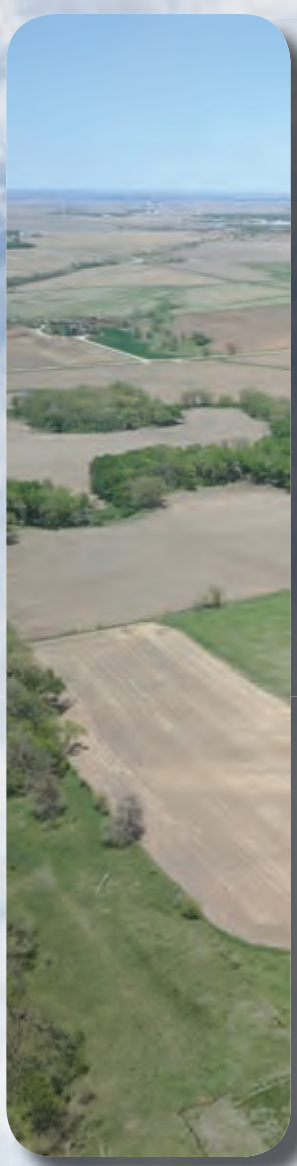
United States Department of State
Bureau of Oceans and International Environmental and Scientific Affairs
Office of Environmental Quality and Transboundary Issues

Final Supplemental Environmental Impact Statement for the Keystone XL Project

Volume II Appendices

December 2019



APPENDIX A
INDIAN TRIBE, AGENCY AND ELECTED OFFICIALS COORDINATION

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Acronyms

Acronym	Definition
BLM	Bureau of Land Management
Department	U.S. Department of State
EA	Environmental Assessment
MAR	Mainline Alternative Route
NPS	National Park Service
NDEQ	Nebraska Department of Environmental Quality
PHMSA	Pipeline and Hazardous Materials Safety Administration
SHPO	State Historic Preservation Office
USACE	U.S. Army Corps of Engineers
USDA	U.S. Department of Agriculture
USEPA	U.S. Environmental Protection Agency
USFWS	U.S. Fish and Wildlife Service

APPENDIX A – INDIAN TRIBE, AGENCY AND ELECTED OFFICIALS COORDINATION

This appendix includes the formal coordination letters that the U.S. Department of State (Department) sent to Indian tribes and federal agencies. It also contains coordination letters sent to state agencies and elected officials.

A.1 INDIAN TRIBES

Table A-1 provides a brief timeline of coordination efforts with Indian tribes regarding the Mainline Alternative Route (MAR) and updated Supplemental Environmental Impact Statement (SEIS).

Table A-1. Department Coordination Efforts with Indian Tribes Regarding the Keystone XL Project Since 2014

Date	Activity
December 23, 2013	The Department executed a Programmatic Agreement to take into account the effects of the Keystone XL Project on historic properties listed in or eligible for listing in the NRHP resulting from construction, operations and maintenance of the Keystone XL Project (see Appendix E of the 2014 Keystone XL Final SEIS (Link to Appendix E)).
April 10, 2018	The Department sent a letter to the 67 Indian tribes who expressed interest in the historic properties potentially affected by the Keystone XL Project. The letter stated the Department is continuing government-to-government consultation with the tribes and in accordance with the Programmatic Agreement (see Appendix A, Indian Tribe and Agency Coordination).
May 1, 2018	In accordance with stipulation V.B.2 of the Programmatic Agreement, the Department sent letters to Indian tribe leaders and THPOs. In order to make a reasonable and good faith effort to complete the identification of historic properties before construction begins, the Department requested assistance in identifying Traditional Cultural Properties/properties of religious and cultural significance of the tribe that may be eligible for listing in the NRHP and could be affected by construction of the MAR (see Appendix A, Indian Tribe and Agency Coordination). Four tribes submitted Scopes of Work to conduct TCP studies. All were approved by the Department.
May 24, 2018	The Department sent a letter to the 67 Indian tribes who expressed interest in the historic properties potentially affected by the Keystone XL Project announcing the decision to prepare an EA on the MAR and to establish a direct point of contact for each tribe interested in participation on the Draft EA.
July, 2018	Three tribes conducted approved TCP studies within the MAR (Omaha Tribe of Nebraska, the Santee Sioux Nation and the Fort Belknap Indian Community). The tribes reported multiple locations that may contain burials. Two magnetometer surveys were conducted to investigate these locations.
July 26, 2018	The Department sent a letter to tribes notifying them of the availability of the 2018 Keystone XL MAR Draft EA and start of a 30-day comment period.
August 16, 2018	The Department met with the Chairman and Tribal Council for the Assiniboine & Sioux Tribes of the Fort Peck Indian Reservation, in Poplar, Montana to provide the tribal leadership with an update on the cultural resources investigations conducted for the Keystone XL Project and to discuss any concerns the tribe might have regarding the effect of the Project on those resources. Representing the Department was the Director, Office of Environmental Quality and Transboundary Issues, Bureau of Oceans and International and Scientific Affairs the Department's Trade and Environment Negotiator; and, the Department's legal counsel. The Department was scheduled to meet with the Fort Belknap Indian Community in Harlem, Montana on August 15, 2018 for the same purpose; however, at the last moment the tribe cancelled the meeting with no explanation and shortly thereafter ceased communicating with the Department
August 29, 2018	The Department sent a letter to all tribes notifying them of the availability of the cultural resources survey report on the MAR and requested their comments on National Register eligibility and effect.

Table A-1. Department Coordination Efforts with Indian Tribes Regarding the Keystone XL Project Since 2014

Date	Activity
September 17, 2018	The Department sent a letter to tribes notifying them of the availability of the 2018 Keystone XL MAR Draft SEIS and start of a 45-day comment period.
October 5, 2018	The Department sent the Omaha Tribe of Nebraska, the Santee Sioux Nation and the Fort Belknap Indian Community the results of two magnetometer studies investigating potential burial locations along the MAR and requested comments. No burial features were identified.
December 12, 2018	The Department, responding to a request from the Omaha Tribe, agreed to include the potential burial locations to the list of places that will be monitored by tribal members during construction.
December 14, 2018	The Department sent a letter to tribes announcing the decision to prepare a new SEIS in response to the Federal District Court for the District of Montana's November 8, 2018 Order for the Department to supplement the analysis in the 2014 Keystone XL Final SEIS relating to greenhouse gas emissions, oil spills, cultural resources and market analysis.
June 26, 2019	The Department met with the Tribal Chairman, the Tribal Historic Preservation Officer, and a member of the Tribal Council tribal leadership for the Little Shell Tribe of Chippewa Indians of Montana at the tribal headquarters in Great Falls, Montana. The purpose of the meeting was to discuss concerns the tribe had expressed about the potential effects of the Project to cultural resources and the need for supplementary cultural resources inventory of the Project ROW in Montana. The Department's cultural resources contractor attended the meeting and reported the meeting results to the Department for decision making.
July 2, 2019	The Department sent an invitation via email to all tribal consulting parties inviting their participation in the field work. Representatives from four tribes chose to participate. The Department will consult with all tribal consulting parties on the result of the re-inspection once the inventory report is complete.
July 30 – August 29, 2019	The Department, in conjunction with Keystone, arranged to re-inspect 77 miles of the Project ROW in Montana to supplement the existing cultural resources inventory record.

Department = U.S. Department of State; EA = Environmental Assessment; MAR = Mainline Alternative Route; NRHP = National Register of Historic Places; SEIS = Supplemental Environmental Impact Statement; TCP = Traditional Cultural Property; THPO = Tribal Historic Preservation Officer

The following is a list of Indian tribes included in the coordination efforts:

- Absentee-Shawnee Tribe of Indians of Oklahoma
- Alabama-Coushatta Tribe of Texas
- Apache Tribe of Oklahoma
- Assiniboine & Sioux Tribes of the Fort Peck Indian Reservation
- Blackfeet Tribe of the Blackfeet Indian Reservation of Montana
- Cherokee Nation
- Cheyenne and Arapaho Tribes
- Cheyenne River Sioux Tribe of the Cheyenne River Reservation
- Chippewa Cree Indians of the Rocky Boy's Reservation
- Confederated Tribes of the Goshute Reservation
- Crow Creek Sioux Tribe of the Crow Creek Reservation
- Crow Tribe of Montana
- Delaware Tribe of Indians
- Duckwater Shoshone Tribe of the Duckwater Reservation
- Eastern Band of Cherokee Indians
- Shoshone Tribe of the Wind River Reservation
- Ely Shoshone Tribe of Nevada
- Forest County Potawatomi Community
- Fort Belknap Indian Community
- Hannahville Indian Community

- Ho-Chunk Nation of Wisconsin
- Iowa Tribe of Kansas and Nebraska
- Kaw Nation, Oklahoma
- Kialegee Tribal Town
- Kickapoo Traditional Tribe of Texas
- Kickapoo Tribe in Kansas
- Kiowa Tribe
- **Little Shell Tribe of Chippewa Indians of Montana**
- Lower Brule Sioux Tribe of the Lower Brule Reservation
- Lower Sioux Indian Community in the State of Minnesota
- Match-e-be-nash-she-wish Band of Pottawatomi Indians of Michigan
- Nez Perce Tribe
- Northern Arapaho Tribe of the Wind River Reservation
- Northern Cheyenne Tribe
- Nottawaseppi Huron Band of the Potawatomi
- Oglala Sioux Tribe of the Pine Ridge Reservation
- Omaha Tribe of Nebraska
- Otoe-Missouria Tribe of Indians
- Pawnee Nation of Oklahoma
- Poarch Band of Creeks
- Pokagon Band of Potawatomi Indians
- Ponca Tribe of Indians of Oklahoma
- Ponca Tribe of Nebraska
- Prairie Band of Potawatomi Nation
- Red Lake Band of Chippewa Indians
- Rosebud Sioux Tribe of the Rosebud Indian Reservation
- Sac and Fox Nation of Missouri in Kansas and Nebraska
- Sac and Fox Nation
- Sac and Fox Tribe of the Mississippi in Iowa
- Santee Sioux Nation
- Shakopee Mdewakanton Sioux Community of Minnesota
- Shoshone-Bannock Tribes of the Fort Hall Reservation
- Sisseton-Wahpeton Oyate of the Lake Traverse Reservation
- Skull Valley Band of Goshute Indians of Utah
- Southern Ute Indian Tribe
- Spirit Lake Tribe
- Standing Rock Sioux Tribe of North & South Dakota
- The Modoc Tribe of Oklahoma
- The Osage Nation
- Thlopthlocco Tribal Town
- Three Affiliated Tribes of the Fort Berthold Reservation
- Tonkawa Tribe of Indians of Oklahoma
- Turtle Mountain Band of Chippewa Indians of North Dakota
- Upper Sioux Community
- Ute Indian Tribe of the Uintah & Ouray Reservation
- Ute Mountain Ute Tribe
- Wichita and Affiliated Tribes
- Yankton Sioux Tribe of South Dakota
- Ysleta del Sur Pueblo

Sample Letter #1

United States Department of State

Bureau of Oceans and International Environmental and Scientific Affairs

Washington, D.C. 20520

April 10, 2018

Governor Edwina Butler-Wolfe
Absentee-Shawnee Tribe of Indians of Oklahoma
2025 South Gordon Cooper Drive
Shawnee, Oklahoma 74801

Re: Update on the Keystone XL Pipeline Project and the Section 106 Programmatic Agreement

Dear Governor Butler-Wolfe,

As you may be aware, TransCanada Keystone Pipeline, L.P. (Keystone) intends to begin vegetative clearing in preparation for construction of the Keystone XL Pipeline (Project) this fall.

In 2013, consistent with Section 106 of the National Historic Preservation Act, the Department of State (Department) executed a Programmatic Agreement (PA) to take into account the effects of the Project on historic properties listed in or eligible for listing in the National Register of Historic Places (National Register). The Department is designated as the Lead Federal Agency in the PA and is responsible for coordinating implementation of the terms of the PA in consultation with the consulting parties. Your tribe is a consulting party to the Project.

The purpose of this letter is to continue government-to-government consultation between the Department and your tribe on the Project. In accordance with the PA, consultation will focus on how to avoid, minimize, or mitigate the adverse effects of the Project on historic properties of concern to your tribe. Presented below for your information is an update on the Project and the cultural resources investigations that have been conducted to date, as well as future plans.

Project Update

The Project pipeline will transport crude oil 1,275 miles from Alberta, Canada to Steele City, Nebraska through a 36-inch pipe. On the U.S. side of the border, the Project pipeline will be 875 miles long and pass through portions of Montana, South Dakota, and Nebraska. Pipeline construction will be limited to a 110-foot wide temporary right-of-way (ROW). Power stations, electrical transmission lines and facilities, access roads, pipe yards, construction camps and other facilities will be built as part of the Project.

A Presidential approval is required for the Project because the pipeline crosses the international border. Keystone submitted a Presidential permit application for the current Project alignment in May, 2012; however, that permit application was denied in November, 2015. Keystone re-

submitted the permit application to the Department in January, 2017 and on March 23, 2017, Under Secretary of State for Political Affairs, Thomas A. Shannon, Jr., determined that the Project was in the national interest and issued a Presidential permit to Keystone.

Approval of the Project pipeline alignment is also required by each state. The states of Montana and South Dakota approved the preferred alignment for the pipeline. The State of Nebraska, however, approved an alternative alignment further to the east in the state referred to as the Mainline Alternative Route.

Keystone intends to start clearing vegetation to build the construction camps and pipe yards this fall (2018) with pipeline construction to begin next year (2019).

Cultural Resources Investigation Update

Keystone has conducted cultural resources inventories for the Project since 2008. Supplemental survey work has also been conducted as segments of the pipeline alignment have been repositioned to avoid affecting cultural resources.

A total of 95 cultural resources have been identified within the Project ROW. Forty-eight of these meet the criteria for listing in the National Register or are unevaluated but will be treated as National Register eligible. However, forty-seven cultural resources do not meet the National Register criteria. Of the 48 National Register eligible properties, six have been recommended for treatment to mitigate adverse effects: two historic period canals, a historic period homestead, a prehistoric campsite, and two prehistoric stone feature/circle sites – all in Montana. To ensure that historic properties are not affected or adversely affected during construction 30 historic properties will be fenced and monitored, including those recommended for treatment. An additional 18 historic properties will not be affected and do not require avoidance measures to ensure their protection. Tribal consultation will continue regarding the effects of the Project to historic properties in the Project ROW.

Tribal consultation played an important role in drafting the 2013 Project PA. The Department identified 67 federally recognized tribes, including your tribe, as a consulting party to the Project. Eight tribes identified portions of the pipeline alignment in Montana and South Dakota as being culturally sensitive and provisions were added to the PA to ensure that the construction is monitored by tribal members in these areas. These culturally sensitive areas were identified through tribal consultation and also through traditional cultural property (TCP) studies that were conducted for individual tribes at their request.

Since the Mainline Alternative Route in Nebraska will follow a different ROW, additional cultural resources survey investigations will be conducted. The Department will consult with your tribe regarding new survey work to be conducted this spring and summer (2018). The Department will also consult with all tribal consulting parties to determine if there are culturally sensitive areas along the Mainline Alternative Route where construction should be monitored by tribal members following the tribal monitoring provisions in the PA.

Summary and Closing

By this letter, the Department is informing your tribe that Keystone has received the Presidential permit needed to build the Keystone XL pipeline and intends to move forward with construction. As the lead federal agency for the PA, the Department wishes to continue consulting with your tribe on a government-to-government basis, to avoid, minimize, or mitigate any adverse effects of the Project on historic properties of concern to your tribe.

In order to ensure timely consultation, we request that you let the Department know if there are other members of your tribe that should be included in future consultations about the Project. Please provide a name and contact information.

The Department looks forward to continued consultation with your tribe in the spirt of mutual respect as the Project moves forward to construction. If you have any questions about the Project or the cultural resources investigations conducted to date, please contact me for further information.

Sincerely,

Ms. Jill E. Reilly
Acting NEPA Coordinator
Department of State
(202) 647-9798
ReillyJE@state.gov

Sample Letter #2

United States Department of State

Bureau of Oceans and International Environmental and Scientific Affairs

Washington, D.C. 20520

May 1, 2018

Governor Edwina Butler-Wolfe
Absentee-Shawnee Tribe of Indians of Oklahoma
2025 South Gordon Cooper Drive
Shawnee, Oklahoma 74801

Re: Request for information on traditional cultural properties along the Keystone XL Pipeline Mainline Alternative Route in Nebraska

Dear Governor Butler-Wolfe,

As you are aware, TransCanada Keystone Pipeline, L.P. (Keystone) intends to build the Keystone XL pipeline (Project) to transport crude oil from Alberta, Canada to Steele City, Nebraska. In November 2017, the Nebraska Public Service Commission approved a Project alignment through Nebraska that is referred to as the Mainline Alternative Route (MAR).

The Department of State (Department) is identified as the Lead Federal Agency responsible for coordinating implementation of the terms of the Keystone XL Programmatic Agreement (PA) in consultation with the consulting parties. Under the PA, cultural resources investigations along the MAR are required under Stipulation V.B. The Department wishes to continue to consult with your tribe and requests your assistance in identifying traditional cultural properties (TCPs)/properties of religious and cultural significance to your tribe that may be eligible for listing in the National Register of Historic Places, and could be affected by construction of the MAR.

The Mainline Alternative Route in Nebraska

The MAR alignment is described in a survey research design contained in the compact disc (CD) that accompanies this letter. The 2018 document is entitled, "Research Design and Methodology for a Phase I Cultural Resources Investigation of a Portion of the Proposed Keystone XL Pipeline Project's Mainline Alternative in Nebraska" and was prepared by American Resources Group, Ltd. The research design explains how the cultural resources survey of the pipeline corridor will be conducted prior to construction. It also contains detailed maps of the MAR alignment, along with information about previously identified archaeological sites and other cultural resources. The Department is sending you this CD because of the large size of the document; if, however, you require a paper copy, please let me know and a copy will be sent to

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you. It is our hope that this report may help you and your tribe identify those areas along the MAR where you would like access, should you desire to conduct TCP studies.

Figure 1 on page 2 of the MAR survey research design is a map showing three possible Project alignments in Nebraska. The earlier Preferred Alignment, which was analyzed in the 2014 Final Supplemental Environmental Impact Statement, is shown in green; the MAR is shown in red. The Sandhills Alternative Route, shown in yellow, is no longer a viable option. The MAR follows the Preferred Alignment from Keya Paha County through Holt County to a point in Antelope County, where is runs southeastward through Madison County into Stanton County, and then joins the existing Keystone Mainline Route (Phase 1) corridor shown in gray. The MAR extends to the south where it diverges from the Keystone mainline pipeline corridor in Seward County, rejoins the original Keystone mainline pipeline corridor, and terminates in Steele City, Jefferson County. You may recall that the original Keystone mainline pipeline was completed in 2010 and was inventoried for cultural resources for that project. The Area of Potential Effects (APE) for the MAR in some locations will overlap with the APE for the original Keystone mainline pipeline. Although no new cultural resource surveys will be conducted where the two pipeline APEs entirely overlap; new surveys will be conducted in the newly proposed alignment where cultural resource inventories have not yet taken place and where the two pipeline corridors are side by side. In addition, the Department will conduct tribal consultation regarding potential TCPs in areas where the MAR deviates from the Preferred Alignment and the original Keystone Mainline Route.

Traditional Cultural Property Studies

Stipulation V.B.2 of the PA says that the Department will make a reasonable and good faith effort to complete the identification of historic properties before construction begins. In doing so, the Department will consider information submitted by the tribes about historic properties to which the tribes may attach religious and cultural significance that may be located within the MAR corridor where it deviates from the Preferred Alignment and the Keystone Mainline Route. The Department asks your tribe to consider (1) whether there are, or could be, TCPs/historic properties of religious and cultural significance to your tribe along the MAR corridor, and if so, (2) does your tribe want to conduct a TCP study to identify these properties.

The Department is working with Keystone to compensate consulting tribes for conducting studies that seek to identify possible TCPs/historic properties of religious and cultural significance that may be located within the MAR corridor where it deviates from the Preferred Alignment and the Keystone Mainline Route. Compensation will be provided for a maximum of $20,000 per tribe, given the scope of work, schedule, and anticipated level of work. The payment will be made in two installments. The first payment will be issued following receipt of a Department-approved scope-of-work, schedule, and budget regarding survey of the applicable portions of the MAR APE for TCPs/historic properties of religious and cultural significance to the tribes. The second payment will be issued upon receipt of the survey report(s) and final report.

This offer of compensation extends to activities directly related to the identification of TCPs/historic properties of religious and cultural significance to the tribes within relevant portions of the MAR APE. Expenses capture in the budget may include costs associated with

expert consultants employed to identify historic properties; field visits by tribal members and elders to provide information about specific places or sites; research associated with Project-level historical investigations; report production; and travel expenses. These identification and evaluation efforts will be guided by the *Guidelines for Evaluating and Documenting Traditional Cultural Properties* (National Register Bulletin 38, 1990 revised 1998), other applicable National Register Bulletins, Secretary of the Interior's Standards and Guidelines for Identification and Evaluation (e.g., https://www.nps.gov/history/local-law/arch_stnds_3.htm), and any related tribal publications and/or standards/guidance materials.

In order to consider potential Project effects upon TCPs/historic properties of religious and cultural significance, the Department must receive a scope of work, schedule, and budget (via email, fax, or hard copy) from consulting party tribes by May 31, 2018, at 5:00 pm Eastern Standard Time (EST). Should your tribe require additional time to submit your proposal, the Department will grant a two-week extension to June 11, 2018; however, the request for extension must be made before the May 31, 2018 submittal deadline.

The compensation will be disbursed to the appropriate Tribal representative as follows,

- The first payment of 50% of the total budget will be disbursed upon receipt of a Department-approved scope of work, schedule, and budget;

- The second and final payment of 50% of the total budget will be disbursed upon receipt of the survey report(s) and final report.

Please respond with your acceptance of the TCP study offer by May 14, 2018. If we do not hear from you by then, the Department will understand that your tribe declines the offer to conduct a TCP study on the MAR where it deviates from the Preferred Alignment and the Keystone Mainline Route. If you accept this offer, the Department must receive all surveys and a final report documenting the TCP analysis by 5:00 pm EST on August 15, 2018.

The Department understands that some tribes may require Tribal Council approval for this work and that due dates and our timeline may be difficult to meet for some Councils. Any effort to obtain an expedited approval by your Tribal Council would be greatly appreciated by the Department. Due to the sensitive nature of these studies, the Department is committed to working with your tribe to resolve concerns about the confidentiality of information on historic properties or other important sites identified in these studies.

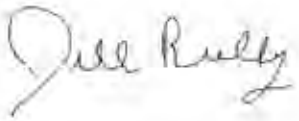
Summary

By this letter, Department is requesting the assistance of your tribe in identifying and evaluating TCPs/historic properties of religious and cultural significance along the MAR in Nebraska where it deviates from the Preferred Alignment and the Keystone Mainline Route. To this end, the Department is asking if your tribe wishes to conduct a TCP study, and if so, to respond with your acceptance of the TCP study offer by May 14, 2018. The Department asks you to submit a scope of work, schedule, and budget for the TCP study by May 31, 2018, at 5 pm EST. You should submit your TCP study plan, as well as the final deliverables, to me, Jill Reilly, with the Bureau

of Oceans and International Environmental and Scientific Affairs (OES) and Environmental Quality and Transboundary Issues (EQT) within the U.S. Department of State. These materials may be transmitted via email (ReillyJE@state.gov), fax (202-647-5947), or hard copy (Jill Reilly, OES/EQT, U.S. Department of State, 2201 C Street, N.W., Suite 2726, Washington, D.C., 20520).

If you have any questions, please contact me.

Sincerely,



Ms. Jill E. Reilly
Acting NEPA Coordinator
Department of State
(202) 647-9798
ReillyJE@state.gov

Attachment: Compact disk (CD) containing the survey research design for the Keystone XL pipeline project Mainline Alternative Route (MAR)

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Sample Letter #3

United States Department of State

Bureau of Oceans and International Environmental and Scientific Affairs

Washington, D.C. 20520

May 24, 2018

Governor Edwina Butler-Wolfe
Absentee-Shawnee Tribe of Indians of Oklahoma
2025 South Gordon Cooper Drive
Shawnee, Oklahoma 74801

Re: Environmental Assessment for the Keystone XL Mainline Alternative Route in Nebraska

Dear Governor Butler-Wolfe,

In respect for our government-to-government relationship, the U.S. Department of State (Department) is inviting your participation in the preparation of the Environmental Assessment (EA) regarding the proposed Keystone XL Mainline Alternative Route (MAR) project. On November 20, 2017, the Nebraska Public Service Commission approved the MAR in Nebraska. Figure 1 shows the variance of the MAR from the preferred route analyzed in the 2014 Final Supplemental Environmental Impact Statement for the Keystone XL Project (2014 Keystone XL Final SEIS).

The Department is preparing the EA – consistent with the National Environmental Policy Act of 1969 (as implemented by the regulations of the Council on Environmental Quality, found at 40 CFR 1500–1508) – to evaluate the potential environmental impacts of the MAR in support of the Bureau of Land Management's review of a right-of-way grant pursuant to the Mineral Leasing Act of 1920. The EA will be used to determine if there are potentially significant impacts from the MAR and to identify any potential mitigation measures to avoid significant adverse effects. The EA will not affect the existing March 2017 Presidential permit authorizing the construction, connection, operation, and maintenance of pipeline facilities at the international border of the United States and Canada as part of the Keystone XL Pipeline project.

The proposed MAR is approximately 162 miles of new 36-inch-diameter pipeline and related ancillary facilities (pump stations, mainline valves, and permanent access roads) for transport of Western Canadian Sedimentary Basin and Bakken crude oil through the State of Nebraska to existing pipeline facilities near Steele City, Nebraska, for onward delivery to refineries in the Gulf Coast area. Construction would employ similar methods as discussed in the 2014 Keystone XL Final SEIS and require a 110-foot-wide temporary right-of-way and generally require a maintained a 50-foot-wide permanent right-of-way easement.

We would like to establish a direct point of contact for your tribe so that notification of the Draft EA can be provided and to ensure that your tribe's questions, comments, and concerns are addressed. We request your engagement within 30 days of receipt of this letter. If you are interested in providing comments or desire additional information, please contact Ms. Jill Reilly, ReillyJE@state.gov. Thank you in advance for your assistance.

Sincerely,

Jill Reilly

Ms. Jill E. Reilly
NEPA Coordinator

Enclosures

Supplementary Information: On January 26, 2017, TransCanada Keystone Pipeline L.P. resubmitted its Presidential Permit application to the Department for the proposed Keystone XL pipeline facilities. Subsequently, on March 23, 2017, Under Secretary of State for Political Affairs Thomas A. Shannon, Jr., issued a Presidential Permit to TransCanada Keystone Pipeline L.P. to construct, connect, operate, and maintain pipeline facilities at the international border of the United States and Canada as part of the Keystone XL Pipeline project. Subsequently, on November 20, 2017, the Nebraska Public Service Commission approved the MAR which differs from the preferred route analyzed in the 2014 Final Supplemental Environmental Impact Statement for the Keystone XL Project (2014 Keystone XL Final SEIS). Figure 1 shows the variance of the MAR from the preferred route analyzed in the 2014 Final 2014 Keystone XL Final SEIS.

The proposed MAR is approximately 162 miles of new 36-inch-diameter pipeline and related ancillary facilities (pump stations, mainline valves, and permanent access roads) for transport of Western Canadian Sedimentary Basin and Bakken crude oil through the State of Nebraska to existing pipeline facilities near Steele City, Nebraska, for onward delivery to refineries in the Gulf Coast area. Construction would employ similar methods as discussed in the 2014 Keystone XL Final SEIS and require a 110-foot-wide temporary right-of-way and generally require a maintained a 50-foot wide permanent right-of-way easement.

May 24, 2018
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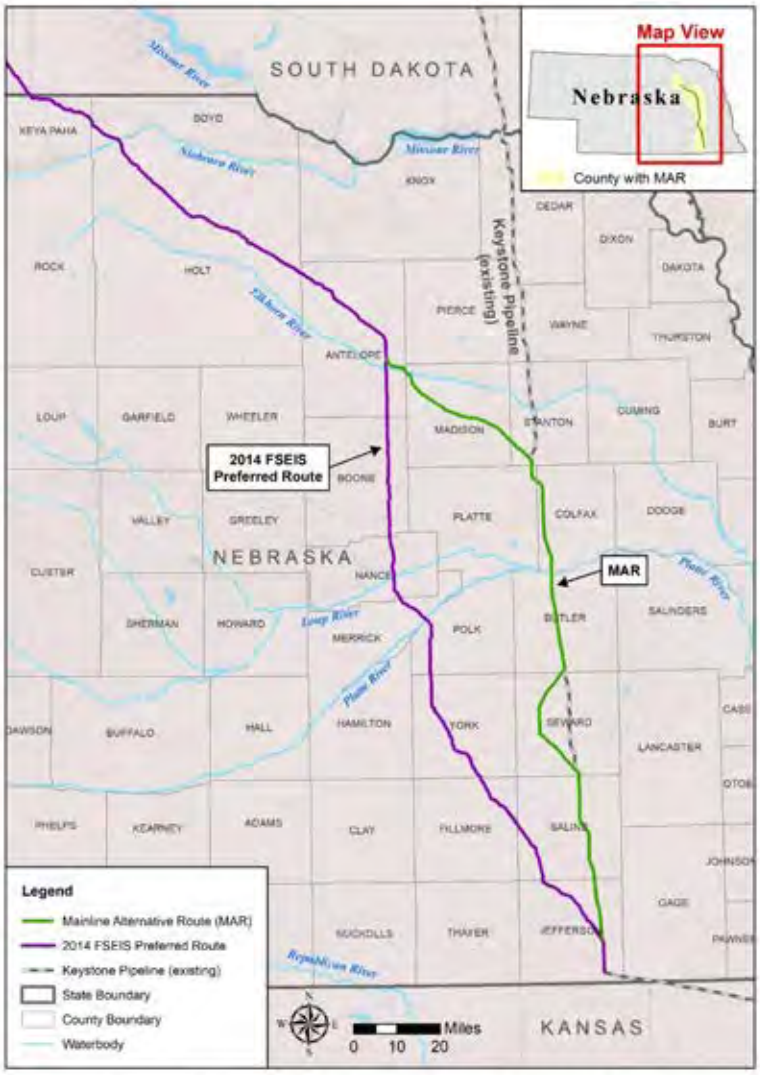

Figure 1. Mainline Alternative Route Overview Map

Sample Letter #4

United States Department of State

Bureau of Oceans and International Environmental and Scientific Affairs

Washington, D.C. 20520

July 26, 2018

Governor Edwina Butler-Wolfe
Absentee-Shawnee Tribe of Indians of Oklahoma
2025 South Gordon Cooper Drive
Shawnee, Oklahoma 74801

Dear Governor Butler-Wolfe,

This letter serves as notification that the United States Department of State (Department) Draft Environmental Assessment (EA) for the proposed Keystone XL Pipeline Mainline Alternative Route (MAR) in Nebraska is available online at the Department's website https://keystonepipeline-xl.state.gov/ for public review and comment. The Department has identified you as a point of contact for your organization, and as such, requests that you forward this notification to other interested individuals within your organization.

The Department prepared the Draft EA to evaluate the potential environmental impacts of the proposed Keystone XL MAR – consistent with the National Environmental Policy Act of 1969 – in support of the Bureau of Land Management's (BLM) review of TransCanada Keystone Pipeline, L.P.'s (Keystone) application for a right-of-way.

The MAR was included by Keystone as an alternative to its Preferred Route in their February 16, 2017 application to the Nebraska Public Service Commission (Nebraska PSC) seeking approval for the Keystone XL Project. Keystone's Preferred Route was considered in the Department's 2014 Final Supplemental Environmental Impact Statement for the Keystone XL Project (2014 Keystone XL Final SEIS). After reviewing Keystone's application, the Nebraska PSC approved the MAR on November 20, 2017. Keystone's application to BLM for a right-of-way remains pending with that agency. This EA will be used to determine if there are potentially significant impacts from the proposed MAR and to identify any potential mitigation measures to avoid significant adverse effects.

Under the Proposed Action, Keystone would construct the portion of the Keystone XL Project in Nebraska along the MAR. This would include approximately 162 miles of construction, connection, operation and maintenance along the MAR of the proposed new 36-inch diameter pipeline and related ancillary facilities within Nebraska that were not analyzed within the 2014 Keystone XL Final SEIS.

The 30-day public comment period ends on August 29, 2018. Comments received or postmarked by August 29, 2018 will be considered in preparing the Final EA. Comments may be submitted online at http://www.regulations.gov by entering "Mainline Alternative Route" into the search field and following the prompts. Comments submitted by mail should be addressed to: Mr. Marko Velikonja, U.S. Department of State, Office of Environmental Quality and Transboundary Issues (EQT), Bureau of Oceans and International Environmental & Scientific Affairs (OES), 2201 C Street NW, Room 2726, Washington, DC 20520. Comments should be identified as intended for the Draft EA for the Keystone XL Mainline Alternative Route Project.

Comments are not private and may be posted online and/or published in the Final EA. The comments will not be edited to remove identifying or contact information, and the Department cautions against including any information that one does not want publicly disclosed.

If you require additional information or have any questions, please contact Mr. Velikonja at velikonjamg@state.gov.

Thank you for your interest in the MAR and the Draft EA.

Sincerely,

Mr. Marko Velikonja
Program Manager

Sample Letter #5

United States Department of State

Bureau of Oceans and International Environmental and Scientific Affairs

Washington, D.C. 20520

September 17, 2018

Governor Edwina Butler-Wolfe
Absentee-Shawnee Tribe of Indians of Oklahoma
2025 South Gordon Cooper Drive
Shawnee, Oklahoma 74801

Dear Governor Butler-Wolfe,

This letter serves as notification that the United States Department of State (Department) Draft Supplemental Environmental Impact Statement (SEIS) for the proposed Keystone XL Pipeline Mainline Alternative Route (MAR) in Nebraska will be available online at the Department's website https://keystonepipeline-xl.state.gov/ for public review and comment beginning September 21, 2018. The Department has identified you as a point of contact for your organization, and as such, requests that you forward this notification to other interested individuals within your organization.

The Department prepared the Draft SEIS in response to the United States District Court, District of Montana's order to supplement the 2014 Keystone XL Final SEIS to evaluate potential impacts of the proposed MAR and related facilities. In July 2018, the Department published a notice of availability regarding the availability of the Draft Environmental Assessment (EA) that analyzed the Keystone XL MAR. This Draft SEIS, based on the 2018 July Draft EA, evaluates the potential environmental impacts of the proposed Keystone XL MAR – consistent with the National Environmental Policy Act of 1969 – in support of the Bureau of Land Management's (BLM) review of TransCanada Keystone Pipeline, L.P.'s (Keystone) application for a right-of-way.

The MAR was included by Keystone as an alternative to its Preferred Route in their February 16, 2017 application to the Nebraska Public Service Commission (Nebraska PSC) seeking approval for the Keystone XL Project. Keystone's Preferred Route was considered in the Department's 2014 Final Supplemental Environmental Impact Statement for the Keystone XL Project (2014 Keystone XL Final SEIS). After reviewing Keystone's application, the Nebraska PSC approved the MAR on November 20, 2017. Keystone's application to BLM for a right-of-way remains pending with that agency. This SEIS will be used to determine if there are potentially significant impacts from the proposed MAR and to identify any potential mitigation measures to avoid significant adverse effects.

Under the Proposed Action, Keystone would construct and operate the portion of the Keystone XL Project in Nebraska along the MAR. This would include approximately 162 miles of construction, connection, operation and maintenance along the MAR of the proposed new 36-inch diameter pipeline and related ancillary facilities within Nebraska that were not analyzed within the 2014 Keystone XL Final SEIS.

The 45-day public comment period ends on November 5, 2018. Comments received or postmarked by November 5, 2018 will be considered in preparing the Final SEIS. As previously indicated, the Department prepared a Draft EA regarding the MAR and published a notice of availability that announced availability of the Draft EA in the Federal Register (FR) (83 FR 36659) on July 30, 2018. The public comment period for the Draft EA extended from July 30 to August 29, 2018. The Department will also consider comments received on the Draft EA in the Final SEIS document.

Beginning September 21, 2018, comments may be submitted online at http://www.regulations.gov by entering "Mainline Alternative Route" into the search field and following the prompts. Comments submitted by mail should be addressed to: Mr. Marko Velikonja, U.S. Department of State, Office of Environmental Quality and Transboundary Issues (EQT), Bureau of Oceans and International Environmental & Scientific Affairs (OES), 2201 C Street NW, Room 2726, Washington, DC 20520. Comments should be identified as intended for the Draft SEIS for the Keystone XL Mainline Alternative Route Project.

Comments are not private and may be posted online and/or published in the Final SEIS. The comments will not be edited to remove identifying or contact information, and the Department cautions against including any information that one does not want publicly disclosed.

The Department will convene a public meeting in Lincoln, Nebraska on Tuesday October 9, 2018, at the Lincoln Marriott Cornhusker Hotel, 333 South 13th Street from 4:30 PM to 7:30 PM. The purpose of the meeting is to provide an opportunity for the public to gain information about the project and talk with government officials. The meeting will be an open house format with opportunities to submit comments via hand-written comment forms, electronic comment stations, and one-on-one verbal comments to a stenographer. Please note that in the interest of the security of all attendees, certain items will not be permitted inside the public meeting space. In particular, the following items are prohibited from the meeting space: bags, weapons, bottles, air horns, mega-phones, posters, signs and alcoholic beverages. The Department intends to make a free speech area available outside the meeting space where individuals may gather with signs and posters.

If you require additional information or have any questions, please contact Mr. Velikonja at velikonjamg@state.gov.

Thank you for your interest in the MAR and the Draft SEIS.

Sincerely,

Mr. Marko Velikonja
Program Manager

Sample Letter #6

United States Department of State

Bureau of Oceans and International Environmental and Scientific Affairs

Washington, D.C. 20520

December 14, 2018

Governor Edwina Butler-Wolfe
Absentee-Shawnee Tribe of Indians of Oklahoma
2025 South Gordon Cooper Drive
Shawnee, Oklahoma 74801

Re: Keystone XL Pipeline Supplemental Environmental Impact Statement

Dear Governor Butler-Wolfe,

The U.S. Department of State (Department) is notifying you that on December 3, 2018 it published in the *Federal Register* a Notice of Intent (NOI) to Prepare a Supplemental Environmental Impact Statement (SEIS) for the proposed Keystone XL Pipeline (83 FR 62398). The Department is preparing the SEIS consistent with the National Environmental Policy Act (NEPA) of 1969 [as implemented by the regulations of the Council on Environmental Quality, found at 40 CFR 1500–1508] and in response to the Federal District Court for the District of Montana's November 8, 2018 Order for the Department to supplement the analysis in the 2014 SEIS for the Keystone XL Pipeline.

The December 3, 2018 NOI follows recent notices the Department published in the *Federal Register* earlier this year about which your tribe was previously notified. These include:

- May 25, 2018: NOI to prepare an Environmental Assessment (EA) for the Keystone XL Mainline Alternative Route (MAR) in Nebraska (83 FR 24383).
- July 30, 2018: A Notice of Availability (NOA) regarding availability of the Keystone XL MAR Draft EA and to solicit comments on the Draft EA over a 30-day public comment period (83 FR 36659).
- September 17, 2018: NOI to prepare a SEIS on the MAR (83 FR 46989).
- September 24, 2018: NOA announcing availability of the Keystone XL MAR Draft SEIS and a 45-day public comment period (83 FR 48358).

The SEIS referred to in this latest NOI will incorporate the information included in the Keystone XL MAR Draft SEIS for the MAR in Nebraska.

We would like to continue coordination to ensure that your tribe has an opportunity to comment on the Draft SEIS. Although there is no action requested in connection with this current NOI, we will notify you when the Draft SEIS is released in the coming months and will welcome your comments. In the meantime, if you have any questions about the process, please feel free to contact me at 202-647-4828 or velikonjam@state.gov.

Sincerely,

Marko Velikonja
Keystone XL Program Manager

Sample Letter #7

United States Department of State

Bureau of Oceans and International Environmental and Scientific Affairs

Washington, D.C. 20520

October 4, 2019

Governor Edwina Butler-Wolfe
Absentee-Shawnee Tribe of Indians of Oklahoma
2025 South Gordon Cooper Drive
Shawnee, Oklahoma 74801

Dear Governor Butler-Wolfe,

This letter serves as notification that the United States Department of State (Department) Draft Supplemental Environmental Impact Statement (SEIS) for the proposed Keystone XL Project will be available online at the Department's website https://keystonepipeline-xl.state.gov/ for public review and comment beginning October 4, 2019. The Department has identified you as a point of contact for your organization, and as such, requests that you forward this notification to other interested individuals within your organization.

The Department prepared the Draft SEIS in response to the United States District Court, District of Montana's order to supplement the 2014 Keystone XL Final SEIS relating to greenhouse gas emissions, oil spills, cultural resources, and market analysis. In September 2018, the Department published a notice of availability of the Draft SEIS for the Proposed Keystone XL Pipeline Mainline Alternative Route in Nebraska. Prior to this Draft SEIS, the Department prepared a Draft Environmental Assessment (EA) and Draft SEIS regarding the Mainline Alternative Route (MAR) in Nebraska and published Notices of Availability that announced the availability of the draft documents in the Federal Register (FR) (83 FR 36659 and 83 FR 48358, respectively). The public comment period extended from July 30 to August 29, 2018 on the Draft EA and from September 21 to November 8, 2018 for the Draft SEIS. The Department considered comments received during both the Draft EA and the Draft SEIS public comment periods in this new Draft SEIS document. Consistent with the National Environmental Policy Act of 1969, the Draft SEIS supplements the 2014 Keystone XL Final SEIS, considers the direct, indirect and cumulative impacts related to changes in the Project since 2014 and incorporates updated information and new studies, as applicable.

Under the Proposed Action, TransCanada Keystone Pipeline, L.P. (Keystone) would construct the Keystone XL Project. This would include approximately 162 miles of construction, connection, operation and maintenance along the MAR of the proposed new 36-inch diameter pipeline and related ancillary facilities within Nebraska that were not analyzed within the 2014 Keystone XL Final SEIS.

The 45-day public comment period ends on November 18, 2019. Comments received or postmarked by November 18, 2019 will be considered in preparing the Final SEIS.

Beginning October 4, 2019, comments may be submitted online at http://www.regulations.gov by entering "Keystone XL" into the search field and following the prompts. Comments submitted by mail should be addressed to: M. Ross Alliston, U.S. Department of State, Office of Environmental Quality and Transboundary Issues (EQT), Bureau of Oceans and International Environmental & Scientific Affairs (OES), 2201 C Street NW, Room 2726, Washington, DC 20520. Comments should be identified as intended for the Draft SEIS for the Keystone XL Project.

Comments are not private and may be posted online and/or published in the Final SEIS. The comments will not be edited to remove identifying or contact information, and the Department cautions against including any information that one does not want publicly disclosed.

The Department will convene a public meeting in Billings, MT on Tuesday October 29, 2019, at the Billings Hotel & Convention Center, 1223 Mullowney Lane, Billings, MT from 4:30 PM to 7:30 PM. The purpose of the meeting is to provide an opportunity for the public to gain information about the project and talk with government officials. The meeting will be an open house format with opportunities to submit comments via hand-written comment forms, electronic comment stations, and one-on-one verbal comments to a stenographer. Attendees will be able to speak one-on-one with Department representatives. Please note that in the interest of the security of all attendees, certain items will not be permitted inside the public meeting space. In particular, the following items are prohibited from the meeting space: bags, weapons, bottles, air horns, mega-phones, posters, signs and alcoholic beverages. The Department intends to make a free speech area available outside the meeting space where individuals may gather with signs and posters.

If you require additional information or have any questions, please contact me at AllistonMR@state.gov.

Thank you for your interest in the Keystone XL Project and the Draft SEIS.

Sincerely,

M. Ross Alliston
Presidential Permitting Team Leader

Responses Received from Indian Tribes

Mainline Alternative Route

From: Whitehorn, Elsie <[redacted]
Sent: Thursday, June 14, 2018 12:19 PM
To: Reilly, Jill E
Subject: Re: Environmental Assessment for the Keystone XL Mainline Alternative in Nebraska

Good morning Ms. Reilly,

In response to the subject above, the Otoe-Missouria Chairman and the Tribal Historic Preservation Officer will be the direct point of contact. We look forward to hearing more information about this subject, preferably electronically.

Thank you,

Elsie Whitehorn
Tribal Historic Preservation Officer
Otoe-Missouria Tribe
[redacted]

Ysleta del Sur Pueblo
Tribal Council – Javier Loera (War Captain/Tribal Historic and Preservation Officer) E-mail [redacted]
117 South Old Pueblo Road * P.O. Box 17579 * El Paso, Texas 79917 * (915) 859-8053 * [redacted]

June 21, 2018

Ms. Jill E. Reilly
United States Department of State
Bureau of Oceans and International
Environmental and Scientific Affairs
Washington, D.C. 20520

Dear Ms. Reilly

This letter is in response to Supplemental Environmental Assessment correspondence in which you provide Ysleta Del Sur Pueblo the opportunity to comment on The Environmental assessment for the Keystone XL Mainline Alternative in Nebraska.

The Ysleta Del Sur Pueblo does not have any comments nor does it request consultation on this project due to its location being outside of our Pueblos NAGPRA area of interest and/or relevance.

Thank you for allowing us the opportunity to comment on this project.

Sincerely,

Javier Loera
War Captain/Tribal Historic and Preservation officer
Ysleta Del Sur Pueblo
Phone (915)859-8053

Tribal Council Assistant
Adam Nevarez

FORT PECK TRIBES
Assiniboine & Sioux

June 13, 2018

Director Brian P. Doherty
Office of Environmental Quality and Transboundary Issues
U.S. Department of State

Re: Docket ID No. Public Notice: 10427, 83 FR 24383, Document No. 2018-11240
Environmental Assessment for the Proposed Keystone XL Pipeline Mainline Alternative Route in Nebraska

Dear Director Doherty:

The Assiniboine and Sioux Tribes of the Fort Peck Indian Reservation (Tribes) appreciate this opportunity to comment on the scope and content of an Environmental Assessment (EA) to evaluate the potential environmental impacts of the Mainline Alternative Route in support of the Bureau of Land Management's (BLM) review of TransCanada's application for right-of-way. The Tribes believe this EA provides an excellent opportunity for the Department of State (DOS) to address issues that have been left out of the National Environmental Policy Act (NEPA) process thus far.

The Tribes' main concern is for the Assiniboine and Sioux Rural Water Supply System (ASRWSS). The ASRWSS is a $302 million water supply project which supplies water to 30,000 people on the Fort Peck Reservation and surrounding areas in Montana. The ASRWSS was funded by the Fort Peck Reservation Rural Water System Act of 2000.[1] The ASRWSS intake is 57 miles downstream of the Pipeline's proposed Missouri River crossing. The Tribes are concerned that an oil spill from the Pipeline could contaminate the ASRWSS. Thus, the proposed route for the Pipeline patently threatens the only public water supply on the Reservation; endangering the health and safety of the surrounding communities.

The Pipeline also threatens: two Assiniboine sacred, historical sites; the 1 million acre-feet water right the Tribes were allocated in its water compact with the State of Montana, as ratified by the United States; irrigation intakes closer to the crossing; and Reservation land on the north half of the Missouri River bed and banks.

[1] P.L. 106-382; 114 Stat. 1454.

Poplar, Montana 59255 P.O. Box 1027 (406) 768-2300

Unfortunately, none of these issues have been raised in any of this project's NEPA documents (i.e., the draft environmental impact statement (EIS), the final EIS, the supplemental EIS, or Montana Department of Environmental Quality's Appendix or Certificate of Compliance). Therefore, DOS must prepare a new supplemental EIS which considers these issues.[2]

A supplemental EIS is warranted if: (1) the final EIS makes substantial changes to the proposed action that are relevant to environmental or safety concerns; or (2) *there are significant new circumstances or information relevant to environmental concerns and that bear on the proposed action or the impacts of the proposed action.*[3] The DOS' regulations have the same standard.[4] "[If] the new information is sufficient to show that the remaining action will 'affect the quality of the human environment' in a significant manner to the a significant extent not already considered, a supplemental EIS must be prepared."[5]

The ASRWSS is a significant new circumstance or information because it was not previously considered in the NEPA process. In addition, the ASRWSS is part of the human environment and the Keystone XL Pipeline (Pipeline) will significantly affect it. Thus, the ASRWSS should have been considered in the NEPA process regardless of whether alternatives that were considered would have protected it.

TransCanada must also acquire right-of-way permits from BLM and Clean Water Act Section 404/10 and 408 permits from the United States Army Corps of Engineers (Corps) to cross the Missouri River upstream from the ASRWSS intake. However, these permits rely on the information in DOS' NEPA documents. These permits will be invalid without a thorough analysis of the ASRWSS and other impacts the Pipeline will have on the Tribes.

Therefore, the scope and content of this pending EA must be wider than simply the alternative route in Nebraska. DOS must produce a supplemental EIS because the alternative route is substantially different from the one discussed in the EIS, the EIS is out of date, and the EIS does not consider the ASRWSS.[6] The Tribes again thank you for this opportunity and look forward to your decision to expand the scope and content of this EA to include the ASRWSS.

Sincerely,

Floyd Azure
Tribal Executive Board Chairman
Assiniboine & Sioux Tribes of the Fort Peck Indian Reservation

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[2] *Norton v. S. Utah Wilderness Alliance*, 542 U.S. 55, 73 (2004).
[3] 42 U.S.C. § 4332a(b)(1)-(2) (emphasis added).
[4] *See* 22 C.F.R. § 161.9(k).
[5] *Marsh v. Oregon Nat. Resources Council*, 490 U.S. 360, 370 (1989).
[6] 22 C.F.R. § 161.9(k).

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Majel Russell
Legal Counsel for the Tribes
2501 4th Avenue North
Billings, MT 59101
[redacted]

Keystone XL Project

November 5, 2018

VIA FEDERAL EXPRESS AND EMAIL
Tracking No: 773649314522

Mark Velikonja
U.S. Department of State
Bureau of Oceans and International Environmental and Scientific Affairs
2201 C Street NW
Washington, DC 20520

Re: Initial Comments and Formal Request for Tribal Consultation on the United States Department of State Draft Supplemental Environmental Impact Statement for Proposed Keystone XL

Dear Mr. Velikonja:

The Cheyenne River Sioux Tribe ("Tribe") provides these initial comments and formally requests government-to-government consultation with the United States Department of State ("Department") leadership on the Department's Draft Supplemental Environmental Impact Statement ("SEIS") for the proposed Keystone XL ("KXL"). We make this request pursuant to Executive Order 13175, Consultation and Coordination with Indian Tribal Governments (Nov. 6, 2000) and Executive Order 13175, Consultation and Coordination with Indian Tribal Governments (Nov. 5, 2009). Our request is also informed by the conclusions of the U.S. Department of Interior, the U.S. Department of the Army, and the U.S. Department of Justice in their report entitled Improving Tribal Consultation and Tribal Involvement in Federal Infrastructure Decisions, January 20, 2017 ("Improving Tribal Consultation"). We have attached copies of these documents

The blue represents the thunderclouds above the world where live the thunder birds who control the four winds. The rainbow is for the Cheyenne River Sioux people who are keepers of the Most Sacred Calf Pipe, a gift from the White Buffalo Calf Maiden. The eagle feathers at the edges of the rim of the world represent the spotted eagle who is the protector of all Lakota. The two pipes fused together are for unity. One pipe is for the Lakota, the other for all the other Indian Nations. The yellow hoops represent the Sacred Hoop, which shall not be broken. The Sacred Calf Pipe Bundle in red represents Wakan Tanka – The Great Mystery. All the colors of the Lakota are visible. The red, yellow, black and white represent the four major races. The blue is for heaven and the green for Mother Earth.

for your reference, as well as technical reports concerning cultural and natural resources that have the potential to be adversely affected by the construction of the proposed KXL.[1]

The Cheyenne River Sioux Reservation is located wholly within the exterior boundaries of the State of South Dakota. (A map showing the location of the Tribe's Reservation is enclosed herewith.) However, our rights and trust resources extend beyond our Reservation borders as a matter of federal law. As set forth, herein, the Proposed KXL Pipeline and its MAR in Nebraska will affect our reserved water rights, our treaty rights, and our historic, spiritual, and cultural resources. For this reason the Department must consult with the Tribe on the SEIS for the proposed KXL Pipeline.

The Tribe's Rights and Trust Resources in the vicinity of the Proposed KXL Pipeline

- Reserved water rights: The Tribe enjoys reserved water rights in the Missouri River Basin as well as related groundwater in an amount sufficient to fulfill the purposes of the Reservation. *See Winters v. United States*, 207 U.S. 564 (1908); *Arizona v. California*, 373 U.S. 546, 600 (1963). These reserved water rights are a trust resource for which the United States owes a fiduciary duty. These rights are a function of the Tribe's extant treaty rights. *See Treaty of Fort Laramie with the Sioux, Etc.*, 11 Stat. 749 (Sep. 17, 1851); *Treaty with the Sioux – Brule, Oglala, Mniconjou, Yantonai, Hunkpapa, Blackfeet, Cuthead, Two Kettle, Sans Arc, and Santee*, 15 Stat. 635 (Apr. 29, 1868). The Tribe retains reserved water rights in waterways in the Missouri River Basin as well as groundwater and aquifers outside its Reservation, some of which are located south and west of the Tribe's Reservation's southwest corner where the proposed KXL Pipeline is proposed to cross.

- Hunting and fishing rights: The Tribe enjoys hunting and fishing rights in Lake Oahe, the reservoir of the Missouri River that are subject to the United States' trust duty. The rights are a function of the Tribe's extant treaty rights and have been preserved by Congress. *See Treaty of Fort Laramie with the Sioux, Etc.*, 11 Stat. 749 (Sep. 17, 1851); *Treaty with the Sioux – Brule, Oglala, Mniconjou, Yantonai, Hunkpapa, Blackfeet, Cuthead, Two Kettle, Sans Arc, and Santee*, 15 Stat. 635 (Apr. 29, 1868); Act of Sep. 3, 1954, Pub. L. 83-776, 68 Stat. 1191. Numerous off-reservation tributaries and aquifers belong to the Lake Oahe hydrologic system and consequently will impact the Tribe's retained hunting and fishing rights in Lake Oahe.

[1] Although the technical reports were prepared for the Dakota Access Pipeline, the reports are relevant with regard to the issues presented by the Keystone XL Pipeline, because the reports and associated documents address broader water and sacred site concerns.

- Historic, spiritual, and cultural resources: There are numerous sites of historic, spiritual, and cultural significance to the Tribe throughout the Tribe's large aboriginal territory, but especially within the boundaries of the lands reserved to the Tribe in the *Treaty of Fort Laramie with the Sioux, Etc.*, 11 Stat. 749 (Sep. 17, 1851) (see map below). The Tribe's 1851 territory extends into North Dakota. (A map showing the Tribe's 1851 territory is enclosed herewith.) For example, the proposed KXL Pipeline route directly intersects and crosses Chief Big Foot's Village, where he and many Cheyenne River Sioux camped immediately before being forced down to Wounded Knee and massacred on December 29, 1890.

United States Trust Duty

The United States has a two-fold trust duty to the Tribe. Courts have long recognized the "existence of a general trust relationship between the United States and the Indian people." *United States v. Mitchell*, 463 U.S. 206, 225 (1983). The courts are clear that "any Federal government action is subject to the United States' fiduciary responsibilities toward the Indian tribes." *Nance v. EPA*, 645 F.2d 701, 711 (9th Cir. 1981) (emphasis in original) (citing *Seminole Nation v. United States*, 316 U.S. 268, 297 (1942)).

Secondly, the federal government has a specific trust duty to protect the rights reserved in the 1851 and 1868 Fort Laramie Treaties. The Tribe was a party to the 1851 and 1868 Fort Laramie Treaties, which reserved land and water to the Tribe in order to fulfill the purpose of the Reservation to provide for self-sufficiency. *See Winters v. United States*, 207 U.S. 564 (1908). The reserved water right recognized in the *Winters* doctrine, and reserved for the Tribe, includes the right to clean, safe water. *See, e.g., United States v. Gila River Irrigation Dist.*, 920 F. Supp. 1444, 1448 (D. Ariz. 1996). Likewise, the Tribe has retained its right to hunt, fish, and gather on the Reservation and in Lake Oahe. Act of September 3, 1954, Pub. L. 83-766, 68 Stat. 1191; *South Dakota v. Bourland*, 508 U.S. 679, 697 (1993) (noting that Congress explicitly has reserved the Cheyenne River Sioux Tribe's original treaty rights, including the right to hunt and fish, on Lake Oahe); *see also United States v. Dion*, 476 U.S. 734, 738 (1986) ("Indians enjoy exclusive treaty rights to hunt and fish on lands reserved to them . . . ."). The Tribe's water rights include a right to water that is sufficient in amount and quality to support hunting and fishing rights. *United States v. Adair*, 723 F.2d 1394, 1409, 1411 (9th Cir. 1983). As a result of the federal government's trust responsibilities to the Tribe, the Department must ensure that such trust resources are preserved in any activity that may impact the Tribe's rights, including any excavation, dredge and fill or any other activities resulting from the construction of the KXL Pipeline.

The United States Must Consult on the Tribe's Rights and Has a Duty to Protect Them

The United States and the Department's trust relationship does not only extend to the affirmative obligations to protect tribal rights and trust resources, but the United States must also engage in meaningful pre-decisional consultation on projects that will affect the Tribe's treaty rights and trust resources. Executive Order 13175, Consultation and Coordination with Indian

Tribal Governments (Nov. 6, 2000); White House Memorandum for the Heads of Executive Departments and Agencies on Tribal Consultation (Nov. 5, 2009).

"In carrying out its treaty obligations with the Indian tribes, the Government is something more than a mere contracting party." *Seminole Nation v. United States*, 316 U.S. 286, 296-67 (1942). Instead, "it has charged itself with moral obligations of the highest responsibility and trust." *Id.* Pursuant to its trust duty, agencies are required to "consult with Indian tribes in the decision-making process to avoid adverse effects on treaty resources." *Klamath Tribes v. United States*, No. 10-2130, 1996 WL 924509 (D. Or. 1996) (quoting *Lac Courte Oreille Band of Indians v. Wisconsin*, 668 F. Supp. 133, 140 (W.D. Wis. 1987); *Ctr. for Biological Diversity v. Salazar*, No. 10-2130, 2011 WL 60000497, at *11 (D. Ariz. Nov. 30, 2011). It is not a discretionary duty. *Ctr. for Biological Diversity*, at *11.

The duty to consult is binding on an agency when the agency has announced a consultation policy, and the Tribes have come to rely on that policy. *Yankton Sioux Tribe v. Kempthorne*, 442 F. Supp. 2d 774, 784 (D. S.D. 2006); *see also Oglala Sioux Tribe v. Andrus*, 603 F.2d 707 (8th Cir. 1979); *Lower Brule Sioux Tribe v. Deer*, 911 F. Supp. 395 (D. S.D. 1995); *Albuquerque Indian Rights v. Lujan*, 930 F.2d 49, 58 (D.C. Cir. 1991); *Indian Educators Fed'n Local 4524 of Am. Fed'n of Teachers, AFL-CIO v. Kempthorne*, 541 F. Supp. 2d 257, 264-65 (D. D.C. 2008). At a minimum, this requires that the agency give fair notice of its intentions, which requires, "telling the truth and keeping promises." *Yankton Sioux Tribe*, 442 F.Supp.2d at 784 (citing *Lower Brule Tribe*, 911 F Supp. at 399). An agency's failure to provide tribes with accurate information necessary to meaningfully consult before a decision is made is agency failure to meet its consultation obligation. *Id.* at 785; *see also Cheyenne River Sioux Tribe v. Jewell*, No. 3:15-03072, 2016 WL 4625672 (D. S.D. Sep. 6, 2016). ***Reviewing a Tribe's comments submitted in conjunction with a department's general invitation for public comments is not sufficient to meet this obligation.***

The federal government has further obligations to tribes under the National Historic Preservation Act ("NHPA") and the Religious Freedom Restoration Act ("RFRA"). The NHPA was enacted to preserve historic resources in the midst of modern projects and requires agencies to fully consider the effects of its actions on historic, cultural, and sacred sites. Section 106 of the NHPA requires that prior to issuance of any federal funding, permit, or license, agencies must take into consideration the effects of that "undertaking" on historic properties. 54 U.S.C. § 306108; 36 C.F.R. § 800.1. The Section 106 process also requires consultation between agencies and Indian Tribes on federally funded or authorized "undertakings" that could affect sites that are on, or could be eligible for, listing in the National Register, including sites that are culturally significant to Indian Tribes. 54 U.S.C. § 302706. An agency official must "ensure" that the process provides Tribes with "a reasonable opportunity to identify its concerns about historic properties, advise on the identification and evaluation of historic properties . . . articulate its views on the undertaking's effects on such properties, and participate in the resolution of adverse effects." 36 C.F.R. § 800.2(c)(ii)(A). This requirement imposes on agencies a "reasonable and good faith effort" by agencies to consult with Tribes in a "manner respectful of tribal sovereignty." *Id.* 36 C.F.R. § 800.2(c)(2)(ii)(B); *see also id.* § 800.3(f) (any Tribe that "requests in writing to be a consulting party shall be one").

Under RFRA, the "Government shall not substantially burden a person's exercise of religion" unless the Government "demonstrates that application of the burden to the person—(1) is in furtherance of a compelling governmental interest; and (2) is the least restrictive means of furthering that compelling governmental interest." 42 U.S.C. § 2000bb-1(b). Tribal religious practices are significantly tied to oral tradition, ancestral lands, and natural resources.

Federal agencies hold in trust many culturally important sites held sacred by Indian tribes, and federal agencies are responsible for analyzing the potential effects of agency projects carried out, funded, or permitted on historic properties of traditional cultural and religious importance to Indian tribes including sacred sites. Additionally, international law, treaties, and jurisprudence has repeatedly affirmed the right of Free Prior Informed Consent. *See Declaration on the Rights of Indigenous People*, art. 10, United Nations (Mar. 2008). The purpose of Free Prior Informed Consent is to establish bottom up participation and consultation of an Indigenous population prior to the beginning of a development on ancestral land or using resources within the Indigenous population's territory. *Id.*

Tribe's Requests Concerning the SEIS for the Keystone XL Pipeline

1. The Keystone XL Pipeline Poses a Serious Threat to Tribal Rights that the Department Must Thoroughly Evaluate

The Keystone XL Pipeline is proposed to be sited within the Tribe's 1851 territory and in areas that impact aquifers and tributaries that affect Cheyenne River Sioux Reservation lands and waters. As such, the Keystone XL Pipeline will have serious impacts on (a) the Tribe's treaty rights and reserved water rights, (b) the Tribe's cultural resources; and (c) the Tribe's religious exercise, as set forth in further detail below.

a. The Keystone XL Pipeline Poses a Serious Threat to the Tribe's Treaty Rights and Reserved Water Rights

The proposed Keystone XL Pipeline is proposed to be sited in areas that affect aquifers, watersheds, and tributaries that are hydrologically connected to the waters that affect Cheyenne River Sioux Reservation lands and waters. These lands and waters have been guaranteed to us by Treaty, and the United States must act as our fiduciary in protecting them as a matter of federal law as set forth above.

In 2005, when a drought threatened the Tribe's only source of drinking water, which is drawn from an intake project at the confluence of the Cheyenne River and the Missouri River at Lake Oahe, the U.S. Army Corps of Engineers determined that a loss of this water source would devastate our Tribe. As a consequence, we are vigilant in our monitoring and stewardship of our waters. The Cheyenne River, the waterway that gives our Reservation its name, constitutes the southern border of our Reservation and flows into the Missouri River (Lake Oahe) at precisely the place where the United States has built the water intake that serves our entire Reservation. The

Cheyenne River also flows through the Black Hills and through the proposed Keystone XL Pipeline route.

The Tribe has collected water samples over many years from the Cheyenne River in an effort to protect the health, safety, and welfare of our people. These samples show levels of 16-32 pCiPl (Pico liter series per liter) in the Cheyenne River. This demonstrates that past uranium mining has, and future uranium mining will, migrate out of the resources and will not be contained. We have also seen high levels of radiation on the Moreau River, another tributary of the Missouri River, caused from past uranium mining upstream. In light of these facts, the Cheyenne River Sioux Tribe strongly opposes any and all current, new, or ongoing pipeline projects in lands and waters that affect our Reservation.

Importantly, the current analyses of the Keystone XL Pipeline do not address the impacts of the mining activity on the Cheyenne River Sioux Tribe. There is no risk data concerning human health impact of the mine on the Cheyenne River Sioux people as it relates to the aquifers, watersheds, or tributaries that feed our Reservation. There is no analysis of impacts to fish and wildlife on our Reservation and in Lake Oahe, to which we have rights embodied in both Treaty and federal statute. There is also no analysis of impacts upon plants that we rely upon for food and medicine.

In light of its fiduciary duty to the Cheyenne River Sioux Tribe, until the Department has thoroughly evaluated the above impacts to the Tribe, any authorizations of the instant pipeline project violates federal law and would be arbitrary and capricious.

b. The Keystone XL Pipeline Poses a Serious Threat to the Tribe's Cultural Resources

The site of the proposed mine is within the Tribe's 1851 territory. Specifically it is in the vicinity of the Black Hills, among the most sacred sites to the Lakota people. Our people lived in this area, hunted in this area, and made religious pilgrimages in this area from time immemorial. Our Tribal Historic Preservation Officer advises that the site of the Keystone XL Pipeline has the potential to contain numerous sites of cultural and spiritual significance. Significantly, the proposed KXL Pipeline route directly intersects and crosses Chief Big Foot's Village, where he and many Cheyenne River Sioux camped immediately before being forced down to Wounded Knee and massacred on December 29, 1890. While it is our understanding that some efforts have been made to identify cultural resources in the project area, the Department has not consulted with the Tribe pursuant to the National Historic Preservation Act.

c. The Keystone XL Pipeline Poses a Serious Threat to the Tribe's Religious Exercise

Water is an essential aspect of the Lakota religion. It figures prominently in our theology as the origin of our creation as Lakota people and as a key aspect of how we became who we are today. In addition, water is a key component of many of our religious ceremonies. While many or our religious sacraments require either water or ritual deprivation thereof, water is an essential component of one of our most important religious sacraments, the *inipi* ceremony or sweat lodge.

Importantly, this sacrament requires that we use only water that is both environmentally and ritually pure. As noted above, the Tribe has very limited access to water on the Reservation and relies solely on water drawn from the confluence of the Cheyenne River and the Missouri River at Lake Oahe for its drinking water and which represents reserved water rights of the Tribe. Upstream contamination of these waters in which the Tribe owns reserved water rights has the very serious potential to affect the Tribe's and its members' religious exercise in violation of the Religious Freedom Restoration Act.

2. The Department must engage in meaningful government-to-government consultation with the Tribe

As described herein, the proposed Keystone XL Pipeline poses serious threats to the Tribe's reserved water rights, hunting and fishing rights, cultural and spiritual sites, and religious exercise in ways that implicate federal statutes and treaty rights. As further described herein, as a function of its fiduciary duty to the Tribe and as a matter of federal law, the Department must engage in meaningful government-to-government consultation with the Tribe on the issues discussed herein and other issues that may arise.

The Tribe looks forward to such consultation and believes that such consultation must, ***at a minimum***, encompass the following components required both by the laws cited above and by the Department's policies and guidance:

- Provide the Tribe with and explain all pertinent information concerning the impact on the Tribe's rights before consultation in a timely manner. *Yankton Sioux Tribe*, 442 F.Supp.2d at 784 (requiring agencies and departments to provide tribes with accurate information necessary to consult before a decision is made).

- Coordinate with the Tribe before consultation begins, especially with development of an agreement on consultation timelines. *See Yankton Sioux Tribe*, 442 F. Supp. 2d at 784 (requiring pre-decisional consultation).

- Consult only with Tribal representatives who have been authorized to engage in government-to-government consultation by the Tribal government. Treaty Guidance Comments at p. 4 ("Participation by particular tribal officials during . . . consultations with tribes is at the discretion of the involved tribes.").

- Make every effort to conduct Tribal consultation at the seat of Tribal government, Eagle Butte, South Dakota or elsewhere on the Cheyenne River Sioux Reservation.

- Ensure that federal participants in Tribal consultation have actual decision-making authority. Improving Tribal Consultation at p. 17 ("While staff-level dialogue is important, government-to-government consultations should involve the participation of the Federal agency decision-makers. . . .").

- Provide written confirmation that the agency has considered tribal comments and concerns and the agency's response, whether positive or negative.

- Obtain resolution of approval from the Tribe that the agency has satisfactorily consulted with the Tribe and the Tribe agrees with the agency's response to Tribal concerns in each instance. Improving Tribal Consultation at p. 18 (advising that agencies should "[s]eek to fully understand Tribal concerns, reach a consensus where possible, and when necessary, explain clearly why Tribal concerns could not be addressed").

Significantly, the Department must be aware that consultation required under the Section 106 National Historic Preservation Act concerning cultural and spiritual resources, while important, is separate from and not sufficient to meet the United States' obligation to consult about reserved water rights, treaty rights, or other religious freedom issues.

In light of the foregoing, the Cheyenne River Sioux Tribe formally requests that the Department engage in face-to-face government-to-government consultation on the Proposed KXL Pipeline and the SEIS. I have been designated as the Tribe's authorized representative for consultation, but I hope to secure the participation of members of the Tribal Council as well. Further, as discussed above, it is the Tribe's desire that consultation take place at our Tribal Headquarters in Eagle Butte, South Dakota.

Please contact our attorney, Nicole Ducheneaux, at 402-333-4053 to arrange this consultation.

Very Truly Yours,

Harold Frazier
Chairman, Cheyenne River Sioux Tribe

cc: Ted Kill

A.2 AGENCIES

The Department, on behalf of the Department and BLM, invited the following agencies to participate as cooperating agencies for preparation of this SEIS:

FEDERAL AGENCIES

- U.S. National Park Service (NPS)
- Pipeline and Hazardous Materials Safety Administration (PHMSA)
- U.S. Army Corps of Engineers (USACE)
- U.S. Department of Agriculture (USDA), Rural Utilities Service
- U.S. Fish and Wildlife Service (USFWS)
- Western Power Area Administration

STATE AGENCIES

- Nebraska Department of Environmental Quality (NDEQ)

The U.S. Environmental Protection Agency (USEPA) agreed to participate in this SEIS as a coordinating agency. The Department coordinated with the USEPA during the development of the 2018 Keystone XL MAR Draft Environmental Assessment (EA), 2018 Keystone XL MAR Draft SEIS, and further coordinated telephonically and through email correspondence for this SEIS.

In addition, the Department sent scoping letters to the Advisory Council on Historic Preservation and the Nebraska State Historical Society regarding the MAR.

The following letters provide a sample of the invitation and scoping letters sent. Also included is a sample of the letter notifying agencies of the availability of the 2018 Keystone XL MAR Draft EA and the 2018 Keystone XL MAR Draft SEIS. Additionally, this section includes a letter from the Nebraska State Historic Preservation Office (SHPO) that documents approval of the process outlined in the Programmatic Agreement.

Sample Cooperating Agency Invitation Letter

United States Department of State

Bureau of Oceans and International Environmental and Scientific Affairs

Washington, D.C. 20520

May 24, 2018

Mr. Todd Yeager
U.S. Bureau of Land Management
Eastern Montana / Dakotas Office
Acting District Manager
111 Garryowen Road
Miles City, Montana 59301

Re: Cooperating Agency Request for the Environmental Assessment for the Keystone XL Mainline Alternative in Nebraska

Dear Mr. Yeager,

You are receiving this letter because your agency was a Cooperating Agency on the U.S. Department of State (Department) 2014 Final Supplemental Environmental Impact Statement for the Keystone XL Project (2014 Keystone XL Final SEIS). On March 23, 2017, Under Secretary of State for Political Affairs Thomas A. Shannon, Jr., issued a Presidential Permit to TransCanada Keystone Pipeline L.P. to construct, connect, operate, and maintain pipeline facilities at the international border of the United States and Canada as part of the Keystone XL Pipeline project. Subsequently, on November 20, 2017, the Nebraska Public Service Commission approved the Keystone XL Mainline Alternative Route (MAR) which differs from the preferred route analyzed in the 2014 Keystone XL Final SEIS. Figure 1 shows the variance of the MAR from the preferred route analyzed in the 2014 Final 2014 Keystone XL Final SEIS.

The Department is preparing an Environmental Assessment (EA) – consistent with the National Environmental Policy Act of 1969 [as implemented by the regulations of the Council on Environmental Quality, found at 40 CFR 1500–1508] – to evaluate the potential environmental impacts of the MAR in support of the Bureau of Land Management's review of a right-of-way grant pursuant to the Mineral Leasing Act of 1920. The EA will be used to determine if there are potentially significant impacts from the proposed MAR and to identify any potential mitigation measures to avoid significant adverse effects.

I am writing to invite your agency to become a Cooperating Agency on the EA. As a Cooperating Agency, you will be invited to participate in the reviews of the draft and final version of the document and included in any meetings (public or otherwise).

Please notify me in writing within 15 days of receipt of this letter of your decision. I would appreciate both positive and negative responses in writing and, if you choose to participate as a Cooperating Agency, please designate a point of contact for project correspondence. If you have any questions, please contact me at 202-647-9798 or ReillyJE@state.gov.

Sincerely,

Jill Reilly

Ms. Jill Reilly
NEPA Coordinator

Enclosures

May 24, 2018
Page 3

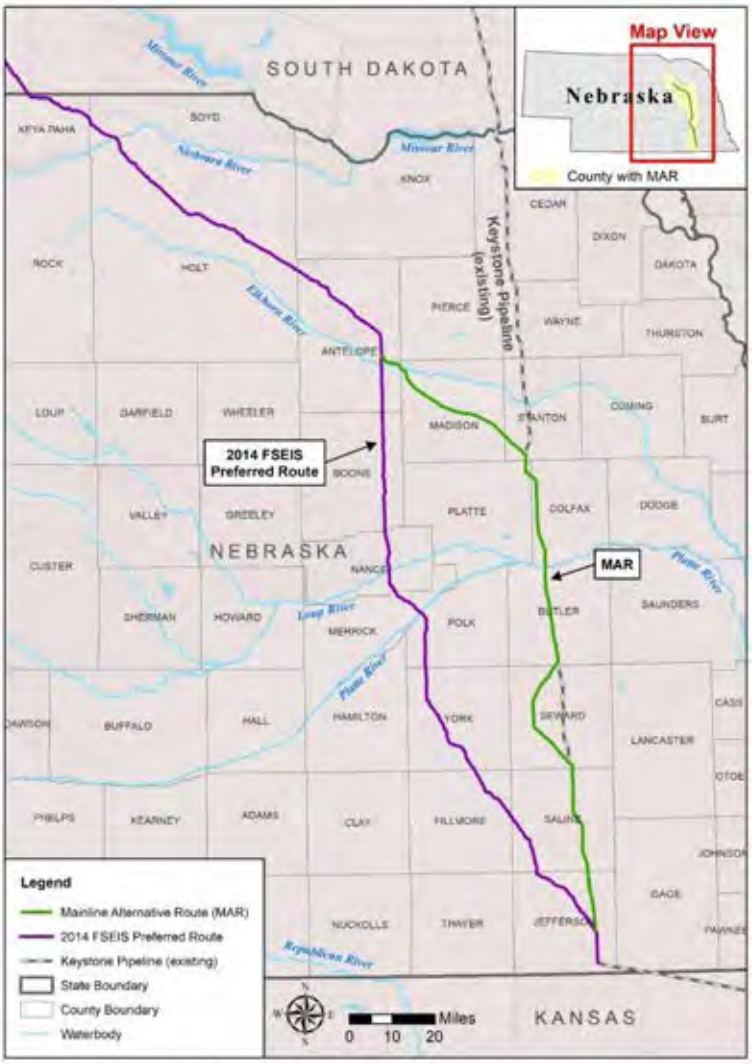

Figure 1. Mainline Alternative Route Overview Map

Sample Agency Scoping Letter

United States Department of State

Bureau of Oceans and International Environmental and Scientific Affairs

Washington, D.C. 20520

May 24, 2018

Mr. Trevor Jones
Nebraska State Historical Society
Director & State Historic Preservation Officer
P.O. Box 82554
Lincoln, Nebraska 68501-2554

Re: Environmental Assessment for the Keystone XL Mainline Alternative in Nebraska

Dear Mr. Jones,

On November 20, 2017, the Nebraska Public Service Commission approved the Mainline Alternative Route (MAR) in Nebraska. The U.S. Department of State (Department) is preparing an Environmental Assessment (EA) – consistent with the National Environmental Policy Act of 1969 [as implemented by the regulations of the Council on Environmental Quality, found at 40 CFR 1500–1508] – to evaluate the potential environmental impacts of the MAR in support of the Bureau of Land Management's review of a right-of-way grant pursuant to the Mineral Leasing Act of 1920.

I am writing to invite your agency to submit any scoping comments to assist the Department in identifying environmental and other relevant issues, any measures that might be adopted to reduce the proposed MAR's environmental impacts, and other information relevant to your agency's jurisdiction in determining the scope of the EA. Please provide me with any comments regarding the proposed MAR within 30 days of receipt of this letter. Additional background information and a project location map are provided within this letter.

If you have any questions, require additional information, or would like to discuss this matter further, please contact me at 202-647-9798 or ReillyJE@state.gov.

Sincerely,

Jill Reilly

Ms. Jill Reilly
NEPA Coordinator

Enclosures

Supplementary Information: On January 26, 2017, TransCanada Keystone Pipeline L.P. resubmitted its Presidential Permit application to the Department for the proposed Keystone XL pipeline facilities. Subsequently, on March 23, 2017, Under Secretary of State for Political Affairs Thomas A. Shannon, Jr., issued a Presidential Permit to TransCanada Keystone Pipeline L.P. to construct, connect, operate, and maintain pipeline facilities at the international border of the United States and Canada as part of the Keystone XL Pipeline project. Subsequently, on November 20, 2017, the Nebraska Public Service Commission approved the MAR which differs from the preferred route analyzed in the 2014 Final Supplemental Environmental Impact Statement for the Keystone XL Project (2014 Keystone XL Final SEIS). Figure 1 shows the variance of the MAR from the preferred route analyzed in the 2014 Final 2014 Keystone XL Final SEIS.

The proposed MAR is approximately 162 miles of new 36-inch-diameter pipeline and related ancillary facilities (pump stations, mainline valves, and permanent access roads) for transport of Western Canadian Sedimentary Basin and Bakken crude oil through the State of Nebraska to existing pipeline facilities near Steele City, Nebraska, for onward delivery to refineries in the Gulf Coast area. Construction would employ similar methods as discussed in the 2014 Keystone XL Final SEIS and require a 110-foot-wide temporary right-of-way and generally require a maintained a 50-foot wide permanent right-of-way easement.

May 24, 2018
Page 3

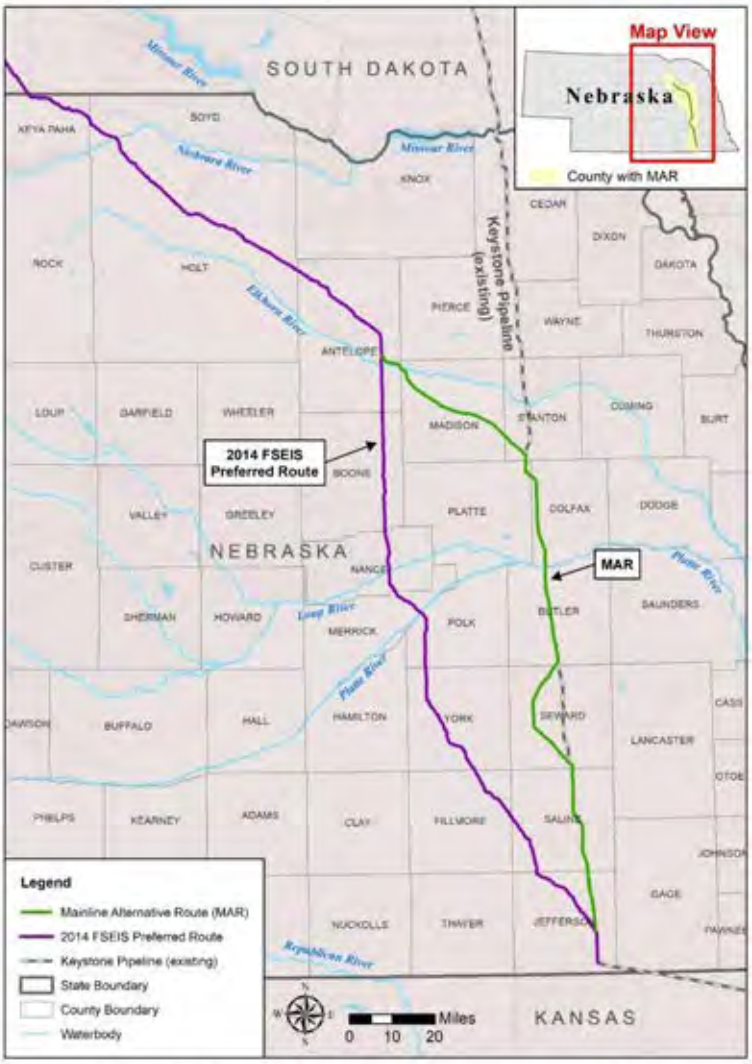

Figure 1. Mainline Alternative Route Overview Map

Sample 2018 Keystone XL MAR Draft EA Notification Letter

United States Department of State

Bureau of Oceans and International Environmental and Scientific Affairs

Washington, D.C. 20520

July 26, 2018

Mr. Trevor Jones
Director & State Historic Preservation Officer
Nebraska State Historical Society
1500 R Street
Lincoln, Nebraska 68501-1651

Dear Mr. Jones,

This letter serves as notification that the United States Department of State (Department) Draft Environmental Assessment (EA) for the proposed Keystone XL Pipeline Mainline Alternative Route (MAR) in Nebraska is available online at the Department's website https://keystonepipeline-xl.state.gov/ for public review and comment. The Department has identified you as a point of contact for your organization, and as such, requests that you forward this notification to other interested individuals within your organization.

The Department prepared the Draft EA to evaluate the potential environmental impacts of the proposed Keystone XL MAR – consistent with the National Environmental Policy Act of 1969 – in support of the Bureau of Land Management's (BLM) review of TransCanada Keystone Pipeline, L.P.'s (Keystone) application for a right-of-way.

The MAR was included by Keystone as an alternative to its Preferred Route in their February 16, 2017 application to the Nebraska Public Service Commission (Nebraska PSC) seeking approval for the Keystone XL Project. Keystone's Preferred Route was considered in the Department's 2014 Final Supplemental Environmental Impact Statement for the Keystone XL Project (2014 Keystone XL Final SEIS). After reviewing Keystone's application, the Nebraska PSC approved the MAR on November 20, 2017. Keystone's application to BLM for a right-of-way remains pending with that agency. This EA will be used to determine if there are potentially significant impacts from the proposed MAR and to identify any potential mitigation measures to avoid significant adverse effects.

Under the Proposed Action, Keystone would construct the portion of the Keystone XL Project in Nebraska along the MAR. This would include approximately 162 miles of construction, connection, operation and maintenance along the MAR of the proposed new 36-inch diameter pipeline and related ancillary facilities within Nebraska that were not analyzed within the 2014 Keystone XL Final SEIS.

The 30-day public comment period ends on August 29, 2018. Comments received or postmarked by August 29, 2018 will be considered in preparing the Final EA. Comments may be submitted online at http://www.regulations.gov by entering "Mainline Alternative Route" into the search field and following the prompts. Comments submitted by mail should be addressed to: Mr. Marko Velikonja, U.S. Department of State, Office of Environmental Quality and Transboundary Issues (EQT), Bureau of Oceans and International Environmental & Scientific Affairs (OES), 2201 C Street NW, Room 2726, Washington, DC 20520. Comments should be identified as intended for the Draft EA for the Keystone XL Mainline Alternative Route Project.

Comments are not private and may be posted online and/or published in the Final EA. The comments will not be edited to remove identifying or contact information, and the Department cautions against including any information that one does not want publicly disclosed.

If you require additional information or have any questions, please contact Mr. Velikonja at velikonjamg@state.gov.

Thank you for your interest in the MAR and the Draft EA.

Sincerely,

Mr. Marko Velikonja
Program Manager

Sample 2018 Keystone XL MAR Draft SEIS Notification Letter

United States Department of State

Bureau of Oceans and International Environmental and Scientific Affairs

Washington, D.C. 20520

September 17, 2018

Mr. Trevor Jones
Director & State Historic Preservation Officer
Nebraska State Historical Society
1500 R Street
Lincoln, Nebraska 68501-1651

Dear Mr. Jones,

This letter serves as notification that the United States Department of State (Department) Draft Supplemental Environmental Impact Statement (SEIS) for the proposed Keystone XL Pipeline Mainline Alternative Route (MAR) in Nebraska will be available online at the Department's website https://keystonepipeline-xl.state.gov/ for public review and comment beginning September 21, 2018. The Department has identified you as a point of contact for your organization, and as such, requests that you forward this notification to other interested individuals within your organization.

The Department prepared the Draft SEIS in response to the United States District Court, District of Montana's order to supplement the 2014 Keystone XL Final SEIS to evaluate potential impacts of the proposed MAR and related facilities. In July 2018, the Department published a notice of availability regarding the availability of the Draft Environmental Assessment (EA) that analyzed the Keystone XL MAR. This Draft SEIS, based on the 2018 July Draft EA, evaluates the potential environmental impacts of the proposed Keystone XL MAR – consistent with the National Environmental Policy Act of 1969 – in support of the Bureau of Land Management's (BLM) review of TransCanada Keystone Pipeline, L.P.'s (Keystone) application for a right-of-way.

The MAR was included by Keystone as an alternative to its Preferred Route in their February 16, 2017 application to the Nebraska Public Service Commission (Nebraska PSC) seeking approval for the Keystone XL Project. Keystone's Preferred Route was considered in the Department's 2014 Final Supplemental Environmental Impact Statement for the Keystone XL Project (2014 Keystone XL Final SEIS). After reviewing Keystone's application, the Nebraska PSC approved the MAR on November 20, 2017. Keystone's application to BLM for a right-of-way remains pending with that agency. This SEIS will be used to determine if there are potentially significant impacts from the proposed MAR and to identify any potential mitigation measures to avoid significant adverse effects.

Under the Proposed Action, Keystone would construct and operate the portion of the Keystone XL Project in Nebraska along the MAR. This would include approximately 162 miles of construction, connection, operation and maintenance along the MAR of the proposed new 36-inch diameter pipeline and related ancillary facilities within Nebraska that were not analyzed within the 2014 Keystone XL Final SEIS.

The 45-day public comment period ends on November 5, 2018. Comments received or postmarked by November 5, 2018 will be considered in preparing the Final SEIS. As previously indicated, the Department prepared a Draft EA regarding the MAR and published a notice of availability that announced availability of the Draft EA in the Federal Register (FR) (83 FR 36659) on July 30, 2018. The public comment period for the Draft EA extended from July 30 to August 29, 2018. The Department will also consider comments received on the Draft EA in the Final SEIS document.

Beginning September 21, 2018, comments may be submitted online at http://www.regulations.gov by entering "Mainline Alternative Route" into the search field and following the prompts. Comments submitted by mail should be addressed to: Mr. Marko Velikonja, U.S. Department of State, Office of Environmental Quality and Transboundary Issues (EQT), Bureau of Oceans and International Environmental & Scientific Affairs (OES), 2201 C Street NW, Room 2726, Washington, DC 20520. Comments should be identified as intended for the Draft SEIS for the Keystone XL Mainline Alternative Route Project.

Comments are not private and may be posted online and/or published in the Final SEIS. The comments will not be edited to remove identifying or contact information, and the Department cautions against including any information that one does not want publicly disclosed.

The Department will convene a public meeting in Lincoln, Nebraska on Tuesday October 9, 2018, at the Lincoln Marriott Cornhusker Hotel, 333 South 13th Street from 4:30 PM to 7:30 PM. The purpose of the meeting is to provide an opportunity for the public to gain information about the project and talk with government officials. The meeting will be an open house format with opportunities to submit comments via hand-written comment forms, electronic comment stations, and one-on-one verbal comments to a stenographer. Please note that in the interest of the security of all attendees, certain items will not be permitted inside the public meeting space. In particular, the following items are prohibited from the meeting space: bags, weapons, bottles, air horns, mega-phones, posters, signs and alcoholic beverages. The Department intends to make a free speech area available outside the meeting space where individuals may gather with signs and posters.

If you require additional information or have any questions, please contact Mr. Velikonja at velikonjamg@state.gov.

Thank you for your interest in the MAR and the Draft SEIS.

Sincerely,

Mr. Marko Velikonja
Program Manager

Letter from the Nebraska State Historic Preservation Office (SHPO)

History NEBRASKA

Preserving the past. Building the future.

February 1, 2019

Mr. Marko Velikonja
Keystone XL Program Manager
Office of Environmental Quality and Transboundary Issues
U.S. Department of State
2201 C Street NW
Washington, DC 20520

RE:

Dear Mr. Velikonja,

This letter sets forth our expectations for how the late stages of the identification and evaluation of historic properties within the Area of Potential Effect (APE) of the Keystone XL Pipeline project will proceed according to the Programmatic Agreement that has been signed with the U.S. Department of State.

According to V.B.2.b., "In the event identification of historic properties cannot be completed for any Construction Spreads prior to construction, Keystone will develop and submit a Coordination Plan to the DOS for review and approval pursuant to Stipulation V.D. The Coordination Plan must describe the measures Keystone will use to implement and complete the identification and evaluation of cultural resources and appropriate consultation before any historic properties are adversely effected by vegetation clearing and construction activities related to that spread."

Thus far, the Keystone and its consultants have been extremely responsive to SHPO comments and we have concurred on their determinations of eligibility, and we have appreciated their efforts to move the path of the pipeline in order to avoid eligible cultural resources. If issues arise in the last number of acres of survey, we plan to hold them to their agreement to survey the line completely and to act in good faith in determining the eligibility of cultural resources that may be found, and anticipate no issues in their willingness to adhere to our agreement.

Sincerely,

Jill B. Dolberg
Deputy State Historic Preservation Officer

1500 R Street
Lincoln, NE 68508-1651
P: 402.471.3270
P: 800.833.6747
F: 402.471.3100
history.nebraska.gov

A.3 ELECTED OFFICIALS

The following is a list of elected officials from Montana, South Dakota and Nebraska that are included in the Draft SEIS distribution notification:

GOVERNORS

Governor of Montana

- Governor Steve Bullock

Governor of South Dakota

- Governor Kristi Noem

Governor of Nebraska

- Governor Pete Rickets

MEMBERS OF U.S. CONGRESS

Montana

- Senator Steve Daines
- Senator Jon Tester
- Representative Greg Gianforte

South Dakota

- Senator Mike Rounds
- Senator John Thune
- Representative Dusty Johnson

Nebraska

- Senator Deb Fischer
- Senator Benjamin Sasse
- Representative Don Bacon
- Representative Jeff Fortenberry
- Representative Adrian Smith

STATE LEGISLATURE

Members of Montana Legislature

- Senator Kenneth Bogner
- Senator Steve Hinebauch
- Senator Mike Lang
- Senator Frank Smith
- Representative Alan Doane
- Representative Casey Knudsen
- Representative Rhonda Knudsen
- Representative Joel Krautter
- Representative Frederick Moore
- Representative Bridget Smith
- Representative Jonathan Windy Boy

Members of South Dakota Legislature

- Senator Rocky Blare
- Senator Gary L. Cammack
- Senator Red Dawn Foster
- Senator Troy Heinert
- Senator Ryan M. Maher
- Senator Lance Russell
- Representative Thomas J. Brunner
- Representative Kirk Chaffee
- Representative Caleb Finck
- Representative Julie Frye-Mueller
- Representative Tim Goodwin
- Representative Steve Livermont
- Representative Sam Marty
- Representative Peri Pourier
- Representative Lee Qualm
- Representative Rebecca Reimer

Members of Nebraska Legislature

- Senator Bruce Bostelman
- Senator Tom Briese
- Senator Tom Brandt
- Senator Mark Kolterman
- Senator Jim Scheer
- Senator Paul Schumacher

COUNTY COMMISSIONERS AND SUPERVISORS

Montana

- Mary Armstrong (Valley Co. – District 3)
- Steve Baldwin (Fallon Co.)
- Deanna Bockness (Prairie Co – District 2)
- Doug Buxbaum (Dawson Co. – District 3)
- John F. Carnahan (Phillips Co.)
- Bruce Christofferson (Phillips Co.)
- Todd Devlin (Prairie Co. – District 3)
- Richard Dunbar (Phillips Co.)
- John Fahlgren (Valley Co. – District 2)
- Gary Kartevold (Dawson Co. – District 1)
- James Moos (McCone Co. – District 1)
- Deb Ranum (Fallon Co.)
- Roy Rost (Fallon Co.)
- Alan Stempel (McCone Co. – District 2)
- Dennis Teske (Prairie Co. – District 1)
- Paul Tweten (Valley Co. – District 1)
- Janet Wolff (McCone Co – District 3)
- Dennis Zander (Dawson Co. – District 2)

South Dakota

- Rod Bradley (Meade Co. – District 1)
- Deb Brown (Harding Co. – District 2)
- William Clarkson (Harding Co. – District 5)
- Stephen J. Clements (Haakon Co. – District 5)
- Doreen Allison Creed (Meade Co. – District 2)
- Matt DeBow (Harding Co. – District 1)
- Mark DiSanto (Pennington Co. – District 4)
- Daniel Forgey (Tripp Co. – District 2)
- Michael M. Gebes (Haakon Co. – District 1)
- Kim Halverson (Lyman Co.)
- Wayne Henderson (Perkins Co. – District 3)
- Ryan Huffman (Lyman Co.)
- Steve Iwan (Jones Co. – District 2)
- Nick Konst (Haakon Co. – District 4)
- Bill Lengkeek (Lyman Co.)
- Richard Liggett (Meade Co. – District 5)
- Curt Littau (Tripp Co. – District 4)
- Mike Novotny (Tripp Co. – District 3)

- Steve Perry (Lyman Co.)
- Thomas J. Radway (Haakon Co. – District 3)
- Leslie Reuer (Lyman Co.)
- Kim Richards (Butte Co. – District 3)
- Marty Roghair (Jones Co. – District 3)
- Clifford Schroeder (Tripp Co. – District 5)
- Ted Seaman (Meade Co. – District 4)
- Gary Snook (Haakon Co. – District 2)
- Charles Verhulst (Harding Co. – District 4)
- Dean Wagner (Harding Co. – District 3)
- Lori Waldron (Jones Co. – District 1)
- Frank Walton (Butte Co. – District 5)
- Talbot Wieczorek (Meade Co. – District 3)

Nebraska

- Jeffrey Bauman (Colfax Co.)
- Allan Bentley (Antelope – District 3)
- Max Birkel (Butler Co. – District 4)
- John Culver (Seward – District 4)
- Michael Dux (Jefferson – District 3)
- Jerry Engdahl (Platte Co. – District 6)
- Whitney Fleischman (Seward – District 3)
- Diana Garske (Seward – District 2)
- Gene Gausman (Seward Co. – District 1)
- Roger Glawatz (Seward – District 5)
- Jerry Heard (Colfax Co.)
- Janet Hennig (Saline Co.)
- Eli Jacob (Antelope Co. – District 2)
- Gregory Janak (Butler Co. – District 6)
- Russ Karpisek (Saline Co.)
- Dennis Kment (Stanton Co. – District 2)
- Marvin Kohout (Saline Co.)
- Tony Krafka (Butler Co. – District 2)
- Stephanie Krivohlavek (Saline Co.)
- Robert Lloyd (Platte Co. – District 5)
- Willis Luedke (Saline Co.)
- David Mach (Butler Co. – District 1)
- Gerald Micek (Platte Co. – District 2)
- Thomas Martens (Platte Co. – District 1)
- Christian Ohl (Madison Co. – District 2)
- Hollie Olk (Platte Co. – District 7)
- Ronald Pfeifer (Platte Co. – District 4)
- Gale Pohlmann (Jefferson Co. – District 2)
- David Potter (Butler Co. – District 7)
- Jim Prauner (Madison Co. – District 3)
- Dean Smith (Antelope Co. – District 1)
- Ron Schmidt (Madison Co. – District 1)
- Mark Schoenrock (Jefferson Co. – District 1)
- James Scow (Platte Co. – District 3)
- Kevin Slama (Butler Co. – District 3)
- Scott Steager (Butler Co. – District 5)
- Gil Wigington (Colfax Co.)

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APPENDIX B
WESTERN AREA POWER ADMINISTRATION STANDARD CONSTRUCTION AND MITIGATION PRACTICES

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APPENDIX B. WESTERN AREA POWER ADMINISTRATION STANDARD CONSTRUCTION AND MITIGATION PRACTICES

Table B-1. Western Area Power Administration Standard Construction and Mitigation Practices

Ref. #	Standard Practices
SCP 1	The contractor shall limit the movement of its crews and equipment to the ROW, including access routes. The contractor shall limit movement on the ROW to minimize damage to grazing land, crops, or property, and shall avoid unnecessary land disturbance.
SCP 2	When weather and ground conditions permit, the contractor shall obliterate contractor-caused deep ruts that are hazardous to farming operations and to movement of equipment. Such ruts shall be leveled, filled, and graded, or otherwise eliminated in an approved manner. In hay meadows, alfalfa fields, pastures, and cultivated productive lands, ruts, scars, and compacted soils shall have the soil loosened and leveled by scarifying, harrowing, discing, or other approved methods. Damage to ditches, tile drains, terraces, roads, and other features of the land shall be corrected. Before final acceptance of the work in these agricultural areas, ruts shall be obliterated, and trails and areas that are hard-packed as a result of contractor operations shall be loosened, leveled, and reseeded. The land and facilities shall be restored as nearly as practicable to their original conditions.
SCP 3	Water bars or small terraces shall be constructed across ROW and access roads when needed to prevent water erosion and to facilitate natural revegetation.
SCP 4	The contractor shall comply with applicable federal, state, and local environmental laws, orders, and regulations. Prior to construction, supervisory construction personnel and heavy equipment operators will be instructed on the protection of cultural and ecological resources.
SCP 5	The contractor shall exercise care to preserve the natural landscape, and shall conduct its construction operations to prevent any unnecessary destruction, scarring, or defacing of the natural surroundings in the vicinity of the work. Except where clearing is required for permanent works, construction roads, or excavation operations, trees, native shrubbery, and vegetation shall be preserved and shall be protected from damage by the contractor's construction operations and equipment. To the extent practicable considering the need to protect transmission lines form encroaching vegetation and vegetation hazards (especially trees) edges of clearings and cuts through tree, shrubbery, or other vegetation would be irregularly shaped to soften the visual impact of straight lines within the ROW.
SCP 6	On completion of the work, work areas shall be scarified or left in a condition that would facilitate natural revegetation, provide for proper drainage, and prevent erosion. The contractor would repair damages resulting from the contractor's operations. Newly created access roads will be left to revegetate to height that still allows vehicle passage.
SCP 7	Construction staging areas shall be located and arranged in a manner to preserve trees and vegetation to the maximum practicable extent. Staging areas will not be placed within wetlands, including fen wetlands, riparian communities, or in proximity to surface waters. On abandonment, storage and construction buildings, including concrete footings and slabs, and construction materials and debris shall be removed from the site. The area shall be regraded as required so that surfaces drain naturally, blend with the natural terrain, and are left in a condition that will facilitate natural revegetation, provide for proper drainage, and prevent erosion.
SCP 8	Borrow pits shall be excavated so that water will not collect and stand. Before being abandoned, the sides of borrow pits shall be brought to stable slopes, with slope intersections shaped to carry the natural contour of adjacent undisturbed terrain into the pit or borrow area, giving a natural appearance. Waste piles shall be shaped to provide a natural appearance. No waste piles will occur on Forest Service Lands.

Table B-1. Western Area Power Administration Standard Construction and Mitigation Practices

Ref. #	Standard Practices
SCP 9	Construction activities shall be performed by methods that will prevent entrance, or accidental spillage, of solid matter contaminants, debris, other objectionable pollutants and wastes into streams, flowing or dry watercourses, lakes, and underground water sources. Pollutants and waste include, but are not restricted to refuse, garbage, cement, concrete, sanitary waste, industrial waste, oil and other petroleum products, aggregate processing tailing, mineral salts, and thermal pollution.
SCP 10	Dewatering work for structure foundations or earthwork operations adjacent to, or encroaching on, streams or watercourses, shall be conducted in a manner to prevent muddy water and eroded materials from entering the streams or watercourses by construction of intercepting ditches, bypass channels, barriers, settling ponds, or by other approved means. Dewatering shall comply with applicable state requirements.
SCP 11	Excavated material or other construction materials shall not be stockpiled or deposited near or on stream banks, lake shorelines, or other watercourse perimeters where they can be washed away by high water or storm runoff, or can encroach upon the actual watercourse itself.
SCP 12	Waste waters from construction operations shall not enter streams, watercourses, or other surface waters without the appropriate permits and proper implementation of applicable permit conditions, including but not limited to use of turbidity control methods as settling ponds, gravel-filter entrapment dikes, approved flocculating processes, or other approved methods. Waste waters discharged into surface waters shall be essentially free of settleable material. For the purpose of these practices, settleable material is defined as material that will settle from the water by gravity during a 1-hour quiescent detention period.
SCP 13	The contractor shall use practicable methods and devices that are reasonably available to control, prevent, and otherwise minimize discharges of air contaminants.
SCP 14	The emission of dust into the air will not be permitted during the handling and storage of concrete aggregate, and the contractor shall use methods and equipment as necessary for the collection and disposal, or prevention, of dust. The contractor's methods of storing and handling cement and pozzolans shall include means of controlling air discharges of dust.
SCP 15	Equipment and vehicles that show excessive emissions of exhaust gases due to poor engine adjustments, or inefficient operating conditions, shall not be operated until repairs or adjustments are made.
SCP 16	The contractor shall prevent nuisance to persons or damage to crops, cultivated fields, and dwellings from dust originating from his operations. Oil and other petroleum derivatives shall not be used for dust control. Speed limits shall be enforced, based on road conditions, to reduce dust problems.
SCP 17	To avoid nuisance conditions due to construction noise, internal combustion engines shall be fitted with an approved muffler and spark arrester.
SCP 18	Burning or burying waste materials on the ROW or at the construction site will be permitted if allowed by local regulations. The contractor shall remove all other waste materials from the construction area. All materials resulting from the contractor's clearing operations shall be removed from the ROW. No waste materials can be buried on NFS lands.

Table B-1. Western Area Power Administration Standard Construction and Mitigation Practices

Ref. #	Standard Practices
SCP 19	The contractor shall make necessary provisions in conformance with safety requirements for maintaining the flow of public traffic, and shall conduct its construction operations to offer the least possible obstruction and inconvenience to public traffic.
SCP 20	Western will apply necessary mitigation to eliminate problems of induced currents and voltages onto conductive objects sharing a ROW, to the mutual satisfaction of the parties involved.
SCP 21	Structures will be carefully located to avoid sensitive vegetative conditions, including wetlands, where practical. Wetlands will be crossed at a feasible location for the construction contractor and in an area where the least amount of damage would occur to the wetland community. If necessary, Western would obtain the appropriate permits from the USACE.
SCP 22	No disturbance of vegetation will occur within 100 feet of a stream, except for hazard trees. No fueling, staging or storage areas would be placed within 100 feet of wetlands, streams or riparian areas. Where possible, vehicles should avoid crossing hydric soils.
SCP 24	Topsoil will be removed, stockpiled, and respread at heavily disturbed areas not needed for maintenance access.
SCP 25	Disturbed areas not needed for maintenance access will be reseeded using mixes approved by the landowner or land management agency.
SCP 26	Erosion control measures will be implemented on disturbed areas, including areas that must be used for maintenance operations (access ways and areas around structures).
SCP 27	The minimum area will be used for access ways (generally 12 to 16 feet wide, except where roadless construction is used).
SCP 28	Leveling and benching of structure sites will be the minimum necessary to allow structure assembly, erection, and maintenance.
SCP 29	ROW will be located to use the least steep terrain.
SCP 30	Careful structure location will ensure spanning of narrow flood prone areas.
SCP 31	Structures will not be sited on potentially active faults.
SCP 32	Structure sites and other disturbed areas will be located at least 100 feet, where practical, from rivers, streams (including ephemeral streams), ponds, lakes, and reservoirs.
SCP 33	New access ways will be located at least 100 feet, where practical, from rivers, ponds, lakes, and reservoirs.
SCP 34	At crossings of perennial streams by new access ways, culverts of adequate size to accommodate the estimated peak flow of the stream will be installed. Construction areas will minimize disturbance of the stream banks and beds during construction. The mitigation measures listed for soil/vegetation resources will be performed on areas disturbed during culvert construction.
SCP 35	If the banks of ephemeral stream crossings are sufficiently high and steep that breaking them down for a crossing would cause excessive disturbance, culverts will be installed using the same measures as for culverts on perennial streams, and the applicable USAGE permits would be obtained.

Table B-1. Western Area Power Administration Standard Construction and Mitigation Practices

Ref. #	Standard Practices
SCP 36	Blasting will not be allowed.
SCP 37	Power line structures will be located, where practical, to span small occurrences of sensitive land uses, such as cultivated areas. Where practicable, construction access ways will be located to avoid sensitive conditions.
SCP 38	ROW will be purchased at fair market value and payment will be made of full value for crop damages or other property damage during construction or maintenance.
SCP 39	The power line will be designed to minimize noise and other effects from energized conductors.
SCP 41	Crossing of operating railroads by construction vehicles or equipment in a manner that would cause delays to railroad operations will be avoided. Construction will be coordinated with railroad operators. Conductors and overhead wire string operations would use guard structures to eliminate delays.
SCP 42	Before construction, Western will perform a Class III (pedestrian) cultural survey on areas to be disturbed, including structure sites and new access ways. These surveys will be coordinated with the appropriate landowner or land management agency, the State Historic Preservation Officer and Indian Tribe if on tribal lands. The survey reports and recommendations will be reviewed with the State Historic Preservation Offices and other appropriate agencies, and specific mitigation measures necessary for each site or resource will be determined. Mitigation may include careful relocation of access ways, structure sites, and other disturbed areas to avoid cultural sites that should not be disturbed, or data recovery.
SCP 43	The contractor will be informed of the need to cease work in the location if cultural resource items are discovered.
SCP 44	Construction activities will be monitored or sites flagged to prevent inadvertent destruction of cultural resource for which the agreed mitigation was avoidance.
SCP 45	Construction crews will be monitored to the extent possible to prevent vandalism or unauthorized removal or disturbance of cultural artifacts or materials from sites where the agreed mitigation was avoidance.
SCP 46	If cultural resources that were not discovered during the Class III survey are encountered during construction, ground disturbance activities at that location will be suspended until the provisions of the National Historic Preservation Act have been carried out.
SCP 47	Construction activities will be monitored or significant locations flagged to prevent inadvertent destruction of paleontological resource for which the agreed mitigation was avoidance.
SCP 48	Clearing for the access road will be limited to that necessary to permit the passage of equipment, and the safe construction, operation and maintenance of the line.
SCP 49	The access road will follow the lay of the land rather than a straight line along the ROW where steep topography would result in a higher disturbance.

Source: Western Area Power Administration. 2013. Granby Pumping Plant Switchyard – Windy Gap Substation Transmission Line Rebuild, Grand County, Colorado DOE/EIS-0400. Final Environmental Impact Statement. June 2013. Available online at https://www.energy.gov/nepa/downloads/eis-0400-final-environmental-impact-statement. Accessed February 15, 2019.

ROW = right-of-way; SCP = Standard Construction Practice; USACE = U.S. Army Corps of Engineers

APPENDIX C
TRANSMISSION LINE POPULATION DATA

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APPENDIX C. TRANSMISSION LINE POPULATION DATA

Table C-1. Minority Population and Population below Poverty Level for Census Block Groups within Two Miles of Transmission and Distribution Lines

County	Census Block Group	Square miles	Minority Population		Population Below Poverty Level	
			Percentage of Population	State Percentile	Percentage of Population	State Percentile
Montana						
Dawson	300210001001	1,209.33	5%	30th	30%	42nd
Fallon	300250001001	1,609.43	2%	11th	35%	56th
McCone	300559540001	2,671.55	12%	67th	26%	32nd
Phillips	300710602004	2,016.10	24%	87th	37%	58th
Phillips	300710602003	3,191.59	22%	86th	37%	59th
Prairie	300790001001	1,742.56	4%	24th	37%	58th
Valley	301051001001	1,596.84	6%	36th	28%	37th
Valley	301059406001	470.82	13%	73rd	35%	55th
Valley	301059406003	61.09	5%	29th	19%	15th
Valley	301051001002	1,799.96	5%	29th	21%	19th
South Dakota						
Gregory	460539711001	367.43	10%	52nd	34%	59th
Gregory	460539711002	14.90	10%	50th	51%	83rd
Gregory	460539712002	413.86	9%	49th	33%	59th
Haakon	460559601001	46.45	6%	36th	42%	75th
Haakon	460559601002	1,780.65	15%	68th	52%	83rd
Harding	460639687001	2,677.56	5%	26th	31%	53rd
Jackson	460719611001	792.08	7%	39th	26%	42nd
Jones	460750916001	971.62	5%	27th	41%	74th
Meade	460930205002	1,314.58	3%	15th	49%	81st
Perkins	461059683001	1,349.52	5%	29th	27%	45th
Perkins	461059683002	1,532.86	4%	25th	40%	72nd
Tripp	461239716002	803.31	25%	79th	36%	64th
Tripp	461239716001	781.42	2%	11th	35%	62nd

Table C-1. Minority Population and Population below Poverty Level for Census Block Groups within Two Miles of Transmission and Distribution Lines

County	Census Block Group	Square miles	Minority Population		Population Below Poverty Level	
			Percentage of Population	State Percentile	Percentage of Population	State Percentile
Nebraska						
Antelope	310039796001	200.24	7%	33rd	36%	66th
Butler	310239676002	61.21	1%	4th	23%	39th
Butler	310239676003	93.69	4%	19th	26%	47th
Colfax	310379646003	36.11	3%	14th	31%	57th
Holt	310899740001	574.88	1%	4th	19%	32nd
Holt	310899742001	117.90	5%	22nd	28%	50th
Jefferson	310959636003	234.05	5%	26th	22%	37th
Platte	311419651003	144.03	7%	33rd	25%	45th
Saline	311519607001	88.27	10%	44th	17%	28th
Seward	311599604002	114.59	10%	42nd	33%	62nd
Seward	311599604001	74.57	1%	6th	13%	19th

APPENDIX D
COMMENT RESPONSE DOCUMENT

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Acronyms

Acronym	Definition
°C	Degrees Celsius
cfs	cubic feet per second
APE	area of potential effect
BLM	Bureau of Land Management
CEQ	Council on Environmental Quality
CFR	*Code of Federal Regulations*
CMRP	Construction Mitigation and Reclamation Plan
Department	U.S. Department of State
dilbit	diluted bitumen
DRA	drag reducing agent
EA	Environmental Assessment
EIS	Environmental Impact Statement
ERP	Emergency Response Plan
FBI	Federal Bureau of Investigation
FR	*Federal Register*
GIS	geographic information system
GREET	Greenhouse Gases, Regulated Emissions, and Energy Use in Transportation
HDD	horizontal directional drill
IEA	International Energy Agency
IPCC	Intergovernmental Panel on Climate Change
Keystone	Keystone LP
MAR	Mainline Alternative Route
NEPA	National Environmental Policy Act
NGO	non-governmental organization
NRHP	National Register of Historic Places
OSLTF	Oil Spill Liability Trust Fund
PHMSA	Pipeline and Hazardous Materials Safety Administration
ROW	right-of-way
RUS	Rural Utilities Service
SCADA	Supervisory Control and Data Acquisition
SDS	Safety Data Sheet
SEIS	Supplemental Environmental Impact Statement
TSA	Transportation Security Administration
U.S.	United States
USACE	U.S. Army Corps of Engineers
USC	*U.S. Code*
USEPA	U.S. Environmental Protection Agency
USFWS	U.S. Fish and Wildlife Service
WAPA	Western Area Power Administration
WCSB	Western Canadian Sedimentary Basin

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APPENDIX D – COMMENT RESPONSE DOCUMENT

D.1 INTRODUCTION

The United States (U.S.) Department of State (Department) published the 2019 Draft Supplemental Environmental Impact Statement (SEIS) for the Keystone XL Project on October 4, 2019. This SEIS supplements the Department's 2014 Final Supplemental Environmental Impact Statement for the Keystone XL Project (2014 Keystone XL Final SEIS), considers the direct, indirect and cumulative impacts related to changes in the Project since 2014 and incorporates the following updated information and new studies:

- Update to the market analysis considering the effects of current market conditions and the viability of the proposed Keystone XL Project.
- Analysis of the Mainline Alternative Route (MAR), including existing resources, the potential for environmental impacts, and identification of any potential mitigation measures to address environmental impacts.
- New information related to the Keystone XL Project, including studies conducted of the proposed Keystone XL pipeline's crossing of the Missouri River (a site-specific risk assessment conducted for the Missouri River crossing and the U.S. Army Corps of Engineers (USACE) Missouri River scour analysis), sensitive species surveys and agency data, and findings of cultural surveys completed since 2014.
- Revised methodology and analysis for greenhouse gas emissions using recently published lifecycle greenhouse gas emissions studies for Western Canadian Sedimentary Basin (WCSB) and other crude oils as well as the Greenhouse Gases, Regulated Emissions, and Energy Use in Transportation (GREET) Model, and reevaluation of projected cumulative emissions using updated crude oil production and consumption estimates (e.g., U.S. Energy Information Administration, Canadian Association of Petroleum Producers, and Canada National Energy Board projections). The analysis also considers recent climate change reports, including the U.S. Global Change Research Program's Fourth National Climate Assessment and the Intergovernmental Panel on Climate Change (IPCC) Special Report on Global Warming of 1.5 degrees Celsius (^{o}C).
- Revised methodology for accidental releases, including updated modeling to account for industry- and Keystone-specific incident history since 2014, the latest findings and research related to accidental release of crude oil, an updated analysis of potential for impacts from overland spills to sensitive resources along the entire alignment, and an updated analysis of potential for impacts to downstream receptors within 40 river-miles from the pipeline along connected hydraulic pathways.
- Additional supporting analysis of electrical transmission and distribution lines required to support pipeline operations, including existing resources, the potential environmental effects, and identification of any potential mitigation measures to address the adverse environmental effects.

The Bureau of Land Management (BLM), Rural Utilities Service (RUS), Western Area Power Administration (WAPA) and USACE will use findings in the Final SEIS among other information in consideration of their Federal Decisions:

- BLM's Federal Decision includes whether to approve, approve with modification or deny issuance of a right-of-way (ROW) grant and Temporary Use Permit to Keystone under Section 28 of the Mineral Leasing Act for the proposed Keystone XL pipeline, and if approved, under what terms and conditions. The ROW grant and Temporary Use Permit would cover the 44.4 miles of BLM land in Montana and the lands administered by USACE.

- WAPA's Federal Decision includes whether to approve or deny electric cooperative interconnection requests and to complete any necessary work to WAPA's infrastructure to accommodate the interconnections. These interconnection requests are for Pump Station 9 through 13 in Montana and Pump Station 17 through 19 and 21 in South Dakota.

- RUS's Federal Decision includes whether to provide federal financing to electric cooperatives for the construction, operation and improvement of electric transmission and generation facilities in rural areas. This includes electric cooperatives in South Dakota which have applied for RUS financing for the construction of power lines to deliver power to Pump Stations 15 through 21.

- USACE's Federal Decision is whether USACE may allow the BLM to include 1.88 miles of federal land administered by USACE for the Fort Peck Project in a ROW granted by BLM to Keystone for the installation of the proposed Keystone XL Pipeline on Fort Peck Project land. USACE also anticipates receiving and acting upon applications submitted by Keystone pursuant to Section 404 of the Clean Water Act of 1972 (33 *U.S. Code* [USC] 1344).

The Department issued a Notice of Intent on December 3, 2018, announcing its intent to prepare a new SEIS in response to the Federal District Court for the District of Montana order for the Department to supplement the analysis in the 2014 Keystone XL Final SEIS relating to greenhouse gas emissions, accidental release of crude oil, cultural resources, and market analysis. Consistent with the National Environmental Policy Act (NEPA), the Department solicited public comments on the Draft SEIS during a 45-day public comment period beginning October 4, 2019 and closing November 18, 2019. The Department considered comments received during the public comment period in the Final SEIS document.

This Comment Response Document summarizes the 2019 Keystone XL Draft SEIS public review process and provides information on and responses to, the comments received during the 45-day public comment period on the Draft SEIS. The Comment Response Document is organized into the following sections:

- **Section D.2** presents an overview of the public review and comment process initiated by the Department by announcing the availability of the Draft SEIS and soliciting public comments. It also presents the number of comments submitted during the public comment period by entity, submission method, and disposition of comment (either in support, against, or neutral to the Proposed Action); and describes the processing and delineation of comments received.

- **Section D.3** outlines the major themes associated with comments received during the comment period.

- **Section D.4** provides Department responses to the major themes outlined in Section D.3.

- **Section D.5** lists the references cited in this appendix.

Appendix E of this SEIS provides copies of the formal comments received from federal agencies, Indian tribes, elected officials and non-governmental organizations (NGOs). In addition, Appendix E includes a copy of the oral comments transcribed during the October 29, 2019 public meeting in Billings, Montana and provides sample notices regarding availability of the Draft SEIS and the public comment period. All comments submitted online are available for viewing at www.regulations.gov by searching ID DOS-2019-0033-0001.

D.2 AGENCY AND PUBLIC REVIEW AND COMMENT PROCESS

D.2.1 Notifications, Distribution and Public Meeting

The Department published a Notice of Availability in the *Federal Register* (FR) (84 FR 53215) on October 4, 2019 to announce availability of the Draft SEIS and to solicit public comments over a 45-day period and announce a public meeting in Billings, Montana. The Department also placed Draft SEIS notifications in the following newspapers:

Montana

- Billings Gazette
- Fallon County Times
- Ranger-Review
- The Terry Tribune
- Philips County News

South Dakota

- Rapid City Journal
- Faith Independent Newspaper
- The Pioneer Review
- Lyman County Herald

Nebraska

- Lincoln Journal Star
- Omaha World Herald

Along with the FR and newspaper notifications, the Department sent letters to notify stakeholders and potentially interested parties (see Table D-1). The notifications contained a link to an electronic version of the document posted on the Department's website and announced the availability of hard copies at libraries along the pipeline route. Appendix E contains sample notifications.

Table D-1. Draft SEIS Notification

Notification Method	Quantity
Letter	245
Newspaper	11
Library	26
Total Notifications	**282**

The distribution of the Draft SEIS included notifications to 11 federal elected officials, 67 Indian tribes, 36 state elected officials, 37 federal agencies (including regional offices), 2 state agencies, and 86 local elected officials. The Department provided hard copies of the Draft SEIS to the BLM and U.S. Environmental Protection Agency (USEPA) and to 26 libraries.

As part of the review process, the Department hosted a public meeting for the Draft SEIS scheduled from 4:30 PM to 7:30 PM at the Billings Hotel & Convention Center in Billings, Montana. The meeting was an open house format. The purpose of the meeting was to collect verbal, written and electronic comments from members of the public and to provide an opportunity for members of the public to gain information about the project and speak with Department representatives and subject matter experts.

D.2.2 Comment Submission Summary

The Department has considered all comments received on the Draft SEIS public comment period in the Final SEIS document. Prior to this SEIS, the Department prepared a Draft Environmental Assessment (EA) and Draft SEIS regarding the Mainline Alternative Route (MAR). Comments received on the MAR Draft EA and MAR Draft SEIS were considered during preparation of the 2019 Keystone XL Draft SEIS. This Appendix focuses on comments received during the 2019 public comment period. During the public comment period, the Department received comments by means of the following submission methods:

- handwritten comments – mailed to the Department or submitted during the public meeting;
- e-mail comments – through e-mail to the Department;
- www.regulations.gov comments – submitted via www.regulations.gov; and
- oral comments – to a stenographer at the public meeting.

The public comment period closed on November 18, 2019 but the Department considered late comments including 45 emailed comments and 308 mailed comments. The Department considers each individual's or entity's submittal as one comment submission. Table D-2 provides a summary of the number of comment submissions received by each entity type (i.e., elected official, federal agency, state agency, tribal government, NGO or advocacy group, or the general public) and the type of submission (i.e., written, electronic or oral).

Table D-2. Comment Submission Method

Entity	Method				TOTAL
	Written	E-mail	Regulations.gov	Oral	
Elected Official	2	2	4	10	**18**
Federal Agency	0	2	2	0	**4**
State Agency	0	0	0	0	**0**
Tribal Government	4	3	11	3	**21**
NGO/Advocacy Group	8	3	40	3	**54**
General Public	353	1,152	1,097	13	**2,615**
TOTAL	**367**	**1,162**	**1,154**	**29**	**2,712**

Note: The total value includes instances of duplicate comment submissions; of the comments received, 28 comment submissions were noted to be duplicates, meaning the same commenter submitted an identical comment via more than one of the comment submission methods.

NGO = non-governmental organization

NGOs and advocacy groups submitted campaigns that involved either a single submission backed by numerous signatories or multiple submissions of the same comment. Table D-3 provides the NGO and advocacy group names and the number of signatories for each campaign. There was a total of 165,249 signatories in opposition of the Proposed Action. No campaigns were received in support of the Proposed Action.

Table D-3. Non-Governmental Organizations and Advocacy Groups

Group Name	Number of Signatories
Action Network	1,150
350.org	19,480
350 Montana	63
Bold Nebraska	7,451
Center for Biological Diversity	20,068
Climate Writers	6
CREDO Action	33,222
Families for a Liveable Climate	8
Friends of the Earth	36,996
Indigenous Environmental Network	1,132
Native American Rights Fund	85
Natural Resources Defense Council	33,063
Oil Change International	1,891
Oil Change U.S.	10,340
Unnamed Group	294
TOTAL SIGNATORIES	**165,249**

D.2.3 Processing and Delineation of Comments

As indicated in Table D-2, the Department received a total of 2,712 comment submissions. The Department first processed the comments by recording the commenter name and organization, date of submission and method of submission. The Department reviewed each submission to determine its general tone or disposition (support, opposition or neutral). Table D-4 presents the number of submissions, categorized as either in support of the Proposed Action, in opposition to the Proposed Action or neutral. The Department characterized a submission as neutral if it did not have a supportive or oppositional tone, such as a submission that only requested a hardcopy of the document or to be added to the distribution list.

Table D-4. Comment Submission Tone

Comment Submission Tone	Quantity
In Opposition	**2,284**
In Support	**100**
Neutral	**328**
TOTAL SUBMISSIONS	**2,712**

The Department continued to process each submission by delineating individual or unique comments contained within the submission. For example, if a member of the public submitted one letter regarding the Draft SEIS that contained one comment on the public comment period, three comments on the accidental release methodology and two comments on the market analysis, the submission was treated as containing six unique comments. Therefore, the total number of comments when delineated by topic received on the Draft SEIS is greater than the number of submissions presented in Table D-2, as many submissions include multiple unique comments. Section D.3 provides a discussion of the major topics (themes) and sub-themes received during the comment period on the Draft SEIS.

D.3 MAJOR COMMENT THEMES

Based on a review of all the comment submissions, the Department developed "major comment themes" to facilitate an effective way to respond to the comments with detailed information and a focused discussion without redundancy. For example, commenter A may generally question the need for the project; commenter B may question Keystone's need, specifically referencing the projected decline in global oil demand in Section 1.4 of the SEIS under the Sustainable Development Scenario; and commenter C may question the accuracy of the market conditions assessment cited to provide a basis for the need. The "Purpose and Need" theme would contain a detailed response collectively addressing each of these related comments, while providing commenter A with perhaps more information regarding the purpose and need than their original comment would necessitate.

Table D-5 presents the major themes and sub-themes in which the Department received substantive comments. This table also provides the location(s) in the SEIS where the topic is discussed and lists comment sub-themes related to the central topic.

As shown in Table D-5, the Department further divided most themes into sub-themes, to assist in organizing and responding to the wide range of comments received under each broad theme. For example, comments regarding the overall methodology used for the accidental releases analysis are addressed under *ACR Sub-theme 5-3 – Methodology and Assumptions*. Other comments express concerns related to potential impacts to water resources in the event of a spill, and these are addressed under *ACR Sub-theme 5-9 – Impacts to Water Quality*. Thus, the Department classified each substantive comment with a major theme, as well as the relevant sub-theme(s). Section D.4 of this document includes detailed responses to each of the themes and sub-themes presented in Table D-5.

Table D-5. Major Comment Themes

Theme	SEIS Location	Sub-Themes
Purpose and Need (P&N)	Chapter 1	• General (1-0) • NEPA Process (1-1) • Quality of 2014 SEIS and Request for a New Analysis (1-1a) • Quality of the Current SEIS Analysis (1-1b) • Public Outreach General (INV) (1-2) • Public Comment Period (INV) (1-2a) • Public Meeting (INV) (1-2b) • Consultation with Tribes (INV) (1-2c) • Market Conditions (MKT) (1-3)
Proposed Action (PRO)		• Pipeline Alignment (2-1) • Construction (2-2) • Decommissioning (2-3)
Alternatives (ALT)	Chapter 2	• Alternatives Dismissed (*e.g., renewables*) (2-4) • Alternatives Development (2-5)
Affected Environment (AFF)	Chapters 3, 6	• Data Sources (3-0)
Land Use, Recreation and Visual Resources (LAN)	Sections 3.2, 4.2, 5.5.2, 6.4.7	• Conclusions (4-2)
Air Quality (AIR)	Sections 3.4, 4.4, 5.5.4	• Conclusions (4-4)
Water Resources (WAT)	Sections 3.6, 4.6, 5.5.6, 6.4.2, 6.4.3	• Impact Methodology and Assumptions (4-6a) • Conclusions (4-6b) • Aquifers (4-6c) • HDD and Frac-Out (4-6d)

Table D-5. Major Comment Themes

Theme	SEIS Location	Sub-Themes
Biological Resources (BIO)	Sections 3.7, 4.7, 5.5.7, 6.4.4, 6.4.5, 6.4.6	• Impact Methodology (4-7a) • Conclusions (4-7b) • Protected Species Impacts (4-7c)
Socioeconomics and Environmental Justice (SOC)	Sections 3.8, 4.8, 5.5.8, 6.4.9	• Impact Methodology and Assumptions (4-8a) • Conclusions (4-8b) • Eminent Domain (4-8c) • Impacts to Tribal Resources of Significance (*e.g., Ponca Trail of Tears, Sacred Sites*) (4-8d) • Impacts to Tribal Way of Life (4-8e) • SOC Sub-Theme – Economy (4-8f) • SOC Sub-Theme – Jobs (4-8g)
Cultural Resources (CUL)	Sections 3.9, 4.9, 5.5.9, 6.4.10	• Study Area (3-9a) • Impact Methodology and Assumptions (4-9a) • Conclusions (4-9b) • Programmatic Agreement (4-9c) • Tribal Involvement (4-9d) • Unsurveyed Locations (4-9e)
Greenhouse Gases (GHG)	Sections 3.10, 4.10, 5.5.10	• General (3-10) • Impact Methodology and Assumptions (4-10a) • Conclusions (4-10b) • Lifecycle Emissions (4-10c) • Climate Change Effects (4-10d)
Accidental Releases (ACR)	Chapter 5	• General (5-0) • Guiding Principles, Policies, Regs and Laws (5-1) • Methodology and Assumptions (5-2) • TC Energy[a] Track Record on Spills and Cleanup (5-3) • Conclusions (5-4) • Mitigation, Response and Remediation (5-5) • Pipeline Safety (5-6) • Human Health and Safety (5-7) • Impacts to Water Quality (5-8) • Impacts to Tribal Rights and Resources (5-9) • Drinking Water Intake (5-10) • Riverbed Scour and Sufficiency of Burial Depth (5-11)
Electrical Power Infrastructure (EPI)	Chapter 6	• Proposed Infrastructure (6-0) • Suggested Clarification to Analysis (6-1) • Socioeconomics (6-2) • Tribal Lands (6-3) • Avian Collisions (6-4)
Cumulative Impacts (CEA)	Chapter 7	• Study Area (7-1) • Impact Methodology and Assumptions (7-2) • Conclusions (7-3) • Other Pipelines and Contribution to GHG (7-4)

[a] Formerly TransCanada

HDD = horizontal directional drill; NEPA = National Environmental Policy Act; SEIS = Supplemental Environmental Impact Statement

D.4 THEMATIC COMMENT RESPONSES

This section provides a summary of each major comment theme identified in Table D-5, and a synopsis of substantive comments received for the related sub-themes. The Department provides a response to each sub-theme that includes references to relevant information presented in the SEIS and to document any changes incorporated into the Final SEIS as a result of the comments. Appendix E of the SEIS presents the formal submissions from federal agencies, Indian tribes, elected officials and NGOs. In addition, all comments submitted online are available for viewing at www.regulations.gov by searching ID DOS-2019-0033-0001. Commenters can refer to the theme and sub-theme topics in this Appendix to view Department responses.

D.4.1 Purpose and Need (P&N)

The Department received comments related to the purpose and need for the project. This included comments regarding the NEPA process, general quality of the SEIS document and the market analysis, public outreach, and consultation with tribes. A majority of these comments involved general support or opposition of the proposed project.

Theme	SEIS Location	Sub-Themes
Purpose and Need (P&N)	Chapter 1	• General (1-0) • NEPA Process (1-1) • Quality of 2014 SEIS and Request for a New Analysis (1-1a) • Quality of the Current SEIS Analysis (1-1b) • Public Outreach General (INV) (1-2) • Public Comment Period (INV) (1-2a) • Public Meeting (INV) (1-2b) • Consultation with Tribes (INV) (1-2c) • Market Conditions (MKT) (1-3)

P&N Sub-Theme – General (1-0)

Synopsis:

These comments were general in nature and were related to opposition to or support of the Project. Opposing comments talked about the Project's history of strong project opposition, question the need of the Project, expressed concerns of the United States' dependence on oil and allowance of a foreign entity to use eminent domain, and cited general environmental, cultural, human health, and tribal concerns if the Project were approved. Those in favor of the Project cite local and regional economic benefits of the Project, the role of the Project in achieving national energy security, and environmental and safety benefits of pipeline transport versus rail and tanker.

Commenters also questioned whether the Project is within the national interest and how the Project determination changed from not being within the national interest during the Obama administration to being within the national interest during the Trump administration. Commenters additionally questioned whether the Project is in the national interest based on foreign ownership of the pipeline.

Commenters also provided general opposition comments regarding fracking, the natural gas industry, effects of brine spills and opposition to other crude oil pipelines.

Response:

The NEPA process seeks to include environmental, cultural and socioeconomic considerations into any federal agency planning or undertaking. This SEIS is prepared to objectively assess the potential impacts of the Project to provide decision-makers and other stakeholders with information needed to understand

any potentially significant environmental impacts resulting from an action, including mitigation and conservation measures warranted to protect a resource or minimize impact to a resource. Analyses are based on best available data and surveys conducted, and academic and agency research and reports to characterize the resources present within the Project area (region of influence), the potential for adverse effects, and where possible, best management practices are incorporated into the design of the Project and/or mitigation measures are included to reduce potential for adverse impacts.

Regarding comments in opposition to and in favor of the Project, the Department understands the opposing viewpoints on whether this Project should proceed and appreciates the public input in the NEPA process. The SEIS incorporates the best available data in documenting existing resources and to determine the potential adverse and beneficial effects on resources from the construction, operations and maintenance of the pipeline. This includes an updated analysis of greenhouse gas and climate change (see Section 3.10 and 4.10 of this SEIS) and accidental release of crude oil (see Chapter 5) to include updated incident rates, consideration of water intakes and tribal resources, and new information such as scour analysis along the Missouri River. Greenhouse Gases (GHG) and Accidental Release (ACR) themes and responses have additional information regarding specific comments received on these topics. This SEIS discloses both the potential for adverse and beneficial effects from construction and operation of the proposed pipeline (Chapter 4) and the probability and extent of impacts in the event of an accidental release of crude oil (Chapter 5), including consideration of both industry and TC Energy (formerly TransCanada) incident history. Section 4.8 of this SEIS and Section 4.10 and Appendix O of the 2014 Keystone XL Final SEIS contains a discussion of socioeconomic effects, including tax benefits and creation of jobs. Chapter 8 of this SEIS contains a summary of conservation measures Keystone has committed to minimize the potential for adverse effects. The Department considers comments received during the Draft SEIS comment period regarding fracking, the natural gas industry, effects of brine spills, and opposition to other crude oil pipelines unrelated to the proposed Project, and therefore, out of scope for consideration in the SEIS.

Regarding the national interest, the issuance of a new cross-border permit for the Keystone XL pipeline by the President on March 29, 2019, revoked the 2017 permit, national interest determination and record of decision for the Keystone XL pipeline.

See the Alternatives (ALT) theme and 2-4 and 2-5 sub-themes for comments and responses related to consideration of renewable energy and transportation by rail as alternatives to the proposed pipeline.

P&N Sub-Theme – NEPA Process (1-1)

Synopsis:

Commenters questioned the validity of the NEPA process under political pressures and the timing of Keystone's need to build the pipeline.

Response:

The Department prepared this SEIS consistent with NEPA. Table 1-2 in this SEIS outlines the summary of major actions, including highlights of the NEPA process related to the proposed Keystone XL pipeline. The original permit application was submitted by Keystone in 2008 with subsequent NEPA analysis and field studies occurring over an 11-year span.

P&N Sub-Theme – Quality of the 2014 SEIS and Request for a New Analysis (1-1a)

Synopsis:

Comments on the Draft SEIS stated the analysis did not incorporate new information or studies. They referred to the 2018 U.S. District Court for the District of Montana ruling regarding deficiencies of the 2014 Keystone XL Final SEIS and the need for a new analysis.

Response:

The proposed route in Montana, South Dakota and Nebraska (excluding the MAR) is largely unchanged from what was presented in the 2011 Final Environmental Impact Statement (EIS), except for minor route modifications. Those minor shifts are described in 2014 Keystone XL Final SEIS Table 2.1-2. As a result, the Department decided to prepare a focused supplemental NEPA document to include analysis of changes in the Project since 2014 and new information to address the four deficiencies identified by the U.S. District Court for the District of Montana: the effects of current oil prices, cumulative effects of greenhouse gas emissions, cultural resources, and accidental release modeling.

Specifically (as stated in Chapter 1), the SEIS includes the following updated information and new studies:

- Update to the market analysis considering the effects of current market conditions and the viability of the proposed Keystone XL Project.
- Analysis of the MAR, including existing resources, the potential for environmental impacts, and identification of any potential mitigation measures to address environmental impacts.
- New information related to the Keystone XL Project, including studies conducted of the proposed Keystone XL pipeline's crossing of the Missouri River (a site-specific risk assessment conducted for the Missouri River crossing and the USACE Missouri River scour analysis), sensitive species surveys and agency data, and findings of cultural surveys completed since 2014.
- Revised methodology and analysis for greenhouse gas emissions using recently published lifecycle greenhouse gas emissions studies for WCSB and other crude oils as well as the GREET Model, and reevaluation of projected cumulative emissions using updated crude oil production and consumption estimates (e.g., U.S. Energy Information Administration, Canadian Association of Petroleum Producers, and Canada National Energy Board projections). The analysis also considers recent climate change reports including the U.S. Global Change Research Program's Fourth National Climate Assessment and the IPCC Special Report on Global Warming of 1.5ºC.
- Revised methodology for accidental releases, including updated modeling to account for industry and Keystone-specific incident history since 2014, the latest findings and research related to accidental release of crude oil, an updated analysis of potential for impacts from overland spills to sensitive resources along the entire alignment, and an updated analysis of potential for impacts to downstream receptors within 40 river-miles from the pipeline along connected hydraulic pathways.
- Additional supporting analysis of electrical transmission and distribution lines required to support pipeline operations, including existing resources, the potential environmental effects, and identification of any potential mitigation measures to address the adverse environmental effects.

This Final SEIS has also been updated to include additional information received during the public comment period. This includes additional information regarding the tribal consultation process (see SEIS Section 3.9 and P&N sub-theme 1-2c), the market analysis (see SEIS Section 1.5 and P&N sub-theme 1-3), tribal resources (see SEIS Sections 3.8 and 4.8 and SOC sub-themes 4-8d and 4-8e), and the accidental releases analysis (see SEIS Chapter 5 and ACR sub-themes 5-0 through 5-14). The Final SEIS also contains conservation measures outlined within the USFWS Biological Opinion (see SEIS Section 4.7 and BIO sub-theme 4-7c).

P&N Sub-Theme – Quality of the Current Draft SEIS (1-1b)

Synopsis:

Comments on the Draft SEIS suggested the 2019 document places too much emphasis on the MAR and that the entire alignment should undergo a new analysis with updated studies and information. Comments stated the Draft SEIS ignores all previous studies suggesting that the proposed Project will cause devastating harm to the earth's climate, to Indigenous communities along the pipeline route and downstream of river crossings, and the analysis lacks consideration of historic properties, tribal sacred sites, and burial grounds. A commenter also suggested that natural resource depletion should be analyzed within the SEIS, considering the sustainability of the Project as it extracts and depletes natural resources. A request was also made for the Department to revise and recirculate the SEIS for public comment based on deficiencies.

Response:

Regarding scope of the new analysis in this SEIS, although the focus is on the MAR which had not been previously analyzed in the 2014 Keystone XL Final SEIS, the Department also considered new information which extended beyond the MAR including biological survey data, cultural resource surveys, updates to incident rates and market conditions, and greenhouse gas and climate change (see P&N sub-theme 1a for additional information). Additionally, throughout the NEPA process, the Department worked with tribes to identify Traditional Cultural Properties, including sacred sites. This coordination dates to the preparation of the original 2011 Keystone XL Final EIS and continues today through the Programmatic Agreement. See response to SOC sub-themes 4-8d and 4-8e and CUL sub-theme 4-9c regarding impacts to tribal resources of significance and a discussion of the existing Programmatic Agreement and response to P&N sub-theme 1-2c regarding the history of tribal consultation.

Regarding natural resource depletion, Appendix N of the 2014 Keystone XL Final SEIS and Chapter 9 of this SEIS contains a discussion of irreversible and irretrievable commitments of resources from implementation of the proposed Project. This includes consideration of irreversible resource commitments involving loss of the resource and the effect that the loss would have on future generations. It also includes consideration of irretrievable resource commitments resulting from the loss of production or harvest, or the use of renewable resources. Resources typically classified as non-renewable includes minerals and those resource characteristics that are renewable only over long time spans, such as soil productivity.

Regarding recirculation of the SEIS for public comment, the Department reviewed and considered all substantive comments received during the public comment period. The Final SEIS has been edited to reflect new information presented during the public comment period, as summarized within this Appendix, however, the Department does not view the additional information presented in the Final SEIS warrants further public comment periods of the SEIS document.

P&N Sub-Theme – Public Outreach General (1-2)

Synopsis:

Commenters expressed general concern over the level of complexity and detailed information presented in the SEIS, the ability for the general public to understand information presented in the SEIS, and the inaccessibility of the public meeting. A commenter also stated that the Department's outreach violated the due process rights of landowners along the MAR and that landowners were not afforded the opportunity to attend public meetings or were not allowed to attend official reviews during the Nebraska Public Service Commission process.

Response:

The level of information presented in the SEIS is meant to reflect the duty of federal agencies to take a 'hard look' at environmental consequences resulting from the proposed federal action for each agency. This entails providing decision-makers and the interested public comprehensive information about proposed Project's impacts on environmental, cultural and socioeconomic conditions. The Department has organized the SEIS in a manner to allow for public review of the document for those resources or topics that are of the greatest interest to the reviewer. The Summary at the front of the document provides a broad overview of information contained within and findings of the SEIS and is a great start for members of the general public to gauge what areas of the document they may want to focus on to engage in a deeper review of the analysis and findings. The following provides additional information by chapter regarding the organization of the SEIS document:

- Chapter 1 provides information on the purpose and need, agency decisions, market analysis, and agency, tribal, and public involvement.
- Chapter 2 provides information on the development of the proposed Project (preferred Keystone XL pipeline route including the MAR) and an overview of the proposed Project requirements for construction, operations and decommissioning.
- Chapter 3 provides a discussion of the affected environment regarding resources present within each resource's region of influence. It also includes a discussion of greenhouse gases and climate change impacts.
- Chapter 4 provides a discussion of potential impacts from construction and normal operations of the proposed Project for each resource area discussed in Chapter 3.
- Chapter 5 provides an assessment of potential environmental consequences to resources from an accidental release. This includes an incident analysis which considers past industry-wide and TC Energy-specific incident histories, types of crude oil releases, and effects on the environment.
- Chapter 6 provides a focused discussion on related power infrastructure and impacts from construction and operation of these facilities which would be constructed and maintained by power companies.
- Chapter 7 reviews cumulative effects and includes a discussion of other activities occurring in the region which could add incrementally with effects of the proposed Project.
- Chapter 8 provides a summary of environmental consequences and proposed conservation measures to reduce potential for adverse effects.
- Chapter 9 considers irreversible and irretrievable commitment of resources.

Regarding lack of a public meeting for landowners in Nebraska affected by the MAR, the Department previously held a public meeting in Lincoln, Nebraska, on October 9, 2018 (83 FR 48358). This meeting location was chosen to allow for those landowners near the MAR to be able to attend. Similar to the meeting in Billings, the October 2018 meeting in Lincoln was chosen as it was the closest location to the MAR with facilities capable of handling larger crowds. Approximately 150 members of the public were in attendance. Also see response to P&N sub-theme 1-2b regarding the public meeting location for the 2019 Draft SEIS. The Department is not responsible for state review processes and related public involvement such as those held during the Nebraska Public Service Commission process.

P&N Sub-Theme – Public Comment Period (1-2a)

Synopsis:

Commenters requested an extension to the 45-day public comment period, suggesting a minimum 90-day period is warranted to provide interested parties the necessary time to adequately review the amount of information within the Draft SEIS. Commenters urged the Department to make diligent efforts to involve the public in implementing NEPA per 22 *Code of Federal Regulations* (CFR) 161.9 and stated that in the past, the Department made diligent efforts in its NEPA review of Keystone XL Project by providing approximately 75 days for public comment on the 2013 Draft SEIS for Keystone XL SEIS and holding over 20 public meetings along the pipeline route.

Response:

The 45-day public comment period for the Draft SEIS began on October 4, 2019 with publication of the Notice of Availability in the *Federal Register*. The comment period closed November 18, 2019. The length of this comment period is consistent with the Council on Environmental Quality (CEQ) regulations for implementing NEPA and consistent with a supplemental analysis. The public has had numerous opportunities to review and comment on the Project; this includes scoping and public comment periods during the 2011 and 2014 EIS and SEIS documents, along with the 2018 Draft Environmental Assessment (EA) and Draft SEIS on the MAR. See P&N sub-theme 1-2b regarding the rationale for the meeting location and format of the public meeting.

P&N Sub-Theme – Public Meeting (1-2b)

Synopsis:

Commenters questioned the legitimacy and format of the public meeting on the Draft SEIS and why there was only a single meeting held, and why Billings, Montana was chosen as the location. Commenters requested the Department hold traditional Public Hearing format meetings where those in attendance can voice their comments in an open format. Commenters stated that the actual type of meeting format held by the Department should have been communicated in advance of the meeting. Commenters also stated the meeting format did not allow participants at the meeting to hear differing viewpoints and gain a common understanding, and that the meeting did not constitute government-to-government consultation with the tribes.

Response:

The Department followed procedures consistent with CEQ regulations (40 CFR 1506.6 - Public Involvement). The regulations state that agencies shall make diligent efforts to involve the public in preparing and implementing their NEPA procedures. This includes providing public notice of NEPA-related hearings, public meetings, and the availability of environmental documents so to inform those persons and agencies who may be interested or affected. Section D.2 of this Comment Response Document outlines efforts the Department made regarding public involvement. The regulations do not require a specific format for public hearings or meetings. The Department did fulfill the requirements to solicit information and comments regarding the SEIS document and the NEPA process from the public. This included a public meeting in Billings, Montana where members of the public could speak one-on-one with government representatives, provide written or electronic comments, and provide oral comments to a stenographer. The Department chose the Billings, Montana location to make the meeting more accessible to members of the public along the northern portion of the Project route because it had previously hosted a public meeting in Lincoln, Nebraska focused primarily on the MAR. Billings is also the largest city within a 500-mile radius of the public lands involved with facility space capable of supporting the potential for a large event and is closest to the proposed Project's connection of the BLM Montana and Dakota District to the ROW that may be issued for the pipeline.

Outside of the public meeting, the public has additional means to participate in the NEPA process and comment on the SEIS through other mechanisms such as www.regulations.gov or U.S. mail. Use of www.regulations.gov as a means for submitting comments allows the public to be able to view other public comments submitted on the Draft SEIS document which allows those unable to attend the public meeting an opportunity to understand the issues raised during the public comment period.

Regarding tribal consultation, the intent of the public meeting was to provide an opportunity for the public under 40 CFR 1506.6 - Public involvement to attend the meeting and provide public comment. The meeting was not intended to serve as official consultation among tribes; members of tribes, along with members of the general public were invited to attend. The Open House format of the meeting was announced in both the *Federal Register* and in local newspaper announcements so members of the public could understand the type of meeting, "This open house-style gathering will afford members of the public the opportunity to speak with Department officials, learn more about the proposed Keystone XL Pipeline Project, and provide comments on the Draft SEIS."

P&N Sub-Theme – Consultation with Tribes (1-2c)

Synopsis:

Commenters questioned the Department's efforts in consultation. This included the involvement of Indian tribes and the Department's efforts for meaningful government-to-government consultation. Tribes claimed they were not officially consulted with through the protocols established by the tribes and that the Project should not be approved or proceed until all tribal consultation has been complete.

Response:

Consistent with Executive Order 13175 and 36 CFR 800 (Protection of Historic Properties), the federal government has engaged federally-recognized American Indian tribes in government-to-government consultation. The federal government initiated consultation with tribes as part of the original application that culminated in the August 2011 Final EIS. The Department continued this consultation through the development of the 2014 Keystone XL Final SEIS. As part of this consultation process, the Department conducted a broad range of tribal consultations, ranging from group meetings involving many tribes and discussion topics to individual discussions on specific topics via letter, phone, or email. Principal concerns raised by the tribes during these meetings and discussions were the potential effects of the Project to Traditional Cultural Properties and places of cultural sensitivity that might be affected by construction. A Programmatic Agreement consistent with Section 106 of the National Historic Preservation Act was drafted as part of the 2011 Final EIS. The Department, working with Keystone, addressed tribal concerns about Traditional Cultural Properties by consulting with the tribes and offering to fund Traditional Cultural Property studies conducted by the tribes. The Department, in consultation with the tribes, also offered to monitor areas or locations identified by the tribes as culturally sensitive during construction to ensure that no previously unknown historic properties are affected. As part of the 2014 Keystone XL Final SEIS evaluation process, the Programmatic Agreement that was signed in 2011. The results of the Traditional Cultural Property studies and the tribal identification of culturally sensitive areas were incorporated into a tribal monitoring plan, which was drafted in consultation with the tribes, and attached to the 2011 Programmatic Agreement. These same commitments were adopted into and made a part of the amended Programmatic Agreement, which was signed in 2013 (see Appendix E of the 2014 Keystone XL Final SEIS). The Department continues to consult with the tribes by providing the tribes with the opportunity to share their views on the identification and evaluation of historic properties, assessment of effects, and treatment of adverse effects as required under the Programmatic Agreement.

The following summarizes coordination by the Department with Indian tribes regarding the Keystone XL Project since the 2014 Keystone XL Final SEIS:

- April 10, 2018. The Department sent a letter to the 67 Indian tribes who expressed interest in the historic properties potentially affected by the Keystone XL Pipeline Project (see Appendix A, Indian Tribe and Agency Coordination). The letter stated the Department is continuing government-to-government consultation with the tribes and in accordance with the Programmatic Agreement.
- May 1, 2018. In accordance with stipulation V.B.2 of the Programmatic Agreement, the Department sent letters to Indian tribe leaders and Tribal Historic Preservation Officers requesting assistance in identifying Traditional Cultural Properties/properties of religious and cultural significance of the tribe that may be eligible for listing in the National Register of Historic Places (NRHP) that could be affected by construction of the MAR. Four tribes submitted Scopes of Work to conduct Traditional Cultural Properties studies. All were approved by the Department.
- May 24, 2018. The Department sent a letter to the 67 Indian tribes who expressed interest in the historic properties potentially affected by the Keystone XL Pipeline Project announcing the decision to prepare an EA on the MAR and to establish a direct point of contact for each tribe interested in participation on the Draft EA.
- July 2018. Three tribes conducted approved Traditional Cultural Properties studies within the MAR (Omaha Tribe of Nebraska, the Santee Sioux Nation and the Fort Belknap Indian Community). The tribes reported multiple locations that may contain burials. Two magnetometer surveys were conducted to investigate these locations.
- July 26, 2018. The Department sent a letter to tribes notifying them of the availability of the Draft EA and start of a 30-day comment period.
- August 16, 2018. The Department met with the Chairman and Tribal Council for the Assiniboine & Sioux Tribes of the Fort Peck Indian Reservation, in Poplar, Montana to provide the tribal leadership with an update on the cultural resources investigations conducted for the Keystone XL Project and to discuss any concerns the tribe might have regarding the effect of the Project on those resources. Representing the Department was the Director, Office of Environmental Quality and Transboundary Issues, Bureau of Oceans and International and Scientific Affairs (OES/EQT); the Department's Trade and Environment Negotiator; and, the Department's legal counsel. The Department was scheduled to meet with the Fort Belknap Indian Community in Harlem, Montana on August 15, 2018 for the same purpose; however, at the last moment the tribe cancelled the meeting with no explanation and shortly thereafter ceased communicating with the Department.
- August 29, 2018. The Department sent a letter to all tribes notifying them of the availability of the cultural resources survey report on the MAR and requested their comments on National Register eligibility and effect.
- September 17, 2018. The Department sent a letter to tribes notifying them of the availability of the 2018 Keystone XL MAR Draft SEIS and start of a 45-day comment period and public meeting in Lincoln, Nebraska on October 9th, 2018.
- October 5, 2018. The Department sent the Omaha Tribe of Nebraska, the Santee Sioux Nation and the Fort Belknap Indian Community the results of two magnetometer studies investigating potential burial locations along the MAR and requested comments. No burial features were identified.

- December 12, 2018. The Department, responding to a request from the Omaha Tribe, agreed to include the potential burial locations to the list of places that will be monitored by tribal members during construction.
- June 26, 2019. The Department met with the Tribal Chairman, the Tribal Historic Preservation Officer, and a member of the Tribal Council for the Little Shell Tribe of Chippewa Indians of Montana at the tribal headquarters in Great Falls, Montana. The purpose of the meeting was to discuss concerns the tribe had expressed about the potential effects of the Project to cultural resources and the need for supplementary cultural resources inventory of the Project ROW in Montana. The Department's cultural resources contractor attended the meeting and reported the meeting results to the Department for decision making.
- On July 2, 2019. The Department sent an invitation via email to all tribal consulting parties inviting their participation in the field work. Representatives from four tribes chose to participate. The Department will consult with all tribal consulting parties on the result of the re-inspection once the inventory report is complete.
- July 30 – August 29, 2019. The Department, in conjunction with Keystone, arranged to re-inspect 77 miles of the Project ROW in Montana to supplement the existing cultural resources inventory record.
- October 4, 2019. The Department sent a letter to tribes notifying them of the availability of the Draft SEIS and start of a 45-day comment period and public meeting in Billings, Montana on October 29th.
- November 26, 2019. The USACE, accompanied by the Bureau of Land Management, consulted with the Assiniboine & Sioux Tribes of the Fort Peck Indian Reservation concerning the Keystone XL Pipeline Project.

Table 3.9-1 of the SEIS has been updated to reflect the timelines reference above related to Department coordination efforts with tribes. In addition, the following text has been added to the SEIS to provide additional information on the Programmatic Agreement and consulting parties: "***The Department re-engaged the consulting parties to the 2013 Amended Programmatic Agreement following issuance of a Presidential permit for the Keystone XL Pipeline Project (Project) in March 2017. The Department notified all 17 state and federal agencies that are signatories to the agreement and all 67 tribal consulting parties about the Project start-up and requested point of contact information (two tribes have since joined as tribal consulting parties). Since April 2018 the Department has provided all consulting parties with letters, reports, maps and other documents generated in compliance with the Programmatic Agreement for review and comment. Initially, these documents were sent through the U.S. mail; however, in August 2018 the Department launched an online cultural resources portal for downloading documents for review. When review documents become available, an email notice is sent to all parties requesting their comments, typically within a 30-day review period. The parties are free to choose which documents they wish to review and provide their comments to the Department either in writing or via email. In March 2019, a Geographic Information System (GIS) was added to the portal enabling users to see the location of all recorded cultural resources in relation to the Project pipeline right-of-way, access roads, substations, etc. This enables all consulting parties access to the same cultural resources information enhancing the consultation process.***"

Also see Sections 3.8.2.4, 4.8.3.1 and 5.5.8.2 of this SEIS regarding tribal rights and treaty lands and the Socioeconomics and Environmental Justice (SOC) theme and sub-themes 4-8d and 4-8e regarding consideration of indigenous communities along the route.

P&N Sub-Theme – Market Conditions (1-3)

Synopsis:

Commenters questioned the market-based need for the Project including justification of need based on the break-even point of crude oil prices presented and the conclusions that global demand projections under certain market forecast scenarios may not influence the overall rates of WCSB crude oil extraction. Commenters also questioned the validity of the data sources used and stated the market analysis should consider the external costs of climate change, increasing use of renewable energy, and other policies adopted by countries into the future.

Response:

Considering policies and federal programs considered in the market analysis, the International Energy Agency (IEA) projection in Section 1.4.1.2 of the SEIS, does consider the "Current Policies Scenario," "New Policies Scenario," and "Sustainable Development Scenario." The market analysis is intended to consider the need for the Project based on oil demand. Section 3.10.4 of the SEIS discusses the types of impacts associated with climate change.

Considering market conditions and the need for the Project, the market analysis in the Draft SEIS is an update of the 2014 Keystone XL Final SEIS, which evaluated how the proposed Project would help meet the demand for crude oil by U.S. refineries in the Gulf Coast area. Regarding current market conditions, Section 1.4 of the SEIS discusses the global crude oil market since publication of the 2014 Keystone XL Final SEIS until date of drafting of the 2019 Keystone XL Draft SEIS. As discussed within Section 1.4.3, the United States is forecast to become a net exporter of petroleum liquids after 2020, with a plateau and eventual fall of exports forecast after 2030. A net exporter is defined as a country whose value of exported goods is higher than its value of imported goods over a given period-of-time. The market analysis uses timeframe projections through 2040 and 2050, based on U.S. Energy Information Administration and IEA reporting forecasts. These forecasts evaluate a set range of "High," and "Low" scenarios, all of which indicate the global demand for crude oil will continue throughout the duration of the forecast period under different yet reasonable price scenarios as Canadian oil sands production continues to climb. The sources of oil (including extraction from the WCSB) are dependent upon numerous factors including supply, demand, and prices. Government policies globally (laws, regulations, agreements and sanctions) can all influence the global market.

Considering final product destination and exports of petroleum products, as stated in the SEIS, the exact mix volume and destination of crude oil types would be determined by market forces. In their January 2017 application for the Keystone XL cross-border Presidential Permit, Keystone stated that it maintains shipping contracts similar to those represented in its 2012 application for a Presidential Permit, namely to transport approximately 555,000 bpd of WCSB crude oil to U.S. Gulf Coast area delivery points and 155,000 bpd of WCSB crude oil to Cushing, Oklahoma. Secure supplies and increased production in the United States improves U.S. energy security and provides economic benefit to Americans.

Regarding lifetime of the pipeline and fate of the pipeline following use, please refer to PRO sub-theme 2-3 regarding decommissioning of the pipeline and to Section 2.4.10 of this SEIS.

D.4.2 Proposed Action (PRO)

The Department received comments related to the Proposed Action. Comments relate to the proposed pipeline alignment, construction methods, and decommissioning.

The Department received comments related to the Proposed Action. Comments relate to the proposed pipeline alignment, construction methods, and decommissioning.

Theme	SEIS Location	Sub-Themes
Proposed Action (PRO)	Chapter 2	• Pipeline Alignment (2-1) • Construction (2-2) • Decommissioning (2-3)

PRO Sub-Theme – Pipeline Alignment (2-1)

Synopsis:

Commenters had concerns regarding the proximity of the proposed Keystone XL pipeline alignment to the Sandhills Region. Comments also stated the pipeline should be rerouted to avoid impacts to tribal treaty lands and tribal way of life. See the Accidental Release (ACR) theme and sub-themes for comments and responses related to accidental release of crude oil.

Response:

Throughout the NEPA process from the 2011 Keystone XL Final EIS to the 2014 Keystone XL Final SEIS, the proposed alignment of the Keystone XL pipeline shifted to the east, away from ecologically sensitive areas. The Preferred Route analyzed in the SEIS follows the MAR, which represents a shift of the proposed Keystone XL pipeline alignment analyzed in the 2014 Keystone XL Final SEIS. This shift further to the east in Nebraska maximizes co-location with the existing Keystone Mainline and other utility and transportation ROW corridors to further minimize environmental impacts. As stated in Section 2.3 of the SEIS, the Department dismissed the Steele City Segment Alternative (presented as the Sandhills Alternative Route in the Nebraska Public Service Commission application) as this alternative does not minimize impacts to environmentally sensitive areas (e.g., Sand Hills Region).

The introduction of Chapter 2 in the SEIS explains that the MAR was developed as part of the planning process and in support of Keystone's application to the Nebraska Public Service Commission for approval of a pipeline route through Nebraska. As discussed in Chapter 2, the Nebraska Public Service Commission's review and approval of the MAR used numerous environmental criteria particularly to minimize impacts to environmentally sensitive areas.

The proposed MAR would potentially cause fewer environmental impacts than earlier designs, largely due to the its avoidance of the Sandhills Region and its underlying aquifers. As presented in Table S-1, and explained in Section 2.4.1 of this SEIS, the MAR improves on prior proposed routes because it would follow the Keystone Mainline and other ROWs for 106.8 miles as opposed to the Preferred Route of the 2014 Keystone XL SEIS, which was co-located with ROWs for only 2 miles of its length. In addition, Section 1.1 discusses that the MAR shifts away from its co-location with the existing Keystone Mainline pipeline at proposed milepost 804 for approximately 29 miles to route west to avoid the Seward County wellhead protection area.

See ALT sub-theme 2-5 regarding proximity of Project to tribal lands.

PRO Sub-Theme – Construction (2-2)

Synopsis:

Commenters expressed concern regarding construction of the proposed pipeline in proximity to other buried infrastructure, specifically the Dry Prairie Rural Water District waterline infrastructure. This included request for an assessment of potential impacts and measures that would be taken to prevent a disruption to these water systems both during construction and in the event of pipeline maintenance. Additionally, concerns were raised on how the introduction of the Keystone XL pipeline would affect maintenance of the water systems and claim maintenance will be more challenging with the introduction of a crude oil pipeline crossing the existing water system ROWs.

Response:

Keystone has coordinated with existing water system operators and provided funds to lower water lines crossed by the proposed Keystone XL pipeline. Specifically regarding the Dry Prairie Rural Water District, the proposed pipeline does cross the existing District's infrastructure 12 times to the west and south of Nashua (between mileposts 82 to 86). Keystone has worked with and compensated Dry Prairie Rural Water District to: 1. Lower the waterlines to a minimum depth of 14 feet, which would allow for the proposed Keystone pipeline to cross over the waterlines at a typical clearance of 7 feet between the two lines. This allows for any deviations of the Keystone XL pipeline during installation to maintain a minimum 2-foot separation; 2. Case the waterlines; 3. Avoid contact of waterlines during pipeline installation by horizontal directional drill (HDD) or trenchless crossing methods. In certain locations it was deemed unnecessary to lower the waterline as the proposed depth of the Keystone XL pipeline will be deeper than the waterline due to installation by trenchless construction methods. These locations are typically at road crossings and HDDs will be well below the existing waterline. The Dry Prairie Rural Water District completed the waterline lowering and casing in mid-2019 for all known crossing locations. Also see response to SOC Sub-Theme – Impacts to Tribal Way of Life (4-8e) regarding additional text included in the SEIS on construction and maintenance activities around the existing waterlines.

PRO Sub-Theme – Decommissioning (2-3)

Synopsis:

Commenters had concerns over the decommissioning and pipeline abandonment process, including who is ultimately responsible and whether the property owner will be left to deal with any unanticipated consequences and associated costs once the pipeline is abandoned.

Response:

Keystone would comply with the Pipeline and Hazardous Materials Safety Administration (PHMSA) requirements for decommissioning crude oil pipelines as outlined in the 49 CFR 195.402(c)(10) (Procedural Manual for Operations, Maintenance, and Emergencies) and in 49 CFR 195.59 (Abandonment or Deactivation of Facilities). These regulations require that the pipeline procedural manuals must include procedures for abandonment, including safe disconnection from an operating pipeline system, purging of combustibles, and sealing abandoned facilities left in place to minimize safety and environmental hazards. Further details are provided in the 2014 Keystone XL Final SEIS, Section 2.1.11, Operations and Maintenance, and in the 2019 Keystone XL SEIS, Section 2.4.10, Decommissioning.

Additionally, separate from the NEPA process, as a condition for accepting a ROW grant, the BLM is requiring Keystone to complete a comprehensive decommission the Keystone XL Project as a part of their filed Plan of Development, which will include cost estimates for such project abandonment. The BLM will require Keystone to submit a bond(s) to ensure coverage of such decommission if the ROW holder fails to perform such responsibilities.

D.4.3 Alternatives (ALT)

The Department received comments related to the development of alternatives and dismissal of alternatives within the SEIS, specifically alternatives involving renewable energy.

Theme	SEIS Location	Sub-Themes
Alternatives (ALT)	Chapter 2	• Alternatives Dismissed (*e.g., renewables*) (2-4) • Alternatives Development (2-5)

ALT Sub-Theme – Alternatives Dismissed (2-4)

Synopsis:

Comments stated the Department should promote renewable energy alternatives and conservation efforts instead of encouraging development of fossil fuel infrastructure. Many commenters suggested that the use of alternative sources of energy and conservation of energy would either: 1) eliminate the need for the proposed Project, or 2) reduce the market need for heavy crude oil to the extent that smaller scale projects could meet short- and long-term energy needs. Commenters emphasized the costs of renewable energy have declined and renewables are increasingly becoming a viable option for energy over oil. Commenters also stated the SEIS fails to consider alternatives for landowners who would prefer to place renewable energy installations on their land instead of selling their land to Keystone. In addition, commenters stated concern of the proposed Project's impact on existing renewable energy projects on lands proposed for construction.

Response:

As discussed in Section 2.3, Alternatives Dismissed from Further Consideration, of the SEIS, the Department conducted a robust analysis of alternatives in both the 2014 Keystone XL Final SEIS and in the earlier 2011 Keystone XL Final EIS. This included consideration of the use of alternative energy sources and energy conservation. Ultimately the Department dismissed each of these alternatives from detailed analysis as they failed to meet the purpose and need. Consideration of an east-west route through Canada and/or the United States is not in the scope of this SEIS analysis, as part of the need for the Project would be to meet the supply demands for U.S. refineries in the Gulf Coast area.

The 2014 Keystone XL Final SEIS found that renewable energy sources and conservation efforts would not meet the demand for transportation fuels at the Gulf Coast refineries, which are primarily driven by the need for transportation fuels (see Sections 2.2.3 and 2.2.4.4 of the 2014 Keystone XL Final SEIS). Given that the majority of the crude oil from the WCSB and Bakken delivered through the proposed Project would be refined into transportation fuels, alternative energy sources were measured against this criterion to determine whether they could be a reasonable alternative. The 2014 Keystone XL Final SEIS Section 2.2, Description of Alternatives, found that while renewable energy could be used in some transportation modes, it could not on its own meet the demand for heavy transportation uses such as trucking, rail, and ships, and was therefore eliminated from detailed analysis in the Final Supplemental EIS. This SEIS additionally considered policies, federal programs, and sustainable technologies within the updated market analysis as part of IEA projections in Section 1.4.1.2 under the "New Policies Scenario" and "Sustainable Development Scenario". Despite a reduced demand for crude oil these scenarios, the global demand still exists for crude oil regardless of alternative energies and sustainable technologies. The development of broader energy conservation initiatives and programs and the government's commitment to renewables, alternative fuels are outside the scope of the SEIS.

ALT Sub-Theme Alternative Development (2-5)

Synopsis:

Comments stated the Department should consider other modes of transportation such as rail as an alternative to pipeline construction. Other commenters stated that rail is a more dangerous alternative to pipeline transport in regard to potential incident rates and air emissions. Commenters stated that a No Action Alternative which considers rail or other transport mechanisms as an offset to the proposed Keystone XL pipeline transport is fatally flawed. Commenters emphasized their support of a No Action Alternative in which the pipeline would not be built.

Commenters also stated the Department failed to consider an alternative route that avoided disproportionate impact to tribes on their ability to hunt, fish, and utilize natural resources as was suggested prior to the 2014 SEIS.

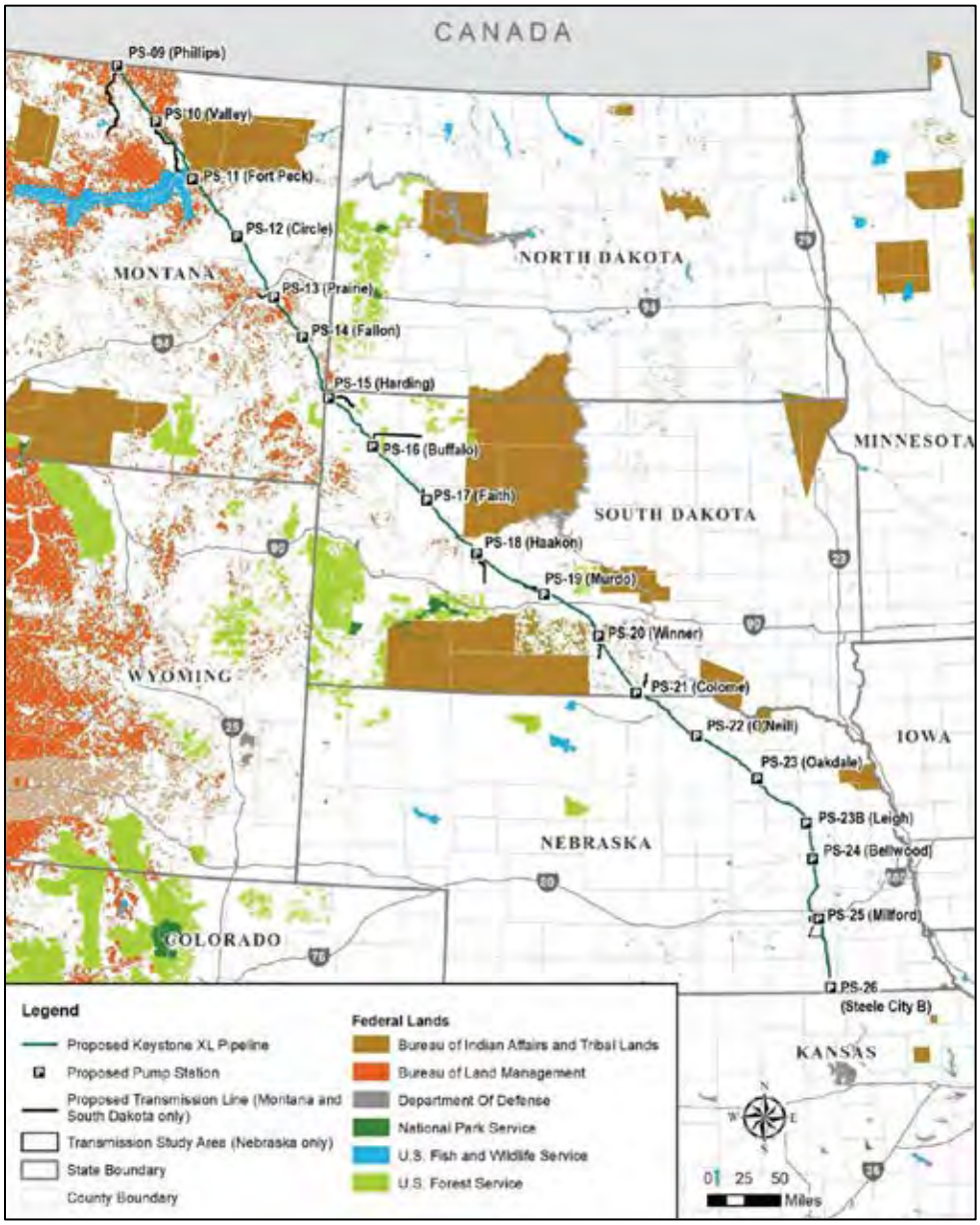
Response:

As stated in Section 2.2 of the SEIS, the 2014 Keystone XL Final SEIS considered a range of potential scenarios that could occur under the No Action Alternative, including rail/pipeline, rail/tanker and rail direct to the Gulf Coast as alternate means of crude oil transport if the Keystone XL Project was not constructed or operated. In developing alternative transport scenarios, efforts were made to focus on reasonably likely scenarios by the oil and transportation industry in response to the crude oil transport constraints that would occur if the permit were denied. Among other factors, likelihood of a scenario was determined by analyzing practicability (e.g., economically competitive) and whether the scenario takes advantage of existing infrastructure to the extent possible, uses proven technologies, and is similar to transport options currently used. The SEIS market analysis (Section 1.4) finds that there is continued global crude oil market demand. Under most scenarios, WCSB production is likely to continue to increase and despite the recent lower price of global crude oil (including WCSB crude oil) since 2014, the industry break-even point of WCSB crude oil has also dropped in tandem with production costs, indicating production of WCSB crude oil will continue. The market analysis also finds that transport capacity issues remain, and rail is becoming a growing alternative to pipelines for transport of WCSB crude oil. Therefore, the No Action Alternative scenarios considered in the 2014 Keystone XL Final SEIS remain viable. Impacts under these scenarios are anticipated to be consistent with the findings of the 2014 Keystone XL Final SEIS contained in Chapter 5, Alternatives, and are incorporated by reference.

In addition, as shown in Table 5.3-2 of the 2014 Keystone XL Final SEIS, the other alternatives considered for the Project using rail or a mix of rail and pipeline or a mix of rail and ocean tanker all had projected higher annual greenhouse gas emissions than transportation by pipeline. Transportation by trucking was eliminated from consideration as a viable alternative based, in part, on the large amount of greenhouse gas emissions that would be produced (2014 Final SEIS, Ch. 2, Pg. 2.2-37).

Regarding an alternative route to avoid impacts to tribes, the preferred route analyzed within this SEIS avoids tribal lands and tribal trust lands as demonstrated in the image on the following page. This SEIS and the 2014 Keystone XL Final SEIS conclude that construction and normal operations of the proposed Project would not have disproportionately high and adverse impacts to environmental justice populations compared to other populations along the route. Section 5.5.8.2 of this SEIS does conclude it is not possible to determine whether a disproportionately high and adverse impact would occur for minority or low-income populations from an accidental release of crude oil potentially occurring along the proposed pipeline route as it is not possible to predict the location of a release. This SEIS does disclose that disproportionately high and adverse impacts to minority and low-income populations along and downstream of the pipeline may occur in the event of a large release, including to hunting and fishing rights and water supply and irrigation systems. Shifting of the pipeline route would be unlikely to

eliminate all potential impacts to tribes in the event of an accidental release; Chapter 8 of this SEIS provides a summary of resource protection measures Keystone would be required to adhere to during construction and operations to minimize the potential for adverse effects. Also see comments and responses to the SOC theme for additional information on environmental justice populations and tribal concerns.



D.4.4 Affected Environment (AFF)

The Department received comments related to the data used to characterize the affected environment.

Theme	SEIS Location	Sub-Themes
Affected Environment (AFF)	Chapters 3, 6	• Data Sources (3-0)

AFF Sub-Theme – Data Sources (3-0)

Synopsis:

Commenters questioned the validity of the data sources used to characterize the affected environment. This included a combination of the source and date of information used.

Response:

Both the 2014 Keystone XL Final SEIS and this SEIS rely on a combination of data sources including academic and agency-specific studies and reports (e.g., climate change, crude oil and energy trends, fragmentation, etc.), state and federal databases and records (protected species, PHMSA incident reports, etc.), and field surveys (wetland, protected species and cultural). Keystone-supplied information within the SEIS documents largely pertains to proposed Project construction and operational requirements and field surveys within the proposed ROW corridor. When practical, the Department verified data sources and relied on multiple data sources in development of the affected environment and assessment of effects.

In 2018 and 2019, Keystone completed field surveys along portions of the proposed pipeline which included biological surveys (northern long-eared bat, Topeka shiner critical habitat, American burying beetle, and western prairie fringed orchid), waterbody and wetland surveys, paleontological survey, and cultural surveys (archaeological, architectural). The SEIS considers all surveys completed including discussion in the following Sections: 3.2, Geology and Soils; 3.6, Water Resources; 3.7, Biological Resources; 3.9, Cultural Resources; Chapter 4, Environmental Consequences from Construction and Normal Operations; and Chapter 6, Electrical Transmission and Distribution Lines.

Also see response to P&N sub-theme 1-1a and 1-1b for additional topics on updated data and new analysis performed in the SEIS document.

D.4.5 Land Use, Recreation and Visual Resources (LAN)

The Department received comments related to the SEIS conclusions on land use and agriculture.

Theme	SEIS Location	Sub-Themes
Land Use, Recreation and Visual Resources (LAN)	Sections 3.2, 4.2, 5.5.2, 6.4.7	• Conclusions (4-2)

LAN Sub-Theme – Conclusions (4-2)

Synopsis:

Commenters expressed concern about the proposed Project's impacts on agricultural lands and to farming. Commenters also expressed the lack of resource protection measures listed under normal operations to land uses within the ROWs where the pipeline would occur.

Response:

Similar to information presented in Section 2.1.1 of the 2014 Keystone XL Final SEIS, Keystone will make minor adjustments to the proposed pipeline alignment during final design based on additional information obtained from field surveys or landowners. These minor route variations (micro-alignments) would be implemented to address specific landowner concerns, and to avoid certain features at the landowner's request (such as terraces, dams, and shelter belts). These measures would also serve to minimize impacts from normal operations through avoidance during final design. Regarding the need for specific resource protection measures for operations, as stated in Section 4.2.3.2 of this SEIS and as concluded in the 2014 Keystone XL Final SEIS, operations and maintenance of the pipeline would have

negligible to minor adverse effects on land use and any impacts would be restricted to the 50-foot permanent ROW. Operational activities would include occasional aerial and ground inspection, vegetation management to remove woody vegetation, trees and noxious weeds from the permanent ROW, and pipeline maintenance, as necessary. Measures listed at the beginning of Section 4.2.3 of this SEIS for agricultural land, rangeland, forest and developed land would apply to any construction-related maintenance activities during normal operations. Agricultural land use would be allowed within the permanent easement. Refer to ACR Sub-Theme – Guiding Principles, Policies, Regs and Laws (5-1) regarding liability and responsibility and related measures that would be required by Keystone in the event of an accidental release.

Regarding impacts to farming, the 2014 Keystone XL Final SEIS discusses potential temporary adverse effects to croplands, and that such effects would be minimized through implementation of the conservation measures identified in Section 4.2.3 of this SEIS and the Construction Mitigation and Reclamation Plan (CMRP). Construction-phase disruption in any single location is expected to last 6 to 8 months, and would generally be limited to the construction ROW. Permanent land use impacts from normal operation of the proposed Project would be limited to the prevention of tree growth and occasional ground disturbance (i.e., excavation for maintenance purposes) within the 50-foot permanent ROW. The permanent ROW would be available for agricultural activity after construction completed. Other land use impacts within the construction ROW—such as reduced crop production—are expected to be short term as Keystone would segregate topsoil during construction and restore disturbed farmland areas with the stockpiled topsoil following construction. Keystone would also avoid functional loss of active irrigation ditches during construction and restore damage to drainage tile systems from pipeline installation following construction.

In addition, the proposed soil mitigation measures in 2014 Keystone XL Final SEIS Section 4.2.3.1, Construction Impacts, and current SEIS, Section 4.3.3, Proposed Action, describe specific best management practices that would be implemented during construction, reclamation, and post-construction in fragile soils, including proposed soil mitigation measures designed to avoid and/or minimize soil erosion and impacts to prime farmland. This includes specific topsoil handling measures which objectives are to maintain topsoil capability by conserving topsoil for future replacement and reclamation, and to minimize the degradation of topsoil from compaction, rutting, loss of organic matter, or soil mixing so that successful reclamation of the ROW could occur. As described in the CMRP, mitigation measures would be implemented during topsoil removal and storage. The CMRP includes both industry standards for topsoil handling and best management practices as required by various applicable state permitting authorities.

D.4.6 Air Quality (AIR)

The Department received comments related to the SEIS conclusions and air quality protection measures.

Theme	SEIS Location	Sub-Themes
Air Quality (AIR)	Sections 3.4, 4.4, 5.5.4	• Conclusions (4-4)

AIR Sub-Theme – Conclusions (4-4)

Synopsis:

Commenters expressed concern about the lack of resource protection measures for air quality under normal operations.

Response:

Regarding the need for specific resource protection measures for operations, as stated in Section 4.4.3.2 of this SEIS and as concluded in the 2014 Keystone XL Final SEIS, operations and maintenance of the pipeline would have negligible to minor adverse effects on air quality. Factors regarding the potential for significance considered in the air quality analysis for construction, operations and maintenance included:

- Emissions of criteria pollutants that could exceed relevant air quality or health standards;
- An adverse change in air quality attainment status related to the NAAQS or state standards;
- A violation of any federal or state permits;
- Effects on visibility and regional haze in Class I areas;
- Conflicts with local or regional air quality management plans to attain or maintain compliance with federal or state air quality regulations; and
- Impacts to human health from the inhalation of fugitive vapors from the petroleum product.

Operation of the pipeline and associated facilities would not result in direct stationary source emissions of air pollutants because the pump stations would be operated by electricity generated offsite, except for temporary emergency generator emission during a power failure. Table 4.4-3 of the SEIS includes estimated emissions from emergency generators during operations. The USEPA regulates hazardous air pollutant (HAP) emissions and criteria pollutants emitted from emergency generators (40 CFR 60 and 40 CFR 63) and depending on the generator size and exemption options, some states require emergency generator permitting or registration. Operational emissions would not change attainment status, violate federal or state ambient air quality standards or trigger any of the other significance criteria listed above. As such, no air quality protection measures would be warranted beyond those identified for construction and summarized in Section 4.4.3 of this SEIS and contained within the 2014 Keystone XL Final SEIS CMRP. Section 4.10 of this SEIS discusses effects of greenhouse gas and climate change.

D.4.7 Water Resources (WAT)

The Department received comments related to the impact methodology used in the SEIS regarding water resources and SEIS impact conclusions. Comments also and raised concern on aquifer protection and the use of HDD during construction.

Theme	SEIS Location	Sub-Themes
Water Resources (WAT)	Sections 3.6, 4.6, 5.5.6, 6.4.2, 6.4.3	• Impact Methodology and Assumptions (4-6a) • Conclusions (4-6b) • Aquifers (4-6c) • HDD and Frac-Out (4-6d)

WAT Sub-Theme – Impact Methodology and Assumptions (4-6a)

Synopsis:

Commenters requested a thorough analysis of impacts be assessed for each stream crossing instead of deferring to the USACE Section 404 of the Clean Water Act and Nationwide Permit 12 process.

Response:

The SEIS provides an assessment of waterbody crossing methods for the MAR in Section 2.4.8.4, Special Pipeline Construction Techniques, and Sections 3.6 and 4.6, Water Resources. The 2014 Keystone XL Final SEIS provides an assessment of waterbody crossing methods for the entire pipeline route in Sections 3.3 and 4.3, Water Resources, and provides the Keystone-supplied CMRP in Appendix G.

Potential impacts to streams, rivers, and other waterbodies from the proposed Project construction are minimized through industry standard practices as described in the CMRP. In some cases, access to surface water resources, as well as, bank and riparian areas may temporarily be restricted; however, the methods proposed do not permanently limit or remove access to surface water resources or prohibit their use. Areas may be protected during revegetation efforts or while stream bank areas are stabilized, which also might temporarily limit access to the water resource.

As described in the CMRP, most waterbody crossings along the proposed Project route would involve one of the open-cut methods. These methods include restoration of stream areas to preconstruction conditions where possible. In situations where restoration to preconstruction conditions is not feasible, the CMRP prescribes restoration to a stable condition. In addition, the HDD method would be used at several major rivers and as conditions warrant in other locations to avoid impacts to water quality and fisheries. Keystone has created site specific waterbody crossing plans (e.g., 2014 Keystone XL Final SEIS, Appendix D, Waterbody Crossing Tables and Required Crossing Criteria for Reclamation Facilities) that describe the procedures to be used for waterbody crossings.

Prior to commencing any surface waterbody crossing construction activities, the proposed Project would be required to undergo federal and state permitting and approval processes, including but not limited to: Section 401 and 404 of the Clean Water Act and, in some cases, Section 10 of the Rivers and Harbors Act of 1899 administered by the USACE. The USACE and state agencies would require measures to limit unnecessary impacts during construction as a condition of the crossing permits. As a condition of these permitting processes, Keystone would need to demonstrate that use of and access to waters of the state and private water rights would be preserved. When possible, the proposed Project would execute stream crossings during low flow periods, or for intermittent streams, when there is no flow. However, the timing of each stream crossing would be determined by the limitations imposed in environmental permits, weather conditions, and other variables.

The SEIS, Section 4.6.3.1, Construction, describes the potential impacts of constructing the MAR pipeline. As discussed in 2014 Keystone XL Final SEIS, Section 4.3.3.2, Surface Water, the design would account for the dynamic nature of waterbodies over time by employing industry standard practices to account for stream migration and scour at a variety of possible flow rates and re-occurrence intervals. Individual crossing designs would account for flow rates, vertical bed scour and lateral channel migration potential, habitat, soil, and vegetative conditions present at the time of construction.

In regards to surface water flow changes caused by trenching activities that will occur during pipeline construction, and the impacts this might have on vegetation, all ground surfaces will be restored as closely as possible to pre-disturbance conditions. Therefore, impacts during construction are considered temporary. They will be mitigated by following the permit conditions stipulated in the Project's National Pollutant Discharge Elimination System Permit and/or Soil Erosion and Sediment Control Plan.

Regarding Project compliance with Section 404 of the Clean Water Act and Section 10 of the Rivers and Harbor Act, USACE anticipates Keystone will request approval under Nationwide Permit 12 based on past pre-application meetings. General permit verifications or required permit approvals, however, will not be known until Keystone submits Pre-Construction Notifications to the USACE. At that time, USACE will review information provided by Keystone within the Pre-Construction Notifications and determine the appropriate verification or approval process. Specific text within the SEIS related to Nationwide Permit 12 has been revised to accurately reflect this process.

WAT Sub-Theme – Conclusions (4-6b)

Synopsis:

Commenters expressed disagreement with the characterization of impacts to water resources in Chapter 4. Stating the conclusions of "less than significant" impacts are false based on the potential for a spill into waterways, groundwater and wetlands. Commenters also questioned Keystone's plan for long-term inspection of streambank integrity and what mitigation measures Keystone would employ to ensure streambanks are inspected at least one year after construction and again after major flood events to ensure that the stream banks and bed remain stable in areas of pipeline crossing.

Response

The level of impact disclosures in Chapter 4 regarding resources, including water resources, is based on activities during construction and normal operations; this is noted at the introduction to the section which also refers the reader to Chapter 5 regarding the potential effects from an accidental release of crude oil. Specifically, Section 4.6 discusses the type and intensity of impacts that could occur from construction of the proposed pipeline and from normal operations and maintenance. These conclusions also consider resource protection measures contained within Table 8-2 of this SEIS. Also see sub-theme 4-6d regarding use of HDD and potential for frac-outs and impacts to water quality.

Regarding an accidental release of crude oil and the effects to water resources, as stated in the event of an accidental release of crude oil (Chapter 5), the impact intensity is dependent on numerous factors including the type of product released, the size of release, proximity to the resource to the point of release, weather conditions, response time and the method of cleanup. The potential range of effects to water resources from an accidental release are discussed in Section 5.5.6. Also see the Accidental Release (ACR) theme and sub-themes 5-9 and 5-11 for potential impacts to water quality and drinking water intakes from an accidental release.

Regarding streambank erosion, PHMSA Condition #41 *Pipeline Patrolling* (see Appendix Z of the 2014 Keystone XL Final SEIS) requires Keystone to patrol the ROW at intervals not exceeding 3 weeks, but at least 26 times each calendar year, to inspect for excavation activities, ground movement, unstable soil, wash outs, leakage, or other activities or conditions affecting the safe operation of the pipeline. This would include inspection of all streambanks at the location of the pipeline crossing. Keystone would perform these type of inspections immediately following a major flood event to ensure integrity of the pipeline and protective cover.

WAT Sub-Theme – Aquifers (4-6c)

Synopsis:

Comments received on aquifers primarily related to the concern of contamination in the event of a spill (see ACR sub-themes 5-5 and 5-9 regarding impacts of a spill to water resources, including aquifers). Other comments in general had a concern for aquifer protection and water supplies within the aquifers.

Response:

Regarding aquifer identification and protection, the aquifers crossed by the proposed pipeline route are discussed in Section 3.3.2, Groundwater, and illustrated in Figure 3.3.2-1 of the 2014 Keystone XL Final SEIS and in Section 3.6.1.1, Groundwater, and Figure 3.6-1 of this SEIS regarding the MAR in Nebraska. Both SEIS documents include an evaluation of key aquifers, public and private water wells, and depth to groundwater along the proposed pipeline route. The construction and operation of the proposed pipeline would require compliance with all applicable federal, state, and local regulations related to pipeline integrity testing, monitoring, maintenance, and training. Regarding protection of groundwater wells,

Keystone will work with landowners to establish a set-back between a water well and the pipeline. Keystone strives to meet a 150-foot offset from the construction footprint and depending on other constraints on a landowner's property.

In addition, the 2014 Keystone XL Final SEIS outlines provisions for protecting groundwater resources, including PHMSA Special Conditions (see Section 1.2.2, Project-Specific Special Conditions, and Section 4.13.6.1, PHMSA Special Conditions), baseline water quality testing for domestic and livestock water wells within 300 feet of the pipeline when requested by landowners in Nebraska (see Section 4.3.3.1, Groundwater, of the 2014 Keystone XL Final SEIS), and the CMRP (Appendix G of the 2014 Keystone XL Final SEIS), which would address actions to prevent spills and releases. See ACR sub-themes 5-9 and 5-11 for potential impacts to water quality and drinking water intakes from an accidental release.

With respect to effects of the proposed Project on water availability and supply, as outlined in the 2014 Keystone XL Final SEIS, construction of the proposed pipeline would require the use of water for dust control, directional drilling, and hydrostatic testing of the pipeline (see Section 4.3.3.1, Groundwater). Although local groundwater resources would likely be used to meet some of the water supply demands during construction, this use would be of relatively short duration, and it is unlikely that groundwater extraction associated with construction of the pipeline would affect water levels in aquifers along the proposed pipeline route on a long-term basis. The degree to which the water table would be depressed would depend on the aquifer used during construction, volume of water withdrawn from the aquifer, and the aquifer characteristics, such as groundwater gradient and hydraulic conductivity. Prior to initiation of construction activities, Keystone would verify the baseline depth to groundwater and aquifer characteristics as part of the groundwater appropriations permitting process. Groundwater pumping rates and removal volumes during construction would comply with applicable regulations, permitted appropriations, and conditions specified in agreements with water rights holders and purveyors.

WAT Sub-Theme – HDD and Frac-Out (4-6d)

Synopsis:

Comments received on the Draft SEIS include concerns of the potential impacts from a frac-out during HDD operations and requested details on procedures that would be followed to reduce the likelihood of a frac-out occurring during HDD under waterways and sensitive resources and to provide any details on procedures that would be followed in the event that a frac-out occurs that impacts waterways or sensitive resources.

Response:

The SEIS acknowledges that inadvertent returns of drilling fluid (frac outs) could adversely affect water quality and aquatic flora and fauna. However, such impacts would be short-term following the release. The drilling material used during HDD operations is bentonite, a non-toxic clay slurry. Long-term contamination of local resources is not anticipated. In addition, Keystone has developed a multi-step process to reduce the likelihood of a potential inadvertent return. These steps include:

- Performing a geotechnical investigation of the proposed crossing to create profiles of the underlying geologic materials.
- Using the geotechnical data and drill profile to estimate the annular pressure and the maximum allowable med pressure to determine inadvertent return potential.
- Finalizing drill design in consideration of pressure calculations to minimize the potential for an inadvertent return.

- Requiring construction contractors to prepare a drilling plan outlining the site-specific plan for drilling operations, equipment to be used, and materials to be used and to finalize the Horizontal Directional Drill Frac-Out Contingency Plan with the necessary cleanup material located on-site.
- Employing mitigation measures during construction, including adjusting mud mixture based on site specific drilling conditions and returns, adjusting tooling based on the drilling conditions, and monitoring fluid returns and downhole pressures during drilling and pullback.

The Horizontal Directional Drill Frac-Out Contingency Plan was prepared and submitted to USACE. It outlines the responsibilities, monitoring, corrective action, containment, clean-up, and notification process for an inadvertent return. The purpose of this plan is to minimize the potential for an inadvertent return, provide timely detection and response, protect the environment impacted by a potential release, ensure an organized and timely response, and ensure all appropriate notifications are made immediately.

In the event of inadvertent return to the surface, the following actions will be taken:

- Contractor will notify the Keystone Drill Inspector, who will contact the appropriate Keystone representatives.
- Suspend active drilling operations.
- Search for surface fractures.
- Determine the volume of lost fluid to surface.
- Contain any drilling fluid that has surfaced.
- Evaluate the circumstances leading to circulation loss to determine if the fracture can be sealed. This shall include a review of the annular pressure history during the drill.
- In the event of partial circulation loss, pumping of drilling fluid may be reduced to reduce pressure applied to native formation materials or lost circulation material may be added. Use of pressure reduction or addition of lost circulation material will be identified in the contract specification.
- Construct additional berms around the bore pit as directed by the Keystone Representative to prevent release of materials into the adjacent water body.
- The contractor will pump the spill in an attempt to recover all of the spilled fluid for disposal.
- Implement measures (berm, silt fence, and/or hay bale installation) to prevent silt-laden water from flowing into the water body.
- If hand tools cannot contain a small on-land release, small collection sumps may be constructed to pump the released material into the mud processing system.
- Sump pumps or vacuum trucks will be used to remove and dispose of any drilling fluids.

D.4.8 Biological Resources (BIO)

The Department received comments related to the SEIS conclusions regarding impacts to vegetation and wildlife and the need to complete the Section 7 Consultation process before presenting effect determinations for protected species.

Theme	SEIS Location	Sub-Themes
Biological Resources (BIO)	Sections 3.7, 4.7, 5.5.7, 6.4.4, 6.4.5, 6.4.6	• Impact Methodology (4-7a) • Conclusions (4-7b) • Protected Species Impacts (4-7c)

BIO Sub-Theme – Impact Methodology (4-7a)

Synopsis:

Commenters requested that the proponents (Keystone) coordinate with state natural resource agencies, including the Montana Department of Fish, Wildlife and Parks. Comments indicated that state natural heritage programs are able to provide updated geospatial data regarding wildlife distributions and other locations of biological importance.

Response:

The proposed Project must comply with state laws and regulations protecting wildlife and other natural resources. These regulations require Keystone to consult with state natural resource agencies if any state-listed species may be impacted by the proposed Project. The state-level process is additional to and separate from the Department's NEPA process. However, the analysis in the Final SEIS uses recent geospatial data from state natural heritage programs that includes state-listed species. For example, the dataset from the Montana Natural Heritage Program is dated January 11, 2019. In addition, the analysis supplemented the official Montana Natural Heritage Program dataset with new records of the northern long-eared bat, *Myotis septentrionalis*, received from the Montana Natural Heritage Program on November 1, 2019.

BIO Sub-Theme – Conclusions (4-7b)

Synopsis:

Commenters stated the Draft SEIS unambiguously draws minimal impact conclusions for wildlife and that the clearing of vegetation and wetlands will negatively affect dwindling bird populations, including endangered species and species of concern. The Draft SEIS never evaluates the full range of impacts to ecological systems and the species that rely on them, nor does it provide a full analysis of the cumulative impacts of the Project on wildlife, especially from climate change. Commenters expressed concern about the lack of resource protection measures for biological resources under normal operations. Commenters also questioned the purpose of aerial surveillance and the method for determining impacts to wildlife and also had concerns regarding how disturbance associated with construction would affect sensitive species.

Response:

Regarding impact analysis and determinations to effects to biological resources, resultant impacts are based on the phase of the Project and also the type of impact. Construction impacts contained within the 2014 Keystone XL Final SEIS and within this SEIS range from minor to moderate and include the type of impacts listed at the beginning of Section 4.7.1 and discussed in Section 6.4.5 of this SEIS; where appropriate, both sections provide quantification of acreage of impacts affected and also indication of where impacts would be short-term versus long-term or permanent. Removal of vegetation would adversely affect habitat along the ROW; most of these instances would be temporary as areas would recover following installation of the pipeline. Permanent loss of habitat would occur from construction of surface-level infrastructure such as pump stations or new electrical infrastructure. Areas of forest within the permanent ROW of the pipeline and power lines would also be permanently converted to herbaceous or scrub-shrub habitat. Impacts to major rivers and associated wetlands, including those containing federally-protected species would be avoided through the use of HDD for pipeline construction. Specifically regarding protected species, impact determinations were based on a combination of desktop and field studies and coordination with the U.S. Fish and Wildlife Service (USFWS).

As stated in the event of an accidental release (Chapter 5), the impact intensity of an accidental release is dependent on numerous factors including the type of product released, the size of release, proximity to the resource to the point of release, weather conditions, response time and the method of cleanup. Past case studies and the properties of the crude oil are used to determine the type of effects on aquatic and terrestrial habitat and to vegetation, fisheries, and wildlife; however the quantification of impacts of an

accidental release of crude oil from the proposed Keystone XL pipeline would be speculative due to the factors previously stated. The potential range of effects to vegetation, wildlife and fisheries from an accidental release of crude oil are discussed in Section 5.5.7.

Conservation measures identified in Chapter 8 of this SEIS would serve to minimize potential for adverse effects from construction and long-term effects during operations. These measures were developed in coordination with the USFWS through the Endangered Species Act (ESA) Section 7 process and reflect conditions within the USFWS Biological Opinion.

Regarding the need for specific resource protection measures for operations, measures listed at the beginning of Section 4.7.3 of this SEIS for vegetation and wildlife and fisheries would apply to any construction-related maintenance activities during normal operations. Refer to ACR Sub-Theme – Guiding Principles, Policies, Regs and Laws (5-1) regarding liability and responsibility and related measures that would be required by Keystone in the event of an accidental release.

Regarding aerial surveillance, the purpose of this activity is to monitor the condition of the pipeline during operations, not to survey vegetation or wildlife.

Cumulative effects to biological resources are discussed in CEA Sub-Theme – Conclusions (7-3). Section 3.10.4 of this SEIS includes a discussion of the effects of climate change on land- and aquatic-based ecosystems and the organisms they support. As discussed in the SEIS, climate change is a result of global greenhouse gas emissions and not solely a cumulative effect of the proposed Project and other projects considered within the cumulative effects analysis. Although approval or denial or any individual project would result in an incremental change to projected climate change impacts, these actions would not substantially alter anticipated climate change-related effects. Therefore, the SEIS does not quantify the specific climate change effects that could occur as result of the Proposed Action, including potential effects to biological resources. The discussion in Section 3.10 of the SEIS regarding potential impacts to biological resources is based on the Fourth National Climate Assessment report (USGCRP 2018). Refer to this report for a more in-depth discussion of observed and predicted climate change impacts to biological resources.

BIO Sub-Theme – Protected Species Impacts (4-7c)

Synopsis:

Commenters stated the need for completion of the Section 7 Consultation process to conclusively determine whether listed species are likely to be adversely affected by the Project and that the Draft SEIS improperly draws conclusions of effects to listed species without USFWS concurrences or issuance of a Biological Opinion. Commenters stated the results of consultation should inform the NEPA process and be available for public comment as part of the NEPA process. Commenters also stated the SEIS does not provide an analysis of the actual harm that is likely to occur to species—regardless of whether the proposed mitigation measures would work to reduce adverse impacts. Commenters expressed concern that the conclusions regarding protected species were not supported by the analysis in that the biological consequences of the particular types of potential harms mentioned are not considered. Commenters expressed concern that various aspects of the analysis were inadequate, including the risks of impacts from frac-out, accidental releases, collision with electrical power lines, sedimentation in the Taylor Creek system, and cumulative effects. Commenters also requested additional avoidance, minimization, and mitigation measures or questioned why certain measures were not included in the analysis.

Response:

The NEPA regulations, at 40 CFR 1502.25 *Environmental Review and Consultation Requirements* requires "(a) To the fullest extent possible, agencies shall prepare draft environmental impact statements concurrently with and integrated with environmental impact analyses and related surveys and studies required by the Fish and Wildlife Coordination Act (16 USC 661 et seq.), the National Historic

Preservation Act of 1966 (16 USC 470 et seq.), the Endangered Species Act of 1973 (16 USC 1531 et seq.), and other environmental review laws and executive orders." As stated in Table 3.7-4 of the Draft SEIS, consultation with the USFWS was on-going. The effects determinations and conservation measures within the Biological Assessment submitted to the USFWS on September 30th, 2019 were included within the Draft SEIS for public review and comment.

As part of that ongoing Section 7 Consultation process, an amended Biological Assessment was prepared and submitted to the USFWS on November 27th and the USFWS has subsequently prepared their Biological Opinion; findings of the Biological Opinion, including conservation measures, have been updated in the Final SEIS document.

Similar to the response in BIO Sub-Theme – Conclusions (4-7a), the range of effects or potential for consequences to species are discussed at the beginning of Section 4.7.3, and the range of potential effects (independent of mitigation measures) to vegetation, wildlife, and fisheries would be the same for protected species. Specific conservation measures to avoid adverse effects on protected species are summarized in Table 4.7-3 of the Final SEIS and are consistent with conservation measures contained within the USFWS Biological Opinion. The BLM, WAPA, RUS, and/or the USACE will make adherence to the conservation measures in the Biological Assessment and/or Biological Opinion conditions of any approvals, as applicable within the authority of each agency. Section 5.5.7 of this SEIS contains an assessment of potential adverse effects to biological resources, including protected species, in the event of an accidental release of crude oil. This includes the likelihood of a release to affect a resource based on incident rates and the presence of the resource along the pipeline alignment.

The revised Final SEIS Sections 4.7 and 6.4.6 align with the analyses in the Biological Assessment and Biological Opinion. Each type of potential effect now receives a discussion of potential biological consequences, which are considered along with the likelihood of those consequences occurring to determine an impact rating.

Regarding the risk of impacts from frac-out, the revised Final SEIS Section 4.7.3.1 explains that the nature(s) of the habitats crossed by HDD and the natural history of each species potentially present render a biologically meaningful adverse consequence highly unlikely for any threatened or endangered species even in the case of a frac-out. For additional information, please refer to Sub-Theme 4-6d, HDD and Frac-Out.

Regarding the risk of impacts from accidental releases, the revised Final SEIS Section 5.5.7 explains that significant impacts are highly unlikely, due to the likelihood that most spills would be small in size, the low probability of a spill contacting suitable habitat, and the low probability of the spill coinciding with the presence of individuals of any protected species other than the American burying beetle. For the American burying beetle, the Biological Assessment estimates that approximately four individuals would be affected by spills, leading to less than significant impacts to the species; however, the Biological Opinion from the USFWS considers that effects on this species resulting from accidental releases are not reasonably certain to occur. The nature of potential effects of an accidental release on ESA-listed species are described in both the Draft and Final SEIS Section 5.5.7 and Table 5-20. For additional information, please refer to the Theme of Accidental Releases (ACR).

Regarding the risk of collision with electrical power lines, an updated summary of the potential for effects on ESA-listed species resulting from collisions with proposed electrical power lines is provided in Section 6.4.6.1 of the SEIS. Also provided in the BA as well as Section 8.1 of the SEIS is a series of conservation measures that will be applied to the proposed electrical power infrastructure to minimize the potential for avian power line collisions. Given that collision with power lines is a major source of known whooping crane mortality, a detailed collision risk assessment was completed in coordination with the USFWS and included in the Biological Assessment and subsequent Biological Opinion. This risk assessment is also included in Section 6.4.6.1 of the Final SEIS. The whooping crane collision risk

assessment followed methodology prescribed by the USFWS and was reviewed by applicable resource agencies prior to submission.

Regarding the risk of impacts from sedimentation of the Taylor Creek system, the revised Final SEIS Section 4.7.3.1 explains that the proposed Project would implement the sediment and erosion control measures in Keystone's CMRP to avoid and minimize the potential effects of erosion and sedimentation. Furthermore, only one proposed crossing in the Taylor Creek watershed intersects a perennial stream, and photographs indicate that this feature is too small to convey any construction-related sediment the approximately 8.6 river miles downstream to the designated critical habitat in Taylor Creek.

Regarding the risk of cumulative impacts on listed species, the revised Final SEIS Section 7.4.6 includes an updated assessment of cumulative impacts to listed species. For additional information, please refer to the Theme of Cumulative Impacts (CEA).

Regarding avoidance, minimization, and mitigation measures, the revised Final SEIS Chapter 8 includes an updated Table 8-3 showing avoidance, minimization, and mitigation measures related to ESA-listed species. These measures include all of the conservation measures in the Biological Assessment and/or Biological Opinion, as well as other measures added after publication of the Draft SEIS. The BLM, WAPA, RUS, and/or the USACE will make adherence to the conservation measures in the Biological Assessment and/or Biological Opinion conditions of any approvals, as applicable within the authority of each agency. The analyses in Chapters 4 through 7 of the Final SEIS consider the application of these measures and the impact ratings are reflective of this. The USFWS has reviewed the proposed measures and has determined that they would be sufficient to render effects to ESA-listed species other than the American burying beetle insignificant and/or discountable. For the American burying beetle, the USFWS has determined that the proposed measures would lead to the proposed Project and connected actions having effects on this species that do not jeopardize the existence or recovery of the species.

D.4.9 Socioeconomical and Environmental Justice (SOC)

The Department received comments related to the manner in which the SEIS evaluated impacts to tribes, use of eminent domain by a foreign entity, and the impacts to the economy and jobs presented in the SEIS.

Theme	SEIS Location	Sub-Themes
Socioeconomics and Environmental Justice (SOC)	Sections 3.8, 4.8, 5.5.8, 6.4.9	• Impact Methodology and Assumptions (4-8a) • Conclusions (4-8b) • Eminent Domain (4-8c) • Impacts to Tribal Resources of Significance (4-8d) • Impacts to Tribal Way of Life (4-8e) • SOC Sub-Theme – Economy (4-8f) • SOC Sub-Theme – Jobs (4-8g)

SOC Sub-Theme – Impact Methodology and Assumptions (4-8a)

Synopsis:

Commenters stated the Draft SEIS fails to adequately assess impacts to tribal rights.

Response:

The SEIS discusses tribal rights and resources in Section 3.8 and analyzes potential impacts to those resources both in Section 4.8 and Chapter 5. Consistent with Executive Order 13175 and 36 CFR 800 (Protection of Historic Properties), the federal government has engaged federally recognized American Indian tribes in government-to-government consultation. The federal government initiated

consultation with tribes as part of the original application that culminated in the August 2011 Final EIS. The Department continued this consultation through the development of the 2014 Keystone XL Final SEIS. As part of this consultation process, the Department conducted a broad range of tribal consultations, ranging from group meetings involving many tribes and discussion topics to individual discussions on specific topics via meetings, letter, phone, or email. A Programmatic Agreement consistent with Section 106 of the National Historic Preservation Act was originally drafted as part of the 2011 Final EIS. As part of the 2014 Keystone XL Final SEIS evaluation process, the Programmatic Agreement that was signed in 2011 was amended, finalized, and implemented in 2013 (see Appendix E of the 2014 Keystone XL Final SEIS). The Department continues to uphold conditions within the Programmatic Agreement.

Also see response to P&N Sub-Theme 1-2c regarding consultation with tribes and responses to sub-themes 4-8d and 4-8e regarding impacts to tribal resources of significance, tribal way of life and federal recognition of treaty land rights.

SOC Sub-Theme – Conclusions (SOC 4-8b)

Synopsis:

Commenters expressed concern about the lack of resource protection measures for socioeconomic conditions and environmental justice populations and question the impact conclusions regarding economic benefits.

Commenters also stated the Draft document fails to adequately evaluate environmental justice impacts along the pipeline route. These comments focus on the concern for safety of native women and increase of crime and trash due to the establishment of construction camps. Commenters also linked the proximity of the Project to Fort Peck and important tribal resources and the potential for adverse effects as environmental justice concerns; these communities have endured hardships in the past and the Project would threaten their communities.

Response:

The Department considers the analyses presented in the environmental justice sections of the 2014 Keystone XL Final Supplemental EIS (see Sections 3.10.2.4, Environmental Justice, 4.10.3.1, Construction, and 4.10.3.2, Operations) and this SEIS (see Sections 3.8.2 and 4.8.3) to be consistent with the CEQ guidance for analysis of potential environmental justice effects. The documents identify geographic areas with meaningfully greater or populations exceeding 50 percent of minority and/or low-income populations, including American Indian populations. These geographic areas of minority and/or low-income concentrations have the potential to be disproportionately adversely affected by the proposed Project, including exposure to construction dust and noise, disruption to traffic patterns, and increased competition for medical or health services in the event of an accidental release of crude oil or other incident. These impacts could also disproportionately affect American Indian populations to the extent that they use ceremonial and medicinal foods and other products.

Regarding the need for specific resource protection measures for operations, based on the projected impacts from construction and operations, no additional measures, beyond those identified in Table 8-2 of this SEIS would be warranted. Specific mitigation for environmental justice communities would involve ensuring that adequate communication in the form of public awareness materials regarding the construction schedule and construction activities is provided (see Section 4.10.3.1, Construction of the 2014 Keystone XL Final SEIS). Keystone states that it would reach out to Local Emergency Planning Committees during and after the development of its Emergency Response Plan (ERP) and produce public awareness materials with special emphasis on considerations of low-income and minority communities in

those preparedness efforts (see Section 4.10.3.1, Construction of the 2014 Keystone XL Final SEIS). Refer to ACR Sub-Theme – Guiding Principles, Policies, Regs and Laws (5-1) regarding liability and responsibility and related measures that would be required by Keystone in the event of an accidental release.

Increases in crime and social impacts to local communities from the oil industry such as gambling, alcohol, and violence have been widely reported, but such impacts are generally associated with boom towns and/or longer term operations like oil/gas drilling operations where a largely male workforce may be residing for months or years. Keystone states that it has established a camp Code of Conduct to control and manage behavior in all proposed Project camps. All camp residents must agree to abide by the conditions of the Code of Conduct. Workers who violate Camp Code of Conduct would be fired. The Code of Conduct addresses camp access control procedures, bringing weapons into the camp, disruptive or abusive behavior, alcohol use, and criminal/illegal activities. Keystone would restrict camp access to ensure that only appropriate personnel receive camp entrance authorization. Camps would be fully fenced with a guard shack at a single entrance and video surveillance would be used to monitor key areas. A contract security officer staffing the guard house would be provided on a 24/7 basis and at all times there would be at least one additional roving security officer supplemented with off-duty law enforcement personnel, as needed. Residents would be prohibited from having visitors within the camp. In most locations, the workforce would be housed in construction camps, away from communities and the construction camps would be operational temporarily (6 to 8 months).

Although out of scope of this project, the U.S. Government is aware of, and is taking steps to address, the unique problem of violence toward Native Americans. On November 22, 2019, Attorney General William Barr announced a nationwide plan to address the crisis of missing and slain Native American women. This initiative would invest $1.5 million to hire specialized coordinators in 11 U.S. attorney's offices across the United States with significant Indian Country caseloads. The coordinators would be responsible for developing protocols for a better law enforcement response to missing persons cases. Montana's coordinator, a former Federal Bureau of Investigation (FBI) agent, has already started in his position. Tribal or local law enforcement officials would also be able to call on the FBI for additional help in some missing indigenous persons cases. The FBI could then deploy some of its specialized teams, including investigators who focus on child abduction or evidence collection and special agents who can help do a quick analysis of digital evidence and social media accounts. The Justice Department is also committed to conducting an in-depth analysis of federal databases and its data collection practices to determine if there are ways to improve the gathering of information in missing persons cases.

On November 26, 2019, President Donald Trump signed an executive order that established Operation Lady Justice – an interagency task force charged with developing an aggressive, government-wide strategy to address the crisis of missing and murdered women and girls in American Indian and Alaska Native communities. The task force will establish multi-jurisdictional teams comprising representatives from tribal and federal law enforcement to review unsolved cases and promote greater cooperation among federal, local, state, and tribal law enforcement agencies in responding to cases. This executive order also directs the Department of Justice to issue grants to help improve safety in Native American communities. The President said, when signing the order, that "We will leverage every resource we have to bring safety to our tribal communities, and we will not waver in this mission."

Also see response to P&N Sub-Theme 1-2c regarding consultation with tribes and responses to sub-themes 4-8d and 4-8e regarding impacts to tribal resources of significance, tribal way of life and federal recognition of treaty land rights.

SOC Sub-Theme –Eminent Domain (4-8c)

Synopsis:

Comments stated concern of eminent domain and also the precedent set by allowing a foreign corporation to use eminent domain on private U.S. citizen land for corporate profits.

Response:

Regarding eminent domain and foreign entities, Section 2.1.7.2 (Pipeline Construction Procedures, TransCanada-Keystone Pipeline) of the 2014 Keystone XL Final SEIS details that Keystone LP (Keystone) is a limited partnership organized under the laws of the state of Delaware. To construct, operate, and maintain the proposed Project, Keystone would be responsible for acquiring easement rights from landowners along the entire route in each state. Easement agreements would list the conditions to which both the landowner and Keystone agree, including financial compensation to the landowners in return for granting easements. Compensation would also be made for loss of use during construction, crop loss, loss of non-renewable or other resources, and restoration of any unavoidable damage to personal property during construction. The Department expects Keystone to negotiate fairly, honestly, and respectfully with landowners when they negotiate an easement; however, those negotiations and final agreements are private business concerns between the landowners and Keystone.

If Keystone obtains all necessary permits and approvals and an easement negotiation cannot be completed in a manner suitable to both parties, Keystone may attempt to use state eminent domain laws to obtain easements needed for pipeline construction, maintenance, and operation. State laws dictate the circumstances and legal entities under state law which eminent domain may be used and define the eminent domain process and level of compensation within a given state. The Department has no authority over negotiations of easement agreements and has no legal status to enforce the conditions of an easement agreement. A landowner who considers Keystone to be out of compliance with an easement agreement would need to discuss the matter with Keystone or local law enforcement officials or initiate legal consultation.

SOC Sub-Theme –Impacts to Tribal Resources of Significance (4-8d)

Synopsis:

Comments stated concern of impacts to tribal resources of significance both from construction of the proposed pipeline and from an accidental release of crude oil. This includes recognition of the Ponca Trail of Tears eligibility on the NRHP, the need for the Department to consult with tribes regarding sacred sites and Traditional Cultural Properties, and protection of tribal resources of spiritual significance such as Ponca Sacred Corn.

Response:

Throughout the NEPA process, the Department worked with tribes to identify Traditional Cultural Properties, including sacred sites. This includes consideration of the Ponca Removal Trail which was identified as a resource during previous public comment (see 3.9 of this SEIS). The general route of what is now known as the Ponca Removal Trail crosses the MAR study corridor somewhere near the Big Blue River in Seward County. This route was used for the forced removal of the Ponca Tribe from northern Nebraska in 1877. Although no evidence exists pointing to the exact location of the trail in this area, a short segment of an old trail known as the Ulysses to Seward Settlement Trail has been documented at a nearby archaeological site; it is possible that this road segment, which is located approximately 1 kilometer (0.65 mile) southeast of the MAR centerline, represents a small portion of the Ponca Removal Trail. Because the locations of happenings (such as camp sites and burials) during the Ponca's forced removal were documented in detail as they occurred (specifically several miles to the north and the south, near the present-day towns of Ulysses and Staplehurst, respectively), there is no evidence associating the

old road segment with significant events that occurred during the Ponca's removal in 1877. Furthermore, archaeological investigation of the two locations the Project centerline will cross the projected route of the Ponca Removal Trail found no physical evidence of the trail, camp sites or unrecorded burials associated with the Ponca Removal Trail.

Since completion of the 2014 Keystone XL Final SEIS, the Tanderup Family, whose farm is located in proximity to the Ponca Removal Trail, deeded land to the Ponca Tribe of Nebraska and the Ponca Nation of Oklahoma along the Preferred Route, approximately 11 miles northwest of the start of the MAR. Sacred Ponca Corn has been planted on the Tanderup Farm and deeded land. The Ponca Removal Trail has been reported to cross this property where the corn has been planted, however, during the Nebraska Public Service Commission hearings, it was determined that the Ponca Trail is located approximately 1 mile east of the Tanderup property based on geographic information system (GIS) locations provided by Chief Standing Bear (Nebraska Commission on Indian Affairs 2019). Stipulation V.B.2.a, of the Programmatic Agreement states "In the identification and evaluation of historic properties to which Indian tribes may attach religious and cultural significance, the Department will take into consideration information submitted by Indian tribes to the Department prior to construction through consultations." This would include the Sacred Ponca Corn planting location on the Tanderup farm.

Section 3.9.2 of the Final SEIS has been updated to reflect the above discussions regarding the Ponca Removal Trail and Tanderup farm.

Regarding impacts from pipeline construction, the Department has worked with tribes under the Programmatic Agreement to identify and avoid historic properties along the ROW. As indicated in Section 4.9 of this SEIS, these measures include shifting the alignment to avoid the resource, boring underneath the resource, fencing and monitoring, and restricting vehicle traffic. Unavoidable impacts to historic properties would require specific mitigation to that resource through the Programmatic Agreement.

See response to CUL sub-theme 4-9c regarding the existing Programmatic Agreement and response to P&N sub-theme 1-2c regarding the history of tribal consultation.

SOC Sub-Theme – Impacts to Tribal Way of Life (4-8e)

Synopsis:

Comments stated concern of impacts to tribal resources related to way of life and cultural and religious practices. This includes impacts to plants, wildlife and water used for spiritual practices, medicinal uses, and daily survival. Commenters also stated the Draft SEIS did not fully consider water rights, including those established for reservations under the Winters Doctrine and the Fort Peck-Montana Compact. Additionally, potential impacts of the proposed pipeline's crossing of the Assiniboine and Sioux Rural Water Supply System had not been fully disclosed as Chapter 5 of the Draft SEIS incorrectly stated "The proposed pipeline ROW does not cross any Assiniboine and Sioux Rural Water Supply System-related infrastructure".

Response:

The Department acknowledges that fishing, hunting and collection of plants for medicinal purposes are significant activities for many Indian residents of the proposed Project area. Individuals participate in these activities for numerous reasons, including food supply, personal income, and the continuance of cultural customs and traditions. Regarding medicinal plants and wildlife and fishery resources valued by tribes, construction of the proposed pipeline would have temporary adverse effects to resources during construction. With the exception of forested areas cleared within the permanent ROW, biological

communities would be restored following construction to specified landowner agreements and federal agency ROW terms and conditions. These effects are discussed in Section 4.8.3 of this SEIS.

Section 5.5.8.2, Environmental Justices discusses impacts of the proposed pipeline on tribal rights in the event of a spill. It is recognized that Indian tribes and tribal members could be disproportionately impacted negatively by the proposed Project because they could have a greater dependence on natural resources than non-tribal members. A large accidental release of crude oil could significantly impact aquatic and terrestrial resources, including those considered important by Indian tribes or used in sacred and spiritual practices. Although the Draft SEIS identified the potential significant impacts to aquatic and terrestrial resources, including impacts to resources considered important to Indian tribes or used in sacred and spiritual practices, the Department expands on the analysis in the draft to respond to comments. Additional text has been added to the Final SEIS based on comments received: "***Comments received from tribes and tribal members during the Draft SEIS comment period emphasized the importance of these resources to their culture and way of life. Rivers sustain the tribes in part by providing the water for traditional religious and cultural practices such as the Sundance and sweat lodges. These practices require water and resources, such as cottonwood trees and gathered plants, which rely on water from the rivers to thrive. Specifically, the Missouri River in certain tribal traditional beliefs holds sacred spiritual beings which would be threatened by contamination. Members of tribes also rely on rivers for subsistence including hunting of large mammals and game birds as well as gathering of plants which rely on the rivers. These subsistence activities are often used to supplement fixed incomes and loss of these resources in the event of a spill would be a significant impact to these individuals. Contamination of these resources in the event of an accidental release would adversely affect these resources and significantly affect tribal culture, beliefs, and threaten the transfer of these traditions to younger generations. Depending on the location of the accidental release, these effects could be disproportionately high and adverse to tribal communities affected by a spill.***"

Additional text has also been included in Section 3.8.2.4 regarding treaty and water rights (bold indicates new text):

Regarding water rights, in 1908, a Supreme Court ruling established the Winters Doctrine which clarifies water rights of American Indian reservations by establishing that when the federal government created Indian reservations, water rights were reserved in sufficient quantity to meet the purposes for which the reservation was established. The specific case involved the Fort Belknap Reservation in Montana and their right to use the water of the Milk River which was being diverted upstream by farmers. The upstream diversion provided insufficient water supply to support irrigation for agriculture on the reservation. The Supreme Court ruled in favor of the United States and the Native Americans, arguing that the establishment of the Fort Belknap Reservation entitled the Native Americans to perpetual use of the water that it contained; their rights were "reserved" at the date of establishment (1888), and, contrary to the doctrine of prior appropriation, those rights could not be lost through nonuse. Courts have held that Indian tribes have "reserved" rights in all waters that arise on, border, traverse, or underlie their reservations.

More recently, in 2000, Congress enacted the Fort Peck Reservation Rural Water System Act to (1) ensure a safe and adequate municipal, rural and industrial water supply for the residents of the Fort Peck Indian Reservation in the state of Montana; and (2) assist the citizens of Roosevelt, Sheridan, Daniels and Valley counties in the state, outside the Fort Peck Indian Reservation, in developing safe and adequate municipal, rural and industrial water supplies (Public Law 106-382). The resulting project, known as the Assiniboine and Sioux Rural Water Supply System, is comprised of the Fort Peck Reservation and Dry Prairie Rural Water Authority, which are located in northeastern Montana. ***While portions of the Assiniboine and Sioux Rural Water Supply System are still in development, much of the work has been***

completed and title for operational facilities has been transferred to the Bureau of Indian Affairs to be held in trust for the Tribes. The Assiniboine and Sioux Rural Water Supply System uses water from the Fort Peck-Montana Compact which was ratified in 1985 by the state of Montana and the Assiniboine and Sioux Tribes of the Fort Peck Indian Reservation. The Compact was approved by the Secretary of the Interior and the U.S. Attorney General and establishes water rights of the Assiniboine and Sioux Tribes of the Fort Peck Indian Reservation in the State of Montana to water on, under, adjacent to, or otherwise appurtenant to the Reservation, including waters of the Missouri River, its tributaries, and ground water. The Assiniboine and Sioux Rural Water Supply System provides clean, safe drinking water to schools, churches and other faith communities, hospitals, and businesses on the Reservation. *The Fort Peck Reservation has a total population of approximately 10,700 people, of which approximately 5,800 are members of the Assiniboine and Sioux Tribes. The water system serves Reservation populations in or around the towns of Wolf Point, Poplar, Brockton, Fort Kipp, Oswego and Frazer. Towns not on the Reservation, including Glasgow, Scobey, Plentywood and Culbertson, are served by the Dry Prairie Rural Water Association (Assiniboine & Sioux Rural Water Supply System 2010).* ***The ultimate design population serviced by the water supply system is 31,200 people.***

A discussion has been added to Section 4.8 to discuss the proposed Keystone XL pipeline's crossing of the Assiniboine and Sioux Rural Water Supply system (construction): *"**The proposed Keystone XL pipeline also crosses part of the Assiniboine and Sioux Rural Water Supply waterlines at 12 locations between mileposts 82 to 86. For these crossings, Keystone has worked with and compensated the Dry Prairie Rural Water District to lower the waterlines to a minimum depth of 14 feet, which would allow for the proposed Keystone pipeline to cross over the waterlines at a typical clearance of 7 feet between the two lines and case the waterlines. This separation distance between the existing waterlines and proposed Keystone XL pipeline and casing of the existing waterlines would help prevent impacts to interruption of the Assiniboine and Sioux Rural Water Supply distribution system during construction of the proposed Keystone XL pipeline."*** (normal operations and maintenance): ***"As previously stated, the proposed Keystone XL pipeline crosses part of the Assiniboine and Sioux Rural Water Supply waterlines at 12 locations. Efforts made to increase the separation distance between the pipelines and the casing of the waterlines would help prevent impacts to interruption of the Assiniboine and Sioux Rural Water Supply distribution system should repairs of the proposed Keystone XL pipeline be required at the vicinity of a crossing location***."

SOC Sub-Theme – Economy (4-8f)

Synopsis:

Commenters expressed how taxes received from the pipeline would benefit local and regional economics and fund much needed infrastructure improvements. Commenters also provided disagreement that the potential long-term environmental effects and resulting adverse economic impacts outweigh the economic Project benefit described in the SEIS. Commenters stated the economic analysis needs to include the potential costs associated with an accidental release of crude oil and effects of climate change.

Response:

Regarding economic benefits, the 2014 Keystone XL Final SEIS and the current SEIS provide an analysis of the economic impacts of the proposed Project, including the estimated beneficial impacts of increased direct and indirect employment, earnings, tax revenues to local communities along the route, and gross state product and gross domestic product. As discussed in 2014 Keystone XL Final SEIS Section 4.10, Socioeconomics, and in the current SEIS Section 3.8/4.8, some of these benefits (such as employment and earnings) would be generally short-term in nature, while others (such as tax revenues) would be longer-term. Based on the predicted number of jobs created during construction and spending, as well as the long-term tax benefits, economic effects to the local and regional jurisdictions are determined to be substantial. The local jurisdictions receiving tax benefits would ultimately decide where additional

revenues would be spent. Local communities in the economic corridor would experience some temporary direct economic benefits of the proposed Project during construction.

Section 5.5.8.1 of this SEIS discusses the potential economic effects in the event of an accidental release of crude oil. This includes impacts to agricultural production, hunting and fishing, local property values and commercial activity. Actual economic dollar value impacts, however, would be speculative as the extent and duration of the socioeconomic impacts would depend on the properties and uses affected, the response time, the remedial method employed by the response team, and the length of time required to return properties to conditions similar to those prior to the release.

Regarding potential climate change-related economic impacts from the proposed Project, see response to GHG sub-theme 4-10b regarding consideration of USEPA's social cost of carbon metric. Also, section 3.10 of the SEIS discusses the potential global, national, and regional impacts that are predicted to intensify as a result of climate change. These effects, however, cannot be tied to a single project, and are therefore, not considered part of the economic impact of the proposed Project. The discussion in Section 3.10 of the SEIS regarding socioeconomic effects is based on the Fourth National Climate Assessment report (USGCRP 2018). Refer to this report for a more in-depth discussion of observed and predicted climate change impacts to economic growth within the United States.

SOC Sub-Theme – Jobs (4-8g)

Synopsis:

Commenters expressed how the proposed Project would create jobs and be a benefit to the region and union laborers, whereas other commenters focus on the job creation estimates being inflated, stating a majority of the jobs would be temporary construction jobs. Others commented on how the SEIS should evaluate creation of green energy jobs using alternative energy sources.

Response:

Employment estimates are provided in Section 4.10.3.1, Construction, of the 2014 Keystone XL Final SEIS. These estimates are based on staffing and contracting patterns provided by Keystone. Given past experience, Keystone estimates that only about 10 percent of the pipeline workforce would be hired locally. Pipeline construction is typically done by firms using a predominately national, highly-specialized workforce. Because oil pipeline construction is such a specialized activity, a suitable workforce would not be expected to reside in the mostly rural stretches through which the proposed Project corridor runs.

As noted in Section 4.10.3.1, Construction of the 2014 Keystone XL Final SEIS, most jobs in the economic corridor states would occur in construction, trade, professional services, lodging, and food services. This mix of industry effects stems from local suppliers to pipeline construction activity, as well as household spending of worker income. In southern Nebraska, this pattern would be supplemented by the anticipated use of commercial lodging and food service during pipeline construction.

Where less specialized construction activities would occur, such as in the development of storage sites, the analysis assumes that in-state contractors could be used. In describing employment impacts in Section 4.10.3.1, Construction of the 2014 Keystone XL Final SEIS, the term local includes workers residing anywhere within a proposed Project corridor state (a state through which the proposed Project corridor runs). These less specialized construction activities plus the other direct, indirect, and induced jobs resulting from spending for the proposed Project would total approximately 12,000 average annual jobs in the four proposed Project corridor states. The numbers of jobs outside the proposed Project corridor states are summed together and are not broken down by state. These total approximately 30,100 average annual jobs, including direct, indirect, and induced jobs (see the 2014 Keystone XL Final SEIS, Table 4.10-4).

Appendix O, Socioeconomics, of the 2014 Keystone XL Final SEIS provides detailed employment estimates by industry by state along the proposed Project corridor. For Nebraska, sub-state analyses were completed to account for substantial economic and demographic differences between northern and central/southern portions of the state.

Contractors would likely use local subcontractors and in-state sources for common goods and services where available. Keystone estimates that approximately 10 percent of the workforce in each state would come from locations within that state, both within and outside the counties through which the pipeline would pass. Worker expenditures during construction would primarily go toward lodging, meals, and minor retail purchases.

The proposed Project represents a private investment of approximately $3.1 billion (see Section 4.10.3.1, Construction of the 2014 Keystone XL Final SEIS). It is possible that such a scale of investment in green energy or in some other enterprise could result in more jobs than the proposed Project. However, such an investment has not been proposed, and the number of jobs associated with the proposed Project is not the sole consideration in approval or denial of permits and grants for the proposed Project. Additionally, neither approval or denial of the proposed Project would preclude public or private investments in green energy.

Some commenters assert that the proposed Project would result in net job losses. There is no specific relationship between the proposed Project moving forward, and jobs being lost in industries that provide alternatives to a fossil fuel economy. The market analysis (see Section 1.4, Market Analysis, of both the 2014 Keystone XL Final SEIS and this SEIS document) explains that demand for heavy sour crude oil is projected to continue in the long-term at U.S. refineries in the Midwest regardless of whether the proposed Project moves forward, and that this demand would be met by other crude oil transport options in the absence of the proposed Project. Section 1.4.6.1, Crude Price Differences and Gasoline Prices of the Keystone XL Final SEIS, discusses crude price differences and gasoline prices and concludes that Midwest product prices are driven by international rather than U.S. inland crude oil prices. Section 1.4, Market Analysis of the 2014 Keystone XL Final SEIS, finds that the crude slate would be essentially the same with the proposed Project, and Section 4.15.3.12, Air Quality and Noise, finds that, as a result, the changes in emissions at the Gulf Coast area refineries would be negligible and would not affect health and climate or, as a result, jobs.

Section 4.13.5, Potential Impacts, of the 2014 Keystone XL Final SEIS and Chapter 5 of this SEIS discusses the potential impacts of a spill on farming and on businesses that rely on hunting, fishing, sightseeing, and other recreational activities. These analyses acknowledge that impacts to these resources could occur, but states that impacts would be expected to be temporary and short-term.

The proposed Project pipeline would not be expected to threaten trucking jobs as it is a long-distance pipeline and crude oil is not transported by truck for long (multi-state) distances. In the Bakken, trucks are used locally to transport crude oil.

D.4.10 Cultural Resources (CUL)

The Department received comments related to the study area used and the process for identifying historic properties and tribal involvement during the cultural survey process. Comments received also discussed the Programmatic Agreement and questioned the process for evaluating unsurveyed locations.

Theme	SEIS Location	Sub-Themes
Cultural Resources (CUL)	Sections 3.9, 4.9, 5.5.9, 6.4.10	• Study Area (3-9a) • Impact Methodology and Assumptions (4-9a) • Conclusions (4-9b) • Programmatic Agreement (4-9c) • Tribal Involvement (4-9d) • Unsurveyed Locations (4-9e)

CUL Sub-Theme – Study Area (3-9a)

Synopsis:

Commenters stated the Draft SEIS too narrowly defines the area of potential effect. The terminology "area of potential effect" is used, which is different from other sections, where a "region of influence" or "ROI" term is used. The 300-foot ribbon along the proposed pipeline may be sufficient to address direct impacts to historic properties' integrity (location, design, materials, workmanship, setting, feeling, and association). There is potential for indirect impacts beyond the 300-foot line, such as visual effects, that might change a historic property's setting, feeling, and association. The area of potential effect needs to account for such indirect effects. This includes consideration of historic properties within 1,200 feet that may be adversely affected by an accidental release of crude oil.

Response:

As a supplement to the 2014 Keystone XL Final SEIS analysis, the current SEIS adopts the same methodology used in determining the area of potential effects (APE) which included a 300-foot-wide survey area; a distance deemed sufficient to understand the extent of historic properties within the 110-foot wide construction footprint for pipeline installation. The Department recognizes the concerns for indirect visual impacts beyond this distance, however, with the exception of the pump stations, the pipeline will be belowground. Regarding a larger 1,200-foot APE, this distance would fall well beyond expected direct effects from pipeline construction and normal operations.

In the event of an accidental release, protection of public health and safety would be paramount and the protection of historic properties if present or discovered during remediation of a spill would be coordinated through the *Programmatic Agreement on Protection of Historic Properties During Emergency Response Under the National Oil and Hazardous Substances Pollution Contingency Plan* (Advisory Council on Historic Preservation 2002). This Programmatic Agreement ensures that historic properties are taken into account in their planning for and conduct of the emergency response under the National Oil and Hazardous Substances Pollution Contingency Plan (40 CFR 300). The National Oil and Hazardous Substances Pollution Contingency Plan does not provide specific guidance for taking historic properties into account during emergency response to an actual or threatened release of a hazardous substance, pollutant or contaminant or the discharge of oil or other pollutants (hereinafter, a release or spill). Also, emergency provisions contained in the regulations implementing Section 106 of the National Historic Preservation Act do not directly address requirements for such emergency responses. The Programmatic Agreement provides an alternative process to ensure appropriate consideration of historic properties within the meaning of the National Historic Preservation Act during emergency response to a release or spill.

CUL Sub-Theme – Impact Methodology and Assumptions (4-9a)

Synopsis:

Commenters stated there are a number of occurrences where the Draft SEIS mischaracterizes impacts to cultural resources (e.g., use of cultural resource terminology, indirect effects, treatment vs. mitigation) or incorrectly conflates NEPA terminology and practice with that of requirements arising from Section 106 of the National Historic Preservation Act. They also stated the surveys conducted are an impact and that activity should be recognized in the SEIS and that tribal consultation was not conducted for testing and mitigation of sites.

Response:

Sections 3.9 and 4.9 of the SEIS have been revised to reflect consistent terminology of "historic property" as defined under the National Historic Preservation Act versus the use of cultural resource or heritage resource used in the Draft SEIS. The analysis has also been revised to characterize effects as direct effects vs. the previous characterization of indirect effects. Additional information from surveys conducted during 2019 have also been included along with the status of SHPO concurrence.

Regarding tribal consultation and the role of tribes during the surveys, the regulations implementing Section 106 of the National Historic Preservation Act (54 USC 306108) are at 36 CFR 800. Section 800.16 defines consultation as "the process of seeking, discussing, and considering the views of other participants, and where feasible, seeking agreement with them regarding matters arising in the section 106 process." The 2013 amended Programmatic Agreement, prepared in accordance with 36 CFR 800.14(b), lays out the process by which the Department will consult with the 17 federal and state agencies that are signatories to the Programmatic Agreement, TransCanada (an invited signatory), and the 69 tribes the Programmatic Agreement recognizes as tribal consulting parties to the Project. The Department has followed the consultation process.

Consistent with the terms of the Programmatic Agreement, the Department has satisfied the Section 106 regulation's requirements for identifying and evaluating historic properties. The Section 106 regulations require federal agencies to make a "reasonable and good faith effort" to identify historic properties that may be affected by federal undertakings. The Advisory Council on Historic Preservation issued standards for meeting the "Reasonable and Good Faith" requirement. The standards instruct federal agencies to ensure their identification efforts are logical, clear, and comprehensive (reasonable) and carried out in a timely manner in consultation with the consulting parties (good faith). Demonstrating good faith also includes "…recognizing the special expertise possessed by Indian tribes and Native Hawaiian organizations in assessing the eligibility of historic properties that may possess religious and cultural significance to them…" (Advisory Council on Historic Preservation 2011). The Department, working with the BLM, made efforts to engage tribes in the 2019 surveys. Multiple tribes, several of which are from Montana (both federally recognized and non-recognized tribes) participated in on the ground inventory.

The Department has always recognized the tribal expertise in identifying places of cultural significance to them that may be affected by the Project. In 2009, the Department invited the tribes to conduct studies to identify properties of religious and cultural significance, otherwise referred to as Traditional Cultural Properties, in proximity to the proposed pipeline route. Eight tribes conducted Traditional Cultural Property studies in 2009-2011. The results of these studies were mapped in relation to the Project ROW and added to the list of places to be monitored by tribal members during construction. The tribal monitoring plan was developed in consultation with tribes and was included as Attachment E to the 2011 Programmatic Agreement. The tribal monitoring plan was carried over to the amended Programmatic Agreement in 2013 and the list of areas/locations to be monitored has since been expanded. The Department continues to recognize the places identified by the tribes as culturally sensitive. These places will be monitored by the tribes during construction to ensure that previously unidentified historic properties are not affected.

The Department also has made cultural resources inventory reports, maps, testing plans, data recovery/treatment plans and other related documents available to any tribe that requested these documents soliciting their views on National Register eligibility and effect. In addition, the Department has arranged for meetings and field visits if requested by a tribe. Following the re-authorization of the Project in 2017, the Department re-started tribal consultation. Since April 2018, the Department has sent all cultural resources documents and reports to the tribes for review whether requested or not. From August, 2018 to the present the Department has notified all tribes when cultural resources reports and documents have been posted to the Project cultural resources portal for download and invited the tribes to review the documents and provide comments. These efforts have been made in compliance with Stipulation V.A of the Programmatic Agreement to "…continue to provide all consulting parties with an opportunity to provide their views on the identification and evaluation of historic properties, assessment of effects, and treatment of adverse effects…".

In the spring of 2018 Keystone developed a cultural resources research design to guide cultural resources inventory of the MAR. The research design was recorded on a Compact Disk and mailed on May 1, 2018 to all tribal consulting parties with an invitation from the Department to conduct Traditional Cultural Property studies along the MAR. The research design contained 1:24,000 scale maps showing the ROW and all known archaeological sites and other cultural resources in relation to the ROW. The purpose of including the research design was to provide the tribes with information about the ROW in sufficient detail so the tribes could determine if the Project would pass through culturally sensitive areas warranting a Traditional Cultural Property study. In July, 2018 three tribes conducted approved Traditional Cultural Property studies within the MAR (Omaha Tribe of Nebraska, the Santee Sioux Nation, and the Fort Belknap Indian Community).

In August, 2018 the Department sent a letter to all consulting parties, including all tribes, announcing the establishment of an on-line Project cultural resources portal that enables large documents to be posted for download and review. In March 2019 the Department sent a letter to all consulting parties, including the tribes, notifying them that a GIS database had been added to the cultural resources portal. The GIS contains spatial data layers on all known cultural resources in relation to the pipeline ROW as well as the ROWs for all other Project components including power stations, pump stations, power lines, access roads, pipe yards, etc. This allows the viewer to see the cultural resources data in a scalable format in relation to detailed information on the Project

CUL Sub-Theme – Programmatic Agreement (4-9c)

Synopsis:

Commenters questioned the level of tribal involvement in relation to the Programmatic Agreement and lack of coordination with tribes in the identification of natural and cultural resources.

Response:

The Department executed a Programmatic Agreement to consider the effects of the Keystone XL Pipeline Project on historic properties listed in or eligible for listing in the NRHP resulting from construction, operations and maintenance of the Keystone XL Pipeline Project. The Programmatic Agreement is the product of multiple meetings with tribal members during which the tribes expressed concerns about the effects of the Project to Traditional Cultural Properties and other places of cultural sensitivity. These concerns were addressed in both the original 2011 Programmatic Agreement and in amending the current Programmatic Agreement in 2013. The Department has consistently consulted with the tribes on the findings of cultural resources reports and other documents to provide the tribes the opportunity to express their views, as required under the 2013 Programmatic Agreement.

Under the 2013 Programmatic Agreement, if impacts to NRHP-eligible properties could not be avoided, mitigation plans would be reviewed by the Department and the consulting parties (including tribes) to evaluate the submitted information following the protocols outlined in the amended Programmatic Agreement developed for the Keystone XL Pipeline. The following are available mitigation measures:

- **Avoidance**, which could be accomplished by shifting the proposed footprint away from the historic property, boring underneath/around the historic property, limiting activities in the vicinity of the resource, monitoring construction activities near the historic property or any combination of these techniques.
- **Minimization**, which would reduce to the extent possible the impact to the historic property through avoidance measures as described above, but would not completely avoid the historic property. For historic structures, impacts to viewshed could be minimized by reducing the visibility of the Project such as planting of trees as a visual barrier or through fencing.
- **Mitigation**, which, when impact to a historic property could not be avoided, would offset that impact through some means such as protection of a similar resource nearby, detailed documentation of the historic property through data recovery excavations in the case of archaeological sites or Historic American Buildings Survey/Historic American Engineering Record documentation in the case of historic structures, contributions to the preservation of cultural heritage in the affected community, interpretative exhibits highlighting information gained about historic properties through the Project or some combination of these strategies.

If the pipeline could not avoid a particular historic property, the Department would consult with the Advisory Council on Historic Preservation, State Historic Preservation Office, consulting Indian tribes and other federal and state consulting parties to determine those measures to be implemented by Keystone to minimize and mitigate adverse effects on eligible historic properties identified in the APE. If the Department determines that the adverse effect could not be avoided, Keystone would draft a comprehensive Treatment Plan for each adversely affected historic property. The Treatment Plan would describe the measures to minimize and mitigate the adverse effect of proposed construction activities on historic properties, the manner in which these measures would be carried out and a schedule for their implementation.

The Department will review and forward survey reports as they are completed to the applicable consulting parties consistent with 36 CFR 800. NRHP assessments and any resulting avoidance or mitigation plans would be reviewed by the Department and the consulting parties to evaluate the submitted information following the protocols outlined in the amended Programmatic Agreement developed for the proposed Project.

Direct impacts, such as an unanticipated discovery of previously unknown historic properties during construction, could have a permanent impact on that resource. Should any unanticipated discoveries of cultural resources be made during construction or operation of the pipeline, the terms of the Unanticipated Discoveries Plan would be followed. Typically, construction activities within a 100-foot radius (including traffic) would be immediately halted, the Keystone Environmental Inspector would be notified, and interim measures would be placed to protect the discovery from looting or vandalism. The appropriate federal, state, local or tribal authorities would be notified of discovery within 48 hours of the initial find, and construction would not proceed within the discovery area until all mitigation measures defined in the Programmatic Agreement are concluded and Keystone receives approval from the appropriate agencies that construction may resume. Should a historic property be discovered in this fashion appear to be significant, appropriate additional mitigation measures would be considered, as feasible and appropriate, consistent with the terms of the Programmatic Agreement. Also see response to P&N sub-theme 1-2c regarding the Department's consultation with tribes.

See SOC sub-themes 4-8d and 4-8e for impacts to tribal resources of significance, tribal ways of life, and federal recognition of treaty land rights regarding natural resources and importance to tribes.

CUL Sub-Theme – Tribal Involvement (4-9d)

Synopsis:

Commenters stated that tribes have not been allowed to participate in cultural investigations and review the findings of the cultural resource survey reports.

Response:

The Department has continued to uphold conditions of the Programmatic Agreement. The following text has been added to Section 3.9 to provide additional information regarding cultural resource surveys and the role of tribes:

*"**The Department re-engaged the consulting parties to the 2013 Amended Programmatic Agreement following issuance of a Presidential permit for the Keystone XL Pipeline Project (Project) in March 2017. The Department notified all 16 state and federal agencies that are signatories to the agreement and all 67 tribal consulting parties about the Project start-up and requested point of contact information (two tribes have since joined as tribal consulting parties). Since April 2018 the Department has provided all consulting parties with letters, reports, maps and other documents generated in compliance with the Programmatic Agreement for review and comment. Initially, these documents were sent through the U.S. mail; however, in August 2018 the Department launched an on-line cultural resources portal for downloading documents for review. When review documents become available, an email notice is sent to all parties requesting their comments, typically within a 30-day review period. The parties are free to choose which documents they wish to review and provide their comments to the Department either in writing or via email. In March 2019, a Geographic Information System (GIS) was added to the portal enabling users to see the location of all recorded cultural resources in relation to the Project pipeline right-of-way, access roads, substations, etc. This enables all consulting parties access to the same cultural resources information enhancing the consultation process.**"*

Also refer to P&N sub-theme 1-2c regarding consultation with tribes.

CUL Sub-Theme – Unsurveyed Locations (4-9e)

Synopsis:

Commenters questioned how the SEIS can contain a full and complete analysis of historic properties when acreage remains unsurveyed. The SEIS needs to document all historic properties within the construction footprint and state mitigation or protection measures for these sites. Commenters also questioned why portions of previously surveyed lands for historic properties were resurveyed and questioned the quality of previous surveys as the follow-on surveys detected additional sites. They requested the SEIS provides a rationale for the 2019 re-inspection of the specific section in Montana and discuss whether the results of the re-inspection suggest that additional sections of the centerline and/or associated facilities also need re-inspection.

Response:

Regarding unsurveyed acreages and sites documented within the construction footprint, unsurveyed areas within the construction footprint continued to be surveyed for historic properties under the Programmatic Agreement. The Final SEIS document has been updated to include the results of both the 2018 and 2019 field seasons; this includes an additional 142 acres of previously unsurveyed lands. As stated in Section 3.9, the Programmatic Agreement outlines procedures for incomplete surveys prior to the

commencement of construction which includes development of a coordination plan which would outline the areas that still need to be inventoried and the schedule to complete the identification and evaluation of historic properties in those areas prior to construction. These measures would identify historic properties prior to disturbance and allow for management of recorded sites per the Programmatic Agreement to avoid or mitigate adverse effects. Section 4.9 of the SEIS has been updated to include an inventory of historic properties identified within and adjacent to the Project footprint and measures taken to avoid or mitigate impacts to the historic property.

Regarding resurveyed areas, in April of 2019, a tribal member from the Little Shell Tribe of the Chippewa Cree in Montana using satellite imaging identified a precontact stone feature site within the Keystone XL Project ROW on BLM land that had not been recorded during the original 2008 cultural resources survey. The Department, the BLM, and the Montana Department of Environmental Quality were notified and staff from the BLM and the Montana Department of Environmental Quality went into the field to confirm the site in the ROW. The Department alerted Keystone as well as the Montana State Historic Preservation Office and the Montana Department of Natural Resources and Conservation. Keystone then reviewed high resolution, low level aerial photographs of the entire 875-mile pipeline corridor to look for other locations in the ROW that might contain historic or pre-contact stone feature sites that remained to be recorded. A number of places that could contain these features were identified within or near the ROW in Montana north of Fort Peck Lake. The analysis detected no other potentially cultural stone features anywhere else along the remaining portions of the Project ROW.

In May 2019, Keystone sent a professional cultural resources survey crew to check the places of interest it had identified. The results reported in June of 2019 confirmed that additional previously unrecorded sites were present between the U.S.-Canadian border and Glasgow, Montana in Phillips and Valley Counties, Montana. At that point the Department determined that a re-inspection of the ROW from Mile Post 0 to Mile Post 77 was warranted. An announcement was made to all tribal consulting parties in early July 2019 inviting the tribes to participate in the re-inspection of the ROW. Tribal representatives from the Blackfeet Tribe of the Blackfeet Indian Reservation of Montana, the Chippewa Cree Tribe of the Rocky Boy's Reservation of Montana, the Little Shell Tribe of Chippewa Cree of Montana, and the Otoe-Missouria Tribe of Oklahoma participated in the field work. Two other tribes, the Spirit Lake Tribe of North Dakota and the Northern Arapaho Tribe of the Wind River Reservation in Wyoming, expressed interest but chose not to participate. The field work was carried out between July 30 and August 29, 2019.

Weekly updates and a field work summary were provided for information purposes to the BLM, the Montana State Historic Preservation Office, the Montana Department of Environmental Quality, the Montana Department of Natural Resources and Conservation, Blackfeet Tribe of the Blackfeet Indian Reservation of Montana, the Chippewa Cree Tribe of the Rocky Boy's Reservation of Montana, the Little Shell Tribe of Chippewa Cree of Montana, and the Otoe-Missouria Tribe of Oklahoma.

Thirty-five prehistoric and historic sites and seven isolated finds were documented during the re-inspection, along with a number of locations of tribal interest. A full report is being prepared, along with management recommendations and determinations of National Register eligibility and effect. The report will be circulated to all consulting parties to the Programmatic Agreement for review and comment.

Sites identified in the 2019 surveys have been included in the Final SEIS.

D.4.11 Greenhouse Gases (GHG)

The Department received comments related to climate change, the characterization of impacts, and the methodology used to calculate greenhouse gas emissions including lifecycle emissions.

Theme	SEIS Location	Sub-Themes
Greenhouse Gases (GHG)	Sections 3.10, 4.10, 5.5.10	• General Affected Env. (3-10) • Impact Methodology and Assumptions (4-10a) • Conclusions (4-10b) • Lifecycle Emissions (4-10c) • Climate Change Effects (4-10d)

GHG Sub-Theme – General (3-10)

Synopsis:

Comments expressed concerns that the Draft SEIS does not adequately address predicted levels of global warming and average temperature rise and effects of climate change. Commenters requested that the Draft SEIS needs to discuss recent reports published by the IPCC on options to limit climate change below 1.5°C, as well as studies that discuss the need to limit global warming below a critical threshold to avoid runaway climate change. Commenters also mentioned the need to leave fossil fuels unburned in the ground to achieve needed greenhouse gas reductions that would avoid the worst effects of climate change. Some commenters cited specific reports on climate change that they believe should be referenced in the SEIS.

Response:

Section 3.10.2 of the SEIS provides an overview of past trends in global and U.S. greenhouse gas emissions, as well as projected future emissions based on published studies from the IPCC, IEA, U.S. Energy Information Administration, and other sources. In response to comments, however, the Department added following text to this section (new text is shown in ***bold***):

"*The United Nations Framework Convention on Climate Change agreed that the long-term increase in global temperature should be limited to well below 3.6°F (2°C) above pre-industrial levels (i.e., 1850 to 1900 levels), with the goal to limit the temperature increase to 2.7°F (1.5°C) above pre-industrial levels in order to avert the most severe and widespread impacts of climate change (IPCC 2018).* ***Other studies have also suggested that if global temperatures rise more than about 3.6°F (2°C) above pre-industrial levels, risks rise significantly that the Earth could enter a "hothouse" state where temperatures and sea levels would continue to rise for millennia, rather than stabilizing at some intermediate state (Steffen et al 2018). Modeling suggests that in order to keep global temperature increase to below 2.7°F (1.5°C), global anthropogenic greenhouse gas emissions need to decline by about 45 percent from 2010 levels by 2030, and reach net zero by around 2050.***

The IEA predicts global energy demand and greenhouse gas emissions will continue to rise in the near future, but the growth rate of global energy demand is likely to slow down after 2025. However, the IEA's predicted central scenario puts the world economy on a path consistent with a significantly higher long-term temperature increase, unless there is coordinated global action to reduce greenhouse gas emissions. Fossil fuels, including coal, gas and petroleum, will likely continue to fulfill the majority of global energy demand, with low-carbon sources (including nuclear) accounting for approximately one-fourth of global supply by 2040. A recent study suggests that limiting temperature increase to 3.6°F (2°C) or less would require the share of fossil fuels in primary energy demand to decrease in half by 2050, with renewable sources meeting 65 percent of the world's energy needs (OECD/IEA and IRENA

2017). ***More recently, the IEA estimated that with policies currently in place, global greenhouse gas emissions in 2030 would overshoot the emissions needed to limit warming to 3.6°F (2°C) by about 16 billion metric tons [carbon dioxide equivalent] (IEA 2019). Some scholars have suggested that in order to avoid the worst effects of climate change, globally, a third of oil reserves, half of gas reserves and over 80 percent of current coal reserves should remain unused from 2010 to 2050 (McGlade and Elkins 2015).***"

With respect to incorporating new studies and reports into the SEIS, the Department believes that overall, the Draft SEIS provides sufficient information about climate change to provide a context for assessing the potential impacts of the Proposed Action. The Department acknowledges the serious nature of climate change and the evolving nature of the current understanding of climate change impacts. In some instances, the Department has incorporated new studies to address specific comments as exemplified in the text additions above. The following new climate-change related analyses and studies were incorporated into the SEIS in Chapter 3, Section 3.10.2:

- IEA (International Energy Agency). 2019. World Energy Outlook: Energy and Climate Change. Accessed December 1, 2019 at https://www.iea.org/weo/energyandclimatechange/.
- McGlade, C. and P. Elkins. 2015. The geographical distribution of fossil fuels unused when limiting global warming to 2◦C. Nature, 517: 187-190
- Steffen, W., J. Rockström, K. Richardson, T.M. Lenton, C. Folke, D. Livermanf, C.P. Summerhayes, A.D. Barnosky, S.E. Cornell, M. Crucifix, J.F. Donges, I. Fetzera, S.J. Lade, M. Scheffer, R. Winkelmann and H.J. Schellnhuber. 2018. Trajectories of the Earth System in the Anthropocene. Proceedings of the National Academies of Science, 115 (33): 8252–8259

GHG Sub-Theme – Impact Methodology and Assumptions (4-10a)

Synopsis:

Commenters questioned the methodology and assumptions used in estimating greenhouse gas emissions from the Project and the basis for determining climate change impacts. Specifically, commenters stated that the Draft SEIS did not consider the carbon intensity of extracting, transporting, and refining oil sands crude oil, which is more energy intensive compared to other sources of crude oil.

Some comments expressed a concern about including unrealistic market scenarios to analyze the effects of crude oil displacement and petroleum coke combustion, and pointed out that many oil sands producers already have or are currently transitioning away from burning coke for energy. Commenters also pointed out that energy use and greenhouse emissions related to oil sands production have shown a long-term declining trend, and that the Province of Alberta has also started implementing policies to reduce greenhouse gas emission from industrial activity.

Other commenters requested that the analysis include monetization of climate change-related costs using the "social cost of carbon," to allow an easier comparison of potential costs and benefits of the Proposed Action and to more fully describe it's potential climate change impacts.

Response:

Section 4.10 of the Draft SEIS provides a comprehensive discussion and analysis of the potential greenhouse gas emissions that could occur as a result of the Proposed Action. The Draft SEIS summarizes direct and indirect greenhouse gas emissions that would occur from construction and operation of the pipeline, and also includes a broader lifecycle analysis that includes the effects of extracting, transporting, refining, and ultimately using (i.e., combusting) fuels derived from WCSB crude

oil. Further, the Draft SEIS compares lifecycle emissions form WCSB crude oil to other crude oils commonly refined in the United States and considers the potential market effects of importing WCSB crude oil and displacing other types of crude oil currently imported into the United States.

Regarding the scenarios analyzed for crude oil displacement, the Draft SEIS considers three scenarios for displacement of other crude oils by WCSB crude oil – a full displacement scenario, a partial displacement scenario that accounts for a range of market conditions, and a no-displacement scenario. The full displacement scenario is included for consistency with the 2014 Keystone XL Final SEIS and serves as a lower bound for estimated greenhouse gas emissions under the Proposed Action. Similarly, the no displacement scenario serves as an upper bound on estimated greenhouse gas emissions. The Department considers that the range of emissions under the partial displacement scenario reflects a more likely outcome, compared to either the full displacement or the no displacement scenarios. Text was been added in the following locations in the SEIS (new text shown in ***bold***) to emphasize the partial displacement scenario:

- Section 4.10.4.1: "*The above estimates represent the increase in emissions associated with production and consumption of 830,000 bpd of oil sands crude oil, taking into account the potential impact of this increase in crude oil supply on global oil markets and consumption.* ***Based on a review of published studies, the Department considers partial displacement of other crude oils a more likely outcome compared to full displacement or no displacement. Therefore, the range of emissions associated with partial displacement reflects the likely impacts of the Proposed Action. Emissions for the no displacement and full displacement scenarios are presented as bounding conditions, and for consistency with the 2014 Keystone XL Final SEIS.***"
- Section 4.10.4.4: "*The 2014 Keystone XL Final SEIS estimated changes in lifecycle greenhouse gas emissions assuming that crude oil transported on Keystone XL would fully displace other crude oils from the market, i.e., global crude oil consumption would not increase. In such a case, greenhouse gas emissions would increase by an amount equal to the difference in lifecycle emissions between the imported WCSB crude oil and the displaced crude oil,* ***which is the lower bound scenario analyzed in this SEIS. This SEIS also considers an upper bound scenario in which crude oil transported on Keystone XL would not displace other crude oils from the market. In such a case, greenhouse gas emissions would increase by an amount equal to the lifecycle emissions associated with the imported WCSB crude oil.***"

  This SEIS also considers a ***third*** *possibility that depending on market conditions, the crude oil transported by the proposed Project would only partially displace other crude oils from the market, leading to a net increase in global oil consumption. In this scenario, some of the crude oil displaced from U.S. refineries would be refined (and consumed) at other locations around the globe. The amount of additional crude oil consumed in this case would contribute to a further increase in greenhouse gas emissions, as compared to full displacement. The change in greenhouse gas emissions would depend on the characteristics of the specific crude oil that is assumed to be displaced by WCSB crude oil.*"

Regarding the effects of petroleum coke combustion, the Draft SEIS separately considered the effects of upgrader coke and refinery coke combustion. Commenters pointed out that many oil sands upgrading projects are moving away from burning coke for energy. This is consistent with the treatment of upgrader coke in the Draft SEIS, which assumes that only 25 percent of upgrader coke would be burned for energy while the remaining volume would be stockpiled or used for other non-energy related purposes. This percentage was derived from published industry data, as reported by the Alberta Energy Regulator. Refinery coke is considered separately, and is assumed to be completely burned for energy. This is also consistent with data reported by the U.S. Energy Information Administration and with available market literature which suggests that global demand for petroleum coke in the power, cement, and aluminum

sectors will continue to increase in coming years. Additionally, the Draft SEIS considered the effect of including an emissions credit assuming that all petroleum coke burned would displace an equivalent amount of coal (on an energy basis). This comparison is shown in Table 4.10-3.

Some comments also stated that the energy intensity of oil sands production has declined steadily over time, and is likely to continue to do so in the future. Commenters also pointed out recent policies enacted by the Province of Alberta to reduce industrial greenhouse gas emissions, including emissions from oil sands production. The analysis in the Draft SEIS is based on the most recent available lifecycle emissions data for WCSB and other crude oils and as such, does not directly take into account possible future changes in emissions. Section 4.10.4.6 of the Draft SEIS does, however, discuss the potential for emissions to change in the future due to improvements in technology and changes in policies, as well as the potential for emissions to rise due to declining reservoir quality and other factors. The following text was added to this section to address comments regarding the potential for new policies to reduce future greenhouse gas emissions in Alberta and elsewhere:

"***Future policies to limit greenhouse gas emissions – Emerging and future policies designed to limit greenhouse gas emissions could potentially lower lifecycle emissions for WCSB and other crude oils. For example, the Government of Alberta introduced legislation in 2019 that would establish a system to encourage energy-intensive facilities to find innovative ways to reduce emissions and invest in clean technologies. The legislation would require large emitters (including all oil sands producers) to reduce their emissions intensity over time or pay into a technology fund.***"

Finally, some comments stated that the SEIS should use the social cost of carbon or a similar metric to analyze the monetary costs of climate change impacts that would occur as a result of greenhouse gas emissions under the Proposed Action. NEPA does not require an economic cost-benefit analysis (40 CFR 1502.23), although it does require consideration of "effects" that include "economic" and "social" effects (40 CFR 1508.8(b)). The social cost of carbon tool was developed for the express purpose of "allow[ing] agencies to incorporate the social benefits of reducing carbon dioxide (CO_2) emissions into cost-benefit analyses of regulatory actions that impact cumulative global emissions" and to assist agencies in complying with Executive Order 12866 (and Executive Order 13563). These Executive Orders require federal agencies to assess the cost and benefits of rulemakings as part of their regulatory impact analyses, but do not apply to analyses prepared under NEPA. The Draft SEIS was developed in accordance with the CEQ's 2016 guidance on climate change and NEPA (since withdrawn). The 2016 CEQ guidance states that Agencies can consider monetizing costs of potential climate change impacts when there is a clear benefit to doing so, but monetization is not required. The Draft SEIS quantifies potential greenhouse gas emissions under the Proposed Action for a range of market conditions, and compares them to other regional, national, and global sources of greenhouse gas emissions. The Department believes that this analysis provides sufficient information and context for an assessment of the severity of climate change impacts that could occur as a result of the Proposed Action. The Department believes that monetization using the USEPA's social cost of carbon metric would provide another point of comparison between the Proposed Action's potential costs and benefits, but does not consider that this would necessarily yield a clearer or more complete understanding of potential climate change impacts given the assumptions and limitations underlying any such exercise. The social cost of carbon analysis would also lack a complete monetary analysis of potential social benefits of the Proposed Action to society as a whole; therefore, inclusion of a social cost of carbon analysis would potentially result in an unbalanced analysis and therefore would not be useful. In addition, the estimates of the social cost of carbon developed by the USEPA and other agencies are currently only available for emissions through 2050. However, the proposed Keystone XL pipeline would likely have a design life of at least 50 years and would likely result in greenhouse gas emissions beyond 2050. Therefore, the Department has not monetized climate change impacts under the Proposed Action.

GHG Sub-Theme – Conclusion (4-10b)

Synopsis:

Commenters questioned the conclusions reached in the Draft SEIS regarding climate change and climate change impacts. Some comments stated that the Draft SEIS underplays the potential impacts of the Proposed Action by not assigning an impact rating to greenhouse gases and climate change. Other commenters questioned why operational emissions estimated in the Draft SEIS were lower than operational emissions estimated in the 2014 Keystone XL Final SEIS, given that the pipeline length analyzed in the 2019 Draft SEIS was greater than in the 2014 Final SEIS. Some comments stated that the Draft SEIS fails to adequately consider the environmental implications of the possibility that WCSB crude oil could be re-exported from the Gulf Coast, rather than being refined in the United States.

Other comments stated that the Draft SEIS underestimates the potential risk from extreme weather events to the pipeline and associated infrastructure, given that climate change is likely to increase the frequency and severity of such events.

Response:

The Department has revised Table S-3 and Table 8-1 to state that greenhouse gas emissions that could occur as a result of the Proposed Action are a potentially significant impact. In the absence of established federal criteria for evaluating the significance of greenhouse gas emissions, the Draft SEIS stated the magnitude of the potential emissions along with a discussion of their climate effects. However, the Department received several comments stating that the absence of an impact rating appeared to downplay both the risks of climate change and the potential for the Proposed Action to contribute to these risks. Commenters stated that the estimated increase in greenhouse gas emissions under the Proposed Action should be considered significant because of the limited window of opportunity for global action to avoid the worst effects of climate change. The Department also considered the potential for climate change to cause significant adverse effects to Indian tribes and heritage resources, as stated in comments provided by various tribal organizations. Accordingly, the Department has revised the impact rating for greenhouse gas and climate change impacts to "significant" in the Final SEIS to reflect these concerns (see Table S-3 and Table 8-1). Text in Section 4.10.1 was revised as follows to reflect this change (new text in **bold**):

"*Climate change impacts are not attributable to any single action but are the result of multiple individual sources of greenhouse gas emissions across the globe, each making a relatively small addition to global atmospheric greenhouse gas concentrations that collectively have a large impact. Therefore, this SEIS does not attempt to attribute specific climate change effects to the proposed Project. Instead, it uses estimates of greenhouse gas emissions as a proxy for assessing the extent and severity of climate change impacts that could occur from the proposed Project. Section 3.10 discusses the types of climate change impacts that could potentially occur as a result of increased greenhouse gas emissions from the proposed Project. These impacts include changes to weather events, water cycles, ecosystems, economies, public health and native people's communities and traditional ways of life that would occur globally, nationally and regionally (within the northern Great Plains, where the proposed Keystone XL Project would be located).*

Increased greenhouse gas emissions from the proposed Project would contribute to total greenhouse gas emissions worldwide with the resulting effects on global, national and regional climate. ***Approval or denial of the proposed Project would not by itself significantly alter the trajectory of global climate change. By contributing to an increase in global greenhouse gas emissions, however, the proposed Project would add incrementally to atmospheric greenhouse gas concentrations and the resulting climate change impacts. The climate effects of*** *increased greenhouse gas* ***concentrations*** *are likely to be of a long-term or permanent nature, since most greenhouse gases can persist in the atmosphere for decades or even centuries (Oak Ridge National Laboratory 2016).* ***Further, as discussed in Section 3.10,***

there is broad agreement among experts on the need to make large reductions to greenhouse gas emissions in the near term to avoid the worst effects of climate change. Considering the proposed Project's estimated level of lifecycle greenhouse gas emissions (discussed later in this section), the incremental contribution of these emissions to elevated global greenhouse gas concentrations, the long-term nature of these impacts, and widespread recognition of the need to urgently reduce global greenhouse gas emissions, the Department concludes that greenhouse gas emissions from the proposed Project would likely represent a potentially significant impact."

Additionally, text in Section 7.4.10 was revised as follows (new text in **bold**):

"*Greenhouse gas emissions from the proposed Project would contribute incrementally to global climate change in combination with all other global sources of greenhouse gas emissions, including the projects listed in Table 7-1 as well as those discussed in the 2014 Keystone XL Final SEIS cumulative impacts discussion. Greenhouse gas emission impacts are additive as these gases accumulate in the atmosphere; impacts would likely be long-term because of the long atmospheric lifetimes of most greenhouse gases (typically decades to centuries).* ***Cumulative greenhouse gas emissions from the proposed Project, in conjunction with other actions, would likely represent a significant environmental impact.***

Table 7-4 compares the potential increase in lifecycle emissions under the proposed Project to emissions from proposed future pipeline projects that would import additional supplies of WCSB crude oil into the United States, out of the various projects listed in Table 7-1. Cumulative greenhouse gas emissions from these projects span a wide range that depends primarily on market conditions. In case of partial displacement of other crude oils, cumulative emissions would range from 76.8 to 176.3 million metric tons CO_2-eq per year depending on market conditions and the specific crude oils displaced. Cumulative emissions could range from as low as 2.9 million metric tons CO_2-eq per year in the case of full displacement of other heavy crude oils such as Venezuelan crude oil, to as high as 333.9 million metric tons CO_2-eq per year in case other crude oils are not displaced from the market."

Operational emissions in the Draft SEIS are lower compared to the 2014 Keystone XL Final SEIS because the Draft SEIS uses eGRID emissions factors for 2016, which are lower than the 2012 emissions factors used in the 2014 SEIS. eGRID 2016 emissions factors are lower because they reflect greater use of natural gas (relative to coal) for electricity generation. The following explanatory text has been added to the SEIS on page 4-78 (new text shown in ***bold***):

"*Estimates of greenhouse gas emissions from operations of the proposed Project, reconfigured to follow the MAR through Nebraska, are based on emissions estimates for the proposed Project as analyzed in the 2014 Keystone XL Final SEIS, after adjusting for pipeline length, number of pump stations, and area of land disturbed****, as well as changes in electric grid emission factors due to changes in the regional fuel mix including replacement of coal with natural gas.***"

The Draft SEIS discusses (in Section 4.10.4) the potential for WCSB crude oil to be re-exported from the United States, rather than being refined in the country. If exported, greenhouse gas emissions related to crude oil transport would likely be slightly higher, while differences in refining and vehicle technologies in foreign markets could lead to either an increase or a decrease in greenhouse gas emissions. Overall, the Department believes that these differences would not significantly alter the results of the lifecycle analysis presented in the Draft SEIS.

The potential climate change effects are discussed on Chapter 3, Section 3.10.4, which includes a detailed discussion of rising surface temperatures, changes in precipitation, decreasing ice cover, sea level rise, changes in land-based ecosystems, changes to ocean temperature and chemistry, extreme weather events, flooding and wildfires, and impacts to human society and health. On a regional scale, the discussion

presents temperature and precipitation changes in Montana, the Dakotas, Wyoming and Nebraska along with regional considerations of climate change on impacts to water systems, agriculture, recreation and tourism, energy systems, and native people. Additionally, Chapter 4, Section 4.10.5 summarizes the potential for climate change to impact the Proposed Action. As discussed in the Draft SEIS, climate-change related risks posed to the Keystone XL pipeline and associated infrastructure include the potential for more frequent and severe flooding, wildfire, and other severe weather hazards.

Specifically regarding flooding and increased rainfall events and potential for impacts on the Project from scour and lateral migration, Section 2.4.8.4 of this SEIS includes a discussion of special pipeline construction techniques in sensitive areas including floodplains. This includes consideration of the historic spring of 2019 flooding that occurred in South Dakota and Nebraska. As part of pre-construction design, Keystone examined the historical flows at all stream crossings where the U.S. Geological Survey has collected flow data to determine the proper pipeline burial depth in the floodplain for protection from flooding and erosive events that may occur along rivers. Keystone also utilized flood data from the National Oceanic and Atmospheric Administration and the Federal Emergency Management Agency to estimate the lateral migration potential of the stream and river beds and to determine the extent and depth a stream/river course could migrate in a floodplain over the course of the 50-year life of the Project. The construction drawings incorporate this information at each crossing and include a set of drawings developed to address potential lateral migration at waterbody crossings, as well as site-specific drawings to address potential vertical scour. Based on the vertical and lateral migration estimates for minor and intermediate-sized streams, Keystone determined the appropriate pipeline burial depth is five feet or greater below the minimum elevation within the defined stream channel. Outside of the stream channel, the five feet or greater burial depth extends a minimum of 15 feet from the top of the defined stream channel. For major rivers where Keystone would use the HDD method of construction, site-specific drawings specify a minimum depth of 25 feet below the stream channel. This depth has been shown to protect the pipe for a worst-case scenario, far beyond a 100-year design. During the lateral migration analysis, Keystone confirmed HDD entry and exit locations are placed outside the potential lateral migration zone for the stream. For the Missouri River crossing, where the most severe floods have been recorded due to water releases from the upstream dam, Keystone was required to model the erosive effects of a worst-case 40,000-year flood event (no record of such an event has been observed) to determine if the burial depth of the HDD crossing would result in sufficient cover to protect the pipe. The modeling confirmed that the current design would not be exposed if such an unlikely event were to occur on the river. Chapter 5, Environmental Consequences from Accidental Releases, presents additional information for potential release in floodplain and riverine areas.

GHG Sub-Theme – Lifecycle Emissions (4-10c)

Synopsis:

Commenters expressed concern over the Project's contribution to an increase in greenhouse gas emissions, including the extraction methods and type of crude oil. With respect to lifecycle emissions, some commenters expressed a concern whether the Draft SEIS claims that crude oil to be transported through the Keystone XL pipeline would reach markets on other modes even under the No Action Alternative.

Response:

The Department acknowledges these concerns. The Draft SEIS provides a comprehensive discussion and analysis of the potential greenhouse gas emissions resulting from the Proposed Action, including direct and indirect greenhouse gas emissions that would potentially occur over the crude oil lifecycle. The lifecycle analysis considers the effects of extracting, transporting, refining, and ultimately using (i.e., combusting) fuels derived from WCSB crude oil. Further, the Draft SEIS compares lifecycle emissions

from WCSB crude oil to other crude oils commonly refined in the United States and considers the potential market effects of importing WCSB crude oil and displacing other types of crude oil currently imported into the United States. As discussed in the Draft SEIS, the extraction and refining of WCSB crude oil is more energy intensive than some other types of crude oil commonly refined and use in the United States.

Some commenters raised the concern that the greenhouse gas emissions analysis in the Draft SEIS makes the supposition that WCSB crude oil would reach markets on other modes even under the No Action Alternative. Commenters stated their opposition to such a supposition, which would justify a finding that impacts under the Proposed Action would be negligible, if the same volume of crude oil would potentially reach markets with or without the Keystone XL pipeline. However, the Department is clarifying that the Draft SEIS does not make such a supposition. Section 4.10.4 of the Draft SEIS states that some of the crude oil transported through the Proposed Action would likely be transported through other modes under the No Action alternative. This is consistent with the price differential between rail and pipeline transport; all else remaining equal, an increase in (cheaper) pipeline capacity would likely displace some crude oil from (more expensive) rail. In this case, crude oil production and consumption could still increase but the increase would likely be lower than the Keystone XL pipeline's full capacity. The analysis presented in the SEIS, however, assumes that crude oil production and consumption would increase by an amount equal to Keystone XL pipeline capacity, and therefore, represents an upper bound on greenhouse gas emissions that could occur as a result of the Proposed Action.

GHG Sub-Theme – Climate Change Effects (4-10d)

Synopsis:

Commenters expressed concern over the effects of climate change on their livelihood and the Project's potential contribution to climate change. Some commenters stated that the Draft SEIS does not adequately address the impacts of climate change on native communities and others, which are already occurring and are not only anticipated in the future. Other comments mentioned that a global analysis of climate change and health effects in the context of environmental justice is needed to fully understand the Keystone XL pipeline's impacts.

Response:

Section 3.10.4.1 discusses the potential impacts of climate change on human society, and acknowledges that these impacts are likely to be experienced disproportionately by socioeconomically disadvantaged communities. Climate change impacts on native communities are summarized in Chapter 3, Section 3.10.4.2. The Draft SEIS acknowledged that climate change impacts are currently occurring, and may become more severe in the future. The following text was added to the SEIS, directly referring readers to the Fourth National Climate Assessment's more in-depth discussion on this topic (new text in ***bold***):

"***The Fourth National Climate Assessment describes in detail the potential impacts of climate change on native communities. These*** *include damage to settlements and infrastructure, endangering natural resources, decreasing water quality and quantity, and jeopardizing food security* ***(USGCRP 2018)***."

As discussed in the SEIS, climate change is a result of global greenhouse gas emissions and approval or denial or any individual project would result in an incremental change to projected climate change impacts, but would not substantially alter anticipated climate change-related effects. The SEIS was prepared in accordance with CEQ's 2016 guidance on climate change and NEPA (since withdrawn), which recommended that agencies focus on estimating potential greenhouse gas emissions as a proxy to understanding the climate change impacts of their actions. Therefore, the SEIS does not quantify the specific climate change effects that could occur as result of the Proposed Action, including potential effects to native communities and lands. The Department considers that conducting an environmental justice analysis based on global climate change impacts would be outside the scope of this SEIS.

D.4.12 Accidental Releases (ACR)

The Department received comments related to the following topics: methodology used for the analysis; past incident records; impact conclusions; pipeline, safety and leak detection; human health and safety; remediation, response and liability; impacts to tribal resources and water intakes; and enforcement.

Theme	SEIS Location	Sub-Themes
Accidental Releases (ACR)	Chapter 5	• General (5-0) • Guiding Principles, Policies, Regs and Laws (5-1) • Methodology and Assumptions (5-2) • TransCanada Track Record on Spills and Cleanup (5-3) • Conclusions (5-4) • Mitigation, Response and Remediation (5-5) • Pipeline Safety (5-6) • Human Health and Safety (5-7) • Impacts to Water Quality (5-8) • Impacts to Tribal Rights and Resources (5-9) • Drinking Water Intake (5-10) • Riverbed Scour and Sufficiency of Burial Depth (5-11)

ACR Sub-Theme – General (5-0)

Synopsis:

Commenters expressed concern that the SEIS did not comprehensively address all of the product types that would be transported by the pipeline. In addition, a commenter requested that oil spills should be referred to as "discharge" and not "release," since release is a term specifically used in Comprehensive Environmental Response, Compensation and Liability Act (CERCLA).

Response:

Section 3.13.3 of the 2014 Keystone XL Final SEIS and Section 5.4.1 of the 2019 Keystone SEIS compare the physical and chemical properties of several types of crude oils, including dilbit, that may be transported by the proposed Project. Distinctions between oil types (especially light Bakken and dilbit) are made throughout Chapter 5 when addressing release type, impacts or oil behavior. Because the described products are similar to the products that may be transported by the proposed Project, the cleanup methods and approaches are considered relevant and are included in Appendix G and Appendix I of the 2014 Keystone XL Final SEIS.

The term "release" is defined in relation to this SEIS in Table 5-1. Although the term "release" has a specific regulatory definition under CERCLA, it has been used here and in previous NEPA documents prepared by the Department in its general form. Since this document does not use this term in accordance with its definition under CERCLA, there is little chance that it would be confused with the regulatory definition in this document. To remain consistent with previous analysis and use generic language that is easily understood by the public, the Department has elected to continue using the term.

ACR Sub-Theme – Guiding Principles, Policies, Regs and Laws (5-1)

Synopsis:

Commenters requested that TransCanada be required to follow current industry standards, including American Petroleum Institute (API) Recommended Practice (RP) 1133, Guidelines for Onshore Hydrocarbon Pipelines Affecting High Consequence Floodplains, and API RP 1173, Pipeline Safety Management Systems, and API RP 1175, Pipeline Leak Detection Program.

Comments also questioned who would be held liable for damages and recovery in the event of an accidental release. Specific concerns included the private property owner or municipality being responsible for damages to property, resources (e.g., wells, wetlands, farmland soils) and infrastructure (e.g., water supplies, water treatment systems, irrigation systems).

Response:

TransCanada has committed to ensuring that the design, construction and operational practices for the Keystone pipeline are consistent with the API RP standards 1133, 1173 and 1175; however, these standards are not required by PHMSA.

The Oil Spill Liability Trust Fund (OSLTF) is typically used to pay for and expedite the response and cleanup activities associated with a large oil spill. The OSLTF can be used to cover costs incurred by federal and state responses, payments for natural resource damage assessments and restoration, payment of claims for uncompensated costs or damages, research and development, and other allocations. Although Keystone has asserted that dilbit is exempt from the federal excise tax that contributes to the OSLTF, OSLTF resources could nonetheless be used to assist cleanup of a spill associated with the proposed Project. The OSLTF is financed in part by the recovery of costs and damages from the responsible parties for response and remediation activities as well as the fines or civil penalties incurred by the responsible parties liable for incidents.

Section 4.13.6.2, Safety and Spill Response, of the 2014 Keystone XL Final SEIS describes Keystone's liability and responsibility as the pipeline operator under potentially applicable federal and state soil, surface water and groundwater clean-up regulations. In the event that a release of crude oil contaminates groundwater, Keystone has agreed that it would be responsible for cleanup and restoration and, where appropriate, for providing an alternative water supply for groundwater that was used as a source of potable water or for irrigation or industrial purposes. See Section 4.13.6.2, Safety and Spill Response (see subsection Spill Liability and Responsibility) and Appendix B, Potential Releases and Pipeline Safety, of the 2014 Keystone XL Final SEIS, for additional information.

Keystone could also be liable for damages to natural or other resources. There are no regulatory limits to these liabilities. Keystone could also be subject to the civil and criminal penalty provisions of the Clean Water Act, Rivers and Harbors Act, and the Pipeline Safety Act. In the event of a spill, state, tribal and federal natural resource trustee agencies could require a Natural Resource Damage Assessment under either the Oil Pollution Act or the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), depending on the types of materials spilled and the assessment of the magnitude of the impacts. The assessment would identify the extent of resource injuries, the best methods for restoring those resources, and the type and amount of restoration required in the event of a spill. The funds recovered from these civil and criminal penalties would also be returned to the OSLTF.

If a release is caused by negligent or willful acts of others, Keystone may ultimately recover costs from those committing the acts since individuals are not automatically protected from liability associated with negligent acts or willful misconduct leading to property destruction and environmental damage. Specific liability warrants and indemnifications are included within individual easement agreements.

ACR Sub-Theme – Methodology and Assumptions (5-2)

Synopsis:

Commenters questioned the methodology used to perform the accidental release analysis in Chapter 5 of the SEIS. This included requesting justification for the maximum reasonable transport distance of 40 river-miles, requesting the use of past incident data to include the recent spill on the existing Keystone Mainline on October 29, 2019, and questioning the general calculation of incident rates compared to TransCanada's track record. Commenters also claimed that the impact analysis did not fully address spills to streams that are ice covered and the challenges associated with response and recovery operations.

Response:

Maximum reasonable transport distance. Several commenters called into the question whether the 40-river-mile maximum reasonable transport distance used to establish the region of influence extends far enough to support the analysis of potential impacts. Commenters reference two spills in Montana where oil was observed more than 40 miles downstream (see Laurel, Montana [2011] and Glendive, Montana [2015] in Section 5.3.4) and state that the spill in Marshall, Michigan was artificially constrained by dams at a downstream distance of approximately 40 river-miles. In addition, comments stated that the analysis should be completed using all the possible spill response times specified in 49 CFR 194.115(b).

As discussed in Section 5.2 of the SEIS, the Department established a 40-river-mile distance as the maximum reasonable transport distance to evaluate potential downstream impacts from a spill that flows into a surface water body. This distance is used in the SEIS to establish the region of influence for the evaluation of potential impacts that encompass a range of potential accidental release types and conditions. The Department established the maximum reasonable transport distance based on numerous factors including the results of project-specific modeling data from a worst-case analysis of a release on the Missouri River, information from and the characteristics of other major oil spills including construction techniques and pipeline age, prior accident analysis from similar pipelines, and characteristics and safety measures integrated into the design and operation of the proposed Keystone XL pipeline. Therefore, the maximum reasonable transport distance includes consideration of prior events that have both a range of response times and spill conditions. Based on this review, the Department considers a maximum reasonable transport distance of 40 river-miles to be within the rule of reason as an upper bound for evaluating potential impacts for a release from the Keystone XL pipeline. Worst-case and response zone-specific spill scenario analysis, as required under 49 CFR 194, would appropriately be addressed to support development and approval of a Facility Response Plan prior to operation of the pipeline.

The Department considers accidental releases with the potential for effects beyond the maximum reasonable transport distance to be extremely unlikely. However, in the unlikely event that a spill were to impact resources beyond the 40-river-mile distance, including water quality or intake structures, those impacts would be expected to be similar in nature, but much smaller in degree, to those presented in Chapter 5 of the SEIS.

The Department considered both the Laurel, Montana and Glendive, Montana spills, as presented on page 5-2 of the Draft SEIS, which includes a discussion of oil sheens and oil globules (small round particles) being observed at distances greater than 40 river-miles. Observations beyond 40 river-miles from these spills were limited to light and very light amounts of oil. As a result, water quality impacts were extremely limited in magnitude and extent or did not occur beyond this distance. It is important to note that both of these spills involved different product types and occurred at Yellowstone River crossings in which the pipeline had been installed using open trench methods, which presents a substantially greater risk for a release to the river as compared to the horizontal directional drilling (HDD) technique that would be used for the proposed Keystone XL pipeline.

During the 2011 Laurel, Montana spill, the Yellowstone River was experiencing flood conditions, which increased the river's flow rate and therefore the downstream transport distance of released oil. Even so, the majority of observed oil was located within the first 28 miles downstream of the release point. EPA Region 8 used the shoreline cleanup and assessment technique (SCAT) during the spill response to support cleanup operations, in which the floodplain for the Yellowstone River was divided into three divisions: Division A (spill origin to 10 miles downstream), Division B (10 to 28 miles downstream) and Division C (28 to 85 miles downstream). SCAT observations during the response period were characterized as either no oil observed, very light, light, moderate or heavy. Approximately 70 percent of Division C had no observations of oil. Of the remainder, approximately 28 percent of observations

(2,069 acres) were classified as very light. Only 0.1 percent of the distance beyond 28 miles downstream of the release point had observations of moderate oil (USEPA 2011c). However, oiled soils and woody debris are not indicative of water quality effects to drinking water. Samples were collected from near the release point up to 260 miles downstream; none of these samples detected hydrocarbons at concentrations exceeding Montana Numeric Quality Standards with Tier 1 Risk Based Screening Levels (Arcadis 2014b).

For the 2015 Glendive spill, the final containment recovery site was located 30 to 40 miles downstream of the spill near Crane, Montana. This recovery site was established beyond the known extent of contamination as the point at which no oil would be allowed to travel; no observations of oil were made at this downstream distance.

The 2010 Marshall, Michigan dilbit spill into Talmadge Creek and the Kalamazoo River occurred during a planned shut-down procedure, and pipeline operators did not initially recognize the loss of pipeline pressure as a release. The release went unreported for over 17 hours, delaying response efforts and thereby increasing the downstream area affected. Flood conditions in the Kalamazoo River also increased river flow rates and the downstream extent of effects. However, as discussed in the Draft SEIS, dams located along the Kalamazoo River impeded the downstream flow of released crude oil. It is important to note that a spill response boundary that was established just upstream of the dam at the western end of Morrow Lake acted as an effective barrier that prevented further downstream migration of spilled dilbit. It is unclear whether spilled product could have flowed beyond the dam at Morrow Lake if not for the response effort that took place there. According to the Federal On-Scene Coordinator for the 2010 Marshall, Michigan response effort, "EPA observed that the oil covered the entire surface of Talmadge Creek over its 2.2 mi reach to the river, entered the Kalamazoo River, and remained as bank to bank coverage until the Ceresco Dam, which was approximately six miles downstream from the confluence of Talmadge Creek and the Kalamazoo River. At the downstream side of the dam, oil was still pervasive but diminished to approximately 50% coverage of the river surface area due to mixing and breaking up while flowing over the dam" (USEPA 2016).

Commenters also cited spill events in which the 6-hour response time was not adhered to, including a spill on a Chevron Pipeline Company in Salt Lake City, Utah in June 2010, the 2010 spill in Marshall Michigan, and a spill from Belle Fourche Pipeline Company's Bicentennial Pipeline system in December 2016. The commenters state that the risk analysis conducted for the Missouri River crossing wrongly concludes that a 6-hour response time would be appropriate for calculating the downstream flow distance for a spill since other spills have taken much longer to detect and initiate response efforts. For the purpose of the risk analysis, the 6-hour response time was used as it represents the maximum response time along the Missouri River stipulated by federal pipeline safety regulations (49 CFR 194). It is important to note that this modeling for the risk analysis produced downstream transport distances from less than 1 mile for low flow conditions to up to of 33.33 miles for extreme flood conditions, which is well within the 40-mile transport distance considered in the SEIS.

The Missouri River analysis and modeling was only one of several factors used in evaluating the maximum reasonable transport distance for the SEIS analysis. As mentioned earlier, the Department used a number of factors to identify the downstream distance region of influence, including the Missouri River analysis and a review of spill report data for several other spills to surface water including those listed above. In all of those cases, observations beyond 40 miles (if any) were limited to sheen and sporadic presence of globules. For example, following the spill in December 2016 on the Bicentennial Pipeline, 70 percent of the oil was contained in the first mile and an additional 15 percent was contained in the next 4 miles downstream, while the leading edge of the plume was estimated at 6.5 miles downstream. This was a much smaller (6-inch) pipeline; however, as the commenter noted response time exceeded 48 hours.

The 40-river-mile maximum downstream distance remains a reasonable boundary for the assessment of potential impacts resulting from an accidental release along the pipeline. It is also important to take into account the fact that all major crossings (greater than 100 feet in width) will be crossed using HDD at a depth of at least 25 feet beneath the bottom of the waterbody, which substantially reduces the risk of an in-water release, as occurred in the Laurel and Glendive spills. Keystone has also agreed to install pipelines across smaller streams with a minimum of 5 feet of cover instead of the 3 feet of cover required by code. Additionally, the crossing distance for these streams has been identified by conducting lateral migration studies to maintain that 5-foot depth while accounting for future stream channel migration. These measures also reduce the likelihood of a spill occurring in close proximity to streams.

Incident Rates. Within the SEIS, the Department applied an approach consistent with the recommendation for analyzing accidents under NEPA developed by the Department of Energy (U.S. Department of Energy 2002). As discussed in Section 5.3.1 of the SEIS, the Department utilizes data from the PHMSA to calculate incident rates along U.S. onshore pipelines. The incident rates developed for the SEIS are based on spills of crude oil from U.S. onshore pipeline systems. These rates are conservative in nature as they have not been adjusted to reflect specific engineering factors that reduce risk or incorporate different incident rates for the various pipeline system elements. For example, releases occur more frequently at fixed facilities, such as terminals and pump stations, but incidents involving these system components are more likely to be contained within operator-controlled property as opposed to affecting offsite sensitive resources. The SEIS analyzed differences in incident rates for the various pipeline components but did not use this data to calculate incident rates.

To address the concern related to the fact that the overall incident rate overstates the potential for a release to occur within the right-of-way (ROW) for the mainline pipe, the Department has prepared a summary of incident rates for the mainline pipe versus fixed facilities, which uses the same data set (PHMSA 2019b) and spill size categories (as defined in Table 5-1 of the SEIS). Table D.4.12-1 summarizes pipeline incident data between the years 2010 to 2018 (inclusive) from the PHMSA incident database. The overall incident rate in the SEIS was also updated to incorporate incident data through 2018. A qualitative assessment of data through October 2019 was also incorporated into the analysis for the SEIS. In Table D.4.12-1, incidents have been sorted into two groups, those occurring along the pipeline ROW and those occurring at fixed facilities. Incidents occurring along the pipeline ROW would include incidents from the mainline pipe or a valve, while incidents at fixed facilities would include leaks and spills from any of the pipeline system components located at a pump station or tank terminal.

Table D.4.12-1. Annual Incident Rates for Crude Oil Pipeline ROW and Fixed Facilities (per 1,000 pipeline miles)

	Small	Medium	Large	Catastrophic	All Spill Sizes
Overall Pipeline System	2.54	0.51	0.07	0.010	3.12
Pipeline ROW Only	0.58	0.21	0.04	0.005	0.84
Fixed Facilities Only	1.96	0.29	0.03	0.005	2.28

Source: PHMSA 2019a, 2019b
Note: Values may not add up due to rounding.

As shown in the Table D.4.12-1, the incident rate for small spills, which account for over 80 percent of all reported incidents, is 3.4 times higher at fixed facilities (1.96 incidents per 1,000 miles of pipeline) as compared with spills occurring in the pipeline ROW (0.58 incident per 1,000 miles of pipeline). The incident rate for medium spills is slightly higher for fixed facilities (0.29 incident per 1,000 miles of pipeline) than for the pipeline ROW (0.21 incident per 1,000 miles of pipeline), while the rate for large

spills occurring within the pipeline ROW (0.04 incident per 1,000 miles of pipeline) is nearly the same as the incident rate for large spills at fixed facilities (0.03 incident per 1,000 miles of pipeline). The incident rates for catastrophic spills occurring within the pipeline ROW and those at fixed facilities are the same (0.005 incident per 1,000 miles of pipeline).

The Department has determined that despite the difference in incident rates between fixed facilities and the pipeline ROW, it is still reasonable and appropriate to use an overall incident rate that represents the entire pipeline system as an upper bound to support the impact analysis. The overall incident rate overestimates incidents occurring along the pipeline ROW and underestimates incidents occurring at fixed facilities; however, the impact analysis in the SEIS is not dependent upon incident rates for specific features within the pipeline system, but rather estimates the likelihood for spills to occur at any point along the pipeline system. The Department updated Section 5.3.1 of the SEIS to acknowledge these differences in incident rates to better frame the analysis.

In response to the comment regarding the fact that the number of pump stations, valves and tanks is not known and estimating this number cannot be supported with existing data and may be speculative, the Department agrees that Table 5-3 in Section 5.3.1 of the SEIS should be updated to remove the estimate on the numbers of these equipment and the likelihood of release. This table discusses incident rates in terms of incidents per 1,000 equipment-year, where equipment-years are calculated by counting the total estimated number of equipment (i.e., valves, pumps, etc.) in operation from 2010 to 2018 and dividing by the number of years, in this case, 9 years. While the total number of tanks, valves and pump stations supporting U.S. onshore crude oil pipelines are not known based on available data, the Department used information from the proposed Project to make reasonable estimates. For example, under the proposed Project, valves would be located at 20-mile intervals along the pipeline route, and pump stations would occur every 46 miles. The Department divided the number of existing U.S. onshore crude oil pipeline miles by 20 and 46 to estimate the number of valves and pump stations, respectively, for use in calculating the incidents per equipment-year presented in Table 5-3. Given the uncertainty related to these calculations and the fact that the analysis is not dependent upon these equipment-specific incident rates, the Department has elected to remove the last two columns from Table 5-3 for tanks, valves and pump stations.

A comment claimed that the SEIS analysis is inaccurate as it is based on a single project and speculation instead of definitive numbers of existing equipment. The analysis relies on industry-wide estimates and information from this specific project; however, the conclusions presented in the text of the SEIS are supported by the information presented in Table D.4.12-1. Most spills, regardless of location or component that failed, are small in size, and most spills occur at fixed facilities. No change was made to the methodology for calculating the incident rates presented in Section 5.3.1 and Table 5-3, but the numbers were updated to include 2018 incident and pipeline mileage data from PHMSA (PHMSA 2019a, 2019b).

Another comment states that the incident analysis and resulting impact analysis is overly conservative because it does not account for the fact that most pipeline spills occur at fixed facilities, such as tank farms, where containment systems lessen or prevent impacts to the environment. The Department has prepared a summary of incident data for spills occurring at fixed facilities and along the pipeline ROW. Table D.4.12-2 compares the number of incidents and percent product lost for releases occurring within pipeline ROWs with those occurring at fixed facilities. The percent product lost represents the fraction of the total released volume that was not recovered following the spill. The total volume lost in barrels is also presented to provide context for the discussion.

Table D.4.12-2. Comparison of Percent Crude Oil Lost Following a Release

	Small		Medium		Large		Catastrophic		All Spill Sizes	
	Total No.	% Lost (bbl)	Total No.	% Lost (bbl)	Total No.	% Lost (bbl)	Total No.	% Lost (bbl)	Total No.	% Lost (bbl)
Pipeline ROW	324	23.0% (585)	120	21.2% (7,782)	24	26.3% (22,349)	3	45.7% (24,357)	471	31.0% (5,5073)
Fixed Facility	1,095	11.6% (727)	163	9.6% (3,828)	15	6.7% (2,510)	3	27.8% (9,023)	1,276	13.9% (16,089)

Source: PHMSA 2019b

For those spills that occurred at fixed facilities, approximately 14 percent of spilled crude oil was lost, while for spills of crude oil that occurred along the pipeline ROW, the rate of spilled crude oil lost was more than double at 31 percent. Although the total number of spills is higher at fixed facilities, the recovery rate is also higher at those facilities. More product is lost from spills occurring along the ROW than at fixed facilities.

The data summarized in Table D.4.12-2 confirms that more product is recovered at fixed facilities, but based on the information available in the PHMSA database, it cannot be determined whether this is because of product being more readily contained or whether the incident was more quickly identified and remediated by staff at the fixed facilities as compared to an incident occurring somewhere along a pipeline ROW. Section 5.3.1 of the SEIS has been updated to acknowledge this fact; however, the Department has not made changes to the incident analysis because it represents a reasonable and conservative estimate of the potential for an incident to occur.

Using PHMSA information, the Department also performed an analysis to determine the number of incidents which only impacted property controlled by the operator as compared to those which impacted off-site properties or properties within the ROW. Overall, nearly 75 percent of all incidents impacted only operator-controlled properties. This rate was higher (92 percent) for incidents which occurred at fixed facilities, where spills are smaller and where additional containment measures are in place. For large and catastrophic spills, only 13 out of 45 incidents (29 percent) between 2010 and 2018 were completely contained on operator-controlled property.

Commenters raised a concern regarding the way that the tables in Section 5.5 are overstating the potential for spills to affect the listed resources. They pointed out that most spills occur on operator-controlled property and are contained and cleaned up with no impacts to resources. As pointed out in the previous paragraph, nearly 75 percent of spills have only impacted operator-controlled properties. The tables in Section 5.5 are showing the potential for a spill to occur in the vicinity of a resource and do not, as the commenter pointed out, directly represent the likelihood that a spill would affect these resources. As a result, the table titles have been changed to address this fact. For example, Table 5-7 has been renamed from "Likelihood of Spills Affecting Agricultural Land Use per Year" to "Likelihood of Spills Occurring in Proximity to Agricultural Land per Year."

A commenter raised the concern that the distance (over 1,000 feet for large spills) used to estimate the length of a groundwater plume assumes that the crude oil spill remains in place without cleanup, which is unrealistic for larger releases. Although the Department does acknowledge that the methodology in this case is conservative, especially for modeling large spills, the Department has elected not to change this methodology since it is consistent with previous analysis conducted by the Department and conservatively identifies the resources with the potential for impacts from a release.

See ACR Sub-theme TransCanada Track Record on Spills and Cleanup (5-3) regarding TransCanada's track record on spills, including information considered on the recent October 29, 2019 spill along the existing Keystone Mainline pipeline.

Consideration of Ice-Covered Streams. Commenters claimed that the SEIS does not analyze a spill scenario during winter conditions when a stream is partially or completely ice covered. Section 5.4.3.2 addresses impacts related to spills to frozen waterways. As mentioned in that section, these spills would have the potential to be trapped under the ice, especially any spills originating at the river crossing. The presence of ice inhibits initial detection of a spill, observations of the presence of oil and estimates of the extent of the oil within the waterway (MDEQ 2016b). The section goes on to describe what occurred during the January 2015 spill near Glendive, Montana to the Yellowstone River when the river was frozen, including the fact that the ice trapped volatile organic compounds within the water column that would have dissipated to the air otherwise.

Section 5.5.6.2 has been expanded to include more details regarding potential for impacts from a spill to a frozen waterway. As would be expected, impacts would depend upon many factors including whether the spill was under or on top of ice, and whether the ice was structurally competent or broken up. This section has also been expanded to include additional details from the January 2015 spill. It is important to note that a spill like the one that occurred near Glendive, Montana in which a pipeline ruptured underneath a frozen river is extremely unlikely. As previously discussed, the pipeline associated with this release was installed using open trench methods, which presents a substantially greater risk for a release to the river as compared to HDD construction. In addition, there was no other similar reported spill in the PHMSA database (2010 through 2019) that involved a spill underneath an ice-covered stream. Regardless of how unlikely such a spill would be, TransCanada would include response procedures in their Facility Response Plan specific to responding to spills to ice-covered waterways. This will help to ensure that TransCanada's response team is ready to respond to spills to waterways, even when they are covered with ice.

ACR Sub-Theme – TransCanada Track Record on Spills and Cleanup (5-3)

Synopsis:

Commenters questioned TransCanada's track record of pipeline safety and accidental releases, including the track record of the existing Keystone pipeline highlighting recent events such as the October 29, 2019 incident in North Dakota. Commenters claimed that TransCanada's recent spills indicate that the spill frequency should be revisited since it may not be indicative of TransCanada's recent record.

Response:

For the analysis of impacts from spills in the SEIS, spill data is used in two ways. Spill data from spill reporting over each preceding year is used to calculate the frequency of spills in the past, which in turn is used to estimate the potential for spills to occur in the future. In addition, other available information, such as response and investigation reports, are used to evaluate the details of large or catastrophic spills and integrate that information into the analysis as appropriate.

Spill response information and investigation information were reviewed to assess spills that originated from the proponent's infrastructure, which are documented in the SEIS. However, this becomes challenging when a new spill occurs for which all reporting is preliminary and an investigation has not yet been completed. In this case the information that can be incorporated into the SEIS is limited to general information reported during the initial response, including the location and volume of the spill, and details on the area that has been affected. This is the case or a recent spill that occurred on the existing Keystone pipeline in October 2019. Available information from that spill has been incorporated into the analysis, as appropriate. The most recent spill was also compared against the current statistical analysis (2010

through 2018) to make a determination whether any changes/updates should be made related to the analysis of spills originating from pipelines operated by the proponent and by crude oil pipelines nationwide. In addition, the statistical analysis was updated to quantitatively incorporate spill reports from 2018 and qualitatively review and assess incident rates through the present (October 2019).

Section 5.3.3 discusses the incident history for TransCanada, and Table 5-4 compares the rates of incidents occurring along TransCanada-operated pipelines to the industry average for U.S. onshore crude oil pipelines. Note that the statistical analysis has been updated to incorporate spill reports from 2018. While not included in the statistical analysis, Section 5.3.3 also includes text regarding two incidents involving TransCanada-operated pipelines in 2019, including the most recent release occurring on October 29, 2019 near Edinburg, North Dakota. In addition, Table D.4.12-3 compares the rate of incidents occurring along TransCanada-operated pipelines to the industry average incident rate per 1,000 pipeline miles. This table incorporates incident data through October 2019, including TransCanada's recent spills. The table shows how recent spills along TransCanada-operated pipelines in 2019 have affected the company's incident rate; the rates of small and large spills per 1,000 pipeline miles have increased, while the incident rate for medium spills decreased slightly. TransCanada's incident rates for small and medium spills are well under those for the rest of the industry (2.5 times less for small spills and 4 times less for medium spills), while TransCanada's incident rate for large spills is about 1.7 times higher than the average for the rest of the industry. By using the overall industry average rate, as shown in Table 5-4, the analysis of potential impacts in the SEIS reflects the potential for releases to occur from TransCanada-operated pipelines.

Table D.4.12-3. TransCanada Annual Incident Rate Per 1,000 Miles of Pipeline

	Incident Rate Per 1,000 Miles of Pipeline			
	Small Spills	**Medium Spills**	**Large Spills**	**Catastrophic Spills**
TransCanada (2010-2018) (from Table 5-4 of SEIS)	0.81	0.14	0.07	0.00
Industry-wide (without TransCanada) (2010-2018)	2.58	0.52	0.07	0.01
TransCanada (2010-October 2019)	0.98	0.12	0.12	0.00
Industry-wide (without TransCanada) (2010-October 2019)	2.51	0.50	0.07	0.01

Note: Incident rates for 2019 were calculated using available incident data from PHMSA through October 2019 and the existing 2018 U.S. onshore pipeline mileage. The mileage was then prorated for the partial year by multiplying by the fraction of 2019 being accounted for, in this case, 10 out of 12 months.

ACR Sub-Theme – Conclusions (5-4)

Synopsis:

Commenters questioned the conclusions in the SEIS based on past incident rates and the extent of impacts a release could cause in sensitive resources such as streams, wetlands, aquifers, farmland, plants and wildlife, in addition to tribal lands and effects to the local economy and recreation. The commenters believe the level of effects to resources discussed within the SEIS are minimalized. Commenters also requested that the socioeconomic analysis in Chapter 5 of the SEIS consider the potential costs of an accidental release to surrounding communities, including tribes. Additional concerns included that the Department's application of the IMPLAN model contains no quantitative analysis of non-positive

socioeconomic impacts of either construction or operations of the pipeline and should include negative factors, such as increased law enforcement costs and potential revenue losses (e.g., tourism and agriculture). Commenters also state the potential impacts from a crude oil release to environmental justice communities along the pipeline are not considered. Commenters also questioned the conclusion of no impacts to cultural resources in the event of a crude oil release and stated that other culturally significant sites such as Ponca corn and the effect of soil productivity to the corn's growth must be considered.

Response:

Regarding impacts to water and biological resources, potential impacts to water resources (groundwater, drinking water and surface water), wetlands, wildlife, vegetation and the public due to a spill along the proposed project route are discussed in detail in SEIS Section 5.5, Impacts of Releases. Section 5.5 provides an overview of each resource area and potential direct and indirect effects to the resources in the event of a spill. This section also provides the probability of a release, by release size, occurring within proximity to a resource based the occurrence of the resource along the proposed pipeline and the incident rates reported to PHMSA through the 2018 calendar year (also see response to ACR Sub-theme TransCanada Track Record on Spills and Cleanup (5-3) regarding calculation of incident rates). The SEIS analysis uses updated federal and state databases on protected species and field surveys with a maximum reasonable transport distance of 40 river-miles downstream, which is more conservative than the region of influence assessed in the 2014 Keystone XL Final SEIS.

The SEIS evaluates potential impacts to local ecosystems, communities and the public due to a spill along the proposed pipeline route based on spill size and likely distance traveled (see Section 5.2 for additional information). A detailed discussion of potential receptors along the proposed route is contained in Section 5.5, including high consequence areas, unusually sensitive areas, vegetation and soil ecosystems, agricultural lands, wildlife, cultural resources and water resources. Biological and ecological impacts may manifest in local populations, communities or entire ecosystems depending on the location, size, type, season, duration and persistence of the spill, as well as the type of habitats and biological resources exposed to spilled oil.

The effects of a spill on a community would depend on the size of the spill and the size of the population in the impacted area. Populated areas are divided into two categories by the USDOT: High Population Areas and Other Populated Areas. The potential impacts to local communities and the general public could include interruptions in daily activities such as access to safe drinking water, decreased air quality, socioeconomic effects and/or temporary relocation of the population in impacted areas during spill response procedures.

Sections 5.5.3 and 5.5.6 of the SEIS consider the soils and soil properties effects on contamination and migration into groundwater. Coarse-textured soils, or sandy soils, allow for easier percolation of liquid through the soils to reach groundwater. If a spilled product reached these soils, infiltration rates could be greater than in other areas. Because the infiltration rate of the product into the underlying soil controls vertical migration, rapid emergency response measures to control the release, contain it and collect the released product would mitigate the potential for groundwater contamination (also see response to ACR Sub-theme – Mitigation, Response and Remediation (5-5)). The analysis also includes consideration of external temperature and viscosity of the crude oil for migration with increasing viscosity (from lower temperatures) tends to reduce vertical migration rates in soil profiles and infiltration into the shallow groundwater table.

Sections 5.5.2.1 and 5.5.3 of the SEIS summarize potential impacts of an accidental release on local agricultural activities and prime farmland soils. These effects include oiled crops or grazing areas, loss of soil productivity and contaminated water supplies that irrigate fields or support livestock. In addition to

general soil clean up measures that could be employed following a release, Keystone has committed to a number of additional measures, which are addressed in Appendix B, Potential Releases and Pipeline Safety, of the 2014 Keystone XL Final SEIS. In the event that a spill contaminates water supplies used for industrial or irrigation purposes, Keystone may provide either an alternate supply of water or appropriate compensation for those facilities affected.

Regarding wetlands, SEIS Sections 3.6, 4.6, 5.5.6 and 6.4.3 discuss water resources including wetlands. Appendix G, CMRP, of the 2014 Keystone XL Final SEIS includes an expanded discussion of wetland avoidance and minimization efforts, documents wetland impacts using the best available information (i.e., based on field delineations supplemented with desktop review of other wetland mapping databases), and quantifies the permanent loss and temporary conversion of wetlands. The Appendix also assesses the effects of these impacts on wetland functions and values, references Executive Order 11990 regarding the no net loss of wetlands policy, and discusses likely mitigation requirements by providing an overview of USACE mitigation policy. The SEIS does not affect the USACE's jurisdiction over wetland permitting and mitigation. This permitting authority is granted to USACE under Section 404 of the Clean Water Act.

Regarding groundwater, one of the factors affecting downward migration of spills to groundwater would be the depth to groundwater, which factors into the travel time of a spill from the point of release to an underlying groundwater resource. As discussed in Section 4.3.3.1, Groundwater, of the 2014 Keystone XL Final SEIS, extended periods of drought would tend to lower the water table and increase the depth to groundwater in shallow, unconfined aquifers such as alluvial aquifers and the Ogallala Aquifer. Thus, increased depths to groundwater resulting from drought conditions would increase the time required for spills to reach and affect groundwater resources. That relationship notwithstanding, Keystone is not relying on increased depth to groundwater as a mitigation measure for potential spills and has instead committed to a comprehensive spill prevention and response program.

Regarding biological resources, Chapter 5 addresses the risk of bioaccumulation in Section 5.5.7 by stating that heavy components of released product do not bioaccumulate, but the light, more soluble components bioaccumulate more readily. Bioaccumulation could result in toxic effects as these compounds move up the food chain. The topic is also addressed in Table 5-20 as it pertains to listed species found in areas potentially affected by the proposed Project.

Regarding socioeconomic impacts in the event of a crude oil release, the SEIS does discuss the range of negative effects which could occur. Both direct and indirect effects to socioeconomic conditions are highlighted in Section 5.5.8.1. As stated at the beginning of the section, the analysis acknowledges the extent and duration of the impact (including financial losses) would depend on the properties affected, the uses of those properties (including resources used for hunting, recreation and agriculture), the response time, remedial method used and the length of time required to restore conditions. These highly variable factors would result in speculative dollar estimates of actual economic losses that could occur in the event of a crude oil release.

Regarding environmental justice impacts, Section 5.5.8.2 includes a discussion of potential impacts to minority populations along the route. The discussion has been expanded to include specific concerns raised by tribes and tribal members during the public comment period on the Draft SEIS (see ACR Sub-Theme – Impacts to Tribal Rights and Resources (5-9)).

Regarding impacts to historic properties, Section 5.5.9 contains a discussion of the direct effects which could occur to historic properties if they are present in the area affected by a crude oil release. Table 5-23 of the Draft SEIS has been moved to Section 5.5.8.2 under environmental justice as the information contained within the table is related to tribal trust lands and not historic properties. The information

regarding paleontological sites has been moved to Section 5.5.3 under the discussion of geological resources. As stated at the beginning of Section 5.5.9, to mitigate potential impacts, Keystone has committed, whenever feasible, to avoid known historic properties during siting of the pipeline, minimize impacts when avoidance is not possible (e.g., HDD beneath unavoidable sites) and mitigate impacts when minimization is not sufficient.

Regarding potential impacts to soil productivity and Ponca corn, Section 4.13.5, Potential Impacts (Potential Releases), of the 2014 Keystone XL Final SEIS and Section 5.5.8.1 of this SEIS discuss the potential impacts to agricultural and rangeland due to a spill from the proposed pipeline. The extent and duration of the impacts to soil productivity would depend on the number of productive acres affected, the response time, the remedial method selected and implemented by the response team, and the length of time required to return land services to conditions similar to those existing prior to the spill. These effects would be similar to the location of Ponca corn planting on the deeded Tanderup property. Section 4.9.3.2, Land Use, and Appendix G, CMRP, of the 2014 Keystone XL Final SEIS describe mitigation measures to reduce impacts, procedures to protect soil productivity and compensation procedures should a decrease in soil productivity occur.

ACR Sub-Theme – Mitigation, Response and Remediation (5-5)

Synopsis:

Commenters expressed concern regarding liability and associated costs for cleanup and for loss of resource use (e.g., water supplies, agricultural land) in the event of an oil spill; some commenters suggested a separate fund be established by TransCanada for cleanup costs in the event of a spill. Commenters requested that TransCanada provide the Emergency Response Plan for the project so that state, local and tribal organizations could review the plan. Commenters also expressed concern regarding the ability to access sites and perform cleanup during inclement weather, and the length of time required for a site of a release to be fully restored.

Response:

Spill response and remediation measures are described in the SEIS, Section 5.4.4, Response and Remediation of Spills, and the 2014 Keystone XL Final SEIS, Section 4.13.1, Introduction (Potential Releases). The proposed Project would include processes, procedures and systems to prevent, detect and mitigate potential oil spills that could occur during operation of the pipeline. Keystone's Emergency Response Plan (ERP) details overarching strategies and specific tactics to manage various emergencies, including a potential release of crude oil into the environment. Within the Emergency Response Plan, detailed Geographic Response Plans identify specific resources and tactics that would be used if a release occurred within a specific area. A Geographic Response Plan is the corresponding tactical plan that guides emergency responders in the event of an oil release. It is composed of a series of maps and site-specific response locations termed priority protection areas. Each Geographic Response Plan map serves as a quick reference guide to the equipment and deployment tactics anticipated for a response, as well as identification of sensitive resources and a corresponding protection strategy to be used during an emergency response.

A draft ERP was provided through the Montana Facility Siting Act (MFSA) review process and in the first Environmental Impact Statement (EIS) completed for the Project. That ERP is found in Appendix C of the Draft EIS published in 2010 and Appendix C of the Final EIS published in 2011, and an updated, redacted ERP was filed as Appendix I of the Final Supplemental EIS in 2014. This project-specific ERP contains further details on response procedures and will be reviewed by PHMSA prior to granting permission to operate the proposed pipeline.

A Facility Response Plan (FRP) would be prepared and submitted to PHMSA and USEPA prior to initiating operation of the proposed Project, in accordance with requirements of 49 CFR 194. This plan relies on final permitting requirements and detailed design and construction information. A proposed Project-specific, worst-case spill scenario including location, available resources and response actions would be addressed in the FRP once the final permitting, detailed design and construction information were available. Project-specific spill prevention, control, and countermeasure (SPCC) plans would be prepared for specific stages of the construction. Both sets of plans rely on final permitting requirements and detailed design and construction information. As these details are not yet known, draft plans cannot be prepared or provided at this time. The FRP would be prepared and submitted to the USEPA Regional Administrators for Regions 7 and 8 for review and approval prior to operation. Project-specific SPCC plans would be reviewed and certified by a Professional Engineer prior to commencement of construction activities. Under current regulations, Keystone also would be required to submit these plans to PHMSA for review and approval prior to operation of the proposed Project. As stated in Section 5.4.4 of this SEIS, Keystone would maintain an Integrity Management Program required for pipelines that could affect a high consequence area in accordance with 49 CFR 195.

The 2014 Keystone XL Final SEIS, Section 4.13.6, Additional Mitigation, addresses the additional measures that are recommended to increase safety and reduce the severity and likelihood of a spill. Increased levels of protection are provided by implementing the PHMSA Special Conditions discussed in the 2014 Keystone XL Final SEIS, Section 4.13.6.1, PHMSA Special Conditions. These measures provide for an additional safety factor on the proposed Project that exceeds those typically applied to a domestic oil pipeline projects. If a spill occurred, pre-defined and systematic plan response actions can take effect to quickly mitigate the impact. The 2014 Keystone XL Final SEIS, Section 4.13.6.2, Safety and Spill Response (see subsection Response Actions), describes the written procedures that Keystone has identified and prepared to address a response action. Potential emergencies include response for public safety measures, fire, line break or leak, release to groundwater, severe thunderstorm/flash flooding/landslide, tornadoes, earthquakes, volcanic eruptions and human-related emergencies, such as bomb threat/terrorist activity and abnormal operations.

In the event of a spill, Keystone would be liable for costs associated with cleanup and restoration, as well as other compensation, under a number of federal, state and tribal laws as outlined in Table 4.13-40 of the 2014 Keystone XL Final SEIS. Keystone is legally required to clean up spills, and has agreed that it would be responsible for cleanup and restoration of areas affected by a spill, including groundwater. These statutes have various types of liability and fines associated with spills, and Keystone would be responsible for meeting the requirements of the applicable statutes. See ACR Sub-theme – Guiding Principles, Policies, Regs and Laws (5-1) for additional information regarding liability in the event of an accidental release.

ACR Sub-Theme – Pipeline Safety (5-6)

Synopsis:

Comments regarding pipeline safety involved both leak detection methods and construction quality of the pipeline. This included quality of construction and pipeline safety training to mitigate potential risks. Commenters were concerned that the pipeline monitoring systems would not be able to detect pinhole leaks and that in general leak detections systems would be inadequate. Commenters also expressed concern that the SEIS did not address potential impacts associated with a release caused by an act of terrorism.

Response:

Regarding pinhole leaks, TransCanada supplements real-time Supervisory Control and Data Acquisition (SCADA) detection methods with non-real-time methods to inspect, monitor and protect their pipelines. The systems currently in place are capable of detecting leaks as small as 1.5 percent of flow in 2 hours. For even smaller leaks, TransCanada would depend upon facility maintenance and inspection activities to identify leaks, as required by Special Condition No. 27. Inspection activities would include smart ball (identified in the 2014 Keystone XL Final SEIS) inspections and aerial and ground patrols. These would be supplemented by third-party reporting and a landowner awareness program.

Figure 5-2 of this SEIS depicts the number of incidents by the installation decade of the part (pipeline, tank, valve or pump station) that failed and caused the release. This figure does show a higher incidence of failure along older mainline pipes. However, an exact failure rate for pipes of a certain age cannot be determined, as pipeline integrity relies on a range of factors including material, construction and maintenance.

Regarding inspection and pipeline safety during construction, the details of the monitoring and enforcement programs are presented in Appendix G, CMRP of the 2014 Keystone XL Final SEIS. The inspection frequencies would be determined by PHMSA requirements, other permitting requirements and as outlined in the CMRP. In addition, as described in Appendix B, Potential Releases and Pipeline Safety, of the 2014 Keystone XL Final SEIS, Keystone must prepare and follow an Operator Qualification Program for construction tasks that could affect pipeline integrity. The Construction Operator Qualification Program must comply with 49 CFR 195.501 (Qualification of Pipeline Personnel—Scope) and must be followed throughout the construction process to help ensure the qualifications of individuals performing tasks on the pipeline. Appendix B also includes a PHMSA Special Condition addressing third-party monitoring requirements.

Section 4.13.1, Introduction (Potential Releases), of the 2014 Keystone XL Final Supplemental EIS addresses the issue of spill detection. Pipeline conditions along the entire proposed Project route would be continuously monitored 24 hours per day, 7 days per week using a SCADA system with over 16,000 sensors along its length and multiple overlapping state-of-the-art leak detection systems. The SCADA sensors are designed to automatically detect leaks large enough to produce noticeable changes in pipeline pressure and flow rates in real time. For small leaks outside the range of the SCADA system, computer-based, non-real time, accumulated gain/loss volume trending would be used to assist in identifying low rate or seepage releases below the 1.5 percent to 2-percent-by-volume detection thresholds. A pinhole-sized leak resulting in drips from defects in materials or faulty construction/fabrication of the pipeline could occur along any segment of the pipeline. As the majority of the pipeline would be buried, these small, continuous-type releases may go unnoticed for an extended period until the spill volume is expressed on the surface. This volume of spill generally would remain within the pipeline ROW unless the oil was released adjacent to a channel or surface waterbody that could facilitate spreading. Smaller leaks may also be identified by pipeline patrolling (the objectives and patrol interval are prescribed in Special Condition 41) and integrity inspections (the frequency of inline inspection are prescribed in Special Condition 44).

Keystone has agreed to incorporate the PHMSA Special Conditions, developed with the USDOT, to enhance the overall safety of the proposed Project. Section 2.1.7.1, Pipeline Design, of the 2014 Keystone XL Final Supplemental EIS discusses the design and manufacture criteria for the proposed Project. The design would reflect four minimum pipeline wall thicknesses ranging from 0.465 inch for areas where normal installation methods and cross country conditions prevail, to 0.748 inch for directionally drilled crossings and uncased railroad crossings. Section 4.13.6.1, PHMSA Special Conditions, of the 2014 Keystone XL Final SEIS discusses how the PHMSA Special Conditions encompass design, construction, operation, maintenance and monitoring. These are further detailed in

Appendix B, Potential Releases and Pipeline Safety, of the 2014 Keystone XL Final SEIS. The additional design standards enable the entire length of the pipeline system to have a degree of safety similar to that which is required in a high-consequence area, as defined in 49 CFR 195.450 (Definitions). PHMSA Special Condition 19, Depth of Cover, and PHMSA Special Condition 21, Mainline and Check Valve Control, address potential weather issues.

Several other aspects of the PHMSA Special Conditions address the proposed Project's specifications and environmental factors. Overpressure protection control and pipeline integrity is covered by several PHMSA Special Conditions: PHMSA Special Condition 16, Overpressure Protection Control; PHMSA Special Condition 32, Mainline and Check Valve Control; and PHMSA Special Condition 45, Verification Reassessment Interval.

As stated in the 2011 Keystone XL Final EIS, the Department, in consultation with PHMSA, has determined that incorporation of industry standards and practices, PHMSA regulatory requirements and the set of proposed Project-specific Special Conditions developed by PHMSA would result in a Project that would have a degree of safety over any other typically constructed domestic oil pipeline system under current code and a degree of safety along the entire length of the pipeline system similar to that which is required in high-consequence areas, as defined in 49 CFR 195.450.

Procedures for repair and/or replacement of damaged or faulty sections of the pipeline (regardless of location) would be described in the Pipeline Spill Response Plan, which would be developed by Keystone and submitted to PHMSA prior to commencement of operations. In addition, as required by 49 CFR 195.402 (Procedural Manual for Operations, Maintenance, and Emergencies), and as described in Section 2.1.7, Pipeline System Design and Construction Procedures of the 2014 Keystone XL Final SEIS, Keystone would prepare and follow a manual of written procedures for conducting normal operations and maintenance activities and handling abnormal operations and emergencies that would include the Keystone XL ERP.

While the probability of intentional destructive events (i.e., sabotage or terrorism) cannot be estimated, the effects related to such acts would likely be similar to the range of effects described for accidental releases. Although sabotage and terrorism was not directly referenced in the SEIS, the engineering of the proposed Project considers the Transportation Security Administration (TSA) Pipeline Security Guidelines as mentioned in Section 3.13.3.11, Time-Independent Threats, of the 2014 Keystone XL Final SEIS. In March of 2018, the TSA Pipeline Security Branch updated the TSA Pipeline Security Guidelines, which provides recommendations for pipeline industry security practices. These updated guidelines include the advancement of security practices to meet the ever changing threat environment in both the physical and cyber security realms. A copy of the TSA Pipeline Security Guidelines is available at the TSA Pipeline Security website. The TSA has also developed a National Terrorism Advisory System Threat Level Protective Measures Supplement to the TSA Pipeline Security Guidelines. This supplemental document contains a series of progressive security measures to reduce vulnerabilities to pipeline systems and facilities during periods of heightened threat conditions. The Keystone Corporate Security Policy and Information Security Policy provide direction and oversight for the Security Management Program (SMP). These policies reference a number of Keystone operating procedures, plans, processes and internal procedures which formulate the SMP. The existing SMP was developed to meet the needs of the business and continues to evolve. All elements of the TSA Pipeline Security Guidelines have been considered and addressed in the development of these processes. Keystone also employs the above noted procedures, processes and security vulnerability assessments to identify potential risks, to implement the appropriate physical or cyber security measures, and to address the TSA Pipeline Security Guidelines with respect to physical and cyber security.

ACR Sub-Theme – Human Health and Safety (5-7)

Synopsis:

Commenters expressed concerns over human health and safety, potential health effects, and carcinogenic properties related to chemicals used to facilitate the transport of crude oil via pipeline. Commenters also expressed concern over constituents of the crude oil being carried within the pipeline, including drag reducing agents and the components of dilbit. They state that the safety data sheets for the drag reducing agents warns to "Avoid release to the environment" and "Harmful to aquatic life with long lasting effects" and that the safety data sheets state the drag reducing agents are not regulated by the Safe Water Drinking Act; and are toxic to humans.

Response:

As discussed in Section 4.13, Potential Releases, of the 2014 Keystone XL Final SEIS, human health can be affected due to exposure to crude oil and the hazardous chemicals that make up crude oils. Exposure to crude oil can occur through ingestion, inhalation of vapors, dermal (contact with skin) and ocular exposure (contact with surface of the eye). Short-term exposure effects due to each of these pathways include:

- Mild stomach disturbances, transient nausea, gastrointestinal tract disturbances and self-limiting diarrhea due to ingestion of a small amount of crude oil (i.e., less than 8 ounces). The main risk of the ingestion of crude oil is aspiration of hydrocarbons into the lungs caused by vomiting, which could result in significant lung injury and possibly chemical pneumonitis.
- Irritation of the respiratory system is the main concern due to inhalation of fresh crude oil. This can cause dizziness, rapid heart rate, headaches, confusion, anemia, nausea and/or vomiting. Inhalation hazards of weathered crude oil are less of a concern because the concentrations of the toxic volatile hydrocarbons are greatly reduced during the weathering process.
- Exposure to burning crude oil cause similar effects to the respiratory system when inhaled. This may harm the passages of the nose, airways and lungs by causing shortness of breath, difficulty breathing, coughing, itching and black mucous.
- Depending on the amount and duration of exposure, skin contact with crude oil can be mildly to moderately irritating. Irritations can include reddening of the skin, edema (swelling) and burning. Dermal effects can worsen by succeeding exposure to sunlight because trace contaminants in the oil are more toxic when exposed to light. Also, depending on the skin sensitivity of the individual, skin effect may be more pronounced after smaller or shorter exposure periods.
- Prolonged skin exposure to crude oil can cause defatting of the skin, which increases the possibility of dermatitis or secondary skin infections.
- The risk of weathered crude oil as a skin cancer-causing agent is unknown due to the variability of the compounds in the weathered oil mixture.
- Ocular exposure can cause slight stinging, temporary redness and watery eyes. No permanent damage should result.

Long-term exposure effects of crude oil are currently not wholly understood. Most research indicates that the long-term effects of exposure to crude oil would be similar to the long-term effects of the chemicals that make up crude oil including, but not limited to, benzene, toluene, ethyl benzene, xylene, hydrogen sulfide and polycyclic aromatic hydrocarbons. Long-term exposure effects of these chemicals consist of anemia, cancer, headaches, nervous system effects, possible reproductive effects, immune system effects, respiratory effects, memory loss, liver effects, kidney effects, change in sense of balance, gastro-intestinal system effects and blood effects. However, long-term exposure effects would only be seen in people who

were directly interacting with crude oil for multiple hours a day for an extensive period of time (i.e., spill cleanup professionals). These individuals would likely be highly trained in appropriate personal protective equipment for the task, exposure limits, work/rest schedule and other ways to minimize the risk of crude oil interaction.

Regarding drag reducing agents (DRAs), TransCanada has indicated a DRA could be added to the Keystone XL Pipeline to facilitate operations by reducing the viscosity of the crude oil and allowing it to flow more easily through the pipeline. The use of DRA is common among major pipeline companies. DRA is a freeze-protected slurry that contains 20 to 30 percent hydrocarbon solvent, 10 to 40 percent ethylene glycol, and 0 to 6 percent alcohols. After blending DRA with crude oils transported by the Project, the maximum concentration of DRA within crude oil would be approximately 30 parts per million (ppm). If crude oil with DRA was released into the environment, DRA would not be expected to persist in the environment and would have low mobility in soils and sediments due to adsorption. At these low concentrations, none of the DRA constituents would be expected to be present at levels considered toxic to aquatic life or human health. In the event of a spill, Keystone's ERP (2014 Keystone XL Final SEIS Appendix I) incorporates measures and considerations should DRA be present in the product stream.

Regarding dilbit, the dilbit that would be transported by the proposed Project is bitumen (originating in the oil sands) mixed with a diluent, which is usually a natural gas liquid such as gas condensate. The gas condensate is mainly light hydrocarbons such as iso-butene, n-butane, iso-pentane, n-pentane and hexanes. Due to shipper confidentiality issues, the exact compositions of the dilbit blends are not publicly available. Although the Department is unable to supply every Safety Data Sheet (SDS) of the crude oil that would be transported by the proposed Project, 2014 Keystone XL Final SEIS Appendix Q, Crude Oil Material Safety Data Sheets, contains MSDSs that identify the chemical composition and maximum volumes of chemicals that could be present in the dilbit and Bakken crude oil in the event of a release. These MSDSs do not represent an actual dilbit blend that would be transported by the proposed Project, but could be useful to emergency responders for planning purposes. In the event of a release, pipeline personnel would identify and distribute appropriate SDSs to first responders within 1 hour, as described in 2014 Keystone XL Final SEIS Section 4.13.6.2, Safety and Spill Response. Chemical characteristics and physical properties of dilbit and synthetic crude oil (SCO) are discussed further in Section 3.2 of Exponent's Environmental Review, which is available on the Department's project-specific website at https://2012-keystonepipeline-xl.state.gov/documents/organization/221103.pdf. Additionally, this SEIS describes dilbit in Section 5.4.1, Characteristics of Crude Oil, and diluent composition is addressed in the 2014 Keystone XL Final SEIS in Section 3.13.3.2, Dilbit.

Section 5.5.4 of this SEIS also includes a discussion of air quality impacts to surrounding populations and clean-up workers. The most notable impacts related to accidental releases arise from inhalation of the hydrocarbons (organic molecules made of hydrogen and carbon atoms) that make up crude oil. Health effects from exposure depend on the concentration of the chemical in the air and the duration of exposure. The analysis cites the Michigan Department of Community Health and the U.S. Department of Health and Human Services, Agency for Toxic Substances and Disease Registry, which developed air monitoring protocols for testing, levels of concern and decision trees for evacuation and re-occupancy based on benzene levels following the Marshall, Michigan spill in 2010. The initial "real-time" readings at the spill site did not detect combustible gas at concentrations above the protective screening level for explosives, and all measured oxygen and carbon monoxide concentrations were within normal limits. However, measurements found elevated levels of the screening compounds of benzene, total VOCs and hydrogen sulfide. This warranted the voluntary evacuations of residents from approximately 50 houses within a designated area of approximately 400 acres between the spill site and the Kalamazoo River. During the first 3 weeks following the Marshall, Michigan spill, people in the spill area who inhaled oil-related chemicals reported short-term health effects, including headaches, nausea, respiratory discomfort and eye

irritation. These short-term effects diminished or stopped when people were no longer breathing the contaminated air. By August 18, 2010 (i.e., the end of the voluntary evacuation period), approximately 3 weeks after the spill, concentrations of air contaminants fell below human health screening levels, such that individuals near the oil did not breathe oil-related chemicals at concentrations or for durations of time that would cause long-term adverse health effects.

ACR Sub-Theme – Impacts to Water Quality (5-8)

Synopsis:

Commenters expressed concern regarding the effects of a spill on water resources, including aquifers. Commenters were concerned that the analysis shows that a spill from the pipeline would have detrimental effects on drinking water supplies. Commenters claimed that when the likelihood calculations for water resources are applied to the 50-year term of the project, that 2 large or catastrophic spills would occur and that 10 medium, large or catastrophic spills would occur. Commenters also claimed that the SEIS stated that any impacts to streams used for domestic water and irrigation would be mitigated through Keystone's plan to provide an alternate water supply if a spill affects an intake.

Response:

Table 5-15 (as with other similar tables in Chapter 5) has been renamed in the Final SEIS to "Likelihood of Spills Occurring in Proximity to Surface Water Resources per Year" to clarify the information being presented. The revised title reflects that the tables summarize the potential for a release to occur in proximity versus the "likelihood of a release affecting surface water resources." While the resources could be affected by a spill, there are many factors that could prevent a release from actually causing an effect including site-specific conditions, weather, timeliness of identification and responsiveness of containment and cleanup efforts. So the likelihood of a spill occurring in proximity to a water resource is largest for perennial streams. As shown in Table 5-15, an incident rate of 0.2 incidents per year occurring within 150 feet and 500 feet of perennial streams equates to 10 incidents occurring over the life of the project (50 years); however, it is important to note that statistically no large or catastrophic spills would occur within 500 feet of perennial streams over the life of the project. All spills would be small or medium. For the perennial streams within 1,200 feet of the pipeline (5,000 feet in areas of moderate to steep slope), statistically 1 large spill and no catastrophic spills were calculated to occur within this vicinity over the 50-year life of the project.

The significance of large spills, and the potential subsequent impacts resulting from them, are discussed and analyzed extensively throughout Chapter 5, particularly Subsection 5.5. No effects are expected from accidental releases with the potential for effects beyond the maximum reasonable transport distance of 40 miles as described in ACR Sub-Theme – Methodology and Assumptions (5-2). However, in the unlikely event that a spill were to be transported beyond the 40-river-mile distance, potential effects, including those to water quality or intake structures, would be limited and similar in nature, but much smaller in degree, to those presented in Chapter 5 of the SEIS. As discussed on pages 5-2 and 5-3 of the SEIS, at a distance of 40 river-miles downstream from a spill, it would typically be expected that response resources have been able to contain the majority of the spill before it reach this distance.

Although not expected, if circumstances were to occur that result in the transport of a spill beyond maximum reasonable transport distance of 40 river-miles, potential effects would be primarily related to an oil sheen and the presence of globules. An oil sheen is typically approximately 1 micron in thickness and contains very little oil (for comparison, the thickness of a human hair ranges from 17 to 180 microns). Sheens are readily dispersed by weathering and wave action. Oil globules are typically small in size (about the size of a coin) and will eventually sink, float ashore or stick to aquatic vegetation. If globules were to be transported to distances beyond 40 river-miles, they would typically accumulate in depositional areas at concentrations that would be expected to have very limited effects, which is consistent with effects from spills where observations beyond 40 miles were made.

As discussed in the 2014 Keystone XL Final SEIS, if an accidental release did affect surface water, Keystone would be liable for all costs associated with cleanup and restoration, including damages to natural resources and for the loss of subsistence use of these natural resources. As discussed in Section 5.5.6.2 of the SEIS, in the event that a spill contaminates water supplies used for industrial or irrigation purposes, both short- and long-term effects would be expected on the suitability or usability of these intakes. The degree of impacts to surface water intakes from a release would depend on many factors, such as the size of the release, the time of year of the release and the response time to address the release. A spill that contaminates an intake may make it unusable for an extended period of time until spill response and recovery activities have been completed. Keystone has committed to provide an alternate water supply for any users of wells or irrigation intakes where water quality is affected by a spill. Keystone would provide either an alternate supply of water or appropriate compensation for those facilities impacted, as may be agreed upon among the affected parties and Keystone. Keystone would memorialize such arrangements through an appropriate written agreement with the USEPA. Crop loss as a result of a spill that was not covered by a farmer's liability insurance would involve a third-party claim that would have to be directed to Keystone for review and payment.

ACR Sub-Theme – Impacts to Tribal Rights and Resources (5-9)

Synopsis:

Commenters stated the SEIS significantly downplays the risks to tribal communities if a spill were to occur. The SEIS lacked an analysis of the Assiniboine and Sioux Tribes of the Fort Peck Reservation's water and irrigation systems and minimizes the risks to the Missouri River, a waterway which functions as the lifeblood to the impacted region. Sub-Theme 5-11 Drinking Water Intake contains information on comments raised regarding drinking water sources including the Assiniboine & Sioux Rural Water Supply System and Mni Wiconi water supply project.

Response:

Regarding the Fort Peck Irrigation Project, Section 5.5.6.2 of this SEIS has been revised to state (note, text in bold has been added to the Final SEIS based on public comment):

"The final two categories of intakes include those used for irrigation and other uses. This includes intakes that are used to support agriculture and livestock operations as well as other commercial and governmental operations. As shown in Table 5-14, many of these intakes were identified within the 40 river-mile downstream area, which includes portions of North Dakota and Kansas. This included a total of 13 irrigation intakes along the Milk River, all located within 15 river-miles downstream of the proposed pipeline crossing (Montana Department of Natural Resources Conservation 2019). ***Two of these intakes located on the Fort Peck Reservation at Wiota and Frazer are part of the Fort Peck Irrigation Project used to irrigate Tribal lands within the Fort Peck Reservation and are reportedly located 10 and 14 river-miles downstream of the proposed crossing. The Fort Peck Irrigation Project was authorized by Congress in Section 2 of the Act of May 30, 1908 as part of the federal government's policy of promoting tribal irrigated agriculture. Pursuant to the 1908 Act, the federal government allotted forty acres of land near the Missouri River to the head of each family on the Fort Peck Reservation on land requiring irrigation to be successfully farmed. The irrigation project is the sole source of irrigation water for approximately 19,000 acres of land-including trust land on the Reservation and the croplands it supports represents a sizeable portion of the reservation's agricultural economy****.*

A release to surface water located upstream, and in the vicinity of any of these intakes identified, could produce both short- and long-term effects on the suitability or usability of these intakes. The degree of impacts to surface water intakes from a release would depend on many factors, such as the size of the release, the time of year of the release and the response time to address the release. A spill that

contaminates an intake may make it unusable for an extended period of time until spill response and recovery activities have been completed. ***Loss of these irrigation intakes during the growing season would result in economic losses to farmers, including Fort Peck's agricultural economy.***

Keystone has committed to a number of measures beyond spill cleanup measures, which are addressed in Appendix B, Potential Releases and Pipeline Safety, of the 2014 Keystone XL Final SEIS. In the event that a spill contaminates water supplies used for industrial or irrigation purposes, Keystone has committed to provide an alternate water supply for any users of wells or irrigation intakes where water quality is affected by a spill. Keystone would provide either an alternate supply of water or appropriate compensation for those facilities impacted, as may be agreed upon among the affected parties and Keystone. If the permit were approved, Keystone would memorialize such arrangements through an appropriate written agreement with the USEPA. ***Crop loss as a result of a spill that was not covered by a farmer's liability insurance would involve a third-party claim that would have to be directed to Keystone for review and payment."***

Regarding potentially affected rivers from an accidental release, Section 5.5.9 of this SEIS does acknowledge the proximity of the Project and river crossings to downstream tribal lands "*...two Indian reservations are located adjacent to waterways within the 40 river-mile downstream area included in the [Region of Influence] for the proposed Project. Cherry Creek and the Cheyenne River extend along a combined total of 40.34 miles of the Cheyenne River Reservation in South Dakota, while the Milk and Missouri rivers border a total of 58.83 miles of the Fort Peck Reservation in Montana."* Also see SOC Sub-Theme – Impact Methodology and Assumptions (4-8a) regarding impacts to tribal rights and response to ACR 5-11 regarding additional considerations added regarding tribal impacts in the event of a spill.

Finally, the Section 5.5.8 discussion has been revised to further describe the concerns of tribes related to way of life and the importance of the resources (note, text in bold has been added to the Final SEIS based on public comment):

"*It is recognized that Indian tribes* ***and tribal members*** *could be disproportionately negatively impacted by the proposed Project because they could have a greater dependence on natural resources than non-tribal members. This includes subsistence use within treaty lands in southeastern Montana, western South Dakota and northwestern Nebraska where Indian tribes still claim rights to hunting, fishing and water use. Large oil spills could significantly impact aquatic and terrestrial resources, including those considered important by Indian tribes or used in sacred and spiritual practices. Because many of the plant and animal species identified by the Indian tribes may be associated with wetland, riparian, aquatic and sagebrush habitats at the Missouri River crossing at Fort Peck, the proposed Project has the potential to impact fish and wildlife species important to Indian tribes.* ***Comments received from tribes and tribal members during the Draft SEIS comment period emphasized the importance of these resources to their cultural and way of life. Rivers sustain the tribes in part by providing the water for traditional religious and cultural practices such as the Sundance and sweat lodges. These practices require water and resources, such as cottonwood trees and gathered plants, that rely on water from the rivers to thrive. Contamination of these resources in the event of an accidental release would adversely affect these resources and significantly affect tribal cultural, beliefs, and threat the transfer of these traditions to younger generations. Specifically, the Missouri River in certain tribal traditional beliefs holds sacred spiritual beings which would be threatened by contamination. Members of tribes also rely on rivers for subsistence including hunting of large mammals and game birds and gathering of plants which rely on the rivers. These subsistence activities are often used to supplement fixed incomes and loss of these resources in the event of a spill would be a significant impact to these individuals***.

While the impact analysis in the 2014 Keystone XL Final SEIS and this SEIS is not specific to tribal natural resources, the analysis regarding environmental resources provides insight as to how resources important to Indian tribes could be affected by the Project. For example, Sections 4.6 and 4.7 of the 2014 Keystone XL Final SEIS describe environmental consequences of, and mitigation for, the construction and operation of the Project on hunting and fishing and other natural resources. Specifically, Section 4.6.3 discusses potential impacts to big and small game animals and waterfowl. Section 4.7.3 describes potential impacts to fisheries during construction (4.7.3.2.) and operations (4.7.3.3.)."

See response to PRO Sub-Theme – Construction (2-2) regarding the proposed Keystone XL pipeline crossing of the Dry Prairie Rural Water System and mitigation measures performed by Keystone in cooperation with the water district. Also see SOC Sub-Theme – Impacts to Tribal Way of Life (4-8e) regarding additional discussion added to Sections 3.8 and 4.8 regarding the Assiniboine and Sioux Rural Water Supply System.

ACR Sub-Theme – Drinking Water Intake (5-10)

Synopsis:

Commenters expressed concern of drinking water intakes located downstream of the proposed pipeline. Comments specifically focused on the Assiniboine & Sioux Rural Water Supply System (ASRWSS) which has a water intake along the Missouri River, approximately 57 miles downstream of the proposed Keystone XL pipeline's crossing over the Missouri River. Commenters also expressed concern over the proposed pipeline's crossing of the Dry Prairie Rural Water System (DPRWS) which also serves rural areas in Montana. Primary topics raised involved the lack of discussion of the ASWRSS and DPRWS in the SEIS document, the lack of the ASWRSS system's filtration equipment's capability to handle oil if a release were to occur and oil were to enter the system, and the financial aspect and hardships the system and the public served by the system would endure if the system had to be shut down. Additional concerns were raised regarding the Mni Wiconi water supply project and the potential effects.

Commenters also expressed concerns for additional drinking water intakes not specifically discussed in the SEIS. These included three specific intakes identified by the Standing Rock Sioux Tribe: The Wakpala intake in Lake Oahe near the mouth of the Grand River, and two intakes (in Cannon Ball and Fort Yates) along Lake Oahe on the Missouri River.

Response:

Regarding the ASRWSS, Section 5.5.8.2 of this SEIS has been revised to state (note, text in bold has been added to the Final SEIS based on public comment):

"A specific concern raised by Assiniboine & Sioux Tribes of the Fort Peck Reservation is proximity of the proposed pipeline to the Assiniboine and Sioux Rural Water Supply System, the tribal municipal and industrial water supply system with an intake on the Missouri River approximately 57 miles downstream of the pipeline's proposed Missouri River crossing. The system supplies raw water to the Assiniboine and Sioux Rural Water Supply System water treatment plant in Poplar, Montana, and potable water to the Fort Peck Indian Reservation as well as to the residents of portions of Valley, Daniels, Sheridan and Roosevelt counties in Montana through the Dry Prairie Rural Water Association. In the event of a release to the Missouri River, Keystone has prepared a Site-Specific Risk Assessment (refer to Section 5.2) and a Geographic Response Plan (refer to Section 5.4.4) for the Missouri River crossing to support both the protection of environmentally sensitive areas and the protection of the public's health and safety if a release were to occur. These documents were prepared to evaluate the risk of a release, the potential effects that may result in the event of a release and the tactics for responding to a release. The proposed pipeline ROW does not cross any Assiniboine and Sioux Rural Water Supply System-related infrastructure. Section 4.3.3.2 of the 2014 Keystone XL Final SEIS discusses the Assiniboine and Sioux

Rural Water Supply System in greater detail. As stated within this chapter, Keystone has committed to a number of measures beyond spill cleanup measures, which are addressed in Appendix B, Potential Releases and Pipeline Safety, of the 2014 Keystone XL Final SEIS. In the event that a spill contaminates water supplies used for industrial or irrigation purposes, Keystone may provide either an alternate supply of water or appropriate compensation for those facilities affected. Additionally, Keystone would also provide an alternative water supply for any well water quality that was found to be compromised by the spill. ***Information provided by the Water Commission for the Assiniboine & Sioux Rural Water Supply System state their water treatment plant is not designed nor equipped to remove hydrocarbon contaminants such as benzene, ethylbenzene and p-xylene that are present in crude oil and the diluent that is used to facilitate its passage through pipelines. If oil were to reach the intakes on the Missouri River, the water treatment plant would have to close, resulting in the loss of the sole water supply for over 30,000 residents of the Fort Peck Reservation and surrounding communities within Valley, Daniels, Sheridan, and Roosevelt counties, including 4 hospitals and 13 public schools. The Assiniboine & Sioux Rural Water Supply System water supply system intake is beyond the 40-river-mile downstream maximum reasonable transport distance. Keystone has committed to a number of measures beyond spill cleanup measures, which are addressed in Appendix B, Potential Releases and Pipeline Safety, of the 2014 Keystone XL Final SEIS. In the event that a spill contaminates water supplies used for industrial or irrigation purposes, Keystone has committed to provide an alternate water supply for any users of wells or irrigation intakes where water quality is affected by a spill. Keystone would provide either an alternate supply of water or appropriate compensation for those facilities impacted, as may be agreed upon among the affected parties and Keystone.***

Water intakes used to irrigate tribal lands within the Fort Peck Reservation are reportedly located 10 and 14 river-miles downstream of the proposed crossing. As stated in Section 5.5.6.2 of this SEIS, a release to surface water located upstream, and in the vicinity of any of these intakes identified, could produce both short- and long-term effects on the suitability or usability of these intakes. The degree of impacts to surface water intakes from a release would depend on many factors, such as the size of the release, the time of year of the release and the response time to address the release. A spill that contaminates an intake may make it unusable for an extended period of time until spill response and recovery activities have been completed. Loss of these irrigation intakes during the growing season would result in economic losses to farmers, including Fort Peck's agricultural economy. Crop loss as a result of a spill that was not covered by a farmer's liability insurance would involve a third-party claim that would have to be directed to Keystone for review and payment.

Regarding the Mni Wiconi rural water supply project, the treatment plant water intake at approximately 130 miles downstream from the Cheyenne River crossing is considered outside of the region of influence for an accidental release of the proposed Keystone XL pipeline. All other water supplies downstream of the 40-mile-river distance are also considered outside of the region of influence for an accidental release and are not expected to experience any effects from a spill. However, if a spill were to affect these resources, Keystone would respond in the same manner as described within the 40-mile region of influence. See response to ACR Sub-theme – Methodology and Assumptions (5-2) regarding use of the 40-river-mile downstream extent of analysis.

See response to PRO Sub-Theme – Construction (2-2) regarding the proposed Keystone XL pipeline crossing of the Dry Prairie Rural Water System and mitigation measures performed by Keystone in cooperation with the water district.

Regarding the additional intakes identified by the Standing Rock Sioux Tribe, using GIS, the Department calculated the following with respect to the intake locations referenced in the comment above:

- The Wakpala intake, located at the confluence of Grand River and Lake Oahe in South Dakota, is approximately 302 miles downstream from the Keystone XL pipeline's Grand River crossing (between milepost [MP] 321 and MP 322).
- The Cannon Ball intake, located near the confluence of Cannon Ball River and Lake Oahe, is approximately 487 miles downstream from the Keystone XL pipeline's Missouri River crossing (between MP 89 and MP 90).
- The Fort Yates intake, located at Fort Yates in Lake Oahe, is approximately 513 miles downstream from the Keystone XL pipeline's Missouri River crossing (between MP 89 and MP 90).

The Department determined the maximum reasonable transport distance for the purpose of assessing potential downstream effects based on the results of Project-specific modeling data from a worst-case analysis of a release on the Missouri River, information from and the characteristics of other major oil spills including construction techniques and pipeline age, and characteristics and safety measures integrated into the design and operation of the proposed Project. Based on this review, the Department considers a maximum reasonable transport distance of 40 river-miles to be within the rule of reason for the proposed Keystone XL pipeline and the potential for effects beyond this distance to be highly unlikely. Because downstream distances of these intakes, as referenced above, are well beyond the 40-river-mile region of influence, it was determined that these resources would not be affected by the proposed Project.

ACR Sub-Theme – Riverbed Scour and Sufficiency of Burial Depth (5-11)

Synopsis:

Commenters called into question the scour analysis that was completed by TransCanada for the Missouri River and questioned why such an analysis was not also completed for the Yellowstone River. Commenters pointed out that a report prepared by Engineering Systems, Inc. (the ESi Report) identified numerous omissions in TransCanada's scour analysis. Commenters questioned the ability of the pipeline to withstand both scour-based erosion and erosion due to lateral migration in the event of flooding and high-water events which are becoming more common.

Commenters also indicated that the Draft SEIS fails to adequately analyze the impacts of a winter spill, when there is a potential for ice over to cause increased scour during spikes in output from the upstream dam. Specifically, the requested that the Department evaluate rapid pulses in water flow under the ice (i.e., under pressure) during winter months to determine whether they could increase scour rates.

Commenters requested that the project be evaluated through the lens of the 2019 historic flooding across the Midwest, specifically in Nebraska and along the proposed pipeline route. They indicated that flooding along the pipeline route, which, if built, will pass through floodplains and erosion-prone land, increases the risk of exposure of the buried pipeline, and therefore of oil spills.

Finally, commenters also noted that the scour analysis states that there will be "routine maintenance to ensure depth of cover is maintained over the pipeline," but requested that additional information be provided, including the types of patrols, frequency of patrols and maintenance, and assignment of responsibility for maintenance activities.

Response:

As part of the Montana Facility Siting Act (MFSA) review, Keystone prepared a 100- and 500-year flood event scour and lateral migration analysis of the Yellowstone River. The modeling and reports were part of the 2011 FEIS and MDEQ analysis under the MFSA. The scour analysis for the Yellowstone River found that the maximum scour resulting from a 500-year event would still only come with 19 feet of the pipeline (Morrison Maierle, Inc. 2011).

The modeling of the Missouri River by Keystone was completed in consultation with the USACE, including staff that operates the dam on the river, as well as their hydrological modeling staff. Working with the USACE, the model was built using an existing USACE model that was calibrated and validated separately before its use for the scour analysis. The model runs were updated to conservatively model scour, sediment behavior, and flow conditions, including an assumed full dam release (a 1 in 40,000-year event). In response to a comment that the modeling failed to accurately estimate channel degradation, it should be noted that clear-water scour conditions have existed since the dam was constructed and have decreased the bed elevation for the past 75 years. Clear water scour occurs when stream velocities and other conditions are not sufficient to move streambed materials/sediment. As noted in the 2017 Missouri River Scour Analysis (TransCanada 2018a), subsequent investigations have concluded that degradation occurred most rapidly following construction of the dam and future degradation is expected to be minimal. A conservative estimate for future degradation was agreed upon with the USACE as an input to the scour analysis that was performed.

The Department notes that the ESi report does not account for the increased flows in the Missouri River if the Milk is flooded and flowing at higher flows. The conditions that would cause one to flood would be prevalent to cause the other to flood as well. The Milk River flows, even with the flooding that would cause a full dam release on the Missouri River, would be dwarfed by the flows in the Missouri River itself. Further, while the ESi report may provide information on a geologic scale, it does not address migration expected during the life of the project (e.g., 50-year span).

With respect to flooding and increased rainfall events and potential for impacts on the project from scour and lateral migration, Section 2.4.8.4 of this SEIS includes a discussion of special pipeline construction techniques in sensitive areas including floodplains. This includes consideration of flooding events such as the historic spring of 2019 flooding that occurred in South Dakota and Nebraska. As part of pre-construction design, Keystone examined the historical flows at all stream crossings where the U.S. Geological Survey (USGS) has collected flow data to determine the proper pipeline burial depth in the floodplain for protection from flooding and erosive events that may occur along rivers. Keystone's design ensures depth of cover is maintained through areas of lightweight soils in combination with potential water table near grade. This is achieved through the use of buoyancy control measures such as granular filled geotextile weights placed at select intervals along the pipeline based on specific calculations. Furthermore, the Department also notes that the proposed Keystone XL pipeline will parallel the existing operating Keystone pipeline for approximately 100 miles, and there has been no exposure of the existing buried pipeline as a result of 2019 historic flooding.

PHMSA Advisory Bulletin ABD-2019-01 May 2019 has been reviewed and safeguards consistent with the advisory have been implemented within KXL's design to mitigate damage as a result of flooding. These safeguards include but not limited to analysis of terrain, historical imagery, historical flows, consideration of use of HDD technique for installation, defined design depth elevation maintained along a certain distance etc. The pipeline would be installed at the minimum water crossing depth of 5 feet for a distance of at least 15 feet beyond each side of the waterbody (Appendix Z of the FSEIS, page 14).

Keystone also utilized flood data from the National Oceanic and Atmospheric Administration (NOAA) and the Federal Emergency Management Agency (FEMA) to estimate the lateral migration potential of

the stream and river beds and to determine the extent and depth a stream/river course could migrate in a floodplain over the course of the 50-year life of the Project. The construction drawings incorporate this information at each crossing and include a set of drawings developed to address potential lateral migration at waterbody crossings as well as site-specific drawings to address potential vertical scour. Based on the vertical and lateral migration estimates for minor and intermediate-sized streams, Keystone determined the appropriate pipeline burial depth is at least 5 feet below the minimum elevation within the defined stream channel. Outside of the stream channel, the burial depth of at least 5 feet extends a minimum of 15 feet from the top of the defined stream channel.

For major rivers where Keystone would use the HDD method of construction, site-specific drawings specify a minimum depth of 25 feet below the stream channel. This depth has been shown to protect the pipe for a worst-case scenario, far beyond a 100-year design. During the lateral migration analysis, Keystone confirmed HDD entry and exit locations are placed outside the potential lateral migration zone for the stream. For the Missouri River crossing, where the most severe floods have been recorded due to water releases from the upstream dam, Keystone was required to model the erosive effects of a worst-case 40,000-year flood event (no record of such an event has been observed) to determine if the burial depth of the HDD crossing would result in sufficient cover to protect the pipe. The modeling confirmed that the current design would not be exposed if such an unlikely event were to occur on the river.

Following the installation of the pipeline at the crossing location, TransCanada would monitor the pipeline crossing for lateral migration to establish baseline conditions. Thereafter, USACE Fort Peck staff would provide advanced notice to TransCanada regarding any spillway releases where the flowrate was expected to exceed certain thresholds. TransCanada would then mobilize survey crews to remeasure stream cross-sections, and the information would be used for verification of the scour model and to determine the extent of any lateral migration. If lateral migration greater than 50 feet is measured, additional mitigative measures would be considered to prevent further encroachment of the bank as per the Missouri River Waterbody Crossing Plan (TransCanada 2017).

The Department reviewed TransCanada's scour analysis and has integrated some portions of the analysis into the EIS; however, the analysis in the SEIS does not solely rely on the scour analysis. The Department has used more conservative estimates for incident probability and has conducted an extensive analysis of available data and literature related to pipeline incidents. Chapter 5, Environmental Consequences from Accidental Releases, presents additional information regarding potential releases in floodplain and riverine areas.

Although the scour analysis for the Missouri River did not include an analysis of scour potential under ice-covered conditions, it did include a "full release" scenario, where the spillway outflows of the Fort Peck Dam reach the design capacity of 350,000 cfs (a once in 40,000-year event). Any pulses of water released under ice-covered conditions are expected to be far less than the forces of erosion that would be realized under a full release scenario for the Fort Peck Dam.

PHMSA amended the Pipeline Safety Regulations to improve the safety of pipelines transporting hazardous liquids. The effective date of this final rule is July 1, 2020. Consistent with the final rule, TransCanada is formalizing its internal processes, and is developing a procedure to address the code requirements, defined in 49 CFR 195.414, regarding inspections of pipelines in areas affected by extreme weather and natural disasters.

To comply with PHMSA Special Condition 19, Keystone must construct the pipeline with soil cover at a minimum depth of 48 inches in areas, except in consolidated rock, which is limited to 36 inches. In cultivated areas where conditions prevent the maintenance of 48 inches of cover, Keystone must employ additional protective measure to alert the public and excavators of pipeline presence, including, but not

limited to, placing warning tape and additional line-of-sight pipeline markers along the affected pipeline segment. In addition to any depth-of-cover maintenance activities that may take place as a result of routine patrols, Keystone must perform a detailed depth of cover survey along the entire Keystone XL pipeline as frequently as practicable, at intervals not to exceed once every 10 years, and replace cover as soon as practicable, not to exceed 6 months, to meet the minimum depth of cover requirements specified herein. Routine patrol methods will include aerial, ground and sonar surveys to ensure adequate depth of cover following flood events. No additional permitting is necessary to implement these methods. Keystone will be responsible for the maintenance. As part of this, Keystone will keep up to date on USACE's Missouri River Mainstem Bulletins Reservoir; 24-hour Forecast Conditions.

D.4.13 Electrical Power Infrastructure (EPI)

The Department received comments related to the proposed electrical power infrastructure. These included comments regarding the configuration of the proposed infrastructure as well as the analysis of potential impacts, including potential impacts resulting from increased risk of birds colliding with the proposed power lines.

Theme	SEIS Location	Sub-Themes
Electrical Power Infrastructure (EPI)	Chapter 6	• Proposed Infrastructure (6-0) • Suggested Clarification to Analysis (6-1) • Socioeconomics (6-2) • Tribal Lands (6-3) • Avian Collisions (6-4)

EPI Sub-Theme Proposed Infrastructure (6-0)

Synopsis:

Various entities with direct control over the proposed electrical power infrastructure pointed out several instances where the descriptions in the SEIS were outdated and did not accurately represent the most current plans for the configuration of the proposed infrastructure.

Response:

Some refinements of proposed power line routes have occurred since the text in the Draft SEIS was developed as a result of new or updated information becoming available. In addition, the extents of disturbance related to certain substation activities have been reduced, and certain substations or substation expansions described in the Draft SEIS have since been determined to be unnecessary. As stated in the Draft and Final SEIS, further route variations (microalignments) could be implemented in the future to address specific landowner concerns, avoid certain features (such as structures, wells, or irrigation systems), minimize effects on environmental or cultural resources, or facilitate construction in such areas as steep terrain or waterbody crossings. The revised Final SEIS Chapter 6 incorporates the latest information provided. None of these refinements have prompted changes to the general conclusions presented in the Draft SEIS regarding impacts to the resources assessed.

EPI Sub-Theme Suggested Clarifications to Analysis (6-1)

Synopsis:

Commenters suggested various clarifications to the analysis of potential impacts from the proposed electrical power infrastructure, specifically regarding the descriptions of existing resources and of certain potential impacts that were not described accurately. Specific comments included how land ownership might affect impacts from power infrastructure, how additional environmental reviews might relate to the present analysis, terminology used to describe land use changes, incorporating the results of the

Biological Assessment submitted to the USFWS, how to describe the proximity of habitats, the use of ESA effects determinations versus NEPA impact ratings, the wording of avoidance and minimization measures, the descriptions and eligibility status of various cultural and/or historic resources, coordination with State Historic Preservation Offices, measures to avoid or minimize impacts to cultural resources, potential effects on water resources, and potential effects on protected species.

Response:

Chapter 6 of the SEIS was revised where appropriate, considering the suggested clarifications along with other sources of information. Most of these changes expanded on specific information and analysis presented in the Draft SEIS, provided different and clearer ways of presenting the information already in the Draft SEIS, and/or were editorial in nature. For example, relevant analyses of power infrastructure impacts on federally-listed species in the amended Biological Assessment submitted to the USFWS after the publication of the Draft SEIS are now included in the Final SEIS. Additionally, redundant information has been removed from Chapter 6 of the Final SEIS where such information is already included earlier in the document. For clarity, the Final SEIS now uses only NEPA impact ratings for ESA-listed species, taking into account but not explicitly including ESA effects determinations to avoid confusion. The Final SEIS also incorporates many small changes under section 6.4.10 regarding descriptions of cultural resources and potential impacts to those resources. In addition, modified avoidance, minimization, and mitigation measures are now summarized in a new Table 8-5.

EPI Sub-Theme Socioeconomics (6-2)

Synopsis:

One commenter indicated that the proposed infrastructure would benefit the members of the local electrical cooperative and would, in combination with the greater Project, increase tax revenues that could help pay for public services.

Response:

The revised Final SEIS Section 6.4.9.2 now states: "***Operation of the electrical power infrastructure could benefit the members of the local electrical cooperatives by increasing their revenues by selling large amounts of power to Keystone. Operation could also, in combination with the greater Project, increase tax revenues that could help pay for public services.***" The revised Final SEIS Section 6.4.9.2 now concludes that overall, operation of the electrical power infrastructure would likely have negligible to beneficial impacts on socioeconomic resources.

EPI Sub-Theme Tribal Lands (6-3)

Synopsis:

Commenters expressed concerns about the proposed electrical power infrastructure crossing tribal lands.

Response:

The Draft SEIS stated that some tribal lands and tribal trust lands would be crossed by the proposed electrical power infrastructure, based on analysis of Geographic Information System (GIS) data representing tribal lands and tribal trust lands. Subsequent analysis indicated that these GIS data were not sufficiently accurate and precise when compared to legal plats of ownership. These more accurate plats indicated that the proposed electrical power infrastructure would fall outside of tribal lands and tribal trust land boundaries. The relevant sections of the Final SEIS have been revised accordingly to remove any mention of crossings of tribal lands or tribal trust lands.

EPI Sub-Theme Avian Collisions (6-4)

Synopsis:

Impacts to avian species as a result of collisions with power lines and electrocutions are not adequately assessed in the Draft SEIS. These species include those protected under the Endangered Species Act (ESA), including the whooping crane, the interior least tern, and the piping plover, as well as those protected under the Migratory Bird Treaty Act (MBTA). Impacts from low-voltage power lines as well as cumulative impacts are not adequately assessed.

Response:

In close coordination with the USFWS, the federal agencies prepared a new Biological Assessment regarding potential effects on federally threatened and endangered species and submitted it to the USFWS during preparation of the Draft SEIS. This Biological Assessment included a discussion of the potential for adverse effects resulting from collisions with power lines. An amended Biological Assessment was prepared and submitted to the USFWS on November 27th, and the USFWS has finalized their Biological Opinion; both contain conservation measures to reduce the potential for collision. The Final SEIS has been revised to align with the analyses and findings of the Biological Assessment and Biological Opinion. The BLM, WAPA, RUS, and/or the USACE will make adherence to the conservation measures in the Biological Assessment and/or Biological Opinion conditions of any approvals, as applicable within the authority of each agency.

An updated summary of the potential for effects on ESA-listed species resulting from collisions with the electrical power infrastructure associated with the proposed Project is provided in Section 6.4.6.1 of the Final SEIS. Under the current interpretation of the MBTA (see U.S. Department of Interior 2017), incidental take of migratory birds is not prohibited. However, a series of conservation measures that will be applied to the proposed electric power infrastructure to minimize the potential for ESA-listed species colliding with the proposed power lines are provided in the Biological Assessment and the Biological Opinion, as well as in Table 8-5 of the Final SEIS. These measures would also have incidental benefits of reducing impacts to migratory birds.

Given that collision with power lines is a source of known whooping crane mortality, a detailed collision risk assessment was completed in coordination with the USFWS and included in the Biological Assessment and subsequent Biological Opinion. This risk assessment is also included in Section 6.4.6.1 of the Final SEIS and includes updated mapping of historical and recent records of migrating whooping cranes relative to the proposed Project area. The whooping crane collision risk assessment and analysis followed methodology prescribed by the USFWS (2018l) and was reviewed by applicable resource agencies prior to submission. Per the USFWS (2018l) white paper for determining risk to migrating whooping cranes from power lines, there does not appear to be supporting evidence that shows that low-voltage power lines pose a higher collision risk than high-voltage lines. Additionally, a review of the proposed construction camp locations confirmed that power lines currently exist adjacent to the sites and, at most, lines would need to cross existing roadways into the camp; therefore, the total length of this type of proposed new power line is negligible.

For additional information, please refer to the Electrical Power Infrastructure (EPI) sub-theme of Cumulative Impact Conclusions (7-5).

D.4.14 Cumulative Impacts (CEA)

The Department received comments related to the cumulative impacts analysis that related to the study area, conclusions, other pipelines and contribution to GHGs.

Theme	SEIS Location	Sub-Themes
Cumulative Impacts (CEA)	Chapter 7	• Study Area (7-1) • Impact Methodology and Assumptions (7-2) • Conclusions (7-3) • Other Pipelines and Contribution to GHG (7-4)

CEA Sub – Theme Study Area (7-1)

Synopsis:

Commenters stated the cumulative effects analysis failed to extend beyond the MAR along the entire pipeline and the analysis required fails to consider impacts from tar sands development. A commenter also suggested the analysis failed to consider cumulative effects of other pipelines; specifically the Dakota Access Pipeline in North Dakota. Commenters also stated the region of influence for an accidental release should be expanded to consider the entire U.S. crude oil pipeline system as the number of pipelines, and pipeline miles, are increasing.

Response:

The 2014 Keystone XL SEIS provided a robust cumulative effects analysis of the entire pipeline. Since 2014, little activity has occurred within the proposed pipeline alignment due to the rural setting, with the biggest change occurring due to the adjustment of the Preferred Route to include the MAR. As stated in Section 7.1, the analysis provides updates to projects considered within the 2014 Keystone XL SEIS and identifies any new projects along the proposed pipeline route, focusing on projects with similar linear and large-scale characteristics to the proposed Project in which incremental cumulative impacts could occur due to these projects in consideration of the proposed Project. Information regarding the Dakota Access Pipeline has been added to Table 7-1. In addition, the following discussion has also been included in Section 7.4.7: "***The Department has determined that overall cumulative impacts to socioeconomics and environmental justice of the Preferred Route (including the MAR) would be minor to moderate. Members of tribes claim that the increase of pipelines are a significant cumulative impact to tribal resources and tribal rights, including the increased risk of a spill occurring on lands they claim treaty rights to and resources they claim use rights for, including water, fisheries, plants and animals. This claim extends beyond the proposed Keystone XL pipeline as other crude oil projects including the Dakota Access Pipeline, Line 67 (Alberta Clipper) Pipeline, and Line 3 Pipeline have generated attention by and opposition from these communities.***"

Regarding effects of tar sands extraction, the proposed Project described in the SEIS begins at the international boundary where the pipeline would exit Saskatchewan, Canada, and enter the United States through Montana. Although the Canadian portion of the proposed Project is beyond the scope of analysis required by NEPA, the 2014 Keystone XL Final SEIS includes information related to the Canadian National Energy Board's environmental analysis of the proposed Project. Section 4.15.4 of the 2014 Keystone XL Final SEIS addresses the environmental effects of oil sands development in Alberta, Canada. This section includes a summary of general regulatory oversight and environmental impacts in Canada related to oil sands production. As discussed in Section 4.15.4.2, Concerns Related to Oil Sands Extraction, oil sands development projects undergo an environmental review under Alberta's Environmental Protection and Enhancement Act and the Water Act, as well as the Canadian Environmental Assessment Act and the Species at Risk Act. Other Canadian federal and provincial agencies may participate in the review as Responsible Authorities or as (Canadian) Federal Authorities with specialist advice.

Regarding consideration of additional crude oil pipelines, Section 7.4.10 of this SEIS discussed the potential for cumulative impacts associated with unintended operational releases from the proposed Project and multiple releases within shared pipeline corridors and pipeline crossings. The impacts of individual spills resulting from separate incidents involving separate pipelines would be additive over time. However, for spills to have a cumulative effect, incidents would need to affect two or more pipelines, and the resulting spills would need to occur near and within timeframes such that the plumes from released product would overlap. The Department has determined that such an incident would be unlikely. The same rationale would apply to the crude oil pipeline network within the U.S. where a cumulative adverse effect would require an incident to affect the same footprint and timeframe. Factors of pipeline miles and incidents per year are used to determine the incident rate (also see response to ACR 5-3 through 5-5 regarding incident rates).

CEA Sub – Theme Impact Methodology and Assumptions (7-2)

Synopsis:

Commenters stated the Draft SEIS fails to adequately evaluate the impacts of pipeline construction and operation on specific waterways, including rivers, streams, wetlands, and other waterbodies, such as impacts from crossing methods at specific sites and operational impacts like spills. In particular, the Draft SEIS fails to properly analyze cumulative impacts to water resources based on the proximity of multiple water crossings to each other, within particular watersheds.

Response:

The Draft SEIS characterizes impacts due to the pipeline construction as temporary. Key factors in controlling the temporal scale of effects of the proposed Project, and consequently the potential for future cumulative impacts with other projects or pipeline construction within the same watershed, include measures designed to mitigate, offset, and/or restore impacted resources to pre-construction conditions. The provisions of Appendix G, CMRP, in the 2014 Keystone XL Final SEIS, additional mitigations presented in Chapter 8 of this SEIS, individual federal and state agency permitting conditions, and/or existing laws and regulations all function to control potential impacts and reduce long-term and/or permanent effects, thus reducing the potential for incremental impacts with future actions. In addition, given the uncertainty associated with quantifying potential impacts of reasonably foreseeable future projects, the assessment of potential incremental impacts of future actions is addressed qualitatively. Also refer to WAT Sub-Theme – Impact Methodology and Assumptions (4-6a) regarding discussion on the USACE Nationwide Permit process and preconstruction notifications.

CEA Sub – Theme Conclusions (7-3)

Synopsis:

Commenters expressed concern that the cumulative effects analysis did not adequately assess potential impacts to ESA-listed species along the entire proposed Project route. In particular, comments stated a need for further analysis of the potential for cumulative impacts related to the proposed electrical power infrastructure as well as other power lines and wind farms in the vicinity of the proposed Project.

Response:

The revised Final SEIS Section 7.4.6 includes an updated assessment of cumulative impacts to listed species. That assessment combines an updated summary of the potential for effects on ESA-listed species resulting from collisions with the electrical power infrastructure associated with the proposed Project (as discussed in Section 6.4.6.1 of the Final SEIS) with related impacts from other electrical power lines and wind farms. In addition, potential cumulative effects resulting from avian species other than ESA-listed species colliding with other regional transmission lines and power connections are discussed in both the Draft SEIS and Final SEIS Section 7.4.6.

The cumulative effects assessment of power line collisions on ESA-listed species includes the whooping crane, particularly as a result of the proposed R-Project Transmission Line. As depicted in the collision risk assessment provided in Section 6.4.6.1, despite the proliferation of power lines in the migration corridor and the increase in whooping cranes in the Aransas-Wood Buffalo Population, increased mortality resulting from power line collisions has not been observed in the historical records or by current radio telemetry efforts (Stehn and Haralson-Strobel 2014; USFWS 2016b). In fact, the last known power line mortality was documented in 2002 (Stehn and Haralson-Strobel 2014). In addition to power lines, Section 7.4.6 of the Final SEIS also includes an expanded discussion of the potential for direct cumulative impacts to whooping crane and other ESA-listed species resulting from collision with operating wind turbines.

For additional information, please refer to the Electrical Power Infrastructure (EPI) sub-theme of Avian Collisions (6-4).

CEA Sub – Other Pipelines and Contribution to GHG (7-4)

Synopsis:

Commenters stated the cumulative effects analysis needs to consider the total greenhouse gas contribution from the burning of fossil fuels

Response:

The Draft SEIS (Chapter 3, Section 3.10.2) includes an overview of greenhouse gases and their sources. It includes a discussion of global and U.S. greenhouse gas emissions, and states that energy-related sources accounted for nearly 72 percent of global emissions while fossil fuel use accounts for approximately 77 percent of total U.S. emissions. Section 3.10.3 discusses the climate change impacts that are likely to occur as a result of these greenhouse gas emissions.

D.5 REFERENCES

As this Appendix contains text and reference citations from the main Final SEIS, the references follow the lettering convention found in Chapter 10.

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33 USC (United States Code) 1344. "Permits for dredged or fill material." U.S. Federal Government, *U.S. Code.*

36 CFR 800. "Protection of Historic Properties." U.S. Federal Government, *Code of Federal Regulations*.

40 CFR 60. "Standards of Performance for New Stationary Sources." U.S. Environmental Protection Agency, *Code of Federal Regulations.*

40 CFR 63. "National Emission Standards for Hazardous Air Pollutants for Source Categories." U.S. Environmental Protection Agency, *Code of Federal Regulations.*

40 CFR 300. "National Oil and Hazardous Substances Pollution Contingency Plan." U.S. Environmental Protection Agency, *Code of Federal Regulations.*

40 CFR 1500-1508. "National Environmental Policy Act Implementing Regulations." The Council on Environmental Quality, *Code of Federal Regulations*.

49 CFR 194. "Response Plans for Onshore Oil Pipelines." The Department of Transportation, *Code of Federal Regulations.*

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APPENDIX E
KEYSTONE XL PROJECT DRAFT SEIS OFFICIAL COMMENTS SUBMITTED BY AGENCY, TRIBAL AND NON-GOVERNMENTAL ORGANIZATIONS

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APPENDIX E – OFFICIAL COMMENTS SUBMITTED BY AGENCY, TRIBAL AND NON-GOVERNMENTAL ORGANIZATIONS

E.1 INTRODUCTION

This Appendix presents the Keystone XL Project Draft Supplemental Environmental Impact Statement (SEIS) comments from federal agencies, Indian tribes, elected officials and non-governmental organizations that submitted official comments. Appendix D, Comment Response Document, addresses these comments along with all comments received during the public comment period for the Keystone XL Draft SEIS.

E.2 FEDERAL, TRIBAL, ELECTED OFFICIAL AND NON-GOVERNMENTAL ORGANIZATION COMMENTS

E.2.1 Federal Agencies

U.S. Environmental Protection Agency

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

OFFICE OF POLICY

NOV 18 2019

M. Ross Alliston
Presidential Permitting Team Leader
Office of Environmental Quality and Transboundary Issues
Bureau of Oceans and International Environmental and Scientific Affairs
United States Department of State
2201 C Street, NW, Suite 2726
Washington, DC 20520

Dear Mr. Alliston:

In accordance with our responsibilities under Section 309 of the Clean Air Act and the National Environmental Policy Act, the U.S. Environmental Protection Agency (EPA) has reviewed the U.S. Department of State's *Draft Supplemental Environmental Impact Statement (SEIS) for the Keystone XL Project* (CEQ 20190244).

This SEIS is being prepared to update the evaluation of the Keystone XL Project presented in the 2014 Keystone XL Final SEIS based on changes to the project. The primary purpose of the proposed Keystone XL pipeline is to provide the infrastructure to transport up to 830,000 barrels per day of crude oil from the Western Canadian Sedimentary Basin in Canada and the Bakken Shale Formation in the U.S. to existing pipeline facilities near Steele City, Nebraska for onward delivery to Cushing, Oklahoma and the U.S. Gulf Coast area. On November 8, 2018, the U.S. District Court for the District of Montana identified four areas in the 2014 Keystone XL final SEIS that required updates or additional analysis, including the effects of current oil prices, cumulative effects of greenhouse gas emissions, cultural resources, and accidental release modeling. EPA's review included a focus on those areas that fall within our area of expertise. Our detailed comments are included in the attached.

We appreciate the collaboration with the Department of State on the development of this draft SEIS and look forward to reviewing the final SEIS related to this project. If you would like our assistance, we are available to provide additional assistance or clarifications in addressing any of the comments identified. The staff contact for the review is Marthea Rountree and she can be reached at (202) 564-7141 or rountree.marthea@epa.gov.

Sincerely,

Robert Tomiak
Director
Office of Federal Activities

Analysis of Potential Oil Spills and Recommended Mitigation Measures

Accidental Releases

The draft SEIS documentation to support a 40 river-mile (rm) maximum transport distance for potential spills, acknowledges historically that spills do occur beyond this range. Considerations include:

1. Of the five major spills highlighted in the draft SEIS, two of the discharges observed in Montana are beyond 40 rm (59 rm and 72 rm respectively) and a lake and dam constrained further migration of the spill beyond 40 rm of the third discharge (Marshal, Michigan).
2. The draft SEIS proposes horizontal directional drilling (HDD) to reduce potential future spills for 18 perennial stream crossings. The Final SEIS would benefit from clarifying if the remaining perennial stream crossing will use a non-HDD method and if there would be any additional measures that may be implemented to reduce potential future spills.
3. Table 5-15 provides the likelihood of spills affecting surface water resources per year, including perennial streams with state water classifications. When applying this information to the 50-year life of the project, there was a likelihood of two large or catastrophic spills (pipeline areas within 1,200 feet of a stream) and 10 medium, large or catastrophic spills (pipeline areas within 150 feet or 500 feet of a stream).

The EPA recommends that the final SEIS revise the maximum transport distance for the probability of oil spills based on the considerations raised above.

Distinctions of different behaviors of type of oil

The proposed project is intended to carry a wide range of product types from Bakken Crude to diluted bitumens from the oil sands region of Canada. While the draft SEIS acknowledge that different oil types behave differently, the distinctions are understated. In order to be clear, EPA recommends that each type of oil be discussed comprehensively as if it were a separate entity.

Terminology (release -vs- discharge)

All discussions of oil spills should be referred to as "discharge" and not "release". Release is a CERCLA hazardous substance term.

We are happy to offer additional technical assistance in implementing these recommendations. For additional technical assistance on the oil spill analysis comments, please contact Mr. Brian Schlieger Chief, Preparedness, Removal, Exercise and Policy Branch, Office of Land and Emergency Management, at schlieger.brian@epa.gov.

Western Area Power Administration

From: Blazek, Steven
To: [redacted]
Cc: Marsh, Matthew; Gomer, Christina; Fellow, Alyssa; Hoffman, Gary
Subject: WAPA SEIS Comments
Date: Monday, October 28, 2019 2:25:18 PM
Attachments: KXL_WAPA Comment Matrix_+ CG AF_10.23.19.docx

The Western Area Power Administration, as a cooperating agency for the Keystone XL SEIS, respectfully submits the attached comments for your review and consideration. Please let me know if you have questions or if you would like to discuss.

Regards,

Steve
Steve Blazek | Transmission Siting and Permitting Policy Analyst
Western Area Power Administration | Headquarters
Department of Energy
[redacted]

Keystone XL Project Draft SEIS **October 2019**

Comment Number	Section, Page, Line Number	Type of Comment (Technical or Editorial)	Comment
1	6.2.2/6-2/1st paragraph, 3rd and 4th sentences	Editorial	PS-20 does not need to be specifically called-out as having no WAPA action. Other non-WAPA PS were not explicitly mentioned (for example, PS-14/15/16).
2	Table 6-1/PS-11	Technical	The Voltage column lists "6.9." Confirm whether this is accurate or should be changed to say "69." Carry this comment throughout (6.3.9.3/6-20/1st paragraph, 1st sentence; Section 6.4.4.2, etc.)
3	6.3.2/6-14/1st paragraph, 1st sentence	Editorial	"Depending on intended ownership,…." should be deleted from the sentence. WAPA is unclear what this means and how ownership might impact ROW acquisition – the paragraph presents only one ownership option (the individual utilities acquiring ROW).
4	6.3.7/6-18/4th paragraph, 1st sentence	Technical	"No off-ROW access roads have been identified for the power lines at this time." The BA (page 22, footnote A of Table 2.6-1) indicates the powerline to PS-13 will have off-ROW access roads.
5	6.3.7/6-18/4th paragraph, 3rd sentence	Editorial	"Any additional areas disturbed outside of the ROW would be subject to additional environmental review." BA has more discussion on future Keystone commitments that may be helpful to include here. (i.e., prior to construction…)
7	6.3.9.12/6-23/1st paragraph, 1st sentence	Technical	"WAPA's Witten Substation." WAPA does not own the Witten Substation.
8	6.3.9.13/6-23/1st paragraph, 2nd and 3rd sentences	Technical	This description is slightly inaccurate. See Christina's 9/11/19 (10:28 am) email to Andrew DeWitt and others: *WAPA will need to rebuild our existing Gregory substation (for non-KXL related reasons). During this work, we would also complete any work needed to accommodate the KXL interconnection request. We own 8 acres and plan to rebuild the substation somewhere within that parcel.* Consider whether it's worth noting that "WAPA has indicated the substation would need to be rebuilt to accommodate the request, in addition to other non-Keystone reasons" and clarifying the maximum disturbance area is 8 acres. If 8 acres is used, the rest of the document would need to be updated as well (for example, Table 6-34).

Page 1

Keystone XL Project Draft SEIS **October 2019**

Comment Number	Section, Page, Line Number	Type of Comment (Technical or Editorial)	Comment
9	Table 6-12	Technical	The Substation Construction Impacts (acres) column lists substation impacts to 80 acres of grassland/herbaceous vegetation. Clarify whether this should be 8 acres (the size of the Bowdoin Substation parcel).
10	6.4.5.2/6-61/final paragraph, first sentence.	Editorial	"The impacts resulting from permanent habitat loss as a result of land cover conversion could be locally significant, although the regional effect would likely be minor to moderate." Regarding "permanent habitat loss." Modification is a more accurate description, rather than loss. Regarding "land cover conversion." WAPA did not notice references to land cover conversion elsewhere in the document. Fragmentation may be a better term. Regarding "significant." The NEPA document should avoid making determinations of significance – replace with "high-impact" or similar term.
10	6.4.6.1/6-61/ABB section, 4th paragraph	Technical	Reconcile this information with the BA and HCP discrepancies.
11	6.4.6.1/6-63/BFF section	Editorial	Please review this section for redundant information. Additionally, the 1, 3, 4, and 10 mile distances may be very confusing for readers.
12	6.4.6.1/6-63/Tern section	Editorial	Explain for the reader why these distances are important. "The only power line route within 1 mile of known suitable habitat is the line that would serve PS-10; however, potentially suitable nesting habitat within 0.25 mile of the proposed power line to PS-10 is absent." Same comment for the NLEB – why is 1 mile important?
13	6.4.6.1/6-65/NLEB section, final paragraph, final sentence	Editorial	"Therefore, the construction, operation and maintenance of the proposed Project power lines are not likely to affect the northern long-eared bat." This is the only section with determination language. Suggest replacing with an impact qualifier to be consistent with other species' summaries.

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Keystone XL Project Draft SEIS **October 2019**

Comment Number	Section, Page, Line Number	Type of Comment (Technical or Editorial)	Comment
14	6.4.6.1/6-66 Plover section, final paragraph	Editorial	"Operation of the proposed power lines would incrementally increase the collision and predation hazards for feeding and nesting piping plover in the Project area. The transmission line and electrical distribution lines could result in long-term increases in collisions and predation on nesting plovers and chicks. However, with implementation of conservation measures, it is expected that these lines would not have measurable impacts on the piping plover." Emphasize that none of the powerlines would cross the suitable habitats discussed in the paragraphs above. Same comment applies to the tern section.
15	6.4.6.1/Whooping Crane/Collision Risk Assessment/6-69/footnote 2	Technical	"At construction camps, electricity for the required camps would be provided by local utilities via an interconnection to existing adjacent low-voltage power lines. At most, a new low-voltage power line would be built from the existing power line across a roadway and into the campsite. As such, no adverse impacts on migrating whooping cranes or their habitats would be expected to occur, and the new power lines associated with construction camps, if necessary, are not included in the analysis below." Given that low-voltage power lines result in higher collision risk, it seems strange to dismiss impacts. Suggest reiterating that construction camps are near existing powerlines and no new powerlines would be constructed (if true).
16	6.4.6.1/Western Prairie Fringed Orchid/6-73/final paragraph	Technical	"Any individuals located within the planned route would either be avoided by route micro-alignments or would be transplanted out of the affected area." Is this commitment feasible, considering the incomplete surveys in areas of suitable habitat (where the Project route crosses private lands) and the erratic flowering patterns with long dormancies that make detection difficult?
17	Table 6-49	Editorial	Delete this sentence: Few studies have focused specifically on piping plover, so the level of potential hazard is not known.

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Keystone XL Project Draft SEIS **October 2019**

Comment Number	Section, Page, Line Number	Type of Comment (Technical or Editorial)	Comment
18	6.4.8.2/6-106/PS-19/between 2nd and 3rd sentences	Editorial	Delete extra spacing and punctuation.
19	6.4.10.2/6-120/PS-11/second paragraph, 1st sentence	Technical	"Field surveys for this proposed transmission line and substation were completed in fall 2018, but the details from those surveys are currently unavailable." WAPA will re-submit survey report to DOS.
20	6.4.10.2/6-120/PS-11/second paragraph, 1st sentence	Technical	"Prior to construction, the Department and WAPA would consult with Montana SHPO and any Indian tribes or other consulting parties and develop avoidance measures of any potentially eligible archaeological sites. An Unanticipated Discovery Plan would be developed and implemented to ensure minimization of impacts on unknown cultural resources that may be inadvertently encountered during construction or operation of the proposed transmission line." Per the terms of the PA, WAPA is responsible for consulting on WAPA-owned portions of the project (the substation), while DOS retains responsibility for consulting on the transmission line.
21	6.4.10.2/6-120/PS-11/second paragraph, last sentence	Technical	"WAPA completed a Class III cultural resources inventory of the substation area in June 2011 and received SHPO concurrence on the findings and determinations on July, 5, 2011." This statement is incorrect. Please review the table sent by Christina Gomer to Andrew DeWitt on 9/11/19 (10:30 am) regarding cultural resources survey reports and SHPO concurrence status and ensure all WAPA-involved PS are updated with correct information.
22	6.4.10.2/6-120/PS-12	Technical	As in previous comment, please review the 9/11/19 table and update accordingly. Substation area surveyed and summarized in the report titled "A Class III Cultural Resource Inventory of Three WAPA Construction Projects in Custer, McCone, and Phillips Counties, MT" and dated June 2011. SHPO concurred on 7/5/2011.

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E.2.2 Indian Tribes

Fort Peck Assiniboine & Sioux Tribes

FORT PECK TRIBES

Assiniboine & Sioux

November 18, 2019

Robert D. Wing
Acting Director

Ross Alliston
Keystone XL Program Manager

Office of Environmental Quality and Transboundary Issues
U.S. Department of State
2201 C Street NW
Washington, DC 20520

Re: DOS-2019-0033, 84 FR 53215, Notice of Availability of the Draft Supplemental Environmental Impact Statement for the Proposed Keystone XL Pipeline

Dear Acting Director Wing and Mr. Alliston:

The Assiniboine and Sioux Tribes of the Fort Peck Indian Reservation (Tribes) submit the following comments on the U.S. Department of State's (Department's) Draft Supplemental Environmental Impact Statement (Draft SEIS)[1] for the proposed Keystone XL Pipeline (Pipeline) by TC Energy (formerly TransCanada).[2]

INTRODUCTION

I. The Fort Peck Reservation is located on the Missouri River immediately downstream from the proposed Pipeline crossing.

A. The Fort Peck Reservation was established for the Tribes, and the Tribes exercise rights on it that the United States must protect.

[1] Notice of Availability of the Draft Supplemental Environmental Impact Statement for the Proposed Keystone XL Pipeline; Public Meeting Announcement, 84 Fed. Reg. 53,215 (Oct. 4, 2019).

[2] All of the Tribes' previous comments on this Project are incorporated into these comments.

1

Poplar, Montana 59255 P.O. Box 1027 (406) 768-2300

The Fort Peck Reservation, located in northeastern Montana, is the home of more than 6,500 Native Americans.[3] By a statute enacted in 1874, Congress set these lands aside as part of a much larger reservation for a number of Indian tribes, containing over 20 million acres in what is now Montana north of the Missouri River, east of the Continental Divide and south of the Canadian border.[4] The Assiniboine and Sioux Tribes had both settled on this reservation by 1870.[5] The Tribes were economically and culturally dependent upon game and other natural resources for food, clothing, and social identity.[6]

In 1886, Congress appointed a Commission to negotiate with the several tribes occupying the 1874 Act Reservation to secure a substantial land cession prior to admission of Montana as a State.[7] By virtually identical agreements entered into in 1886 and 1887, the various tribes ceded major portions of the 1874 Act Reservation to the United States, retaining three smaller and separate reservations—the present day Fort Peck, Fort Belknap and Blackfeet Reservations.[8] Congress ratified these agreements by the Act of May 1, 1888.[9]

The 1888 Act established the southern boundary of the separate Fort Peck Reservation: "[b]eginning at a point in the middle of the main channel of the Missouri River opposite the mouth of Big Muddy Creek, thence up the Missouri River, in the middle of the main channel thereof, to a point opposite the mouth of Milk River, thence up the middle of the main channel of Milk River…" (which forms the southwestern boundary of the Reservation). The Reservation is approximately 100 miles long (east to west) and approximately 40 miles wide (north to south). It contains about 2.1 million acres,

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[3] *See* American Community Survey 2013-2017 population estimates for Fort Peck Reservation. My Tribal Area, U.S. Census Bureau, https://www.census.gov/tribal/?st=30&aianihh=1250 (last visited November 12, 2019).

[4] Act of April 15, 1874, ch. 96, 18 Stat. 28.

[5] *Blackfeet & Gros Ventre Tribes of Indians v. United States*, 162 Ct. Cl. 136, 140-41 (1968); *Blackfeet & Gros Ventre Tribes v. United States*, 18 Indian Claims Comm'n 241, 248-50 (1967); H.R. Exec. Doc. 50-63, at 13 (1888).

[6] H.R. Rep. 48-2648, at 4 (1885).

[7] Act of May 15, 1886, ch. 333, 24 Stat. 29, 44.

[8] *See British-Am. Oil Prod'g Co. v. Bd. of Equal'n*, 299 U.S. 159, 162 (1936); *Winters v. United States*, 207 U.S. 564, 567-68, 575-76 (1908).

[9] Ch. 213, 25 Stat. 113.

approximately 1 million acres of which are now owned by the United States in trust for the Tribes or for individual Indian allottees.[10]

In *Winters v. United States*, the United States Supreme Court determined that the 1888 Act created the Fort Belknap Reservation as "a permanent home and abiding place" for the tribes of that Reservation.[11] The Court held that the purpose of the 1888 Act was to enable those tribes to change from "a nomadic…people…to become a pastoral…people,"[12] that the Reservation "lands were arid and, without irrigation, practically valueless,"[13] and that creation of the Reservation also reserved a right to a sufficient amount of water to make the Reservation "valuable and adequate" for uses "which would necessarily be continued through the years…"[14]

The 1888 Act also applies to the Fort Peck Reservation for the purpose of establishing this Reservation to foster the Tribes becoming a "pastoral people." Accordingly, the purposes of the Reservation necessitated reserving water for irrigation, domestic, and other uses as well as rights to hunt and fish.[15] In furtherance of those purposes, Congress fixed the middle of the main channels of the Missouri and Milk Rivers as the Reservation's boundaries. The Tribes now hold water rights to the Missouri River and other reservation streams as quantified under the Fort Peck-Montana Water Compact.[16] Under the Compact, the Tribes has the right to divert 950,000 acre-feet from the Missouri River in any one year.[17] As set forth below, the Fort Peck Irrigation Project and the

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[10] By the Act of May 30, 1908, 35 Stat. 558, Congress authorized trust allotments of tribal lands to individual tribal members and opened the other lands on the Reservation to sale to non-Indians. Slightly more than half the lands on the Reservation today are owned in fee simple by non-Indians.

[11] 207 U.S. 564, 565 (1908).

[12] *Id.* at 576,

[13] *Id.*

[14] *Id.* at 576-577.

[15] *See, United States v. Adair*, 723 F.2d 1394, 1409, 1411 (9th Cir. 1983)(recognizing instream flows to protect tribal fishing rights); *Menominee Tribe v. United States*, 391 U.S. 404 (1968) (treaty setting aside lands for a tribe to be held "as Indian lands are held" included hunting, fishing and gathering rights even though treaty was silent regarding those rights); *United States v. Dion*, 476 U.S. 734, 738 (1986) ("Indians enjoy exclusive treaty rights to hunt and fish on lands reserved to them . . . [and] [t]hese rights need not be expressly mentioned in the treaty").

[16] Mont. Code Ann. § 85-20-201.

[17] Mont. Code Ann. § 85-20-201. at Art. III(A).

Assiniboine and Sioux Rural Water Supply System (ASRWSS) municipal projects are essential components in carrying out the federal purposes of establishing the Fort Peck Reservation. The Tribes also exercise hunting, fishing, and gathering rights along the Missouri River, including specified in the areas immediately downstream from the Pipeline's proposed Missouri River crossing, as more particularly described in Part I(B), *infra*.

B. The Tribes depend on the Missouri River to sustain its members' way of life.

Ever since the Tribes' members arrived in the area of the Fort Peck Reservation, the Missouri River has sustained the Tribes' way of life. According to tribal traditional beliefs, the River is a sentient being that sustains the life of the people. In return, everyone has an obligation to recognize it as a fellow being and protect it from harm. The River sustains the Tribes in part by providing the water for traditional religious and cultural practices like the Sundance and sweat lodges. These practices require water and resources—such as cottonwood trees and gathered plants—that rely on water from the Missouri to thrive and are adversely affected by contaminates in the River. These ceremonies are not simply expressions of tribal culture and religion. They are also one of the ways the Tribes teach traditional culture and beliefs to younger generations. Also, tribal traditional beliefs, hold that there are sacred spiritual beings who live in the Missouri River. It would be catastrophic for those beings to be harmed by negative changes in the River.

Members of the Tribes also rely on the resources of the River for subsistence purposes. Tribal members hunt mule deer in the Missouri River bottoms throughout the Reservation, including the area immediately downstream from the Pipeline's proposed Missouri River crossing. Tribal members also hunt ducks, geese, and pheasants that live in or migrate through the Missouri River bottoms on the Reservation. They also gather plants there and fish in the Missouri River. All of these are vitally important sources of food for tribal members. Additionally, many tribal elders rely on others to hunt and gather food for them in the area immediately downstream from the proposed Missouri River crossing to supplement their fixed incomes.

The Missouri is also a necessary source of water for our consumptive uses. Despite the large size of the Reservation, the vast majority of tribal members live on the southern portion of the Reservation—within five miles of the Missouri River. Most of the towns and settlements in the Reservation are located within two miles of the River—including Poplar (location of the Tribal Headquarters), Wolf Point (the county seat of Roosevelt County), and other towns such as Frazer, Brockton, and Fort Kipp. Due to pollution to groundwater and other sources of surface water on and near the Reservation caused by prior oil and gas

exploration and extraction activities, the Missouri River is now the only reliable source of water for irrigation and domestic, residential, commercial, or industrial uses on the Reservation. The Tribe primarily divert water from the Missouri and put to use on the Reservation via two systems.

First, the ASRWSS[18] was funded by Congress in the Fort Peck Reservation Rural Water System Act of 2000.[19] It provides potable water for municipal, residential, and industrial purposes on the Reservation. The ASRWSS provides clean, safe drinking water to schools, churches and other faith communities, hospitals, and businesses on the Reservation. It also provides water for the operation of tribal governmental services and tribal enterprises, as well as the county and municipal governments that provide services to tribal members and non-Indians on the Reservation.

The ASRWSS uses water from the Tribes' water right under the Fort Peck-Montana Compact.[20] The ASRWSS intake is in the Missouri River, fifty-seven river-miles downstream of the Pipeline's proposed crossing. The Tribes' water right is piped through the ASRWSS pipelines and connects to the Dry Prairie Rural Water System (DPRWS) (collectively, Water System). When completed this Federal water project will have been funded by Congress in the amount of approximately $302 million and will supply water to 31,200 people in Daniels, Roosevelt, Sheridan, and Valley Counties and the Fort Peck Reservation. Below is a table showing the current state of the ASRWSS and DPRWS construction and the populations served by the Water System:

Table 1: Data on Water Systems through FY 2019	
Appropriations (through FY 2019)	
ASRWSS	$ 185,359,606
DPRWS	$ 63,349,161
Total	$ 248,708,767
Construction Completion (through FY 2019)	
ASRWSS	82.61%
DPRWS	64.42%
Total	74.42%
Current Population Connected	

[18] *See* Draft SEIS at 3.8-11 and 5-55 for basic information on the ASRWSS.

[19] Pub. L. No. 106-382, 114 Stat. 1454.

[20] *See* Mont. Code Ann. § 85-20-201.

ASRWSS	9,453
DPRWS	6,992
Total	16,445
Design (ultimate) Population	
ASRWSS	16,995
DPRWS	14,205
Total	31,200

Attached is a construction map showing the construction phases of the Water System.[21] The Pipeline's crossing of the Missouri River will be due south of "Interconnection 2" at Nashua on the map. If the Pipeline is approved, it will cross completed Water System's lines between Glasgow and Nashua—including three main transmission lines.

Second, water for irrigation is diverted from the Missouri River through the Fort Peck Irrigation Project (Irrigation Project or Project), a Federal project that was authorized by Section 2 of the Act of May 30, 1908.[22] The Project was planned and developed as part of the federal government's policy of promoting tribal irrigated agriculture. Pursuant to the 1908 Act, the federal government allotted forty acres of land near the Missouri River to the head of each family on the Reservation to engage in irrigated agriculture. The Irrigation Project was intended to make it possible for these lands to be successfully farmed. Congress thereafter appropriated funds for construction of the Irrigation Project.[23] The basic infrastructure of the Irrigation Project has been in operation for nearly a century, with modifications to pumping equipment to reflect developments in technology.

The Irrigation Project diverts water from the Missouri River at two intakes located on the Reservation at Wiota and Frazer, which are only ten and fourteen miles, respectively, downstream from the Pipeline's proposed crossing of the Missouri River.[24] The Irrigation Project uses a flood irrigation technique, under which the Project pumps water from the Missouri River through pipes to croplands, where the water is distributed over the soil by force of gravity.

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[21] *See* Attach. 1.

[22] 35 Stat. 558.

[23] *See* Act of Aug. 24, 1912, ch. 388, § 10, 37 Stat. 518, 526; Act of June 30, 1913, ch. 4, § 10, 38 Stat. 77, 90.

[24] *See* Draft SEIS at 5-39.

The Irrigation Project is the sole source of irrigation water for approximately 19,000 acres of land—including trust land—on the Reservation, which is primarily used for alfalfa production or native grasses.[25] Each acre of land in the Fort Peck Reservation can annually produce two cuttings of alfalfa hay of approximately two tons per cutting.[26] Alfalfa prices recently ranged between $40 and $250 per ton depending on protein quality and packaging.[27] Thus, the Irrigation Project can support agricultural production valuing between approximately $3 million and $19 million a year. Given that Indian farmers' sales of crops produced on-reservation totaled about $6 million in 2017,[28] the Irrigation Project and the croplands it supports are a significant portion of the Reservation's agriculture economy.

C. The Department has a trust responsibility to protect the Tribes' land, water, and trust infrastructure.

The ASRWSS is held in trust by the United States for the Tribes.[29] Similarly, the Irrigation Project's purpose is to provide water to lands on the Reservation. As discussed *infra*, the Department is putting trust assets—the ASRWSS and Irrigation Project—into dire jeopardy.

The water that flows through these water systems is sacred to the Tribes and has been reserved for the Tribes' use by the Federal Government and the State of Montana. The Fort Peck Indian Reservation was created by the Treaty of Fort Laramie and ratified by Congress by Act of May 1, 1888.[30] All the water needed for the Tribes to use the land

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[25] WWC Eng'g, Fort Peck Tribes Agriculture Resources Management Plan 20 (2015) (on file with Tribes).

[26] *Alfalfa Hay: Yield per Harvested Acre by County*, USDA, Nat'l Agric. Stats. Serv., https://www.nass.usda.gov/Charts_and_Maps/Crops_County/al-yi.php (last visited Nov. 11, 2019).

[27] *Weekly Montana Hay Report*, USDA Market News, Nov. 8, 2019 https://www.ams.usda.gov/mnreports/bl_gr310.txt (last visited Nov. 12, 2019).

[28] *USDA/NASS QuickStats*, USDA, Nat'l Agric. Stats. Serv., https://quickstats.nass.usda.gov/data/printable/348CD40F-1F6F-3971-8BA5-7D37636293E6 (last visited Nov. 11, 2019) (row for "Crop Totals – Sales, Measured in $" and "Producers: (Race = American Indian or Alaska Native, Alone or Combined with Other Races)") (showing data on agricultural production on Fort Peck Reservation in 2017).

[29] Fort Peck Reservation Rural Water System Act of 2000, Section (4)(f); 114 Stat. at 1453.

[30] 25 Stat. 113.

was reserved by the United States.[31] The amount was quantified as 950,000 acre-feet per year of water from the Missouri River in the Tribes' compact with the State of Montana.[32] This water right "is held in trust by the United States for the benefit of the Tribes."[33] This compact was approved by the Secretary of the Interior and the U.S. Attorney General.[34]

Following adoption of the U.S. Constitution, the federal government exclusively managed relations with Indian tribes. The Constitution authorizes Congress to regulate commerce with Indian tribes[35] and grants power to the President to negotiate treaties with tribes.[36] The U.S. Supreme Court opinions of Chief Justice Marshall (known as the "Marshall Trilogy"[37]) defined the legal trust relationship between the United States and tribes. In *Cherokee Nation v. Georgia*, Chief Justice Marshall explained that tribes were domestic dependent nations and the federal government had obligations to protect Tribes similar to a guardian and his ward.

The role of this trusteeship evolved into providing judicially enforceable rights to Tribes for a redress of grievances. "One of the fundamental common-law duties of a trustee is to preserve and maintain trust assets."[38] Elementary trust law confirms a fiduciary duty on administrators of trust property to prevent the property from falling into ruin on his watch. Generally, the federal government and all federal agencies must exercise their respective responsibilities in the context of a trust responsibility to Indian tribes.[39]

With respect to the Irrigation Project and the land that it services, Congress has recognized that:

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[31] *Winters v. United States*, 207 U.S. 564, 577 (1908).

[32] Mont. Code Ann. § 85-20-201 (2019).

[33] *Id.*; *See* 25 U.S.C. § 162a(d)(8).

[34] *Id.*

[35] U.S. Const. Art. I, § 8, cl. 3.

[36] U.S. Const. Art. II, § 2, cl. 2.

[37] *Johnson v. M'Intosh*, 21 U.S. 543 (1823); *Cherokee Nation v. Georgia*, 30 U.S. 1 (1831); *Worcester v. Georgia*, 31 U.S. 515 (1832).

[38] *United States v. White Mt. Apache Tribe*, 537 U.S. 465, 475 (2003) (*citing Southeast & Southwest areas Pension Fund v. Central Transport, Inc.*, 472 U.S. 559, 572 (1985)).

[39] *Nance v. EPA*, 645 F.2d 701, 711 (9th Cir. 1981).

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> [T]he United States has a trust responsibility to protect, conserve, utilize, and manage Indian agricultural lands consistent with its fiduciary obligation and its unique relationship with Indian tribes [and] Indian agricultural lands are renewable and manageable natural resources which are vital to the economic, social, and cultural welfare of many Indian tribes and their members.[40]

Given this specific recognition by Congress, and as set forth more specifically in Part III(C), *infra*, it is a violation of NEPA for the Draft SEIS to fail to consider the adverse impacts on the Fort Peck Irrigation Project – the only significant irrigated agriculture on the entire Reservation—of a potential spill at or near the Milk and/or Missouri River crossings.

DISCUSSION

II. The Draft SEIS is inadequate to satisfy NEPA.

The Draft SEIS states that it was prepared in part to "include…new information related to the proposed Keystone XL pipeline's crossing of the Missouri River in Montana."[41] While the Draft SEIS does evaluate some impacts from construction of the Pipeline at the Missouri River crossing, its consideration of the impacts of an oil spill at the Missouri River crossing on the federally protected activities of the Tribes on their Reservation immediately downstream of that crossing is utterly inadequate in a number of respects.

First, the Draft SEIS fails to recognize all the consequences from diluted bitumen's—the oil that will be carried by the Pipeline—higher density, adhesion, viscosity, and persistence properties compared to other oils. These properties make it much harder to clean up, a difficulty that would be compounded by the Missouri River's size, turbidity, and lateral movement, as set forth in Sections II(A) and (B), *infra*. As a result, the consequences of any oil spill into the Milk or Missouri Rivers would be far more devastating to the Reservation than the Draft SEIS suggests. Second, as set forth in Part III, the Draft SEIS entirely fails to assess the threat of an oil spill on the federally funded and protected resources of the Reservation, particularly the ASRWSS and the Fort Peck Irrigation Project. The Draft SEIS's analysis of the above impacts is fatally flawed by its arbitrary determination to establish a region of influence limited to just forty river-miles downstream of the Missouri River crossing and to take proper account of TC Energy's

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[40] 25 U.S.C. § 3701(2)-(3).

[41] Draft SEIS at 3.6-1.

abysmal past record with respect to pipeline construction, operation, and maintenance. Part IV, *infra*.

In addition, no permits may lawfully be issued during ongoing investigation of tribal cultural sites, as discussed in Part V, *infra*, and public meetings must be held and comments received prior to issuing Missouri River crossing permits as shown in Part VII, *infra*. Lastly, the Draft SEIS is defective because it does not analyze the impact of man camps on the Missing and Murdered Indigenous Women and Girls Crisis, as shown in Part VI, *infra*.

A. The properties of Diluted Bitumen create special environmental concerns that the Draft SEIS does not properly consider.

The Pipeline will carry three types of oil: conventional light crude oil derived from the Bakken formation, synthetic crude oil composed of partially refined bitumen, and diluted bitumen (dilbit) derived from western Canadian oil sand deposits.[42] As of the 2014 Final SEIS, TC Energy had firm, long-term contracts to deliver 710,000 barrels per day of western Canadian bitumen and at least 65,000 barrels per day of Bakken crude oil along the proposed Pipeline.[43] Consequently, the majority of oil transported through the Keystone XL pipeline will be dilbit.

Bitumen is the densest and most viscous of the three types of oil, so much so that in order to flow through a pipeline it must be diluted with a lighter material, such as natural gas condensate, naptha, or a mixture of other light hydrocarbons.[44] However, the exact dilutant that TC Energy will use is not described in the Draft SEIS, perhaps because "the mixture typically remains a trade secret."[45] Dilbit has different properties than other oils (even heavy crude oils) which makes it especially dangerous to the Tribes' resources if it spills into the Missouri River.

As described in the Draft SEIS, once dilbit is exposed to the environment it undergoes a process called "weathering."[46] During weathering, the diluents evaporate at a significantly higher rate than the heavy compounds of the bitumen.[47] This increases the

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[42] Draft SEIS at 5-16.

[43] 2014 Final SEIS at 2-1 to 2-2.

[44] *Id.* at 5-16.

[45] *Id.*

[46] *Id.* at 5-19 to 5-20, 5-25.

[47] *Id.* at 5-20, 5-25.

density of bitumen so that it exceeds the density of water and sinks.[48] In a highly turbid river, like the Missouri, bitumen will adhere to particulate matter in the water.[49] These conglomerates of oil, sediment, and organic matter will be suspended in the river or sink to the bottom, where they can collect in deposits on the streambed and "become a continual source of contamination as stream flow continues to distribute them."[50]

Once it sinks into the water, bitumen is hard to detect because it is hard to see from above the surface and may be mistaken for aquatic vegetation, or vice versa.[51] In addition, removing sunken bitumen is much more difficult than remaking lighter oil—especially in a large river like the Missouri.[52] And bitumen also disperses in the environment more slowly than other types of oil,[53] meaning it could persist in the environment for longer than other oils might.[54] Consequently, bitumen that spills into the River from the Pipeline will likely remain in a waterbody for long periods unless it is removed.

B. The Draft SEIS did not adequately consider how the characteristics of the Missouri River at the Keystone XL Crossing could affect Pipeline operations.

The Missouri River is impounded by the Fort Peck Dam just upstream of the Tribes' Reservation. As noted, the Reservation's southern boundary extends to the midchannel of the Missouri River between the Milk River and Big Muddy Creek. The Draft SEIS proposes the Pipeline cross the Missouri River downstream from the Fort Peck Dam and approximately 0.25 river-miles upstream of the western boundary of the Reservation.

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[48] 2014 Final SEIS at 5-25.

[49] *See id.* at 5-20

[50] *Id.*

[51] Draft SEIS at 5-25.

[52] Draft SEIS at 5-25.

[53] *Id.* at 5-16.

[54] *Id.*

The Missouri River below the Fort Peck Dam is a big, turbulent river. It has a high flow rate and significant turbidity.[55] The Missouri River is also prone to lateral shifting.[56] The impacts of lateral shifting are illustrated by the attached map of the Missouri and Milk Rivers near the Pipeline's crossing of the Missouri.[57] The white line depicts the Pipeline's proposed crossing under the Missouri River. The ends of the lines indicate the start and finish of the Pipeline's horizontal directional drilling (HDD) path. The map shows a striated delta to the east of the current confluence of the Milk and Missouri Rivers, showing that the Rivers' confluence used to be over a mile and a half downstream from where it is now.[58] This illustrates the effects of the basic principle of stream hydrology that water flow acts on the outside curvature of rivers, eroding the bank and "pushing" the river in the direction of the curvature. As these natural processes continue to work in the Milk River, its confluence with the Missouri will continue moving west, toward the planned river crossing.

Other sites nearby on the Missouri River also illustrate the sometimes-dramatic effects of lateral shifting. For instance, in the 19th century the American Fur Company constructed the Fort Union trading post directly on the north bank of the Missouri River, at what is now the border of North Dakota and Montana about twenty miles east of the Reservation's southeastern boundary, in order to trade with the Assiniboine. Due to the lateral shifting of the Missouri River southward, today the site of Fort Union is over 1,000 feet from the banks of the main stem of the Missouri River.[59]

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[55] Patrick J. Braaten, et al., U.S. Army Corps of Eng'rs, *Fort Peck Flow Modification Biological Data Collection Plan: Summary of 2009 Collection Activities* 11-12, 18-19 (2011), *available at* https://myfwp.mt.gov/getRepositoryFile?objectID=91634.

[56] Nat'l Sedimentation Lab., USDA, *Channel Erosion on the Missouri River, Montana Between Fort Peck Dam and the North Dakota Boarder* (1999), *available at* https://www.ars.usda.gov/ARSUserFiles/60600505/PDF/montana-report.pdf.

[57] *See* Attach. 2.

[58] *See* Attach. 3 (showing that the Missouri River used to be further south before its confluence with the Milk River but has since shifted north).

[59] *See* Nat'l Park Serv., *Statement for Management: Fort Union Trading Post National Historic Site* at SFM-2 and Map entitled "Existing Land Management and Use" (1982), *available at* https://books.google.com/books?id=aUc3AQAAMAAJ&pg=PP3&source=gbs_toc_r&cad=2#v=onepage&q&f=false; Google Maps, https://www.google.com/maps/@47.99826,-104.0424882,1041m/data=!3m1!1e3 (last visited Nov. 12, 2019).

Thus, it is very likely that both the Missouri and Milk Rivers will shift and expose the Pipeline during its lifetime. This is especially likely during a high-water event, when avulsive events can quickly change the depth or course of the River during a period which large amounts of water and debris are being swept downstream. In fact, the buildup of debris on the Silvertip Pipeline in Laurel, Montana during a flood on the Yellowstone River was what caused that pipeline to rupture in July 2011, spilling over 1,500 barrels of oil into the Yellowstone River.[60] As a result of that spill, significant amounts of oil were detected forty-five river-miles downstream from the spill, and visible signs of oil were seen on the River seventy-two river-miles downstream.[61] Both these impacts were outside the arbitrary forty river-mile region of impact the Draft SEIS analyzed.

The issue of lateral shifting is not properly analyzed in the Draft SEIS.[62] The Draft SEIS shows that TC Energy estimated "the lateral migration potential of the stream and river beds . . . to determine the extent and depth a stream/river course could migrate in a floodplain over the course of the 50-year life of the Project."[63] The Draft SEIS states that "for major rivers where Keystone would use the HDD method of construction . . . Keystone confirmed HDD entry and exit locations are placed outside the potential lateral migration zone for the stream."[64] But as the foregoing discussion shows, in the next fifty years the Missouri or Milk Rivers may well move a much greater distance than the distance between the planned HDD entry and exit locations and the banks of those Rivers.

Moreover, the lateral movement of the Missouri and Milk Rivers will very likely be exacerbated by climate change. As the Draft SEIS shows, climate change poses an almost unimaginable threat to humanity's way of life,[65] and to the way of life of indigenous communities in particular.[66] Changes to seasonal cycles and increased flood and drought threaten the Tribes' access to potable water and agricultural activities that rely on irrigation. These same changes will drastically affect the Missouri River and its flow rates. The Draft SEIS acknowledges that "[t]he northern United States…is projected to receive more

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[60] Draft SEIS at 5-13.

[61] *Id.*

[62] *Id.* at 2-12.

[63] *Id.*

[64] Draft SEIS at 2-12.

[65] *See generally id.* § 3.10.

[66] *Id.* at 3.10-18

precipitation in the winter and spring…"[67] Additionally, the Draft SEIS admits that "over the last 50 years, there has been an increase in extreme weather events, including…heavy downpours…[and] severe floods…"[68] This is especially true for the northern Great Plains.[69] The amount of one- and two-day heavy rainfall events will increase by 8-10 and 50 percent by 2050, respectively.[70] When the water levels of the Fort Peck Reservoir become too high the U.S. Army Corps of Engineers (Corps) must release more water from the spillway to prevent high pressure situations and water from spilling over the Fort Peck Dam. Thus, climate change will likely result in more and larger releases from Fort Peck Dam and more flood events in the Missouri River. This will likely increase lateral shifting of the Missouri River just below the Dam.[71]

Given its recognition of the above information, the Department should have considered the issue of lateral movement in far more depth. Specifically, it should have addressed the possibility that the Milk and Missouri Rivers might move as much at the proposed crossing as they have moved in the past at those locations and other, nearby areas, and that climate change will probably increase the lateral movement of the Rivers as flooding events increase in frequency and severity.

III. The Draft SEIS does not adequately assess the threat of an oil spill on the Tribes' trust resources including lands, waters, fish and wildlife, irrigation system and municipal water delivery infrastructure.

A. The Draft SEIS does not assess effects of an oil spill on the Tribes' trust lands and trust resources.

The Fort Peck Reservation is the only homeland the Assiniboine and Sioux Tribes have left. The United States now holds title to approximately one million acres of land in trust for the Tribes and Indian allottees. These lands are critical to the survival of the Assiniboine and Sioux people. The Draft SEIS simply states that tribal communities are more vulnerable to the impacts of climate change. This is true, but the Draft SEIS utterly

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[67] Draft SEIS at 3.10-11; *see id.* at 3.10-10, fig.3.10-12 ("Observed U.S. Annual Precipitation Change, 1986 to 2015, Relative to 1901 to 1960, USGCRP (2017)").

[68] *Id.* at 3.10-13.

[69] *Id.* at 3.10-16.

[70] *Id.*

[71] *Id.* at 5-10.

fails to examine the direct impact that a spill would have on the Fort Peck Reservation and the Tribes' resources.

While we show that the forty river-mile mark indicated as the ROI for a spill is arbitrary and capricious, see Part IV(A), *infra*, even the minimal forty river-miles that a spill travel could be devastating to the west side of the Fort Peck Reservation. Shockingly, the Draft SEIS does not specifically consider the effect of the Pipeline on the Reservation lands at all. The Draft SEIS describes historic Indian lands potentially affected by the Keystone XL pipeline as limited to the Great Sioux Reservation established by the 1868 Fort Laramie Treaty, which does not encompass the Fort Peck Reservation at all.[72] The accompanying map in the Draft SEIS does not even portray the Fort Peck Reservation or the Tribes' historic reservation and other lands.[73]

In addition to failing to identify the Fort Peck Reservation as an area potentially impacted by a spill, the Draft SEIS utterly fails to analyze the impact that a spill would have on the Tribes' resources on the Reservation. A spill of dilbit into the Missouri River could lead to inestimable damage to the Tribes and the Tribes' trust resources. It would disrupt or prevent delivery of water to tribal members for agricultural, residential, industrial, and commercial purposes. It would destroy crops or render them unmarketable. It would prevent tribal members from hunting, fishing, and gathering in the Missouri River bottoms. And it would cause indefinable damage to tribal spiritual and cultural practices and beliefs. Even if the likelihood of a spill were miniscule, which it is not, the possible catastrophic effects of a spill on the Tribes make the risk unacceptable.[74]

Nor does the Draft SEIS mention the Tribes in its environmental justice analysis, other than to dismiss the Tribes' concerns that a pipeline failure would affect the ASRWSS—evidently because the Draft SEIS limits its impact analysis to areas within forty river-miles of the crossing.[75] And to support its environmental justice analysis, the Draft SEIS purports to rely on the impact analysis in the 2014 Final SEIS and 2011 SEIS but admits this analysis "is not specific to tribal natural resources."[76]

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[72] Draft SEIS at 3.8-10 to 3.8-11.

[73] *Id.* at 3.8-11, fig.3.8-2.

[74] *Standing Rock Sioux Tribe v. U.S. Army Corps of Engineers*, 252 F. Supp. 3d 101, 132 (D.D.C. 2017).

[75] Draft SEIS at 5-54 to 5-55.

[76] Draft SEIS at 5-55.

The Tribes have unique historical, cultural, and spiritual relationships with their trust land and water resources that would be affected by a spill from the Keystone XL pipeline. A spill would not just negatively affect those resources, it could also seriously disrupt the Tribes' economy, hunting and fishing rights, and the ability to practice their religion and culture, and pass traditional knowledge on to the next generations.

The United States has recognized the rights of Native Americans to continue to exercise their religious beliefs.

> [T]he policy of the United States [is] to protect and preserve for American Indians their inherent right of freedom to believe, express, and exercise the traditional religions of the American Indian, Eskimo, Aleut, and Native Hawaiians, including but not limited to access to sites, use and possession of sacred objects, and the freedom to worship through ceremonials and traditional rites.[77]

Given this reality, it is facially insufficient for the Draft SEIS to utterly fail to include a specific analysis of how the Pipeline would affect the Tribes and Tribes' trust resources, including lands, waters, fish, and wildlife.

B. The Draft SEIS does not assess the impact an oil spill would have on the ASRWSS.

The ASRWSS is held in trust by the United States for the Tribes.[78] The Tribes are concerned that an oil spill from the Pipeline could destroy the ASRWSS and its sophisticated water filtration equipment. Thus, the proposed route for the Pipeline patently threatens the only water supply on the Reservation; endangering the health, safety, and welfare of the Tribes and surrounding communities.[79]

As described in Section I(B), *supra*, the proposed Pipeline will cross completed Water Systems' lines between Glasgow and Nashua. The Water Systems' lines are typically buried seven feet underground to avoid frost. The Pipeline is designed to be

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[77] 42 U.S.C § 1996.

[78] Fort Peck Reservation Rural Water System Act of 2000, Section (4)(f); 114 Stat. at 1453.

[79] *Montana v. United States*, 450 U.S. 544 (1981).

placed with three to five feet of cover.[80] The Pipeline itself is three feet in diameter.[81] Thus, the bottom of the Pipeline will be between six and eight feet in the ground in close proximity to or overlapping with the length of the Water Systems' pipelines. If the Pipeline is approved, there will be construction around the critical water delivery infrastructure for the Reservation and all of northeastern Montana. Yet the Draft SEIS contains no discussion of how construction activities may harm the Water System's infrastructure. Additionally, there has been no analysis of how operation of the Pipeline, including the potential for spills, would affect the Water System's transmission and distribution lines.

More specifically, any repairs of the Water System's lines near the Pipeline will have to go around the larger Pipeline, thereby causing delays in repairs and more time residents would have to go without water. If oil is spilled and gets into the Water Systems' transmission lines at the junctures the oil would continue down the lines onto the Reservation. As indicated on the construction map, water from the Pipeline's crossing of the Water Systems' transmission lines will eventually go back onto the northwest corner of the Reservation. If that occurred, water services would have to stop for hundreds or thousands of residents.

Remarkably, instead of discussing these impacts, the Draft SEIS wrongly asserts that the proposed Pipeline will not affect any of the Water System's infrastructure."[82] That is simply untrue, and the Draft SEIS must analyze this matter.

In addition, the high adhesion rate of diluted bitumen is very dangerous if weathered bitumen reaches the ASRWSS intake. If that occurs, it would be very difficult to remove,[83] and such an impact would likely require the closure of the ASRWSS.[84] The ASRWSS is a "conventional treatment" facility involving a stepwise filtration system beginning with "Actiflo" and ending with graded sand filters in eight bays for polishing water quality. Turbidity is reduced from instream levels as high as 6,000 nephelometric turbidity units

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[80] Draft SEIS at 2-11.

[81] *Id.* at 2-2.

[82] *Id.* at 5-55.

[83] Common Effects of Diluted Bitumen on Envt., Nat'l Acads. of Scis., Eng'g & Med., *Spills of Diluted Bitumen from Pipelines: A Comparative Study of Environmental Fate, Effects, and Response* 46 (2016), *available at* https://www.nap.edu/read/21834/chapter/1 (hereinafter "NAS Study").

[84] *Id.* at 77.

(NTU) to 1.5 NTU before water enters the distribution system.[85] However, the facility is not designed for hydrocarbon removal. Treatment for hydrocarbons is not common and is not provided at any treatment facility in the Northern Great Plains.

While bitumen has a relatively lower toxicity than other oils,[86] its increased persistence would require the closure of the ASRWSS in the event of a spill, because the treatment plant is unable to filter high volumes of toxic organic compounds.[87] This would necessitate an additional supply of water to the region because the ASRWSS is the last source of potable water due to previous oil and gas exploration pollution. The Draft SEIS acknowledges that approximately 5,000 Native American households lack safe water supplies.[88] This number would increase dramatically if the ASRWSS became contaminated.

The Draft cavalierly states that "[i]n the event that a spill contaminates water supplies used for industrial or irrigation purposes, Keystone may provide either an alternate supply of water or appropriate compensation for those facilities affected."[89] The Draft SEIS also says "Keystone has committed to a number of measures beyond spill cleanup measures, which are addressed in Appendix B . . . of the 2014 Keystone XL Final SEIS."[90] But that Appendix to the 2014 Final SEIS simply provides that Keystone "would be responsible for providing an appropriate alternative potable water supply of comparable volume and quality to those impacted or provide compensation, if this option is agreed upon by affected parties and Keystone."[91]

In the case of the ASRWSS, TC Energy does not have sufficient infrastructure or transportation services available to replace the ASRWSS if water deliveries were stopped. "Compensation" would be meaningless if users of the ASRWSS cannot bath, cook, clean, and other immediate residential needs. Nor could TC Energy could agreements with

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[85] An NTU is a unit of measurement of how much a beam of light shining through a water column is scattered by particles floating in water, which is a proxy for the amount of materials floating in the water.

[86] NAS Study at 60-69.

[87] *Id.* at 77.

[88] Draft SEIS at 3.10-18.

[89] *Id.*

[90] *Id.*

[91] 2014 Final SEIS, App. B, at 40, ¶ 7.

hundreds or thousands of ASRWSS water customers in time to provide for their needs during the disruption.

The Draft SEIS must consider how TC Energy would actually address damage to the ASRWSS or interruptions of service caused by the proposed Pipeline where it crosses the Water System's infrastructure. TC Energy should have been required to provide specific spill response plans that show how the 31,200 residents of northeastern Montana will get clean water for possibly years into the future, and those plans should be discussed in the Department's environmental analysis.

C. The Draft SEIS does not adequately assess the impact of an oil spill on the Fort Peck Indian Irrigation Project.

As described in Section I(B), *supra*, the Tribes' members conduct intense farming that is only possible due to the Irrigation Project. The Draft SEIS describes the general effect of an oil spill on agricultural lands, *without any specific reference at all* to the Fort Peck Irrigation Project which has intakes only ten and fourteen river-miles from the proposed Missouri River crossing.[92] Table 5-6 generally summarizes the potential effects of an oil spill on agricultural land use.[93] The direct effects of an oil spill would be the physical coating of vegetation, contaminated water, and contamination of prime farmland.[94] Indirect effects include the loss of commercial crops, contaminated irrigation water, and reduced soil productivity.[95] If the water from the Irrigation Project is contaminated with oil or the Irrigation Project's pumps are unable to function, that would destroy the only irrigated agriculture on the Reservation. As stated in *Winters*, the Fort Peck Reservation was created in part to allow tribal members to become farmers so as to support themselves. The Draft SEIS simply states that "Keystone has committed to provide an alternate water supply for any users of wells or irrigation intakes where water quality is affected by a spill," without any specific reference to the 19,000 acre Fort Peck Irrigation Project.[96] Appendix B to the 2014 Final SEIS makes similarly vague claims.[97] Without any supporting analysis, it is impossible to determine whether TC Energy has any credible plan to irrigate 19,000 acres of land in the event that the Irrigation Project's infrastructure is

[92] Draft SEIS at 5-29 to -30.

[93] *Id.* at 5-29.

[94] *Id.*

[95] *Id.*

[96] *Id.* at 5-39.

[97] 2014 Final SEIS, App. B, at 40 ¶ 7.

damaged or destroyed by an oil spill. TC Energy must provide definitive, plausible plans for dealing with such a catastrophe on the Reservation and the Department must then evaluate them in its environmental impact analysis for the Pipeline.

IV. The Draft SEIS fails properly to evaluate the risk of an oil spill at the Missouri River crossing.

A. The Department and BLM's use of a forty river-mile downstream region of impact for oil spills into the Missouri River is arbitrary and capricious.

It is unclear how the Department and Bureau of Land Management (BLM) determined the region of influence (ROI) of an oil spill was only forty river-miles downstream of the Missouri River crossing. According to the SEIS, "[t]he Department and BLM used modeling data from worst-case analysis of a release on the Missouri River and information from other major oil spills to develop a maximum reasonable transport distance of 40 river-miles for reviewing potential downstream effects."[98] However, there is little information on the methodology of how this determination was made. In any event, as set forth below, it is clear that the ROI of a spill into the Missouri River is potentially far greater than forty river-miles.

B. The Draft SEIS Analysis of previous oil spills is insufficient.

The Draft SEIS reviews five recent oil spills.[99] Three of these spills occurred in river systems—Marshall, Michigan 2010; Laurel, Montana 2011; and Glendive, Montana 2015.[100] The Marshall, Michigan spill released 20,082 barrels (or 843,444 gallons) of dilbit—the *same oil* that will be transported in the proposed Pipeline—into wetlands, which migrated into Talmadge Creek, which then flowed into the Kalamazoo River.[101] "Observable floating and submerged oil from the release traveled *40 river-miles* downstream along the Kalamazoo River and to the western side of Morrow Lake."[102] Additionally, the cleanup effort on the Kalamazoo continued for at least five years after the

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[98] Draft SEIS at 5-2.

[99] *Id.* at 5-13.

[100] *Id.*

[101] *Id.*

[102] *Id.* (emphasis added).

spill.[103] Over 80,000 gallons of oil (approximately 10% of the original spill) remained in the sediments of the River five years after the spill.[104]

This spill shows that diluted bitumen can travel long distances in river systems and remain in the environment for long periods of time. That being said, there are significant differences between the Kalamazoo River and the Missouri River that the Department should have considered in determining the ROI for a spill from the Keystone XL Pipeline into the Missouri River. Since the ROIs for this Pipeline and the Marshall spill are the same distance, it appears the Department is simply taking the distance the Marshall, Michigan oil spill travelled and applying it to the Missouri River.[105]

The Department states that:

> While the [Marshall] spill represents extreme circumstances regarding the volume of oil released to the environment and the flow rate of the waterway, the Marshall spill provides a conservative example of what impacts could result from a spill along a waterway.[106]

However, it is absurd to compare the Missouri River on the Fort Peck Reservation to the much smaller Kalamazoo River. First, the Missouri River is the longest river in the United States and drains a watershed of 529,350 square miles.[107] On the day of the Marshall spill, the Missouri River had a flow rate that was approximately *4.5 times* the size of the Kalamazoo River's flow rate.[108]

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[103] NAS Study at 42. The NAS Study does not include clean up information that may have happened after its publication in 2017.

[104] *Id.* at 43.

[105] *See* Draft SEIS at 5-4.

[106] *Id.*

[107] Columbia Envtl. Research Ctr., U.S. Geological Survey, *The Missouri River Story* (2010), *available at* https://web.archive.org/web/20100527124725/http://infolink.cr.usgs.gov/The_River/MORstory.htm.).

[108] *USGS 04103500 Kalamazoo River at Marshall, MI*, U.S. Geological Survey, https://nwis.waterdata.usgs.gov/mi/nwis/uv?cb_00060=on&cb_00065=on&format=gif_default&site_no=04103500&period=&begin_date=2010-07-26&end_date=2010-07-27 (last visited Nov. 13, 2019); *USGS 0617700 Missouri River near Wolf Point, MT*, U.S. Geological Survey, https://nwis.waterdata.usgs.gov/mt/nwis/uv?cb_00060=on&cb_00065=on&format=gif_stats&sit

Second, the oil flow in the Kalamazoo River was constrained by the Ceresco and Monroe Street Dams and was eventually halted by Morrow Dam.[109] If these dams had not been in place this oil would have continued to travel until it reached Lake Huron. In contrast, the Missouri River downstream of the Fort Peck Dam is not encumbered by any dam until it reaches Lake Sakakawea in North Dakota—*203.6 river-miles* downstream. The Garrison Dam, which creates Lake Sakakawea, is *381.6 river-miles* downstream from the Fort Peck Dam. Therefore, an oil spill in or near the Missouri River crossing can, and very likely would, travel much farther than the forty river-miles ROI.

The other examples the Department cites in the Draft SEIS—which are more similar to the circumstances on the Missouri River—show why is it mistaken to rely on the Marshall spill as a proxy for the ROI for the Keystone XL Pipeline. The Laurel, Montana oil spill released approximately 1,509 barrels (or 63,378 gallons) of light, sweet crude oil into a flood stage Yellowstone River. The Missouri River was flowing at approximately the same leveling the Yellowstone on the day of that spill (between 60,000-70,000 cfs).[110] Oil from the Laurel spill washed up *eighty-five river-miles downstream*.[111] "Flooding also raised safety concerns, resulting in a delayed spill response."[112] A similar spill in the Missouri River would have disastrous effects much farther downstream than forty river-miles.

The Glendive, Montana oil spill released over 758 barrels (or 31,836 gallons) of Bakken crude oil into a surface frozen Yellowstone River.[113] Oil was observed *fifty-nine*

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e_no=06177000&period=&begin_date=2010-07-26&end_date=2010-07-27 (last visited Nov. 13, 2019).

[109] Draft SEIS at 5-13.

[110] *USGS 06214500 Yellowstone River at Billings MT*, U.S. Geological Survey, https://nwis.waterdata.usgs.gov/nwis/uv?cb_00010=on&cb_00060=on&cb_00065=on&format=gif_default&site_no=06214500&period=&begin_date=2011-07-01&end_date=2011-07-02 (last visited Nov. 13, 2019); *USGS 06177000 Missouri River near Wolf Point, MT*, U.S. Geological Survey, https://nwis.waterdata.usgs.gov/mt/nwis/uv?cb_00060=on&cb_00065=on&format=gif_stats&site_no=06177000&period=&begin_date=2011-07-01&end_date=2011-07-02 (last visited Nov. 13, 2019).

[111] *2011 Exxon Oil Spill in Yellowstone River Poses Threat*, Yellowstone Nat'l Park Trips (Jun. 1, 2017), https://www.yellowstonepark.com/news/exxon-oil-spill-yellowstone-river.

[112] Draft SEIS at 5-13.

[113] *Id.* at 5-14.

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river-miles downstream of the spill site.[114] "Sampling efforts detected benzene at a water intake associated with the city of Glendive's public drinking water supply located 7 [river-] miles downstream."[115] As mentioned above, the ASRWSS is not designed for hydrocarbon removal. Any spill that reaches the ASRWSS would be devastating for the Water Systems and the people to whom they supply water.

As discussed in Part II(B) above, the Missouri River below the Fort Peck Dam is a big, turbulent river. Diluted bitumen will sink after a short weathering process.[116] Sunken bitumen is much harder to clean up than oils that float on the surface—such as the Bakken crude oil in the Glendive oil spill or the light, sweet crude oil in the Laurel oil spill.[117] Therefore, cleanup of diluted bitumen in the Missouri River would be much more difficult and would have more lasting effects than a spill of Bakken crude oil into a surface frozen Yellowstone River or a spill of light, sweet crude oil into a flood stage Yellowstone River.

The Draft SEIS states that "[a]t a distance of 40 [river-]miles downstream from a spill, it would typically be expected that response resources have been able to contain the majority of the spill before it gets to that point."[118] However, the Draft SEIS acknowledges that submerged or sunken diluted bitumen is difficult to detect, contain, and recover.[119] The Department must reconcile these opposing statements and reconsider its use of a forty river-mile ROI in light of the Yellowstone River spills.

C. The Draft SEIS includes a faulty Risk Assessment in its analysis.

The Department previously relied on TC Energy's Site-Specific Risk Assessment to calculate downstream transport distances of crude oil.[120] That "analysis calculated the

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[114] Draft SEIS at 5-14.

[115] *Id.*

[116] *Id.* at 5-18 to -20.

[117] *Id.* at 5-25.

[118] *Id.* at 5-2.

[119] *Id.* at 5-25.

[120] Draft SEIS at 5-3; Bureau of Oceans & Int'l Envtl. & Scientific Affairs, U.S. Dep't of State, *Draft Supplemental Environmental Impact Statement: Keystone XL Mainline Alternative Route*, (2018), *available at* https://www.state.gov/wp-content/uploads/2019/02/20180726-Keystone-XL-MAR-Draft-EA_508-Compliant.pdf; Stantec Consulting Servs., Inc., *Site-Specific Risk Assessment for Keystone XL Project's Missouri River Crossing* (2017), *available at*

distance the released crude oil might travel within 6 hours, which is the maximum response time in high-volume areas stipulated by federal pipeline safety regulations..."[121] The Tribes previously pointed out, it took over seventeen hours and a report from a Michigan utilities employee before Enbridge acted to stop the flow of oil into the Kalamazoo River.[122] The area around the Kalamazoo River in Michigan is far more densely populated and accessible than northeastern Montana. Thus, there is simply no reason to believe a six-hour response time is realistic. This is especially troubling given that, as the Tribes pointed out in its previous comments, the proposed SCADA system can only detect leaks of 1.5-2% of total flow through the Pipeline—which means the system would not be able to detect a leak of 527,940 gallons a day, or over 21,997 gallons an hour. Consequently, the Department should evaluate impacts that would result from longer response times.

Additionally, there are significant questions about the impartiality of the contractor that prepared the Risk Assessment for the Pipeline. 40 C.F.R. § 1506.5 requires that any contractor that prepares a portion of an EIS must be selected by the lead agency to "avoid any conflict of interest" and must "execute a disclosure statement prepared by the lead agency...specifying that they have no financial or other interest in the outcome of the project."[123] The Department copied verbatim significant portions of the Risk Assessment into the previous NEPA documents for this project. Yet, the contractor who prepared the Risk Assessment, Stantec Consulting Services, Inc., did not provide a disclosure statement. Moreover, it appears that Stantec drafted the Risk Assessment for TC Energy, not for use in an EIS, because the Risk Assessment itself provides that it was drafted for TC Energy and that reliance by a third party "is strictly prohibited."[124] If Stantec drafted the Risk Assessment for TC Energy, that is significant because information provided by a permit applicant to the lead agency must be independently verified by the lead agency before it is included in an EIS.[125] Therefore, the Tribes renew its comment that the Department must independently verify the information provided in the Risk Assessment and copied into

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https://www.tcenergy.com/globalassets/pdfs/oils-and-liquids/keystone-xl/transcanada-keystone-xl-missouri-river-crossing-site-specific-risk-assessment.pdf.

[121] Draft SEIS at 5-3; *see* 49 C.F.R. § 194.

[122] U.S. EPA, *FOSC Desk Report for the Enbridge Line 6b Oil Spill: Marshal, Michigan* 5 (2016), *available at* https://www.epa.gov/sites/production/files/2016-04/documents/enbridge-fosc-report-20160407-241pp.pdf; *See* the Tribes' comment to the 2018 Draft EA and 2018 Draft EIS attached.

[123] 40 C.F.R. § 1506.5(c).

[124] *Risk Assessment*, Sign-off Sheet (page 2 of PDF document).

[125] 40 C.F.R. § 1506.5(a).

previous NEPA documents, and ensure that Stantec does not have an interest in the outcome of Keystone XL Pipeline permitting by requiring a disclosure statement.

D. TC Energy/Keystone Pipeline oil spill history was not adequately evaluated in the Draft SEIS.

Oil spills from pipelines are common occurrences which the Draft SEIS far too lightly dismisses. As the Draft SEIS acknowledges, between 2010 and 2017, there were six catastrophic spills, thirty-three large spills, and a total of 1,534 oil spills of any kind.[126] That averages to 191.75 oil spills per year. The Draft SEIS also acknowledges this resulted in the release of 270,455 barrels of oil (or 11,359,110 gallons).[127]

TC Energy's record described in the Draft SEIS is so deficient that the Draft SEIS should have been far more thorough in its analysis and derogatory in its conclusions. For example, the Draft SEIS admits that from 2010 to 2017, TC Energy-operated pipeline facilities experienced eleven small spills, two medium spills, and one large spill. The Keystone 1 Pipeline, to which the proposed Pipeline would be connected, has been especially prone to leaks since it was completed in 2010. On April 2, 2016 Keystone 1 spilled approximately 400 barrels (16,800 gallons) of crude oil six miles east of Menno, South Dakota.[128] On November 16, 2017 it spilled 9,726 barrels (408,492 gallons) of crude oil three miles southeast of Amherst, South Dakota.[129] On February 6, 2019 it spilled approximately forty-three barrels (1,800 gallons) of crude oil forty miles northeast of St. Louis, Missouri.[130] On October 29, 2019, *just last month*, it spilled 9,120 barrels (383,040

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[126] Draft SEIS at 5-6, Table 5-2.

[127] *Id.*

[128] Mayra Cuevas & Steve Almasy, *Keystone Pipeline Leaks 210,000 Gallons of Oil in South Dakota*, CNN.com (Nov. 17, 2017), https://www.cnn.com/2017/11/16/us/keystone-pipeline-leak/index.html.

[129] Draft SEIS at 5-12.

[130] *Id.*; Alan Neuhauser, *Keystone Pipeline Likely Cause of Oil Spill in Missouri*, U.S. News & World Report, Feb. 11, 2019, https://www.usnews.com/news/national-news/articles/2019-02-11/keystone-pipeline-likely-cause-of-oil-spill-in-missouri.

gallons) of crude oil near Edinburg, North Dakota—a spill that the Draft SEIS did not consider.[131]

The Draft SEIS also failed to consider TC Energy's troublingly deficient record on pipeline maintenance. The U.S. Pipeline and Hazardous Materials Safety Administration (PHMSA) identified up to sixty-two probable deficiencies on the Keystone 1 Pipeline.[132] PHMSA stated TC Energy's "records indicate deficiencies that remained uncorrected for multiple years."[133] Between 2010 and 2012, TC Energy "failed to do 51 required tests to see if its rust protection system was working on the Keystone [1] pipeline."[134] This is especially dangerous, considering that corrosion of pipelines is one of the primary causes of pipeline incidents.[135] Corrosion could also lead to "pinhole" leaks in the pipeline, which would be undetectable by TC Energy's automated system and which could release approximately 880 gallons of oil a day *each*.[136] Such leaks would not be detected until an inspector actually observed evidence of oil in water or on the surface of the ground,[137] which is exceptionally difficult when bitumen leaks into water bodies, for reasons discussed *supra*, Section II(A).[138]

TC Energy's shortcomings are not limited to its operations in the United States. "In Canada between 2010 and 2015, TransCanada reported 21 incidents to the Canadian regulator, the National Energy Board..., on Keystone in Alberta, Saskatchewan and

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[131] Mahita Gajanan, *Keystone Pipeline Leaks 383,000 Gallons of Oil in North Dakota as Environmental Groups Express Concerns*, TIME, Nov. 1, 2019, https://time.com/5716106/keystone-pipeline-leak/.

[132] Mike De Souza, *TransCanada Failed to Operate Keystone Safely, U.S. Regulator Alleges*, Can.'s Nat'l Observer (Dec. 11, 2015), https://www.nationalobserver.com/2015/12/11/news/transcanada-failed-operate-keystone-safely-us-regulator-alleges.

[133] *Id.*

[134] *Id.*

[135] Draft SEIS at 5-10.

[136] *Id.* at 5-17.

[137] *Id.*

[138] *See id.* at 5-25.

Manitoba." "These included 15 fires, two small releases of crude oil and four cases where the company was operating the line beyond its design limits."[139]

In sum, TC Energy builds and operates faulty pipelines that have spilled hundreds of thousands of gallons of oil into the environment and has purposefully and knowingly ignored safety regulations. Thus, it is not a question of *if* the Keystone XL Pipeline will spill oil into the environment, but *when* and *where*. Yet, the Draft SEIS devotes only one page to an "incident analysis for TransCanada" that does not adequately discuss significant elements of TC Energy's history of failure to ensure the safety of its pipelines, including elements of the pipeline system of which the proposed Keystone XL Pipeline will be a part. The Department should go back and more fully consider TC Energy's record, in light of the potentially catastrophic effects of an oil spill on the Tribes.

V. No permits may be granted while cultural sites are being evaluated and the Department and other agencies must include the Tribes in this evaluation.

In Montana, nine cultural sites have been recorded since the 2014 Final SEIS.[140] Two of the sites are eligible for listing under Section 106 of the National Historic Preservation Act (NHPA) and the remaining seven cultural sites have not been evaluated.[141] The two sites that have already been determined to be eligible for listing are a farmstead and railroad. Meanwhile, all the tribal sites are still being evaluated. This sort of disparate treatment for tribal sites is completely unacceptable. The evaluation must be completed in order for the Department to adequately evaluate the impacts of the Keystone XL pipeline on historic properties.

There are six additional tribal cultural sites within the Pipeline project construction footprint.[142] All of these cultural sites are within the proposed centerline of the Pipeline.[143] The Draft SEIS states that construction of the Pipeline will have adverse effects on five of

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[139] De Souza (2015).

[140] Draft SEIS at 3.9-11, tbl.3.9-6 ("Summary of Potentially Eligible Sites Identified in Montana since 2014").

[141] Draft SEIS at 3.9-11.

[142] Draft SEIS at 4-70, tbl.4.9-2 ("Newly Identified Stics and Site Updates Within the Keystone XL Project Construction Footprint and Effect Determination"); Sites 24DW0560, 24PH4372, 24VL0938, 24VL1269/24VL1274, 24VL1919, and 24VL1965.

[143] Draft SEIS at 4-70.

these cultural sites.[144] The sixth site, 24DW0560, has an unknown project effect; but since it is located in the proposed centerline of the Pipeline it is likely the effect will also be adverse.[145] All of these sites are eligible for placement on the National Register of Historic Places (NRHP).[146]

Because these sites are eligible for placement on the NRHP and the Pipeline construction will have an adverse impact on them, the applicable regulation states that the Department must consult with Indian tribes "to develop and evaluate alternatives or modifications to the undertaking that could avoid, minimize, or mitigate adverse effects on historic properties."[147] Under this regulatory requirement, the Department is required to consult with the Tribes to evaluate alternatives or modifications to the *Pipeline*—not the adversely affected cultural sites.

The NHPA requires that "prior to the approval of any Federal undertaking that may directly and adversely affect any National Historic Landmark, the head of the responsible Federal agency shall…undertake such planning and actions…to minimize harm to the landmark."[148] However, the Draft SEIS admits that "eligibility and management recommendations have not been established at this time" for the NHRP eligible properties identified in Montana since 2014, and "a report on the cultural resources re-inspection is being prepared and will be sent to all applicable Federal and state agencies and all tribal consulting parties for review and comment."[149] This has not been done. The Department's evaluation will not be sufficient until those recommendations and report are finalized.

VI. The Department must analyze how man camps will impact the Missing and Murdered Indigenous Women and Girls Crisis.

In June 2019, the Canadian government released a years-long study undertaken by the federal government that declared the Missing and Murdered Indigenous Women and Girls (MMIWG) Crisis a state-induced genocide.[150] Among the findings presented in the

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[144] Draft SEIS at 4-70.

[145] *Id.*

[146] *Id.*

[147] 36 C.F.R. § 800.6(a).

[148] 54 U.S.C. § 306107.

[149] Draft SEIS at 3.9-12.

[150] Nat'l Inquiry into Missing & Murdered Indigenous Women & Girls, *Reclaiming Power and Place* (2019), *available at* https://www.mmiwg-ffada.ca/final-report/; Nick Martin, *The*

1,200-page document, the Canadian government pinpointed extractive industries and man camps as hotbeds of violence.[151] The Canadian government stated:

> We call upon resource-extraction and development industries and all governments and service providers to anticipate and recognize increased demand on social infrastructure because of development projects and resource extraction, and for mitigation measures to be identified as part of the planning and approval process.[152]

This tragedy is not limited to Canada. In 2016, the U.S. National Crime Information Center reported that there were 5,712 cases of missing American Indian and Alaska Native women and girls in the United States.[153] In 2017, 5,646 Native women were reported missing in the United States.[154] "The Center for Disease Control and Prevention has reported that murder is the third-leading cause of death among American Indian and Alaska Native women..."[155]

> Nationwide, the murder rate for Native women is ten times that of the average American; in Montana, Native citizens are 6.7 percent of the population, yet between 2016-2018, they made up 26 percent of the state's missing persons reports.[156]

Montana has the fifth highest number of cases of missing and murdered indigenous women and girls among all states.[157]

Connection Between Pipelines and Sexual Violence, The New Republic, Oct. 15, 2019, https://newrepublic.com/article/155367/connection-pipelines-sexual-violence.

[151] *Reclaiming Power and Place*.

[152] *Id.*; Martin (2019).

[153] Annita Lucchesi & Abigail Echo-Hawk, Urban Indian Health Inst., *Missing and Murdered Indigenous Women & Girls* 2 (2019), *available at* http://www.uihi.org/wp-content/uploads/2018/11/Missing-and-Murdered-Indigenous-Women-and-Girls-Report.pdf.

[154] Martin (2019).

[155] Lucchesi & Echo-Hawk (2019).

[156] Martin (2019).

[157] Lucchesi & Echo-Hawk (2019).

There is an inescapable connection between man camps, which bring large numbers of young, typically non-Indian, men into rural areas with sparse law enforcement resources, and the MMIWG Crisis.

> Man camps, also described as "work-camp modular housing," are temporary housing communities set up for the well-paid, typically male laborers that are tasked with constructing pipelines snaking their way above, across, and below our nation's waterways and lands. More often than not, these routes, and as a result the man camps, find themselves cutting through or just outside of rural tribal nation lands and other marginalized communities.[158]

Man camps in the Bakken Oil Field have caused the rates of domestic violence, sexual assault, rape, and sex trafficking to skyrocket in the area.[159] The impact falls disproportionately on native women and girls.[160] "Native American and First Nations women and girls are disproportionately targeted by sex traffickers, and more than half report experiencing domestic or sexual abuse at some point during their lives."[161] The placement of man camps by the pipeline construction will pose a substantial threat to reservation communities including those on the Fort Peck Reservation. TC Energy proposes to locate two construction camps near the Tribes' Reservation boundaries.[162] One camp was placed near the Missouri River crossing—near the southwest corner of the Reservation.[163] The second camp was not discussed in the 2014 SEIS and its location is not identified in this Draft SEIS.[164] These temporary work camps would be constructed to meet

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[158] Martin (2019).

[159] John Vibes, *Oil Company "Man Camps" in ND Terrorizing and Sex Trafficking Native American Kids and Adults*, Activist Post (Dec. 6, 2017), https://www.activistpost.com/2017/12/oil-company-man-camps-nd-terrorizing-sex-trafficking-native-american-kids-adults.html.

[160] *See* Garet Blair & Anya Zoledziowski, *The Missing and Murdered: 'We As Native Women are Hunted'*, Indianz.com (Aug. 27, 2018), https://www.indianz.com/News/2018/08/27/the-missing-and-murdered-we-as-native-wo.asp;

[161] Carey Dunne, *'No More Stolen Sisters': 12,000-mile Ride to Highlight Missing Indigenous Women*, The Guardian (June 7, 2019), https://www.theguardian.com/us-news/2019/jun/07/indigenous-women-missing-murdered-activists-ride-north-america.

[162] 2014 SEIS, at 2.1-31.

[163] *Id.* at 2.1-33, Figure 2.1.5-1.

[164] *Id.* at 2.1-31.

the housing needs of construction workforce.[165] Each camp would house approximately 1,000 residents and occupy 50 to 100 acres.[166] "In South Dakota and Montana, towns around the reservation communities abutting the [P]ipeline route would play temporary host to roughly 1,000 pipeline construction workers as they complete the project."[167]

Aside from the severe physical, emotional, and psychological impacts that sexual exploitation and violence have on survivors[168], responding to this crisis naturally strains rural and tribal law enforcement. The impact is especially acute for law enforcement on or near Reservations. Tribal police cannot charge non-Indians with crimes, and therefore, responsibility for policing the man camps and their inhabitants is almost wholly shifted onto county sheriffs and municipal police,[169] which already have limited resources to patrol and adequately enforce laws against violent offenders on communities near the Reservation.

Neither this Draft SEIS nor the 2014 SEIS analyze how native communities and local law enforcement will be impacted by these man camps. Both Valley County and the Tribes' law enforcement are already understaffed for the size of the areas they patrol. The addition of these camps will only put greater stress on these limited resources. Thus, the Department must analyze how these camps will affect tribal resources and exacerbate the MMIWG Crisis. In order to undertake that analysis, the Department should consult with the Tribes on how the federal government and TC Energy will prevent or mitigate these impacts.

VII. BLM and the Corps may not issue permits under a defective SEIS and must provide a comment period and public meetings for the Missouri River crossing permits.

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[165] 2014 SEIS at 2.1-31.

[166] *Id.* at 2.1-32.

[167] *Id.*

[168] *See* Children's Bureau, U.S. Dep't of Health & Human Servs., *Impact of Domestic Violence on Victims and the Community*, Child Welfare Information Gateway, https://www.childwelfare.gov/topics/systemwide/domviolence/impact/impact-victims/#Victims (last visited Nov. 13, 2019) (collecting articles on long term impacts of domestic violence on survivors, especially women and children).

[169] Martin (2019); *see Oliphant v. Suquamish Indian Tribe*, 435 U.S. 191 (1978).

The BLM and the Corps must still approve right-of-way and Section 408 permits for Pipeline's the crossing of the Missouri River, respectively.[170] However, both agencies have refused to provide public comment periods or public meetings for these permits.

Public scrutiny is essential to implementing the National Environmental Policy Act of 1969 (NEPA).[171] To the fullest extent possible, federal agencies shall "[i]mplement procedures to make the NEPA process more useful to…the public" and "[e]ncourage and facilitate public involvement in decisions which affect the quality of the human environment."[172] "Agencies shall…hold or sponsor public hearings or public meetings…"[173]

Under the Corps' regulations, a public meeting is defined as:

> A public proceeding conducted for the purpose of acquiring information or evidence which will be considered in evaluating a proposed [Department of the Army (DA)] permit action, or Federal project, and which affords the public an opportunity to present their views, opinions, and information on such permit actions or Federal projects.[174]

The Corps' regulations require public hearings to "be held in connection with the consideration of a DA permit application or a Federal project whenever a public hearing is needed for making a decision on such permit application or Federal project."[175] Additionally, "any person may request, in writing, within the comment period specified in the public notice on a DA permit application or on a Federal project, that a public hearing be held to consider the material matters at issue in the permit application or with respect to Federal project."[176] "In fixing the time and place for a hearing, the convenience and necessity of the interested public will be duly considered."[177]

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[170] Draft SEIS at 1-8 to -11.

[171] 40 C.F.R. § 1500.1(b); *see* 42 U.S.C. § 4321 *et seq*.

[172] 40 C.F.R. § 1500.2(b) & (d).

[173] *Id.* § 1506.6(c).

[174] 33 C.F.R. § 327.3(a).

[175] *Id.* § 327.4(a).

[176] *Id.* § 327.4(b).

[177] *Id.* § 327.4(d).

BLM regulations require the responsible official to "consult, coordinate, and cooperate with relevant…tribal governments concerning the environmental effects of any Federal action with the jurisdictions or related to the interests of those [tribal governments]."[178] Thus, the BLM and the Corps must hold public meetings and a comment period on the permits for the Pipeline's proposed crossing of the Missouri River.

The Draft SEIS also states BLM and the Corps will base their permit decisions on the Draft SEIS.[179] As shown in this comment, the Draft SEIS is fundamentally flawed. Thus, BLM and the Corps cannot not rely on it to issue permits.

VIII. The Department must also hold public meetings to address the public's concerns about the Pipeline.

The Pipeline will cross Montana, South Dakota, and Nebraska. The only public meeting to discuss this Draft SEIS was a meeting in Billings, Montana. Much of the draft SEIS discusses the Nebraska Mainline Alternative Route.[180] Yet, the Department has refused to provide a public meeting in Nebraska. The Pipeline will cross sacred corn fields of the Ponca Tribe in Nebraska.[181] Likewise, the Pipeline and related facilities will cross Rosebud Sioux trust lands in South Dakota[182] and cultural sites of the Fort Belknap Community in northern Montana. And, of course, the Pipeline will cross the Missouri River just upstream of the Tribes' Reservation. Therefore, the Department is obligated to seek more public participation than just a single meeting.[183] The Department cannot possibly issue a final SEIS that adequately considers all the problems that this Pipeline will pose for tribes without further public comment and participation.

Doing so is also consistent with departmental policy. "It is the policy of the [Department] to…[i]nvite and facilitate…public involvement in decisions which affect the quality of the environment…"[184] "Departmental officials are encouraged to cooperate

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[178] 43 C.F.R. § 46.155.

[179] Draft SEIS at 1-9.

[180] *See id.* §§ 2-4.

[181] *Id.* at 3.9-11.

[182] *Id.* at 6-23, -93, -99, -106, -125, and -127.

[183] 40 C.F.R. § 1506.6.

[184] 22 C.F.R. § 161.2(d).

with...the public throughout the conduct of the Department's NEPA process."[185] "Departmental officials *will* make *diligent efforts* to involve the public..."[186] To meet the goals of this policy, the responsible action officer must seek public involvement in the Department's NEPA process. "The responsible action officer shall identify those persons, community organizations, environmental interest groups...or other bodies which may have an interest in or be affected by the proposed Departmental action and who should therefore be involved in the NEPA process."[187] The responsible action officer must then submit a list of such persons, groups, and organizations and a recommendation of possible public hearings to the Office of Environment and Health.[188]

The public meetings to date have simply not been sufficient to comply with the Department's regulatory policies and its obligations under NEPA. For instance, representatives from the Tribes attended a "public meeting" for the Draft SEIS on October 29 in Billings, Montana. They had to travel over 300 miles to attend this meeting. That is approximately the same distance between Billings and the closest point on the Pipeline's proposed route—even though the Pipeline will cross the Missouri River just upstream of the Tribes' Reservation.

Before the meeting began, tribal representatives were quarantined in an outdoor "free speech area" surrounded by metal fencing. The temperature that day was the coldest ever recorded in Billings,[189] but no one was allowed inside before the meeting began.

During the meeting, the Department only allowed comments through written submission or by stenographer. The "experts" the Department provided simply referred the tribal representatives to the Draft SEIS when they were asked about the Tribes' concerns. There was no chance for the tribal representatives to express their concerns to agency decision-makers. A public meeting should be an opportunity for members of the public to express their concerns, face-to-face, to the agency officials responsible for the proposed project. But the "public meeting" on October 29 was little different than an opportunity to submit written comments by hand, rather than email or post. The meeting certainly did not respect the dignity of the Tribes as a sovereign government to which the United States owes

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[185] *Id.* § 161.9(c).

[186] *Id.* § 161.9(f)(1) (emphasis added).

[187] *Id.* § 161.9(f)(3).

[188] *Id.* § 161.9(f)(3)(iii).

[189] Mike Kordenbrock, *Billings records 0 temp, shattering records*, Billings Gazette (Oct. 29, 2019).

a trust responsibility. So far, the Department has failed to solicit actual public involvement as required by NEPA and the Department's own regulations.

CONCLUSION

The deficiencies that the Tribes has identified in this letter must be addressed before the Department issues a final SEIS. Thank you again for the opportunity to comment on this Draft SEIS and the Tribes look forward to your inclusion of the Tribes' concerns in your next draft.

Sincerely,

Floyd Azure, Chairman
Tribal Executive Board
Assiniboine and Sioux Tribes of the Fort Peck Indian Reservation

cc: Senator Jon Tester
Senator Steve Daines
Representative Greg Gianforte
Montana Governor Steve Bullock
Montana Attorney General Tim Fox
Deputy Director William Pendley, Bureau of Land Management
Regional Director John Mehlhoff, Bureau of Land Management
Lieutenant General Todd Semonite, U.S. Army Corps of Engineers
Colonel John Hudson, U.S. Army Corps of Engineers
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November 15, 2019

Robert D. Wing
Acting Director, Office of Environmental Quality and Transboundary Issues
U.S. Department of State

Becky Latka
Project Manager for Keystone XL
U.S. Army Corps of Engineers

Re: Docket ID No. DOS-2019-0033-0001
Notice of Environmental Impact Statements; Availability, etc.: Proposed Keystone XL Pipeline; Public Meeting Announcement

Dear Mr. Wing and Ms. Latka:

I am writing to make a formal request that the comment period on the draft Supplemental Environmental Impact Statement for the proposed Keystone XL pipeline be extended, and that the State Department, Army Corps of Engineers, and Bureau of Land Management hold a formal public hearing on the Fort Peck Reservation.

I am an enrolled member of both the Assiniboine and Sioux Nations, and was born in Poplar, Montana, on the Fort Peck Indian Reservation on June 10, 1939. I have resided on the Reservation, on the Missouri River, all my life.

For fifty years, I have been active in advancing the interests of Native Americans on the Fort Peck Indian Reservation. I currently serve as Chairman of the Board of Directors of the Assiniboine & Sioux Rural Water Supply System, on whose Board I have served since 2007. I am also currently Chairman of the Board of the Native American Development Corporation of Billings, Montana, and have been a member of that Board since 1999. I have served two terms on the Fort Peck Tribal Council, am a former Chairman of the Wolf Point Community Organization, and a former Board Member of the Fort Peck Community College. I have also served as a State Legislator in the Montana House of Representatives. I am a college graduate with a B.A. from the University of Northeastern Illinois and a U.S. Army Veteran.

My biggest concern regarding the Keystone XL is for the Assiniboine and Sioux Rural Water Supply System (ASRWSS) on Fort Peck Indian Reservation and surrounding rural communities, to remedy contamination of their ground water supplies due to irresponsible oil and gas development permitted by the United States government. Two decades ago, the Assiniboine & Sioux Nations established the Assiniboine & Sioux Rural Water Commission to construct the Wambdi Wahachanka "Eagle Shield" Water Treatment Plan and manage its operation. Upon completion, at an estimated cost of over $300,000,000, this modem water treatment plant and vast pipeline delivery system will provide clean water to over 30,000 people, including residents, ranchers, and farmers on the Fort Peck Indian Reservation in Montana's four northeastern counties (Roosevelt, Valley, Daniels, and Sheridan) to the Canadian border. The project is approximately 80 percent completed. The intake for this water system is located on the

Missouri River (in the town of Wolf Point, on the Fort Peck Indian Reservation) about 58 river miles downstream from the Fort Peck Reservoir, and 57 miles downstream from the proposed crossing of the Missouri River by the Keystone XL Pipeline.

I am familiar with the proposed Keystone XL Pipeline's route through ranch land north of the Milk River (a major tributary of the Missouri River), across the Milk River via a proposed underground pipeline, across extremely fertile farmland located in the Missouri River and Milk River alluvial deltas between those two rivers, and then across the Missouri River via a second proposed underground pipeline. From there it would pass south and east through eastern Montana through extensive ranch and farmlands and across many other tributaries of the Missouri River, including the Yellowstone River, before crossing Montana's eastern border and entering South Dakota.

The proposed route of the Keystone XL Pipeline poses a direct threat to the source of water for the Fort Peck Indian Reservation. I feel that this has not been considered thoroughly or with specificity, nor have the Fort Peck Tribes been consulted directly on it. This is why I am requesting an extension of the comment period to include a public hearing on the Fort Peck Reservation. The Keystone XL Pipeline would cross under the Milk River and the Missouri River just 10 and 14 miles upstream of our Wyota and Frazer irrigation intakes on the Missouri River, which supply the Fort Peck Reservation's extensive irrigation system, providing water to about 19,000 acres of highly productive farmland. Downstream of the Wyota and Frazer irrigation intakes is the intake for the Wambdi Wahachanka "Eagle Shield" Water Treatment Plant that pumps water from the Missouri River, for potable use, to the inhabitants of the Fort Peck Reservation as well as other communities within Montana's four northeastern counties.

I am familiar with the Wambdi Wahachanka "Eagle Shield" Water Treatment Plant's vulnerability to contamination of the Missouri River upstream of this water treatment plant's intake point. The proposed Keystone XL Pipeline poses an unacceptable risk of contamination of our Fort Peck Reservation water supply for at least five reasons. First, our Water Treatment Plant is not designed nor equipped to remove hydrocarbon contaminants such as benzene, ethylbenzene and p-xylene that are present in crude oil and the diluent that is used to facilitate its passage through pipelines. Were there to be a tar sands crude oil leak contaminating the Missouri River, our water treatment plant would have to close, resulting in the loss of the sole water supply for over 30,000 residents of the Fort Peck Reservation and surrounding communities within Valley, Daniels, Sheridan, and Roosevelt counties, including four hospitals and thirteen public schools.

Second, the proposed crossing of the Keystone XL Pipeline under the Missouri River is at a location on the river which is subject to extreme hydrologic pressure and movement for several reasons. It is situated in the sediment delta that has formed where the Milk River and the Missouri River meet. The soils of this delta have a high clay component, which means that they expand and shrink greatly depending on their moisture content, and are easily eroded by water movement. The course of the Milk River as it passes through this delta varies widely over time, as indicated by its extremely meandering path through the delta with many oxbows. Roads maintained by local farmers as well as by the Fort Peck Reservation are subject to extensive erosion due to these frequent meanders of the Milk and Missouri Rivers through the highly

erosive clay soil. Consequently, soil erosion and movement of the riverbanks of both the Milk River and the Missouri River make for a highly unstable substrate for the proposed Keystone XL Pipeline.

The third reason that the Keystone XL Pipeline poses an unacceptable risk to our water supply is that its crossing of the Missouri is located just a few hundred yards downstream from the Fort Peck Reservoir Spillway. This spillway provides emergency relief from high water conditions in the reservoir. The Fort Peck Reservoir is the world's largest earthen-filled dam. It stores approximately 19,000,000 acre-feet of water (i.e., more than four times the size of Shasta Reservoir, California's largest) and thus is one of the largest reservoirs in the world. During high water conditions, when water must be released down the emergency spillway into the Missouri River (immediately upstream of the confluence with the Milk River), the tremendous hydraulic force of the released water can cause extensive erosion of the Missouri River's riverbed and river banks. Thus, the proposed placement of the Keystone XL Pipeline at this location would subject the pipeline itself to highly erosive forces of the water released from the Fort Peck Spillway during high water conditions, as occurred during May 2018.

The fourth reason the Keystone XL Pipeline poses an unacceptable risk of contamination to Fort Peck Reservation's water supply is that the Missouri River is subject to freezing during the winter. When it is frozen solid on the surface, it would be virtually impossible to access and repair any breach in an oil pipeline passing underneath the river. It would also be very difficult to locate the specific point at which the pipeline might be breached. The presence of thick ice on this river course also poses hazards during the season of spring breakup, when ice forms dams that can impede the flow of water, resulting in unstable surface conditions on the ice and the potential for the sudden release of waters temporarily dammed behind the ice. The unpredictable winter conditions on the Missouri River can also cause violent erosion of the riverbed and river banks, and thus pose additional risks for the potential breach of, and contamination from, any underground oil pipeline located here.

The fifth reason our Water Commission opposes the Keystone XL Pipeline is that the release of tar sands crude oil from the Keystone XL Pipeline would pose particular harm to the Missouri River and surrounding communities. Because tar sands crude is so viscous, it requires thinning with a toxic solvent known as diluent to allow its transport through a pipeline. The resulting mixture is called dilbit. When dilbit escapes from a pipeline, the solvent quickly forms a gas that evaporates in waves of toxic air. Such a release would necessitate evacuation of both the area of the spill and all downstream communities such as Wolf Point and Poplar on the Fort Peck Reservation. The release of the lighter fractions as gas would leave behind the heavy, sticky tar sands crude, which then sinks to the bottom instead of floating like a lighter conventional oil. Tar sands crude is exceptionally difficult to clean up, and could remain in the riverbed and river banks of the Missouri River for decades. Tar sands crude oil leaks in other rivers, such as Michigan's Kalamazoo River, have required many years to clean up, and in some cases, the contamination remains indefinitely.

For each of these reasons, on October 2, 2017, the Water Commission for the Assiniboine & Sioux Rural Water Supply System (of the Assiniboine & Sioux Tribes of the Fort Peck Indian Reservation) voted unanimously to oppose the Keystone XL Pipeline and to support the lawsuits

filed against it. A true copy of our Water Commission's Resolution opposing the Keystone XL Pipeline is attached to this letter.

In summary, the proposed Keystone XL Pipeline's construction and operation poses a direct threat to the water supply of the Assiniboine & Sioux Nations and to more than 30,000 residents of Montana's four northeastern counties. Our communities live close to the land and our lives are woven tightly with the Earth's water, air, land, and animals as part our identity.

However, despite the risks posed to our costly and critical water project, the Assiniboine & Sioux Tribes have never been formally consulted nor was a public hearing held in the near vicinity of our reservation. I would request that the State Department, the Army Corps of Engineers, and the Bureau of Land Management formally extend this current comment period in order to hold a public hearing on the Fort Peck Reservation in order to directly consult our tribes and hear specifics about our concerns.

I thank you for the opportunity to comment and look forward to upcoming and future consultation.

Sincerely,

Bill Whitehead
Chairman
Water Commission for the Assiniboine & Sioux Rural Water Supply System of the Assiniboine & Sioux Tribes of the Fort Peck Indian Reservation

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FORT PECK TRIBES

Assiniboine & Sioux

November 29, 2019

Ross Alliston
Keystone XL Program Manager
Office of Environmental Quality and Transboundary Issues
U.S. Department of State
2201 C Street NW
Washington, DC 20520

Re: DOS-2019-0033, 84 FR 53215, Public Meeting Announcement

To Manager Alliston:

The Assiniboine and Sioux Tribes of the Fort Peck Indian Reservation (Tribes) thank the U.S. Department of State (Department) for this opportunity to provide comment on the draft Supplemental Environmental Impact Statement (draft SEIS) for the Keystone XL Pipeline (Pipeline). Unfortunately, there are several problems with the draft SEIS and the Department's public meeting approach.

The Department must provide more public meetings. The Pipeline will cross Montana, South Dakota, and Nebraska. The only public meeting to discuss this SEIS is this meeting in Billings, Montana. Much of the draft SEIS discusses the Nebraska Mainline Alternative Route. Yet, the Department has refused to provide a public meeting in Nebraska. The Pipeline will cross sacred corn fields of the Ponca Tribe in Nebraska. Likewise, the Pipeline will cross Rosebud Sioux trust lands in South Dakota and cultural sites of the Fort Belknap Community in northern Montana. The Pipeline will cross the Missouri River just upstream of the Tribes' reservation. This Pipeline will affect many people, geographical areas, and tribal lands. Therefore, the Department is obligated to seek more public participation than just a single meeting.[1]

The Tribes are concerned about the effects a spill from the Pipeline would have on the Fort Peck Irrigation Project (Project) and the Assiniboine and Sioux Rural Water Supply System (ASRWSS). Both of these water systems are trust resources.[2] The Department has a duty to protect these resources from harm.[3] As the Tribes demonstrate in their comments, the draft SEIS does not sufficiently analyze the impacts an oil spill in the Missouri River on these trust resources.

The Department and Bureau of Land Management (BLM) have determined that the region of impact from an oil spill into the Missouri River is only 40 river-miles downstream of the Pipeline's crossing. The Department and BLM do not clearly show how they came to this determination in the draft SEIS. It appears that this number is somewhat based on previous oil spills into rivers. However, some of these spills showed oil traveling up to 70 river-miles

[1] 40 C.F.R. 1506.6.
[2] Fort Peck Reservation Rural Water System Act of 2000, 114 Stat. 1451, 106 P.L. 382; Section 10 of the Act of August 24, 1912, 37 Stat. 518, 526; Act of June 30, 1913, 38 Stat. 77, 90.
[3] *United States v. White Mt. Apache Tribe*, 537 U.S. 465, 475 (2003) (*citing Southeast & Southwest areas Pension Fund v. Central Transport, Inc.*, 472 U.S. 559, 572 (1985)).

Poplar, Montana 59255 P.O. Box 1027 (406) 768-2300

downstream. Additionally, other spills were contained by dams and/or occurred in smaller rivers. The Missouri River is one of the largest rivers in the country. This 40 river-mile region of impact is the definition of arbitrary and capricious.

Even if the 40 river-mile region of impact was upheld, the Project is still within that region because it has intakes at 10 and 14 river-miles downstream from the Pipeline's Missouri River crossing. The Project provides water to 19,000 acres of crop land on the Reservation. So the Department has put trust property and reservation lands at great risk of destruction.

The ASRWSS is a $302 million water supply project which supplies water to 30,000 people on the Fort Peck Indian Reservation and surrounding areas in Montana. The ASRWSS is the only source of potable water on the Reservation. Other sources of water have been contaminated from previous oil and gas extraction operations. The ASRWSS intake is 57 miles downstream of the Pipeline's proposed Missouri River crossing. The Tribes are concerned that an oil spill from the Pipeline could destroy the ASRWSS and its sophisticated water filtration equipment. Thus, the proposed route for the Pipeline patently threatens the only public water supply on the Reservation; endangering the health, safety, and welfare of the Tribes and surrounding communities.[4]

The Pipeline also threatens: Tribal sacred and historical sites; the 1 million acre-feet water right the Tribes were allocated in its water compact with the State of Montana, as ratified by the United States; fracture discharge contamination during HDD operations; the endangered pallid sturgeon; and Reservation land on the north half of the Missouri River bed and banks. These issues will be further discussed in the Tribes' comments.

Thank you again for this opportunity to comment on the draft SEIS. However, there remain significant deficiencies with the draft SEIS which the Department must correct. The Department must also provide more public meetings to receive legitimate public input on the draft SEIS.

Sincerely,

Floyd Azure, Chairman
Fort Peck Tribal Executive Board

[4] *Montana v. United States*, 450 U.S. 544 (1981).

Oglala Sioux Tribe

Oglala Sioux Tribe

PINE RIDGE INDIAN RESERVATION

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Julian Bear Runner

November 18, 2019

Ross Alliston
Keystone XL Program Manager
Office of Environmental Quality and Transboundary Issues
U.S. Department of State

Submitted via www.regulations.gov

Re: Oglala Sioux Tribe Urges "No Action" Alternative to Keystone XL Pipeline; DOS-2019-0033

Dear Mr. Alliston:

The Oglala Sioux Tribe (Tribe) submits these comments in response to the October 2019 Keystone XL Draft Supplemental Environmental Impact Statement (SEIS). We attach and incorporate into these comments our March 5, 2014 submission[1] and an Expert Report that highlights serious deficiencies in the Draft SEIS.[2]

The Tribe remains adamantly opposed to the Keystone XL Pipeline (KXL). Moving forward with KXL would be a disastrous decision that would violate the United States' treaty and trust obligations to the Tribe as well as its obligations under domestic and international law to protect and respect Indigenous Peoples' fundamental human rights. KXL poses a direct and grave risk to our tribal homelands, our way of life, and indeed all of Mother Earth. Despite having repeatedly voiced our concerns, the State Department has yet to adequately assess or address the threat KXL poses to our treaty-protected lands and resources, cultural resources, and drinking water facilities. The Draft SEIS does nothing to remedy this failure.

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[1] See Attachment A. Our March 5, 2014 submission addresses the Keystone XL Pipeline National Interest Determination and includes a position paper responding to the substance of the 2014 Final Supplemental Environmental Impact Statement (SEIS), which the current Draft SEIS incorporates and relies upon.
[2] See Attachment B.

On October 30, 2019, the Keystone Pipeline, also constructed by TransCanada, had its 21st spill since it began operation in 2010.[3] This latest spill leaked 380,000 gallons of oil in North Dakota. Despite TransCanada's history of oil spills, the United States is now poised to allow this company to expand its operations, placing our tribal homelands and our drinking water at risk. Additionally, KXL will exacerbate the climate crisis, which is already disproportionately impacting our Tribe. Just this past year, the President had to sign a Major Disaster Declaration to make federal assistance available to the Tribe due to severe storms and flooding that left our people stranded and decimated our already ailing infrastructure.[4] The Draft SEIS, however, fails to even consider the effects of climate change on our Tribe.

The decision to move forward with KXL rests on bad policy—prioritizing the interests of a foreign oil company over those of the United States' own citizens, including Indigenous Peoples who have cared for and preserved this land since long before colonial occupation. The United States should halt this reckless project and listen to the very real concerns of Indigenous Peoples and myriad others. The stand-off against the Dakota Access Pipeline demonstrated how important protecting our homelands is to us, our fellow Indigenous Nations, and our allies. We urge the United States to listen to us and reconsider its position on the KXL.

I. Impacts to Cultural and Historic Properties Remain Unaddressed

KXL would run through our ancestral homelands, which include, but is not limited to the treaty territory of the Great Sioux Nation as recognized by the Fort Laramie Treaties of 1851 and 1868. These lands and their natural and cultural resources are a critical link to our history as the Great Sioux Nation, a sovereign nation, and as a people, remain an integral part of our current cultural and religious practices, and we are responsible for protecting them to ensure the cultural survival of future generations. These sacred, treaty-protected lands retain millions of burial locations, sites important to our ceremonies, historical artifacts, petroglyphs, and numerous other sites of religious and cultural significance.

As we detailed in our March 5, 2014 comments, the State Department has failed to fulfill its obligations under Section 106 of the National Historic Preservation Act (NHPA) with regard to our Tribe's historic properties because we were not consulted in good faith. The NHPA requires that an agency take into consideration effects of any proposed undertaking on tribal historic properties.[5] It also imposes an independent obligation that the federal agency consult with tribes in that process.[6] When an undertaking may adversely affect historic properties, the

[3] See, e.g., Mark Hefflinger, "Keystone Pipeline Spill History," BOLDNEBRASKA.ORG (Nov. 7, 2019), http://boldnebraska.org/keystone-pipeline-spill-history/.
[4] See FEMA.GOV, "President Donald J. Trump Approves Major Disaster Declaration for the Oglala Sioux Tribe of the Pine Ridge Reservation," HQ-19-066 (Jun. 21, 2019), https://www.fema.gov/news-release/2019/06/21/president-donald-j-trump-approves-major-disaster-declaration-oglala-sioux.
[5] 54 U.S.C. § 306108.
[6] 54 U.S.C. § 302706(b).

federal agency must consult with tribes to develop measures to avoid, minimize, or mitigate adverse effects.[7]

The Draft SEIS continues to rely on a flawed Programmatic Agreement (PA) for protection of cultural resources.[8] The Tribe did not become a signatory to the PA because the State Department's consultation was grossly inadequate and failed to fulfill the regulatory requirement that consultation be conducted in good faith. ACHP regulations define consultation as "the process of seeking, discussing, and considering the views of other participants, and, where feasible, ***seeking agreement*** with them regarding matters arising in the Section 106 process."[9] Consultation, therefore, is designed to seek consensus. The State Department, however, did not engage in meaningful consultation to develop the PA, instead holding meetings in which it was clear to tribal representatives that pipeline authorization was pre-determined regardless of what adverse effects might occur to our historic properties. The Draft SEIS fails to remedy this disregard for the requirements and intention of the Section 106 process, rendering the safeguards of that process meaningless.

II. Impact of a Spill to the Tribe Remains Unaddressed

The sanctity of the waters and lands of our treaty territory is also of utmost concern. KXL will not only desecrate these lands, it will place them at grave risk of a catastrophic oil spill. The State Department, however, has once again failed to even consider the impact that an oil spill could have on the Tribe.

In particular, the Tribe has repeatedly voiced its concerns regarding the impact of KXL on the Mni Wiconi Project, a rural water supply system that provides our Tribe with safe drinking water and in which the United States has invested $450 million. The Mni Wiconi Project Act, Pub. L. No. 100-516, as amended, specifically states that "the United States has a trust responsibility to ensure that adequate and safe water supplies are available to meet the economic, environmental, water supply, and public needs of the Pine Ridge Reservation...."[10] Further, the Mni Wiconi Project itself is held in trust by the United States for the Tribe.[11] The State Department, therefore, has an obligation, which it has yet to fulfill, to consider the impacts that KXL will have to this trust resource. *See United States v. White Mountain Apache Tribe*, 537 U.S. 465, 468–69 (2003) (finding statute directing the Secretary of Interior to hold property in trust created a fiduciary duty to maintain, protect, repair, and preserve the property); *see also United States v. Mitchell*, 462 U.S. 206, 255 (1983), *Seminole Nation v. United States*, 315 U.S. 286, 297 (1942).

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[7] 36 C.F.R. § 800.6.
[8] See, e.g., Draft SEIS at 3.9-2. See also our discussion of the PA in Attachment A.
[9] 36 C.F.R. § 800.16(f) (emphasis added).
[10] Mni Wiconi Project Act § 2(a)(5). The Act also states that the United States has a parallel trust obligation to the Lower Brule Sioux Reservation and the Rosebud Sioux Reservation.
[11] *Id.* § 3(e)

KXL would cross several tributaries to the Missouri River, and the 2014 Final SEIS acknowledged that the Mni Wiconi Project intake draws from the Missouri River and that "[s]pills or releases could travel through these tributary systems and could potentially result in impacts to affect the Missouri River, aquatic habitats and the [Mni Wiconi Project]."[12] Yet, the 2014 analysis failed to adequately consider impacts to the Mni Wiconi Project or the drinking water it supplies, limiting analysis to 10 miles downstream.[13] The Draft SEIS has not provided any additional consideration to the risks KXL poses to the Mni Wiconi Project, flatly stating that no impacts are anticipated because the distance from the pipeline crossing at the Missouri River is over 100 miles from the Mni Wiconi intake.[14]

In addition to the threat to the Mni Wiconi Project posed by the Missouri River crossing, KXL would cross the Mni Wiconi distribution infrastructure twice.[15] However, the State Department has refused to agree to the additional safeguards the Tribe has previously requested to protect the Mni Wiconi Project at these crossings.

Further, the Draft SEIS provides a significantly flawed analysis of the impacts of an oil spill. The Draft SEIS arbitrarily limits its review of potential downstream effects of an oil spill to 40 miles, stating that this is the maximum reasonable transport distance.[16] The Draft SEIS bases this analysis on that "it would typically be expected that response resources have been able to contain the majority of the spill before it gets to that point."[17] As discussed in the attached Expert Report, this analysis is based on a transport time of 6 hours because federal regulations require responders to be on site and initiating containment within 6 hours.[18] Limiting analysis of downstream effects of a spill based on assumed compliance with federal regulatory requirements is arbitrary and capricious. As the Expert Report notes, "pipeline ruptures are always unplanned, sometimes occur during adverse weather or flood conditions, and almost always result from unanticipated situations."[19] Response times for spills have not, therefore, historically been limited to the 6 hours required by federal regulation.[20] The Draft SEIS, however, unreasonably minimizes historic spills.[21] Limiting spill analysis to 40 miles unreasonably excludes analysis of impacts further downstream.[22]

As noted in the Expert Report, even assuming that the "majority" of a spill would be contained within 40 miles, it is unreasonable to refuse to consider the impacts of that portion of a

[12] 2014 Final SEIS at 3.3-42.
[13] *Id.* at 4.3-19.
[14] Draft SEIS at 5-38.
[15] 2014 Final SEIS at 3.3-40.
[16] Draft SEIS at 5-2.
[17] *Id.*
[18] Attachment B, p. 3.
[19] *Id.* at 4.
[20] *Id.* at 3–4.
[21] *Id.* at 5–6.
[22] *Id.* at 6–7.

spill that is not contained.[23] This is particularly important given that the Draft SEIS acknowledges that "submerged crude oil could result in the slow release of dissolved hydrocarbons, resulting in long-term chronic toxicological impacts to aquatic organisms" and that "waterbodies may not return to pre-spill conditions" depending on the size and location of the spill."[24]

The Draft SEIS, however, unreasonably fails to consider the potential long-term impacts to the Tribe and the Mni Wiconi Project.[25] These potential long-term impacts, according to the Expert Report include accumulation of hydrocarbons in tissues of fish, waterfowl, and other aquatic animals; accumulation of hydrocarbons in tissues of benthic species and vegetation that serve as food sources for higher life forms in the ecosystem; dissolution of hydrocarbons trapped in oil globules that can remain in the environment for substantial periods; introduction of hydrocarbons into the Mni Wiconi water treatment plant that was not designed to remove organic compounds; and other long-term impacts."[26] A KXL spill, therefore, could have significant, long-term impacts not only on the Tribe's drinking water but also on the Tribe's treaty-protected hunting and fishing rights and on protected species.

Additionally, because KXL will travel right past the Tribe's Reservation, the Draft SEIS should consider the impact of potential leaks on the Tribe. As the Expert Report notes, leak detection systems use pressure measurements to identify leaks, and thus it is possible that a leak of 1% of KXL's volume could go undetected while releasing 8,300 barrels per day.[27]

The Expert Report documents a host of other deficiencies in the Draft SEIS, including use of an improper screening level for benzene and other flaws. The State Department must consider each of the points in the Expert Report and reconsider its spill analysis, with particular attention to the potential effects on the Tribe and the Mni Wiconi Project.

III. Impacts of Climate Change Are Not Adequately Considered

As detailed in our previous comments, the 2014 Final SEIS significantly minimizes the extent to which KXL will impact the climate crisis.[28] The Draft SEIS acknowledges that "[c]limate change in the northern Great Plains threatens regional Indian tribe communities and their traditional ways of life," stating that potential impacts may exacerbate our poverty and vulnerability and threaten our health and economies.[29] Nonetheless, the Draft SEIS fails to

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[23] *Id.* at 7.
[24] Draft SEIS at 5-36–5-37.
[25] *See* Attachment B, pp. 7–8. As described in the expert report, the Draft SEIS also fails to adequately consider the long-term risks associated with polycyclic aromatic hydrocarbons (PAHs), instead focusing on the effects of benzene. *Id.* at 12–13.
[26] *Id.* at p. 8
[27] *Id.* at 5.
[28] Attachment A.
[29] Draft SEIS at 3.10-18.

provide any further consideration to the ways in which KXL will exacerbate the impact of climate change on tribes.

Instead, the Draft SEIS entirely avoids this issue, stating that "[c]limate change impacts are not attributable to any single action but are the result of multiple individual sources of greenhouse gas emissions across the globe, each making a relatively small addition to global atmospheric greenhouse gas concentrations that collectively have a large impact."[30] Thus the Draft SEIS provides that "this SEIS does not attempt to attribute specific climate change effects to the proposed Project."[31] The Tribe, however, will disproportionately suffer the specific impacts of these climate change effects, and they should be considered with a reasonable degree of specificity.

The Draft SEIS also acknowledges that "[c]limate change could also intensify the impacts of accidental releases," that increased flooding and precipitation could result in "the transport of spilled crude oil over greater distances," and that "increased frequency of severe weather events could potentially have an adverse effect on spill response."[32] The Draft SEIS, however, fails to consider the ways in which the climate change effects exacerbated by KXL will impact the Tribe or the Mni Wiconi Project. Instead, it insists on excluding impacts on the Tribe from its spill analysis as described above.

IV. The United States Has An Obligation to Protect and Respect Indigenous Rights

The United States has a well-established duty under international law to protect and respect the rights of Indigenous Peoples, including when those rights are threatened by the extractive operations of a private, foreign entity.[33]

The International Covenant on Civil and Political Rights (ICCPR), to which the United States is a party, protects the rights of Indigenous persons to "enjoy their own culture" in community with other members of their group.[34] The Human Rights Committee (Committee), which is responsible for monitoring ICCPR implementation, has recognized that "culture manifests itself in many forms, including in a particular way of life associated with the use of land resources, especially in the case of indigenous peoples."[35] Thus, the Committee concluded that States Parties have a specific obligation to protect Indigenous Peoples' rights to culture, including associated rights related to the use of land and resources. Protection of these rights may require "positive legal measures of protection" as well as "measures to ensure the effective participation of members of [Indigenous] communities in decisions which affect them."[36] The

[30] Draft SEIS at 4-75.
[31] *Id.*
[32] Draft SEIS at 4-101.
[33] See, e.g., United Nations Guiding Principles on Business and Human Rights (2011).
[34] ICCPR, Art. 27.
[35] Human Rights Committee, General Comment No. 23, para. 7.
[36] *Id.*

Committee noted that "[t]he protection of these rights is directed towards ensuring the survival and continued development of the cultural, religious and social identity of the [Indigenous Peoples] concerned, thus enriching the fabric of society as a whole."[37]

The International Convention on the Elimination of All Forms of Racial Discrimination (ICERD) protects Indigenous Peoples' individual and collective rights to property, culture, and religion (art. 5) under conditions of equality (art. 2). The Committee on the Elimination of Racial Discrimination (CERD) has specifically called on States Parties to "protect the rights of indigenous peoples to own, develop, control and use their communal lands, territories and resources," recognizing that Indigenous Peoples "have been, and are still being, discriminated against and deprived of their human rights and fundamental freedoms and in particular that they have lost their land and resources to colonists, commercial companies, and State enterprises" which in turn has jeopardized the preservation of their culture and identity.[38]

The United States' obligations under the ICCPR, ICERD, and domestic law are all to be interpreted consistent with the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP). The United States endorsed UNDRIP in 2010. Although not directly legally binding, the principles articulated in UNDRIP constitute minimum standards (art. 43) and are binding on the United States to the extent they articulate crystallized principles of international law. Numerous provisions of UNDRIP call on the United States to respect and protect the Tribe's rights to traditional lands and resources (arts. 20, 24, 25, 26, 27, 29, 32), culture and cultural resources (arts. 8, 11, 12, 13, 31), treaty enforcement (art. 37), and consultation (arts. 18, 19).[39]

V. Conclusion and Request for Consultation

To date, the State Department has not engaged the Tribe in meaningful consultation regarding KXL, nor has it fulfilled its treaty and trust responsibilities to assess the potential impacts on the Tribe or the Mni Wiconi Project in detail. From the publication of the Notice of Intent to prepare the SEIS in May 2018 to the Notice of Availability of the Draft SEIS in October 2019, the State Department did not engage in consultation with the Tribe. Only after the Draft SEIS was made available did the State Department meet with tribes concerning the Draft SEIS, and the meeting, held on October 29, 2019, did not include meaningful dialogue, and was far afield from the required meaningful tribal consultation. Instead, State Department representatives were allowed to speak while attendees were only allowed to respond by submitting written or recorded statements via computers or one-on-one meetings with State Department stenographers. This is not a consultation, and it entirely disrespects the government-to-government relationship between the United States and the Tribe.

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[37] *Id.* at para. 9.
[38] Committee on the Elimination of Racial Discrimination, General Recommendation No. 23, paras. 3, 5.
[39] See also our discussion in Attachment A.

The Tribe, therefore, reiterates its request for meaningful consultation. We invite State Department officials to come meet with us at the seat of our government on Pine Ridge in order to actually have a government-to-government discussion about KXL.

Moving forward with KXL without addressing the Tribe's legitimate concerns is unreasonable and can only lead to further conflict over this controversial project. We urge the United States to prioritize the needs and well-being of its citizens, including its indigenous citizens, over those of a foreign oil company.

Sincerely,

Julian Bear Runner
President

Ponca Tribe of Nebraska

PONCA TRIBE OF NEBRASKA
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November 18, 2019

M. Ross Alliston
Office of Environmental Quality and Transboundary Issues (EQT)
Bureau of Oceans and International Environmental & Scientific Affairs (OES)
United States Department of State
2201 C Street NW, Room 2726
Washington, D.C. 20520

Re: Comments on Draft SEIS for Proposed Keystone XL Project

Dear Mr. Alliston:

On behalf of the Ponca Tribe of Nebraska ("Tribe"), I write to submit comments on the Department of State's ("DOS") Draft Supplemental Environmental Impact Statement for the Keystone XL Project ("Draft SEIS"). While the Tribe is pleased that DOS has withdrawn its previous piecemeal Draft Supplemental Environmental Impact Statement ("Draft EA") which only considered the MAR, the Tribe strongly objects to the Draft SEIS both in terms of the failure of DOS to properly consult with Indian nations and in terms of the substance of the Draft SEIS, which is wholly inadequate. The Tribe urges DOS to withdraw the Draft SEIS, actually conduct appropriate consultations, provide for actual avoidance and mitigation of impacts on cultural resources, include all relevant data available in analyzing the impacts and threats of the Project, and issue a new draft which actually includes all information for the public to review and comment upon.

I. DOS HAS NOT CONSULTED WITH INDIAN TRIBES AND THE DRAFT SEIS MUST BE WITHDRAWN AND NOT ISSUED UNLESS AND UNTIL PROPER CONSULTATIONS HAVE BEEN COMPLETED AND THE RESULTS INCLUDED.

The Draft SEIS falsely asserts "the Department has conducted government-to-government consultations with Indian tribes." (Draft SEIS at 3.9-1). DOS' own table of contacts with Indian tribes plainly shows there has not been one single instance of consultation with tribes regarding the new route of the Keystone XL Pipeline since the Nebraska Public Service Commission ("Nebraska PSC") approved the Mainline Alternative Route ("MAR"). Table 3.9-1 identifies 6 events DOS claims to be "consultation" and "coordination" with Indian tribes since the Nebraska PSC approved the MAR. Three of those events – half – are just letters informing tribes of DOS' issuance of draft environmental assessments and draft environmental impact statements. Each and every such event is merely "The Department sent a letter..." There is not one single meeting with any Indian tribe or even an indication of receiving or considering responses from Indian tribes to DOS' letters.

Sending letters to tribes in no manner constitutes consultation. The dictionary definition of "consultation" is the action or process of formally consulting or discussing. Notification is not consultation. Dictating actions to tribes or even informing tribes about actions or proposed actions is not consultation. While the Tribe cannot speak for other tribes, the Tribe has not once been consulted regarding the impacts of the Project on the Tribe or its cultural resources even though the Project will traverse the Tribe's congressionally recognized service areas which constitute its reservation, is acknowledged to cross land actually owned by the Tribe, and will pass through the Tribe's traditional and aboriginal areas. There has not been a single instance of DOS meeting with the Tribe and obtaining any input or even having any discussion with the Tribe, particularly about its resources which DOS acknowledges will be impacted by the Project.

The Draft SEIS recognizes that the Tribe has cultural resources near the Project that will be directly impacted by the Project. The Draft SEIS acknowledges that the grave of Standing Bear and the Ponca Agency are within 25 miles of the MAR, (Draft SEIS at 3.9-7), but DOS has never discussed impacts on those sites with the Tribe or protection of those sites from damage by the Project. The Draft SEIS also acknowledges the MAR will cross the Ponca Trail of Tears (referred to as the "Ponca Removal Trail" in the Draft SEIS), (Draft SEIS at 4.9-11), but DOS has never discussed that issue with the Tribe or even sought input from the Tribe on the Ponca Trail of Tears, its location, impacts of the pipeline, or its protection. The Draft SEIS even acknowledges that the Project will cross land owned by the Tribe and the Ponca Tribe of Oklahoma, that the Tribes grow Sacred Corn on that land, and that the Project "would likely constitute an adverse impact to these tribes due to the presence of the sacred corn and ceremonies associated with planting." (Draft SEIS at 4-74-4-75). But, again, the Tribe has never been consulted regarding its land, the acknowledged adverse impacts on the Sacred Corn, or the impacts on its religious ceremonies related to the Sacred Corn, contrary to both Section 106 of the National Historic Preservation Act ("NHPA") and the American Indian Religious Freedom Act ("AIRFA").

The Draft SEIS also acknowledges the impacts of climate change on Indian tribes, noting that it threatens tribes, will damage their communities, endanger their resources, decrease water quality, jeopardize food security, and exacerbate poverty. (Draft SEIS at 3.10-18). But, at not point has DOS discussed the climate change impacts of the Project with tribes or consulted with tribes in any manner to deal with those impacts tribes will face and that will be exacerbated by the Project. The same is true for the impact on tribes' hunting and fishing rights and water use in treaty lands impacted by the Project. (Draft SEIS at 5-55).

DOS' claim that it has consulted with tribes is completely empty and evident on the face of the Draft SEIS. Unless and until those consultations occur, input from the Tribe is incorporated, and the results of those consultations and the Tribe's input included in the Draft SEIS, DOS cannot issue an SEIS on the Project. DOS must withdraw the Draft SEIS, conduct actual and proper consultations with Indian tribes regarding the full impacts of the Project on tribes and their communities, incorporate the input of tribes into a new Draft SEIS, and then re-issue the new draft for comment.

II. THE TRIBE HAS FORMALLY REQUESTED CONSIDERATION THAT THE PONCA TRAIL OF TEARS BE EVALUATED FOR NRHP INCLUSION, BUT THE DRAFT SEIS FAILS TO NOTE THAT EVALUATION MUST BE COMPLETED OR EVEN ACKNOWLEDGE THE REQUEST.

While the Draft SEIS recognizes that the KXL Pipeline will cross the Ponca Trail of Tears, it fails to acknowledge that the Ponca Trail of Tears needs to be considered for inclusion in the NRHP as a historic

district and, in fact, the Tribe has formally requested that DOS conduct an archaeological inventory and NRHP evaluation for the Trail as a historic district. NRHP regulations define "district" as "a geographically definable area... possessing a significant concentration, linkage, or continuity of sites... united by past events." 36 C.F.R. § 60.3(d). Numerous sites along the Ponca Trail of Tears are well documented in historical records and identifiable. The Nebraska Commission on Indian Affairs has even created an online interactive map showing locations of specific events along the Trail, including deaths, burial sites, and locations in journal entries of the Bureau of Indian Affairs agent along the trail. Consequently, there is a well-documented continuity of sites which are linked and meet the definition of "district" under the regulations.

The Ponca Trail of Tears also has a "significance in American history" that possesses integrity of location, design, setting, materials, workmanship, feeling, and association coupled with one or more other aspects of significance. The events of the removal and return of the Ponca along the Ponca Trail of Tears led to Chief Standing Bear's arrest and the ultimate federal court decision in *Standing Bear v. Crook* that Native Americans are "persons" entitled to habeas corpus and having civil rights under the law. Without question, the Ponca Trail of Tears, Chief Standing Bear, and his trial are significant in American history. There are monuments to Chief Standing Bear and the events of the Ponca Trail of Tears and the trial of Chief Standing Bear are taught in history classes. Citizens of Nebraska still tend to graves of people who died along the Ponca Trail of Tears and the events of the Ponca Trail of Tears and Chief Standing Bear are topics of events and remembrances. As noted, there is already a well-documented record of the location of the Ponca Trail of Tears and sites along it, giving it integrity of location, and the events certainly have an integrity of feeling and association.

Additionally, 36 C.F.R. § 60.4(a) provides that a site is eligible if it is "associated with events that have made a significant contribution to the broad patterns of our history." The Ponca Trail of Tears is significant nationally as it is representative of the historic treatment that Native American people faced at the hands of the United States government. It has significant association with the Indian Removal Policy of the United States, which is one of the main historical policies and eras of the United States with respect to Native Americans.

Furthermore, the Ponca Trail of Tears is associated with Chief Standing Bear and served as an impetus for the decision in *Standing Bear v. Crook* which meets the criterion under 36 C.F.R. § 60.4(b). That criterion states that districts, sites, and the like are eligible if they "are associated with the lives of significant persons in our past." Sites associated with Standing Bear have already been listed on the NRHP, acknowledging him as a significant person in our past. The case of *Standing Bear v. Crook* itself is considered extraordinarily significant as the first U.S. court case to find that Native Americans were "persons" under the law. As noted, the case and the history of the Ponca Trail of Tears is taught in schools. The Ponca Trail of Tears is the event and impetus which lead to the decision in *Standing Bear v. Crook* and built the significance of Chief Standing Bear himself in the history of the United States.

The National Park Service's Bulletin 38 also gives guidance for protecting Traditional Cultural Properties ("TCP"). The bulletin defines TCPs as being eligible for NRHP inclusion because of their "association with cultural practices or beliefs of a living community that (a) are rooted in that community's history, and (b) are important in maintaining the continuing cultural identify of that community." This also applies to the Ponca Trail of Tears as it is a significant cultural and historic moment for the Ponca Tribe of Nebraska. It ultimately split the tribe between Nebraska and Oklahoma and reaffirmed the Northern Ponca's ties to the Niobrara River Valley. It is the entire basis for the recognition of the Ponca Tribe of Nebraska as a separate federally recognized Indian nation from the

Ponca Tribe of Oklahoma in the United States. The Tribes have even retraced the Ponca Trail of Tears, walking the path followed by their ancestors, such as the Ponca Remembrance Walk in 2017 to commemorate the 140th anniversary of the Ponca Trail of Tears. It is a key part of both Ponca Tribes' history and central to the Ponca Tribe of Nebraska's identity and community.

The Ponca Trail of Tears must be more than simply mentioned in the Draft SEIS and brushed aside with an empty claim that its location is not precisely know. The Trail must be listed as an identified cultural resource, noted as a resource that requires NRHP eligibility determination, and that NRHP determination actually conduced prior to issuance of any final SEIS. As noted, the Tribe has specifically and formally requested NRHP determination for the Ponca Trail of Tears as a historic district. The fact the Draft SEIS ignores that request and fails to note the required consideration of the Ponca Trail of Tears for NRHP eligibility is a grave deficiency in the Draft SEIS which alone prevents its adoption as a final SEIS.

III. ALL CULTURAL RESOURCES AND SACRED SITES MUST BE IDENTIFIED IN CONSULTATION WITH TRIBES AND NOT EXCLUDED WITHOUT THE CONSENT OF TRIBES AND PROPER TRIBAL INPUT INCLUDED TO ENSURE PROTECTION OF ALL IDENTIFIED SITES.

The Tribe is extremely concerned with the lack of protection of cultural resources along the proposed KXL Pipeline. While DOS claims that additional surveys have been conducted along the KXL Pipeline route, it admits that approximately 668 acres have yet to be surveyed – this is more than half of the approximately 1,038 acres DOS admitted had not been surveyed in the last EIS which the Federal District Court ordered to be surveyed before moving forward. DOS claims that any unsurveyed acres remaining prior to construction will be surveyed, but this is insufficient and the precise claim which the Federal District Court found inadequate in the prior SEIS. Presumably, to the extent DOS asserts those acres remain un-serveyed due to lack of landowner permission, surveys could not be conducted until TransCanada obtained title to the lands by eminent domain, cementing the path of the KXL Pipeline. Surveys conducted at that point would be entirely insufficient since the Project will already be underway and the path set by TransCanada's eminent domain actions. The bureaucratic momentum of the Project would entirely negate use of DOS' proposal of "avoidance" of cultural resources found on those acres. Instead, at best, tribes would be forced to allow their cultural resources to be removed or destroyed. This is entirely unacceptable. Additionally, the Draft SEIS lists five identified sites where NRHP eligibility has yet to be determined. (Draft SEIS at 3.9-7). No SEIS should be issued unless and until all sites have been identified and all determinations of NRHP eligibility have been concluded.

Furthermore, while DOS claims that cultural surveys have been conducted, tribes have not been permitted to participate in those surveys, conduct their own surveys, or even review the surveys performed. The Draft SEIS notes that Traditional Cultural Properties are to be considered along other historic resources. (Draft SEIS at 3.9-3). The NHPA expressly provides that properties of traditional religious and cultural importance to Indian tribes are eligible for inclusion in the National Register. 54 U.S.C. § 302706(a). But, at no point has DOS sought input from tribes about properties that have traditional religious and cultural importance to them. No one other than tribes can identify those properties. Yet, presumably, DOS is relying on TransCanada and its hired personnel to decide what properties are considered important to tribes. Setting aside the clear conflict of interest in having the pipeline operator decide the significance of any resources it will impact, this is a disturbing paternalistic approach and an exercise of colonialism that is entirely contrary to the United State's claimed policy of self-determination for Indian tribes. No person or entity other than the tribes themselves has any

authority or capacity to determine what constitutes a Traditional Cultural Property or any other property of religious or cultural importance to a tribe. Again, DOS must withdraw the Draft SEIS until true consultations with tribes have been conducted, including the actual identification of all cultural resources, sacred sites, and other important traditional religious and cultural properties.

Even if all sites are identified, real and concrete protections for all sites must be a basic condition of allowing the KXL Pipeline to move forward. Yet, no such protections are provided. Even where cultural resources have been identified, DOS has not provided any concrete plans to protect and preserve those cultural resources from damage or destruction or even to ensure access to tribal peoples where necessary for the cultural and religious practices. The Draft SEIS lists "options" for dealing with those sites and "punts" to the Programmatic Agreement, but nowhere bothers to actually identify how each currently know site will be protected or whether it will be avoided or mitigated and, if so, how. While the Draft SEIS acknowledges the KXL Pipeline will impact the Ponca Trail of Tears and Ponca Sacred Corn, it provides nothing in terms of concrete plans to ensure their protection from either the construction of the KXL Pipeline or the leaks that will most certainly come if it is built. With the Sacred Corn, the Draft SEIS states measures to avoid impacts "could include construction during post-harvest or use of alternate construction methods such as boring the planted lands" and then basically kicks the issue down the road by referencing the Programmatic Agreement's language that DOS will consider input from tribes later. This is precisely the approach the Draft EIS takes with all cultural resources – instead of developing real plans to protect known and identified cultural resources, DOS will deal with them later. This is entirely insufficient and suggest that cultural resources will be wholly disregarded and likely destroyed if the KXL Pipeline is permitted to proceed, as was done with the Dakota Access Pipeline.

While proposed methods to handle unanticipated discoveries may be appropriate, it is entirely insufficient for known and identified cultural resources. The actual impacts of the KXL Pipeline cannot be determined for a proper SEIS unless the actual method of handling each identified and known cultural resource is determined. The Draft SEIS must include the proposed handling of each identified cultural resource and site – that it will avoided if that is the proposed action, how it will be mitigated if that is the proposed action, and precisely what damage will occur and be minimized if minimization is the proposed action. Unless and until actual cultural resource handling of each identified cultural and historic resource is set forth in the SEIS, it cannot be considered complete and no final SEIS can be issued.

IV. THE DRAFT SEIS' ANALYSIS OF NEED IS SIGNIFICANTLY FLAWED AND FAILS TO ACKNOWLEDGE THAT THE CRUDE OIL TO BE TRANSPORTED IS FOR EXPORT, NOT DOMESTIC USE.

The Draft SEIS purports to find that there is a need for additional crude oil that will be transported through the KXL Pipeline sufficient to justify its construction and, presumably, tilts the scale in favor of allowing its negative impacts and dangers. But, the primary basis for finding that need is "pressures on oil markets to replace Iranian exports, which the United States is committed to getting to zero" and "Venezuela-related sanctions presenting major disruptions in the flow of needed crude oil to the United States." (Draft SEIS at 1-11-1-12). This basis for finding need is ridiculous. Both the lack of Iranian exports and the disruption of Venezuela oil flowing to the United States are the direct result of unilateral actions by the United States itself. It is the United States, under the current administration, which has unilaterally blocked Iranian oil exports (contrary to international consensus) and unilaterally blocked Venezuelan imports into the United States. And DOS itself plays a significant role in that

blocking. DOS cannot block the export of oil from other countries and then claim its actions in blocking those exports creates a need for imports of oil from another foreign country. Additionally, the Draft SEIS asserts that increased demand has been predicted because the current administration has lessened fuel efficiency standards. (Draft SEIS at 1-14). Whether self-imposed oil import restrictions or self-imposed fuel inefficiency, these justifications are purely self-serving and ridiculous and must be removed as bases for need. A true analysis of need apart from actions of the United States intentionally creating need must be performed.

Additionally, the Draft SEIS also pretends that there is a necessity for increased oil for the United States itself and suggests that Canadian imports through the KXL Pipeline will somehow meet this need. But, the Draft SEIS fails to acknowledge that the entire purpose of the KXL Pipeline is for TransCanada to export its oil to other countries. The Draft SEIS acknowledges that the KXL Pipeline will transport Canadian crude oil to Gulf refineries, (Draft SEIS at 1-8), but ignores the fact that it is then intended to be sold internationally and not kept in the United States. The KXL Pipeline will not replace imports from Venezuela because the oil to be transported through it is designed to be refined and sold overseas, not domestically. Thus, even if the United States' own actions in reducing imports from other countries could be used as a self-serving justification for need, the KXL Pipeline will not meet this need since its oil will be sold outside the United States and not replace any missing imports.

Finally, the Draft SEIS takes no consideration of the reduction of use of crude oil, particularly refined crude oil, as technologies replace it. It pretends that technologies which are over a century old will continue to be used at the same rates and in the same manners as they have been historically. But, not only will fuel efficiency increase despite the current administration's attempts to lessen it, more and more gasoline vehicles are and will be replaced by alternative fuels vehicles, including electric. In considering global demand for oil, the Draft SEIS does not consider the impact of reduction in gasoline powered vehicles. Currently, it is estimated that more than 30 million Americans are likely to buy an electric care as their next vehicle. Outside of the United States, just from 2015 to 2016, China increased the sale of electric and hybrid vehicles by 53%. Already fleets of electric vehicles exist in the United States, replacing gasoline vehicles. In its 2019 Electric Vehicle Outlook report, Bloomberg New Energy Finance estimates that the total electric vehicle stock will constitute about 32% of the world's passenger vehicles by 2040. The numbers of non-gasoline vehicles will continue to increase each year, reducing the number of gasoline vehicles and thereby reducing the demand for crude oil. The Draft SEIS fails to properly take these real world factors into consideration when calculating need for any additional oil which will be transported by the KXL Pipeline.

The Draft SEIS must be entirely rewritten with respect to need. Need cannot be found based on unilateral actions of the United States which have unnecessarily restricted oil exports and imports from Iran and Venezuela or attempts to increase demand by reversing fuel efficiency standards. In addition, any determination of need must consider the reduced demand for oil as new technologies replace it and demand necessarily decreases.

V. THE KXL PIPELINE WILL RESULT IN DISASTROUS CLIMATE CHANGE THAT THREATENS TRIBES AND INDIGENOUS PEOPLES MORE THAN OTHERS AND THE DRAFT SEIS' CONSIDERATION OF CLIMATE CHANGE IS WHOLLY INADEQUATE AND LACKING.

The development and operation of the KXL Pipeline will result in disastrous climate change that dictates it should never be constructed or operated. But, the Draft SEIS pretends as though the impact

will be negligible. The KXL Pipeline is designed to transport tar sands from Alberta, Canada to the United States Gulf of Mexico. The Draft SEIS admits "[t]he long-term additional crude oil production in the WCSB is projected to come to the market as heavy crude oil, in the form of diluted bitumen (dilbit)," (Draft SEIS at 1-20), but does not sufficiently consider the increased impacts on climate change from the development of those tar sands versus other forms of crude oil. Canada's tar sands are the third biggest oil reserve in the world, but separating the oil from the rock is energy intensive and causes three to four times more carbon emissions per barrel than conventional oil. Experts have said that if those tar sands are developed, it would be "game over" for the climate.

The Draft SEIS fails to properly consider the additional carbon emissions which will result from the increased development of Canadian tar sands if the KXL Pipeline is developed. The Draft SEIS pretends that the tar sands will be developed because of the current transportation by truck and rail, but entirely fails to acknowledge that transportation by truck and rail limits and slows the development of Canadian tar sands while the KXL Pipeline will speed up and exacerbate that development. The consideration of climate impacts of the KXL Pipeline must use a model which recognizes the increased development of Canadian tar sands as a direct result of the KXL Pipeline's construction and operation and the fact tar sands will be the primary crude oil developed, transported, and refined.

The Draft SEIS also entirely fails to properly address the impacts of climate change on Indian tribes. While the Draft SEIS pays lip service to the impacts of climate change on Indian tribes in barely one-half a page, the most recent climate assessment by the U.S. Global Change Research Program ("USGCRP") dedicated an entire chapter to the impacts of climate change on tribes and indigenous peoples. That indicates the significance of climate change impacts on Indian tribes and Indian communities is not recognized or properly considered in the Draft SEIS. The USGCRP found, "Climate change threatens Indigenous peoples' livelihoods and economies, including agriculture, hunting and gathering, fishing, forestry, energy, recreation, and tourism enterprises." Fourth Nat'l. Climate Assessment, ch. 15, p. 573 (2018). It further found:

> Indigenous health is based on interconnected social and ecological systems that are being disrupted by a changing climate. As these changes continue, the health of individuals and communities will be uniquely challenged by climate impacts to lands, waters, foods, and other plant and animal species. These impacts threaten sites, practices, and relationships with cultural, spiritual, or ceremonial importance that are foundational to Indigenous peoples' cultural heritages, identities, and physical and mental health.

Id. The climate catastrophe, according to the assessment, will result in "increased wildfire, diminished snowpack, pervasive drought, flooding, ocean acidification, and sea level rise [that] threaten the viability of Indigenous peoples' traditional subsistence and commercial activities that include agriculture, hunting and gathering, fisheries, forestry, energy, recreation, and tourism enterprises." *Id.* at 574. The assessment notes that "Tribal trust lands provide habitat for more than 525 species listed under the Endangered Species Act, and more than 13,000 miles of rivers and 997,000 lakes are located on federally recognized tribal lands." *Id.* at 578. All of these species and water bodies are threatened and the assessment notes that tribes and their peoples will have the most difficulty dealing with the impact of climate change due to institutional barriers and sociopolitical obstacles preventing response and adaptation – something the Draft SEIS entirely ignores.

The Ponca Tribe itself is already directly impacted by the current effects of climate change. The

Draft SEIS recognizes the significance of the Ponca Sacred Corn and the adverse impacts of construction on the Sacred Corn, including the Tribe's ceremonies. However, this year, the Tribe was actually not able to hold its ceremony for harvesting the corn because there was such a low yield due to climate change. This is not some future impact on the Tribe, it is a direct impact that is already happening. The Draft SEIS fails to recognize that the impacts of climate change are already impacting Indian tribes and the Project will exacerbate those impacts, causing enormous devastation to Indian tribes. The Draft SEIS must be rewritten to acknowledge the current impacts of climate change on Indian tribes and Indian peoples and consider the exacerbation of those impacts if the Project is constructed and placed into operation. That analysis must not be simply a consideration of the increase of greenhouse gases caused by the KXL Pipeline, but the damage to tribal cultural resources and the impacts on the ability of tribes to conduct ceremonies and practice their religion. The exacerbation of the climate crisis by the KXL Pipeline is directly contrary to AIRFA's mandate that the U.S. "protect and preserve for American Indians their inherent right of freedom to believe, express, and exercise the traditional religions of the American Indian[s]..." 42 U.S.C. § 1996. The Draft SEIS must acknowledge that fact and justify the KXL Pipeline against its potential to prevent tribal exercises of religion as a result of its negative impacts.

The KXL Pipeline will extremely exacerbate the current climate crises and, in the United States, it is tribes and their peoples that will suffer most. Tribes will bear the brunt and burden of dealing with the far reaching impacts of the KXL Pipeline's exacerbation of the climate crisis with the most difficulty in protecting their peoples. But, the failure of the Draft SEIS to consider current climate change impacts is not isolated to the Ponca Tribe's loss of ceremonial corn this year and impacts on Indian tribes. The entire tone and discussion of the Draft SEIS on climate change pretends as though it is some matter for the future. The Draft SEIS ignorantly states, "climate change is a phenomenon that is expected to unfold over several decades or even centuries," (Draft SEIS at 4-100), as though it is not currently occurring and a present consideration. Climate change is not a matter for the future – it is happening now. Climate scientists have already acknowledged on several occasions that climate change is occurring faster than their models predicted and that the impacts of climate change are already here. This is plainly evident in the increased severe storms, heat waves, and fires. The issue of "climate change" is actually a climate crisis and climate emergency which is current, not a matter of the distant future. The Draft SEIS must consider the impacts of the KXL Pipeline on the climate in light of the fact that climate change is already happening and that drastic measures to not just minimize, but eliminate greenhouse gas emission are the only way to prevent the devastating consequences.

In that vein, the Draft SEIS' discussion of climate change impacts on the KXL Pipeline itself is laughable. The Draft SEIS actually pretends that "Climate change is also not likely to significantly impact normal operations of the Keystone XL pipeline and associated infrastructure." (Draft SEIS at 4-100). It makes believe that the only risks would be flooding leading to rust or electrical shorts. But, just this year, Nebraska faced devastating floods that resulted in huge ice sheets destroying buildings, dams, and other infrastructure. The floods were not isolated to flood pains – they enveloped areas which normally never flood. Because of the climate crisis, such events are no longer rare or infrequent – they are the new normal. In the event of another incident like last year's floods, ice sheets could easily destroy pump stations and valves that would result in devastating spills. The Draft SEIS entirely ignores the realities of the current climate crisis and how it could have devastating impacts on the KXL Pipeline's operation – not in the distant future, but immediately.

The Draft SEIS must be rewritten to acknowledge that climate change is *currently* happening and not a consideration that will "unfold over several decades or even centuries." This applies not only to the consideration of the KXL Pipeline and development of Canadian tar sands on climate change, but the effects of existing climate change on the operation of the KXL Pipeline.

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VI. THE DRAFT SEIS SEVERELY UNDERESTIMATES THE RISK OF SPILLS AND THE FACT LEAKS WILL HAPPEN, DAMAGING AND DESTROYING ENVIRONMENTAL AND CULTURAL RESOURCES.

The Draft SEIS pretends that spills from the KXL Pipeline will be rare. It purports to make this determination based on incidences from existing pipelines, including TransCanada's current Keystone I pipeline. However, the Draft SEIS is entirely unrealistic in its calculation of the risk of spills from the KXL Pipeline. The reality is that there is no serious question that if the KXL Pipeline is constructed, it will leak and spill the dangerous tar sands for which it intended. The District Court of Montana found that DOS underestimated spills in its first SEIS and DOS continues to do so in this Draft SEIS. The Draft SEIS skews the rate of spills from TransCanada-operated pipelines by limiting consideration to incidences in the PHMSA hazardous liquids accident database and only through 2017. This is entirely improper given the actual knowledge of leaks and spills, particularly related to TransCanada and its Keystone I pipeline.

The Keystone I pipeline leaked 12 times in just the first year of its operation. Prior to construction, the estimates for leaks from Keystone I were 11 in 50 years, or once every 7 years. But, experience has shown those rates were ridiculously underestimated. Keystone I has actually leaked 21 times since it began pumping oil in 2010 – that is a rate of more than 2 times per year. At least four of those spills have been "large" spills, as the Draft SEIS defines them, and two of those spills occurred in the same number of years. The Draft SEIS notes that, in November 2017, Keystone I spilled 9,726 barrels of oil, or 408,492 gallons in South Dakota. (Draft SEIS at 5-12). Notably, TransCanada reported only half that amount, but subsequent investigation revealed the leak was twice as large as reported. The Draft SEIS does not even acknowledge this fact which suggests TransCanada is not a trustworthy operator. In any event, that 2017 spill was less than 300 barrels from being considered "catastrophic" under the Draft SEIS' definitions, but the Draft SEIS speaks as though the incident was barely significant. While the Tribe acknowledges that the Draft SEIS was issued prior, Keystone I just spilled again in October 2019 in North Dakota. This time, TransCanada has estimated a spill of 9,120 barrels, or 383,000 gallons, though a final determination could easily find that TransCanada is once more under-reporting.

With this latest spill, the Keystone I pipeline has now had two (2) "large" spills in as many years. This recent spill must be added to the Draft SEIS and the calculation of risk of spills for KXL Pipeline must be based on the actual known spills from Keystone I, not just those in the PHMSA hazardous liquids accident database. And these spills are not due to "age" as the Draft SEIS would suggest is the primary cause of spills. Instead, these spills have been found to be the result of poor construction on the part of TransCanada. DOS cannot pretend the risk of spills for the KXL Pipeline is small when actual experience shows that pipelines operated by TransCanada in the U.S. leak at the rate of more than two (2) times per year, with "large" spills occurring nearly once every two (2) years. The experience of Keystone I demonstrates that TransCanada has a poor record and that its spill incidence is much higher than what may normally be expected from a pipeline operator.

Furthermore, the Draft SEIS fails to incorporate the fact that the KXL Pipeline will transport dilbit into its risk assessment. The risk of spills from the KXL Pipeline is much greater than that from conventional pipelines because of the high pipeline temperatures needed to transport tar sands. These temperatures cause greater external corrosion of the materials used in the pipeline construction, thus increasing the risk of spills. The assessment of the risk must include the increase caused by the actual crude oil being transported in the pipeline, not just reference to "other" pipelines. In this sense, the use of the PHMSA database is a false baseline since it provides no consideration for the impacts of the actual

crude oil being transported on the risk of the pipeline leaking.

Aside from the rate of spills, the Draft SEIS grossly underestimates the impacts of those spills. First, it pretends as though leaks will be rare despite the fact that every oil pipeline ever constructed in the U.S. has in fact leaked and TransCanada's U.S. pipelines leak at an extraordinarily high rate of at least two (2) times per year. Second, the Draft SEIS pretends that, even if a leak occurs, it will have little significant impact and any impact will be completely remedied. The KXL Pipeline is designed to cross 1,073 bodies of water, actually going under many of them – 459 waterways in Montana, including the Missouri and Yellowstone rivers; 333 waterways in South Dakota, including the Little Missouri, Cheyenne, Bad, and White rivers; and 281 waterways in Nebraska, including the Niobrara and Platte rivers. It will also pass above underground water resources, including the vast Ogallala Aquifer, which supplies water for more than 2 million people, not to mention its required use for growing the food Americans eat. A leak or spill at or near those waterways would easily contaminate them, harming not only people and tribes near the waterways, but likely every person and tribe downstream. Even the cleanup would be devastating, polluting the waters with chemicals which have been shown to be poisonous and damaging – something the Draft SEIS entirely fails to consider. If tar sands or other chemicals leach into underground aquifers, there is no way to ever clean those waters, leaving them permanently poisoned. Water would not be drinkable, crops could not be irrigated, fish and underwater plants would be killed, oil and chemicals would leach into surrounding soils and, for tribes, traditional medicines, food, hunting and fishing grounds, and tribal recreation areas could be destroyed.

Even spills on land are devastating. Soils are immediately contaminated with the tar sands and the dangerous chemicals included so they can be transported through the pipeline. The soil is forever destroyed – it cannot be "washed" and put back. The soil has to be entirely removed and disposed of, leaving the original land devastated. Even if new soil is brought in to replace the contaminated soil, it will likely not have the microorganisms, nutrients, and seeds of the original soil, possibly eliminating traditional and ceremonial plants and medicines from the ecosystem or even introducing invasive species that will contaminate surrounding areas and further destroy the ecosystem. A spill on a sacred site, a historical site, or grounds with other cultural resources would mean the end of those sites and resources. Agricultural land could be permanently destroyed, impacting U.S. food security and independence all in the name of so-called "energy independence" based on an energy source which will be less and less relevant as time passes. The Draft SEIS downplays the impacts of spills, pretending they are remote and that even groundwater could be "cleaned" or poison groundwater would not be a significant issue.

The Draft SEIS fails to acknowledge that no one is even certain about the impacts and effects of tar sands spills. It claims, "Many of the methods used to detect, contain and recover spilled product are well established and have been used over the past several decades," (Draft SEIS at 5-22), but the reality is that methods for cleaning traditional oil spills do not work for tar sands. Very little is known about how tar sands, especially in diluted form, act during a spill or how they affect the environment. In terms of spills involving water bodies, most of what is known about oil spills comes from crude oil spilled in the oceans. But, spills in fresh water are very different – fresh water is not as dense as ocean water, so oil can sink faster. In the case of tar sands, they cannot be skimmed from the top of water. Tar sands are practically solid when removed from the ground. To travel through a pipeline, they must be diluted. As the Draft SEIS acknowledges, oil companies add a variety of chemicals, such as gasoline, naphtha, and others to reduce viscosity and create "dilbit." When the pipeline leaks and spills, those lighter compounds may evaporate, but it leaves behind dense, solid bitumen. Even the U.S. Environmental Protection Agency ("EPA") has said its researchers have found that, unlike conventional oil, which tends

to float on the surface, tar sands often sink to the bottom of water bodies, especially if the weather is cold, if it is in low-density freshwater, or if it picks up dirt and debris on shore before entering the water. While the Draft SEIS notes these factors, it fails to properly apply these important differences and unknowns in analyzing the impacts of the KXL Pipeline.

The Draft SEIS notes the 2010 spill of dilbit in Michigan, but does not adequately consider the lessons from that spill, including the fact that technology and experience with dilbit cleanup does not exist. The Draft SEIS claims that since dilbit is more viscous, "it will spread over land and across water at a slower rate." (Draft SEIS at 5-16). But, this is directly contrary to the sole experience we have with a dilbit spill. The dilbit from the spill in Michigan entered Talmadge Creek and the Kalamazoo River. The tar sands did not "spread... across water at a slower rate" – they sank and essentially paved the bottom of the river, requiring it to be dredged.

Even with the experience of the spill in Michigan, very little is actually known about what happens to the ecosystem after a spill of dilbit. The Draft SEIS nowhere acknowledges this fact. Researchers know from experiments in the lab that dilbit can have an adverse effect on fish, causing developmental problems like sacs of fluid around the heart or malformed swim bladders. But, there is really nothing certain even with those effects. It is known that many of the ingredients in dilbit are toxic to fish, but no one actually knows which ingredients might be causing the effects or, for that matter, even what all of ingredients are. As the Draft SEIS admits, each oil company has its own "secret blends," which change from season to season and from year to year. The constant changes and not knowing the actual ingredients constantly alter the physical and chemical properties of dilbit in pipelines, making every spill unique and making handling those spills completely unpredictable and essentially unmanageable. The Draft SEIS nowhere acknowledges these unique problems with tar sands and dilbit. In fact, the difficult experience of dilbit and tar sands in the waters of Michigan – the only experience with such dangerous and damaging materials thus far – is notably absent from the Draft SEIS' discussion of releases into waterways. (Draft SEIS at 5-20). Furthermore, the Draft SEIS entirely fails to discuss or consider the impact of a dilbit spill into wetlands. Wetlands contaminated by bitumen are impossible to restore and a spill into wetlands is considered a worst case scenario, something the Draft SEIS completely ignores.

The reality is that no one is even entirely sure how to clean up a tar sands spill. While dilbit may initially behave like conventional oil in the first few days following a spill, it quickly degrades into a substance so chemically and physically different that it defies standard spill responses. In most cases, first responders to a tar sands spill are not even aware the spill is tar sands, believing it is conventional oil, only to find out later, as the dilbit degrades, hindering any response and making the spill more devastating. The Draft SEIS must not only acknowledge these realities, but consider them in determining the dangers and threats posed by the operation of the KXL Pipeline.

Tribes are particularly vulnerable to leaks and spills from the KXL Pipeline. The rivers and aquifers threatened by the KXL Pipeline are often the primary and, in many cases, the only source of water for tribal communities. These waters are part of tribes' reserved water rights, part of treaty rights, and fundamental to the functioning of tribal communities, customs, and traditions. The Draft SEIS notes that tribes are more dependent on wetlands, (Draft SEIS at 5-55), but ignores the fact that dilbit spills into wetlands would, therefore, have devastating impacts for tribes since the wetlands cannot be restored. While tribes are more dependent on waters and wetlands, at the same time, tribes face significant institutional barriers and economic limitations in protecting those waters and wetlands from destruction by outside threats like the KXL Pipeline. It will be tribes that will have to respond,

handle, and incur the damage of dilbit and tar sands spills near their lands and communities while likely being completely shut out off from important information, funding, technical assistance, and expertise. The Draft SEIS nowhere acknowledges these issues and matters that are of particular import for Indian tribes.

Even with respect to cultural resources, the Draft SEIS ridiculously claims there is no threat to any cultural sites from a KXL Pipeline spill. (Draft SEIS at 5-57). But, the Draft SEIS acknowledges the pipeline will cross the Ponca Trail of Tears and the Ponca Sacred Corn. It defies logic for the Draft SEIS to acknowledge that the KXL Pipeline will cross cultural sites of the Tribe, but a spill would not threaten any cultural sites, unless DOS intends those sites will be destroyed by construction such that will no longer exist. Even the most elemental consideration of the issue would note that a spill of oil or tar sands where the Tribe grows its Sacred Corn would have devastating impacts. The Sacred Corn is grown with no-till farming techniques that has developed soil with proper nutrients and microorganisms fundamental to the growth of the corn over decades. The Draft SEIS notes that a spill requiring removal and replacement of soil could result in agricultural land becoming permanently unfit for use, but unexplainedly fails to tie this to the Tribe's Sacred Corn. The Draft SEIS must be corrected to note that any spill at or near a cultural resource would destroy that cultural resource and consider the impact accordingly.

Finally, noticeably absent from the Draft SEIS summary of consequences is any reference to the consequences of a spill. This is an apparent attempt to pretend as though the KXL Pipeline will not spill or that it is merely a remote possibility. But, that is simply not true. The KXL Pipeline *will* leak – no oil pipeline has ever been constructed in the U.S. that has not leaked. It is an absolute certainty and perhaps one of the very few certainties that should be in the Draft SEIS. The Draft SEIS must include the consequences of spills in the summary of consequences, not just construction and operation.

Again, there is no doubt that the KXL Pipeline will spill. The only variables are how often and where – a variable that the Draft SEIS grossly underestimates. The Draft SEIS does acknowledge that dilbit is different from conventional oil and that it does sink in water, even admitting "[t]he containment of submerged and sunken oil also poses significant challenges." (Draft SEIS at 5-25). But, as with the other unique difficulties of tar sands and dilbit, does not apply this difference and find that the risks for the KXL Pipeline are significantly higher because of its intended use to transport dibit.

VII. CONCLUSION

The Tribe urges DOS to withdraw the Draft SEIS, complete consultations and surveys as discussed, provide for the actual handling of identified historic and cultural resources, and update all analyses with real and pertinent information, issuing a new Draft SEIS only thereafter. Even if DOS determines to issue an SEIS with the appropriate corrections and additions, the public should be given a full 120 days to comments on the revised SEIS before it is finalized.

Respectfully,

PONCA TRIBE OF NEBRASKA

Larry Wright, Jr.
Chairman

Rosebud Sioux Tribe

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November 18th, 2019

M. Ross Alliston
Presidential Permitting Team Leader
U.S. Department of State
Office of Departmental Quality and Transboundary Issues (EQT)
Bureau of Oceans and International Environmental & Scientific Affairs (OES)
2201 C Street NW, Room 2726
Washington, DC 20520

Re: Response of letter dated October 4th, 2019: U.S. Department of State

Dear Sir:

Greetings from the Rosebud Sioux Tribe. By way of introduction, my name is Rodney Bordeaux. I am the President of the Rosebud Sioux Tribe. I am requesting that your records be updated to reflect my position as President and the contact for the Rosebud Sioux Tribe. The letter dated October 4th, 2019 announces the 2019 Supplemental Environmental Impact Statement (SEIS) for the Mainline Alternative Route of the Proposed Keystone XL Pipeline (KXLP) and provides an opportunity to submit comments. The SEIS covers the Mainline route and other aspects of the entire pipeline and its connected actions.

As you may be aware, we are signatories to both the 1851 and the 1868 Fort Laramie Treaties. There were many promises found within the treaties as well as provisions that discuss depredation of our lands and the United States' obligation to protect us from depredations. As you may also be aware, the Rosebud Sioux Tribe and the Fort Belknap Indian Community are currently suing President Trump, TC Energy, and other federal agencies over violations of these treaties. The SEIS does not address the issues raised in our lawsuit, and for that reason alone is arbitrary, capricious, and not in accordance with the law.

Nor has a single entity within the federal government participated in or meaningfully consulted with us or any other tribe on a government-to-government basis. There are federal laws that direct agencies of the federal government to engage in this consultation process. The Fort Laramie Treaties of 1851 and 1868, as well as Section 106 of the National Historic Preservation Act of 1966 (NHPA; Public Law 89-665; 54 U.S.C. 300101 *et seq.*) (the "Act"), certainly require meaningful consultation. These laws specifically require the federal government to "initiate"

consultation directly with elected tribal leadership, public meetings are not consultation, nor are generic letters to the Tribe from a federal agency. The 1992 amendments to the NHPA established the Tribal Historic Preservation Officer for Tribes to administer and perform the same functions of the State Historic Preservation Officer. This was done, in part, because the Tribes know better than anyone how to identify their own sites, medicines that grow in specific areas, and other areas of tribal cultural, religious, and environmental importance within this pipeline's proposed path and even through the alternate route.

The Act also established two sub-categories for evaluation and preservation under the federal lead, the National Park Service. These two sub-agencies are the Advisory Council on Historic Preservation (ACHP) and the National Register of Historic Places (NRHP). These two NHPA support agencies are an integral part of assessment, interpretation, and determination of cultural and historic resource eligibility to the NRHP. Recommendations for listing of historic properties assessed as possessing historical valuation to the national cultural and historical landscape is the purpose and intention of determining resources for inclusion to the Register. In addition, the UN Declaration on the Rights of Indigenous Peoples ("UN Declaration"), endorsed by the United States, recognizes the federal government's obligation to consult with the Tribe in good faith to obtain our free, prior, and informed consent before approving any project that might affect our lands. Article and 32(2).

Before I endeavor to express some of our concerns with the Supplemental SEIS, I wanted to share the Rosebud Sioux Tribe's frustration at the "open house" that took place in Billings, Montana on October 28, 2019. There was no real consultation or even a public forum. Legally sufficient government-to-government consultation is a requirement that cannot be fulfilled by merely conducting a public forum. This directly violates the federal NHPA regulations. Moreover, our treaties and unique relationship with the federal government require much more than a public forum or form letters. We are not "stakeholders;" we are governments that stand on a different footing. We have tribal members living along the route in South Dakota, we have sacred sites that the Pipeline will cross, and we have land and territory the Pipeline will cross. Despite these very obvious connections, you did not even conduct this "public forum" in South Dakota. You instead held only one such event several hundred miles away in Montana, during a snowstorm, where a majority of those who will be affected could not attend. This was designed to exclude the tribal members who are most affected and was totally unacceptable. Despite the great distance and dangerous weather, we went to the expense and effort to send official representatives to this event only to discover that it was nothing more than an "open house" where there was no meaningful dialogue or even attempt to engage tribal leaders or the public on the serious impacts of this Pipeline. It was nothing more than "lip service," designed to provide some evidence that the agency had public meetings but this most certainly was not.

Below are other specific concerns we have with the SEIS, which show that it is arbitrary, capricious, and fails to protect Rosebud, its members, and its territory and other resources:

(1) Specifically within the Act, Section 101 (d)(6)(A), (B) and (D) includes areas beyond the exterior boundaries of presently occupied reservation lands. The Fort Laramie Treaties of 1851 and 1868 reserved lands within the traditional homelands that extended from Canada to the Northern and Central Plains of the U.S., to

(6) (A) Properties of traditional religious and cultural importance to an Indian tribe or Native Hawaiian organization may be determined to be eligible for inclusion on the National Register.

(B) In carrying out its responsibilities under section 106, a Federal agency shall consult with any Indian tribe or Native Hawaiian organization that attaches religious and cultural significance to properties described in subparagraph (A).

And:

(D) *When Indian tribes and Native Hawaiian organizations attach religious and cultural significance to historic properties off tribal lands, section 101(d)(6)(B) of the act requires Federal agencies to consult with such Indian tribes and Native Hawaiian organizations in the section 106 process. Federal agencies should be aware that frequently historic properties of religious and cultural significance are located on ancestral, aboriginal, or ceded lands of Indian tribes and Native Hawaiian organizations and should consider that when complying with the procedures in this part.*

Traditional homelands, containing and inclusive of cultural, religious, and natural resources important to Rosebud will be negatively affected by construction of the proposed pipeline. As such, the United States must properly consult with Rosebud, as required by law. Sending form letters and holding open meetings without public officials is not meaningful consultation. Our recent letter directed to Secretary Pompeo further expounded on the failures of the United States, and we incorporate it here. Additionally, there are traditional cultural properties (TCP) near the path of the pipeline that are associated with Rosebud (and Oceti Sakowin) cultural practices, traditions, beliefs, lifeways, arts, crafts, or social institutions. These are rooted in our traditional history and important in maintaining the cultural identity of Rosebud. The Pipeline passing near these TCPs, or sacred sites, would diminish the integrity of the TCP's setting, feeling, or association. The failure to consider impacts to TCPs that are nearby and have already been documented, and to properly and meaningfully consult to identify other TCPs, is arbitrary, capricious, and not in accordance with the law. Further, there is nothing that allows a sitting President or any agency of the federal government to violate the treaties, like this SEIS does and the President's issuance of the permit earlier this year. Only Congress can do that and it has not.

(2) 54 U.S.C. § 306108. Effect of undertaking on historic property

The head of any Federal agency having direct or indirect jurisdiction over a proposed Federal or Federally assisted undertaking in any State and the head of any Federal department or independent agency having authority to ***license*** *any undertaking, prior to the approval of the expenditure of any Federal funds on the undertaking or prior to the issuance of any* ***license or permit*** *shall take into account the effect of the undertaking on any historic property.*

The Department of State, as a Federal agency and division of the U.S. government, is held to the same standards of law that would be imposed on any other Federal agency, office, bureau, administration, or commission.

This Consultation requirement is not just unique to the NHPA, but permeates throughout a number of federal treaties, statutes, and proclamations. The requirement for consultation with Indian tribes stems from the recognition of tribal sovereignty by the United States government under the Commerce Clause. Further, the Fort Laramie Treaties of 1851 and 1868 dictate that the United States must consult with Rosebud and seek Rosebud's consent to cross its lands or to allow others (such as TransCanada) to cross Rosebud's lands. This has not been done to date. The SEIS notes that tribal "coordination" took place. But, this is not a replacement for proper and meaningful consultation, which has not occurred to date. Therefore, the SEIS is arbitrary, capricious, and illegal.

It has not escaped our attention that all of these proposed depredations are for the benefit of a foreign corporation for the transportation of crude to the southern ports of the United States. Despite all of these requirements, there is nothing in the SEIS that demonstrates any level of government-to-government consultation with Rosebud Sioux has occurred to date regarding the KXL pipeline. The U.S. government owes this duty to each of the Tribes along the route and those with cultural interests in the area.

(3) Treaty Violations

As detailed in Rosebud's lawsuit against the President regarding the Keystone XL Pipeline, the Pipeline approval across our lands is illegal. The United States has a treaty obligation to protect Rosebud from any depredations and obtain our consent before permitting any entity, let alone a foreign pipeline company, to cross our lands. A crude oil pipeline across our land and through our territory and water is a depredation as our lawsuit against the President shows. The United States and TransCanada have not obtained Rosebud's consent to cross Rosebud's lands, and the SEIS (as well as the 2014 SEIS) fails to even consider this issue and even notes that the Pipeline will *not* cross treaty lands. This is wrong. Therefore, this Draft SEIS is arbitrary, capricious, and not in accordance with the law and must be set aside. We hereby incorporate all of the issues that we have raised in our lawsuit, as this SEIS (as well as the 2014 SEIS) fails to properly address them.

(4) APE and ROI

The SEIS defines the Region of Influence as the 110ft right of way and Area of Potential Effect for cultural resources as a 300ft area from the centerline of the Pipeline. This is arbitrary, capricious, and illogical. The SEIS notes that if the pipeline spills it could travel at least 1,200ft. Thus, the ROI and APE should be at minimum 1,200ft in each direction from the centerline as a spill could effect that area. Thus, utilizing a much smaller ROI and APE is arbitrary, capricious, and illogical, and fails to properly protect Rosebud.

(5) Disproportionate Impact to Tribes

The SEIS admits that the Pipeline will have a disproportionate impact to tribes on their ability to hunt, fish, and utilize natural resources. Yet, there was not an alternative route considered that avoided these impacts as was suggested prior to the 2014 SEIS. This is arbitrary, capricious, and not in accordance with the law.

(6) Spill Data

The SEIS notes that the most up to date spill data is not available until summer of 2019. Yet, the SEIS came out after the summer of 2019. The failure to include the most up to date spill data in the analysis is arbitrary, capricious, and not in accordance with the law. Further, the failure to consider spill data associated with other refined petroleum pipelines is arbitrary and capricious. This data must also be included in the analysis.

(7) Pump Stations

The SEIS notes that the newer pump stations fail more frequently, but fails to analyze the impact to Rosebud lands from the pump stations near Rosebud lands. This is arbitrary, capricious, and not in accordance with the law and is a failure to protect Rosebud from depredations.

(8) Spiritual Practices

The SEIS admits that the pipeline will substantially and negatively burden the spiritual practices of native people. Yet, the SEIS fails to consider whether its approval through these lands is a violation of the Religious Freedom Restoration Act. The failure to consider this issue is arbitrary, capricious, and not in accordance with the law.

(9) Electrical Lines

The SEIS notes that Indian land must be crossed for the new and updated electrical lines. Yet, the Bureau of Indian Affairs is not named as a cooperating agency, and the United States has not ensured that Rosebud's consent has been obtained to cross its land. This is arbitrary, capricious, and not in accordance with the law.

(10) Climate Change

There is a total disconnect in the EIS between the findings related to climate change, and the conclusions reached by the EIS. The SEIS cites numerous sources which outline the perils of climate change –for example the Intergovernmental Panel on Climate Change (IPCC), *Special Report- Global Warming of 1.5 degrees C*. At the outset, the SEIS acknowledges in a dramatic understatement that "There is increasing concern that rising atmospheric greenhouse gas emissions are significantly altering global climate systems with the potential for long-term impacts on human society and the environment." SEIS 3.10-1. It further acknowledges that increased greenhouse gas emissions are due primarily to human activity, and especially to fossil fuel consumption. SEIS 3.10-2 and -5. The SEIS recognizes that increased greenhouse emissions contribute to rising sea levels, rising surface temperatures, increases in extreme weather events, decreases in Arctic ice, changes in ocean temperature and chemistry, increases in

flooding and wildfires, increase in tornado damage and "adverse impacts on the health and well-being of people, particularly populations that are already vulnerable." SEIS 3.10-6-15.

The SEIS is even more specific about impacts of climate change in the northern Great Plains. It states:

> According to the National Climate Assessment (USGCRP), studies project that the northern Great Plains, presently susceptible to heat waves, floods, droughts and severe storms, will experience more intense episodes of these conditions, threatening vulnerable communities and ecosystems throughout the region. These climate impacts could affect agricultural productivity, recreation and tourism, energy systems, human health and **traditional ways of life among Indian tribes** (USGCRP; Melillo et al. 2014).

SEIS 3.10-16 (emphasis supplied). Climate change will also challenge the regional water systems and accelerate the ongoing depletion of the Ogallala and High Plains Aquifers. SEIS 3.10-17.

The SEIS also admits that the KXL pipeline itself will be affected by climate change:

> Climate changes such as higher temperatures and heat waves, decreasing water availability in the summer and more severe precipitation and flooding events can threaten the infrastructure and operations of these energy systems. Pipelines such as the Keystone XL, as well as railroads and other physical energy and transportation infrastructures, are vulnerable to damage or disruption from increasing heavy precipitation events and associated flooding and erosion.

SEIS 3.10-18. The SEIS also makes specific findings as to "Climate Change Impacts To Native People:"

> **Climate change in the northern Great Plains threatens regional Indian tribe communities and their traditional ways of life**. Potential impacts could include damage to settlements and infrastructure, endangering natural resources, decreasing water quality and quantity, and jeopardizing food security. Climate change related impacts may also exacerbate poverty and the vulnerability of traditional cultures and threaten the health and economies in many tribal communities.
>
> Tribal communities are particularly vulnerable to climate change impacts to water systems … Climate change has already begun to exacerbate the problem of decreased water availability …. Livestock ranching and crop agriculture, primary tribal livelihoods in the region, are particularly vulnerable to climate change impacts.

SEIS 3.10-18 (emphasis supplied).

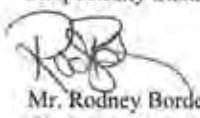
After acknowledging these dire impacts of climate change, the SEIS notes that the pipeline project would, at a minimum, account for an enormous 0.5 per cent of U.S. emissions and under other scenarios, possibly an astounding 2.7 per cent of U.S. emissions. SEIS 7-18. The U.S.

already is the number two emitter in the world after China. The same IPCC report cited as authoritative by the EIS for the dire effects of climate change concludes that "limiting global warming to 1.5 degrees C would require rapid, far-reaching, and unprecedented changes in all aspects of society," so recommends a reduction of global emissions by 45% by 2030 and net zero by 2050. That would give only a reasonable likelihood of keeping the rise to 1.5 degrees C (67% likely). IPCC 2018. The only conclusion that can be drawn from these damning facts is that the KXL pipeline, as currently planned will exacerbate climate change, and therefore approving it and failing to consider a design with lesser climate change consequences is arbitrary, capricious, and not in accordance with the law.

On behalf of the people of the Rosebud Sioux Tribe, we demand that the Department of State, as well as any other agency working on the SEIS, come to Rosebud and fulfill the government-to-government consultation responsibility by engaging with us in meaningful discussion and thereafter incorporating our concerns into the result. For this consultation to be meaningful, we would need to have our Tribal Council and the Administration to visit with the Secretary of State in the near future to visit on this issue. We will share additional concerns at that time.

We should not have to be so direct, but it has come down to this. You deliberately hold meetings so far from the Tribe that our members are unable to attend, you recognize the negative effects of the pipeline on our lands, water and people yet make no explanations in the SEIS and you don't even entertain any alternatives to the current route or plan in any way. We have continued to register our objections year after year, and yet the concerns are fully ignored. You have done nothing to meet your legal obligations. This proposed pipeline will harm our cultural and natural resources for not only the current generation, but seven generations from now.

Respectfully Submitted,



Mr. Rodney Bordeaux
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Standing Rock Sioux Tribe

November 15, 2019

Ross Alliston, Keystone XL Program Manager
Office of Environmental Quality and Transboundary Issues
U.S. Department of State
2201 C Street, N.W.
Washington D.C. 20520

RE: DOS-2019-0033 (84 Fed. Reg. 53215, (October 4, 2019))

Dear Mr. Alliston:

I write on behalf of the Standing Rock Sioux Tribal Council to again express our strong objection to the Keystone XL Pipeline. The construction of the Keystone XL Pipeline would directly harm important water resources of the Standing Rock Sioux Tribe, and a spill could cause catastrophic, long-term damage to our waters, lands and other Treaty protected resources. The increased greenhouse gas emissions caused by the Keystone XL Pipeline will intensify the negative public health impacts and economic costs to our Tribe, which result from extreme weather events associated with global climate change. The Standing Rock Sioux Tribe expressed its strong objections to the Keystone XL Pipeline in 2014 and attach those comments for the Record of this document.

I. Bureau of Land Management and the Army Corps of Engineers have failed to properly consult with tribes on the impact this Pipeline will have on the Standing Rock Sioux Tribe

The Bureau of Land Management (BLM) and the Army Corps of Engineer (USACE) have failed to consult with the Standing Rock Sioux Tribe on the specific impacts that granting Rights-of-Way under the Mineral Leasing Act, 30 U.S.C.§ 185, or the USACE granting "permission under Section 14 of the Rivers and Harbors Act of 1899," 33 U.S.C. § 408, would have on the Tribe.

The rights of Indian tribes held under federal law – by treaty, statute, executive order and common law – are critical to the protection of Indian tribes' reliance on the environment to sustain our cultures and way of life. Of these rights, none is more important than the federal trust responsibility, which commits the federal government to the protection of Indian tribes' rights, resources and interests as a guardian would protect those of his or her ward. The importance of the trust responsibility is even greater today, given the impacts already sustained by Indian tribes as a result of the deterioration of water and air quality, loss of land, natural and cultural resources, and the destruction of sacred sites.

The "undisputed existence of a general trust relationship between the United States and the Indian people," is well established. *United States v. Mitchell*, 463 U.S. 206, 225 (1983). The trust responsibility applies to all actions of all federal agencies in the Executive Branch impacting Tribes. *Nance v. EPA*, 645 F.2d 701, 711 (9th Cir. 1981); *Covelo Indian Cmty. v. FERC*, 895 F.2d 581, 586 (9th Cir. 1990) ("The same trust principles that govern private fiduciaries determine the scope of FERC's obligations to the [Indian] Community"). Federal agencies must strictly adhere to the duties of a private fiduciary when their actions impact Indian rights. *Covelo Indian Cmty.*, 895 F.2d at 586; *accord Assiniboine & Sioux Tribes of Fort Peck Indian Reservation v. Bd. of Oil & Gas Conservation*, 792 F.2d 782, 794 (9th Cir. 1986) (applying "the same trust principles that govern the conduct of private fiduciaries" to Department's authority over mineral royalties); *Coast Indian Cmty. v. United States*, 550 F.2d 639, 652 (Ct. Cl. 1977) (per curiam); *Cheyenne-Arapahoe Tribes of Indians of Okla. v. United States*, 512 F.2d 1390 (Ct. Cl. 1975); *Menominee Tribe of Indians v. United States*, 101 Ct. Cl. 10, 18-19 (1944); *Navajo Tribe of Indians v. United States*, 364 F.2d 320, 322-24 (Ct. Cl. 1966).

The standard which must be met is high. The courts have held that in discharging the trust responsibility, executive officials of the United States must observe "obligations of the highest responsibility and trust" and "the most exacting fiduciary standards," *Seminole Nation v. United States*, 316 U.S. 286, 296-97 (1942), and are bound "by every moral and equitable consideration to discharge its trust with good faith and fairness." *United States v. Payne*, 264 U.S. 446, 448 (1924); *see also Cobell v. Norton,* 240 F.3d 1081, 1099 (D.C. Cir. 2001) (applying Seminole).

Federal executive agencies thus owe a duty of undivided loyalty to Indian tribes and must order their actions to avoid adverse impacts on tribes, unless Congress has clearly and plainly directed otherwise. *Nevada v. United States*, 463 U.S. 110, 128, 142 (1983); *see also United States v. Dion*, 476 U.S. 734, 738-39 (1986); *United States v. White Mountain Apache Tribe*, 537 U.S. 465, 475 (2003); *Confederated Tribes of Umatilla Indian Reservation v. Alexander*, 440 F. Supp. 553, 555 (D. Or. 1977). This means that federal agencies must avoid adverse impacts on Indian rights. Federal agencies have determined that this higher duty requires federal agencies to consult with Tribes. *See*, *Island Mountain Protectors*, 144 IBLA 168, 185 (1998) (the BLM was required to consult with the Tribes and to identify, protect and conserve trust resources, trust assets, and Tribal health and safety in its administration of the NEPA and

other environmental laws.)

As we discuss below, the Tribe retains reserved water, fishing, and hunting rights in and around Missouri River. These rights are fundamental to the Tribe's survival and well-being on its Reservation. The Tribe relies upon the waters of Missouri River and her tributaries for its health, welfare, safety, economy, culture and religion. The federal government has clear obligations to protect those rights in accordance with its trust responsibility. *Klamath Water Users Protective Ass'n v. Patterson*, 204 F.3d 1206, 1213-14 (9th Cir. 1999); *Pyramid Lake Paiute Tribe v. Morton*, 354 F. Supp. 252, 256 (D.D.C. 1972).

The only way that the federal government can fulfill its fiduciary duty to the Tribe is to specifically consult with the Tribe regarding the impacts that both the right-of-way decision and Section 408 permit will have on the Tribe and its Treaty protected resources. Both the BLM and the USACE have failed to do this.

II. The Draft Supplemental EIS fails to comply with federal law

Given the federal agencies' failure to consult with the Standing Rock Sioux Tribe regarding the impact that the granting the rights-of-way or the Section 408 permit will have on the Tribe and its Treaty protected resources, it is not surprising that the Draft SEIS fails to adequately consider or analyze any of the Tribe's concern that were outlined in our 2014 comments. In failing to adequately consider the potential impacts that the Pipeline will have on the Tribe's rights and the Treaty protected lands and resources, the Draft SEIS is completely devoid of any proposed mitigation for these impacts.

a. Impact on Tribal water resources is not properly assessed in the Draft SEIS

In 2014, the Tribe provided a detailed discussion of the impact of the Keystone XL Pipeline will have on the waters of the Missouri River and the other rivers that are on the Standing Rock Sioux Reservation. Specifically, the construction of the Keystone XL Pipeline will result in the depletion of water in one or more tributaries which drain into the Missouri River, upstream from the Standing Rock Reservation, and the risk of a spill at any place the Pipeline crosses the Missouri River or one of her tributaries presents a continuing and long-term threat to the Tribe's resource.

The Standing Rock reservation encompasses roughly three and a half thousand square miles of North and South Dakota. Under well-settled law, the establishment of the reservation for the Standing Rock Sioux Tribe includes a reservation by the Tribe of water rights in the Missouri River sufficient to sustain the purposes for which the Reservation was established – and therefore the Tribe holds, as a property right, water sufficient to sustain the Reservation, now and in the future, as a permanent homeland for the Tribe. *Winters v. United States*, 207 U.S. 564 (1908). This entails both a sufficient quantity and quality of water to meet these beneficial purposes – and impairment of water quality is recognized as a violation of Winter's

doctrine rights. *United States v. Gila River Valley Irrigation District*, 920 F.Supp.1444, 1448 (D. Ariz. 1996). The Tribe relies upon the waters of Lake Oahe for drinking water for tribal members' homes, as well as the hospital, schools, tribal businesses and tribal administrative buildings throughout the Reservation. The Tribe also relies on the waters of Lake Oahe for agriculture – both farming and grazing – as well as industrial purposes.

The establishment of the reservation for the Standing Rock Sioux Tribe also includes rights to hunt, fish and gather on the reservation. *Menominee Tribe v. United States*, 391 U.S. 404 (1968) (treaty setting aside lands for a tribe to be held "as Indian lands are held" included hunting, fishing, and gathering rights, even though treaty was silent regarding those rights); *United States v. Dion*, 476 U.S. 734, 738 (1986). ("Indians enjoy exclusive treaty rights to hunt and fish on lands reserved to them . . . [and] [t]hese rights need not be expressly mentioned in the treaty"). The rule reflects recognition that rights to subsist though hunting, fishing and gathering natural resources were "not much less necessary to the existence of the Indians than the atmosphere they breathed." *United States v. Winans*, 198 U.S. 371, 381 (1905). Tribal water rights under the *Winters* doctrine include a sufficient source of water necessary to support tribal hunting and fishing rights. *United States v. Adair*, 723 F.2d 1394, 1409, 1411 (9th Cir. 1983).

In the Tribe's initial comments, the Tribe identified the threat the Keystone XL Pipeline presented to the Grand River and to the Tribe's own drinking water system and tribal communities of Rock Creek and Little Eagle that are downstream of the pipeline crossing of the Grand River. There is nothing in the Draft SEIS that acknowledges this concern, let alone analyzes the risks, proposes mitigation, or provides any specific response in the event of a spill into the Grand River.

Moreover, in examining the impact to water resources, the FEIS and the Draft SEIS failed to examine the impact on the waters, including the Missouri River and the Grand River as cultural resources. The waters of the Missouri River are sacred to the Tribe, a cultural and spiritual resource that is central to the Tribe's practice of religion. If BLM or the Army Corps had undertaken to consult with the Tribe, they would have learned that the waters of the Missouri River are sacred. They would have learned that our word for water is Mni Wiconi, or water of life, because without water there is no life. They would have learned that the rivers, creeks and streams of the Tribe's ancestral lands were the highways of our past. They would have learned that we still go to the water to pray and to make offering so that all life that is sustained by our water may live. Yet despite the District Court order to better analyze the cultural resources impacted by this Pipeline, nowhere in the Draft SEIS does it acknowledge the cultural resource that is the Missouri River and her tributaries.

The life of the Tribe is closely tied to the waters of the Missouri River, which sustain our people and our economy. The risks presented to these resources must be specifically examined before the BLM may grant any right-of-way or the Army Corps can issue in any permit. This is true even if the risk of harm is infinitesimal. *New York v. Nuclear Regulatory Comm'n*, 681

F.3d 471,482 (D.C. Cir. 2012) (Only if the harm in question is so 'remote and speculative' as to reduce the effective probability to its occurrence to zero may the agency dispense with the consequences portion of the analysis.).

b. The Draft SEIS fails to examine the direct impacts that climate change will have on the Standing Rock Sioux Reservation

In the Tribe's 2014 comments the Tribe detailed the State Department's failure to properly account for the increased greenhouse gas emissions from the extraction of Canadian tar sands crude, enabled by construction of the Keystone XL Pipeline, as well as the State Department's flawed assertion that the Canadian tar sands crude would be transported some other way, and thus the Keystone XL Pipeline would not significantly contribute to greenhouse gas emissions. The Draft SEIS fairs no better.

To be sure, the Draft SEIS acknowledges the impact that climate change will have on tribal communities and in particular the Standing Rock Sioux Tribe. *See*, Draft SEIS 3.10-18. However, the Draft SEIS simply states that tribal communities are "particularly vulnerable" to climate change, it does not conduct the necessary hard look to examine what the annual increase of anywhere between 1.7 million to 178 million metric tons of CO2 will have on tribal communities and tribal resources. *Baltimore Gas & Elec. Co.*, 462 U.S. 87,97 (1983) (quoting *Kleppe v. Sierra Club*, 427 U.S. 390, 410, n.21 (1976)). Further, because the document fails to identify any specific impacts, it cannot identify any measures that TransCanada will take to avoid or mitigate these impacts. The Tribe thinks this is because there is no mitigation for destroying the one and only homeland promised to the Standing Rock Sioux Tribe. This document is simply foretelling a diaspora of tribal communities from the Great Plains.

The United States has a trust responsibility based on the treaties it has entered into with the Standing Rock Sioux Tribe to protect and preserve the Standing Rock Reservation and its resources. This responsibility has been upheld in numerous Supreme Court cases, including the *United States v. Sioux Nation*, 448 U.S. 371 (1980). By allowing the Keystone XL Pipeline to be constructed, the United States will once again undertake an action that will diminish the Standing Rock Sioux Tribe's land and Treaty protected resources, including fish, wildlife and water. This will cause unknown hardships on the Standing Rock Sioux Tribe and result in substantial liabilities for the United States. The Tribe's 2014 comments outlined the obligation of the United States to acknowledge and assess these impacts, and FSEIS's failure to do so, and now the Draft SEIS is simply continuing this failure.

III. Conclusion

The Keystone XL Pipeline will cross major river systems upstream and adjacent to the Standing Rock Indian Reservation, including the Missouri River, Yellowstone River and Grand River. The Tribe possesses reserved water rights to these waters under the *Winters* Doctrine. The withdrawal of water for hydrostatic testing by TransCanada will diminish these waters, the

rights to which our Tribe holds title. The construction of the pipeline will cause degradation of these waters. The potential spill of tar sands crude into these waters would result in the long-term degradation of these waters and cause catastrophic damage to the Standing Rock Sioux Tribe's environment and treaty protected resources.

There is a consensus amongst analysts that the Keystone XL Pipeline will increase the output of Canadian tar sands crude. Both the FSEIS and Draft SEIS confirm that the Keystone XL Pipeline will result in a significant increase in greenhouse gas emissions. This in turn will exacerbate the rate of global climate change. However, neither document examines the specific impacts that this will have on the Standing Rock Sioux Reservation and the Tribe's fish, wildlife, cultural or water resources.

In short, the Keystone XL Pipeline will directly and negatively impact the environmental, economic and cultural resources of the Standing Rock Sioux Tribe. Two Administrations have now failed to adequately assess these impacts. This is true notwithstanding numerous tribes and Tribal organizations identifying these deficiencies and bringing them to the attention of the State Department, the Department of the Interior, and the Army Corps of Engineers. These failures can be directly tied to the federal government's failure to specifically consult with the Tribe on the specific impacts that the Keystone XL Pipeline will have on the Tribe and its resources. It is time that these agencies do the work necessary to assess the true impact of this project on the Tribe and the Tribe's resources.

Sincerely,

Mike Faith, Chairman
Standing Rock Sioux Tribe

XC: File

161298-1

November 18, 2019

Ross Alliston, Keystone XL Program Manager
U.S. Department of State
Office of Environmental Quality and Transboundary Issues
2201 C Street NW
Washington D.C. 20520

RE: Docket No. DOS-2019-0033

To the Department of State:

I write to submit the comments of the Standing Rock Sioux Tribe on the Draft Supplemental Environmental Impact Statement for the Keystone XL Project (October 2019).

The Standing Rock Sioux Tribal Council opposes the Keystone XL Pipeline because it crosses Great Sioux Nation Treaty lands reserved in the 1868 Fort Laramie Treaty and 1851 Fort Laramie Treaty. Keystone XL is designed to transport 870,000 barrels per day of toxie diluted bitumen, posing a significant threat to water, wildlife and cultural resources on our Treaty lands, as well as the Standing Rock Reservation.

The Draft Supplemental Environmental Impact Statement for the Keystone XL Project (Draft SEIS) merely restates the findings in the 2018 Draft SEIS for the Mainline Alternative Route, and the 2014 Final Supplemental Impact Statement for the Keystone XL Project. There is little that is new. The finding of "less than significant impact" in the 2019 draft largely relies on outdated and inadequate analysis contained in the 2014 Final SEIS, and is erroneous.

Specific comments are as follows:

1. The Keystone XL Pipeline Violates the 1868 Fort Laramie Treaty and 1851 Fort Laramie Treaty

Section 3.8.2.4 of the Draft SEIS is entitled "Treaty Lands and Water Rights." This section states "The Keystone XL project crosses treaty lands in southeastern Montana, western South Dakota and northwestern

Nebraska." Draft SEIS p. 3.8-10. That is correct. The State Department acknowledges that the Keystone XL Pipeline crosses Treaty lands, and consequently the Presidential Permit must be denied.

Executive Order 13175 mandates that "Agencies shall respect Indian self-government and sovereignty, honor treaty and other rights, and strive to meet the responsibilities that that arise from the unique legal relationship between the Federal Government and Indian tribal governments." 65 Fed. Reg. 67250, November 6, 2000. As the State Department acknowledges that KXL "crosses Treaty lands," the requirement to honor Treaty rights applies to the Presidential Permit. Consequently, based upon the State Department's own language in section 3.8.2.4 of the Draft SEIS, the Presidential Permit must be denied.

The Standing Rock Sioux Tribe is a signatory to the 1868 Fort Laramie Treaty and the 1851 Fort Laramie Treaty, and KXL violates both Treaties. The vast boundaries of Sioux Country were first codified in Article V of Fort Laramie Treaty of September 17, 1851, as follows;

The territory of the Sioux or Decotah Nation, commencing at the mouth of the White Earth River on the Missouri River: thence in a southwesterly direction to the forks of the Platte River; thence up the north fork of the Platte River to a point known as the Red Butte, or where the road leaves the river; thence along the mountain range known as the Black Hills, to the headwaters of the Heart River; thence down Heart River to its mouth and thence down the Missouri River to the place of beginning. 11 Stat. 749.

Subsequently, Article II of the Fort Laramie Treaty of April 29, 1868, established the Great Sioux Reservation as follows:

The United States agrees that the following district of country, to wit, viz: commencing on the east bank of the Missouri River where the 46th parallel of north latitude crosses the same, thence along low-water mark down said east bank to a point opposite where the northern line of the State of Nebraska strikes the river, thence west across said river, and along the northern line of Nebraska to the 104th degree of longitude west from Greenwich, thence north (to) the 46th parallel of north latitude… thence due east along said parallel to the place of beginning… shall be and the same is, set apart for the absolute and undisturbed use and occupation of the Indians herein named… and the United States now solemnly agrees that no persons, except those herein designated and authorized so to do… shall ever be permitted to pass over, settle upon, or reside in the territory described in this article. 15 Stat. 635

Thus, our Treaty Reservation is comprised of all present-day South Dakota west of the Missouri River. The low water mark of the east bank is the Reservation's eastern boundary – placing the Missouri River within the exterior boundaries of the Great Sioux Reservation. Under Article XVI of the 1868 Fort Laramie Treaty, the Sioux Nation retained aboriginal lands previously recognized as Sioux territory in the 1851 Fort Laramie Treaty –

The United States hereby agrees and stipulates that the country north of the North Platte river and east of the summits of the Big Horn mountains shall be held and considered to be unceded Indian territory, and also stipulates and agrees that no white person or per-sons shall be permitted to settle upon or occupy any portion of the same; or without the consent of the Indians, first had and obtained, to pass through the same. 15 Stat. 639.

Figure 1.2 on page 1-7 of the Draft SEIS shows the route of the Keystone XL Pipeline. Figure 3.8-2 on page 3.8-11 shows the boundaries of the Sioux Nation Treaty Lands as defined by the Indian Claims Commission.

and affirmed by the United States Supreme Court. United States v. Sioux Nation of Indians, 448 U.S. 371, 387 (1980). The Court described the Treaty violations suffered by the Standing Rock Sioux Tribe and Great Sioux Nation - "(a) more ripe and rank case of dishonorable dealings will never, in all probability, be found in our nation's history."

Figures 1.2 and 3.8-2 demonstrate that the route of the Keystone XL Pipeline would traverse Sioux Nation Treaty lands for nearly 400 miles. The Keystone XL Pipeline violates the 1868 Fort Laramie and the 1851 Fort Laramie Treaty. Consequently, the State Department, based upon its own language on page 3.8-10 and its own maps on pages 1-7 and 3.8-2 of the Draft SEIS, must deny the Presidential Permit for the Keystone XL Pipeline.

2. The State Department Failed to Evaluate the Impacts of KXL on Indian Water

With respect to Indian water rights, section 3.8.2.4 of the Draft SEIS provides no evaluation of the potential impacts of construction of Keystone XL, or from an oil spill, on waters subject to the Winters Doctrine claims of Standing Rock and other Tribes. Page 3.8-11 describes the Fort Peck Reservation Water System Act, and that is the only mention of Indian water projects or water rights.

The intake for the Standing Rock Sioux Tribe Municipal, Rural and Industrial Water System is located on the Missouri River, downstream from the proposed crossing of KXL. Our Tribe possesses reserved water rights under the Winters Doctrine to the Missouri River and the Grand River, downstream from the KXL crossings. Our water rights extend to all beneficial uses, including fish and wildlife, cultural, municipal, and agricultural. Although Keystone XL poses risk to our water, the State Department failed to account for the potential impacts of an oil spill to these waters.

During the NEPA process from 2010-2014, the U.S. Environmental Protection Agency repeatedly urged the Department of State to properly evaluate the potential impacts to Indian water rights. The EPA wrote on July 16, 2010, "We recommend that the revised Draft EIS clarify the extent of Indian Country lands potentially impacted by the proposed project… (and) the potential impacts to areas where Tribes may have unadjudicated claims to water bodies that could be affected by spills." EPA Letter to Department of State, July 16, 2010 enclosure p. 6. On June 6, 2011, EPA reiterated its concern that the State Department failed to properly evaluate Keystone XL's potential impact to Tribal waters: "We recommend that the Final EIS evaluate additional mitigation measures that would avoid… impacts through all media (i.e. surface and ground water, soil and air) to… Tribal populations." EPA Letter to Department of State, June 6, 2011.

The State Department failed to properly account for potential impacts to Indian water in the 2014 Final SEIS. The 2019 Draft SEIS fails to remedy this. It states on page 5-39, "In the event that a spill contaminates water supplies used for industrial or irrigation purposes, Keystone has committed to providing an alternate water supply." That is exactly what EPA told the State Department to reject for the 2014 Final SEIS, yet the agency continues to downplay the risk to water, and rely on replacement water supplies.

The State Department improperly relies on old data in the new draft. It states on page 3.6-1 of the Draft SEIS "The 2014 Keystone XL final SEIS discusses water resources along the preferred route. This section supplements the 2014 analysis to include discussion of water resources along the MAR."

Additionally, the region of impact to both surface and groundwater is too narrow. An oil spill in winter, for example, could result in the migration of a significant amount of tar sands for far greater distances than the region of impact outlined in chapter 5 of the Draft SEIS.

The failure to properly account for KXL's environmental impact to our Tribe is also found in chapter 7 of the Draft SEIS, on Cumulative Impacts. Table 7.1 identified the projects subject to cumulative impact analysis. The table excludes the Dakota Access Pipeline. Clearly, there is a cumulative risk to the Standing Rock Indian Reservation from KXL and DAPL. As the region of impact is too narrowly defined, the State Department totally ignored the cumulative risk to our Tribe from DAPL and Keystone XL.

The State Department relies upon data older than 2014 for its evaluation of impacts to water through all but a small portion of the Keystone XL Pipeline, the MAR. The CEQ regulations require use of recent available data, and the State Department fails to do so with respect to surface and ground water claimed under the Winters Doctrine by the Standing Rock Sioux Tribe.

3. The State Department Failed to Engage in Government-to-Government Consultation with the Standing Rock Sioux Tribal Council

Standing Rock's right to government-to-government consultation is a Treaty right. Article XI of the 1868 Fort Laramie Treaty explicitly contemplates consultation in the development of "works of utility or necessity, which may be permitted by the laws of the United States." 15 Stat. 638. The Treaty right of consultation is to be implemented pursuant to Executive Order 13175 on Consultation and Coordination with Indian Tribal Governments. Under E.O. 13175, the Corps of Engineers must –

… work with Indian tribes on a government-to-government basis to address issues concerning Indian tribal self-government, tribal trust resources (and) Indian tribal treaty rights… Each agency shall have an accountable process to ensure meaningful and timely input by tribal officials in the development of regulatory policies… (65 Fed. Reg. 67249-67250).

The term "meaningful" suggests that Tribal views will be incorporated into the decision-making process. The term "timely" requires that Tribal views be solicited at the beginning of the decision-making process. With respect to the Draft SEIS, the Department of States did none of this. There is no documentation in the Draft SEIS of any of the required steps for meaningful consultation. Tribes to whom letters were sent regarding the release of the Draft SEIS on p. 1-23, and Appendix A. The State Department continues to violate the applicable consultation requirements of the Fort Laramie Treaty, Executive Order 13175 on Consultation and Coordination with Indian Tribal Governments and Executive Order 12898 on Environmental Justice.

4. The 2018 Supplemental EIS and the 2014 Final Supplemental EIS Violate Executive Order 12898 on Environmental Justice

Executive Order 12898 requires –

(E)ach Federal agency shall make achieving environmental jus-tice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies and activities on minority populations and low income populations. 59 Fed. Reg. 7629, February 16, 1994.

The Council on Environmental Quality has developed guidance for the implementation of E.O. 12898. The Environmental Justice Guidance requires application of the Executive Order to Tribes. "Each Federal agency should analyze the environmental effects, including human health, economic and social effects of Federal actions, including effects on minority populations, low income populations, and Indian tribes, when such analysis is required by NEPA." CEQ Guidance, p. 4. Thus, NEPA documents must analyze dis-proportionate impacts on both minority communities generally and Indian Tribes. Impacts on Tribes automatically trigger the rigorous analysis and mitigation requirements of E.O. 12898.

The Draft SEIS violates E.O. 12898 in at least two important ways. First, there is no mitigation to the unique impacts suffered by Tribes. This is evidenced in EPA's 2011 letter to the Department of State.

Second, the potential costs and socioeconomic impacts of an oil spill on Tribes is not properly evaluated. The Draft SEIS applies an EJ analysis only to the MAR; it relies upon the 2014 Final SEIS for environmental justice for the remainder of the pipeline, including the area of the Standing Rock Reservation.

The 2014 Final SEIS failed to account for the potential costs of KXL to the Standing Rock Sioux Tribe. The State Department's application of the IMPLAN model contains no quantitative analysis of non-positive socioeconomic impacts of either construction or operations of the Keystone XL Pipeline. The calculations relied upon the positive indicators and failed to incorporate negative factors, such as increased law enforcement costs, potential revenue loss from tourism decline upon an oil spill, etc. Consequently, the environmental justice analysis in the 2014 Final SEIS fails to reflect the net socioeconomic impact of the Keystone XL Pipeline.

5. The Draft SEIS Fails to Require Strict Construction and Operational Standards and Understates the Environmental Impacts of an Oil Spill

The Draft SEIS relies upon current regulations of the U.S. Pipeline and Hazardous Materials Safety Administration (PHMSA) regulations as sufficiently protective of the environment for the construction and operation of the pipeline. The well-respected Pipe-line Safety Trust has noted "recent incident data that suggest there is something fundamentally wrong with the integrity management program as implemented today: significant incidents on hazardous liquid lines within HCA's are on a rising trend over the past several years." Pipeline Safety Trust, Comments Regarding Hazardous Pipeline Safety, docket no. PHMSA-2010-0229, p. 1 available at http://pstrust.org/wp-content/uploads/2015/10/US-Docket-PHMSA-2010-0229-PSTcomments-20160107.pdf, last accessed 2/4/17.

The federal regulations governing pipelines are too weak to be relied upon to protect public health and the environment along the pipeline route. American Petroleum Industry Standards should be required, but the State Department has failed to impose industry best practices for the operation of the Keystone XL Pipeline. The Draft SEIS makes no reference to important API standards that should be imposed. This includes API RP 1133, Guidelines for Onshore Hydrocarbon Pipelines Affecting High Consequence Floodplains; and API RP 1173, Pipeline Safety Management Systems. These best practices must be mandated, but they are not.

Leak detection of harmful tar sands is a significant concern. The State Department does not adequately address this important concern in the Draft SEIS. A 2012 comprehensive leak detection study by PHMSA found that SCADA detected hazardous liquid leaks only 28 percent of the time. PHMSA, Final Report 12-173, Leak Detection Study (2012), p. 2-11.

The discussion in the Draft SEIS on the spill in 2016 near Freeman, South Dakota fails to disclose the shut-off time for that significant release of tar sands into the environment. Clearly, the SCADA system was ineffective in detecting the Freeman spill. Nevertheless, the Draft SEIS lacks any meaningful discussion on the effectiveness of the SCADA system for leak detection. Significantly, the State Department is failing to impose API RP 1175 to ensure compliance with industry best practices for leak detection at Keystone XL.

Similarly, the external monitoring sensors recommended for leak detection by EPA are not included in the Draft SEIS. Keystone XL Shuns Sensors to Detect Leaks, Bloomberg, January 18, 2013, https://www.bloomberg.com/news/articles/2013-06-17/keystone-xl-pipeline-shuns-high-tech-oil-spill-detectors, last accessed 2/4/18. The State Department ignores common sense mitigation measures and downplays the potential harm from a spill of toxic tar sands crude.

In conclusion, the Department of State continues to reveal inadequate consideration of the potential impacts of the Keystone XL Pipeline to the Standing Rock Sioux Tribe. The risk to our water, wildlife and cultural resources has not been properly evaluated. Findings of less than significant impact are not supported by updated, unbiased data. KXL is a violation of the 1868 and 1851 Fort Laramie Treaties. The Presidential Permit must be denied.

Sincerely,

Mike Faith, Jr., Chairman
Standing Rock Sioux Tribe

Yankton Sioux Tribe

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November 18, 2019

M. Ross Alliston
Presidential Permitting Team Leader
U.S. Department of State
Office of Departmental Quality and Transboundary Issues (EQT)
Bureau of Oceans and International Environmental & Scientific Affairs (OES)
2201 C Street NW, Room 2726
Washington, DC 20520

Via Email Only: AllistonMR@state.gov

Re: Response to October 4, 2019 Letter to the Yankton Sioux Tribe Regarding the Draft Supplemental Environmental Impact Statement for the Proposed Keystone XL Pipeline

Dear Mr. Alliston:

I am in receipt of your letter dated October 4, 2019 regarding the availability of the Draft Supplemental Environmental Impact Statement ("DSEIS") prepared on behalf of the State Department to assess potential impacts of the proposed Keystone XL pipeline. Regrettably, I must inform you that the DSEIS and the State Department's treatment of the Yankton Sioux Tribe ("Tribe") over the course of the federal government's review of this project fail to meet requirements imposed by federal laws including (but not limited to) the National Historic Preservation Act ("NHPA"), the National Environmental Policy Act, and Executive Order No. 13175. Despite years of requests for consultation, the Tribe has yet to be meaningfully consulted regarding the impacts of this project. I am therefore re-asserting the Tribe's request for meaningful, government-to-government consultation in accordance to Section 106 of the NHPA.

The Tribe's numerous concerns with the proposed project and the preparation of the DSEIS have been documented through written correspondence and comments to the agency over the better part of a decade, yet these concerns remain unaddressed and unresolved. Such concerns have been submitted to the State Department again today in the form of written comments pursuant to Department of State Public Notice 10920, published at 84 Fed. Reg. 53,214, which are incorporated herein by reference. Furthermore, concerns specific to the Tribe's cultural resources have been detailed in a letter also submitted on this date by Kip Spotted Eagle, Yankton Sioux Tribe Tribal Historic Preservation Officer. I incorporate those cultural resource concerns herein as well.

In order to begin moving towards compliance with Section 106, please contact me and my assistant, Dayla Picotte (daylapicotte@outlook.com), immediately to schedule government-to-government consultation with the General Council, the Tribe's governing body.

Sincerely,

Robert Flying Hawk, Chairman
Business and Claims Committee

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Glenford "Sam" Sully, SECRETARY

B&CC Members:
Greg Courtmoyer Jr.
Robert "Pete" Knows
Derrick Marks
Chris Traverse
Jody Zephier

COMMENTS OF THE YANKTON SIOUX TRIBE
ON THE DRAFT SUPPLEMENTAL ENVIRONMENTAL IMPACT STATEMENT FOR THE PROPOSED KEYSTONE XL PIPELINE

November 18, 2019

INTRODUCTION

The Yankton Sioux Tribe thanks you for this opportunity to submit comments regarding the Draft Supplemental Environmental Impact Statement ("DSEIS") prepared to "analyze[] the impacts related to changes in the [proposed Keystone XL pipeline] Project since 2014, and incorporate[] current information and new studies, as applicable." Notice of Availability of the Draft Supplemental Env'tl Impact Statement for the Proposed Keystone XL Pipeline; Pub. Meeting Announcement, 83 Fed. Reg. 53,215 (Oct. 4, 2019). These comments are made and submitted on behalf of the Yankton Sioux Tribe and the Ihanktonwan Treaty Steering Committee (collectively, the "Tribe").

This proposed project has been scrutinized, criticized, rejected, and unlawfully revived time and again for over a decade, during which time the Tribe's position has not wavered. The Tribe staunchly opposes construction of the proposed Keystone XL pipeline. The proposed route cuts through vast expanses of the Tribe's treaty territory, ancestral territory, and other lands of cultural and historic significance to the Tribe. These affected lands are a sanctuary for all living things, including the plant and animal world, as well as our ancestral sites, ceremonial and burial areas, and rivers and streams, each of which has a spirit. As Indigenous Peoples, our cultures have

a special relationship with these living relatives that spans thousands of years – and that relationship is facing severe peril from destructive fossil fuel projects like the Keystone XL pipeline. Cultural resources are abundant in our treaty and ancestral lands that this project would traverse. The Tribe's concerns specific to cultural resources are discussed in the attached letter from the Tribe's Tribal Historic Preservation Officer, attached hereto as **"Exhibit 1."** Construction of the project would enable the transport of a highly toxic substance through a 36-inch-diameter pipe cutting through the Tribe's natural and cultural resources, placing such resources in imminent threat of the inevitable spill – or, rather, *spills*. At no point over the past decade has TransCanada, now TC Energy, demonstrated that the pipeline is safe and will not spill. This is because no such promise can be made – because even TC Energy knows that, like every pipeline, this pipeline *will spill*.

This pipeline review saga has included comment periods on numerous draft environmental analysis documents to which the Tribe has already responded. As the Tribe has previously pointed out, its concerns have repeatedly fallen on deaf ears. The Tribe therefore finds it necessary to re-submit prior comments that remain unaddressed by the Department of State ("DOS") which are attached hereto as **"Exhibit 2"** and incorporated as if fully set forth herein by reference. While the Tribe does not seek to duplicate its prior, still-unresolved comments, a few points must be reiterated at this juncture.

First and foremost, it is premature and unlawful for DOS to take action on this matter because the agency has yet to fulfill its federally-mandated tribal consultation duties to the Tribe and the agency therefore lacks sufficient information on which to base any decision. To take action without tribal input on a matter that impacts the Tribe as severely as this project does would be arbitrary, capricious, contrary to law, and an abuse of agency discretion in violation of the

Administrative Procedure Act. To date, DOS' purported efforts at tribal consultation with respect to this project have failed rise to the level of *meaningful* consultation. Instead, this process has been woefully inadequate, encompassing many of the flaws identified by the United States Government Accountability Office in its March 2019 report entitled "Tribal Consultation – Additional Federal Actions Needed for Infrastructure Projects." *See* https://www.gao.gov/assets/700/697694.pdf. The Tribe hereby requests, for the fourth time through public comment in less than two years (in addition to requests through direct correspondence), that DOS comply with federal law and engage in meaningful consultation with the Tribe.[1]

This process must halt until such time as tribes have been meaningfully consulted in accordance with the National Historic Preservation Act, the National Environmental Policy Act, and Executive Order No. 13175. The Tribe requests that DOS initiate and engage in consultation in accordance to the *Ihanktonwan* Consultation *Wo'ope*, Yankton Sioux Tribal protocols that govern consultation with federal agencies. A copy of the *Ihanktonwan* Consultation *Wo'ope* is attached hereto as **"Exhibit 3."**

Moreover, DOS has a fiduciary duty to the Tribe not only to engage in consultation, but to protect tribal treaty rights. *See Seminole Nation v. United States*, 316 U.S. 286 (1942); *Nw. Sea Farms, Inc. v. U.S. Army Corps of Engineers*, 931 F. Supp. 1515 (W.D. Wash. 1996); *Muckleshoot Indian Tribe v. Hall*, 698 F. Supp. 1504 (W.D. Wash. 1988); *No Oilport! v. Carter*, 520 F. Supp. 334, 371-72 (W.D. Wash. 1981). The Tribe is aware of no measures that have been or will be

[1] The Tribe asserted its right to consultation in its June 25, 2018 Scoping Comments (p. 2), its August 29, 2018 Comments on the Draft Environmental Assessment (p. 4), and its November 8, 2018 Comments (p.3). *See* Ex. 1.

taken to ensure protection of its treaty rights, despite the grave dangers posed by this project which cuts through the very heart of the Tribe's 1851 Fort Laramie Treaty Territory.

Furthermore, the DSEIS fails to comply with the federal court order that prompted its preparation. DOS published notice of its intent to prepare an SEIS for the proposed Keystone XL pipeline on December 3, 2018 "[i]n response to" an order issued November 8, 2018, by the Federal District Court for the District of Montana in *Indigenous Envt'l Network v. United States Dep't of State*, 347 F. Supp. 3d 561 (D. Mont. 2018). 83 Fed. Reg. 62,398. The Court found that

> **[DOS'] analysis of the following issues fell short of a 'hard look' and requires a supplement to the 2014 SEIS in order to comply with its obligations under NEPA:**
>
> - The **effects of current oil prices** on the viability of Keystone (Section I (C)(2)(a));
> - The **cumulative effects of greenhouse gas emissions** from the Alberta Clipper expansion and Keystone (Section I(C)(2)(c));
> - A **survey of potential cultural resources** contained in the 1,038 acres not addressed in the 2014 SEIS (Section I(E)(1)); and
> - An **updated modeling of potential oil spills and recommended mitigation measures** (Section I(E)(3)).

Indigenous Envt'l Network v. United States Dep't of State, 347 F. Supp. 3d at 590 (emphasis added). The Court further found that DOS "failed to comply with NEPA and the APA when it disregarded prior factual findings related to **climate change** and reversed course." *Id.* at 591 (emphasis added). The DSEIS published October 4, 2019 fails to cure these defects. Mysteriously, the Notice of Availability issued October 4, 2019 neglects to mention the federal court order that pointed out these deficiencies. However, such deficiencies nevertheless existed with the previous iteration of the EIS and they persist with this most recent supplement.

Comments of the Yankton Sioux Tribe regarding DSEIS
November 18, 2019

Among the Tribe's grave concerns regarding the proposed Keystone XL pipeline is the high rate of missing and murdered Indigenous women and girls (often referred to as "MMIW") that corresponds with the establishment of man camps used to construct major infrastructure projects. Sex trafficking of vulnerable women and children is rampant among man camps for a variety of well-documented reasons. *See* Kathleen Finn, Erica Gajda, Thomas Perrin, and Carla Fredericks, Responsible Resource Development and Prevention of Sex Trafficking: Safeguarding Native Women and Children on the Fort Berthold Reservation, American Indian Law Clinic, Univ. of Colo. Law School (Feb. 4, 2016), available at: https://scholar.law.colorado.edu/articles/629/; Carla F. Fredericks, Kate Finn, Erica Gajda, and Jesse Heibel, Responsible Resource Development: A Strategic Plan to Consider Social and Cultural Impacts of Tribal Extractive Industry Development, Harvard Journal of Law & Gender, available at https://harvardjlg.com/2018/10/responsible-resource-development-a-strategic-plan-to-consider-social-and-cultural-impacts-of-tribal-extractive-industry-development/.

The threat man camps pose to tribal communities in South Dakota has necessitated the passage of tribal legislation and the undertaking of a cultural risk assessment to document the dangers pipeline construction and corresponding influx of non-resident men pose to Native women in our territories. Resolutions of the Yankton Sioux Tribe and the Rosebud Sioux Tribe are attached as **"Exhibit 4."** So great is the Tribe's concern regarding man camps that it has retained an expert witness to testify to the dangers they pose at the currently-pending South Dakota Water Management Board proceedings regarding water use for the proposed pipeline in an effort to protect its vulnerable population from man camps. Such dangers are amplified by the lack of resources and limited capacity of our tribal law enforcement agencies and the jurisdictional complexities of crimes committed in or near Indian country.

Furthermore, a traditional Dakota Society (*Okodakiciye*) of the Yankton, the Brave Heart Society, is conducting a Cultural Risk Socioeconomic Impact Survey on lands adjacent to the pipeline corridor in order to measure and map the vulnerable communities, lands, waters, populations, and reservations that will be impacted if the pipeline is built. The Tribe intends to share data gathered through this Survey with DOS through meaningful consultation with the hope that it can be used to better inform DOS and other federal agencies of the devastating potential impacts of this project before it is too late.

CONCLUSION

As the Tribe has stated time and again, the entire NEPA process must be informed by meaningful tribal consultation. Meaningful consultation with the Tribe regarding this project, however, has not yet occurred – despite the Tribe's repeated requests. Contact should be made immediately to Yankton Sioux Tribe Chairman Robert Flying Hawk and to Dayla Picotte, Office of the Chairman, to initiate the consultation process with the Tribe.

For the reasons identified herein, the Draft SEIS still fails to meet the standards set by NEPA and the NHPA and it falls far short of DOS' court-ordered obligations. Moreover, the erroneous conclusions reached regarding impacts of the proposed action are based on an arbitrary and capricious process that failed to comply with the law. The Tribe strongly disagrees with the impact ratings in the DSEIS, particularly with respect to cumulative impacts. If constructed, this project **will have significant, detrimental impacts** on the Tribe, its resources, its culture, its spirituality, and the environment. The decision to grant a Presidential Permit as well as all other federal decisions authorizing construction or operation of the Keystone XL pipeline must be reversed.

Comments of the Yankton Sioux Tribe regarding DSEIS
November 18, 2019

The Tribe appreciates the opportunity to provide these comments to DOS and fully expects DOS proceed with meaningful consultation and take action in accordance with the foregoing comments.

November 18, 2019

M. Ross Alliston
Presidential Permitting Team Leader
U.S. Department of State
Office of Departmental Quality and Transboundary Issues (EQT)
Bureau of Oceans and International Environmental & Scientific Affairs (OES)
2201 C Street NW, Room 2726
Washington, DC 20520

Via Email Only: AllistonMR@state.gov

Re: Response to October 4, 2019 Letter to the Yankton Sioux Tribe Regarding the Draft Supplemental Environmental Impact Statement for the Proposed Keystone XL Pipeline

Dear Mr. Alliston:

As the Yankton Sioux Tribe's Tribal Historic Preservation Officer ("YST-THPO"), I am writing in response to your letter dated October 4, 2019, addressed to Yankton Sioux Tribal Chairman Robert Flying Hawk. The October 4 letter announced the availability of the Draft Supplemental Environmental Impact Statement ("DSEIS") for the proposed Keystone XL pipeline ("KXL").

I wish to alert you to several problematic issues with respect to the DSEIS. I have reviewed the DSEIS and identified deficiencies in 1) analysis; 2) locational specifics; and 3) tribal participation in consultation under Section 106 of the National Historic Preservation Act.

1) Flawed Cultural Resource Identification, Assessment, and Analysis

We consider the analysis of the cultural resources by scholastically trained, non-Native researchers and investigators to be erroneous and incomplete. As the Yankton Sioux Tribe ("Tribe") is a Tribal Nation with an academically undeterminable amount of time of occupation on the Northern Plains, there is a need for clarity in the theoretical conventions and determinations of eligibility of cultural resources for the National Register of Historic Places ("NRHP"). Professed hypotheses by archaeologists that result in recordation and evaluation of sites that have traditional cultural significance are the YST-THPO's main point of contention with the DSEIS. Additionally, when academic support was garnered early on by ethnographers

and historians and supplemented to support the evaluation efforts as required under the Section 106 process, these academic professionals possessed no knowledge of the Dakota, Lakota, and Nakota language and therefore their research is flawed and based on a misguided presumption of expertise. We maintain that our time and use of the Northern Plains landscape as a physical and cultural environment have been continuous since time immemorial.

2) Lack of Precise Locational Data

Construction of the pipeline across the Lakota, Dakota, and Nakota cultural environment of the Northern Plains has been contested since initial correspondence with TransCanada's (now TC Energy) management regarding the location of the pipeline footprint. The Yankton Sioux Tribe is aware that, when the Rosebud Sioux Tribe Historic Preservation Officer (with whom I, as the YST-THPO, work closely) specifically requested maps with legal locational information of the right of way ("ROW") and pipeline trench placement, the request was rebuffed for two alleged reasons: a) that, due to land acquisition issues, the company did not know where the pipeline was actually going to be located; and b) that locational information was a "national security" issue and must therefore be withheld. These reasons do not justify depriving tribes of information that is necessary to conduct a proper assessment of potential impacts to cultural resources in accordance with the National Historic Preservation Act and the National Environmental Policy Act.

We have never been afforded information as to the precise location within our traditional homeland and territory where the pipeline will be placed. Platted 1:24,000 USGS 7.5' maps with legible contours, landscape features, names of watercourses, and visible/discernible watershed directional flow are necessary to enable the Tribe to provide meaningful input on the pipeline's potential impacts, an in particular, its impacts on the Tribe's cultural resources. I hereby request that such maps be provided to the Tribe. The pipeline drawings contained in previously received correspondence, including letters and numerous draft, supplemental, and purportedly final environmental assessments and environmental impact statements, depict broadly stroked locations on relatively small maps. The width of the ROW as drawn on the maps provided is insufficient to determine proximity of the project's footprint to sacred sites and sites of significance to the Dakota and other Tribal peoples.

3) Improper Delegation of Section 106 Consultation Duties

The consultation process has been delegated to third party contractors for the Department of State ("DOS"). This is a flagrant violation of the spirit of Section 106. A federal agency is required to make a "reasonable and good faith effort" to identify Indian tribes or Native Hawaiian Organizations that should be consulted and provide them a "reasonable opportunity" to share their views in all steps of the Section 106 process. The Section 106 process requires consultation with Indian Tribes on federal undertakings, *i.e.*, federally permitted, licensed, or funded activities that potentially affect sites that are culturally significant to Indian tribes. 36 C.F.R. § 800.2(c)(2); 54 U.S.C. § 302707 (properties "of traditional religious and cultural importance to" a Tribe may be included on the NRHP, and federal agencies "shall consult with

any Indian Tribe that attaches religious or cultural significance" to such properties). Consultation must occur regarding sites with "religious and cultural significance" even if they occur on ancestral or ceded land. 36 C.F.R. § 800.2(c)(2)(II)(D).

Due to uncertainty regarding the exact location of the pipeline footprint, in light of the numerous changes to the pipeline's proposed route, and given the absence of tribal investigation of the project footprint, the DSEIS cultural resource findings and DOS' recommendations of eligibility (or ineligibility) of cultural resource sites to the NRHP are flawed and incomplete. If DOS had engaged in direct, meaningful, government-to-government consultation with the Tribe early in the Section 106 process as required by law, these fatal flaws with the DSEIS could have been avoided or rectified.

Thank you for your time and consideration of this letter. I hope to participate in meaningful, government-to-government consultation between DOS and the Yankton Sioux Tribe's General Council, the Tribe's governing body, regarding this proposed project in the immediate future.

Sincerely,

Kip Spotted Eagle
Tribal Historic Preservation Officer
Yankton Sioux Tribe

E.2.3 Elected Officials

Governor Steve Bullock, State of Montana

OFFICE OF THE GOVERNOR
STATE OF MONTANA

STEVE BULLOCK
GOVERNOR

MIKE COONEY
LT. GOVERNOR

November 18, 2019

U.S. Department of State
2201 C Street NW
Washington, DC 20520

RE: Keystone XL Pipeline DSEIS, docket number DOS-2019-0033

To whom it may concern:

I am writing to submit comments on behalf of the State of Montana on the Draft Supplemental Environmental Impact Statement (Draft SEIS) for the Proposed Keystone XL Pipeline. Dating back to my time serving as Montana's Attorney General and throughout my two terms as Governor I have consistently expressed my view that development of Keystone XL must take into account the safety and security of the pipeline, the workers who will construct it, and the communities it will pass through. Twice I have written the Army Corps of Engineers expressing concern over the lack of adequate tribal consultation and the lack of analysis of potential impacts to water supplies associated with stream and river crossings and cultural resources in the State of Montana. In May of this year I also wrote to Chair Neumayr of the White House Council on Environmental Quality asking for closer coordination with the state, a timeline for outstanding federal permitting and environmental review decisions for the project, plans to address known deficiencies with water supply impacts and provisions of the National Historic Preservation Act, the need to address the impact of greenhouse gas emissions and climate change, and federal agency plans to re-initiate and complete tribal consultation requirements.

You can imagine my frustration upon learning of the finalization of this Draft SEIS through outreach from TC Energy just days ahead of the federal agencies publishing their findings in the Federal Register. Since publishing the Draft SEIS, the federal permitting agencies have held only a single open house in Billings, MT for the public, offering them neither an opportunity to comment nor a formal presentation. Moreover, the federal agencies have relegated our state agencies and our tribal nations—each of whom have an important role in the permitting and construction of a project of this magnitude—to mere stakeholders in the federal agencies' process for outreach and environmental review. This level of coordination is wholly inadequate and reflects a dereliction of the core responsibilities required by law to co-sovereigns. It also undermines the State Department's efforts to fulfill its responsibilities under the National Environmental Policy Act (NEPA) and National Historic Preservation Act in a timely and adequate manner.

STATE CAPITOL • P.O. BOX 200801 • HELENA, MONTANA 59620-0801
TELEPHONE: 406-444-3111 • FAX: 406-444-5529 • WEBSITE: WWW.MT.GOV

NEPA requires federal agencies take a "hard look" at their proposals in light of available information, analysis, and the potential for environmental impacts. In our review, the state concludes that the Draft SEIS falls short of this requirement and remains deficient in several important ways. The following comments reflect the consolidated views of the Montana Departments of Environmental Quality, Fish, Wildlife and Parks (FWP) and Department of Natural Resources and Conservation (DNRC).

Potential Spill Impacts and Response:

First and foremost, we are deeply troubled by the failure of the Draft SEIS to adequately analyze potential impacts from a spill to water supplies based on the past experiences of spills in 2011 and 2015 on the Yellowstone River in Montana from smaller-diameter pipelines than the Proposed Project. By arbitrarily setting a 40-mile maximum spill distance and failing to analyze winter ice conditions, Montana is concerned that the State Department has under-reported the potential spill impacts in the Draft SEIS. It is concerning that the two Federal agencies involved in this analysis acknowledge two separate oil spills in Montana that have traveled further than the Draft SEIS analysis area of 40 river-miles, particularly due to the observations of oil impacts to land and vegetation 72 miles downstream from the Laurel spill. We note on the Missouri River that the water intake for the Assiniboine & Sioux Rural Water Supply System and the Dry Prairie Rural Water System lies approximately 57 miles from the proposed river crossing. How can the analysis in the SEIS be limited to only 40 river-miles while the document itself cites two recent spills in Montana that have demonstrated that impacts can occur at a greater distance? Moreover, why was an analysis of potential for scour impacts associated with flooding and channel migration completed for the Missouri River and not the Yellowstone River where two prior spills occurred in flood conditions?

Montana finds no credible basis for the explanation that spill responses would typically limit the distance of impacts to 40 miles. Any analysis should be completed using all the possible spill response times specified in 49 CFR 194.115(b). We further note that the state has not been consulted regarding Spill Response Plans referenced in the Draft SEIS. The State of Montana requests the U.S. Department of State require TC Energy to provide local, county, state and tribal nation emergency response agencies an opportunity to review and offer comment to these Response Plans. With two pipelines breaching in the Yellowstone River over the past eight years, the state has, unfortunately, gained valuable experience in responding to pipeline spills and believes local, county, state and tribal nation emergency response agencies can help assist in making these Response Plans more valuable and useful if they were ever needed to be deployed.

Moreover, Chapter 5 of the Draft SEIS fails to analyze a spill scenario of an iced-over river condition. The only mention of this type of scenario is the reference to the facts regarding the Bridger pipeline spill in Montana in 2015. This oversight needs to be corrected in the Draft SEIS to analyze and disclose to the public the potential impacts from a spill into an iced-over river. Ice cover, commonly about 18-inches thick along the Missouri and Yellowstone Rivers in winter, not only affects flow regimes but also impacts the rate of volatilization of known chemical contaminants such as benzene. Montana further notes that modeling of potential transports of contaminants from oil spills using benzene, a highly toxic chemical compound for human health,

may understate transport distances in river systems of contaminants due to benzene being the least persistent in the environment and most volatile of the known contaminants of concern expected to occur in materials transported by Keystone XL. In contrast to other contaminants, benzene evaporates when river turbulence exposes the dispersed molecules to the air. This becomes an important factor to consider in different seasons, with higher temperatures in the summer increasing volatility, and with winter conditions lowering volatility and limiting exposure to air during ice over.

In several places, the Draft SEIS conducts analysis of the Pipeline and Hazardous Materials Safety Administration incident database and statistics to characterize risks. It omits any relevant background on causes, impacts and remedial actions related to recent spills involving the project proponent in North Dakota (2019) and South Dakota (2018). This data and analysis should be updated to reflect 2018 and 2019 incidents.

In order for the state to have an independent perspective on potential spill impacts to irrigation and drinking water supplies the Montana Department of Natural Resources and Conservation commissioned an engineering study that identifies the potentially impacted water infrastructure of Eastern Montana, evaluates factors that determine the resiliency of surface water intakes to contaminant spills, conducts preliminary modeling of spill scenarios and identifies possible alternative solutions to increase resiliency and mitigate potential impacts. The Water Supply Intake Resilience Analysis completed by Bartlett & West, Newfields and the DNRC is attached here and incorporated in full as part of the state's comments. It is also available online: http://dnrc.mt.gov/divisions/cardd/docs/publications/eastern-mt-water-supply-intake-resilienceanalysis10302019.pdf. The state emphasizes that the study should be viewed as relevant information to the concerns raised regarding potential water supply impacts in these comments, but should also be considered as preliminary and not, in and of itself, satisfactory for meeting the requirements of finalizing a thorough environmental review. Caution should be used when interpreting the results of the study to avoid drawing conclusions out of context.

The analysis confirms that contemporary safety standards for the design, construction and operation of the pipeline have been met by the project and that proposed, shutoff valve locations, Horizontal Directional Drilling (HDD) to locate pipeline at depths of 50-70 feet below riverbeds, monitoring and other efforts serve to minimize the risks of potential spills. Nevertheless, modeling completed suggests that spills at relatively low volumes under the right conditions have remote potential to impact key surface drinking water supply systems serving the Fort Peck Assiniboine Sioux and Dry Prairie Water Systems as well as the city of Glendive and nearby irrigation users. The study explores several mitigation alternatives that can further reduce risks that should be considered in coordination with any final permitting decisions. These include siting alternate intakes upstream of the pipeline crossing, building reserve capacity with onsite raw water ponds, having temporary piping available for emergency deployment, and improving drinking water treatment and monitoring systems. The City of Glendive water intake improved their monitoring and treatment technology following the Bridger pipeline spill to include a MS1200 on-line oil in water analyzer and temporary granular activated carbon technology available for rapid deployment in the event of a spill. Due to the relatively low costs and effectiveness of this monitoring and treatment technology, the state believes similar technology

should be a minimum mitigation requirement of any authorizations finalized by the federal agencies in connection with the proposed project for water intakes on the Missouri River serving the Ft. Peck and Assiniboine Sioux Reservation and the Dry Prairie Rural Water System.

Cultural Resource Impacts:

The state wishes to acknowledge significant efforts to resurvey areas for cultural resources from milepost 0 to 77 during the summer of 2019 north of the Missouri River to address known deficiencies from prior efforts. This re-inventory resulted in the documentation of additional historic and precontact archaeological sites and locations of tribal nation importance within and proximal to the proposed project's right of way. The state believes the Draft SEIS should provide a rationale for the 2019 re-inspection of this specific section and should discuss whether the results of the re-inspection suggest that additional sections of the centerline and/or associated facilities also need re-inspection. Any final SEIS should confirm whether the cultural resource inventories conducted prior to 2014 on other sections are complete and valid.

There are a number of places where the Draft SEIS mischaracterizes impacts to cultural resources or incorrectly conflates NEPA terminology and practice with that of requirements arising from Section 106 of the National Historic Preservation Act. For instance, the No Action alternative in Section 4.9 ignores the testing and mitigations that have already begun across a vast number of cultural sites and historic properties along the project ROW. As such, there has already been an impact to the integrity of these sites, regardless if the No Action Alternative is selected. Sites were sometimes tested and mitigated without any participation or consultation with local tribes (i.e., 24VL938), making tribal interpretation impossible. Mitigations may be considered to have minimized impacts, but impacts have occurred, and it is inaccurate to state otherwise. Section 4 incorrectly characterizes indirect effects from construction activities. Under Section 106, anything that affects the integrity of a site is a direct impact. Just because an impact happens outside of the ROW or construction corridor does not make the impact secondary. If integrity of a site is impacted, it is a direct impact. It may be helpful to differentiate between "impacts" and "adverse effects." On pages 12 and 66, the State Department confuses concepts related to mitigation and treatment of cultural resource sites. Avoidance of impacts is referred to as 'treatment,' while resolution of unavoidable impacts is referred to as mitigation.

Fish and Wildlife Resources and Impacts:

Montana Fish, Wildlife and Parks (FWP) requests the federal agencies and TC Energy coordinate with state officials to reduce potential conflicts with federally endangered pallid sturgeon recovery actions. Pallid sturgeon (adult & juvenile) spawning migrations and overwintering distribution have been documented in the Yellowstone River upstream of Intake from 2014-2019 and natural passage via the side channel occurred in 2014, 2016 & 2017 in addition to translocation from 2017-2019 (see attached map). Planners need to be aware of a proposal to implement test flows from Fort Peck Dam to benefit pallid sturgeon. These test flows could be implemented as early as 2021 but more likely 2022. Additionally, FWP requests that mainstem boring for HDD activities not occur during pallid sturgeon spawning periods from April 15 to June 30 as known pallid sturgeon spawning areas overlap with the proposed bore

locations. FWP further requests TC energy consider boring under all creeks with documented fisheries in Montana, including but not limited to: Pennel, Sandstone and Little Beaver Creeks (Fallon County); and Boxelder Creek (Carter County).

FWP also requests that TC Energy consult with the Department on changes in transmission and distribution lines from previously-identified routes required to support the proposed project. FWP is able to provide updated GIS layers relative to wildlife distribution, winter range, migration corridors etc., as well as most recent species-specific occurrence data that the Natural Heritage Program manages within the Keystone XL project footprint to assist TC Energy and their partners in developing infrastructure in a manner that minimizes impacts to wildlife and habitat.

Additional Comments:

There are several places where the Draft EIS should rely upon contemporary data sets and policy when describing market conditions and trends. These include using the 2019 EIA International Outlook instead of 2017 and 2018, and acknowledging the recent Alberta curtailment policy/production cap that was instituted in 2019 and its effect on WCSB crude oil prices, including contemporary market impacts and those projected in the future.

The State of Montana appreciates the additional analysis regarding greenhouse gases and climate change. Impacts expressed in million metric tons of carbon dioxide equivalent per year may not be comprehensible to the public or decision makers. As required by 40 CFR Section 1502.1, an environmental impact statement is more than a disclosure document. An EIS must translate technical data into terms that render it an effective disclosure of the environmental impacts of a proposed project to all of its intended readership. Although no longer required by CEQ NEPA guidance, an effective way to translate the impacts of additional greenhouse gases would be by explaining the impacts in terms of the economic costs associated with those impacts.

The State of Montana would also like clarification on why the U.S. Department of State has led the preparation of this NEPA document given there is no longer any action before the Department with this Project. Montana's understanding of 40 CFR Section 1501.5 would dictate that one of the three federal agencies who has a permitting decision before them and mentioned on page S-1 should be leading the NEPA document and the other remaining federal agencies should be co-leads or cooperating agencies. We note that the structure of the Summary section under S.3 Federal Decisions does not list any remaining decision for the U.S. Department of State. There is no concise and consistent explanation to the public within the Draft SEIS of the reason the U.S. Department of State should be the lead federal agency.

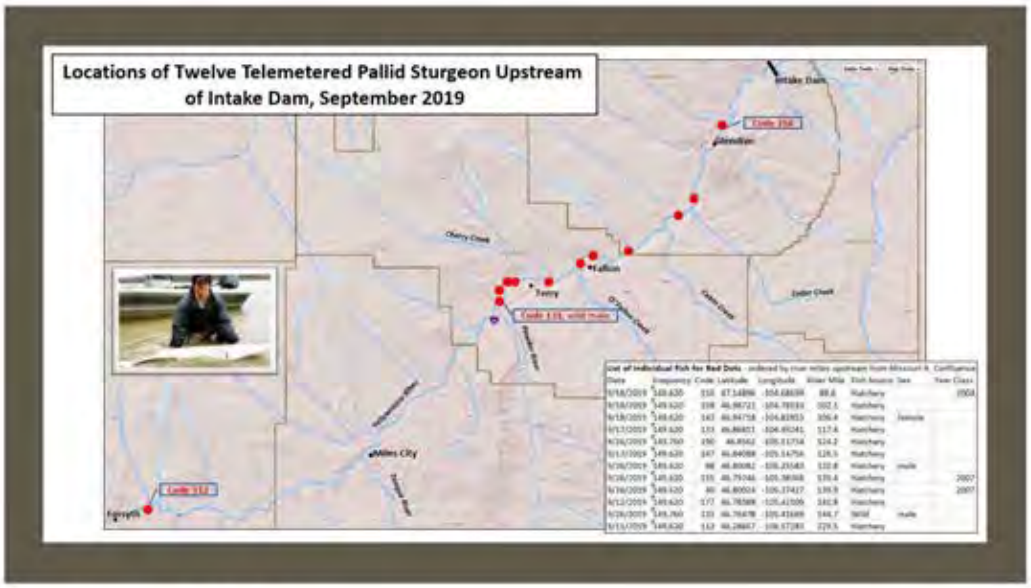
Thank you for your consideration of the comments of the State of Montana. We hope the State Department and the cooperating federal agencies are able to complete a full analysis of the project impacts to inform the public and ensure potential risks are fully mitigated. If you have additional questions regarding these comments please contact Patrick Holmes, Patrick.holmes@mt.gov of my office and Craig Jones, crajones@mt.gov, from the Montana Department of Environmental Quality.

Sincerely,

STEVE BULLOCK
Governor

Attachments:

Water Supply Intake Resilience Analysis (October 2019), DNRC, Barlett & West, Newfields
Map – Pallid Sturgeon Observation



Key Points for Telemetered Pallid Sturgeon:

1) Juvenile and at least one adult male (code 131) are occupying the Yellowstone River upstream of Intake dam, during the spawning period and into the fall period.
2) Until this year, all adult pallids upstream of Intake (translocated or natural passage through the side channel at Intake) have migrated back downstream of the dam following the migration period (May-July).

3) Fish have been relatively non-migratory during the last month, they will likely winter in general locations observed in September (demonstrated by fish located upstream of Intake during fall-winter period in 2018).
4) Fish are occupying the Yellowstone River upstream of Intake Dam during fall period which is the general construction window for the majority of 124 or 310 stream projects.
5) Some of these individual juvenile fish have been upstream of Intake for more than one year; code 191 was translocated upstream of Intake in May 2018.
6) Apex migrations for these fish during the spawning period was generally upstream of current locations.

Senator Jason Small, 66th Montana Legislature

PO BOX 201706
Helena, MT 59620-1706
(406) 444-3064
FAX (406) 444-3036

State-Tribal Relations Committee
66th Montana Legislature

November 12, 2019

U.S. Senator Jon Tester
311 Hart Senate Office Building
Washington, DC 20510-2604

U.S. Senator Steve Daines
320 Hart Senate Office Building
Washington, D.C. 20510

U.S. Representative Greg Gianforte
1222 Longworth HOB
Washington, DC 20515

Dear Senator Tester, Senator Daines, and Representative Gianforte,

The Montana Legislature's State-Tribal Relations Committee respectfully requests that you urge the U.S. Department of State to conduct a more rigorous and meaningful public comment process for the draft supplemental environmental impact statement (SEIS) recently released for the proposed pipeline in northeast Montana.

Scheduling only one public meeting in the country is hardly sufficient for a project with the potential for broad impacts. Additionally, the format of the Department of State's October 29 meeting in Billings provided limited information to the public and did not afford participants the opportunity to listen to the comments of other stakeholders. The lack of a formal presentation and a forum in which attendees could publicly provide input is inconsistent with past practices and denies stakeholders a chance to develop common ground and understanding.

Per discussions with members of the Fort Belknap Indian Community and the Fort Peck Tribes, we are particularly concerned with the lack of formal consultation with tribal governments whose natural and cultural resources could be significantly impacted.

For these reasons, we ask you to take immediate action to ask the Department of State to seek further public comment and consultation with tribes on this important matter.

Sincerely,

Jason Small

Sen. Jason Small, Chairman

cc: Ross Alliston, U.S. Department of State

C10106 9317hxxb

State Representative Bridget Smith, HD 31

Several reasons support the people's demand to disallow construction of the TransCanada Keystone Pipeline, L.P. (Keystone) at the current proposed location. First, the pipeline would set upstream of the Fort Peck Assiniboine Sioux Drinking Water Project (FPASDWP) and second, the pipeline would be too close to the spillway of the Fort Peck Dam. If the pipeline were placed at that location, then the entire water system and the survival of the relevant communities rest in great peril. A pipeline leak would devastate the citizens of Eastern Montana. To place this pipeline where it would jeopardize thousands of American citizens only to serve foreign oil needs and corporate profits is not only immoral, but criminally irresponsible. The Fort Peck Tribes offered alternative solutions to mitigate the potential damage and issued a resolution to allow the keystone to follow the existing route of the Northern Boarder Pipeline, of which TransCanada is the primary owner.

This established, permitted route offers a more practical solution and avoids ruining new ground. To use the currently permitted route confines the disturbance to the area previously developed by the Northern Border Pipeline. This route would be east of the FPASDWP, safeguarding the drinking and irrigation water for Eastern Montana. The existing right-of-way contains other oil pipelines, and thus, eliminates additional degradation of our ecosystem. Joining the permitted route mitigates costs of additional historic and cultural studies and avoids the risk of subsequent litigation. Keep in mind, the US government carries a fiduciary responsibility to protect the water of Assiniboine and Sioux. It is absurd to allow this corporation to crisscross Montana only to serve corporate interests while jeopardizing the people of that entire region of Montana.

I am the State Representative for House District 31 that presented House Bill 271. This bill provided a solution for the Keystone, The Fort Peck Assiniboine Sioux Tribe and the citizens, farmers and ranchers of Eastern Montana.

The sole argument for the construction of the Keystone is money. The tax dollars do amount to 80 million, which is sorely needed by the counties of the proposed route. I believe an equitable solution to the distribution of the tax dollars can be created to assist the counties.

Other than rerouting the Keystone, the only reasonable approach is that the Army Cory of Engineers and the Bureau of Land Management deny the necessary permits required of TransCanada.

State Rep. Bridget Smith, HD31

E.2.4 Non-governmental Organizations

Basin Electric Power Cooperative

BASIN ELECTRIC POWER COOPERATIVE
A Touchstone Energy® Cooperative

November 18, 2019

The Honorable Michael R. Pompeo
Secretary
U.S. Department of State
2201 C Street, NW
Washington, DC 20520

Docket ID: DOS-2019-0033

Re: Draft Supplemental Environmental Impact Statement for the Proposed Keystone XL Pipeline

Dear Secretary Pompeo:

Basin Electric Power Cooperative (Basin Electric) appreciates this opportunity to submit comments in support of the Draft Supplemental Environmental Impact Statement (Draft SEIS) for the proposed Keystone XL Pipeline. Basin Electric is a not-for-profit regional wholesale electric generation and transmission cooperative owned by 141-member cooperatives that has been in operation since 1961.

Basin Electric provides wholesale power to member rural electric systems in nine States: Colorado, Iowa, Minnesota, Montana, Nebraska, New Mexico, North Dakota, South Dakota, and Wyoming. Accordingly, the proposed Keystone XL pipeline will travel through several of our cooperative member service territories. Specifically, the compressor stations for the proposed pipeline will be among the largest electrical loads for our members, and is an important factor in planning for the future of electricity supply in this region.

We have supported the proposed Keystone XL pipeline since the State Department first released its findings several years ago that the project would have minimal environmental impact and is in the national interest. Basin Electric continues to support the project with the release of the Draft SEIS. As North American oil production continues to increase, particularly with respect to the Bakken shale formation, the proposed project represents a vital oil transportation link that will allow for increased energy supply and reliable delivery of oil to the global market. As recent geopolitical events have indicated, the United States' and Canada's roles as energy producers have become increasingly more important, and the Keystone XL pipeline is a critical piece of infrastructure to maintain that role.

We have long supported an "all of the above" energy strategy for the United States, and the Keystone XL pipeline would play an integral role in enhancing our nation's energy security. Basin Electric supports the completion of this important infrastructure.

Thank you again for the opportunity to submit comment.

Sincerely,

Paul M. Sukut
CEO & General Manager

1717 East Interstate Avenue Bismarck, ND 58503 701.223.0441 | Fax 701.557.5336 | basinelectric.com
Equal Employment Opportunity Employer

Bold Nebraska

Public Comments on Keystone XL Pipeline

ID: DOS-2019-0033

Total comments: 1,111 (addendum to earlier submission)

Collected online at:
https://actionnetwork.org/petitions/tell-the-state-dept-no-keystone-xl-pipeline/

The full text of the comment that signatories signed onto is below. Many signatories also composed unique comments, which appear in the column at far right. (*Identifying contact information -- address, email are redacted for privacy purposes.):

To:
Ross Alliston, Keystone XL Program Manager
Office of Environmental Quality and Transboundary Issues
U.S. Department of State
2201 C Street NW
Washington, DC 20520

Re: DOS-2019-0033

Mr. Alliston,

The State Department's draft Environmental Impact Statement (EIS) purports to analyze, among other things, the new "Mainline Alternative Route" through Nebraska. But in reality, it merely collects some slapdash surveys conducted last summer on the new route. That route had never over the past ten years undergone any substantial review of environmental or cultural resources, such as Tribal sacred sites, before it was approved by the Nebraska Public Service Commission in November 2017.

This Trump State Department-led review also furthers an outrageous violation of the due process rights of landowners on the recently chosen "alternative" route in Nebraska, who never knew they were facing

a tar sands pipeline across their farms, and had no opportunity as impacted landowners to object in any of the public hearings or official reviews during the Public Service Commission process.

Of critical importance, the draft report also concedes that there would be adverse impacts to the land on the Tanderup Farm in Neligh, Nebraska, where allies including the Ponca Nation of Oklahoma and Ponca Tribe of Nebraska along with the Cowboy and Indian Alliance have grown Ponca Sacred Corn for the past six years. Last summer, the Tanderup family deeded the land where the corn is grown, which also lies on the historic Ponca Trail of Tears -- and is on the proposed Keystone XL route -- back to the Ponca Nation of Nebraska. The draft SEIS acknowledges that construction of the pipeline would disturb this sacred land.

The Keystone XL pipeline was a bad idea when it was proposed 11 years ago, and it remains a bad idea today. TransCanada bullies landowners. TransCanada ignores meaningful consultation with Tribal Nations. TransCanada tries to buy off County Board members. TransCanada minimizes the real risks to our water, and endangered species like the Whooping Crane and the burying beetle.

TransCanada's first "Keystone pipeline" just experienced its at least 20th spill since it began operation in 2011 -- 380,000 gallons leaked in a "high impact" spill affecting wetlands in northeastern North Dakota on Oct. 30, 2019. Both federal and state elected officials have called on the company to explain its abysmal safety record. It is not in the U.S. national interest to approve another permit for a continent-spanning pipeline to this company.

Signed,

Bold Nebraska *& [list of signatories attached on pages below]*

Global Energy Institute

GLOBAL ENERGY INSTITUTE
U.S. CHAMBER OF COMMERCE

1615 H St NW
Washington, DC 20062
(202) 463-5558

November 18, 2019

The Honorable Michael Pompeo
Secretary of State
U.S. Department of State
2201 C Street, N.W.
Washington, DC 20520

Re: Comments on the Draft Supplemental Environmental Impact Statement for the Proposed Keystone XL Pipeline (Docket Number: DOS-2019-0033);

Dear Secretary Pompeo:

I am pleased to submit comments supporting TC Energy's (formerly, TransCanada) Keystone XL (KXL) pipeline and the findings of the Draft Supplemental Environmental Impact Statement (Draft SEIS) for the Proposed KXL Pipeline published in October 2019. This critical energy infrastructure project is clearly in the nation's interest.

Canada is an important and reliable trading partner and is by far the largest foreign supplier of crude oil and natural gas to the United States[1]. Stable, long-term supplies of Canadian energy would help ensure U.S. energy and economic security.

When completed, the KXL pipeline would have the nominal capacity to supply more than 830,000 barrels per day of heavy Canadian crude oil to U.S. refineries that were built to process that type of crude oil. It would also create new market access and improved distribution to Gulf refineries for 100,000 barrels per day of U.S. domestic crude produced in the Bakken region of Montana and North Dakota.

The Draft SEIS is consistent with the conclusions of multiple previous Environmental Impact Statements in confirming that construction, operation and

[1] U.S. Energy Information Agency (EIA) 2019, Petroleum & Other Liquids, U.S. Imports by Country of Origin

maintenance of KXL, including along the Mainline Alternative Route (MAR) in Nebraska, would have minimal risk to the environment along the route. The Draft SEIS also reaffirms that the long-term benefits of the KXL pipeline to our energy and economic security are significant.

TC Energy has agreed to include in the written design, construction, operating and maintenance plans and procedures for KXL an additional 59 project-specific special safety conditions developed by the U.S. Pipeline and Hazardous Material Safety Administration (PHMSA) that exceed current federal regulatory standards. The Department of State, in consultation with PHMSA, concluded that industry standards and practices combined with the adoption of the additional 59 special safety measures "would result in a degree of safety over any other typically constructed domestic oil pipeline system under current code."

KXL would help ensure stable, long-term energy supplies from a reliable trading partner. It would do so with minimal risk to the environment while enhancing U.S. economic and energy security. It is time to move forward and allow KXL construction to begin.

Sincerely,

Martin J. Durbin

cc: The Honorable Rick Perry, Secretary of Energy
The Honorable Mitch Mulvaney, White House Chief of Staff

Indigenous Environmental Network and North Coast Rivers Alliance

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10.505.01

November 18, 2019

via Regulations.gov, Email, and U.S. Mail

Ross Alliston
Keystone XL Program Manager
Office of Environmental Quality and Transboundary Issues
U.S. Department of State
2201 C Street NW
Washington, DC 20520
(202) 647-4828
AllistonMR@state.gov

Re: Comments of Indigenous Environmental Network and North Coast Rivers Alliance the Draft Supplemental Environmental Impact Statement for the Keystone XL Project, October 2019
Regulations.gov Docket No. DOS-2019-0033

Mr. Alliston:

Pursuant to the National Environmental Policy Act ("NEPA"), 42 U.S.C. section 4321 *et seq.*, and in accordance with the public notice provided by the United States Department of State ("State Department"), Indigenous Environmental Network ("IEN") and North Coast Rivers Alliance ("NCRA") submit the following comments on the October 2019, Draft Supplemental Environmental Impact Statement ("2019 DSEIS") for the Keystone XL Project ("KXL" or "Project"). Please include these comments in the public record.

IEN and NCRA submitted comments on the previous August 2011 Final Environmental Impact Statement ("2011 FEIS") on October 9, 2011, on the March 2013 Draft Supplemental Environmental Impact Statement ("2013 DSEIS") on April 22, 2013, on the January 2014 Final Supplemental Environmental Impact Statement ("2014 SEIS") on February 24, 2014, and on the September 2018 Draft Supplemental Environmental Impact Statement on the Keystone XL Mainline Alternative Route ("2018 DSEIS") on November 8, 2018. Those comments are attached hereto and incorporated by reference.[1] As discussed below, the State Department's

[1] IEN and NCRA's November 8, 2018 Comments are attached hereto as **Exhibit 1**. IEN and NCRA's October 9, 2011, April 22, 2013, February 24, 2014, and February 16, 2017 comments

2019 DSEIS fails to address many of our previous comments and raises additional new concerns that are not adequately addressed under NEPA.

On November 8, 2018, Montana Federal District Court Judge Brian Morris issued an order ("November 2018 Order") vacating the State Department's Record of Decision ("ROD"), and ordering the State Department to supplement its 2014 SEIS regarding (1) the effects of current oil prices on the viability of Keystone; (2) the cumulative effects of greenhouse gas emissions from the Alberta Clipper expansion and Keystone; (3) a survey of potential cultural resources contained in the 1,038 acres not addressed in the 2014 SEIS; and (4) an updated modeling of potential oil spills and recommended mitigation measures. *Indigenous Environmental Network v. Department of State*, 347 F.Supp.3d 561, 575-584, 590-591 (D.Mont. 2018) ("*IEN v. State*"). Furthermore, Judge Morris set aside the State Department's 2012 Biological Assessment and the U.S. Fish and Wildlife Department's 2013 Biological Opinion, ordering those agencies to consider the Project's potential adverse impacts to endangered species from oil spills. *Id.* at 590-591. Judge Morris also ruled that the State Department had failed to provide "a reasoned explanation for disregarding facts and circumstances that underlay or were ordered by the prior policy" of the Department that Keystone would not serve the national interest. *IEN v. State*, 347 F.Supp.3d at 591. The November 8, 2018 Order followed a prior ruling by Judge Morris which also required the State Department to prepare the 2018 DSEIS for the newly proposed Keystone XL Mainline Alternative Route ("MAR") through Nebraska.[2]

In an attempt to appear to comply with the Court's November 2018 Order, the State Department has prepared this deficient 2019 SEIS. However, simultaneously, President Trump chose to evade that Court Order. Rather than comply with applicable federal environmental laws as directed by the District Court pursuant to its authority to interpret and apply the law under Article III of the United States Constitution, on March 29, 2019 President Trump attempted to sidestep those rulings by issuing, through his Office of the Press Secretary, a new "Presidential Permit" purportedly "grant[ing] permission" for TransCanada Keystone Pipeline L.P. ("TransCanada") "to construct, connect, operate and maintain" its proposed Project *without compliance with the laws of the United States*. But President Trump is not above the law. And the State Department is bound by the District Court's November 2018 Order and the laws it enforced, including NEPA. The State Department and its 2019 DSEIS fail to comply with the November 2018 Order and these bedrock environmental laws, as explicated below.

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are included as exhibits to that comment letter.

[2] *Indigenous Environmental Network and North Coast Rivers Alliance v. U.S. Department of State*, United States District Court for the District of Montana, Case no. CV 17-29-GF-BMM, August 15, 2018, Partial Order on Summary Judgment Regarding NEPA Compliance, attached hereto as Exhibit 2 to Exhibit 1.

THE 2019 DSEIS FAILS TO TAKE A "HARD LOOK" AT THE PROJECT'S ENVIRONMENTAL IMPACTS AND ADEQUATELY MITIGATE THOSE IMPACTS

An EIS must take a "hard look" at the environmental impacts of proposed major federal actions and provide a "full and fair discussion" of those impacts. 40 Code of Federal Regulations ("C.F.R.") § 1502.1; *National Parks & Conservation Association v. Babbitt* ("*NPCA v. Babbitt*"), 241 F.3d 722, 733 (9th Cir. 2001). Here, however, the 2019 DSEIS' discussion of many environmental and cultural impacts is absent or inadequate, as explained below. This violates NEPA.

A. Accidental Spills

1. Spill Frequency

As the November 2018 Order made clear, the 2014 SEIS "fell short of a 'hard look' and require[d] a supplement" that "updated modeling of potential oil spills and recommended mitigation measures." *IEN v. State*, 347 F.Supp.3d at 590. The 2014 SEIS "predicts no more than 1.1 spills from Keystone every ten years" but the reality is that many more spills are likely. *Id.* at 581. In addition to the numerous "significant" "major spills that occurred between 2014 and 2017," there was a major spill on TransCanada's existing Keystone Pipeline ("Keystone I") during this period. *Id.* at 582.

In fact, there have been two major spills on TransCanada's Keystone I Pipeline in the last two years alone.[3] In 2017, an estimated 408,492 gallons of crude oil spilled from the Keystone I pipeline in South Dakota. 2019 DSEIS 5-12; Exhibit 2 at 2; Exhibit 3 at 2-3. And on October 29, 2019 the Keystone I pipeline leaked again, this time an estimated 383,000 gallons of crude oil in North Dakota. Exhibit 2 at 1-2; Exhibit 3 at 1-3. This most recent spill covered an estimated half-acre of wetland and leaked enough oil to fill one half of an Olympic-size swimming pool. Exhibit 3 at 1. Both spills were of tar sands crude, or "dilbit," a particularly pernicious crude that is extremely difficult to clean up.

Yet TransCanada's 2019 DSEIS fails to correct the 2014 SEIS' pivotal, but demonstrably erroneous, prediction that "no more than 1.1 spills [will occur] from Keystone every ten years." *IEN v. State*, 347 F.Supp.3d at 581, citing DOSKXLDMT0012067-68. Instead, it provides a misleading analysis of the spill data that ignores the fact that this wildly optimistic prediction has already proven to be untenable. 2019 DSEIS 5-5 to 5-12. Two major spills in just three years is a spill frequency of one every 1.5 years – *more than six times greater* than the 2019 DSEIS

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[3] *Portion of Keystone Pipeline shut down after 380,000-gallon oil leak in North Dakota*, USAToday, November 1, 2019, attached hereto as **Exhibit 2**; Rueb, Emily and Chokshi, Niraj, *Keystone Pipeline Leaks 383,000 Gallons of Oil in North Dakota*, The New York Times, October 31, 2019, updated November 2, 2019, attached hereto as **Exhibit 3**.

predicts. And while the 2019 DSEIS does provide TransCanada's history of spills through 2017, it does not actually provide any analysis of how that history or the recent spills affect the predictions from the 2014 SEIS. 2019 DSEIS 5-5 to 5-14.

The facts show, contrary to the 2019 DSEIS, that TransCanada has an abysmal oil spill record. As noted, TransCanada has had two large spills on Keystone I in the last three years alone, which far exceeds the industry average. 2019 DSEIS 5-12; Exhibit 2 at 2; Exhibit 3 at 2-3. These large spills have significant adverse impacts, and the risk of their occurrence should be carefully examined, not cavalierly dismissed. 2019 DSEIS 5-7 to 5-8. In light of this recent history, it is neither reasonable, nor scientifically sound, to predict that the KXL pipeline will have no more than 1.1 spills per ten years. Because this inadequate analysis understates the risk of catastrophic oil spills, it fails to take the "hard look" that NEPA requires. 40 C.F.R. § 1502.1; *NPCA v. Babbitt*, 241 F.3d at 733.

2. Spill Detection and Containment

The November 2018 Order also mandates that the State Department supplement the information "regarding the difficulty of cleaning up tar sands crude oil spills." *IEN v. State*, 347 F.Supp.3d at 581-582. "The absence of this information from the 2014 SEIS's mitigation measures demonstrates that the agency acted upon incomplete information in setting forth its mitigation measures." *Id.* at 582. However, the State Department fails to adequately update this analysis, as well.

The 2019 DSEIS admits that "[o]ne of the most challenging aspects of responding to spills, particularly dilbit spilled in water, is detecting, containing and recovering submerged and sunken oil. Submerged and sunken oil is difficult to detect because it is often not visible from the surface. Methods to detect submerged and sunken oil are typically slow, limited by water conditions and provide only a "snapshot" of a given area." 2019 DSEIS 5-25. Containment of submerged and sunken dilbit is just as challenging as detection. 2019 DSEIS 5-25 to 5-26. It requires specialized equipment, the effectiveness of which is limited by surrounding environmental conditions. *Id.*

Despite this new admission that dilbit detection and containment methods are both difficult and ineffective, the State Department still relies on the same analysis and mitigation measures it presented in the 2014 SEIS. 2019 SEIS 5-22 ("All spill prevention, mitigation and remediation plans developed for the Keystone XL Project and discussed in the 2014 Keystone XL Final SEIS would apply to the proposed Project"), 5-27 (2019 DSEIS incorporates and builds upon the 2014 SEIS analysis). That analysis is insufficient because it ignores the difficulties in detection and cleanup outlined above, and TransCanada's recent history of two major spills from the Keystone I pipeline in 2017 and 2019.

3. Spill Impacts

The DSEIS' attempted analysis of impacts from crude oil spills – and particularly dilbit spills – is likewise gravely deficient. The 2019 DSEIS downplays the potential significance of large spills on the environment, particularly on waterways used for both domestic consumption and irrigation, such as the Missouri, Yellowstone and Cheyenne rivers, by blithely assuming that (1) no impacts would occur more than 40 miles downstream of the spill, and (2) any impacts would be mitigated through TransCanada's provision of "an alternate water supply" or payment of compensation. 2019 DSEIS 5-37 to 5-39. These assumptions are false. There is no evidence that contaminants would not extend more than 40 miles downstream, and there are no alternative water supplies for many affected communities, such as the Fort Peck Reservation. *See, e.g.* the Declaration of Bill Whitehead in Support of Plaintiffs' Motion for Preliminary Injunction dated June 14, 2019 at paragraphs 4- 13 and Exhibit 1 thereto, which are attached as **Exhibit 4** and **Exhibit 5** hereto. Moreover, no amount of "compensation" can replace the loss of a community's only source of water.

The DSEIS also ignores the threat posed by locating the Keystone XL pipeline immediately downstream of the Fort Peck Dam's emergency spillway. Under flood conditions, the release of water from that spillway could cause extensive erosion of the bed and banks of the Missouri River where the pipeline would cross – exposing the pipeline to catastrophic failure – just as the failure of the Oroville Dam's spillway caused severe riverbed and bank erosion in 2017, as documented in the Declaration of Frank Egger in Support of Plaintiffs' Motion for Preliminary Injunction dated June 19, 2019, at paragraphs 7-11, which is attached as **Exhibit 6** hereto.

The 2019 DSEIS also reveals that "[s]ubmerged crude oil [such as dilbit] could result in a persistent source of contamination [in surface water] because of the slow rate of natural degradation of this material." 2019 DSEIS 5-36. The 2019 DSEIS states that "[r]emoval of submerged product from the water column can be a difficult and long process," citing a 2010 spill in Michigan where cleanup efforts "including dredging, excavation and aeration, continued for 4 years after the spill." 2019 DSEIS 5-37. Indeed, "sunken oil may become buried under or mixed within stream sediment and soil along streambanks, where it may become trapped and remain for an extended duration. This buried oil may slowly biodegrade into soluble components or volatilize over time. Future disturbances to the aquatic environment, such as dredging, wave action, boat propellers or bioturbation, could re-suspend buried oil or its weathered components. The potential re-suspended oil could represent a source of contamination for an extended duration." 2019 DSEIS 5-37.

While admitting that "the potential effects of a large spill to water could have potentially significant adverse effects on water quality" and that detection, containment, and remediation efforts would be difficult, the 2019 DSEIS inexplicably declares that "[r]esponse and remediation activities would likely return the waterbody to near pre-spill conditions." 2019 DSEIS 5-37. However, the evidence in the record does not support this conclusion. Rather, the evidence

shows that a large spill – like either of the two that occurred on TransCanada's Keystone I pipeline in the last two years – would cause permanent irreparable damage. In an attempt to acknowledge, but significantly downplay this likely impact, the 2019 DSEIS includes a single sentence, noting that "it is possible that waterbodies may not return to pre-spill conditions, as it would depend on the size and location of the spill." 2019 DSEIS 5-37. But that does not satisfy NEPA's "hard look" requirement. 40 C.F.R. § 1502.1; *NPCA v. Babbitt*, 241 F.3d at 733. And despite the ample evidence that a large dilbit spill will have permanent and devastating impacts, the 2019 DSEIS still relies on the same inadequate mitigation measures identified in the 2014 SEIS. 2019 DSEIS 5-39.

The 2019 DSEIS' analysis of spill impacts to wetlands likewise fails to satisfy NEPA's "hard look" requirement. 40 C.F.R. § 1502.1; *NPCA v. Babbitt*, 241 F.3d at 733. It admits that "[d]ilbit is more likely than lighter crude oils to persist within wetlands because of the higher amount of residual oil left behind after weathering, increased adhesion and resistance of dilbit to biodegradation," but focuses much of its analysis on lighter crude oils anyway. 2019 DSEIS 5-40 to 5-41. This is particularly concerning given the recent spill of 383,000 gallons on the Keystone I pipeline that covered nearly one half acre of wetland. Exhibit 2 at 1; Exhibit 3 at 1. While the 2019 DSEIS acknowledges that "a large spill could affect soil productivity adversely," and "[i]n some cases . . . soil productivity would not likely return to prior levels," it does not present any new mitigation measures to address this concern. DSEIS 5-29.

The failure to adequately address the potential impact of spills – particularly dilbit spills – extends to the discussion of biological resources as well. Despite admitting that the potential impacts of a spill include "direct and acute mortality; sub-acute interference with feeding and reproductive capacity; disorientation and confusion; reduced resistance to disease; tumors; reduced or lost sensory perceptions; interference with metabolic, biochemical and genetic processes; and many other acute or chronic effects," as well as "consequences on local flora and fauna," the 2019 DSEIS again understates the impact to wildlife and fisheries. 2019 DSEIS 5-45. According to the 2019 DSEIS, the impacts to many terrestrial animals would be limited because the State Department speculates that these species "probably would not ingest contaminated vegetation." 2019 DSEIS 5-45. But that speculation ignores the reality that many animals may not be able to locate other food sources, and the well-established fact that cumulative impacts result from indirect ingestion of pollutants by predators such as coyotes and eagles that prey on animals that have directly ingested contaminated plants and animals. The DSEIS' analysis of oil spill impacts ignores the fact that biochemical toxins may bioaccumulate as they move up the food chain. NEPA requires more.

NEPA also requires more than what the 2019 DSEIS provides regarding threatened and endangered species. Despite admissions about the potentially devastating impacts of a spill on species, the 2019 DSEIS inexplicably declares that an oil spill "may affect" but is "not likely to adversely effect" every threatened or endangered species in the area. 2019 DSEIS 5-48 to 5-52. The 2019 DSEIS claims that "[a]dverse effects . . . would be unlikely due to the low probability of a spill and the low probability of [a threatened or endangered species] contacting the spilled

crude oil." 2019 DSEIS 5-48 to 5-52. But this analysis again ignores the recent number of large spills from pipelines, including TransCanada's Keystone I pipeline which recently spilled 383,000 gallons of crude oil contaminating wetlands and posing threats to the species that rely on them and downstream waters. Exhibit 2; Exhibit 3.

The accidental spill analysis provided in the 2019 DSEIS thus fails to remedy the inadequacies identified in the November 2018 Order.

B. Greenhouse Gas and Climate Change

The 2014 SEIS failed to address the cumulative greenhouse gas emissions associated with the Project and related and connected pipelines. *Id.* It also failed to use updated modeling information in presenting the Project's impacts. Thus, the State Department "failed to paint a full picture of emissions for these connected actions, and, therefore, ignored its duty to take a "hard look." November 2018 Order, 347 F.Supp.3d at 578.

The 2019 DSEIS fails to remedy this deficiency. It does not take a hard look at the Project's greenhouse gas and climate change impacts. Although the 2019 DSEIS reveals that the Project could increase *annual* emissions by between 174.7 and 178.3 million metric tons CO_2-eq. (2019 DSEIS 4-80), it fails to explain that this increase in annual emissions has a *compounding* impact, as greenhouse gases do not dissipate. Instead, they cause warming decades after they have been emitted, and each year's increased emissions add to this growing impact. The DSEIS ignores this cumulative impact.

In 2018, the Intergovernmental Panel on Climate Change ("IPCC") issued a special report warning of the impacts of global warming of just 1.5° Celsius.[4] Its stark conclusion is that we must reduce CO_2 emissions by at least 45% in the next 12 years compared with 2010 levels and achieve net zero CO_2 production by 2050, in order to stave off potentially calamitous hothouse scenarios, ocean acidification, and other catastrophic and irreversible changes to the planet. *See, e.g.*, 2018 IPCC 1.5° Report, Summary for Policy Makers, pp. 5, 12. The 2019 DSEIS ignores this authoritative analysis and dire warning.

Equally troubling, the 2019 DSEIS fails to recognize and address the fact that approval of Keystone XL would make it more likely that the planet will experience a temperature rise of 3° Celsius by 2100. This level of warming will cause calamitous permafrost melting, sea level rise, ocean acidification, and widespread and irreversible destruction of what were once carefully-balanced climatic control systems. The 2019 DSEIS unreasonably disregards these increasingly likely significant climate impacts, and the Project's contribution thereto.

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[4] The 2018 IPCC Special Report on Global Warming of 1.5°C ("2018 1.5° Report") is available in full at:
https://www.ipcc.ch/site/assets/uploads/sites/2/2019/06/SR15_Full_Report_High_Res.pdf.

The 2019 DSEIS also impermissibly downplays the likely impacts that climate change will have on the Project, should it be built. 2019 DSEIS 4-100 to 4-101. It fails to seriously consider how climate change could alter Project operations, and instead relies upon sheer speculation that periodic pipeline inspection will "mitigate risk of damage from severe weather" caused by climate change. 2019 DSEIS 4-101. It also fails to address the likelihood that the Project will become a stranded asset as climate change undermines and ultimately eliminates the market for Canadian tar sands altogether. *Id.*

C. Cultural Resources

"The 2014 SEIS fail[ed] to provide a 'full and fair discussion of the potential effects of the project to cultural resources' in the absence of further information on the 1,038 unsurveyed acres." *IEN v. State*, 347 F.Supp.3d at 580, quoting *Native Ecosystems Council v. U.S. Forest Service*, 418 F.3d 953, 965 (9th Cir. 2005). In its November 2018 Order, the Court found that "[t]he Department appears to have jumped the gun when it issued the ROD in 2017 and acted on incomplete information regarding potential cultural resources along the 1,038 acres of unsurveyed route. The Department must supplement the information on the unsurveyed acres to the 2014 SEIS's cultural resources analysis, in order to comply with its obligations under NEPA." *IEN v. State*, 347 F.Supp.3d at 581, quoting 40 C.F.R. §§ 1502.16(g), 1508.8.

The 2019 DSEIS purports to address cultural resources within the MAR, and provide updated information regarding surveys conducted since the 2014 SEIS. Yet it still fails to adequately address the impacts of the Project on cultural resources. First, as the 2019 DSEIS admits, the inventory of cultural resources "remains ongoing." 2019 DSEIS 3.9-4; 4-66 to 4-67. Indeed, "approximately 688 acres" *still* have not been surveyed for cultural resources. 3.9-6. The 2019 DSEIS attempts to downplay the fact that 688 acres of potential cultural resources remain unsurveyed by contrasting it with the size of the whole preferred route. *Id.* But this comparison is irrelevant. The important question is, will the Project have an impact on cultural resources, and if so, what resources would be impacted and how will this impact be addressed. Until a sufficient cultural resources inventory is complete, the Department simply lacks the information necessary to answer this question. This omission threatens harm to sacred Native American cultural sites that have not been surveyed and protected, an impact that the Native American community finds deeply insulting and completely unacceptable. *See*, e.g., the Declaration of Joye Braun in Support of Plaintiffs' Motion for Preliminary Injunction dated June 24, 2019 and attached as **Exhibit 7** hereto, at paragraphs 8-9. The DSEIS likewise ignores the devastating impacts of TransCanada's proposed "man-camps" on Native American communities. *See id.* at ¶¶ 5-7, and Declaration of Angeline Cheek in Support of Plaintiffs' Motion for Preliminary Injunction dated June 21, 2019, at paragraphs 3 - 29, which is attached as **Exhibit 8** hereto.

Second, the 2019 DSEIS admits that its new survey activity in Montana lead to the discovery of additional sites and areas of Tribal significance. 2019 DSEIS 3.9-12. Yet the Department has not yet completed its evaluation of these sites. The 2019 DSEIS states that "a

report on the cultural resources re-inspection is being prepared and will be sent to all applicable Federal and state agencies and all tribal consulting parties for review and comment." *Id.* But the DSEIS admits it cannot provide more information on "eligibility and management recommendations," because the Department prepared the 2019 DSEIS *without waiting for them to be established. Id.*

And third, the 2019 DSEIS shows that the Department has *not* conducted appropriate government-to-government consultation with impacted tribes while preparing the 2019 DSEIS. While the Department "requested assistance in identifying Traditional Cultural Properties/properties of religious and cultural significance . . . that could be affected by construction of the MAR [Mainline Alternative Route]" (2019 DSEIS 3.9-1; 2019 DSEIS Appendix A, A-3 to A-9), the Department did not undertake government-to-government consultation with tribes elsewhere. Instead the Department merely sent letters announcing its decisions to act, occasionally notifying tribes of comment periods. 2019 DSEIS 3.9-2; 2019 DSEIS Appendix A, A-10 to A-18.

For these three reasons, the 2019 DSEIS fails to provide sufficient information on the Project's potential impacts on cultural resources and therefore fails to comply with the November 2018 Order. Without more, the Department's conclusions regarding whether the Project's construction, operation, and maintenance will impact these unsurveyed cultural resources have no basis in fact. By rushing ahead with the 2019 DSEIS without the information required by the November 2018 Order, the Department continues to fail to take the hard look that NEPA requires.

D. Market Analysis of the Impact of Oil Prices on Tar Sands Production

As the November 2018 Order noted, the 2014 SEIS incorrectly "conditioned much of its analysis . . . on the price of oil remaining high." *IEN v. State*, 347 F.Supp.3d at 576. However, "significant changes in oil prices . . . have occurred since 2014." *Id.* The 2014 SEIS admits that "lower-than-expected oil prices could affect the outlook for oil sand production," but the State Department still fails to address important updated information regarding the price of oil. *Id.*, citing DOSKXLDMT0005895.

The 2019 DSEIS attempts to justify the 2014 SEIS analysis by presenting numerous projections about oil prices that vary widely. 2019 DSEIS 1-11 to 1-22. It claims that "crude oil prices [for the Western Canadian Crude Oil Market] are likely to increase over the medium to long terms such that the recent low price of crude oil globally . . . would not be a driving factor in the crude oil industry's decision regarding development of future [Western Canadian Sedimentary Basin ("WCSB")] production facilities." 2019 DSEIS 1-21. But this conclusion does not follow from the evidence. As the 2019 DSEIS reveals, since the 2014 SEIS "global crude oil prices declined more than 50 percent from peak prices." 2019 DSEIS 1-17. The 2019 DSEIS, however, conditioned much of its analysis on the fact that prices had "partially recovered to [an] average price 25 percent lower than 2014 prices," since 2016. DSEIS 1-17. But like the

2014 SEIS, reliance on that assumption fails. *IEN v. State*, 347 F.Supp.3d at 576. Rather than continue to recover, as the 2019 DSEIS implies, "[p]rices for Canadian oil continue[d] to sink" after the most recent Keystone pipeline spill.[5] In fact, as of November 7, 2019, WCSB prices fell below $35 per barrel. Exhibit 4 at 1.

The 2019 DSEIS market analysis fails to remedy the inadequacies identified by the November 2018 Order. *IEN v. State*, 347 F.Supp.3d at 576. Despite a brief period of recovery, the price of WCSB oil has plummeted once again. This information is "material . . . to the [State] Department's consideration of Keystone's impact on tar sands production," and therefore must be included in the FSEIS. *IEN v. State*, 347 F.Supp.3d at 577.

MAINLINE ALTERNATIVE ROUTE

The 2019 DSEIS claims to incorporate analysis of the Mainline Alternative Route ("MAR") approved by the Nebraska Public Service Commission on November 20, 2017. 2019 DSEIS 1-1. However, the analysis of the MAR throughout the 2019 DSEIS is plagued with the same inadequacies identified by IEN and NCRA in their November 8, 2018 comments on the 2018 DSEIS, attached as Exhibit 1. IEN and NCRA incorporate those comments by reference here, and all of those inadequacies must be remedied in the FSEIS.

CONCLUSION

The Keystone XL 2019 DSEIS is woefully deficient. The potential extent and gravity of the Project's impacts are understated and ignored. The 2019 DSEIS fails to account for the heightened risk of a spill – as seen in recent years along TransCanada's Keystone I pipeline – and ignores the continued decline of western Canadian oil prices. Furthermore, IEN and NCRA oppose this Project because it expands rather than reduces our nation's dependence on foreign oil and the increased greenhouse gas emissions that dependence causes. The 2019 DSEIS fails to remedy the many inadequacies identified in the November 2018 DSEIS.

Respectfully submitted,

Stephan C. Volker
Attorney for Indigenous Environmental Network and North Coast Rivers Alliance

[5] Cunningham, Nick, *Canadian Oil Prices Crash After Keystone Spill*, oilprice.com, November 7, 2019, attached hereto as **Exhibit 9**.

LIST OF EXHIBITS

1. IEN and NCRA's November 8, 2018 Comments on the DSEIS for the Mainline Alternative Route, which include as exhibits the October 9, 2011 comments on the 2011 FEIS, the April 22, 2013 comments on the 2013 DSEIS, and the February 24, 2014 and February 16, 2017 comments on the 2014 SEIS.

2. *Portion of Keystone Pipeline shut down after 380,000-gallon oil leak in North Dakota*, USAToday, November 1, 2019.

3. Rueb, Emily and Chokshi, Niraj, *Keystone Pipeline Leaks 383,000 Gallons of Oil in North Dakota*, The New York Times, October 31, 2019, updated November 2, 2019.

4. Declaration of Bill Whitehead in Support of Plaintiffs' Motion for Preliminary Injunction dated June 14, 2019.

5. Exhibit 1 to the June 14, 2019 Declaration of Bill Whitehead - Resolution of the Water Commission for the Assiniboine & Sioux Rural Water Supply System of the Assiniboine & Sioux Tribes of the Fort Peck Indian Reservation dated October 2, 2017.

6. Declaration of Frank Egger in Support of Plaintiffs' Motion for Preliminary Injunction dated June 19, 2019.

7. Declaration of Joye Braun in Support of Plaintiffs' Motion for Preliminary Injunction dated June 24, 2019.

8. Declaration of Angeline Cheek in Support of Plaintiffs' Motion for Preliminary Injunction dated June 21, 2019.

9. Cunningham, Nick, *Canadian Oil Prices Crash After Keystone Spill*, oilprice.com, November 7, 2019.

Institute for Policy Integrity, New York University School of Law

Institute *for*
Policy Integrity
NEW YORK UNIVERSITY SCHOOL OF LAW

November 18, 2019

To: U.S. Department of State
Subject: Failure to Consistently Apply Substitution Analysis in the Draft Supplemental Environmental Impact Statement for the Proposed Keystone XL Pipeline, Docket No. DOS-2019-0033

The Institute for Policy Integrity at New York University School of Law[1] respectfully submits comments on the Draft Supplemental Environmental Impact Statement for the Proposed Keystone XL Pipeline.[2] Policy Integrity is a non-partisan think tank dedicated to improving the quality of government decisionmaking through advocacy and scholarship in the fields of administrative law, economics, and public policy. In furtherance of this mission, we regularly submit comments to federal agencies on the treatment of greenhouse gas emissions and economic effects in environmental impact statements.

The U.S. Department of State (the "Department") conducts this supplemental environmental impact statement after a federal district court ruled that the agency's original environmental impact statement violated the National Environmental Policy Act ("NEPA") due in part to the agency's failure to take all relevant information into account when projecting that the Keystone XL Pipeline (the "pipeline") would not affect total crude oil production.[3] The Department now projects that the pipeline will likely increase total crude oil production by only partially offsetting production that would have occurred elsewhere under a "no action" scenario, but irrationally and inconsistently fails to account for this substitution effect when projecting the pipeline's economic benefits. Accordingly, these comments argue that the Department continues to violate NEPA by its lopsized treatment of the pipeline's costs and benefits, through not only its inconsistent treatment of substitution effects but also its failure to assess the pipeline's climate-related impacts through monetization.

The Department is inflating the pipeline's economic benefits relative to its environmental effects. On the environmental side, the Department projects that the pipeline will produce over 178 million metric tons of annual greenhouse gas emissions over the lifecycle of the transported

[1] This document does not purport to represent the views, if any, of New York University School of Law.
[2] Dep't of State, Draft Supplemental Envtl. Impact Statement for the Proposed Keystone XL Pipeline (DOS-2019-0033) (Oct. 4, 2019) [hereinafter "DSEIS"].
[3] *Indigenous Envtl. Network v. United States Dep't of State*, 347 F. Supp. 3d 561, 575–77 (D. Mont. 2018).

139 MacDougal Street, Third Floor, New York, New York 10012 • (212) 992-8932 • www.policyintegrity.org

oil (including both upstream and downstream impacts).[4] The Department states that this total represents "an upper bound" in "the change in greenhouse gas emissions under the Proposed Action relative to the No Action Alternative," due to the fact that oil production resulting from constructing the pipeline will likely "displace . . . other crude oils" that would be produced elsewhere if the pipeline were not constructed.[5] The Department models three alternative displacement scenarios—full, 80%, and 40% displacement—and projects the greenhouse gas implications of each. Under the full displacement scenario, the agency projects that the pipeline could yield as few as 2.1 million metric tons of annual net greenhouse gas emissions—less than 2% of the total emissions attributable to the oil that will actually be transported through the pipeline.[6]

In contrast, the Department projects the pipeline's total economic benefits without reference to this displacement effect. For instance, the Department projects that employment and spending from pipeline construction alone will support nearly 3,000 jobs resulting in over $928 million in additional economic output,[7] and that pipeline operation will produce over $134 million in property-tax revenues.[8] Yet if the Department is correct that much of the pipeline's oil production would be offset through increased production elsewhere under a "no action" alternative, then that substitute oil production would also produce employment income, economic output, and tax revenues. But this reality cannot be found in the Department's analysis: Unlike in its discussion of environmental costs, the Department never acknowledges that its projections of economic benefits represent "upper bound[s]," nor does it project economic benefits under alternative displacement scenarios; in fact, the Department never even mentions the possibility of displacement when discussing the pipeline's economic effects. Under the Department's logic, in other words, the pipeline is responsible for all of its economic benefits but few of its environmental harms.

The Department's inconsistent treatment of economic benefits compared to climate costs violates NEPA. In two recent cases, for instance, courts have vacated oil and gas leasing plans under NEPA after the government quantified the plans' economic benefits but not their climate costs.[9] Those cases are just the latest applications of a broader line of case law in which courts find it arbitrary and capricious to apply inconsistent protocols for analyzing some effects compared to others. The U.S. Court of Appeals for the Ninth Circuit, for instance, has explained that when an agency bases a decision on cost-benefit analysis, it is arbitrary to "put a thumb on the scale by undervaluing the benefits and overvaluing the costs."[10] Similarly, the D.C. Circuit has chastised agencies for "inconsistently and opportunistically fram[ing] the costs and benefits"

[4] DSEIS at 4-83. We use the estimates under Scenario 1 in these comments for the sake of simplicity, but our points apply equally under the Scenario 2 estimates.

[5] *Id.* at 4-79.

[6] *Id.* at 4-83.

[7] *Id.* at 4-62.

[8] *Id.* at 4-64.

[9] *Mont. Envtl. Info. Ctr. v. U.S. Office of Surface Mining*, 274 F. Supp. 3d 1074, 1094–99 (D. Mont. 2017); *High Country Conservation Advocates v. United States Forest Serv.*, 52 F. Supp. 3d 1174, 1191 (D. Colo. 2014).

[10] *Center for Biological Diversity v. National Highway Traffic Safety Administration*, 538 F.3d 1172, 1998 (9th Cir. 2008).

of a rule,[11] and the Tenth Circuit has remanded an environmental impact statement because "unrealistic" assumptions "misleading[ly]" skewed comparison of the project's positive and negative effects.[12] Like in those cases, the Department here inconsistently frames the pipeline's costs and benefits by offsetting the pipeline's environmental harms using displacement assumptions without applying those same assumptions to offset its economic benefits. This violates NEPA.

Moreover, consistent treatment of costs and benefits under NEPA also requires the Department to use readily available metrics, like the social cost of greenhouse gases, to meaningfully assess the significance of the pipeline's environmental impacts, especially when the Department touts the pipeline's economic benefits by monetizing them. Specifically, NEPA requires a "hard look" at the beneficial and adverse effects of major federal government actions, and the Supreme Court has held that agencies must "consider and disclose the *actual environmental effects*" of a proposed action in a way that "brings those effects to bear on [the agency's] decisions."[13] In the case of greenhouse gas emissions, the "actual environmental effects" are not the volumetric emissions totals, but rather the incremental climate impacts caused by those emissions such as sea-level rise, property damage, and human health impacts.[14] And to best assess those impacts, the Department should use the social cost of greenhouse gases protocol, which was developed by the federal Interagency Working Group on the Social Cost of Greenhouse Gases and continues to reflect the best available data and methodologies.[15] The

[11] *Bus. Roundtable v. SEC*, 647 F.3d 1144, 1148–49 (D.C. Cir. 2011).

[12] *Johnston v. Davis*, 698 F.2d 1088, 1094–95 (10th Cir. 1983).

[13] *Baltimore Gas & Elec. Co. v. Natural Res. Def. Council*, 462 U.S. 87, 96 (1983) (emphasis added); *see also* 40 C.F.R. § 1508.8(b) (requiring assessment of the "ecological," "economic," "social," and "health" "*effects*") (emphasis added); *Klamath-Siskiyou Wildlands Ctr. v. Bureau of Land Mgmt.*, 387 F.3d 989, 995 (9th Cir. 2004) (holding that merely quantifying the acres of timber to be harvested or the miles of road to be constructed does not constitute a "description of *actual* environmental effects," even when paired with a qualitative "list of environmental concerns such as air quality, water quality, and endangered species," when the agency fails to assess "the degree that each factor will be impacted").

[14] For additional discussion of the climate impacts caused by greenhouse gas emissions, see Intergovernmental Panel on Climate Change, *Global Warming of 1.5 °C: Summary for Policymakers* 9–12 (Valérie Masson-Delmotte et al. eds., 2018), *available at* https://www.ipcc.ch/site/assets/uploads/sites/2/2018/07/SR15_SPM_version_stand_alone_LR.pdf.

[15] The Interagency Working Group's ("IWG") methodology has been repeatedly endorsed by reviewers. In 2014, the U.S. Government Accountability Office concluded that IWG had followed a "consensus-based" approach, relied on peer-reviewed academic literature, disclosed relevant limitations, and adequately planned to incorporate new information through public comments and updated research. Gov't Accountability Office, *Regulatory Impact Analysis: Development of Social Cost of Carbon Estimates* 12–19 (2014). In 2016 and 2017, the National Academies of Sciences, Engineering, and Medicine issued two reports that, while recommending future improvements to the methodology, supported the continued use of the existing IWG estimates. Nat'l Acad. Sci., Engineering & Med., *Valuing Climate Damages: Updating Estimation of the Social Cost of Carbon Dioxide* 3 (2017); Nat'l Acad. Sci., Engineering & Med., *Assessment of Approaches to Updating the Social Cost of Carbon: Phase 1 Report on a Near-Term Update* 1–2 (2016). And in 2016, the U.S. Court of Appeals for the Seventh Circuit held that the Department of Energy's reliance on IWG's social cost of carbon was reasonable. *Zero Zone, Inc. v. U.S. Dep't of Energy*, 832 F.3d 654, 678 (7th Cir. 2016). And many leading economists and climate policy experts have endorsed the IWG's values as the best available estimates. *See, e.g.*, Richard Revesz et al., *Best Cost Estimate of Greenhouse Gases*, 357 Science 655 (2017); Michael Greenstone et al., *Developing a Social Cost of Carbon for U.S. Regulatory Analysis: A Methodology and Interpretation*, 7 Rev. Envtl. Econ. & Pol'y 23, 42 (2013).

Department's failure to assess the pipeline's actual climate effects in this fashion—especially when it monetizes the pipeline's economic benefits—violates its obligations under NEPA.[16]

Indeed, the social cost of greenhouse gases captures the factors that actually affect public welfare and assesses the degree of impact of each factor in ways that just estimating the volume of emissions cannot, providing decision-makers with sufficient informational context as NEPA requires. For instance, applying the social cost of greenhouse gases to the pipeline shows that the use of the oil transported through the pipeline each year would result in approximately $10 billion in climate-related damages, far surpassing the pipeline's other economic effects.[17] For further information on the need to monetize greenhouse gas emissions under NEPA, we attach our October 2019 comments—filed jointly with six other organizations—to the Federal Energy Regulatory Commission on its environmental impact statement for a different pipeline project: the Alaska Gasline Development Corporation's Alaska LNG Project.

As the Department continues to assess the pipeline's impacts, it must consistently evaluate the pipeline's costs and benefits without putting its thumb on the scale—including by both using the social cost of greenhouse gases to assess the pipeline's climate-related impacts and consistently applying substitution analysis to both the pipeline's environmental and economic effects. If it fails to do so, it will continue to violate NEPA.

Sincerely,

Iliana Paul, Policy Analyst
Max Sarinsky, Legal Fellow
Jason A. Schwartz, Legal Director

Institute for Policy Integrity at NYU School of Law

For any questions regarding these comments, please contact:

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jason.schwartz@nyu.edu

Attached: Joint Comments on the Failure to Use the Social Cost of Greenhouse Gases in the Alaska LNG Project Draft Environmental Impact Statement (FERC Docket No. CP17-178-000)

[16] *See supra* notes 9–12 and accompanying text.

[17] The 2016 Interagency Working Group's central estimate of the social cost of carbon for year 2025 emissions is $46 in 2007$; adjusted for inflation using the CPI Inflation Calculator, that equals approximately $57 in 2019$. *See* Interagency Working Group on the Social Cost of Greenhouse Gases, *Technical Support Document: Technical Update of the Social Cost of Carbon for Regulatory Impact Analysis* (2016) (calculating the central estimate at a 3% discount rate). 178 million * $57 = $10.146 billion. Note that in a proper cost-benefit analysis, the social cost of carbon corresponding to each respective year would be used to calculate the damages from that year's emissions, with each yearly estimate discounted back to present value.

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Ross Alliston, Keystone XL Program Manager
Office of Environmental Quality and Transboundary Issues
U.S. Department of State, 2201 C Street NW
Washington, DC 20520.
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Submitted via https://www.regulations.gov

Re: Docket DOS-2019-0033: Draft SEIS on the Keystone XL Pipeline

November 18, 2019

Mr. Allison:

I submit these comments on behalf of James E. Hansen, Christine Real de Azua and John M. Fitzgerald.

The Draft SEIS and the elements of the EIS, Biological Assessment and Biological Opinion that are therein incorporated rely upon inadequate assessment of the likely impact of the project on the endangered Whooping Crane (Crane). That impact will likely include significant harm, injuries and mortality to the main population of whooping cranes.

That population and the species as a whole, given its small size and limited genetic diversity, cannot withstand the loss of even a small number of breeding birds without jeopardizing the continued existence and recovery of the species.

The impacts, however, are avoidable with different energy choices and reducible by avoiding expansion of the transport capacity for tar sands oil.

The Statement of Purpose and Need Violate NEPA

The stated overall purpose and need is factually incorrect for several reasons, including for

1) its assumption of continuing high demand for fossils fuels. In truth, the demand for liquid fossil fuels must be rapidly reduced so as to avoid further dangerous disruption to the climate system. In the process, an increasing portion of the residual demand may be met by means other than through tar sands oil production -- including through conservation, electrification, and reliance of non-fossil fuel generation;

2) its encompassment, in its purpose and need, of a plan that expedites and exacerbates the climate crisis – which countermands the purposes of NEPA's section 101 and 102.

The New Route for the KXL Pipeline is At Least as Dangerous for the Whooping Crane as the Former Route

The proposed change in route of KXL places the project squarely in the migratory path of the Whooping Crane, that is, directly under its wide, well documented, migratory pathway. No new meaningful measures are assessed to protect the Crane and avoid jeopardizing the species' survival. Only the airplane flight altitude requirement is discussed, while the main threat is entanglement in and collision with power lines.

CEQ Regulations Require More

State and its NEPA Cooperating Agencies, including the Corps of Engineers, must discuss the legal ramifications of their actions. CEQ Regulations require that an assessment include alternatives that would allow harm to be avoided or reduced. The Statement must include, among other things, information on conflicts between the action and the law, and such information should be considered concurrently with other reviews required by laws such as the Endangered Species Act.

In particular, Executive Order 12114 (1979) requires departments or agencies to assess and report on the impacts of their actions on several categories of protected or regulated resources in other countries. Two of these duties fall squarely on the State Department in regard to the KXL Pipeline. They are:

1) to assess the effects of crude oil as it flows through pipelines across international and interstate boundaries and across US waters and; and

2) to assess impacts on the endangered whooping crane, which is protected by the US-Great Britain migratory bird treaty, the Endangered Species Act, and the Migratory Bird Treaty Act.

Similarly, the global scope of the NEPA was reaffirmed in 1979[1] and 1997 NEPA Guidance,[2] with CEQ determining that agencies "must include analysis of reasonably foreseeable transboundary effects of proposed actions in the United States."

The DEIS Ignores Unassessed Harms North of the Border

If the project goes forward, then the virtually certain result will include harm to Cranes and other protected species, both north and south of the Canadian border, harm that will not have been assessed with the hard look required by NEPA including:

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[1] https://ceq.doe.gov/docs/ceq-regulations-and-guidance/regs/CEQ_EffectsAbroad_21MAR1979.pdf--[1]

[2] Council on Environmental Quality Guidance on NEPA Analyses For Transboundary Impacts, July 1, 1997, available at https://ceq.doe.gov/docs/ceq-regulations-and-guidance/memorandum-transboundary-impacts-070197.pdf

1) the most serious cause of ongoing injury and death to Cranes -- collision with power lines, such as those that will run above the pipeline on its entire route under the migratory path of the Cranes (in order to power the pumps that force the oil through the pipeline). The collision risk has not yet been effectively eliminated or mitigated or offset by any promise or mitigation commitment under the SEIS as the methods chosen are neither the best practices nor better alternatives to them;

2) the expansion of the already massive excavation sites and tailing ponds holding toxic residues that appear from the air as shining waters -- of the sort that Cranes and other birds drawn to water bodies tend to set down to rest and to feed;

3) the pollution of the waters and wetlands of the sort that has occurred on the existing smaller Keystone Pipeline and other similar oil pipelines due to leaks;

4) the air pollution due to refining at both ends of the pipeline; and

5) the climate disruption caused by the burning of fossil fuels and the effects it has on Crane, its terrestrial flyways.

The increased power line collision risk is especially dangerous for the survival and recovery of the Whooping Crane. The only self-sustaining population of Whooping Cranes has an annual migration path that spans the Central Flyway of North America, from the Northern edge of Alberta Canada to the Gulf of Mexico, largely tracking the proposed Keystone XL route across the Great Plains.[3] The primary cause of Whooping Crane mortality is collisions with power lines,[4] and "[p]ower lines associated with the proposed Project" would present new "collision hazards to migrant whooping cranes" -- as well as to interior least terns and piping plovers. [5]

Moreover, we understand that none of the power companies that will erect the lines have agreed to implement the conservation measures set forth in the Service's "Region 6 Guidance for Minimizing Effects from Power Line Projects within the Whooping Crane Migration Corridor" (the "Region 6 Guidance").[6]

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[3] *See* 2012 Biological Assessment at 3.0-13, 3.0-17.

[4] See *id.*

[5] Thomas v. Stehn & Tom Wassenich, *Whooping Crane Collisions with Power Lines: an Issue Paper* 25 (2008). 2012 Biological Assessment at 3.0-11 to 3.0-12; State Department, Final Supplemental Environmental Impact Statement for the Keystone XL Project ("2014 FEIS") at 4.8-18 to 4.8-19, 4.8-48.

[6] FEIS 4.8-19. The measures required by the FWS Guidance include a five-mile buffer for documented high-use whooping crane areas, burying lines within one mile of potentially suitable habitat where feasible, and otherwise marking existing lines as well as proposed new lines.[6] Rather, the power companies have only consented to marking the proposed new lines with bird flight diverters, though those are known to be less than 50 percent effective at reducing crane collisions. Therefore, bird diverters may *reduce* the risk of collisions, but *they cannot eliminate the likelihood of take or the possibility of jeopardy.*

As for the threat of oil spills, in recent years there have been several significant spills resulting from a breach of an oil pipeline, at least two of which were used to transport tar-sands oil. Most recently the existing smaller Keystone pipeline was found to have been leaking for at least two days in late October 2019 polluting a wetland in North Dakota.

Oil spills are a risk that cannot be discounted nor ignored. Yet, that appears to be exactly what DOS did in the Keystone XL Pipeline Supplemental EIS (which it now seeks to supplement again). The SEIS acknowledged that pipeline spills in Kalamazoo, Michigan and the Yellowstone River, Montana occurred, but it did not include any discussion of the lessons learned from either events and recommended no additional mitigation or precautionary measures to avoid future spills.

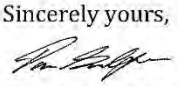
The Kalamazoo oil spill involved a 30-inch pipeline. Keystone XL will be a 36-inch pipeline that can transport almost 900,000 bbl/day, (37,500 bbl/hour or 18,750 bbl/30 minutes) of tar-sands oil. Were the KXL to leak or spill, the risk of a tremendous amount of oil spilled into fragile habitat cannot be discounted. Instead it must, at minimum, be evaluated. The risk plainly may be incompatible with continued survival of the most endangered bird in North America.

Take of whooping cranes is therefore virtually certain to occur as a result of construction and operation of the Project, and both north and south of the US-Canada border. Given their low numbers, genetic bottleneck (a lack of genetic diversity that can lead to physical and mental birth defects and other weaknesses in offspring) and slow reproduction, the loss of a few, or even one, breeding adult could jeopardize the continued existence of this iconic species.

Conclusion

The DEIS is effectively a plan to violate or permit actions that will violate the ESA. It should be withdrawn until such time as it can be accompanied by a Biological Assessment and Biological Opinion that forthrightly covers the full range of the Crane's habitat and the full panoply of impacts of the project upon it.

Sincerely yours,



Daniel M. Galpern

McCone County Board of Commissioners

November 4, 2019

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We would like to comment on the IES for the Keystone XL pipeline. Our county has worked with Keystone, now TC Energy for more than 10 years. They have been good neighbors from the start of this process as we planned for the eventual placement of the pipeline in McCone County. TC Energy worked with landowners as they acquired easements and kept in contact with the county to plan for upcoming events.

TC Energy surveyed the pipeline route and evaluated it for any potential environmental impacts. We do not expect that the pipeline will have negative long term impacts. We do not have a large amount of wildlife that will be impacted and recovery of the pipeline route should improve food sources and habitat for the wildlife.

When TC Energy starts to pay property taxes for the pipeline the increased tax revenue will be a tremendous boost for our economy. We have just over 1,700 people in our county which covers over 2,500 square miles with over 1,000 miles of county roads. The Keystone XL pipeline will provide the county with additional funds to help take care of our residents and our infrastructure.

During the construction phase our county will see an increase in people in our area as well as the economic impact of emplacing the pipeline. TC Energy worked with the county to establish a site that will provide lodging and support for the pipeline workers. The impact will be negligible, but will provide a boost for local businesses and facilities.

TC Energy has provided our county with some community support funds which helped us to improve our local park, football field, library and other areas.

We support the construction of the Keystone XL pipeline.

Thank you for your attention.

Sincerely,

THE BOARD OF COMMISSIONERS
McCONE COUNTY

James D. Moos, Chairman

Alan Stempel, Member

Ty R. Taylor, Member

Montana Chamber of Commerce

PHONE: 406.431.3248

Mr. Ross Alliston
Office of Environmental Quality and Transboundary Issues
U.S. Department of State
2201 C Street NW
Washington, DC 20520

Re: Docket #DOS-2019-0033

7 November 2019

To Whom It May Concern:

On behalf of the business entities that drive economic growth and development in our state, I am writing to encourage approval of the new supplemental environmental impact statement (SEIS) for the Keystone XL pipeline.

The Keystone XL pipeline is set to benefit Montana in many ways, including tax revenue and jobs. An estimate by Governor Brian Schweitzer's administration noted that the Keystone XL pipeline would generate about $63 million annually in property taxes for Montana, and that figure may need to be adjusted upward today. With no other state having more miles of the pipeline than Montana, the project would supply thousands of good-paying jobs during the construction and maintenance phases. Finally, construction of Keystone XL is estimated to generate $2 billion in earnings for U.S. workers and inject approximately $3.4 billion into U.S. GDP.

Given the volume and scope of regulatory procedures already applied to Keystone XL, the project's backers have clearly demonstrated their capability to operate the pipeline safely and utilize our natural resources responsibly. One needs to look no further than previous environmental reviews and Nebraska's recent court ruling that found the plans to be in the public interest.

The Keystone XL project has been reviewed numerous times at both the state and federal level:

- In 2011, the U.S. State Department (DOS) determined the project could be built with no significant impact to the environment.
- In 2014, DOS again finds Keystone XL can be built safely.
- In 2018, DOS again finds Keystone XL can be built with no significant impact.

It is time to proceed.

Envision 2026, the Montana Chamber's 10-year strategic plan for Montana's future, prioritizes economic development for the benefit of all of Montana. The Keystone XL project is a major opportunity to drive new investment to our state and generate tax revenue to support essential services. Please advance the new SEIS.

Thank you for your consideration.

Sincerely,

Todd O'Hair
President & CEO

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Montana Petroleum Association

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November 18, 2019

RE: DOS-2019-0033

On behalf of a diverse spectrum of revenue and job creators working to support Montana production, transportation, and refining of crude oil and natural gas, the Montana Petroleum Association (MPA) respectfully submits the following comments regarding key aspects of continued domestic production of vital petroleum resources.

BACKGROUND

MPA is a non-profit trade association representing the nearly two hundred businesses which work to facilitate energy production in Montana. These include integrated and independent producers; lease operators; service providers; pipeline companies; refineries; mineral owners; as well as professional entities providing legal, financial, and additional regulatory support to the oil and natural gas industry.

MPA is proud to represent and advocate for companies which not only produce necessary resources, but contribute greatly to the families, communities, and to state and local economies. For more than 100 years, petroleum production has supported and, in some cases, saved agricultural producers and other key revenue generators from financial hardship.

On average Montana's petroleum industry pays wages two-thirds higher than the state average; a considerable economic contribution in a state ranked 49th in take-home pay. Additionally, many MPA members are among the largest tax payers in the areas where they operate, supporting the everyday functions of local government and public education.

Also, noteworthy, members of MPA have a longstanding history of successful environmental stewardship, prioritizing conservation and reclamation of operations to protect and restore lands for future generations of ag producers, recreationalists, and others whom enjoy and benefit from activities on multiple-use lands.

MPA works closely with regulators and elected officials to foster a productive collaboration for the responsible development of oil and natural gas resources.

Time to Build the Pipeline

Since 2008 there has been years of rigorous review and the facts have never changed. Every federal study done under both the Obama and Trump administrations has concluded Keystone XL can be built and operated safely, with NO significant impact to the environment.

TC Energy filed its first Keystone XL application in 2008. Since 2008, about 42,000 miles of pipeline have been put into service in the U.S., carrying oil and other petroleum products.[1] The Keystone XL project has been reviewed numerous times at both the state and federal level:

[1] Source: PHMSA, 2008-2017

- In 2008 the permitting process for Keystone XL started.
- In 2011, the U.S. State Department (DOS) determined the project could be built with no significant impact to the environment.
- In 2014, DOS again finds Keystone XL can be built safely.
- In 2018, DOS again finds Keystone XL can be built with no significant impact.
- In 2019 the State permitting processes have been completed in all three affected states, Montana, South Dakota, and Nebraska.
- In 2019 a supplemental EIS was released adding another 648 pages to the voluminous original EIS that reviews geology, soils, water resources, wetlands, wildlife, air quality and noise, terrestrial vegetation, fisheries, species at risk, cultural resources, greenhouse gas emissions and climate change.

ENERGY SECURITY IS NATIONAL SECURITY

In today's global climate, abundant energy supplies and North American energy independence will have a huge influence geopolitically and economically. The Keystone XL project is designed to transport both Canadian and American crude oil. Keystone XL would enhance the United States' energy security by providing additional critically important infrastructure for the delivery of a dependable supply of crude oil from Canada, as well as facilitating the delivery of Montana and North Dakota crude oil supplies.

Keystone XL will enhance the existing pipeline system and provide new ways to safely transport the energy to fuel Americans' daily lives, now and in the future. Keystone XL will provide a reliable source of fuel from a stable neighboring country that shares America's values rather than moving this crude oil to other nations with lesser environmental controls.

ENVIRONMENTALY SAFE MEANS OF TRANSPORTATION

Keystone XL will safely deliver affordable and secure crude oil from western Canada – crude oil that is currently being transported into the US by rail. Pipelines are the safest form of oil transportation, with fewer overall incidents than rail according to U.S. Department of Transportation.

In its 2014 environmental impact statement, the State Department determined that GHG emissions from the movement of this oil by other modes of transportation such as rail would generate 28 percent to 42 percent more GHG emissions than Keystone XL. Canada exported 10 million barrels of oil in January of 2019 via railroad.

This crude oil is coming into the U.S.; the only question is how it will be transported. Crude oil not shipped to the United States will ultimately be transported to other nations without our environmental standards.

ECONOMIC IMPACT

Keystone XL is good business for the U.S. It will create thousands of high-paying construction jobs, pay millions into three rural states' tax coffers and inject billions into the nation's economy. During construction, Keystone XL will create over 42,000 U.S. based jobs. Approximately 12,000 of the jobs will be created in Montana, South Dakota and Nebraska. Wages supported by

Keystone XL construction will generate $2 billion in earnings for U.S. workers Construction of Keystone XL will inject approximately $3.4 billion into U.S. GDP and taxes paid to Montana's state and local coffers will pay for education and social services programs as well as infrastructure needs.

CONCLUSION

The Keystone XL pipeline brings oil into the United States from a country friendly to U.S. interests. This pipeline will provide additional transport for Montana and North Dakota crude oil to southern markets. The construction techniques identified in the permitting requirements of the affected states will ensure proper operating parameters. Environment and climate change concerns are met by adhering to regulations in the United States, not by not exporting this crude oil directly to a foreign nation lacking those same restraints.

It has been eleven years since this project has started the permitting process. It is time to start construction.

Thank you,

Alan Olson
Executive Director
Montana Petroleum Association

National Nurses United

WASHINGTON DC
OAKLAND

Via Federal Register

November 18, 2019

Ross Alliston, Keystone XL Program Manager
Office of Environmental Quality and Transboundary Issues
U.S. Department of State
2201 C Street NW
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Robert D. Wing, Acting Director
Office of Environmental Quality and Transboundary Issues
U.S. Department of State
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RE: Docket No. DOS-2019-0033, Draft Supplemental Environmental Impact Statement for the Proposed Keystone XL Pipeline, 84 Fed. Reg. 53,215 (Oct. 4, 2019)

Dear Mr. Alliston and Mr. Wing:

On behalf of more than 150,000 registered nurses (RNs) across the country, National Nurses United (NNU) submits these comments in response to the U.S. Department of State's (Department) Draft Supplemental Environmental Impact Statement for the Proposed Keystone XL Pipeline, 84 Fed. Reg. 53,215 (Oct. 4, 2019) (Draft SEIS). The Draft SEIS seriously underestimates the threats that the Keystone XL pipeline (KXL) poses to environmental and public health. Despite the failings of the Draft SEIS, its findings nonetheless demonstrate that KXL inevitably will cause environmental and public health disasters with potentially irreversible damage to the land, lakes, rivers, and cultural sites that the pipeline runs through and harm to the health of native American communities, the public, and the planet at large.

As RNs, NNU's members work as bedside healthcare professionals in every state in the nation and our members have witnessed first-hand the devastation that oil and fossil fuel extraction and transportation projects—like KXL—wreak upon the health of individuals, communities, and the environment. Every day NNU nurses see how the production and use of fossil fuels exacerbates the climate crisis, poisons our air and water, and harms our patients and our planet. As nurses, NNU understands the Lakota saying "mni wiconi"—that water is life. For this reason and the reasons detailed below, NNU strongly opposes the construction of KXL.

NNU believes that the Draft SEIS has not adequately met the requirements of the National Environmental Policy Act (NEPA) and that the Department's approval of the any application to construct or operate KXL would violate the Administrative Procedures Act (APA) and the National Historical Preservation Act (NHPA). An SEIS of KXL must more probingly

consider KXL's impact on (1) human and environmental health and safety along the pipeline, particularly with respect to the impact of the devastating pipeline ruptures and spills that we know are inevitable; (2) environmental justice for marginalized populations that live in areas along the pipeline and for the planet as a whole; (3) tribal treaty and consultation rights as well as sacred and cultural sites; and (4) natural resource sustainability. A comprehensive SEIS, with the factors discussed below, will demonstrate that KXL presents hazards that are far too immense such that the Department cannot approve any requests to construct or operate KXL.

In that regard, NNU urges the U.S. Secretary of State (Secretary) to deny any requests to construct or operate KXL whether made by Presidential Permit application, TransCanada Keystone Pipeline, L.P. (TransCanada), TC Energy (formerly TransCanada Corp.), or any other entity. In order to fulfill its legal and moral obligations to protect the public from the inevitable disasters if KXL were completed, the Department must deny all applications for the construction or operation of KXL.

I. Additional Public Hearings and Opportunity to Comment on the Draft SEIS and KXL are Warranted under the NEPA and Other Federal Law.

Before the Secretary approves the construction and operation of KXL, the Department must comply with several environmental laws in permitting the pipeline. To allow the construction of KXL now, without making diligent efforts to involve the public in the comment period would be an arbitrary and capricious agency decision in violation of the NEPA. The NEPA requires federal agencies to disclose all potential adverse consequences of its actions and must allow for public participation in agency decision-making before proceeding with actions that pose potential health and environmental health consequences. 42 U.S.C. § 4332(2)(C); 40 C.F.R §§ 1500.1(b), (d), 1506.6(a). Where the adverse human and environmental health effects of an agency decision may be "significant," those adverse health effects must be analyzed in an EIS. 40 C.F.R. § 1504.4. To fulfill its obligations under the NEPA, it is necessary for the Department to complete a comprehensive SEIS process, including extending the comment period and holding public hearings with each native American tribe that may be impacted by KXL and across the communities where KXL and proposed alternate routes are slated to pass.

Importantly, the Presidential order from March 2019 authorizing the construction of KXL does not abrogate the Department's legal duties under the NEPA and NHPA to conduct a comprehensive environmental impact analysis, to diligently obtain public involvement in such process, and to consult with native American tribes whose historical and cultural sites may be destroyed by KXL and whose treaty rights made demand such consultation. The Draft SEIS failed to meet its obligations under the NEPA and NHPA to thoroughly examine the environmental, public health, and cultural impact of spills along the pipeline and to meet the consultation and public participation requirements.

Similarly, the executive demand on the Department to bypass environmental review and public and tribal consultation requirements does not void the APA's prohibition on arbitrary or capricious agency actions, findings, and conclusions. *See* 5 U.S. Code § 706(2)(A). The

Secretary has twice denied TransCanada's permit applications of to build KXL with environmental impact statements that were utterly lacking in their analyses. To approve KXL now after the Draft SEIS, even with its inadequacies, found greater negative environmental and public health impact than previous analyses, would be in clear contravention to its obligations under the APA. The Department, lest they violate the APA, cannot reverse course and approve KXL.

To fulfill its obligations under the NEPA, the NHPA, and the APA, it is necessary for the Department to deny any requests to construct KXL. NNU urges the Department to do so now and to refrain from issuing a final SEIS.

II. The Health and Safety Impact on Downstream Communities and Communities Along the Pipeline in the Event of a Spill.

An SEIS should include, at minimum, an analysis and determination of the human and environmental health risks that ruptures or spills pose on communities downstream from and along the pipeline. However, the Department failed to thoroughly examine the impact of inevitable spills along KXL and failed to include the thin analysis that it did complete in the Summary of Consequences and ultimate determinations of KXL's impact.

Carrying dilbit—chemically diluted bitumen—extracted from Canadian tar sands in Alberta, KXL would run approximately 1,200 new miles of pipeline from heavy crude oil fields in Canada through proposed routes in Montana, South Dakota, and Nebraska. The pipeline would cross through the Fort Belknap Indian Reservation, cut through the Ogallala Aquifer, and run directly through sacred and historical sites of the Assiniboine and Gros Ventre Tribes. KXL would continue through the Great Sioux Reservation, cutting directly through the Rosebud Sioux Tribe's historic reservation and mere miles from the Rosebud Indian Reservation and yards from the Rosebud Sioux trust lands and other property.[1]

Despite the documented extreme health and safety hazards presented by crude oil pipelines, the Draft SEIS failed to address the potential damage that a spill along KXL would cause beyond a 40-river mile distance downstream of a potential spill. TC Energy and the Draft SEIS vastly underestimate the volume and magnitude of spills that are inevitable with the KXL. A more expansive analysis of the potential for pipeline spills and the effects of spills on human and environmental health must be taken into consideration in the scope of an SEIS.

The tar sands of Alberta, Canada, where the pipeline will originate, yield the semi-solid substance bitumen which requires heavy processing before it can be piped out. The Keystone XL pipeline primarily will carry dilbit, bitumen diluted with various substances to reduce its

[1] See First Amended Complaint, *Rosebud Sioux Tribe et al. v. Trump* (D. Mont.) (May 16, 2019), available at https://www.narf.org/nill/documents/20190508kxl-amended-complaint.pdf, accessed Nov. 18, 2019.

viscosity.[2] Dilbit contains chemicals that are prone to explosion and known to cause miscarriages, birth defects, anemia, cancer, leukemia, pulmonary edema, respiratory paralysis, and immune system dysfunction.[3] It also contains heavy metals such as vanadium, nickel, and arsenic in significantly higher concentrations than in conventional crude oil.[4] These heavy metals are not biodegradable and thus can accumulate over time. They are known to cause major health problems including miscarriage, cancer, organ and nervous system damage, and even death.[5] Fetuses, infants, and young children are at particular risk given their developing biological systems. Fetal and childhood exposure can result in congenital deformities, fetal tumors, hearing loss, learning difficulties, damage to the nervous system, and cognitive deficits.[6] In the event of a spill, the remoteness of some communities and their limited emergency resources could significantly reduce their ability to receive timely and adequate health treatment for dilbit exposure.

A. *The Draft SEIS inadequately evaluated the potential impact of a KXL oil spill.*

Spills over the course of KXL's operating life are inevitable but the devastating consequences of such spills, although discussed in parts of the Draft SEIS, are perplexingly left out of the Summary of Consequences of the Draft SEIS and are not considered to have a

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[2] The chemicals include benzene, hexane, hydrogen sulfide, xylenes, toluene, and bitumen. U.S. Department of State. January 2014. *Final Supplemental Environmental Impact Statement for the Keystone XL Project.* "Appendix Q Crude Oil Material Safety Data Sheets." Available at https://2012-keystonepipeline-sl.state.gov/documents/organization/221243.pdf, accessed Nov. 18, 2019.

[3] Agency for Toxic Substances & Disease Registry. *ATSDR Toxic Substances Portal.* Available at http://www.atsdr.cdc.gov/substances/index.asp, accessed Nov. 18, 2019. See also U.S. EPA, Toxicity and Exposure Assessments for Children's Health: Benzene Chemical Summary. Available at https://archive.epa.gov/region5/teach/web/pdf/benz_summary.pdf, accessed Nov. 18, 2019.

[4] Swift, A., Casey-Lefkowitz, S., Shope, E. Natural Resources Defense Council. February 2011. *Tar Sands Pipelines Safety Risks.* A joint report by Natural Resources Defense Council, National Wildlife Federation, Pipeline Safety Trust, and Sierra Club. Available at http://www.nrdc.org/energy/files/tarsandssafetyrisks.pdf, accessed Nov. 18, 2019.

[5] Agency for Toxic Substances & Disease Registry. *ATSDR Toxic Substances Portal.* Available at http://www.atsdr.cdc.gov/substances/index.asp, accessed Nov. 18, 2019.

U.S. EPA, Toxicity and Exposure Assessments for Children's Health: Benzene Chemical Summary. Available at https://archive.epa.gov/region5/teach/web/pdf/benz_summary.pdf, accessed Nov. 18, 2019.

Physicians for Social Responsibility. *Heavy Metals.* Retrieved from http://www.psr.org/environment-and-health/confronting-toxics/heavy-metals/ on February 20, 2013.

[6] Agency for Toxic Substances & Disease Registry. *ATSDR Toxic Substances Portal.* Available at http://www.atsdr.cdc.gov/substances/index.asp, accessed Nov. 18, 2019.

U.S. EPA, Toxicity and Exposure Assessments for Children's Health: Benzene Chemical Summary. Available at https://archive.epa.gov/region5/teach/web/pdf/benz_summary.pdf, accessed Nov. 18, 2019.

cumulative effect on the factors analyzed. Dilbit spills are far more difficult to clean up than conventional crude oil spills because the denser bitumen separates from the chemicals used to dilute it then sinks whereas conventional crude oil floats. Once deposited in stream beds, it can become an ongoing source of pollutants. To be clear, spills along the pipeline are inevitable and so are the negative environmental and public health impacts of spills. As such, it is irresponsible for the Department to treat spills as factors that are separate and apart from the normal operations of KXL.

The potential frequency and intensity of spills along KXL must be considered a significant environmental and public health and safety risk in an SEIS. Crude oil pipelines are historically unsafe and predictably prone to spills, from large and explosive ruptures to smaller leaks. This is reflected in data collected by the U.S. Department of Transportation's Pipeline and Hazardous Materials Safety Administration (PHMSA), which shows that pipeline spills occur nearly every day.[7] According to this federal data, there have been more than 2,000 "significant incidents"[8] involving onshore crude oil and petroleum pipelines since 1997, which in total caused over $3.5 billion in damage and spilled over 1.3 million barrels of hazardous liquid.[9]

The potential for an oil spill near the Ogallala Aquifer, the Missouri River, and other bodies of water cannot be underestimated. What must be comprehensively evaluated in an SEIS is spill response data, including the spill history of Keystone, TC Energy, and other oil corporations involved in the construction and operation of KXL. Spill response data would detail where ruptures could happen, how emergency personnel would respond, and what immediate measures and plans TC Energy will use in case of a spill. Because the durability of any new engineering and construction measures taken with KXL has yet to be tested over time, the risks of a spill must be thoroughly evaluated. As the Congressional Research Service stated in its 2010 report on the Keystone XL pipeline, a number of spills were likely "regardless of design.

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[7] PHMSA collects data on all oil and gas pipeline accidents and incidents annually, which is available at https://www.phmsa.dot.gov/data-and-statistics/pipeline/pipeline-incident-20-year-trends, accessed Nov. 18, 2019.

[8] PHMSA defines "Significant Incidents" as "those including any of the following conditions: (1) Fatality or injury requiring in-patient hospitalization; (2) $50,000 or more in total costs, measured in 1984 dollars; (3) Highly volatile liquid releases of 5 barrels or more or other liquid releases of 50 barrels or more; and (4) Liquid releases resulting in an unintentional fire or explosion. Gas distribution incidents caused by a nearby fire or explosion that impacted the pipeline system are excluded from this definition." U.S. Dept. of Trans., PHMSA, "National Pipeline Performance Measures," available at https://www.phmsa.dot.gov/data-and-statistics/pipeline/national-pipeline-performance-measures, accessed Nov. 18, 2019.

[9] PHMSA data on "significant" incidents is available at http://www.phmsa.dot.gov/pipeline/library/data-stats/flagged-data-files, accessed Nov. 18, 2019; and data on 20-year pipeline incident trends is available at http://www.phmsa.dot.gov/pipeline/library/data-stats/pipelineincidenttrends, accessed Nov. 18, 2019.

construction, and safety measures."[10] Even as pipeline construction and engineering purportedly have improved, the rate of spills for each mile of pipeline has not decreased.[11]

Tellingly, TC Energy's Keystone pipeline has had 21 oil spills along that pipeline since 2010, the most recent spill of at least 385,000 gallons or 9,120 barrels in near Edinburg, North Dakota was just two and a half weeks ago on October 31, 2019.[12] The October 2019 spill was just 880 barrels short of being a "catastrophic" spill. The most recent estimates from North Dakota state regulators said the leak affected about 209,100 square feet of land, which is almost 10 times more land than originally estimated.[13] The October 2019 spill represents a best-case scenario for an accidental rupture along KXL, with TC Energy's rupture detection and response system working at its best in that emergency officials have stated that the Keystone computer system, which detected a decrease in pressure, shut down the pipeline almost immediately. TransCanada's pipeline leak detection system will only detect a leak at the rate of 1.5 to 2% of the daily pipeline flow, or approximately a leak that is spilling at a rate of 535,500 to 754,000 gallons per day. As the October 2019 spill demonstrates, ruptures along the pipeline must be near catastrophic for the leak detection system to even begin to shut down the toxic flow of dilbit out into the lands and waters that KXL runs through.

Increasing the potential for a spill along KXL, dilbit is highly volatile and appears to be more corrosive and abrasive than ordinary crude oil that requires higher temperatures and pressure to flow through pipes.[14] According to a study by John Stansbury, TC Energy has woefully underestimated the number of significant spills (larger than 50 barrels or 2,100 gallons) that are likely to occur over the pipeline's 50-year operational lifetime.[15] Stansbury found that the number is closer to 91 such spills than to the 11 TC Energy projects. He also estimated that,

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[10] Congressional Research Service, J. L. Ramseur, R. K. Lattanzio, L. Luther, P.W. Parfomak, & N.T. Carter, *Oil Sands and the Keystone XL Pipeline; Background and Selected Environmental Issues*, Congressional Research Service Report (February 9, 2013), available at http://www.fas.org/sgp/crs/misc/R42611.pdf, accessed Nov. 18, 2019.

[11] The Associated Press analyzed PHMSA data from 2009 to 2015 and concluded that the annual number of significant accidents on oil and petroleum pipelines rose almost 60 percent in that period, which matched the rise in U.S. crude oil production during the same time frame. *See* Tribune Wire Reporters, *Federal data: As oil production soars, so do pipeline leaks*, Chicago Tribune, May 22, 2015, available at http://www.chicagotribune.com/news/nationworld/ct-oil-pipeline-leaks-20150522-story.html, accessed Nov. 18, 2019.

[12] Hefflinger, Mark. "Keystone Pipeline Spill History." *Bold Nebraska* (Nov. 7, 2019), available at http://boldnebraska.org/keystone-pipeline-spill-history/, accessed Nov. 18, 2019.

[13] "Land affected by Keystone pipeline leak bigger than thought." *Associated Press* (Nov. 18, 2019), available at https://apnews.com/d3f301c4e5014981949be28fae8e15d7, accessed Nov. 18, 2019.

[14] Swift, A., Casey-Lefkowitz, S., Shope, E. Natural Resources Defense Council. February 2011. *Tar Sands Pipelines Safety Risks*. A joint report by Natural Resources Defense Council, National Wildlife Federation, Pipeline Safety Trust, and Sierra Club, available at http://www.nrdc.org/energy/files/tarsandssafetyrisks.pdf, accessed Nov. 18, 2019.

[15] Stansbury, J. *Analysis of Worst-Case Spills from the Proposed Keystone XL Pipeline.*, available at https://www.scribd.com/document/341213517/UNL-Worst-Case-Spill-Study-for-Keystone-XL-Pipeline, accessed Nov. 18, 2019.

in worst-case scenarios at the Missouri, Yellowstone, and Platte rivers, spills could range from 5.2 million to 5.9 million gallons.[16] A 2011 report issued jointly by several environmental and safety organizations that examined spills greater than 26 gallons caused by internal pipe corrosion supports Stansbury's position.[17] That report found that between 2002 and 2010 Alberta had 218 spills per 10,000 miles of pipeline whereas the U.S. had 13.6. This amounts to sixteen times as many spills for Alberta than for the U.S. suggesting that we may see more spills than in the past if Keystone XL pipes dilbit into the country.

Bearing in mind this alarmingly poor track record of KXL's operators when it comes to spill response and the potent volatility of Canadian dilbit, it is imperative that an SEIS closely examines spill potential and spill response data and include these inevitable disasters in the cumulative impact determinations.

B. ***The Draft SEIS inadequately evaluated the potential human and environmental health risks from contaminated ecosystems and drinking water as a result of oil spills.***

To fulfill the requirements of the NEPA, the Department must also include an analysis in an SEIS the human and environmental health and safety risks that may result from oil contamination and exposure after a spill. With the completion of KXL, dilbit crude oil would flow through lands with sensitive ecologies and through dozens of water sources, including a significant source of drinking water for the Fort Peck Reservation and downstream communities along the Missouri River and along other water sources downstream KXL crossings. Oil contamination resulting from a spill could disturb these fragile ecosystems and could poison water sources along the pipeline with toxins.

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[16] *Id.* Engineers on TransCanada's payroll dispute Stansbury's claims. See Kothari, M., Bajnok, J., Tillquist, H. *Response to "Analysis of Frequency, Magnitude and Consequence of Worst-Case Spills From the Proposed Keystone XL Pipeline" by John Stansbury, Ph.D*, available at http://keystonepipeline-xl.state.gov/documents/organization/182262.pdf, March 8, 2013.

The *Final Environmental Impact Statement* for the original Keystone XL application put the maximum figures at 672,000 to 2.8 million gallons which would still be a very large spill. See "Potential Releases AMENDED 9/22/2011" at http://keystonepipeline-xl.state.gov/documents/organization/182068.pdf, last visited March 8, 2013.

[17] Swift, A., Casey-Lefkowitz, S., Shope, E. Natural Resources Defense Council. February 2011. *Tar Sands Pipelines Safety Risks*. A joint report by Natural Resources Defense Council, National Wildlife Federation, Pipeline Safety Trust, and Sierra Club, available at http://www.nrdc.org/energy/files/tarsandssafetyrisks.pdf, accessed Nov. 18, 2019. The authors acknowledge that a strict comparison between the spills in Alberta and the spills in the United States is not possible. In 2016, the National Academy of Science published a report assessing whether the differences between properties of diluted bitumen and those of other commonly transported crude oils warrant modifications to the regulations governing spill response plans and cleanup. National Academy of Sciences. *Spills of Diluted Bitumen from Pipelines: A Comparative Study of Environmental Fate, Effects, and Response*. National Academy Press (Washington, DC. 2016), available at https://www.nap.edu/catalog/21834/spills-of-diluted-bitumen-from-pipelines-a-comparative-study-of, accessed Nov. 18, 2019.

A rigorous evaluation of the pipeline's destructive potential from oil spills has yet to be conducted. The hazards presented by a KXL oil spill to human and environmental health are foreseeable, and the Department has a responsibility to include a full spectrum analysis of these known health risks in an SEIS. The Department limited its spill and impact analysis to a 40-river mile distance downstream of a potential spill because other spills reached 40-river miles downstream. The Department's reasoning is illogical. That other dilbit spills, like the Kalamazoo River spill described below, traveled 40-river miles downstream, it is reasonable that 40-river miles is the minimum distance not the maximum distance from a potential spill that the Department analyze in an SEIS.

The January 2015 oil pipeline spill in Montana into the Yellowstone River demonstrates the devastating impact that a KXL spill could have on the health of communities along the Missouri River. The pipeline dumped at least 30,000 gallons of light crude oil into nearby waterways after a rupture occurred at a weld, but the freezing temperatures created an ice cover on the Yellowstone that was so heavy that spill clean-up efforts were stalled and the collection of fish for toxicity sampling was hampered.[18] When tests of the municipal water treatment plant of the nearby downstream town of Glendive were finally complete, a review by the Centers for Disease Control and Prevention found benzene, a carcinogen, at three times above the Environmental Protection Agency's safe long-term exposure level.[19] For months following the spill, Montana's Department of Fish, Wildlife and Parks maintained a fish consumption advisory near Glendive after finding polycyclic aromatic hydrocarbons (PAHs) from petroleum in the edible muscle tissue and internal organs of fish.[20]

In a more catastrophic example, a rupture of the Enbridge pipeline outside Marshall, Michigan released 843,000 gallons (or about 20,000 barrels) of tar sands dilbit into Talmadge Creek, which then flowed into the Kalamazoo River. As heavy rains poured, the heavy crude flowed about 40 miles downstream before responders could contain the spill. In the immediate aftermath of the spill, nearly 60 percent of nearby Michigan residents suffered from respiratory,

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[18] *See* U.S. Dept. of the Interior, 2015 Yellowstone River Oil Spill, Case Details, Natural Resource Damage Assessment and Restoration Program, available at https://www.cerc.usgs.gov/orda_docs/CaseDetails?ID=1121, accessed Nov. 18, 2019.

[19] *See* U.S. Environmental Protection Agency, *Bridger Pipeline Release*, Pollution/Situation Report, available at https://response.epa.gov/sitesitrep_profile.aspx; U.S. Environmental Protection Agency, Mont. Dept. of Envtl., and Bridger, *Bridger Pipeline Release, Water Treatment Plant Analytical Data Summary*, available at https://www.epamoc.org/sites/9708/files/WTP%20Analytical%20Summary%2002-24-15.pdf, accessed Nov. 18, 2019.

[20] *See* Montana Fish, Wildlife & Parks, *Oil Found in Glendive Fish; Consumption Advisory Remains*, News Release, Feb. 20, 2015, available at http://fwp.mt.gov/news/newsReleases/fishing/nr_0887.html, accessed Nov. 18, 2019.

gastrointestinal, and neurological symptoms.[21] The Enbridge spill is considered the most disastrous onshore spill in U.S. history, costing the oil company about $1.2 billion for an almost 4-year-long clean up alone.

The health problems following the Yellowstone River and the Enbridge spills are not isolated incidents. In 2010, the Worcester Polytechnic Institute published a report on the effects of major oil spills on human health. Among other findings, the report concluded that chronic exposure to crude oil following spills led to increased incidence of cancer.[22] Other studies of oil spill contamination on human health found that people who had ingested the oil directly through drinking water or indirectly through consumption of contaminated meat had increased incidence of cancer, digestive problems, and reproductive problems.[23]

There are serious human and environmental health consequences that would result from heavy crude contamination and exposure following a KXL oil spill, and these risks must be comprehensively examined in the SEIS process such that the impact frequent large spills is examined and the potential for harm expanded beyond a 40-river mile distance.

III. Local and Global Environmental Justice Considerations Must Be Included in an SEIS.

A. *A detailed local environmental justice analysis of KXL's impact, including the impact of spills on marginalized communities, should have been included in an SEIS.*

The impact of KXL must be environmentally just for all such that no marginalized community disproportionately bear the risks and negative consequences of the pipeline's construction, operation, and inevitable spills. The Draft SEIS fails to conduct an environmental justice analysis of potential spills and fails to determine whether a spill may have a disproportionately high and adverse impact on minority and low-income populations because they claim that location of a spill is unpredictable. The failure of the Department to conduct such an analysis serves to obfuscate the potential risks the pipeline poses on minority and low-income communities. Even without a detailed analysis of the potential environmental justice impact of KXL spills the Draft SEIS does recognize "that Indian tribes could be disproportionately negatively impacted by the proposed Project because they could have a greater dependence on

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[21] Mich. Dept. of Comm. Health, Acute Health Effects of the Enbridge Oil Spill, pp. 8, 15 (Nov. 2010), available at http://www.michigan.gov/documents/mdch/enbridge_oil_spill_epi_report_with_cover_11_22_10_339101_7.pdf accessed Nov. 18, 2019.

[22] Jon Gay, Olivia Shepard, Mike Thyden & Matt Whitman, *The Health Effects of Oil Contamination: A Compilation of Research*, Worcester Polytechnic Institute (2010), available at https://web.wpi.edu/Pubs/E-project/Available/E-project-121510-203112/unrestricted/Health_Effects_of_Oil_Contamination_-_Final_Report.pdf, accessed Nov. 18, 2019.

[23] B. Armstrong, J.A. Córdoba, M.S. Sebastián & C. Stephens, *Exposure and Cancer Incidence near Oil Fields in the Amazon basin of Ecuador*. 58:8 J. of Occ. & Envtl Med. 517-522 (2000).

natural resources than non-tribal members." Clearly, a KXL spill places great risk on Indian populations that live and use land near the pipeline, but the Draft SEIS sidesteps its legal responsibility to analyze such environmental justice risks posed by inevitable spills and to make a determination on the significance of such risks. A thorough environmental justice analysis would evaluate whether the spills along the pipeline would perpetuate already existing disparate health impacts and environmental burdens on low-income and minority communities across the country.

This kind of detailed review can begin to alleviate the deleterious health risks borne by communities of color, which are disproportionately exposed to environmental health hazards. According to a 2007 environmental justice report by the United Church of Christ, about 56 percent of the nine million people who live in neighborhoods within three kilometers of large commercial hazardous waste facilities are people of color.[24] All communities impacted by the pipeline must be fairly treated in the KXL review process and must be meaningfully involved in the pipeline's development.

If approved, the pipeline will flow through sensitive ecosystems and over critical water supplies as well as crossing more than a thousand rivers, ponds, and streams.[25] TC Energy was ready to route the pipeline directly through the Nebraska's Sandhills. Pressure from environmental groups forced TC Energy to reroute the pipeline around the Sandhills area.[26] However, the alternate route, which is currently facing legal challenges in Nebraska, also passes through vulnerable ecosystems and crosses the Ogallala Aquifer.[27] In a letter regarding the draft supplemental environmental impact statement, the Environmental Protection Agency criticized the Department for providing little information about other alternative routes, including the I-90 route that would avoid the Ogallala Aquifer altogether, primarily because the routes would be longer than this alternative route. Based on this lack of analysis of alternative routes and other deficiencies, the agency rated the State Department's draft as EO-2, "Environmental Objections -

[24] Robert D. Bullard, Paul Mohai, Robin Saha & Beverly Wright, *Toxic Wastes and Race at Twenty 1987—2007*, United Church of Christ, pp. x, 52, 152 (March 2007), available at http://d3n8a8pro7vhmx.cloudfront.net/unitedchurchofchrist/legacy_url/27850/toxic20.pdf, accessed Nov. 18, 2019.

[25] U.S. Department of State, *Final Supplemental Environmental Impact Statement for the Keystone XL Project* (Jan. 2014), available at http://keystonepipeline-xl.state.gov/documents/organization/221135.pdf, accessed Nov. 18, 2019.

[26] See Friends of the Earth, "The keys to stopping Keystone XL," available at https://foe.org/2012-01-the-keys-to-stopping-keystone-xl/, accessed Nov. 18, 2019.

[27] Heineman, D. January 22, 2013. *Pipeline Approval Letter*. [Letter to President Obama and Secretary Clinton], available at https://journalstar.com/pdf-heineman-s-letter-approving-keystone-xl-pipeline-route/pdf_7c7f80f4-9482-50a7-9ef6-d18567863df5.html, accessed Nov. 18, 2019.

Insufficient Information."[28] The Draft SEIS still provides no alternative routes that would avoid the Ogallala Aquifer.

In Montana, KXL would also cross the Missouri River and the Milk River near where the two rivers merge and near Fort Peck Dam and Fort Peck Reservoir. The Missouri River, as a significant source of drinking water for homes, schools, public buildings, and the hospital on Fort Peck Indian Reservation, is critical to the health and the economy of the Indian populations and the Fort Peck Indian Reservation. But poverty, poor health care access, and failing public works already exacerbate the health problems of the Assiniboine and Sioux tribes and their members. A pipeline crossing on the Missouri and Milk Rivers and other bodies of water that are water sources for the Assiniboine and Sioux tribes would make the health of these community even more vulnerable.

Tribal waters are particularly susceptible to contamination and health risks. Research by Texas A&M University has shown that federal authorities conduct 44 percent fewer inspections of tribal drinking water utilities and wastewater treatment plants and are far less likely to take enforcement measures against tribal facilities when violations are found.[29] The failure of federal agencies to maintain the same rigorous water quality standard on tribal lands as it does across the country is also a failure in environmental justice. Health and water quality disparities between in tribal and non-tribal communities could be amplified because these environmental justice considerations have not considered in the Draft SEIS.

The potential harm of KXL to environmental and tribal health have been raised in pending litigation to halt the construction of the pipeline filed by the Fort Belknap Indian Community and the Rosebud Sioux Tribe against the Department, President Trump, TC Energy, TransCanada, and other agencies. The Department summarily dismisses tribal treaty rights despite this pending litigation and, instead, utterly fails to meet its obligations to conduct an environmental justice analysis on whether any tribal lands or trust sites would be impacted by spills along the pipeline.

B. *A complete environmental justice analysis in an SEIS would consider KXL's global health impact, including the climate crisis and greenhouse gas emissions.*

Additionally, an environmental justice analysis in an SEIS must consider the global human and environmental health impact of KXL, including to what extent the pipeline would exacerbate the climate crisis. The climate crisis threatens human and environmental health in a

[28] Environmental Protection Agency. April 22, 2013. *EPA Comment Letter: Department of State's Draft Supplemental EIS for the Keystone XL Project*, retrieved from http://epa.gov/compliance/nepa/keystone-xl-project-epa-comment-letter-20130056.pdf on Apr. 24, 2013.

[29] Teodoro, Haider & Switzer, *U.S. Environmental Policy Implementation on Tribal Lands: Trust, Neglect, and Justice*, Policy Journal Studies (Oct. 2016), available at http://onlinelibrary.wiley.com/doi/10.1111/psj.12187/full, accessed Nov. 18, 2019.

catastrophic way, including sea level rise, extreme weather, poor air conditions, and the proliferation of infectious diseases.[30]

It is undisputed that KXL and the extraction of tar sands oil would add to atmospheric carbon levels. The energy needed to extract and pump through the Keystone pipeline system an estimate of 850,000 barrels of dilbit per day through Canada, Montana, South Dakota, Nebraska, and other states along the Keystone pipeline system would certainly produce greenhouse gas emissions at greater rates than conventional drilling. The Carnegie Endowment's Energy and Climate Program with Stanford University and the University of Calgary have developed an Oil-Climate Index (OCI) to measure the greenhouse gas emissions and climate crisis impact of the multitude of oil types. The OCI estimates recovery of extra-heavy oils, like the bitumen from oil sands that KXL would extract, puts significant amounts of energy in to heating up resources so they can flow, consuming 10-30 percent of the energy content of the produced crude.[31] Extra-heavy crude also requires more heat, steam, and hydrogen to extract, transport, and process, with higher yields of petroleum coke (petcoke), a solid carbon material that is the byproduct of the oil refining product and major source of greenhouse gas emissions, and some having total greenhouse gas emissions that are twice as large as lighter oils.[32] The petcoke byproduct produced by KXL is expected to emit 13% more greenhouse gases than the Department previously considered and the petcoke is expected to replace conventional coal, emitting 5-10% more carbon dioxide.[33]

The direct effects that refining and burning fossil fuels have on human health are well known. They include increased risk of strokes and cardiovascular disease; lung damage, chronic bronchitis, and asthma; increased visits to emergency departments and more hospital admissions; and premature death.[34] Thousands of Americans die each year and hundreds of thousands more are seriously impaired. Refining and burning dilbit produces higher levels of

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[30] Various reports from research and organizations around the world have described the harmful impact of the climate crisis on human and environmental health. *See, e.g.*, World Health Organization, Climate Change and Health, Fact Sheet (Jun. 2016), available at http://www.who.int/mediacentre/factsheets/fs266/en/, accessed Nov. 18, 2019; Thomas F. Stocker, Qin Dahe, Gian-Kasper Plattner, Intergovernmental Panel on Climate Change Technical Study, Intergovernmental Panel on Climate Change (2013), available at http://www.climatechange2013.org/images/report/WG1AR5_TS_FINAL.pdf, accessed Nov. 18, 2019.

[31] Deborah Gordon, Adam Brandt, Joule Bergerson & Jonathan Koomey, *Know Your Oil: Creating a Global Oil-Climate Index*, Carnegie Endowment for International Peace, p. 17 (2015), available at http://carnegieendowment.org/files/know_your_oil.pdf, accessed Nov. 18, 2019.

[32] *Id.* at 11.

[33] Stockman, Lorne. *Petroleum Coke: The Coal Hiding in the Tar Sands*. Oil Change International (2013), available at http://priceofoil.org/content/uploads/2013/01/OCI_Petcoke_FINAL_SCREEN.pdf, accessed Nov. 18, 2019.

[34] Environmental Protection Agency. *Emissions from the Oil & Natural Gas Industry*, retrieved from http://www.epa.gov/airquality/oilandgas/basic.html on February 13, 2013.

air pollution and toxic by-products than conventional crude oils resulting in greater costs to human health.[35]

Fossil fuels have the potential to cause far more injury, illness, and death through climate change. The increasing severity of hurricanes, floods, wildfires, heat waves and droughts demonstrate the disastrous effects of the climate crisis.[36] Climate change also causes injury and illness in less dramatic but equally devastating ways. In addition to weather-related deaths and disease, the Centers for Disease Control lists increases in all of the following as potential effects of climate change:

- Heat-related morbidity and mortality
- Asthma, respiratory allergies, and airway diseases
- Insect- and animal-borne diseases
- Cardiovascular disease and stroke
- Food borne diseases and malnutrition
- Waterborne diseases
- Human developmental effects
- Mental health and stress-related disorders
- Neurological diseases and disorders
- Cancer[37]

Those most likely to be impacted include people with underlying health conditions, the elderly and the very young, the poor, and people of color.

Many scientists view the atmospheric carbon dioxide level of 350 parts per million (ppm) as a climate change safety zone. As of 2018, our atmosphere averages 407 ppm of carbon dioxide on a monthly basis.[38] Former NASA scientist James Hansen argues that stabilizing the climate, though an "enormous challenge," is "conceivable" But he warns that, if we extract the fossil fuels in the tar sands, there could be severe environmental repercussions.[39]

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[35] Bailey, D. and Danielle Droitsch. "Tar Sands Crude Oil: Health Effects of a Dirty and Destructive Fuel." Natural Resources Defense Council, available at http://www.nrdc.org/energy/tar-sands-health-effects.asp, accessed Nov. 18, 2019.

[36] U.S. Global Change Research Program. Thomas R. Karl, Jerry M. Melillo, and Thomas C. Peterson, (Eds.). 2009. *Global Climate Change Impacts in the United States*, available at http://downloads.globalchange.gov/usimpacts/pdfs/climate-impacts-report.pdf, accessed Nov. 18, 2019.

[37] Centers for Disease Control and Prevention. *Climate Effects on Health*, available at http://www.cdc.gov/climateandhealth/effects/default.htm, accessed Nov. 18, 2019.

[38] Lindsey, Rebecca, National Oceanic and Atmospheric Administration, "Climate Change: Atmospheric Carbon Dioxide," NOAA Climate.gov (Sept. 19, 2019), available at https://www.climate.gov/news-features/understanding-climate/climate-change-atmospheric-carbon-dioxide.

[39] Hansen, J. June 4, 2011. *Silence Is Deadly: I'm Speaking Out Against Canada-U.S. Tar Sands Pipeline*, available at https://www.resilience.org/stories/2011-06-04/silence-deadly-i%E2%80%99m-speaking-out-against-canada-us-tar-sands-pipeline/, accessed Nov. 18, 2019.

We should not allow any expansion of fossil fuels infrastructure, especially one that would facilitate the extraction and burning of one of the deadliest forms of fossil fuels.

Overall the findings in the Draft SEIS show greater greenhouse gas emissions that are higher than previous EIS estimates. Given the greater, clearly immense potential for KXL to amplify the climate crisis, greenhouse gas emissions, and other waste generated by dilbit production and use, the Department must reject any applications to construct or operate KXL.

IV. Tribal Treaty Rights and Tribal Consultation Rights, including the Impact of KXL on Cultural and Sacred Sights, Must Be Included in SEIS Analyses.

A. *KXL crosses tribal land and impacts tribal treaty rights, which that the U.S. must honor.*

Although the history of tribal treaty rights in connection to the Missouri River is complicated and contentious, the Department must analyze KXL's potential impact to tribal treaty rights in an SEIS, particularly with respect to the potential impact that inevitable spills will have on tribal land and water rights even if the pipeline does not cross treaty land. The Rosebud Sioux Tribe and the Fort Belknap Indian Community, including the Assiniboine and Gros Ventre Tribes, and their members, possess rights to use and occupy land granted unto them under the Fort Laramie Treaty of 1851 (11 Stat. 749) and the Fort Laramie Treaty of 1868 (15 Stat. 635). Pursuant to these treaties between sovereigns, the tribes hold rights to use the lands and waters along the Milk. Missouri, Cheyanne, and Platte Rivers such that the use or occupation of the land by non-tribal members is prohibited without the consent of the respective tribe. To honor these treaties and to uphold the sovereignty of the tribes that were party to the treaties, it is necessary that the Department specifically consider each tribe's treaty rights in an SEIS, including the impact that a pipeline rupture may have on treaty rights.

Related litigation between Fort Belknap Reservation tribes, including Gros Ventre, and the United States, at minimum, established that the Indian tribes maintain both property and use rights to the quantity and quality of waters of Lake Oahe and the Missouri River as well as hunting, fishing, and gathering rights. See *Winters v. United States*, 207 U.S. 564 (1908); *Menominee Tribe v. United States*, 391 U.S. 404 (1968). The Rosebud Sioux Tribe and the Fort Belknap Indian Community currently have litigation pending contesting KXL's construction and operation through tribal lands as a violation of the NEPA, NHPA, APA, and tribal treaty rights, including water use rights to the Missouri River and other waters as well as hunting, fishing, and gathering rights. Inherently tied to the tribal use and property rights is the continued health and safety of waters flowing through and from the Missouri river. As such, the extent of spills and contamination from KXL are factors that must also be weighed in an SEIS review of tribal treaty rights.

B. *The KXL SEIS process cannot be conducted without the consultation with the all tribes that may be impacted or without consideration of tribal cultural and sacred sites.*

Consistent with the Department's legal duties under the NEPA, all tribes that may be impacted must be consulted prior to the Department's authorization of any KXL construction or operation requests. In particularly, the Rosebud Sioux Tribe and the Fort Belknap Indian Community have clearly asserted that Department, the President, and other federal agencies have not honored their tribal consultation rights in violation of tribal treaty rights and under various federal laws. Without full and effective participation of impacted tribes in an SEIS and KXL review process, the legal obligation of the United States to consult with impacted Indian tribes has not be satisfied.

In ongoing litigation, the Rosebud Sioux Tribe and the Fort Belknap Indian Community have raised numerous concerns about KXL's impact on the health and safety of the tribes and their members, on cultural and sacred sites, and on the long-term economic well-being of the reservation. Among the tribes' health and safety concerns are the lack of effective safety measures in the event of a spill, the pipeline's health impact on tribal water systems, and the destruction of natural resources and historical, cultural, and sacred sites in the pipeline's path.

With respect to preservation of the tribes' cultural and sacred sites, the Department must comply with the requirements to review how its actions in the construction and operation of KXL impact historic properties that have been established under Section 106 of the implementing regulations of NHPA. The NHPA additionally requires that federal agencies consult with all stakeholders, including Native American tribes, when historic properties may be impacted. Although the Draft SEIS does examine briefly the impact of potential spills on cultural resources and sacred sites of the tribe, such impact is excluded from the Summary of Consequences. Like the analyses of the environmental justice and water resources impact of potential spills, the Department inexplicably fails to consider the impact of spills in its final determination of KXL's impact on the resources examined.

NNU urges the Department to hold public hearings and hearings specifically with tribes who live near the pipeline's path, including the Rosebud Sioux Tribe and the Fort Belknap Indian Community, on the Draft SEIS and to conduct a meaningful review of all tribal concerns about their right to fully participate in the Department's decision-making process and about the pipeline's potential impact on tribal health, safety, culture, spirituality, and religion. Moreover, the impact of spills on tribal health, cultural resources, or sacred sites must be weighted in an SEIS's determination of KXL's consequences.

V. Jobs Analysis Improperly Weights the Positive Impact on KXL.

The Draft SEIS inappropriately gives too much weight to the economic impact that KXL construction and operation jobs would have. As the Draft SEIS states, only 106 workers would be needed duration of the pipeline's construction and may only indirectly support or induce

2,996 jobs in Nebraska. After the pipeline is constructed, the Draft SEIS only estimates 13 jobs would be available in the project area and most pipeline monitoring would be conducted remotely. Thus, the net tax benefit of the pipeline to the areas in which KXL runs through would be negligible.

Rather than contemplate alternative routes for KXL, the Department should weigh alternative actions that involve green energy projects. Whether to build the Keystone XL pipeline has been framed by some as a choice between jobs and the environment. Economist Robert Pollin makes clear that we can have both jobs and protect the environment. Pollin calculates that, dollar for dollar, money spent on clean energy projects geared toward efficiency and renewable energy sources creates 3.2 times as many jobs as money spent in the oil industry.[40] Several factors come into play here. First, a greater proportion of investments in green infrastructure goes to labor than to supplies and equipment. Second, on average, green jobs pay 20% more than jobs in the oil industry, partly because they are much more likely to be union jobs.[41] Finally, building green infrastructure puts people to work directly in areas such as construction and manufacturing, as well as indirectly in areas that would manufacture and deliver the materials needed for the infrastructure such as steel and transportation. As these workers spend the money they earn, the investment ripples out across the broader economy and creates jobs in retail, wholesale, and other sectors. Although oil pipeline construction creates more jobs per dollar than the oil industry as a whole, it still creates fewer jobs than money spent on clean energy projects. The same amount spent on a clean energy project would create 33% more jobs than the pipeline project for a total of 55,440.

NNU believes that we can begin funding green jobs by ending corporate welfare for the fossil fuel industry that the Department readily serves by fast-tracking approvals of oil pipeline projects like KXL. The Department should consider these alternatives in the economic and socioeconomic justice analyses of an SEIS. At the federal level alone, we provide billions every year in tax deductions, loopholes, and subsidies to an industry making record profits. The country not only subsidizes oil spill cleanup through tax deductions and capping money damages, we also provide special financing and fund research and development. By closing these loopholes and ending the subsidies, we can save $135 billion over the next ten years.[42]

VI. Natural Resource Depletion Should Be Analyzed in an SEIS.

Finally, the Department must also consider the sustainability of KXL as it extracts and depletes natural resources. The extraction of fossil fuels from the earth is not a sustainable

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[40] Pollin, R. 2012. *Back to Full Employment*. MIT Press. Cambridge, MA.

[41] Middle Class Task Force, The Vice President of the United States. Staff Report. *Green Jobs: A Pathway To a Strong Middle Class* (2009), available at http://digitalcommons.ilr.cornell.edu/cgi/viewcontent.cgi?article=1743&context=key_workplace, accessed Nov. 18, 2019.

[42] Sanders, B., Ellison K. *End Welfare for Polluters Act*. 2015, available at https://www.sanders.senate.gov/newsroom/press-releases/end-polluter-welfare-act, accessed Nov. 18, 2019.

venture. By reducing the quality of the air we breathe and our water sources, KXL will limit availability of our most precious natural resources—clean air and safe drinking water.

A natural resource evaluation would pose a fundamental question to the Department—can we provide the same energy to the country without exposing people and the earth to the massive risks presented by our continued reliance on fossil fuels. As a member of the Intergovernmental Panel on Climate Change, the United States is obligated to mitigate global greenhouse gas emissions by limiting fossil fuel production and by developing renewable or alternative energies. The United States must not undermine these international commitments to combat the climate crisis and to build a sustainable energy future.

Honoring international agreements on the climate crisis, an SEIS must measure the impact of KXL's natural resource extraction on air, water, and the planet, and it must consider the availability of alternative and renewable energy sources. The Draft SEIS fails to weigh the consequences that increased greenhouse gas emissions from the KXL and the increased use of dilbit crude would have on natural resources and the long-term impact that KXL would have in accelerating the climate crisis.

VII. Conclusion

For the above reasons, NNU respectfully urges the Department to reject any requests by TransCanada, the President, or other entity to construct or operate the Keystone XL pipeline. It is the moral and legal duty of the Department to thoroughly examine the environmental and public health impact of KXL and, despite its clear inadequacies, the Draft SEIS demonstrates that the Department must halt the construction of KXL.

Thank you for your attention to this matter.

Sincerely,

Michelle Grisat

Michelle Grisat
National Director of Health Policy
National Nurses United

Northern Plains Resource Council, Bold Alliance, Center for Biological Diversity, Friends of the Earth, Natural Resources Defense Council, and Sierra Club

Northern Plains Resource Council • Bold Alliance
Center for Biological Diversity • Friends of the Earth
Natural Resources Defense Council • Sierra Club

October 15, 2019

Ross Alliston
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Robert D. Wing
Acting Director
Office of Environmental Quality and Transboundary Issues
U.S. Department of State
2201 C Street NW
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Re: Request for comment period extension for the Draft Supplemental Environmental Impact Statement for the Proposed Keystone XL Pipeline

Dear Mr. Alliston and Mr. Wing:

On behalf of their millions of members and supporters nationwide, the undersigned environmental organizations respectfully request an extension of the public comment period for the "Draft Supplemental Environmental Impact Statement for the Proposed Keystone XL Pipeline" and additional public hearing dates. Specifically, we ask that the deadline for public comments be extended by at least 45 days, to no earlier than January 17, 2020, and that the State Department hold at least one public hearing in each state—Montana, South Dakota, and Nebraska—as well as a public hearing near the Missouri River crossing and Fort Peck reservation, such as in Wolf Point, MT.

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A 90-day (at minimum) comment period and additional public hearings are warranted for several reasons. First, 90 days represent the minimum amount of time necessary for interested parties to adequately address the numerous issues discussed in the Draft Supplemental Environmental Impact Statement ("Draft SEIS"), including potential impacts of the Mainline Alternative Route through Nebraska, current market conditions affecting the viability of the project, the revised analysis of Keystone XL's climate change impacts, and updated information on the likelihood of and adverse impacts associated with oil spills. The Draft SEIS is over 600 pages long; a 45-day comment period simply does not give the public enough time to submit reasoned, detailed, and responsive comments on the host of issues presented. A longer comment period and additional public hearings are also warranted because there is ongoing litigation over Keystone XL and the federal government's inadequate environmental analysis of the project under several environmental laws, including NEPA, which implicates many of the issues described in the Draft SEIS.

Second, a 90-day comment period and additional public hearings are consistent with the National Environmental Policy Act ("NEPA") and the State Department's regulations, which require the agency to "make diligent efforts to involve the public in implementing" the Act. 22 C.F.R. § 161.9. In the past, the State Department has made such diligent efforts in its NEPA review of Keystone XL by, for example, providing approximately 75 days for public comment on the 2013 Draft SEIS for Keystone XL and holding over twenty public meetings along the pipeline route. *See, e.g.*, 75 Fed. Reg. 20,653 (Apr. 20, 2010); 75 Fed. Reg. 22,890 (Apr. 30, 2010); 75 Fed. Reg. 33,884 (June 15, 2010); *see also* 78 Fed. Reg. 18,665 (Mar. 27, 2013).

Finally, a longer comment period is justified where, as here, the project has attracted significant public interest. The Keystone XL pipeline has been the subject of intense public interest and involvement since it was first proposed. As the State Department notes in the Draft SEIS, the 30-day scoping period in 2018 related to the Mainline Alternative Route in Nebraska gathered over 212,000 comments alone. And as the State Department acknowledged in its 2015 Record of Decision, the agency received over 400,000 comments on the scope of the 2014 SEIS, over 1.5 million comments on the 2013 Draft SEIS, and over 3 million comments on the Keystone XL national interest determination.

For these reasons, we respectfully request an extension of the comment period for the Draft SEIS from 45 to at least 90 days, and ask that the State Department hold at least one public hearing in Montana, South Dakota, and Nebraska, as well as a public hearing near the Missouri River crossing and Fort Peck reservation, such as in Wolf Point, MT.

Thank you very much for your consideration.

Respectfully submitted,

Cecilia D. Segal

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On behalf of Northern Plains Resource Council, Bold Alliance, Center for Biological Diversity, Friends of the Earth, Natural Resources Defense Council, and Sierra Club

**Comments of the Northern Plains Resource Council, *et al.*,
to the Department of State on the Draft Supplemental Environmental Impact
Statement for the Keystone XL Project**

Submitted November 18, 2019

Submitted to Regulations.gov, docket DOS-2019-0033-0001

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On behalf of Northern Plains Resource Council, Bold Alliance, Center for Biological Diversity, Friends of the Earth, Natural Resources Defense Council, and Sierra Club (collectively, "Northern Plains"), we submit these comments to the U.S. Department of State on the Draft Supplemental Environmental Impact Statement (Draft SEIS) for the Keystone XL project.

I. Procedural Background

In 2014, the State Department released a Final Supplemental Environmental Impact Report for the Keystone XL project (the "2014 EIS"). That document contained numerous flaws, including a highly skewed analysis of climate and spill impacts. After exhausting administrative remedies, Northern Plains filed suit against the State Department and other agencies in U.S. District Court for the District of Montana, alleging, among other things, that the State Department's 2014 EIS violated the National Environmental Policy Act (NEPA). While that litigation was pending, the State Department also released an Environmental Assessment and Draft SEIS for the Mainline Alternative Route (MAR) through Nebraska, but never released a Final SEIS before the court issued its decision.[1]

The State Department now claims that the court found the 2014 EIS "largely complied" with NEPA. Draft SEIS at S-2. But in reality, in August and November 2018, the court struck down a number of key sections of the document as violating the law. Specifically, the court held that the State Department failed to prepare a supplemental EIS evaluating critical new information on: (1) Keystone XL's new and unanalyzed route through Nebraska, known as the Mainline Alternative Route; (2) the significant changes in oil prices since 2014, which could materially alter the State Department's analysis of the project's effect on tar sands development; (3) the cumulative climate impacts from the State Department's approval of another tar sands pipeline expansion, including the methods of analyzing greenhouse gases used for that pipeline; and (4) major oil pipeline spills since 2014, including a spill from TC Energy's own Keystone I pipeline, and how such spills would affect endangered species. The district court also found other NEPA

[1] Because this Draft SEIS references the 2014 EIS, Northern Plains incorporates its prior comments on that document, as well as on the Environmental Assessment and Draft SEIS for the Mainline Alternative Route that was never finalized. Northern Plains requests that all of those comments be included in the record for this Draft EIS.

violations alleged by the Indigenous Environmental Network plaintiffs in a consolidated case, including that State Department failed to survey 1,038 acres for cultural resources.

The district court also held that the State Department's reversal—first denying the project in a 2015 Record of Decision and then approving it in a 2017 Record of Decision on the same factual record—was arbitrary because the agency "simply discarded prior factual findings related to climate change to supports its course reversal." Copies of the court's opinions are attached to this letter as Exhibits A and B.

These are not minor or technical violations—they go to the heart of the most controversial issues surrounding Keystone XL: the pipeline's impacts related to climate change, oil spills, endangered species, and its route through an entire state. The district court found that these violations warranted vacating the Record of Decision and enjoining construction of the pipeline. On March 15, 2019, the Ninth Circuit denied TC Energy's motion for a stay pending appeal. Just two weeks later, on March 29, President Trump purported to rescind the State-issued permit and reissue the permit himself as part of a "Presidential Memorandum." Although the Ninth Circuit dismissed the case as moot, the State Department decided to continue its role as the lead agency for the project's EIS, and prepared this Draft SEIS purportedly to comply with the district court's order. However, for the reasons below, the Draft SEIS falls far short of meeting that goal.

II. NEPA Background

NEPA is our "basic national charter for the protection of the environment." 40 C.F.R. § 1500.1. Congress enacted NEPA "[t]o declare a national policy which will encourage productive and enjoyable harmony between man and his environment; to promote efforts which will prevent or eliminate damage to the environment and biosphere and stimulate the health and welfare of man; [and] to enrich the understanding of the ecological systems and natural resources important to the Nation." 42 U.S.C. § 4321. To accomplish these purposes, NEPA requires all agencies of the federal government to prepare a "detailed statement" that discusses the environmental impacts of, and reasonable alternatives to, all "major Federal actions significantly affecting the quality of the human environment." *Id.* § 4332(2)(C). This statement is commonly known as an environmental impact statement (EIS). *Id.*

The EIS must "provide full and fair discussion of significant environmental impacts and shall inform decision-makers and the public of the reasonable alternatives

which would avoid or minimize adverse impacts or enhance the quality of the human environment." 40 C.F.R. § 1502.1. This discussion must include an analysis of "direct effects," which are "caused by the action and occur at the same time and place," as well as "indirect effects which . . . are later in time or farther removed in distance, but are still reasonably foreseeable." *Id.* § 1508.8. An EIS must also consider the cumulative impacts of the proposed federal agency action together with past, present, and reasonably foreseeable future actions, including all federal and non-federal activities. *Id.* § 1508.8. Furthermore, an EIS must "rigorously explore and objectively evaluate all reasonable alternatives" to the proposed project. *Id.* § 1502.14(a).

Thus, in this case, NEPA requires that the State Department's Draft SEIS assess all impacts of the Keystone XL project, including any direct, indirect, and cumulative impacts. 40 C.F.R. §§ 1502.14, 1502.16. Specifically, the EIS must "present the environmental impacts of the proposal and the alternatives in a comparative form, thus sharply defining the issues and providing a clear basis for choice among options by the decision maker and the public." *Id.* § 1502.14.

For the reasons stated below, the Draft SEIS for Keystone XL is legally and technically flawed because, among other things, the State Department failed to adequately assess all of the deficiencies identified by the court. The State Department must fully address the following concerns and re-issue the Draft SEIS for further public comment. An EIS that fairly and accurately addresses all the impacts of Keystone XL will make it evident that Keystone XL is not in the national interest and should be denied.

III. The approving agencies must satisfy their independent NEPA and other statutory obligations

Even though the State Department itself has no approval authority over the project, it is preparing this EIS for use by other agencies that must approve the project. In the Draft SEIS, the State Department lists other federal agencies that will need to rely on the report for their approvals, including for connected actions:

> The construction and operation of the Project would require certain federal approvals, including the grant of a 44.4-mile ROW across federal lands in the State of Montana by the U.S. Bureau of Land Management (BLM) and permission to alter public works by the U.S. Army Corps of Engineers (USACE). In addition, the proposed Project would require construction of electrical power lines (both transmission and distribution) by multiple

> private power companies and cooperatives necessary for Keystone to operate proposed pipeline pump stations. Three federal agencies including the BLM, the U.S. Department of Energy's (DOE's) Western Area Power Administration (WAPA), and the U.S. Department of Agriculture's (USDA's) Rural Utilities Service (RUS) must make decisions related to providing a ROW across federal lands, expanding substations and interconnecting with the electrical grid and/or financing the construction and operation of the power lines.

Draft SEIS at S-1.

A cooperating agency may adopt an EIS prepared by the lead agency without recirculation if it undertakes "an independent review of the statement" and determines that its "comments and suggestions have been satisfied." 40 C.F.R. § 1506.3(c). Some agencies have additional regulations relating to this process. For example, according to the BLM's own regulations and guidance documents, if BLM concludes that the EIS is insufficient, it must initiate a new or supplemental NEPA analysis. BLM Desk Guide at 40. After adopting the EIS, BLM must then issue its own decision. *Id.* at 38. "This may be done in an individual decision document or in a decision document signed by more than one agency, as long as it is clear that only the BLM decisionmaker is making a decision regarding resources under BLM authority." *Id.*

In other words, as cooperating agencies, the BLM, Corps, WAPA, and RUS must independently ensure compliance with NEPA, meaning that they can rely on the State Department's EIS only if it is legally adequate. Otherwise, they must prepare their own analysis for review. *See Sierra Club v. U.S. Forest Serv.*, 897 F.3d 582, 594-95 (4th Cir. 2018) (holding that cooperating agency violated NEPA where it, *inter alia*, failed to undertake an independent review of the lead agency's EIS).

As explained below, the Draft SEIS is inadequate under NEPA and must be revised and recirculated for public comment. Therefore, no cooperating federal agency can approve any aspect of the Keystone XL project—including connected actions such as power lines and pump stations—without completing a supplemental EIS correcting the identified flaws.

IV. The Draft SEIS's market analysis fails to support the State Department's conclusion that development of tar sands is inevitable

For years, the State Department has attempted to downplay the impacts (including climate impacts) of Keystone XL on upstream tar sands development by claiming that the same amount of oil will be developed regardless of whether the pipeline is built. The lynchpin of the State Department's analysis in the 2014 EIS was that if oil prices stayed above $65 to $75 per barrel (WTI equivalent), that would be sufficient incentive for continued tar sands development. Draft SEIS at 1-20. Yet when oil prices dropped below that level, the State Department ignored the conclusion in its own EIS, and found that there would still be sufficient incentive for continued tar sands development regardless of whether Keystone XL was built. The court rejected that faulty reasoning, and ordered the State Department to supplement the EIS with new information about oil prices.

Once again, the State Department has changed its reasoning to arrive at the same conclusion. Oil prices remain low—as of the filing of these comments, WTI equivalent is at $57 per barrel and Brent is $63 per barrel.

Crude Oil & Natural Gas

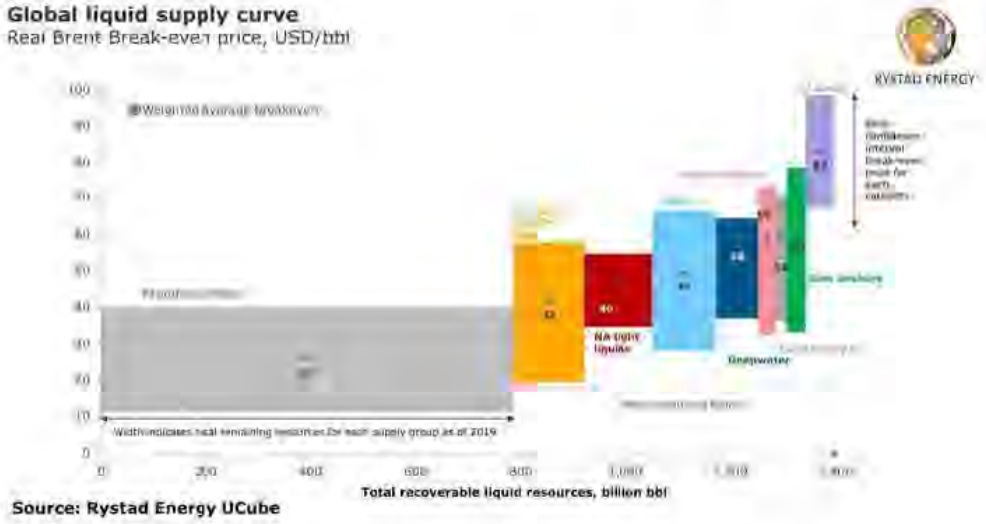
INDEX	UNITS	PRICE
CL1:COM **WTI Crude Oil (Nymex)**	USD/bbl.	57.72
CO1:COM **Brent Crude (ICE)**	USD/bbl.	63.30

Source: Bloomberg, November 17, 2019

Yet the State Department *still* contends that Keystone XL will not have any impact on the rate of tar sands development. Somehow, the breakeven point for tar sands projects magically decreased to $47 to $66 per barrel, "falling on overage 40 percent over the past 4 years" to just at or below current oil prices. Draft SEIS at 1-20. The Draft SEIS devotes a scant few sentences to this apparent sea change, saying only that tar sands crude oil production costs have fallen, without any more detail, and relying heavily on an "IHS Markit study." Draft SEIS at 1-20 to 1-21.

The Draft SEIS's reliance on the IHS Markit study—a study commissioned by TC Energy and prepared by a notoriously pro-industry consultant—is flawed for a number of reasons. First, the IHS Markit study provides no more analysis about this gigantic drop in production costs over a mere four years than does the EIS itself. Rather, it just presents a conclusory chart showing production costs below current oil prices with no discussion. IHS Markit 2018a at 11. It says nothing about the sources of its data. *Id*. at 11 ("Source: IHS Markit"). For example, there is no discussion of what data were included or why, or how those data were analyzed. Thus, on its face, the IHS Markit study fails to support the State Department's conclusion.

Second, the IHS Markit study's findings contradict those of other consultants' findings. For example, in May 2019, Rystad Energy found that the breakeven costs of tar sands projects are around $83 per barrel Brent equivalent. Exhibit C, Rystad Energy, *Rystad Energy ranks the cheapest sources of supply in the industry*, May 9, 2019.



More recent data from Rystad (as of November 2019) shows that the breakeven prices for tar sands mining projects is $94.33 per barrel. Exhibit D (Rystad data re average breakeven costs). Individual mining projects range from the low $50s to $148 per barrel, with many projects having breakeven costs well over $100 per barrel. Exhibit E (Rystad data re breakeven costs for individual projects). Likewise, the average breakeven cost for in-situ projects is $75.60 per barrel. Exhibit D. Individual in-situ projects range

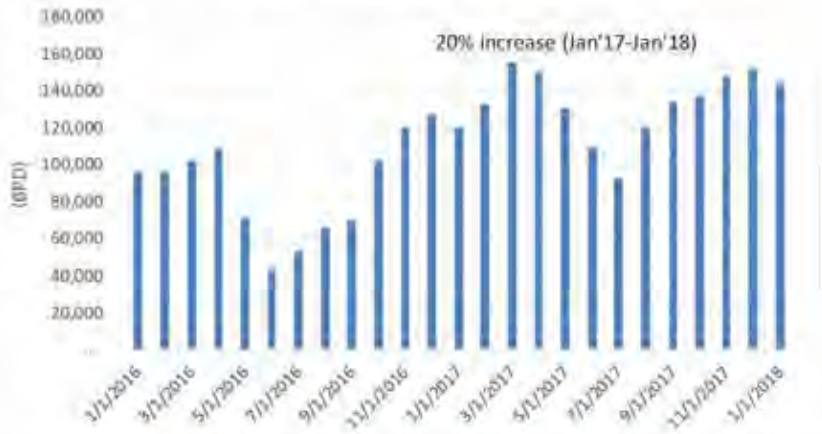
from $46 to $140 per barrel, with a median of around $80 per barrel. Exhibit E. The Draft SEIS does not acknowledge other sources of breakeven price estimates, such as the Rystad data, or explain the discrepancy between those data and the unsupported conclusion in the IHS Markit report that breakeven costs are much lower, at $47 to $66 per barrel. *See Ocean Advocates v. U.S. Army Corps of Eng'rs*, 402 F.3d 846, 864-66 (9th Cir. 2005) (holding the agency failed to take a "hard look" where its assessment included only conclusory assertions and did not discuss contrary evidence).

The State Department's conclusion also ignores the extensive evidence of shrinking capital investment in tar sands, shelving of projects, and industry executives stating that Keystone XL (or similar projects) are critical to allow tar sands growth. Again Rystad data show that only one to three new projects were approved in each year from 2014 to 2018, with none approved in 2019 so far. Exhibit F (Rystad data re approved projects). Indeed, even the IHS Markit study admits that the lack of pipeline export capacity has significantly affected the market and has caused the regional government to impose mandatory production cuts. IHS Markit 2018a at 20. The Draft SEIS does not acknowledge—let alone analyze—the standstill in tar sands project development over the past few years.

The State Department also doubles down on its claim that rail will serve as a substitute for pipeline transport if Keystone XL is not built. Draft SEIS at 1-21. But its own sources refute that point: "CAPP states that, currently, rail service as a form of crude oil transport is struggling to meet the increased demands by [tar sands] oil producers (CAPP 2018). CAPP also reports the current ability to move crude oil volumes by rail is being limited by insufficient access to locomotives, personnel and track space and that rail cannot accommodate sudden increases in demand caused by pipeline maintenance or extraordinary circumstances affecting pipelines (CAPP 2018)." *Id.* In short, even if there is ample *on- and off-loading rail capacity* at terminals, the fact remains that *other* constraints—such as lack of locomotives and tank cars, and congestion on the lines—continue to prevent rail from being a viable alternative to pipelines. The State Department must acknowledge this in its EIS.

The Draft SEIS states that in January 2018, Canadian producers shipped 145 *million* barrels per day by rail. Draft SEIS at 1-21. But that figure is wildly inaccurate. Rather, the CERI report cited says that in January 2018, Canadian producers shipped 145 *thousand* barrels per day.

Figure 2.6: Crude by Rail Shipments



Source: CERI, Canadian Oil Sands Supply Costs and Development Project (2018-2038)

Similarly, EIA estimates that the U.S. imported 87 million barrels total, in *all* of 2018, or roughly 238,729 barrels per day (a figure that include oils other than tar sands):

U.S. Receipts by Rail from Canada of Crude Oil (Thousand Barrels)

Decade	Year-0	Year-1	Year-2	Year-3	Year-4	Year-5	Year-6	Year-7	Year-8	Year-9
2010's	21	743	7,807	29,479	33,153	39,149	33,114	52,313	87,136	

Source: U.S. Energy Information Administration

Keystone XL, with 830,000 barrels per day capacity, will surely have a major influence on tar sands development—it roughly *quadruples* the amount of tar sands that is currently being moved, by the entire industry, by rail. Indeed, the Draft SEIS admits that the Alberta government has implemented a cut in production starting in January 2019 due to a "lack of pipeline transportation capacity and a lack of storage." Draft SEIS at 1-21. To continue to claim that rail will be viable alternative to Keystone XL—when it has failed to materialize over the decade-plus delay in building the pipeline—is simply unreasonable.

Finally, the State Department also pins its conclusion that Keystone XL will not increase tar sands development on a broad statement that there is long-term growing crude oil demand. Draft SEIS at 1-17. But even if that were true, it does not shed any

light on the specific question at hand: whether Keystone XL will make it easier for Canadian tar sands to be developed. Under the State Department's logic, no project would ever have any effect on fossil fuel development, so long as there is demand for fossil fuels. NEPA does not allow such a circular analysis.

V. Because they are based on a flawed market analysis, the no action alternatives are also flawed

The State Department recycles its no action alternatives from the 2014 EIS, making no changes whatsoever. Draft SEIS at 2-2. Those alternatives ("rail/pipeline," "rail/tanker," and "rail direct") *all* use rail transport as a significant component. As explained above, both because of the flaws in the analysis of oil prices and crude-by-rail, the assumption that the same amount of oil will move by rail in the absence of Keystone XL is demonstrably false. Indeed, at this point, we do not need to rely on forecasting, *because we can look at what actually happened when Keystone XL was not built for 10+ years*. At most, a tiny fraction of Keystone XL's capacity is moving by rail from Canada to the Gulf Coast, and it is not even clear how much of that oil is tar sands oil.

Thus, the State Department's continued reliance on these "no action" alternatives is arbitrary and violates NEPA. By comparing the action alternative to these purported "no action" alternatives, the State Department completely eliminates any increase in the rate of tar sands development, along with any attendant climate and other environmental impacts. Rather, the true impact of Keystone XL is the impact an additional 830,000 barrels per day of tar sands development, transport, and consumption would have. The State Department's analysis is therefore fundamentally flawed.

VI. Keystone XL will have significant climate change impacts, which the Draft SEIS fails to properly disclose and analyze

A. The Draft SEIS's climate analysis is disassociated from climate science

As section 3.10 of the Draft SEIS details, climate change is happening and its effects are already serious. According to the State Department, there is increasing concern that "rising atmospheric greenhouse gas concentrations are significantly altering global climate systems with the potential for long-term impacts on human society and the environment." Draft SEIS at 3.10-1. Across the globe, "16 of the 17 warmest years on record have occurred since 2000," and average annual temperatures in the United States

have increased by 1.8 degrees Fahrenheit since the beginning of the 20th century. Draft SEIS at 3.10-8.

The United Nations Framework Convention on Climate Changes agreed that temperature increase must be limited to well below 3.6 degrees Fahrenheit above pre-industrial levels, with the goal to limit increases to 2.7 degrees Fahrenheit, to "avert the most severe and widespread impacts of climate change." Draft SEIS at 3.10-3. However, the IEA predicts significantly higher long-term temperature increases "unless there is coordinated global action to reduce greenhouse gas emissions." Draft SEIS at 3.10-3. As relevant here, the Draft SEIS states that limiting temperature increase to 3.6 degrees Fahrenheit or less "would require the share of fossil fuels in primary energy demand to decrease in half by 2050, with renewable sources meeting 65 percent of the world's energy needs." *Id.*

In assessing Keystone XL's climate "consequences," State Department proposes to assess the "extent and severity of climate change impacts that could occur from the proposed Project." Draft SEIS at 4-75. But Draft SEIS does no such thing. It throws out numbers (which, as discussed below, are misleading), but never circles back to discuss those numbers in the context of the global climate problem. Rather, it just baldly says that increased emissions from the project "would contribute to total greenhouse gas emissions worldwide with the resulting effects on global, national and regional climate." Draft SEIS at 4-75. In short, the Draft SEIS downplays the effects of the pipeline, adopting a business as usual mindset, and ignores that building Keystone XL is the opposite of taking the action we need to reduce greenhouse gas emissions.

B. The Draft SEIS's climate analysis misleads the public about Keystone XL's emissions

The State Department's analysis of climate change is fundamentally misleading. While it admits that mining, transporting, and consuming 830,000 barrels per day of dirty tar sands would cause immense increases in greenhouse gas emissions, it simultaneously undercuts that conclusion by continuing to argue that no such increases will occur by virtue of Keystone XL. Rather, the Draft SEIS repeats the same tired line that these emissions will occur anyway.

The Draft SEIS admits that the lifecycle emissions from 830,000 barrels per day of tar sands are enormous. If that oil fully or partially replaces other crude oils currently being refined, it would result in an additional 33.9 or 120.5 million metric tons of CO_2-

equivalent per year, respectively. Draft SEIS at 4-80 to 4-81. That is the equivalent of 7.9 to 25.6 million passenger vehicles or 10 to 31 coal-fired power plants. *Id.* If there is no replacement (i.e., if the 830,000 barrels per day of tar sands were additional to current conditions), that figure balloons to 178.3 million metric tons of CO_2-equivalent per year. *Id.* That is the same as 37.9 million passenger vehicles, or powering 21.3 million homes, or 45.9 coal fired power plants. That is also equivalent to *2.7% of all U.S. emissions. Id.* These impacts on our climate are unacceptable in a world where we should be reducing, not expanding, our climate footprint.

Although the Draft EIS discloses these figures, it immediately undercuts them, by saying that even in the absence of the proposed project, "the crude oil that would have been transported on Keystone XL would still be produced and transported to market by other modes including rail." Draft SEIS at 4-80. That is reinforced by the Draft SEIS's no action alternatives, which assume that the same amount of oil will make it to market regardless of whether Keystone XL is built. Draft SEIS at 2-2. The State Department cannot have it both ways: It cannot claim to have disclosed the full climate impact of Keystone XL by mentioning these figures, and simultaneously tell decision makers and the public that no such emissions can be attributed to the project. Indeed, the Draft SEIS steadfastly refuses to characterize the emissions from the project as "significant." *Compare* Draft SEIS at 4-1 (listing "beneficial," "negligible," "minor," "moderate," and "significant" as categories of impacts), *with* Draft SEIS as 4-2 and 8-1 (refusing to apply the "significant" label to climate impacts).

In a declaration prepared for the litigation over this project, preeminent climate scientist James E. Hansen, Ph.D., called out the devastating impacts tar sands pipelines of this capacity would have on our climate. According to Dr. Hansen, the greenhouse gases attributable to this project are "significant in every important sense, particularly so in light of the present surfeit of atmospheric CO_2 and our rapid approach to climate tipping points. The increased extraction of tar sands oil enabled by this project would exacerbate the current climate crisis. As I have previously stated, Keystone XL is the fuse to the biggest carbon bomb on the planet." Exhibit G at ¶ 6.

Dr. Hansen also spells out some of the practical consequences of climate change in plain terms on both sea level rise and on biodiversity:

> If ice sheets are allowed to become unstable, shorelines will be in perpetual retreat for centuries, a consequence of the slow response time of ocean temperature and ice sheet dynamics. Economic and social implications will be devastating. Because more than half of the largest cities in the world are located on coastlines and the population of coastal regions continues to grow rapidly, the number of refugees likely would eclipse anything in experienced in history, with associated impacts on human health and the environment.
>
> Rapid shifting of climate zones, already well underway, will be a major contributor to species extinction if global warming continues. Coral reefs, the "rainforests of the ocean," harboring millions of species, are threatened by the combination of a warming ocean, ocean acidification, rising sea level, and other human-caused stresses. The subtropics in summer, and the tropics in all seasons, will become dangerously hot. Species across the globe will face habitat loss and increased disease, starvation and drought. The patent risk to our nation's emblematic species is increasingly widely reported.

Exhibit G at ¶¶ 13-14.

Dr. Hansen concludes that approval of this project is entirely inconsistent with any action to limit climate change: "Particularly in light of approaching points of no return, it is, in my expert opinion, essential to commence serious and sustained action to return atmospheric CO_2 to < 350 ppm without further delay. . . . But, as yet, such action to secure our climate system is not being undertaken. Rather, we see situations such as here, where the government ignores the crisis, and permits projects that will increase fossil fuel extraction, and exacerbate climate change." Exhibit G at ¶¶ 25-26. Dr. Hansen concludes: "It is therefore my expert opinion that construction and operation of Keystone XL would result in significant harm to human health and the environment." Exhibit G at ¶ 27. The State Department's conclusion that Keystone XL would have *no* significant effect on our climate is entirely at odds with this assessment, which comes from the one of the world's most respected and preeminent climate scientists.

The analysis required by NEPA is not nearly as complicated as the State Department makes it. The point of an EIS is to disclose the environmental impacts of a project. Here, per the State Department's own figures, the climate impacts of mining,

transporting, and consuming 830,000 barrels per day of dirty tar sands is roughly 178.3 million metric tons of CO_2-equivalent per year, or 2.7% of all U.S. emissions, a giant—and unacceptable—share for a single project. The Draft SEIS's market analysis fails to show that those emissions would occur regardless of whether the project is built—indeed, as discussed above, its conclusion that Keystone XL would make no difference at all stands in stark contrast to the statements of many producers that the pipeline is key to ending the bottleneck of tar sands export in Canada. In short, Keystone XL would have significant and unacceptable impact on our climate, and the State Department must plainly admit as much.

C. Greenhouse gas emissions from operation are inexplicably lower for the new route through Nebraska

The new Mainline Alternative Route through Nebraska requires 7 additional miles of pipeline, 1 additional pump station, 3 additional construction camps, and 1,047 additional acres of land disturbance. Draft SEIS at 4-13. Nonetheless, the Draft SEIS estimates that the MAR will generate fewer operational greenhouse gas emissions than the originally proposed route. The 2014 EIS estimated 1,443,354 million metric tons of CO_2-equivalent per year for Keystone XL. 2014 EIS at 4.14-17. In contrast, the Draft SEIS estimates that Keystone XL (following the MAR route) will produce 1,312,624 million metric tons of CO_2-equivalent per year in operational emissions. Draft SEIS at 4-78. This difference is illogical and unexplained, given that the MAR is longer and requires more infrastructure.

VII. The Draft SEIS admits that crude oil from Keystone XL will be exported but fails to explain how that fact affects its analysis

The Draft SEIS admits that the intended market for Keystone XL's tar sands—the U.S. Gulf Coast—"is a key hub for U.S. crude oil exports" and therefore that "the crude oil transported on the Keystone XL pipeline could be exported outside the United States via ports on the Gulf Coast, for refining and consumption in overseas markets." Draft SEIS at 4-79. And the Draft SEIS, and the reports it relies on, assume that growth in oil demand in the future will come primarily from Asia, particularly China and India. *See* IHS Markit 2018a at 7. But despite undertaking an extensive market analysis to attempt to prove its foregone conclusion that Keystone XL would not increase tar sands development, the State Department makes no attempt whatsoever to estimate the amount or percentage of the pipeline's crude oil that would be exported. This causes two problems in the analysis:

First, this admission that the crude oil would be exported—without investigating how *much* would be exported—significantly undercuts the Draft SEIS's statement of purpose and need. The State Department continues to assert that one of the primary purposes of Keystone XL is to increase domestic crude oil security. *See* Draft SEIS at S-5. But if that crude oil can—and will—be exported instead, it is unclear how Keystone XL serves that purpose. Thus, the State Department's statement of purpose and need is deficient. *See* 40 C.F.R. § 1502.13; *City of Carmel-By-The-Sea v. U.S. Dep't of Transp.*, 123 F.3d 1142, 1155 (9th Cir. 1997) ("The stated goal of a project necessarily dictates the range of 'reasonable' alternatives and an agency cannot define its objectives in unreasonably narrow terms.").

Second, the Draft SEIS fails to explain how export of Keystone XL's crude oil would affect its market analysis and conclusion on climate change impacts. It claims that "[i]f exported, the increased transport of crude oil would likely lead to a slight increase in greenhouse gas emissions, while differences in refining and vehicle technologies in foreign markets could lead to either an increase or a decrease in greenhouse gas emissions. Overall, these differences would not significantly alter the results of the lifecycle analysis presented in this SEIS." Draft SEIS at 4-79. This conclusory statement is patently insufficient under NEPA. Why do the differences "not significantly alter" the lifecycle analysis? Would the conclusion be the same if the vast majority of the crude oil is exported? The Draft SEIS does not say. The State Department must do more to satisfy its NEPA obligations.

VIII. The State Department's analysis of oil spills is incomplete and misleading

The State Department's ultimate conclusion about "accidental releases"—leaks and spills—from Keystone XL is that the potential impacts "are not likely to be significant" because the "risk of an accidental release is unlikely." Draft SEIS at S-39. That conclusion is entirely arbitrary given that TC Energy's own Keystone I line has had four incidents in the past four years alone:

- On October 29, 2019, the Keystone I pipeline spilled 383,000 gallons in a wetland near Edinburg in northeast North Dakota. Exhibit H, Emily S. Rueb and Niraj Chokshi, *Keystone Pipeline Leaks 383,000 Gallons of Oil in North Dakota*, New York Times, Nov. 2, 2019. According to the State Department's categorizations, this spill qualifies as "major"—and falls just short of a

"catastrophic" spill, which is a spill of 420,000 or more gallons. Draft SEIS at 5-1.

- On February 6, 2019, the Keystone I pipeline spilled 1,800 gallons near St. Louis, Missouri. Draft SEIS at 5-12; Exhibit I, Alan Neuhauser, *Keystone Pipeline Likely Cause of Oil Spill in Missouri*, U.S. New & World Report, Feb. 11, 2019.

- On November 16, 2017, the Keystone I pipeline spilled 408,492 gallons in Amherst, South Dakota. Exhibit H. Draft SEIS at 5-12. TC Energy has sought to reclassify this spill as 276, 8964 gallons. Either way, this was a "major" spill. Draft SEIS at 5-12.

- On April 2, 2016, the Keystone I pipeline spilled 16,800 gallons in Freeman South Dakota. Draft SEIS at 5-12.

For the State Department to now say that the "risk of an accidental release is unlikely" is entirely unwarranted. Rather, the risk of an accidental release, as proven by TC Energy's own track record, is *likely*. The Draft SEIS must be revised to include this conclusion.

The Draft SEIS's analysis also fails to meet the requirements of the District Court's order. The court found that "the proven inaccuracy of [TC Energy's] spill projections for Keystone I demands that the Department reexamine its projections for Keystone XL in a supplemental EIS." Exhibit B at 31-32. Instead of improving the spill projection as the court required, however, the Draft SEIS simply jettisons the calculation altogether. It includes no estimate about likelihood of incidents on Keystone XL whatsoever, leaving the public and decision makers in the dark about the risks of a spill. *See City of New York v. U.S. Dep't of Transp.*, 715 F.2d 732, 746 (9th Cir. 1983) (stating that the agency must "estimate of both the consequences that might occur and the probability of their occurrence.").

The Draft SEIS also fails to include the most recent spill information, in violation of the court's order. It relies on the Pipeline and Hazardous Materials Safety Administration's hazardous liquids accident database from 2009 to 2017. Draft SEIS at 5-5. But even if more recent data from that database are not available yet, that does not excuse the State Department from including and analyzing (at least on a qualitative basis)

incidents that happened in 2018 and 2019. At the very least, the State Department must now include the October 2019 spill on the Keystone I pipeline. And it must also include any other relevant spills that occurred in 2018 and 2019. As is stands, it appears the State Department did not even attempt to look for spills that occurred in those years.

IX. The Draft SEIS's analysis of water resources violates NEPA

A. The Draft SEIS improperly defers analysis of cumulative impacts on water resources

The Draft SEIS fails to adequately evaluate the impacts of pipeline construction and operation on specific waterways, including rivers, streams, wetlands, and other waterbodies, such as impacts from crossing methods at specific sites and operational impacts like spills. In particular, the Draft SEIS fails to properly analyze cumulative impacts to water resources based on the proximity of multiple water crossings to each other, within particular watersheds.

Instead, the document defers to the Army Corps' process under section 404 of the Clean Water Act and Nationwide Permit 12. *See, e.g.*, Draft SEIS at 4-26 ("Prior to commencing any stream-crossing construction activities, at a minimum, permits would be required under Section 404 of the Clean Water Act through USACE, and Section 401 Water Quality Certification, per state regulations. Additional erosion control measures would be installed, if necessary, in accordance with permit requirements."); 6-34 ("Dependent on final design and construction techniques, forested wetland vegetation within the construction corridor would be cut to ground level, most likely with root systems left in place. If construction techniques at certain sites necessitate root system removal, then USACE Section 404 permitting may be required using appropriate mitigation measures, such as restoration of original grade.").

However, the State Department cannot defer that analysis as a matter of law under NEPA, especially because, as Northern Plains has alleged in its lawsuit against the Corps, the Corps *does not* conduct any meaningful project-specific review pursuant to Nationwide Permit 12, and certainly no project-specific NEPA analysis. *See* Exhibit J (amended complaint). In fact, the Corps does not conduct any project-level review, other than for two or three major rivers that require pre-construction notices under Nationwide Permit 12. The Corps' position is that the remaining 99% of crossings are automatically approved under Nationwide Permit 12 without the need for any Corps authorization or verification at all. For example, the Army Corps has already informed TC Energy that it

need not even submit a PCN before proceeding with construction in Nebraska. *Id.* Thus, the State Department (and the Corps as a cooperating agency in this NEPA process) must conduct a full analysis of impacts to waterways.

B. The Draft SEIS's analysis of the Missouri River crossing in Montana is misleading

TC Energy plans to cross the Missouri River in Montana using horizontal directional drilling (HDD). That crossing requires issuance of a permit pursuant to section 14 of the Rivers and Harbors Act, 33 U.S.C. § 408 (commonly known as section 408), so that the pipeline can tunnel under the river shortly below the spillway out of the Fort Peck Dam, one of the largest earthen dams in the world. Section 408 allows the Corps to "grant permission for the alteration or permanent occupation or use of any of the aforementioned public works when in the judgment of the Secretary such occupation or use will not be injurious to the public interest and will not impair the usefulness of such work." *Id.* (emphasis added). As the Corps has acknowledged, this approval is subject to NEPA.

The Draft SEIS downplays impacts to the Missouri River and surrounding waterways: It concludes that there is a very low risk of major spills—once every 2.2 million years—and that in the worst case, spilled oil would travel only 33 miles downstream. Draft SEIS at 5-3. For support, the Draft SEIS continues to rely on two reports commissioned by TC Energy in 2017 for the EIS prepared (but never finalized) for the Mainline Alternative Route: a "Scour Analysis" and "Risk Assessment."

In 2018, Northern Plains submitted a detailed report on the "Scour Analysis" prepared by Engineering Systems, Inc. (the "ESi Report"). The ESi Report was prepared by experts with decades of experience in the fields of water resources, environmental engineering, and geotechnical engineering. *See* Exhibit K, ESi Report. The ESi Report identifies numerous omissions in the Scour Analysis that the State Department and/or Army Corps must correct. For example, the ESi Report states that the Scour Analysis:

(1) **Failed to include a geomorphic assessment of the Milk River in the vicinity of the proposed river crossing location**, which is important because visible terraces on the banks of the Milk River suggest lateral westward migration of the Milk River that could impinge on the area of the proposed Keystone XL crossing of the Missouri River (ESi Report at 5-6);

(2) **Failed to explain the analysis in Appendix D**, which purports to estimate where the Missouri River would be located in future years (i.e. 50 and 100 year thalweg locations), but appears to be based on a few historical photos rather than any actual science (ESi Report at 7-8);

(3) **Failed to include a geotechnical evaluation of bank stability**, i.e., the potential for slope stability failure associated with things like river scour and groundwater seepage, resulting steeper embankments and loss of lateral support (ESi Report at 8-9);

(4) **Failed to use either of two computation methods to more accurately estimate channel degradation** (ESi Report at 9);

(5) **Failed to attempt to calibrate the hydraulic model used in the Scour Analysis or perform any sensitivity/uncertainty analysis,** which can and should be done, for example, by running the model for a period over which there exists historical flow records and comparing the results (ESi Report at 9).

The State Department must revise the EIS to address these shortcomings.

In addition, the Draft SEIS fails to adequately analyze the impacts of a winter spill, when there is a potential for ice cover to cause increased scour during spikes in output from the upstream dam. The proposed crossing is located below the Fort Peck Dam, which is managed to generate power, and, as a result, average stream flows are muted seasonally with mean daily flow releases occurring at in the range of about 7,000-10,000 cubic feet per second (cfs). Figure 1 below shows mean daily flow rates during each month. While natural winter flow rates in an undammed river would be significantly lower than flow rates in warmer months, winter releases at the proposed Keystone XL crossing below the Fort Peck Dam are relatively high. Perhaps more importantly, these winter releases can change quickly depending on the demanded level of power output from the power station at any given moment. Figure 2 below is a hydrograph from 2015-2016 that shows steep daily spikes in output of around 1,000. Importantly, these spikes occur when the river is iced over, which means the higher spikes in river volume could essentially pressurize the river by sending it through a confined space, which could drive increased erosion and scour of the river bed and banks. The State Department should

evaluate these rapid pulses in flow under the ice during winter months to determine whether they could increase scour rates.

00060, Discharge, cubic feet per second,
Mean of daily mean values for each day for 51 - 52 years of record in, ft3/s (Calculation Period 1964-10-01 -> 2017-09-30)
Period-of-record for statistical calculation restricted by user

Day of month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	9,740	10,900	10,200	6,770	8,620	9,730	10,500	10,600	9,910	8,090	8,060	8,900
2	9,830	11,000	9,860	6,900	8,800	9,930	10,500	10,600	9,920	7,890	8,010	8,760
3	9,830	10,900	9,620	6,920	8,620	10,000	10,400	10,500	9,770	7,970	8,070	8,850
4	9,810	10,900	9,230	6,970	8,650	10,200	10,300	10,500	9,780	7,890	8,090	8,920
5	10,000	10,900	9,030	6,890	8,740	10,400	10,400	10,500	9,750	8,000	8,100	9,050
6	9,940	11,000	8,860	7,020	8,940	10,600	10,400	10,500	9,740	7,930	8,150	9,110
7	10,000	11,100	8,690	7,010	9,100	10,700	10,400	10,400	9,630	7,840	8,040	9,190
8	10,100	11,100	8,530	7,090	9,220	10,700	10,300	10,300	9,570	7,780	8,060	9,250
9	10,100	11,200	8,550	7,070	9,090	10,700	10,300	10,200	9,320	7,810	8,180	9,230
10	10,100	11,100	8,610	7,060	9,040	10,900	10,300	10,100	9,320	7,890	8,220	9,140
11	10,200	11,100	8,540	7,080	9,130	10,800	10,300	9,970	9,340	7,860	8,300	9,230
12	10,300	11,000	8,450	7,020	9,250	10,900	10,300	9,970	9,270	7,730	8,300	9,390
13	10,400	11,000	8,490	7,210	9,110	11,000	10,100	10,000	9,200	7,790	8,160	9,340
14	10,500	11,000	8,380	7,300	9,130	10,900	10,500	10,000	9,060	7,800	8,050	9,370
15	10,500	11,000	8,080	7,310	9,310	10,800	10,400	10,100	8,990	7,850	8,290	9,320
16	10,400	11,100	7,910	7,350	9,440	10,900	10,500	9,900	8,720	7,920	8,330	9,420
17	10,500	11,000	7,810	7,610	9,500	10,800	10,600	9,930	8,510	7,880	8,300	9,360

Figure 1.

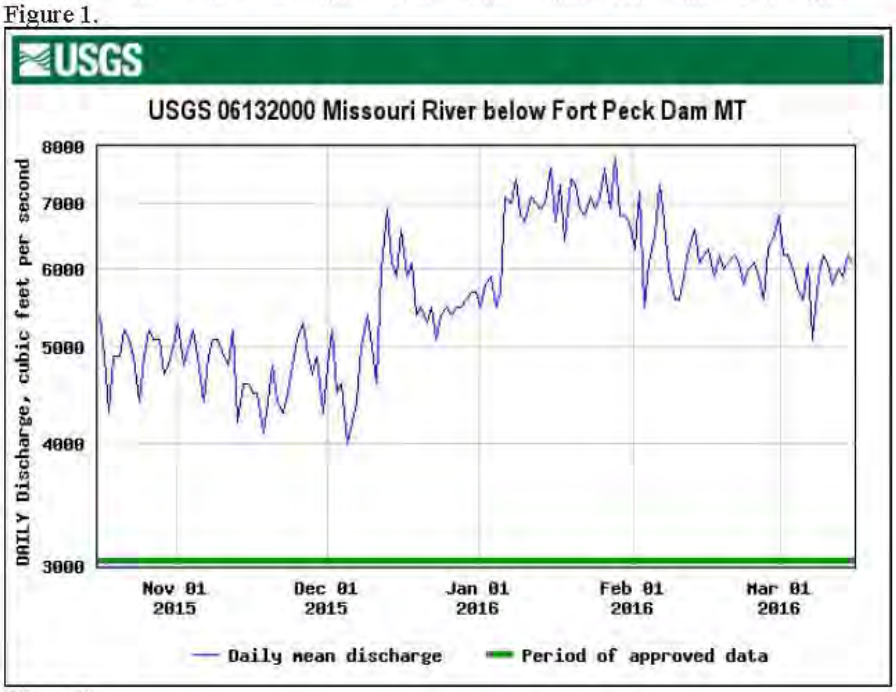


Figure 2.

The Scour Analysis also failed to account for the possibility of repeated scour events during the lifetime of the pipeline (e.g., a 50-year event, a 10-year event, and a 20-year event), particularly considering that this is a clear water area just downstream of a

dam that is likely to see scour / erosion with little deposition. The Scour Analysis states that there will be "routine maintenance to ensure depth of cover is maintained over the pipeline," which suggests that there will be a program in place to inspect the level of scour following flood events and refill scoured areas to ensure a certain amount of cover over the pipeline. However, there are many uncertainties surrounding this statement, including but not limited to: (a) whether this is a legal requirement; (b) whether it will be made a condition of the permit(s); (c) who is responsible for this maintenance; (d) how "routine" these inspections/maintenance efforts will be (e.g., yearly or monthly, or only following flood events that reach a certain threshold); (e) what methods will be used to ensure adequate cover following flood events, and whether those would require further permitting; and (f) whether and how the personnel in charge of the dam and power station and their output levels will be in regular communications with personnel overseeing pipeline operations. The State Department must evaluate potential impacts from repeated scour events and potential mitigation measures; it cannot simply take TC Energy at its word that regular maintenance will alleviate any impacts.

The Draft SEIS also improperly downplays the risk of a spill contaminating downstream water supplies, due in part to its 40-mile downstream limit. The Assiniboine and Sioux Rural Water Supply System and the Mni Wiconi Rural Water Supply System (MWRWSS) operate potable water intakes on the Missouri River downstream from the proposed pipeline crossing. The distance from the pipeline crossing at the Missouri River to the Assiniboine and Sioux Rural Water Supply System is approximately 57 miles, and the distance from the Missouri River crossing to the MWRWSS intake is about 100 miles. Draft SEIS at 5-38.

The Draft SEIS concludes that there would be no impacts to either of these water systems in the event of a spill because they are more than 40 miles downstream. The State Department's 40-mile range is arbitrary. The Draft SEIS acknowledges that oil from previous spills has been detected further downstream than 40 miles: "The Department and BLM acknowledge that oil sheens and oil globules (small round particle) from two releases (see Laurel, Montana [2011] and Glendive, Montana [2015] in Section 5.3.4) were observed at greater downstream distances than the 40 river-mile ROI assessed within this SEIS." Draft SEIS at 5-2. However, the Draft SEIS does not explain how that would affect potable water intakes, except to say that it is "expected" that "response resources" would "contain the majority of the spill before it gets to that point." Draft SEIS at 5-3. That is plainly insufficient analysis of a major threat to drinking water.

Regarding irrigation water intakes and other uses *within* the 40 mile range, the Draft SEIS acknowledges there could be significant impacts from a spill: "A release to surface water located upstream, and in the vicinity of any of these intakes identified, could produce both short- and long-term effects on the suitability or usability of these intakes. . . . A spill that contaminates an intake may make it unusable for an extended period of time until spill response and recovery activities have been completed." Draft SEIS at 5-39.

The Draft SEIS also fails to adequately evaluate the risks and impacts of "pinhole leaks." It does, however, acknowledge the problem:

> Pinhole leaks are a notable subset of this category, as the release point is very small, and therefore product may flow slowly out of the pipeline. The volume of product released would fall below the detection threshold of the SCADA system, and could continue unnoticed until the released volume is observed at the ground or water surface or is identified during a pipeline integrity inspection. An engineering study performed for the Keystone XL pipeline determined that a pinhole leak (defined as a hole with a 1/32-inch diameter) could release approximately 28 bpd (880 gallons per day) (Leis et al. 2013). Pinhole leaks may result from defects in material or faulty construction or fabrication of the pipeline.

Draft SEIS at 5-17. The common threshold of the SCADA systems is 2% of the pipeline's flow. Even 1% of 830,000 barrels per day would be 8,300 barrels per day. Thus, the Draft SEIS's calculation for pinhole leaks that could go undetected appears to be far too low. The State Department must explain this discrepancy.

Finally, the Draft SEIS downplays the unique risks of diluted bitumen and other heavy crude oils. Instead, it continues to focus largely on oil floating on the surface. It admits that the heavy components of dilbit will sink, but just says that that means it will not disperse as quickly. Draft SEIS at 5-19. But rather than suggesting that a spill of tar sands would be better than a spill of conventional oil, the State Department must fully acknowledge and analyze the well-documented difficulties in cleaning up tar sands oil spills.

In sum, the State Department must correct all the deficiencies and omissions outlined in these comments and in the ESi Report, and the Corps must demonstrate that it independently verified the information contained in TC Energy's Scour Analysis as

required by the CWA and NEPA. *See, e.g.*, 33 C.F.R. Part 325, App. B § 8(f)(2); 40 C.F.R. § 1506.5(a)-(b), 1502.17.

X. The Draft SEIS must fully analyze the historic flooding across the Midwestern United States in 2019

The 2019 historic flooding across the Midwest, specifically in Nebraska and along the Keystone route, must be evaluated in the State Department's EIS. Flooding along the pipeline route, which, if built, will pass through floodplains and erosion-prone land, increases the risk of exposure of the buried pipeline, and therefore of oil spills. Flooding of rivers and land, including farmland, has historically exposed buried pipelines and led to oil spills.

In March, the upper Great Plains region experienced a historic "bomb cyclone," which brought rain and unseasonably warm temperatures to a region that had been frozen for months. Exhibit L, Courtney Lindwall, *Battered by Floods, Nebraskans Worry About Pipeline Spills*, NRDC – Midwest Dispatch, May 28, 2019. The storm caused massive amounts of snow to melt, which the still-frozen ground could not absorb, resulting in the Midwest's most damaging flood in half a century. The floods swept away bridges, homes, and livestock; the high water also led to levee failure and inaccessible roads. The 29-foot-tall Spencer Dam in Nebraska collapsed, unleashing a wall of water 15 feet high. These floods were so severe that they created a new channel in the Niobrara River in Nebraska and caused large chunks of ice to travel down river. When water levels returned to normal, farmers, ranchers, and tribal communities in the area were left with ruined land and "livelihoods destroyed." This flooding killed at least four people. *Id.*

Severe floods have the potential to expose the Keystone XL pipeline in a variety of ways if it were to be built. Excessive rainfall can erode already unstable soil. There is a higher risk of unstable, saturated soil washing away, which can expose buried pipelines, especially at their most shallow points. In the case of extreme floods, like those seen this year, erosion can occur very quickly. Heavy rain can create "ephemeral gullies," temporary chasms in the land, which can cause sediment to flow into lakes and streams on lower ground. After the flood this spring, these gullies appeared all across midwestern farmlands: gashes a foot deep and multiple feet across. Once exposed, pipelines are susceptible to damage from forceful currents, as well as debris such as large ice chunks, uprooted trees, or slabs of bridges washed away by floodwaters. *Id.*

In response to the recent floods, the Pipeline and Hazardous Materials Safety Administration issued an advisory in early May 2019, advising pipeline owners to institute safeguards due to the recent accidents from soil shifting around pipelines. Exhibit M, Neela Banerjee, *Midwest Flooding Exposes Another Oil Pipeline Risk — on Keystone XL's Route*, InsideClimate News, May 16, 2019. The agency stated that three of the seven recent ruptures occurred as a result of heavy flooding or "excessive moisture" in the soil.

Richard Kuprewicz, an independent expert in pipeline safety who has worked with both industry and environmental groups for decades, proposed the following scenario with regard to flooding:

> Let's say there's standing water atop typically dry land. That water mixes with the topsoil and changes its density…Now imagine there's a pipeline buried beneath that topsoil. Depending on the density of what's running through the pipeline and how deeply it's buried, it's possible that the structure could float. 'It will bend like a curve,' he says, 'or move around, potentially laterally or up and down.' All that movement poses serious problems. 'Think of it like an aluminum can', Kuprewicz says. As the pipeline bends and stretches, the movement can eventually thin the metal and cause ruptures, something known as 'fatigue failure.'

Exhibit L.

The weights that oil companies attach to existing pipelines in frequently waterlogged areas to prevent them from becoming buoyant are not sufficient. According to a preliminary assessment by the federal Pipeline and Hazardous Materials Safety Administration, such weights caused the damage to the existing Keystone pipeline that resulted in the 210,000-gallon spill in 2017. *Id.*

Farm owner Bob Allpress assesses the floods risk similarly. "Once you break this soil and provide a water channel to the depths, you have the potential for any type of blowout, because they're going to screw up the composition once they trench the pipeline in." Exhibit M. Approximately one mile of the Keystone pipeline was originally planned to intersect with Bob Allpress's 900 acre plot of land. A critical shut off valve was proposed to rise from the buried pipeline on Mr. Allpress's land. When the Keya Paha River flooded in March 2019, a large wall of ice was left along Mr. Allpress's property where the shut off valve was proposed

to be built. *Id.* This flood would have damaged, or destroyed, the shut off valve; if a shut off valve is not operable, it could lead negative effects on not only the pipeline itself, but the land in the area as well. Keystone's proposed path would cross not only farms like the Allpress's, but also through more than 1,000 bodies of water and sensitive animal and plant habitats.

In sum, this new information poses a great environmental threat and exacerbates the risk of oil spills and damage the Keystone XL pipeline has the potential to cause. Those risks will only increase as the likelihood of severe floods increases due to climate change. The Draft SEIS's cursory analysis of this issue is plainly inadequate and must be revised.

XI. The Draft SEIS's cumulative impacts analysis violates NEPA

A. The Draft SEIS fails to include a complete cumulative impacts analysis for the entire pipeline, instead just focusing on the MAR

As defined in the NEPA regulations, a cumulative impact "is the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time." 40 C.F.R. § 1508.7.

While the District Court previously found that the State Department failed to comply with NEPA because the Mainline Alternative Route (MAR) had not been subject to NEPA review, that does not mean that the SEIS can only focus on the MAR and ignore the rest of the route when considering the cumulative impacts of the project. Yet, this is precisely what the Draft SEIS does, resulting in an incomplete and unlawful analysis.

As the District Court made clear, the MAR is connected with the rest of the proposed Keystone XL project, such that the impacts of the project must be considered in one EIS. There is, however, no document analyzing the cumulative impacts of the entire project, since the prior NEPA review did not consider the MAR, and this Draft SEIS only considers the MAR with no analysis of the cumulative impacts along the MAR in conjunction with the rest of the route. *See* Draft SEIS at 7-1 ("This includes consideration of potential climate change impacts on the global, national and regional environment. This analysis also considers specific direct, indirect and cumulative impacts related to the

MAR, and whether those impacts are consistent with those described in the 2014 Keystone XL Final SEIS.").

This segmentation of the analysis is improper, and a clear violation of NEPA. *See One Thousand Friends of Iowa v. Mineta*, 364 F.3d 890, 894 (8th Cir. 2004) ("A segmentation is improper when the segmented project has *no* independent justification, no life of its own, or is simply illogical when viewed in isolation."). Since the Draft SEIS fails to consider the potential for cumulative impacts along the entire route, it does not take a hard look at the "incremental impact of the action when added to other past, present, and reasonably foreseeable future actions" as NEPA requires. 40 C.F.R. § 1508.7. The State Department must prepare a cumulative impact analysis that evaluates the *entire pipeline's* cumulative impacts when considered together with other projects.

B. The Draft SEIS's analysis of cumulative impacts from tar sands development is inadequate

Despite listing numerous other projects in Table 7-1 and admitting that the emissions from these projects would, "in combination," "contribute incrementally to global climate change," Table 7-4 goes on to calculate cumulative emissions only from Keystone XL, Alberta Clipper, and Line 3. Draft SEIS at 7-18. NEPA requires cumulative analysis of any other past, present, or reasonably foreseeable tar sands pipelines. 40 C.F.R. § 1508.7. So, at the very least, cumulative analysis should have also included any existing and proposed tar sands pipelines, including the tar sands pipelines depicted on the map and charts below.

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Figure 4.1 **Major Existing and Proposed Canadian and U.S. Crude Oil Pipelines**

Source: The Canadian Association of Petroleum Producers, Crude Oil Forecast, Markets and Transportation

Table 4.1 Major Existing Crude Oil Pipelines Exiting Western Canada

Pipeline	In Service	Outside Diameter Size (inches)	Distance (km)	Average Annual Capacity (000 b/d)	2018 Annual Throughput (000 b/d)	Est. Capacity Available for Crude Oil Exiting WCSB (000 b/d)
Enbridge Mainline	Operating since 1950	Various	Various	2,851	2,629	2,307
Trans Mountain	Operating since 1953	24 36 30	1,147 827 150 170	300	290	270
Enbridge Express	Operating since 1997	24	1,265	280	249	250
TC Energy Keystone			4,700	591	589	561
Phase 1	Operating since 2010	36	864			
Phase 2	Operating since 2011	30 36	2,592 468			
Gulf Coast Extension	Operating since 2014	36	700			
Houston Lateral	Operating since 2016	36	76			
TOTAL				4,022	3,757	3,388

Table 4.2 Proposed Crude Oil Pipelines Exiting Western Canada

Pipeline	Outside diameter (inches)	Distance (km)	Target In service	Capacity (000 b/d)
Enbridge Line 3 Replacement	36	1,659	2020	370
Trans Mountain		1,184	2020+	590
Expansion	36	987 (new)		
	30	3.6 x 2 (new)		
	24	193 (reactivated)		
TC Energy Keystone XL	36	1,897	2020+	830
Total Proposed Additional Capacity				1,790

Source: The Canadian Association of Petroleum Producers, 2019 Crude Oil Forecast, Markets and Transportation

XII. The Draft SEIS fails to adequately address the adverse impacts of Keystone XL on wildlife and protected species

The Draft SEIS erroneously discounts and/or ignores many of the impacts that Keystone XL would have on wildlife and listed species; provides baseless conclusions that are unsupported by any reasoned analysis; relies on insufficient conservation measures to conclude that impacts to species will be minimal; fails to fully consider the cumulative impacts of the project on listed species; and therefore does not fulfill the basic purposes of NEPA, which include ensuring that the public understands the environmental consequences of any major federal action, and that environmental impacts are fully

considered before agency actions are taken. *See* 40 C.F.R. § 1500.1(b), (c); *see also* 22 C.F.R. § 161.7 (State Department's NEPA regulations).

Furthermore, the analysis in the Draft SEIS of the impacts of construction and operation of the Keystone XL pipeline on threatened and endangered species cannot possibly be sufficient when the ESA Section 7 consultation process remains incomplete. Without completing consultation, it is not possible for the State Department (or other agencies relying on this SEIS) to conclusively determine whether listed species are likely to be adversely affected by the project, since the Fish and Wildlife Service has yet to issue a concurrence or biological opinion; yet, that is precisely what the Draft SEIS does. Since ESA Section 7 consultation has been reinitiated to assess the adverse impacts of construction and operation of Keystone XL, the results of that consultation should inform the NEPA analysis and be made available for public comment as part of the NEPA process. *See* 40 C.F.R. § 1502.25(a) ("To the fullest extent possible, agencies shall prepare draft environmental impact statements concurrently with and integrated with environmental impact analysis and related surveys and studies required by the . . . Endangered Species Act of 1973 (16 U.S.C. 1531 et seq.), and other environmental review laws and executive orders."). Again, this is essential to fulfilling the purposes of NEPA. *See* 40 C.F.R. § 1500.1(b), (c) ("[P]ublic scrutiny [is] essential to implementing NEPA"). Since consultation has not been completed, the determinations in the Draft SEIS as to the impacts of Keystone XL on listed species are premature and inadequate.[2]

Northern Plains is concerned that, as with the prior NEPA documents for this project, there is almost no actual *analysis* in the Draft SEIS's section on the environmental consequences to biological resources. Rather, there is a litany of statements regarding potential harm to species (such as through habitat loss, alteration and fragmentation; direct mortality from construction vehicles and power line collisions; stress and avoidance from human activity; exposure to spills and leaks; increased predation and invasive species, etc.), along with a list of the measures TC Energy will take to mitigate those harms. However, the Draft SEIS never truly evaluates the full range of impacts to ecological systems and the species that rely on them, nor does it provide a full analysis of the cumulative impacts of the project on wildlife, especially from climate

[2] The Draft SEIS states that a new Biological Assessment was provided to FWS in September; therefore, at the very least this document should have been provided along with the Draft SEIS for public comment.

change, which will be exacerbated by the increased tar sands development attributable to Keystone XL.

There is simply no *analysis* of the actual harm that is likely to occur to species—regardless of whether the proposed mitigation measures will in fact work to reduce adverse impacts—in violation of NEPA's hard look requirement. *See Blue Mountains Biodiversity Project v. Blackwood*, 161 F.3d 1208, 1213 (9th Cir. 1998) ("[G]eneral statements about possible effects and some risk do not constitute a hard look absent a justification regarding why more definitive information could not be provided"); *Alaska Wilderness League v. Kempthorne*, 548 F.3d 815, 827 (9th Cir. 2008) (holding that an agency violates NEPA when it merely mentions the possibility for increased impacts on listed species, but fails to take a hard look at whether the magnitude of the specific proposal will have significant impacts on those species); *N. Plains Res. Council, Inc. v. Surface Transp. Bd.*, 668 F.3d 1067, 1084-1085 (9th Cir. 2011) (holding that a recitation of mitigation measures is not sufficient to meet the agency's NEPA obligations). The Draft SEIS is therefore inadequate, and any reliance on this document by federal agencies for compliance with NEPA would be arbitrary and capricious.

A. The Draft SEIS fails to adequately address the potential for harm to listed species from oil spills and leaks

The Draft SEIS fails to adequately address the potential harm to listed species from oil spills or leaks, which have the potential to contaminate habitat that listed species such as pallid sturgeon, whooping cranes, terns, and plovers rely on for breeding and feeding. The Draft SEIS acknowledges that spill events may harm listed species, but provides no analysis of the actual impacts a spill event might have on populations of these protected species, thereby failing to provide the "hard look" that NEPA requires. *See City of New York v. U.S. Dep't of Transp.*, 715 F.2d 732, 746 (9th Cir. 1983) ("It is only the risk of accident that might render the proposed action environmentally significant. That circumstance obliges the agency to undertake risk assessment: an estimate of both the consequences that might occur and the probability of their occurrence.").

Importantly, the Draft SEIS recognizes the specific harm to species that may result from an oil spill or leak including: bioaccumulation resulting in potential toxicological impacts from ingestion through preening (birds) or other ingestion (pallid sturgeon); oiling of animals (cranes, plovers, terns, rufa red knot) leading to loss of oil repellency and insulative capacity of feathers; transfer of crude oil to eggs causing mortality,

reduced hatching success or deformities; and sunken oil smothering the benthic habitat for pallid sturgeon, leading to reduced ability to forage or decreased reproductive success, among other issues. *See* Draft SEIS at 5-15, 5-37, 5-48, 5-50. However, the Draft SEIS avoids analyzing the actual harm to individuals and populations of these species from a spill event by erroneously concluding that such adverse effects are "unlikely" due to the "low probability" of a spill occurring or any species contacting spilled oil. *Id.* at Table 5-20.

This determination is wildly incongruous with reality. It is based on a cursory analysis of spill risk, which as discussed above uses averages to suggest a spill is unlikely to occur and does not capture the true risk of spills and leaks. And, while the Draft SEIS mentions previous spills on TC Energy pipelines, it nevertheless suggests that a spill is still unlikely to occur for Keystone XL, ignoring the fact that Keystone I has leaked at least fifteen times—including a recent spill of nearly 400,000 gallons of oil in South Dakota—and had to be temporarily shut down by U.S. authorities. In fact, Canadian authorities recorded more than twenty spills and other accidents between June 2010 and July 2011 for TC Energy pipelines, yet this is not mentioned in the Draft SEIS.

Because of the cursory and erroneous estimation of spill risk, the Draft SEIS never analyzes the actual adverse impacts on listed species if (and when) an oil spill occurs. Moreover, it does not provide a worst-case scenario spill analysis to determine the potential range of adverse impacts from a spill event, which could vary greatly depending on the location (i.e., near waterways) or timing (i.e., in winter when ice would hinder response efforts) of a spill.

The Draft SEIS simply does not take the requisite "hard look" at the potential impacts to species from an oil spill. For example, while the Draft SEIS notes that whooping cranes could be subject to ingestion of oil or oiling of feathers, it does not provide any analysis as to how this could affect the continued existence of the species, which is particularly troubling given that the best available science indicates whooping cranes remain critically endangered and the loss of even a few breeding adults could preclude recovery.[3] The Draft SEIS therefore fails to take a "hard look" at the

[3] *See* Exhibit N, Butler, Matthew, J. et al. Are whooping cranes destined for extinction? Climate change imperils recruitment and population growth. Wiley, DOI: 10.1002/ece3.2892 (Jan. 30, 2017) (finding that "1 to 2 additional mortalities per year could result in a declining population" of whooping cranes).

consequences of a spill event, as NEPA requires. *See Balt. Gas & Elec. Co. v. Nat. Res. Def. Council, Inc.*, 462 U.S. 87, 97 (1983) (holding NEPA obligates federal agencies to take a "hard look" at the environmental consequences of its actions).

At the very least, the SEIS must use the best available science to identify specific areas where a spill or leak event could result in contact with listed species, such as by using the available whooping crane telemetry data to show proximity of historical crane stopover locations to the pipeline (similar to what should be done regarding the power lines, discussed below), and to consider the potential for adverse impacts at those locations, and methods to minimize such harm (i.e., rapid response measures). Indeed, the Draft SEIS fails completely to provide any information on how oil spill response activities would ensure protection of, or take into account potential harm to, listed species. *See City of New York v. U.S. Dep't of Transp.*, 715 F.2d 732, 746 (9th Cir. 1983) ("It is only the risk of accident that might render the proposed action environmentally significant. That circumstance obliges the agency to undertake risk assessment: an estimate of both the consequences that might occur and the probability of their occurrence."). Rather, the Draft SEIS simply dismisses the potential for adverse impacts by erroneously claiming spill events are unlikely, and therefore does not provide the analysis that NEPA requires.

Another example is the lack of analysis regarding potential harm to pallid sturgeon from a spill event. Sturgeon are very susceptible to adverse impacts from oil spills, which can smother the benthic habitat they rely on for breeding and feeding. The Draft SEIS asserts that the potential for harm to pallid sturgeon is low because the species prefers flowing rivers that would dilute and disperse the spilled oil, and only considered potential impacts within 40 river-miles claiming this is the transport distance of oil in rivers. Draft SEIS at 5-37, 5-50. This is incorrect and unsupported by the best available science. In fact, studies have shown that oil spills in similarly large free flowing rivers (e.g.,. the Columbia) have adversely affected sturgeon up to 57 river-miles downstream. *See* Exhibit O, Krahn et. al., *Evidence of Exposure of Fish to Oil Spilled into the Columbia River*, Marine Environmental Research 20 (1986) 291-298. It is not clear why or how the Draft SEIS could conclude that pallid sturgeon would not be affected by an oil spill in the Platte or Missouri Rivers, while acknowledging that American burying beetles *would* be adversely affected if there was on oil spill in ABB habitat. Draft SEIS at 5-50. That is the very definition of an arbitrary and capricious conclusion, which is not supported by the best available science. The Draft SEIS therefore fails to take a "hard look" at potential harm to the endangered pallid sturgeon.

In sum, the Draft SEIS does not adequately address oil spill impacts because it erroneously concludes that a spill is unlikely to occur, and then fails to offer site- and species-specific analysis of actual potential harm, providing only generalized acknowledgments of harm without ever considering the impacts from spill events. This violates NEPA's "hard look" requirement. *See Balt. Gas & Elec. Co. v. Nat. Res. Def. Council, Inc.*, 462 U.S. 87, 97 (1983) (holding NEPA obligates federal agencies to take a "hard look" at the environmental consequences of its actions). Additionally, while the Draft SEIS states that TC Energy will prepare and implement a project-specific Spill Prevention, Control, and Countermeasure plan, that plan was not provided with the Draft SEIS for public comment. It therefore remains entirely unclear how TC Energy will respond to a spill event, or whether sufficient protections can and will be put into place to minimize and mitigate impacts to listed species.

B. The Draft SEIS fails to adequately address the potential for harm to listed species from power line collisions and does not provide sufficient conservation measures to mitigate harm

Up to 225 million birds are killed annually by the increasing number of power lines and related infrastructure in the U.S. For the whooping crane, the primary known cause of mortality is collisions with power lines, and power line mortalities have been well documented in the Aransas-Wood Buffalo population that migrates across the Great Plains where the project would be placed, with 49 documented fatal collisions, representing 39 percent of all known mortalities to this population since 1956.[4] The actual number of deaths may be quite higher, given the difficulty in establishing the precise cause of death for these migratory birds.

While the Draft SEIS purports to have used the whooping crane telemetry data to consider the potential for collisions with the project's power lines, it does not provide the data itself or any maps to substantiate the claims that are made with regards to the proximity of cranes to the proposed power lines. The Draft SEIS avers that no historical crane stopover locations are in proximity to the project; however, it is impossible to verify these claims, and the Draft SEIS is thereby incomplete, since NEPA requires that the agency provide the data on which it bases its environmental analysis. *See Lands Council v. McNair*, 537 F.3d 981, 994 (holding that an agency must support its

[4] Exhibit P. Stehn, T.V. and C. Strobel. 2011. An Update on Mortality of Fledged Whooping Cranes in the Aransas/Wood Buffalo population. Proceedings of the North American Crane Workshop at 49.

conclusions). Moreover, the Draft SEIS's unsubstantiated conclusions are belied by the Ecosystem Advisors, LLC report previously provided to the State Department and FWS by Northern Plains, which used the best available data to analyze the potential harm to cranes from the power lines for Keystone XL. That analysis showed several crane stopover locations in close proximity to the project, indicating a high risk of harm from collisions.

Further, while the Draft SEIS claims that the telemetry data show only a few stopover events within 5-miles of proposed lines and avers that these are single events that do not show a pattern of use over multiple migrations, this ignores the fact that less than 20% of the whooping crane population has been radio-tagged. Therefore, even these single events can evidence an important stopover location where the risk of collision is increased. It is not clear from the Draft SEIS whether any analysis was undertaken to determine if these data points are indeed stopover locations that provide suitable crane habitat, and which may be used by other, non-marked individual cranes or family groups during migration, increasing the likelihood of a collision with the project's power lines.

The Draft SEIS further fails to adequately assess the potential harm to cranes from power line collisions because it bases the analysis—and the conclusion that the risk is "insignificant and discountable"—on the "Null Hypothesis" that the power lines for this project will be no more hazardous than the average power line. Draft SEIS at 6-69. But using average risk for power lines does not take into account the placement of the actual proposed power lines, which greatly influences risk. There are thousands of power lines across the country, yet not all of them pose a risk of crane collisions. Power lines in or near areas that attract birds (such as wetlands), result in higher mortality rates. *Id.* For whooping cranes, research has found that "power lines dividing wetlands used for roosting from grain fields used for feeding caused the most collisions for cranes because these circumstances encouraged crossing the lines at low altitude several times each day."[5] Therefore, opportunities for whooping cranes to collide with power lines are multiplied when these power lines are suspended across or located near river channels, wetlands, or other low-lying wet areas that serve as whooping cranes' primary foraging or roosting habitats.[6] During migration, deaths from collisions are significantly higher

[5] Exhibit Q, Stehn, Thomas V. and Wassenich, Tom, *Whooping Crane Collisions with Power Lines: an Issue Paper* 31 (2008), North American Crane Workshop Proceedings of the North American Crane Working Group.

[6] *Id.*

"due to exposure to new hazards in unfamiliar environments," with losses comprising 60-80% of annual mortality for the species.[7] Power lines placed near migratory stopover sites pose a significant risk of harm, since the birds are flying at low altitudes as they approach these locations, often in low-light conditions.[8] Importantly, while the Draft SEIS claims to have assessed the proximity of telemetry data points to the power lines, it does not provide any analysis of the proximity of *suitable crane habitat* to the power lines using the best available science. Therefore, the Draft SEIS does not adequately address the risk to cranes from collisions, since the analysis of risk is based on a null hypothesis that does not account for the habitat at the actual placement of the power lines, but rather on the average risk of power lines. This incomplete analysis is clearly arbitrary and capricious.

It is further clear from the Draft SEIS that the proposed mitigation is insufficient to protect whooping cranes from collisions. Most importantly, the Draft SEIS confirms the project is not properly applying the *Region 6 Guidance for minimizing effects from power line projects within the whooping crane migration corridor*, which requires a 5-mile buffer for documented high use areas and states that power lines must be buried within 1-mile of suitable habitat, and if (and only if) that is not feasible then the proposed lines and an equal amount of existing lines should be marked with bird flight diverters (BFDs) to mitigate collision risk.

However, there is no mention anywhere in the Draft SEIS about 5-mile buffers or burying lines to prevent collisions, even though it specifically states that "power lines have been sited less than 5 miles from . . . documented high-use areas." Draft SEIS at S-27. In fact, the Draft SEIS fails to provide any analysis whatsoever of suitable crane habitat within 1-mile of the proposed lines, though it does note that the proposed lines would cross 61 acres of freshwater wetlands, and such areas are known to provide suitable habitat for canes. *Id.* at 6-34. Yet, there is no discussion about burying the lines in those areas or why burying within 1-mile of suitable habitat would not be feasible, as the Region 6 Guidance requires. In failing to apply the pertinent conservation measures, the State Department "entirely failed to consider an important aspect of the problem," and therefore it's "not likely to adversely affect" determination is unsupported and erroneous. *See Earth Island Inst. v. Hogarth*, 494 F.3d 757, 763-64 (9th Cir. 2007) (explaining that courts generally defer to an agency's expertise in the methodology of the agency's

[7] *Id.*
[8] *Id.*

studies, but a result that is not rationally connected to the best available scientific evidence receives no such deference).

The only mitigation proposed is marking the new lines (and no existing lines) with BFDs, and then only at (and for 0.25 miles on either side of) "large river crossings." Draft SEIS at 6-61. No justification for this limited use of BFDs is provided in the Draft SEIS, and large rivers are certainly not the only potentially suitable habitat for migrating cranes, which also use smaller rivers and streams, wetlands, and agricultural areas for feeding and sheltering during migration. Therefore, the proposed line marking will not even cover all suitable crane habitats, as the Region 6 Guidance requires. Further, no justification appears in the Draft SEIS for the failure to include marking existing lines as a conservation measure, as the Region 6 Guidance requires. The failure to properly implement the Region 6 Guidance without explanation is arbitrary and capricious.

Furthermore, the Draft SEIS acknowledges, but then ignores, the limited effectiveness of BFDs to prevent collisions from occurring. These devices are known to be less than 50% effective for preventing crane collisions with power lines, and therefore while they may reduce to potential for harm, they cannot eliminate risk. Even with the proposed mitigation in place, then, the project is more than likely to result in harm to whooping cranes. Yet, there is no analysis in the Draft SEIS of the potential impacts to the recovery and/or continued existence of whooping cranes, even if these devices reduce the number of potential collisions. This is especially troubling, given that power line collisions are the greatest known source of mortality for the species, and the loss of even a few cranes could jeopardize their continued existence—a fact that has been confirmed by USFWS Biologists in recent published literature, which found that "1 to 2 additional mortalities per year could result in a declining population" of whooping cranes.[9]

Regardless, the reliance on mitigation measures to assume that no whooping cranes will be harmed is insufficient for the NEPA analysis, which must fully consider the impacts to the species from power line collisions. As the Ninth Circuit Court explained in *N. Plains Res. Council, Inc. v. Surface Transp. Bd.*, 668 F.3d 1067, 1084-1085 (9th Cir. 2011):

[9] Exhibit N, Butler, Matthew, J. et al., *Are whooping cranes destined for extinction? Climate change imperils recruitment and population growth*. Wiley, DOI: 10.1002/ece3.2892 (Jan. 30, 2017).

> [M]itigation measures, while necessary, are not alone sufficient to meet the Board's NEPA obligations to determine the projected extent of the environmental harm to enumerated resources *before* a project is approved. Mitigation measures may help alleviate impact *after* construction, but do not help to evaluate and understand the impact before construction. In a way, reliance on mitigation measures presupposes approval. It assumes that—regardless of what effects construction may have on resources—there are mitigation measures that might counteract the effect without first understanding the extent of the problem. This is inconsistent with what NEPA requires.

The bottom line is that power lines are the greatest known source of mortality for whooping cranes, and the project would place dozens of miles of power lines in the whooping crane migratory corridor. Given that marking the lines with BFDs may reduce but cannot eliminate the risk—they have been used for decades yet collisions still remain the greatest source of crane mortality—and that the loss of even a few breeding crane could jeopardize the species, it is simply illogical for the Draft SEIS to summarily conclude that there is no increased risk to cranes—especially where power providers are not following the Region 6 Guidance measures by burying the lines near suitable habitat or marking existing lines. The Draft SEIS therefore not only fails to take the requisite "hard look" at the risk to whooping cranes from power line collisions, but the analysis is illogical, arbitrary, and capricious.

The Draft SEIS has also failed to analyze the potential impacts to listed species from predation by raptors perching on the proposed power lines. The prior NEPA and ESA documents for the project acknowledged that perches provided by towers and poles could increase the cumulative predation mortality for interior least terns and piping plovers, yet the State Department has failed to address the actual and cumulative impacts of predation on these protected species, and has failed to set forth reasonable mitigation measures. The Draft SEIS states that power lines will implement anti-perching measures near proposed water crossings to prevent predation of listed species such as terns and plovers. However, the best available science states that these devices are intended to prevent raptors from perching on dangerous parts of power lines where they may be harmed, but they do not prevent perching generally—therefore these will not reduce predation of listed species. *See* Avian Power Line Interaction Committee (APLIC) Suggested Practices for Avian Protection on Power Lines (APLIC 2006). The State

Department cannot simply put its head in the sand and ignore this potentially significant impact.

C. The Draft SEIS fails to adequately account for cumulative adverse impacts to listed species

As explained above, in section XI.A., the Draft SEIS fails to consider the cumulative impacts of Keystone XL across the entire pipeline route. While the Draft SEIS acknowledges cumulative impacts to species from the project—even stating that "the cumulative increase of transmission lines and wind farms has the potential to result in increased collisions for bird species, including the federally endangered whooping crane"—it does not actually analyze these impacts. Draft SEIS at 7-15.

For example, the Draft SEIS notes that additional transmission lines are reasonably foreseeable to accommodate wind energy projects in the Keystone XL project area, and that this may result in cumulative impacts to birds from increased collision risk, but it never acknowledges that this could jeopardize whooping cranes.[10] Rather, it merely states that these other projects would be required to follow the law (i.e., the ESA) and implement appropriate conservation measures. *Id.* at 7-16. But that does not really provide an analysis of the cumulative impacts to the species from these projects, especially given that power line collisions occur even with conservation measures in place. *See Blue Mountains Biodiversity Project v. Blackwood*, 161 F.3d 1208, 1213 (9th Cir. 1998) ("[G]eneral statements about possible effects and some risk do not constitute a hard look absent a justification regarding why more definitive information could not be provided"); *Alaska Wilderness League v. Kempthorne*, 548 F.3d 815, 827 (9th Cir. 2008) (holding that an agency violates NEPA when it merely mentions the possibility for increased impacts on listed species, but fails to take a hard look at whether the magnitude of the specific proposal will have significant impacts on those species).

[10] Interestingly, the SEIS claims in the Cumulative Impacts section that the overall baseline risk of collisions will be maintained because this and other projects will be marking "all new and existing overhead power lines within 1 mile of potentially suitable habitat" with BFDs, yet this is simply not true, since the power providers for Keystone XL are not marking existing lines.

In fact, there are reasonably foreseeable projects in the vicinity of Keystone XL that would contribute to the cumulative adverse impacts to cranes, but which are not mentioned in the Draft SEIS. For example, the Nebraska Public Power District (NPPD) has applied for an Incidental Take Permit for the R-Project transmission line, which would go from Sutherland, NE to a new Substation to be sited in Holt County at the intersection of Holt, Antelope, and Wheeler counties—which is about 20 miles from the Keystone route where the MAR begins near Oakdale, NE.[11] As set forth in prior comments, the R-Project transmission line would have similar adverse impacts as the Keystone XL pump station power lines, greatly increasing the cumulative mortality risk for whooping cranes in the same area of their migration route. The Draft SEIS must therefore consider the cumulative impacts of the R-Project and the Keystone XL powerlines on this highly imperiled species. This is especially important given that power line collisions are the greatest known source of mortality for the species, and the loss of even a few cranes could jeopardize their continued existence.

The analysis of cumulative harm to whooping cranes is therefore entirely inadequate. While the Draft SEIS acknowledges that power lines would create a collision hazard, possibly resulting in injury or death to individual cranes, and that oil spills may adversely affect cranes, it provides no discussion of the cumulative impacts to the species from potential collisions and spill events and how any loss of cranes would preclude recovery of the species. The Draft SEIS fails to even mention cumulative impacts to cranes from habitat disturbance associated with this and other projects. This is a clear violation of the NEPA hard look requirement.

The Draft SEIS also fails to address the cumulative impacts to terns and plovers from construction and operation of Keystone XL. Even though the Draft SEIS acknowledges that terns and plovers may be adversely affected through construction noise, habitat disturbance, and exposure to fuel spills and leaks, the Draft SEIS's section on cumulative impacts provides no analysis of how their populations may be adversely affected by the cumulative impacts of this and other reasonably foreseeable projects. There is simply no discussion at all of the incremental impact of these harms when added to other past, present, and reasonably foreseeable future actions, as NEPA requires. 40 C.F.R. § 1508. The Draft SEIS is therefore inadequate.

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[11] *See* NPPD's R-Project web page at https://rproject.nppd.com/.

D. The Draft SEIS fails to fully address the adverse impacts to listed species along the Mainline Alternative Route (MAR) and relies on inadequate conservation measures

The Draft SEIS acknowledges that construction and operation of the project along the MAR may result in adverse impacts to listed species, including from removal of vegetation such as native grasses, shrubs and trees, creating an unvegetated strip over the proposed pipeline trench and the adjacent construction areas. Draft SEIS at 4-38. It further notes that direct and indirect as well as temporary (short-term) and permanent (long-term) impacts on wildlife resources would occur due to vegetation removal or conversion, obstructions to movement patterns or the removal of native habitats that may be used for foraging, nesting, roosting or other wildlife uses. *Id.* It also states that construction activities and noise could cause indirect mortality of species from stress or avoidance of feeding during construction due to exposure from increased human activity, and that increased noise levels from construction and human activity during the breeding season could also reduce breeding success. *Id.*

The Draft SEIS, however, never provides any actual analysis of the harm to species along the MAR. Importantly, there is no attempt to provide either a quantitative or qualitative analysis of the individual harm to species, or the population level impacts of the adverse effects that were identified in the Draft SEIS. Rather, the Draft SEIS simply acknowledges that harm may occur, and then discounts the potential for impacts based on proposed conservation measures, but this does not provide the analysis that NEPA requires. *See Blue Mountains Biodiversity Project v. Blackwood*, 161 F.3d 1208, 1213 (9th Cir. 1998) ("[G]eneral statements about possible effects and some risk do not constitute a hard look absent a justification regarding why more definitive information could not be provided"); *Alaska Wilderness League v. Kempthorne*, 548 F.3d 815, 827 (9th Cir. 2008) (holding that an agency violates NEPA when it merely mentions the possibility for increased impacts on listed species, but fails to take a hard look at whether the magnitude of the specific proposal will have significant impacts on those species); *N. Plains Res. Council, Inc. v. Surface Transp. Bd.*, 668 F.3d 1067, 1084-1085 (9th Cir. 2011) (holding that a recitation of mitigation measures is not sufficient to meet the agency's NEPA obligations).

Furthermore, the Draft SEIS does not provide for adequate protections for listed species to mitigate these impacts. For example, it only provides a 0.25 mile buffer when whooping cranes are present, but at least a 1-mile buffer must be provided to prevent disturbance, especially from construction noise. In fact, the USFWS protocol for

observing whooping cranes is to stay at least 2,000 feet (0.4 miles) away, and that is for silent observers in cars, rather than loud construction vehicles.[12] Clearly, then, the proposed buffers are inadequate to prevent disturbance.

While the Draft SEIS states that construction will comply with any local noise regulations to protect species, these regulations are intended for a different purpose (i.e., people), and there is no discussion of the actual expected noise levels compared with studies on noise impacts to species. The Draft SEIS has thereby failed to take the hard look that NEPA requires. *See Ocean Advocates v. U.S. Army Corps of Eng'rs*, 402 F.3d 846, 864-66 (9th Cir. 2005) (holding the agency failed to take a "hard look" where its assessment included only conclusory assertions and did not discuss contrary evidence). The project should be required to comply with noise levels that are protective of listed species, and not merely local noise ordinances.

Also, it is not clear who will be monitoring for the presence/absence of listed species such as whooping cranes, interior least terns, and piping plovers. The Draft SEIS states that construction work would stop if listed species are in the vicinity, but would resume if they leave the area. This, however, seems to provide an impetus for project proponents to force these species to leave the area by making noise, so the presence of monitors that have the best interests of the species—and not the project—is required.

The bottom line is that there can be no doubt that construction and operation of the project along the MAR will result in harm to wildlife and listed species, and while the Draft SEIS acknowledges that potential for harm, it does not truly analyze the harm but rather sweeps it under the rug by relying on insufficient and unsupported conservation measures, in clear violation of NEPA.

E. The Draft SEIS fails to adequately address the potential harm from an HDD frac-out

The Draft SEIS acknowledges the potential for harm to species from a frac-out event, where Bentonite clay may be released into waterways, clogging fish's gills and impacting respiration, suffocating larvae and resulting in a lack of oxygen in the water.

[12] Exhibit R, The United State Fish and Wildlife Service and Nebraska Game and Parks Commission, Requirements for Avoiding Disturbance/Harassment to Migrating Whooping Cranes.

However, the Draft SEIS fails to analyze the actual impacts of a frac-out, and rather has put this issue off by claiming that the applicant will develop a contingency plan to address frac-outs during horizontal directional drilling (HDD). This does not provide a sufficient analysis of the likelihood of a frac-out occurring or the impacts if it should happen in areas with listed species. The Draft SEIS is therefore incomplete because it does not include the HDD contingency plan for public comment, and fails to address the actual harm that may occur from a frac-out, even if the contingency plan is properly employed. Merely referencing a plan to react to HDD frac-outs does not provide an analysis of the potential for harm when it occurs.

And it remains unclear what could be done to mitigate a frac-out if it does occur. This is especially relevant with regards to the Topeka shiner and pallid sturgeon, which are very sensitive to increased turbidity. A release of drilling fluids could devastate some of the last populations of these species as well as important sturgeon spawning areas on the lower Platte River, and yet the Draft SEIS fails to address this very real concern. While the contingency plan may contain mitigation and response measures, it remains unclear how long it might take to respond to a frac-out, and how much harm would be done even under the best-case scenario, much less a worst-case scenario. The analysis in the Draft SEIS is therefore entirely inadequate, as an agency must assess the likelihood of a particular risk along with the consequences of such an accident. *See City of New York v. U.S. Dep't of Transp.*, 715 F.2d 732, 746 (9th Cir. 1983) ("It is only the risk of accident that might render the proposed action environmentally significant. That circumstance obliges the agency to undertake risk assessment: an estimate of both the consequences that might occur and the probability of their occurrence.").

F. Other issues

1. The Draft SEIS fails to address impacts to Topeka shiner at Taylor creek, which is designated critical habitat for this listed species. The Draft SEIS acknowledges that the project will cross at least one tributary to Taylor creek (Madison county milepost 737.5) using the open cut trench method, which is known to cause sedimentation of waterways and degrade habitat; yet the Draft SEIS does not even acknowledge that the Topeka shiner could be harmed by this stream crossing, noting no "key species" at issue in Table 3.7-2. That determination is entirely inadequate, since soil erosion from this stream crossing has the potential to increase turbidity in Taylor creek, which could harm endangered Topeka shiners in violation of the ESA. In fact, when designating critical habitat for the Topeka shiner, the Service noted that the primary threats to the Taylor

Creek population (the only critical habitat in the Platte River watershed) include agriculture and channel maintenance "that increase sedimentation and other water quality impacts." 69 Fed. Reg. 44,748 (July 27, 2004). There can therefore be no doubt that sediment from construction across tributaries to Taylor Creek could adversely impact the species, yet the Draft SEIS ignores this important concern.

2. The Draft SEIS notes that power lines would cross several Important Bird Areas (IBAs), which are designated by the National Audubon Society because of the role they play in providing essential habitat to native birds. The Draft SEIS acknowledges that the placement of power lines in these IBAs has the potential to result in avian collisions, which could kill or injure birds that rely on these IBAs, yet it states that no mitigation is planned to prevent or reduce collisions, such as burying lines or using bird flight diverters to minimize collisions. No explanation is provide for this decision, other than that the IBAs are very large areas, but this provides no basis for avoiding mitigation. Indeed, the Draft SEIS fails entirely to analyze the potential harm to migratory birds that rely on these IBAs, and never fully explains why mitigation in these areas is not feasible.

3. The Draft SEIS states that construction will take place at power lines and switching stations in Nebraska where American burying beetles (ABB) may be present during winter when they are dormant, so as to avoid crushing ABB with heavy equipment; however, it goes on to state that this may change if that scheduling cannot be accomplished because of weather delays. This is unacceptable. Weather delays do not provide an excuse for taking a listed species, and TC Energy should not be allowed to flagrantly violate the ESA simply because of economic considerations.

XIII. BLM must also comply with the Mineral Leasing Act and Federal Land Policy and Management Act

Before granting a right of way for Keystone XL and its related infrastructure, BLM must first ensure compliance with the Mineral Leasing Act (MLA) and the Federal Land Policy and Management Act (FLPMA).

The MLA governs the issuance of right of ways and temporary use permits for oil pipelines. 30 U.S.C. § 185(a). This statute contains various provisions aimed at protecting the environment from degradation. Significantly, it requires that the "utilization of rights-of-way in common . . . be required to the extent practical." *Id.* § 185(p). This requirement "imposes a higher and more specific bar" than NEPA's alternatives analysis. *Sierra Club*, 897 F.3d at 604. The MLA also requires compliance with NEPA itself. 30 U.S.C.

§ 185(h). It further requires BLM to implement additional environmental protection measures. *Id.*

Where, as here, a project has the potential to significantly impact the environment, the MLA requires an applicant to submit a "plan of construction, operation, and rehabilitation." *Id.* § 185(h)(2). BLM must then issue regulations or impose stipulations that include: (a) requirements for restoration, revegetation, and curtailment of erosion; (b) requirements to insure that the project will not violate air and water quality standards; (c) requirements designed to control or prevent damage to the environment (including damage to fish and wildlife habitat), damage to public or private property, and hazards to public health and safety; and (d) requirements to protect the interests of individuals living in the vicinity who rely on the natural resources of the area for subsistence purposes. *Id.*; 43 C.F.R. § 2885.11; *see also id.* § 2881.2 ("It is BLM's objective to grant rights-of-way . . . in a manner that: (a) Protects the natural resources associated with public lands and adjacent lands . . . [and] (b) Prevents unnecessary or undue degradation to public lands . . . ."). BLM must also impose requirements on the project's operation that will ensure worker safety and "protect the public from sudden ruptures and slow degradation of the pipeline." 30 U.S.C. § 185(g). Finally, BLM must ensure that the proposed use is consistent with existing land use plans. *See* 43 C.F.R. § 2884.23(a) (referencing consistency with "the purpose for which BLM or other Federal agencies manage the lands" as a relevant concern); *id.* § 2884.21 (instructing BLM to determine whether the proposed use complies with applicable federal and state laws, regulations, and local ordinances).

The FLPMA authorizes BLM to grant rights of way for a pipeline's ancillary facilities, including roads and electrical power generation, transmission, and distribution systems. 30 U.S.C. § 185(g). As with the MLA, rights of way granted under FLPMA must comply with all applicable NEPA requirements, *see id.* § 1764(c) (stating that all rights of way must be issued consistent with applicable law), and projects that may have a significant impact on the environment must include a "plan of construction, operation, and rehabilitation," *id.* § 1764(d). BLM must then impose terms and conditions that: (a) minimize damage to scenic and esthetic values, fish and wildlife habitat, and otherwise protect the environment; (b) require compliance with applicable air and water quality standards; (c) efficiently manage the lands subject to the right of way and protect other lawful users of adjacent lands; (d) protect lives and property; (e) protect the interests of individuals living in the area who rely on local resources for subsistence purposes; and (f) otherwise protect the public interest. *Id.* § 1765; 43 C.F.R. § 2805.12; *Trout Unlimited v.*

U.S. Dep't of Agric., 320 F. Supp. 2d 1090, 1108 (D. Colo. 2004) ("FLPMA requires all land-use authorizations to contain terms and conditions which will protect resources and the environment."). BLM must also locate the right of way along a route that will cause least damage to the environment, including by considering whether an applicant can use an existing right-of-way corridor and by drawing right-of-way boundaries so as to avoid "unnecessary damage to the environment." 43 U.S.C. §§ 1763, 1764(a), 1765(b). Consistent with these statutory requirements, "[i]t is BLM's objective to grant rights-of-way . . . in a manner that: (a) Protects the natural resources associated with public lands and adjacent lands, . . . [and] (b) Prevents unnecessary or undue degradation to public lands . . . ." 43 C.F.R. § 2801.2.

BLM may deny right-of-way and temporary-use applications on several grounds, such as when the proposed use would not serve the public interest, or would have serious environmental consequences that cannot be mitigated. *Id.* §§ 2804.26(a), 2884.23(a). If BLM chooses to grant an application, it may prohibit the applicant from constructing or operating the project until certain stipulations and conditions are met. *See id.* § 2886.10.

As discussed throughout this comment letter, Keystone XL will have substantial harmful effects on the environment, which BLM must carefully consider as part of its NEPA analysis, and which the Draft SEIS fails to adequately consider. By transporting vast quantities of tar sands crude oil—one of the planet's most environmentally destructive energy sources—Keystone XL will accelerate climate change. Construction and operation of the pipeline will harm species and their habitats, including federally protected species. The risk of oil spills also poses significant threats to the land and water along the pipeline route, as well as to the people and species that depend on those resources. These concerns must be addressed by BLM before any decision is made.

"Citizens . . . trust in the [BLM] to prevent undue degradation to public lands by following the dictates of the MLA" and other statutes. *See Sierra Club*, 897 F.3d at 606. Given the substantial environmental degradation threatened by the construction and operation of Keystone XL, BLM must deny TC Energy's right-of-way application under the MLA and FLPMA. If BLM grants this application, it must uphold its statutory obligations to American citizens by imposing terms and conditions that adequately protect the environment, the surrounding areas, and public health and safety. *See Trout Unlimited*, 320 F. Supp. 2d at 1108-09 (holding that agency's failure to impose terms and conditions that minimize environmental degradation, as required by FLPMA, is arbitrary and capricious).

XIV. Conclusion

For the foregoing reasons, the State Department's Draft SEIS violates NEPA. The State Department must revise and recirculate the Draft SEIS for public comment, and no approving or coordinating agency can approve any aspect of the Keystone XL project by relying on this document. However, even this flawed document shows that Keystone XL would have significant and irreversible impacts on our environment, including on the climate, water resources, and endangered species. On that basis, the approving agencies should deny the permits necessary for the project.

Dated: November 18, 2019

/s/ Doug Hayes
Doug Hayes
/s/ Eric Huber
Eric Huber
Attorneys for Sierra Club and Northern Plains Resource Council

/s/ Jaclyn H. Prange
Jaclyn H. Prange
/s/ Cecilia Segal
Cecilia Segal
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/s/ Jared Margolis
Jared Margolis
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Save Our Illinois Land and Sierra Club

STATE OF ILLINOIS
ILLINOIS COMMERCE COMMISSION

Dakota Access, LLC and Energy Transfer Crude Oil Company, LLC	: :	
Joint Petition for an Order under Section 8-503 of the Public Utilities Act for authority to install additional pumping stations and pumping facilities on existing certificated pipelines in the State of Illinois.	:	19-0673

Direct Testimony of
James E. Hansen

On Behalf of
Save Our Illinois Land and
Sierra Club

October 1, 2019

SOIL-SC Exhibit 3.0

INTRODUCTION

Q. PLEASE STATE YOUR NAME, BUSINESS ADDRESS, AND POSITION.

A. My name is James E. Hansen. I am an Adjunct Professor at Columbia University's Earth Institute, and I am Director of the Climate Science, Awareness and Solutions ("CSAS") program at the Earth Institute, Columbia University. CSAS is located at 475 Riverside Drive, Suite 401-O, New York, NY 10115.

Q. WHAT WAS YOUR PRIOR EMPLOYMENT?

A. I began working at the Goddard Institute for Space Studies of the National Aeronautics and Space Administration in 1967. From 1981 to 2013 I was the Director of the Goddard Institute.

Q. WHAT IS YOUR EDUCATIONAL BACKGROUND?

A. I received a B.A. degree in Physics and Mathematics in 1963, an M.S. degree in Astronomy in 1965, and a Ph.D. in Physics in 1967, all from the University of Iowa.

Q. IS SOIL-SC EXHIBIT 3.1 YOUR CURRICULUM VITAE?

A. Yes.

Q. ON WHOSE BEHALF ARE YOU TESTIFYING IN THIS CASE?

A. On behalf of Save Our Illinois Land ("SOIL") and Sierra Club ("SC").

Q. HAVE YOU TESTIFIED BEFORE THE ILLINOIS COMMERCE COMMISSION ("COMMISSION") PREVIOUSLY?

A. No.

Q. HAVE YOU TESTIFIED BEFORE OTHER STATE OR DISTRICT UTILITY COMMISSIONS?

A. Yes.

- before the Iowa Utilities Commission (Docket Nos. Docket No. HLP-2014-0001) on behalf of the Sierra Club Iowa Chapter concerning the DAPL;
- by letter to the South Dakota Public Utilities Commission on behalf of Intertribal Council on Utility Policy concerning the Keystone XL pipeline (Dockett HP14-001) following the Commission's grant of TransCanada's motion to preclude my testimony.

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

A. I was asked to review the potential climate impacts of the decision confronting the Commission. Specifically, I will discuss how the proposal by Dakota Access LLC and Energy Transfer Crude Oil Company (collectively, "Joint Petitioners") to nearly double the capacity on their respective pipelines running from North Dakota to Texas will impact the Earth's climate if approved.

Q. DID YOU PREPARE OR DIRECT THE PREPARATION OF THIS TESTIMONY AND THE ACCOMPANYING EXHIBITS?

A. Yes.

Q. DURING YOUR EMPLOYMENT AT THE GODDARD INSTITUTE DID YOU STUDY WHAT HAS COME TO BE KNOWN AS CLIMATE CHANGE?

A. Yes.

Q. HOW DID YOU FIRST BECOME AWARE OF CLIMATE CHANGE?

A. In my early research I used telescopic observations of Venus to extract detailed information on the physical properties of the cloud and haze particles that veil Venus. Since the mid-1970s, I have focused on studies and computer simulations of Earth's climate, for the purpose of understanding the human impact on global

climate. Some of that work informed my testimony on climate change to Congress in the 1980s, which testimony aimed at raising broad awareness of the global warming issue.

Among that work was *Climate impact of increasing atmospheric carbon dioxide*, a paper that colleagues and I published in the journal *Science* in 1981. In it, we observed that global temperature had risen approximately 0.2°C between the middle 1960s and 1980, an increase consistent with calculations of the effect of the measured increase in atmospheric carbon dioxide. We anticipated that anthropogenic carbon dioxide warming should emerge from the noise level of natural climate variability by the end of the century, and that there would be a high probability of warming in the 1980s. We concluded, as well, that potential effects on climate in the 21st century would include the creation of drought-prone regions in North America and central Asia as part of a shifting of climatic zones, erosion of the West Antarctic ice sheet with a consequent worldwide rise in sea level, and opening of the fabled Northwest Passage.

Q. WHAT HAVE YOU DONE RECENTLY TO DRAW ATTENTION TO THIS MATTER?

A. In recent years I have attempted to draw attention to the danger of passing climate tipping points -- irreversible climate impacts that could yield a different planet from the one on which civilization developed. I think it is critical for regulators and policy makers at all levels to dispute the presumption of fossil fuel interests that all fossil fuels ought to be burned, with their combustion products discharged into the atmosphere.

I have also outlined steps that are needed to restore our planet's energy balance and stabilize climate, with a cleaner atmosphere, productive ocean system, and retention of intact ecosystems on which our children and future generations alike will depend.

Q. YOU HAVE SPOKEN OF THE CLIMATE CRISIS. CAN YOU DESCRIBE THE NATURE OF THAT CRISIS?

A. I can. It is now clear, as the relevant scientific community has established for some time, that high CO_2 emissions from fossil fuel burning have already disrupted Earth's climate system and that, unless we fundamentally alter business as usual, the build up of atmospheric CO_2 will impose profound and mounting risks of ecological, economic, and social collapse.

The fundamental metric is Earth's present and growing energy imbalance. There remains a real, but time-limited, opportunity to commence a phase-down of CO_2 and other greenhouse gas emissions so as to restore energy balance and stabilize the climate system. But increased exploitation of fossil fuel reserves, including from the Bakken formation, cuts sharply in the wrong direction. It will flood the market and reduce the impetus for development of and reliance upon non-carbon sources of energy.

In conjunction with a number of colleagues I have undertaken research and issued corresponding reports concerning the urgent need to (a) phase out fossil fuel emissions and thus gain the chance to return the atmospheric CO_2 concentration to no more than 350 parts per million ("ppm") (and thus restore

Earth's energy balance), (b) consider the emergency risk to our nation and coastal cities throughout the world of multi-meter sea level rise if we fail to restore energy balance over the coming decades, and (c) comprehend that we are saddling our children and future generations with an unconscionable and likely prohibitively costly burden to draw down excess atmospheric CO_2.

Q. AMONG THE ATTACHMENTS TO YOUR TESTIMONY IS A DOCUMENT MARKED AS SOIL-SC EXHIBIT 3.2. PLEASE DESCRIBE THAT DOCUMENT.

A. SOIL-SC Exhibit 3.2 is a copy of Hansen, et. al, *Assessing "Dangerous Climate Change": Required Reduction of Carbon Emissions to Protect Young People, Future Generations and Nature*, PLOS ONE (Dec. 3, 2013).[1] This study, published in conjunction with 17 colleagues, established that continued fossil fuel burning up to even 2°C above the preindustrial level[2] likely would cause large climate change with disastrous and irreversible consequences. Accordingly, actions to rapidly phase out CO_2 emissions, along with efforts to increase the sequestration of carbon, are urgently required so as to reduce the atmospheric CO_2 concentration to no more than 350ppm and restore Earth's energy balance. I hereby incorporate by reference the analyses and conclusions of SOIL-SC Exhibit 3.2 into my testimony.

Q. THE NEXT ATTACHMENT TO YOUR TESTIMONY IS A DOCUMENT MARKED AS SOIL-SC EXHIBIT 3.3. PLEASE DESRIBE THAT DOCUMENT.

[1] Available, as well, at: http://journals.plos.org/plosone/article?id=10.1371/journal.pone.0081648
[2] We are already 0.9°C above the preindustrial temperature. Indeed, in 2015 global temperature is reaching a level ~1°C above the preindustrial level, but the high 2015 level is partly a temporary effect of a strong El Nino, a natural oscillation of tropical Pacific Ocean temperature.

A. SOIL-SC Exhibit 3.3 is a copy of Hansen, et. al., *Ice Melt, Sea Level Rise and Superstorms: Evidence from Paleoclimate Data, Climate Modeling, and Modern Observations that 2°C Global Warming is Highly Dangerous*. It was published in 2015 in conjunction with 16 colleagues and discusses multi-meter seal lever rise.[3] In it we conclude that, if CO_2 emissions are allowed such that energy is continuously pumped at a high rate into the ocean, then multi-meter sea level rise will become practically unavoidable, with consequences that may threaten the very fabric of civilization. I hereby incorporate by reference the analyses and conclusions of SOIL-SC Exhibit 3.3 into my testimony.

Q. THE NEXT ATTACHMENT TO YOUR TESTIMONY IS A DOCUMENT MARKED AS SOIL-SC EXHIBIT 3.4. PLEASE DESCRIBE THIS DOCUMENT.

A. SOIL-SC Exhibit 3.4 is a copy of Hansen, et. al., *Young People's Burden: Requirement of Negative CO_2 Emissions, Earth Syst. Dynam.* It was published in July 2017 in conjunction with 16 colleagues.[4] In *Young People's Burden*, we establish that restoring and securing a viable climate system on which our children and their progeny necessarily depend now requires not only the phasing out of emissions—including abandoning new major fossil fuel investment of which the Joint Petitioners' proposal is a prime instance -- but also "negative emissions," i.e., extraction of CO_2 from the air. I hereby incorporate by reference the analyses and conclusions of SOIL-SC Exhibit 3.4 into my testimony.

[3] Also available at: http://www.atmos-chem-phys-discuss.net/15/20059/2015/acpd-15-20059-2015.pdf

[4] Also available at: https://www.earth-syst-dynam.net/8/577/2017/esd-8-577-2017.pdf

Q. WHAT CONCLUSIONS DO YOU DRAW FROM THESE RECENT STUDIES?

A. I conclude from this, and other information, that the present level of CO_2 and its warming, both realized and latent, is already in the dangerous zone. Indeed, we are now in a period of overshoot, with early consequences that are already highly threatening and that will rise to unbearable unless action is taken without delay to restore energy balance at a lower atmospheric CO_2 amount.

Q. WHAT DO YOU MEAN BY "UNBEARABLE"?

A. Let's start with the ocean and sea level, in light of our most recent research. Utilizing multiple lines of evidence – including satellite gravity measurement, surface mass balances, and satellite radar altimetry – it has become clear, regrettably, that ice mass losses from Greenland, West Antarctica and parts of East Antarctica are growing nonlinearly, with doubling times so far this century of approximately 10 years. My colleagues and I now expect the exponential growth rate for ice mass loss in Greenland to slow, based on the most recent few years of data, but because of amplifying feedbacks described in our paper we also think it likely that Antarctic ice mass loss will continue to climb at its recent high exponent rate – again, if fossil fuel emissions are not rapidly abated. This prospect alone cries out for urgent national and international action to constrain carbon pollution, considering that complete disintegration of the Totten glacier in East Antarctica could raise sea levels by approximately 6-7 meters; that ice fronted by the Cook glacier in East Antarctica could add 3-4 meters of sea rise; and that West Antarctic ice fronted by Amundsen Sea glaciers have the potential to raise sea level an

additional 3-4 meters. Much of the U.S. eastern seaboard, as well as low-lying areas of Europe, the Indian sub-continent, and the Far East, would then be submerged. That order of sea level rise would result in the loss of hundreds of historical coastal cities worldwide, with incalculable economic consequences. It would also create hundreds of millions of global warming refugees from highly populated low-lying areas, and thus likely cause or exacerbate major international conflicts. Our own Defense Department identifies climate change as a threat to national security.[5]

That is what I mean by "unbearable."

Q. WHAT ABOUT SPECIFIC ILLINOIS IMPACTS?

A. I have focused in my research on global impacts, but the study of regional and even more local impacts also is critical for local planning and other purposes, including those of this Commission. The National Oceanic and Atmospheric Administration ("NOAA") publication *NOAA National Centers For Environmental Information: State Climate Summaries* is useful in this regard. The Illinois summary, which is attached hereto as SOIL-SC Exhibit 3.5, importantly denotes that continued climate warming in the region is projected to yield substantially increased spring precipitation rates in Illinois – far more than for the nation as a whole – particularly for the northern two-thirds of the state. In addition, the NOAA review points out that "historically unprecedented warming is projected during the 21st century," though "less warming is expected under a lower emissions future

[5] https://archive.defense.gov/pubs/2014_Quadrennial_Defense_Review.pdf

(the coldest years being about as warm as the hottest year in the historical record; green shading) and more warming under a higher emissions future (the hottest years being about 10°F warmer than the hottest year in the historical record; red shading)."

The NOAA study does not, however, consider the impact of in-migration to Illinois of refugees from coastal regions submerged by the rising seas or other regions torn by climate-linked strife.

Q. WHAT ARE OTHER IMPACTS OF GLOBAL WARMING, BESIDES SEA LEVEL RISE?

A. The impacts of global warming depend in part on the magnitude of Earth's energy imbalance, and that, in turn, will be controlled by the level of excess atmospheric CO_2. Global warming to date measures "only" ~1.1°C above the pre-industrial period, and yet, that level of warming has already begun to have a widespread effect on natural and human systems. For example, mountain glaciers, the source of fresh water to major world rivers during dry seasons, are receding rapidly all around the world. To cite a close-to-home example, glaciers in iconic Glacier National Park are in full retreat: In 1850, according to the Park Service, Glacier National Park had 150 glaciers measuring larger than twenty-five acres. Today, it has just 25 such glaciers.

As well, tropospheric water vapor and heavy precipitation events have increased, as we would expect. A warmer atmosphere holds more moisture, thus enabling precipitation to be heavier and cause more extreme flooding. Higher

temperatures, on the other hand, increase evaporation and can intensify droughts when they occur, as can the expansion of the subtropics that occurs as a consequence of global warming.

Coral reef ecosystems, harboring more than 1,000,000 species as the "rainforests" of the ocean, are impacted by a combination of ocean warming, acidification from rising atmospheric CO_2, and other human-caused stresses, resulting in a 0.5-2% per year decline in geographic extent.

World health experts have concluded with "very high confidence" that climate change already contributes to the global burden of disease and premature death with expansion of infectious disease vectors. Increasing climate variability is being examined as a possible contributor to the expansion of Ebola. Further, the probability of such extreme heat events has increased by several times because of global warming, and the probability will increase even further if fossil fuel emissions continue to be permitted, so that global warming becomes locked in and rendered increasingly severe.

I have already mentioned the unparalleled calamity that the loss of hundreds of coastal cities to rapid sea level rise presents to human civilization. But I should mention that many other impacts also will abound. For example, acidification stemming from ocean uptake of a portion of increased atmospheric CO_2 will increasingly disrupt ocean ecosystem health, with potentially devastating impacts to certain nations and communities. Inland, fresh-water security will be

compromised, due to the effects of receding mountain glaciers and snowpack on seasonal freshwater availability of major rivers.

As to human health: increasing concentrations of CO_2 and associated increased global temperatures will deepen impacts, with children being especially vulnerable. Climate threats to health move through various pathways, including by placing additional stress on the availability of food, clean air, and clean water. Accordingly, unabated climate change will increase malnutrition and consequent disorders, including those related to child growth and development. It will increase death and illness associated with chronic obstructive pulmonary disease, asthma, and other respiratory distress triggered by worsened allergies. Unabated emissions will also produce other injuries from heat waves; floods, storms, fires and droughts, and it will increase cardio-respiratory morbidity and mortality associated with increased ground-level ozone.

With regard to other species, we see that climate zones are already shifting at rates that exceed natural rates of change; this trend will continue as long as the planet is out of energy balance. As the shift of climate zones becomes comparable to the range of some species, the less mobile species will be driven to extinction. According to the United Nations Intergovernmental Panel on Climate Change ("IPCC"), with global warming of 1.6°C or more relative to pre-industrial levels, 9-31 percent of species are anticipated to be driven to extinction, while with global warming of 2.9°C, an estimated 21-52 percent of species will be driven to extinction. These temperature extinction thresholds will not be avoided absent concerted, rational action on carbon emissions.

Q. DOES THE IPCC SHARE YOUR CONCERNS?

A. The IPCC appears to share the major concerns that I have outlined here. I commend to the Commission attention at least the "Summary for Policymakers" from each of that body's three most recent reports. Those are the IPCC Special Report on 1.5 Degrees (SR15) (October 2018), the IPCC Special Report on Climate Change and Land (August 2019), and the IPCC Special Report on the Ocean and Cryosphere in a Changing Climate (September 2019). I have footnoted their links for the Commission's convenience.[6]

Q. CAN YOU BRIEFLY SUMMARIZE THE RECENT STUDIES?

A. Perhaps not without undue risk, and really the Summary for Policymakers (SPMs) are written in an accessible way. But I can briefly indicate a couple of points regarding each, with citations to those IPCC summaries:

First as to the IPCC Special Report on 1.5 Degrees (SR15), it outlines both the global impacts of a 1.5-degree Celsius increase in global temperatures and the mitigation actions required to limit global warming to that level. I have long argued that allowing a long-term temperature increase of 1.5 is unsafe – and that 2°C is likely catastrophic; as well, I have stressed that a safe long-term path requires limiting the long-term global temperature increase to < 1°C (consistent with a 350 ppm target for atmospheric CO_2). As to these points, the IPCC's special report is useful in that it delineates a number of unacceptable climate impacts to humanity

[6] *See*, respectively, https://www.ipcc.ch/sr15/chapter/spm/, https://report.ipcc.ch/srocc/pdf/SROCC_SPM_Approved.pdf, and https://report.ipcc.ch/srocc/pdf/SROCC_SPM_Approved.pdf

and nature that are likely to attend as little as 1.5 °C of warming. And the report details the rapid reduction in carbon emissions needed to achieve even the inadequately restrictive 1.5°C target. As to that latter point, the SR15 projects that "[i]n model pathways with no or limited overshoot of 1.5°C, global net anthropogenic CO_2 emissions decline by about 45% from 2010 levels by 2030 (40–60% interquartile range), reaching net zero around 2050 (2045–2055 interquartile range)" (SPM-12).

Needless to say, emissions reductions of this speed and magnitude—let alone the even faster reductions required to reduce global CO_2 concentrations to 350 ppm—are inconsistent with increasing capacity on Joint Petitioners pipelines as they propose. The clear risk is that such investments will lock in emissions at their present high level, rendering the timely required emissions reductions virtually impossible to secure.

Second, as to the IPCC Special Report on Climate Change and Land: this report further enumerates the severe terrestrial impacts of climate change as well as land-based carbon sequestration actions minimally needed to limit global warming to 1.5 or 2°C. The report details climate change impacts including desertification and degradation of arable land and natural ecosystems. It finds that "[a]t around 1.5°C of global warming the risks from dryland water scarcity, wildfire damage, permafrost degradation and food supply instabilities are projected to be high (medium confidence)." SPM at 16. Furthermore, the report details the profound changes in global land use required to limit global warming to 1.5°C: "All assessed modelled pathways that limit warming to 1.5°C or well below 2°C require

land-based mitigation and land-use change, with most including different combinations of reforestation, afforestation, reduced deforestation, and bioenergy." SPM at 26. The reports is thus consistent with the emphasis in *Young People's Burden* of the requirement for large-scale global carbon sequestration efforts even in the event of a timely phase-out of fossil fuel emissions.

Finally, for now, the IPCC Special Report on the Ocean and Cryosphere in a Changing Climate provides the scientific consensus on current and projected future impacts of climate change on global oceans, ice sheets, and glaciers. It finds that "[o]ver the last decades, global warming has led to widespread shrinking of the cryosphere, with mass loss from ice sheets and glaciers [], reductions in snow cover [] and Arctic sea ice extent and thickness[], and increased permafrost temperature[]." SPM-4. The report projects that with continued fossil fuel emissions these impacts will continue to worsen in the future, leading to the degradation of ocean environments including the loss of coral reefs and continued sea-level rise due to ice sheet melting. Notably the report finds that "[a]cceleration of ice flow and retreat in Antarctica, which has the potential to lead to sea-level rise of several meters within a few centuries, is observed in the Amundsen Sea Embayment of West Antarctica and in Wilkes Land, East Antarctica. These changes may be the onset of an irreversible[] ice sheet instability" (SPM-11).

My own research, as discussed above, has shown the distinct possibility of rapid ice sheet collapse leading to multi-meter sea-level rise on a timescale of decades to centuries. This special report affirms that my concern over ice sheet instability is now widely shared in the relevant scientific community.

Q. BUT WILL THE EMISSIONS FROM THE PROPOSED PIPELINE CAPACITY INCREASE AT ISSUE HERE REALLY MAKE OR BREAK THE CLIMATE? RELATEDLY, EVEN IF THE PROPOSED EXPANSION HERE DOES NOT OCCUR, WON'T REFINERS AND OTHER PROCESSORS OF CRUDE OIL FIND OTHER SOURCES CRUDE?

A. It may still be physically possible that the Commission could approve the proposed capacity expansion while offsetting developments by other authorities will yet place us on a secure path. But I doubt it. More likely, the wrong decision may well work to demoralize other authorities.

With respect to the latter issue, the question really is whether the Commission will pave the way for this intended expansion or whether the Commission, by making the right choice, will exercise leadership that other authorities can emulate, which decisions, in combination, will function to restrict the full exploitation of this exceptionally emissions intensive crude.

The emissions at stake are not trivial. By my quick calculation, the additional crude at issue, once burned as intended, will emit ~ 97 mmt CO_2-eq/year. And my calculation may be conservative.[7] That is roughly equal to the emissions from fifteen 1,000-megawatt coal plants, or 20 million cars.[8] The emissions from Joint Petitioners' proposal must be deemed significant by any reasonable definition.

[7] See Lorne Stockman, *The Dakota Access Pipeline will lock-in the emissions of 30 coal plants*, Oil Change International (September 12, 2016) at http://priceofoil.org/2016/09/12/the-dakota-access-pipeline-will-lock-in-the-emissions-of-30-coal-plants/

[8] https://www.epa.gov/energy/greenhouse-gases-equivalencies-calculator-calculations-and-references

They add fuel to the fire, and endanger persons in Illinois and elsewhere. They should not be implicitly permitted and thus enabled by this Commission.

Q. DOES THIS CONCLUDE YOUR TESTIMONY?

A. It does. At the Commission's request, I will be pleased to elaborate on any of the points I have made herein.

TC Energy

Keystone XL Draft Supplemental Environmental Impact Statement (DSEIS) Comments - 2019			
Reviewer	DSEIS Document Page / Section Number	Verbatim Language	Comments
E. Salisbury	Global Comment	Definitions and use of cultural resources, archaeological sites, heritage resources, TCPs, historic properties, etc.	These are often used interchangeably. Of particular concern is the use of the term cultural resources instead of historic properties. Adverse effects can only occur on historic properties. Including all cultural resources in these discussions is inaccurate. See this issue throughout the document.
E. Salisbury	Global Comment	Tribal Consultation Summary	This section seems to be missing.
J. White	Page S-5	Section S.2.1 - Shipping contracts	TC Energy reaffirms that it maintains shipping contracts that will be substantially similar to those in the 2013 Presidential Permit application.
J. White	Page S-17/Table S-3	Table title	Add "Construction and" in front of "Normal"
J. Schmidt	Page S-18	Bullets 14, 15 and 18 under Land Use	Add, "To the extent practicable at the end of each measure."
J. Schmidt	Page S-19	Geology and Soils, 7th bullet, "removal and segregation of the top 6 to 12 inches of topsoil ..."	Keystone's CMRP and other documents indicate that topsoil "up to 12 inches" will be removed. Most of northern Montana does not have 6 to 12 inches of topsoil to strip. So the term "up to" is a critical distinction to what is presently provided.
J. Schmidt	Page S-21	Biological Resources, 5th bullet: seeding rates	Add at the end of the bullet, "as per the Cult/Rec Units."
J. Schmidt	Page S-21	Biological Resources, 12th bullet: weed control measures	Strike "any applicable plan" and replace with "the state-specific Weed Management Plan"
E. Salisbury	S-42	An accidental release could occur in treaty lands in southeastern Montana, western South Dakota and northeastern Nebraska where Indian tribes still claim rights to hunting, fishing and water use rights. Impacts to water resources from an accidental release could adversely affect important religious ceremonies, such as the inipi in which water is a key component. Impacts to vegetation, wildlife and fisheries have the potential to impact subsistence activities including impacts to hunting and fishing rights. The loss of access to subsistence resources as a result of an accidental release would require individuals dependent on these resources to hunt, gather, harvest and fish elsewhere until the site of an accidental release is remediated.	This isn't a cultural resources issue. Treaty rights are not addressed in NHPA. This paragraph belongs elsewhere (such as socioeconomic and ej)
J. Schmidt	Page 2-4, Section 2.4	"The MAR is not located on any federal or state lands."	Section 2.2.1 indicates a small state land parcel is crossed.
R. Hassan	Page 2-4 Table 2-1 / DR No. 2		"All MLVs and meters would be located within the areas associated with a pump station or permanent ROW. Consequently, the acres of disturbance for these aboveground facilities are captured within the Pipeline ROW and Pump Station categories within the table. c. Pump stations acreages range from approximately 12.5 acres to 16.6 acres."
J. Schmidt	Page 2-8, Section 2.6.5	"All camp residents must agree to abide by the conditions of the Code of Conduct or risk losing their camp residency status."	Workers who violate Camp Code of Conduct would be fired.
J. Schmidt	Page 2-8, Section 2.4.7.1		We have sited the PSs on the MAR, and provided those shapefiles to them and avoided sensitive features.
A. Brooks	Page 2-8 / Table 2-5 / Section 2.4.5		There is a discrepancy in the number of camps described in the DSEIS (12 camps) and the number of camps provided in response to DR 110.0 (11 camps). Table 2-5 of the DSEIS includes the Whitewater Camp in Phillips Montana which was not included in the DR response as a new camp location and puts the total number of camps at 12 in the DSEIS. Per our response to DR 110, whitewater camp is no longer included.
A. Brooks	Page 2-8 / Section 2.4.7		The DSEIS in Section 2.4.7 says that "The MAR would require approximately 37 acres of land, other than permanent ROW, along the proposed route for aboveground facilities, including pump stations with MLVs, and intermediate MLVs that are not associated with a pump station (see Table 2-1)." However, 37 acres is less than the operational acreage listed in Table 2-1 for the Pump Stations (42.5 acres). Even if all 11 of the MLVs listed in Table 2-7 were outside of pump stations, at 40 by 50 feet in size they would only account for 8.5 acre.
J. Schmidt	Page 2-12, Section 2.4.8.4	"Outside of the stream channel, the five feet or greater trench depth extends a minimum of 15 feet from the top of the defined stream channel."	Add at the end of the sentence, "for streams where a migration was determined to be a risk over the 50 year life of the Project."
A. Brooks	Page 2-12 / Section 2.4.8.4 (Wetland Crossings)		The DSEIS text that "Keystone would limit stump removal, grading, topsoil segregation and excavation to the area immediately over the trench line" does not include the situations where this provision can not be implemented as discussed in response to DR 103.0. This response to DR 103.0 states: "Situations where the above quoted provision would not be implemented would include crossing of all linear facilities and water bodies, existing utility, road, stream or railroad where extra workspace or the full ROW is required to complete the crossing of that feature, after topsoil has been removed. It is possible that some stumps may also need to be removed from the working side and/or travel lanes for safety reasons."
B. Rogner	Page 3.3-1 / Section 3.3	subsistence (sink holes) is low	DR No. 21 provided further detail as to why the potential for subsistence is low, but this information was not included in the DSEIS.
J. Schmidt	Page 3.7-10, Section 3.7.1.4, Table 3.7-2, footnote "b"		NDEQ is not a wildlife agency, nor have those requirements been vetted through the NE PSC or NDEQ evaluation process and are therefore not applicable.

Keystone XL Draft Supplemental Environmental Impact Statement (DSEIS) Comments - 2019			
Reviewer	DSEIS Document Page / Section Number	Verbatim Language	Comments
E. Salsbury	3.9-1 / 3.9	The 2014 Keystone XL Final SEIS discusses cultural resources along the Preferred Route. This section supplements the 2014 analysis to include a discussion of the cultural resources within the MAR along with a discussion of updates to cultural resources within Montana, South Dakota and areas of Nebraska along the Preferred Route which have been surveyed since 2014. Chapter 5, Environmental Consequences from Accidental Releases, assesses the risk to ~~cultural resources~~ historic properties in the event of an accidental release. Chapter 6, Electrical Transmission and Distribution Lines, provides a description of cultural resources and an assessment of impacts from connected actions relating to electrical supply needs required for the proposed pipeline. Chapter 7, Cumulative Impacts, provides an assessment of the ~~cultural resources~~ historic properties impacts from the proposed Keystone XL Project (excluding the electrical supply needs) in combination with other past, present and reasonably foreseeable future actions.	Please make suggested changes and add a sentence similar Chapter 4 that correctly refers to historic properties, not cultural resources.
E. Salsbury	3.9-1 / 3.9	This SEIS uses the following terms "heritage resources" and "cultural resources." • Heritage resources include historic properties, as defined under the National Historic Preservation Act (NHPA), as amended, as well as Traditional Cultural Properties, which are recognized for maintaining traditional ways of life among Indian tribes. • Cultural resources include the remains and sites associated with human activities, such as prehistoric and ethno-historic Indian archaeological sites, historic archaeological sites, historic buildings and structures, and elements or areas of the natural landscape.	Please define cultural resources and historic properties stating that historic properties are the resources considered for impacts. Heritage resources is not a term used in this document or the Programmatic Agreement (PA).
E. Salsbury	3.9-1 / 3.9	As a basis for the analysis of ~~heritage and cultural resources~~ historic properties, this SEIS considers federal and state regulations, standards and guidance. The Department invited ~~27~~ 69 Indian tribes having geographic and/or ancestral ties to participate in the NEPA process (Section 1.5, Agency, Tribal and Public Involvement, provides a list), as well as the Nebraska State Historical Society, which acts as the State Historic Preservation Office (SHPO) (see Appendix A, Indian Tribe and Agency Coordination).	Please make suggested changes. Also, only Nebraska is called out here. The other state SHPOs and federal agencies should be included.
E. Salsbury	3.9-3 / 3.9.1.3	In addition, Nebraska Revised Statute 12-1201 through 12-1212, et seq. and 28-13 governs the inadvertent discovery and/or excavation of unmarked burials and human remains as well as associated artifacts on private lands in the state of Nebraska.	Include Montana and South Dakota burial laws. All human remains and funerary objects in the state of Montana are protected pursuant to the Human Skeletal Remains and Burial Site Protection Act (Montana Code Ann. §22-3-601 through §22-3-811). All human burials and funerary objects in the state of South Dakota are protected pursuant to South Dakota Codified Law Chapter 34-27-25, 34-27-29, 34-27-31.
E. Salsbury	3.9-4 / 3.9.1.3	While the MAR would not be located on federal or Tribal lands, the Department would consult with Indian tribes in the event of a discovery of potential remains. If unanticipated cultural materials or human remains were encountered during the construction phase of the MAR, Keystone would implement the Unanticipated Discoveries Plan pursuant to the Programmatic Agreement.	Broaden to include discussion of the whole project. On federal lands, NAGPRA will be followed. On private and state lands, the appropriate state laws and the UDPs will be followed/implemented.
E. Salsbury	3.9-4 / 3.9.1.5	Cultural Resources Investigations since the 2014 Keystone XL Final SEIS	See DR 151
E. Salsbury	3.9-5 / Table 3.9-3	Table 3.9-3	Update with info from DR 151
E. Salsbury	3.9-6 / 3.9.1.6	These measures would identify resources prior to disturbance and allow for management of recorded sites per the Programmatic Agreement to avoid or mitigate adverse effects.	replace "resources" with "historic properties"
E. Salsbury	3.9.2 and 3.9.2.1	Discussions of survey results	Table 3.9-5 lists all sites identified along the MAR during initial survey, regardless of whether they are in the Project area or not and regardless of eligibility; Table 3.9-6 only lists sites that are potentially eligible in Montana in 2018. The text that follows Table 3.9-6 also includes sites identified along the MAR, but are not included in Table 3.9-5. Section 3.9 should include all resources identified during centerline surveys since the FSEIS and Section 4.9 would include historic properties and their potential impacts. DR 151 provides all resources identified during centerline surveys since 2014 and their current status.
E. Salsbury	3.9-7 / 3.9.2	No known villages or reported activity areas have been located within the 2-mile-wide study corridor. A review of recorded Ponca archaeological sites within 25 miles of the MAR indicate only two sites that have clear Ponca associations – one is the grave of Standing Bear and the other is the Ponca Agency, both are located along the Niobrara River north of the Elkhorn River in Knox County (Exp 2018).	This reference should be for EXP and ARG 2018 and refer to the MAR work plan.
E. Salsbury	3.9-11 / 3.9.2 (first paragraph)	The Ponca Removal Trail crosses the MAR study corridor near the Big Blue River in Seward County. This route was used for the forced removal of the Ponca Tribe from northern Nebraska in 1877. Although no evidence exists pointing to the exact location of the trail in this area, evidence of an old trail has been documented at a nearby archeological site, which refers to an extant portion of an old trail at the site as the Ulysses to Seward Settlement Trail (Exp 2018).	This reference should be for EXP and ARG 2018 and refer to the MAR work plan. Suggest using the following text which further clarifies this statement: The general route of what is now known as the Ponca Removal Trail crosses the MAR study corridor somewhere near the Big Blue River in Seward County. This route was used for the forced removal of the Ponca Tribe from northern Nebraska in 1877. Although no evidence exists pointing to the exact location of the trail in this area, a short segment of an old trail known as the Ulysses to Seward Settlement Trail has been documented at a nearby archaeological site, it is possible that this road segment, which is located approximately 1 km (0.65 mile) southeast of the MAR centerline, represents a small portion of the trail that was used by the Ponca. Because the locations of happenings (such as camp sites and burials) during the Ponca's forced removal were documented in detail as they occurred (specifically several miles to the north and the south, near the present-day towns of Ulysses and Staplehurst, respectively), there is no evidence associating this location with significant events that occurred during the Ponca's removal in 1877 (Exp and ARG 2018).

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Reviewer	DSEIS Document Page / Section Number	Verbatim Language	Comments
E. Salisbury	3.9-11 / 3.9.2 (last paragraph)	Since completion of the 2014 Keystone XL Final SEIS, the Tanderup Family, whose farm is located along the Ponca Removal Trail, deeded land to the Ponca Tribe of Nebraska and the Ponca Nation of Oklahoma along the Preferred Route, approximately 11 miles northwest of the start of the MAR. Sacred Ponca Corn has been planted on the Tanderup Farm and deeded land.	It is true that the Ponca holds ceremonies on the Tanderup property where they plant sacred blue corn, and newspaper articles have stated that the Ponca Trail crosses the Tanderup property (and therefore the Project centerline) in this location. However, per the Ponca Tribe during the interrogatory process leading up to the NE PSC hearings, it was determined that the Ponca Trail is located approximately 1 mile east of the Tanderup property. This is based on the locations provided in GIS files that can be found at http://cwfstandingbear.org/trail-map/
E. Salisbury	3.9-11 / 3.9.2.1 (first and second paragraph)	The Montana surveys identified 5 new sites and 9 isolated finds, and visited 15 previously documented sites. Seven sites and the isolated finds are determined NRHP ineligible, recommended NRHP ineligible or would be avoided. Three of the newly recorded sites are unevaluated prehistoric stone features sites. Of the previously documented sites, four have not been evaluated for NRHP eligibility and two sites are eligible for listing. Table 3.9-6 summarizes these nine sites.	The numbers in the SEIS add up to 16 sites, not 20. All resources are either ineligible (3) or would be avoided (the remaining 17). If only those resources that are eligible or potentially eligible and would be impacted are included in Table 3.9-6, then the table would be unnecessary. If the table should include all eligible or potentially eligible resources, regardless of avoidance, then the table should list 17 sites, not 9. Also, see DR 151 for updated numbers.
E. Salisbury	3.9-11 / Table 3.9-6	24VL2153, 2154, 2155	These are access road sites and can be deleted from this table.
E. Salisbury	3.9-12 / 3.9.2.1	These efforts resulted in the documentation of additional historic and precontact archaeological and locations of Tribal importance within the defined ROW.	Recommend rephrasing: These efforts resulted in the documentation of additional historic and precontact archaeological sites and locations of Tribal importance within the defined ROW.
E. Salisbury	3.9-12 / 3.9.2.1	All sites and areas of Tribal significance that were recorded during this additional fieldwork are recommended for avoidance, however the eligibility and management recommendations have not been established at this time.	This is inaccurate. Replace with: Consultation with Tribes regarding their identified locations is ongoing; eligibility determinations and management recommendations have not been established at this time.
J. Schmidt	Page 4-4, Section 4.2.3	"Segregating the upper 12 inches of agricultural topsoil..."	Change to for consistency with CMRP: "Segregating up to 12 inches of agricultural topsoil..."
J. Schmidt	Page 4-5, Section 4.2.3.1	"Wetlands account for approximately 1 percent of the MAR (see acreages in Table 3.2-2). Where possible, these locations would be evaded using HDD."	Less than 1% of the MAR is wetlands according to the table. Also, HDD is not planned for wetlands not associated with river HDDs.
J. Schmidt	Page 4-10, Section 4.3.3	Third bullet: "Removal and segregation of the top 8 to 12 inches of topsoil..."	Keystone's CMRP and other documents indicate that topsoil "up to 12 inches" will be removed. Most of northern Montana does not have 8 to 12 inches of topsoil to strip. So the term "up to" is a critical distinction to what is presently provided. NOTE: This correction is required in several locations throughout the SEIS.
J. Schmidt	Page 4-28, Section 4.8.3.1	Wetlands: "the permanent loss of wetlands due to fill for permanent Project-related facilities (e.g., access roads)."	There are no project impacts resulting in permanent wetland fill.
J. Schmidt	Page 4-48 through 4-49, Table 4.7-3	ABB: Conservation measures for ABB.	Revise to be consistent with the measures in the ABB HCP that were provided by FWS and State wildlife agencies.
E. Salisbury	4-68 / 4.9.3	If the pipeline could not avoid a particular cultural resource/historic property	Make suggested changes.
E. Salisbury	4-68 / 4.9.3	As stated in Section 3.9, approximately 858 526-acres in Nebraska require cultural resource investigations. Consistent with 40 CFR 1502.22 – Incomplete or Unavailable Information, the Department understands that archaeological / historic properties could occur for present within these unsurveyed acres.	Make suggested changes.
E. Salisbury	4-68 / 4.9.3.1	The duration of the construction phase could affect the degree of indirect impacts to historic properties cultural resources impacts. Indirect potential impacts during proposed construction, such as noise, dust, vibrations, heavy equipment traffic and changes in viewshed, would be temporary and would be expected to last for the duration of construction in specific areas for discrete periods of time. Given the temporary nature of construction and use of the ancillary facilities, such as pipe and contractor yards, no permanent indirect adverse effects to cultural resources historic properties are anticipated. HDD operations during construction could also cause indirect damage to cultural resources historic properties, if present. The unintended release of drilling fluids during a frac-out could release benthic drilling mud onto nearby cultural resources historic properties.	Make suggested changes.
E. Salisbury	4-68 / 4.9.3.1	MAR Sites	This section will need to be updated with information from DR 151.
E. Salisbury	4-68 / 4.9.3.1	Last paragraph: Adverse effects to the character of the trail would be less than significant as the trail runs parallel to and is crossed by existing roads.	The Project will have no adverse effect on the trails. This was DOS's determination with SHPO concurrence.
E. Salisbury	4-69 / Table 4.9-1	Table 4.9-1	Update with info from DR 151.
E. Salisbury	4-69 / 4.9.3.1	Preferred Route Sites (Outside the MAR) Within the Project Construction Footprint	Update with info from DR 151.
E. Salisbury	4-69 / 4.9.3.1	All sites and areas of Tribal significance that were recorded during this additional fieldwork are recommended for avoidance, however the eligibility and management recommendations have not been established at this time.	This is inaccurate. Delete sentence. Replace with: Consultation with Tribes regarding their identified locations is ongoing; eligibility determinations and management recommendations have not been established at this time.
E. Salisbury	4-69 / 4.9.3.1		No mention of SD or non-MAR NE - add a statement somewhere that says: No historic properties will be affected by the Project in South Dakota or the remaining Nebraska (non-MAR) ROW.
E. Salisbury	4-70 / Table 4.9-2	Table 4.9-2	Update with info from DR 151.
E. Salisbury	4-70 / Table 4.9-2	24DW0569	Under Project Effect - "Adverse Effect"; and Status / Management Recommendation "Data Recovery, Fence and Monitor"
E. Salisbury	4-70 / Table 4.9-2	24DW0289	Under Project Effect - "No Effect"
E. Salisbury	4-70 / Table 4.9-2	24PH4372	Under Department NRHP Eligibility Determination - remove "non-contributing portion"; Project Effect - "No Effect"; and Status / Management Recommendation "Bore, Fence and Monitor"
E. Salisbury	4-70 / Table 4.9-2	24VL0982	Under Project Effect - "No Adverse Effect"; Status / Management Recommendation - "Fence and Monitor"; Location Notes "within proposed pipeline centerline"
E. Salisbury	4-70 / Table 4.9-2	BCA16-1326-Site 3	delete

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E. Salisbury	4-70 / Table 4.9-2	24VL0978	Under Status / Management Recommendation - "Data Recovery (Complete), Fence and Monitor"
E. Salisbury	4-70 / Table 4.9-2	24VL0972	Under Project Effect - "No Adverse Effect", Status / Management Recommendation - "Fence and Monitor", Location Notes "within proposed pipeline centerline"
E. Salisbury	4-70 / Table 4.9-2	BCA 18-1328-Site 1	delete
E. Salisbury	4-70 / Table 4.9-2	BCA 18-1328-Site 2	delete
E. Salisbury	4-70 / Table 4.9-2	24VL1988	Under Project Effect - "No Adverse Effect"
E. Salisbury	4-71 / Table 4.9-2	24VL2153, 2154, 2155	delete (these are access road sites and are avoided)
E. Salisbury	4-71 / Table 4.9-2	24MC0028	Under Project Effect - "No Adverse Effect"
E. Salisbury	4-71 / Table 4.9-2	39JN2007	Add from Table 4.9-3
E. Salisbury	4-71 / Table 4.9-2	footnote a	delete - SHPO rejected BCA's changes to 24VL0982 and 24VL2072
E. Salisbury	4-71 / Table 4.9-2	footnote	delete ARPA reference: the others are fine
E. Salisbury	4-71 / 4.9.3.1	In addition to sites within the construction footprint, 47 eligible, potentially eligible or unevaluated sites in Montana and South Dakota are close enough to the proposed Project activities (although outside of the current footprint) to require additional protections to ensure avoidance during the construction phase. Exclusion fencing would typically be installed along the edge of the ROW to these areas and the site locations would be monitored during construction. The proposed Project would have no effect on these resources. Table 4.9-3 provides information on these 47 sites outside of the Project footprint.	Change 47 to 48 for numbers through 2018; update with info from DR 151
	4-71 / Table 4.9-3	Table 4.9-3	Update with info from DR 151
E. Salisbury	4-74 / Table 4.9-3	39JN2007	remove from this table and put in Table 4.9-2
H. Tillquist	Section 5	General Comment	The section does not consistently address emergency response and reclamation activities that would mitigate the magnitude and duration of potential effects. Rather, the section presumes that if a release were to occur, that effects will occur. In some cases, the reader is directed to various appendices of the 2014 FSEIS for mitigation measures, emergency response strategies, and reclamation. Given the importance of this topic, we suggest providing a summary of resource-specific activities to reduce the chance of a release in proximity to the resource (e.g., for water resources: HDD, scour analyses, remotely operated valves) and that emergency response tactics to reduce or eliminate impacts to environmental resources (e.g., for water resources: notification of water users, GRP pre-planning, isolation booms for intakes) and reclamation activities that reduce effects and accelerate recovery (e.g., removal of source oil, aeration, natural attenuation). Information on these topics are readily available, eg., SD DENR 2003.
H. Tillquist	Page 5-2 / Section 5.2	If released crude oil reached groundwater, the screening modeling conducted for the 2014 Keystone XL Final SEIS found that components in the oil, such as benzene, could spread downgradient in groundwater an additional 840 feet for a 50-barrel spill, 820 feet for a 1,000-barrel spill and 1,650 feet for a 20,000-barrel spill.	The groundwater model used to estimate the length of the groundwater plume assumes that the crude oil spill remains in place without cleanup, which would reduce or eliminate the source of hydrocarbon contamination. Absence of cleanup is an unrealistic scenario for larger releases. Numerous studies found that groundwater plumes stabilized or begin to shrink once the source of contamination is removed. Field investigations of more than 600 historical petroleum hydrocarbon release sites indicate the migration of dissolved constituents typically stabilizes within several hundred feet of the crude oil source area (Newell and Conner 1998; USGS 1998). Therefore, a plume of more than 1,000 feet given the removal of source oil is unlikely. If the analysis is retained to be conservative, we recommend that this information be clearly noted.
H. Tillquist	Page 5-6 / Section 5.3.1	The Department and BLM calculated the incident rate for tanks, valves and pump stations by dividing the total number of incidents simulated to each of those components by the number of components estimated to be in operation during that period.	The number of pump stations, valves, and tanks is not known and estimation is highly uncertain. The estimation of incident rates at each facility type is therefore speculative. Using data collected from Annual Reports, PHMSA has quantified the number of breakout tanks, but not storage tanks at terminals and tank farms. The PHMSA incident database contains information regarding incidents from both types of tanks. Care should be taken to avoid combining these two facilities, since they are operate very differently and likely have different incident frequencies. Similarly, the number of pump stations and mainline valves in the US is completely unknown. The method used in previous FEIS to calculate was estimated based on KXL spacing. Based on first-hand knowledge of other projects, this estimation is speculative and is likely to be a substantive under-estimation of facilities. Although this does over-estimate risk at these facilities, the use of speculative information is inadvisable, perpetuates misinformation, and may lead to incorrect public perception of risk at these facilities. We recommend the two columns on the right of Table 5-3 be deleted for these listed facility types.

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H. Tilquist	Page 5-7 / Table 5-3	Table 5-3. Spill Volume Distribution by Pipeline Component Pipeline System: All Elements (1,554) // Annual Incident Rate per 1,000 Mile-Years or Equipment-Years	Based on information in Table 5-3, the annual incident rate is 0.00317 incidents/mile-year (equivalent to 3.17 incidents/1000 mile*years), not 0.40 incidents/1000 mile-year. An incident rate of 0.00317 incidents/mile*year is consistent with the information presented in Table 5-4. **See table below**. This incident rate accounts for mainline pipe, pump stations, valves and other facilities. Incident rates throughout table also should be verified. Spill Volume Category Year | Small | Medium | Large | Catastrophic | Total | Pipe miles | Annual Incident Rate 2010 | 116 | 24 | 5 | 2 | 149 | 49,400 | 0.0030 2011 | 106 | 28 | 5 | 1 | 140 | 51,052 | 0.0027 2012 | 147 | 31 | 4 | 0 | 182 | 52,657 | 0.0035 2013 | 167 | 28 | 4 | 1 | 200 | 56,170 | 0.0036 2014 | 196 | 37 | 1 | 0 | 234 | 61,899 | 0.0038 2015 | 199 | 38 | 3 | 0 | 240 | 68,012 | 0.0035 2016 | 149 | 37 | 5 | 1 | 192 | 70,594 | 0.0027 2017 | 155 | 35 | 6 | 1 | 197 | 73,957 | 0.0027 Mean | 192 | 60474 | 0.0032
H. Tilquist	Page 5-7	Table 5-3. Spill Volume Distribution by Pipeline Component	It is unclear which value(s) in Table 5-3 is used to calculate annual incident rates for various resources (e.g., Table 5-7 Agricultural Lands). It would be useful to 1) identify incident frequency used and 2) provide acres of resources within specified spill distance so that these calculations may be verified. The information in the document is insufficient to check analysis and the baseline incident frequency is not identified.
H. Tilquist	Page 5-7	Table 5-3. Spill Volume Distribution by Pipeline Component	The assessment does not modify the incident frequency calculated from PHMSA data to generate a Project-specific incident frequency. Given TC Energy's low incident frequency (more than 3 times fewer incidents than national average, as discussed in Section 5.3.3) and given the number of Special Conditions that the Project would be required to make to ensure the pipe operates safely, this should be identified as a conservative assumption that is likely to over-estimate the potential number of incidents.
	Page 5-7 (cont'd)	Table 5-3 (continued)	One method to avoid issues related to the number of facilities and to reduce the over-estimation of risk along the ROW is to adjust the incident frequency to address releases that occur in ROW or migrate off operator-controlled property (i.e., 22.2% + 6.2% = 28.4%). So an incident rate of 0.00317 incidents/mile*year (i.e., PHMSA incident rate for all elements) would be multiplied by 28.4%, yielding a ROW incident rate of 0.0008 incidents/mile*year equivalent to 0.9 incidents per 1000 mile*years). This adjusted incident rate remains conservative since is assumes that the pipeline will operate at the national incident rate identified in Table 5-4. It does not adjust for lower TransCanada's incident rate or for the 56 Special Conditions to reduce the potential for pipeline incidents.
H. Tilquist	Page 5-17 / Section 5.4.2	The volume of product released would fall below the detection threshold of the SCADA system, and could continue unnoticed until the released volume is observed at the ground or water surface or is identified during a pipeline integrity inspection.	The statement implies that a leak may only be identified by direct observation. However, there are leak detection methods that TC Energy utilizes to detect these types of slower release rates as required by Special Condition #27. Over time, the computational mass balance would be capable of finding a release rate of 2% bbl/day.
H. Tilquist	Page 5-29 / Section 5.5.2.1	However, oil adsorbed or otherwise adhered to soil particles may be transported extended distances by processes such as wind or water erosion. Oil migration could contaminate and adversely affect agricultural land use in areas beyond the initial spill location.	Oil sorbed to soil tends to adhere to other particles and would reduce dust production. For this reason, oil historically has been spread on dirt roads to control dust. The suggestion that oil-laddened dust may transport oil in sufficient quantities to cause adverse effects at other locations is speculative, not consistent with common application practices, and has not been documented with peer-reviewed literature in the FEIS.
H. Tilquist	Page 5-30 / Table 5-7	Table 5-7. Likelihood of Spills Affecting Agricultural Land Use per Year.	Table 5-7 does not reflect the "likelihood of a release affecting agricultural lands". Rather, the table summarizes the potential for a release to occur in proximity to these resources. There are many factors that would prevent a release from actually causing an effect.
H. Tilquist	Page 5-30 / Section 5.5.2.1	As presented in Table 5-7, the likelihood of a release affecting agricultural lands is greatest for cultivated crops, with the highest annual incident rate being 1.1 incidents per year for any size spill that could affect this resource within 150 feet of the release point. This incident rate is very high due to the presence of croplands along much of the pipeline route and the higher incident rate for small spills (2.6 per 1,000 pipeline mile-years).	The likelihood of a release affecting agricultural lands overestimates impacts since the majority of releases (about 70%) are predicted to occur and be completely contained within facilities and, therefore, would have negligible effects to agricultural lands. Based on PHMSA data, a fraction of releases (17.7%) may require soil remediation (PHMSA 2002 - 2018). In accordance with federal and state regulations, Keystone would be responsible for cleanup of contaminated soils and would be required to meet applicable cleanup levels. Once remedial cleanup levels are achieved in the soils, no significant adverse or long term effects would be expected. Based on historical data, soil remediation involved 100 cubic yards of soil or less at the majority of release sites where soil contamination occurred, and only 3 percent of the release sites required remediation of 10,000 cubic yards or more (PHMSA 2002 - 2009).

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H. Tilquist	Page 5-31 / Table 5-9	Table 5-9 Likelihood of Spills Affecting Recreational Land Use per Year	Table 5-9 does not reflect the "likelihood of a release affecting recreational lands". Rather, the table summarizes the potential for a release to occur *in proximity to* these resources. There are many factors that would prevent a release from actually causing an effect.
H. Tilquist	Page 5-31 / Section 5.5.3	Remediation may require the excavation and removal of contaminated soils, which would result in a permanent loss of prime farmland soils.	In the event of a release with residual oil following the initial emergency response, agencies would evaluate reclamation methods with the goal of protection of human health and restoring environmental values. Topsoil removal may occur when agricultural soils do not meet cleanup levels, which generally affects a limited area. In agricultural lands, topsoil that is removed commonly is replaced with uncontaminated topsoil to avoid a loss of productivity. Over large, widespread areas, reclamation of soils in place may be preferable to topsoil removal. Remedial practices focus on the aeration of the soil matrix and stimulation of the microbial community to accelerate bioremediation through natural microbiosh attenuation. While bioremediation may cause a temporary or long-term loss of productivity, effects are not permanent and Keystone would compensate landowner for loss of production.
H. Tilquist	Page 5-32 / Table 5-10	Table 5-10. Likelihood of Spills Affecting Designated Farmland Soils per Year.	Table 5-10 does not reflect the "likelihood of a release affecting" designated farmland soils". Rather, the table summarizes the potential for a release to occur *in proximity to* these resources. There are many factors that would prevent a release from actually causing an effect.
H. Tilquist	Page 5-32 / Section 5.5.3	As presented in Table 5-10, the analysis determined that the likelihood of a release affecting designated farmland soils is greatest for farmland of statewide importance where there is a projected annual rate of 0.9 incident per year for any size spill that could affect such soils within 150 feet of a release point. For prime farmland soil, there is an annual likelihood of 0.7 incident per year of any size spill affecting this resource within 150 feet of a release point along the proposed pipeline route.	The majority of releases (about 70%) are predicted to occur and be completely contained within facilities and, therefore, would have negligible effects to designated farmlands. Based on PHMSA data, a fraction of releases (17.7%) may require soil remediation (PHMSA 2002 - 2019). After emergency response and reclamation activities (if needed), complete recovery of productivity and ecological functions of soils is expected.
H. Tilquist	Page 5-33 / Section 5.5.4	Emergency response teams sometimes initiate controlled burning as a measure to mitigate impacts from spills.	In-situ burning for terrestrial releases is not common due to a variety of considerations, such as feasibility, burning conditions, safety, and location considerations. Potential effects to human health is a critical consideration in determining whether burning is an appropriate cleanup methodology. Additionally, burning may cause additional effects, such as destroying the microbial community in the soil that is necessary for natural attenuation and the formation of a hydrophobic soil surface that makes revegetation and biodegradation more difficult. The decision to burn a crude oil release is not the operator's, but is determined in coordination with state and federal agencies and requires a special burn permit.
H. Tilquist	Page 5-33 / Section 5.5.4	The extent of the impacts would depend on the volume of oil spilled, the size of the plume, the proximity of the incident to populated areas, the evaporative and dispersion characteristics of the weather and wind conditions, and the effectiveness of the spill response.	The majority of releases (about 70%) are predicted to occur and be completely contained within facilities and, therefore, would have negligible effects to air quality (PHMSA 2002 - 2019).
H. Tilquist	Page 5-34 / Section 5.5.5	Large spills would be more likely to result in elevated noise levels across a larger area and for a longer duration. Conversely, small spills would be more localized and less likely to affect noise receptors.	The majority of releases (about 70%) are predicted to occur and be completely contained within facilities and, therefore, would have negligible effects to noise receptors (PHMSA 2002 -2019).
H. Tilquist	Page 5-35 / Section 5.5.6.1	The crude oil plume would then spread horizontally, primarily in the down-gradient direction, until reaching a steady state based on the crude oil hydraulic pressure, groundwater flow rate and soil characteristics.	Movement of crude oil is generally quite limited due to adherence to soil particles, groundwater flow rates, and natural attenuation (i.e., microbial degradation) (Freeze and Cherry 1979; Fetter 1993). Hydrocarbon plumes move more slowly than the rate of groundwater movement due to natural attenuation (biodegradation by naturally occurring microbes). It would take decades for a plume to move hundreds to a thousand feet (if ever). This timeframe provides an opportunity for remediation activities to remove source oil from the release site and remediate groundwater contamination prior to it reaching well intakes. Once source oil is removed and the BTEX plume begins to shrink, Newell and Conner (1998) found that the BTEX concentration dropped from 1 ppm to 1 ppb in 5 to 10 years.
H. Tilquist	Page 5-36 / Table 5-13	Table 5-13. Likelihood of Spills Affecting Groundwater Resources per Year.	Table 5-13 does not accurately reflect the "likelihood of a release affecting groundwater resources". Rather, the table summarizes the potential for a release to *occur in proximity to* these groundwater resources. There are many factors that would prevents a release from actually causing an effect. Based on PHMSA data, a fraction of releases (7.6%) may require groundwater remediation.
H. Tilquist	Page 5-40 / Table 5-15	Table 5-15 presents the likelihood of a spill along the proposed pipeline route reaching surface water resources, including major rivers, lakes, perennial streams with state water classifications and impaired waterbodies.	The estimate is not the likelihood of a spill actually *reaching* the surface waterbody, but is an estimate of a release occurring *in proximity to* a surface waterbody.
H. Tilquist	Page 5-40 / Table 5-15	Table 5-15. Likelihood of Spills Affecting Surface Water Resources per Year.	Table 5-15 does not accurately reflect the "likelihood of a release affecting surface water resources". Rather, the table summarizes the potential for a release to occur *in proximity to* these resources. There are many factors that would prevent a release from actually causing an effect. Based on PHMSA data, a fraction of releases (3.4%) may require surface water remediation. It is important to not that only 0.14% of releases affect drinking water.
H. Tilquist	Page 5-41 / Section 5.5.6.3	Entire paragraph starting "Following a release, aggressive and intrusive cleanup methods would cause impacts to wetlands from excavation and the removal of hydric soils."	Because excavation (or potential in situ burning) can cause substantive damage to wetlands, emergency response and cleanup crews would work with applicable agencies to determine the most appropriate cleanup methods based on site-specific considerations.

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H. Tilquist	Page 5-41 / Table 5-19	"As presented in Table 5-19, the likelihood of a release affecting wetlands..." Also the title of Table 5-19 "Likelihood of Spills Affecting Wetlands per Year"	Table 5-19 does not reflect the "likelihood of a release affecting wetlands". Rather, the table summarizes the potential for a release to occur in proximity to wetlands. There are many factors that would prevent a release from actually causing an effect. The majority of releases (about 70%) are predicted to occur and be completely contained within facilities and, therefore, would have negligible effects to wetlands. Based on PHMSA data, a fraction of releases (1.5%) may affect vegetation and require reclamation, including wetlands.
H. Tilquist	Page 5-42 / Section 5.5.6.4	During a flood, submerged pipeline components would experience a greater risk of damage caused by floating debris, river currents and watercraft.	Correction to language: "During a flood, exposed pipeline components could..."
H. Tilquist	Page 5-42 / Section 5.5.6.4	The areas showing the highest flood hazard along the proposed route include areas along the Milk, Missouri and Yellowstone rivers in Montana; areas along various waterbodies within Butte, Harding, Meade and Tripp counties in South Dakota; and areas along the Elkhorn, Platte, Big Blue and Little Blue rivers in Nebraska. A release of product into these floodplains during a flood event could cause widespread dispersal of the product within the floodplain, especially because of flat topography in these areas.	Keystone evaluated scour potential at rivers and stream and elected to use the HDD crossing method in certain locations to protect pipeline integrity and reduce the potential for a release.
H. Tilquist	Page 5-44 / Table 5-19	Table 5-19 summarizes the annual likelihood of a potential release affecting biologically unique landscapes and area of conservation concern. Table 5-19 Likelihood of Spills Affecting Biologically Unique Landscapes and Areas of Conservation Concern per Year.	Table 5-19 does not reflect the "likelihood of a release affecting biologically unique landscapes and area of conservation concern". Rather, the table summarizes the potential for a release to occur in proximity to these areas. There are many factors that would prevent a release from actually causing an effect. The majority of releases (about 70%) are predicted to occur and be completely contained within facilities and, therefore, would have negligible effects to these areas. Based on PHMSA data, a fraction of releases (1.5%) may affect vegetation and require reclamation.
H. Tilquist	Page 5-46 / Section 5.5.7.2	Therefore, there would be a higher likelihood of direct contact between the biota and the dispersed product. Some toxicity might persist in these streams for a few weeks or longer, until water washes out the toxic compounds trapped in the sediment or until cleaner sediment covers the contaminated sediment.	Sentence may be misconstrued that oil would remain in aquatic environments and no cleanup would occur. In fact, SCAT crews would identify streams where crude oil exists. Crude oil would then be removed by emergency response and cleanup teams. Cleanup levels would be established by the state and would be protective of human health and the aquatic environment. Based on cleanup requirements and rates of recovery documented at previous spill sites, potential effects to streams and associated biota would be short-term.
H. Tilquist	Page 5-46 / Section 5.5.7.2	Because surficial petroleum slicks are less permeable to oxygen than water, spilled material that reaches wetlands, ponds or small lakes could lower dissolved oxygen concentrations caused by a decreased influx of atmospheric oxygen.	Following a release into surface waters, increased biological oxygen demand (BOD) often results from substantial increases in microbial activity that breakdown hydrocarbons following an oil release.
H. Tilquist	Page 5-47 / Section 5.5.7.3	Table 5-19 Likelihood of Spills Affecting Threatened and Endangered Species per Year	Table 5-19 does not reflect the "likelihood of a release affecting threatened and endangered species". Rather, the table summarizes the potential for a release to occur in proximity to habitat used by these species. There are many factors that would prevent a release from actually causing an effect. The majority of releases (about 70%) are predicted to occur and be completely contained within facilities and, therefore, would have negligible effects to these species.
H. Tilquist	Page 5-52 / Section 5.5.8	Socioeconomic section	Keystone would reimburse land and business owners for documented economic losses.
H. Tilquist	5-57 / Table 5-23	Table 5-23	replace "cultural resources" with "historic properties" in table heading. this table should only include cultural, not paleo, and is not clear. How is the number calculated? And what does it mean? What does no significant sites found mean? Seems like the paragraph leading up to this table and the table can be deleted. The table also references exp 2016 which is the ER and not sure what information was provided in that document that would lead to this table.
E. Salisbury	5-55 / 5.5.9	As discussed in Section 3.9 and contained within the Programmatic Agreement (see Appendix E of the 2014 Keystone XL Final SEIS), the Department continues to coordinate with Indian tribes for assistance in identifying Traditional Cultural Properties/properties of religious and cultural significance of the tribe that may be eligible for listing in the NRHP and could be affected by the project.	delete paragraph. Identification of resources was addressed in other sections and does not apply here.
	5-56 / Table 5-22		All of these are direct effects and some of the indirect effects are later mentioned as direct effects. Might just want to list these rather than have two columns. These should all be potential effects. Further - should use consistent NRI language and refer to historic properties rather than sites, TCPs, etc. Effects can only occur on historic properties. If TCP's are present, they would be historic properties.
E. Salisbury	5-56 and 5-57 / 5.5.9	Table 5-23 presents the likelihood of a release affecting cultural resource sites. It should be noted that many prehistoric and historic sites were identified within the potential spill impact areas. In addition to the resources presented in the table, two tribal resources are located adjacent to waterways within the 40 river mile downstream area included in the ACE for the proposed Project. Cherry Creek and the Chalybeate Brick Yard/Building, a combined total of 40.34 miles of the Cheyenne River Watershed in South Dakota, share the ARA and Administrative Boundary a total of 50.83 miles of the Fort Peck Reservation in Montana.	Replace- "cultural resource" with "historic property". Delete the following sentence regarding paleo (it does not fit into any cultural resources discussion). What is a potential spill impact area? Is this the APE? The text in green also does not fit there (these waterways are not historic properties, or cultural resources for that matter.

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E. Salisbury	5-57 / Table 5-23	Table 5-23	Replace "cultural resources" with "historic properties" in table heading; this table should only include cultural, not paleo. This table is difficult to understand How is the number calculated? And what does it mean? What does no significant sites found mean? The paragraph leading up to this table and the table can be deleted. The table also references exp 2018 which is the DR and what information was provided in that document that would lead to this table.
L. Sibbald	Page 6-4 / Table 6-1	Powerline length from PS-09 states as 61.4 miles with 39.4 miles on BLM lands	Total length of powerline needs to be changed to 64.56 miles and the portion on BLM land needs to be changed to 32.7 miles Changes also need to be made to Section 6.3.9.2 as noted below.
L. Sibbald	Page 6-4 / Table 6-1	Voltage for PS-11 is 6.9 kV	This voltage should be 230.
L. Sibbald / J. Schmidt	Page 6-14 / Section 6.5.3	For the purposes of analysis, it is assumed that the expansion of an existing substation would be approximately 4 acres in size	As a reference the pump station substation is 100 be 150 feet or 0.3 acres. Source substation expansions should be smaller.
L. Sibbald / J. Schmidt	Page 6-15 / Section 6.3.3	Finally, new substations may be required for several power lines, as described below. This would potentially include purchasing land and clearing, grading and leveling, fencing, and graveling the site. For the purposes of this analysis, it is assumed that a new substation would require 6 acres of land, whereas a switching station would require 4 acres.	The Ft Peck pump station substation is part of Keystone's pump station footprint and are less than an acre.
L. Sibbald	Page 6-15 / Section 6.3.4	Although a single line could be built in a little as 6 months, construction of multiple lines could be concurrent, and would likely result in completion of all lines over a 9 to 12 month period. However, seasonal restrictions could be observed for certain protected species.	PS 9 and 10 transmission lines will be built over two years to avoid grouse leks and big game migration.
L. Sibbald	Page 6-17 / Figure 6-4	Examples of 115-kV H-frame Transmission Structures (left) and Monopoles (right)	Most of the structures would be single pole with three insulators, not six as shown in the picture.
L. Sibbald	Page 6-17 / Section 6.3.5	Distribution line (69 kV and lower) construction would be conducted in a similar manner as the transmission line construction described in Section 6.3.4. The installation of a 65-foot to 75-foot-long wood pole would occur every 0.06 mile (approximately every 250 feet), resulting in the need for approximately 20 wood poles per mile.	A 65 foot pole is used for transmission. A 25 to 35 foot pole would be used to support a distribution line. If it is a 69 kV distribution line would use a 40 to 45 foot pole.
L. Sibbald	Page 6-19 / Section 6.3.9.1	Big Flat Electric Cooperative proposed to construct and operate a ~~61.3-mile/64.56-mile~~, 115-kV transmission line beginning at WAPA's proposed Bowdoin Substation and ending at PS-09. The proposed transmission line would be located in Phillips County, Montana, but would cross ~~39.4 miles/32.7 miles~~ of BLM-administered lands. The cooperative would secure an 80 to ~~100~~-foot-wide permanent ROW, ~~depending on structure type~~. On all BLM and non-BLM lands, all access and construction would occur on the 80 or ~~100~~-foot permanent ROW. ~~Example that ROW on BLM-administered lands could be temporarily widened to a total of 300 feet during the construction phase only~~. For the purposes of this impact analysis, the Department uses a ROW width of 100 feet along the entire line, resulting in a construction ROW area of ~~744.2 acres/~~782.5 acres.	Make suggested edits.
L. Sibbald / A. Wagner	Page 6-19 / Section 6.3.9.1	~~The ROW would also cross 3.8 acres of non-tribal trust lands for the Turtle Mountain Band of Chippewa Indians of North Dakota.~~	Delete sentence. The ROW does not cross the Turtle Mountain Band of Chippewa Indians of North Dakota lands. This information was provided in DR No. 115.
L. Sibbald / A Wagner	Page 6-19 / Section 6.3.9.1	The total permanent ROW would be ~~385.4 acres, with about 294.8 acres of this on BLM-administered lands. The temporary ROW on BLM lands would add approximately 74 acres for a total of 368 and 782.5 acres with between 317.1 and 356.4 acres of that on BLM-administered lands.~~	Make suggested edits.
L. Sibbald / A Wagner	Page 6-19 / Section 6.3.9.1	The transmission line would have three conductors and an overhead static wire. Based on the assumption of a transmission structure every 400 feet, the proposed line would require approximately ~~845 poles/852 structures~~. Approximately ~~402/425~~ structures would be installed on BLM-administered lands. The cooperative would use various pole types including treated wood monopoles and H-frames (approximately 60 feet to 80 feet tall). Each wood monopole or H-frame would be direct-buried and not require a foundation, directly disturbing approximately ~~29.7 acres/~~0.6 acres within the ROW with ~~11.2 acres/~~0.55 acres of BLM-administered lands. The BLM would identify mitigation actions associated with distribution line construction, to be considered at the time project-specific proposals are finalized.	make suggested edits
L. Sibbald / J. Schmidt / D. Tomic	Page 6-19 / Section 6.3.9.2	A new NorVal Electric Cooperative substation, Black Coulee, is proposed adjacent to the pump station. This substation is assumed to occupy 8 acres.	All substations are located within the Pump Station footprint. For example, PS 10 is 7.62 acre. 0.35 acres will owned (title transfered) to the utility company. *
L. Sibbald	Page 6-20 / Section 6.3.9.3	All substations are located within the Pump Station footprint. For example, PS10 is 7.62 acre. 0.35 acres will owned (title transfered) to the utility company.	This should be "on existing right of way across Fort Peck Dam". The existing structures will be salvaged.
L. Sibbald	Page 6-20 / Section 6.3.9.3	The cooperative would likely use wood and steel monopoles, approximately 65 feet to 110 feet tall).	Change to "likely use steel lattice structures"
L. Sibbald	Page 6-20 / Section 6.3.9.5	In addition, the cooperative would need to construct a new substation adjacent to PS 13. This is assumed to be built within an 8-acre parcel.	This is similar to PS 10. The substation will be built within the 10.95 ac owned by TC. The 8.38 Tongue River EC substation is within the 10.95 ac.
L. Sibbald	Page 6-21 / Section 6.3.9.6	Montana-Dakotas Utility proposes to construct and operate a 6.9-mile, 115-kV transmission line starting at an existing unnamed substation and ending at PS 14, all located in Fallon County, Montana.	This should change to "transmission line looping an existing transmission line and ending at PS 14".
L. Sibbald	Page 6-23 / Section 6.3.9.12	These facilities would be entirely within Tripp County, South Dakota, but would cross one mile of Rosebud Sioux Tribe Trust Lands.	As discussed in data request responses, the general land ownership map being used to calculate impacts to various federal, state or tribal ownership does not match court house plats of ownership. No tribal or trust lands are crossed according to the power provider.
J. Schmidt	Page 6-30, Section 6.4.2.2	Surface Waters: "As determined by the USACE and by state and county construction permitting agencies, an adequate buffer between the transmission line corridor and adjacent surface waters may be needed to minimize impacts on surface water features during initial construction and long-term operation, including maintenance activities."	Strike the sentence. Powerlines will span most waterbodies and wetlands. There would be no NWP permitting required nor any state-level permits.
J. Schmidt	Page 6-31, Section 6.4.2.2	Groundwater: "Every power provider would enact an SPPC Plan..."	There will be no fuel storage for powerline construction, and therefore no requirement for an SPCC.

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J. Schmidt	Page 6-41, Section 6.4.4.2	Text after Table 6-9, 1st paragraph after the table	Based on the first two sentences in this paragraph, the remainder of the paragraph should be deleted since it is not applicable and appears to be a cut and paste from the pipeline impacts.
J. Schmidt	Page 6-62, Section 6.4.6.1	American Burying Beetle	Power line impacts do not match with the HCP, which is based on power pole placement and footprint of impacts.
J. Schmidt	Page 6-63, Section 6.4.6.1	Black-footed Ferret. Last sentence of 2nd paragraph and last sentence of 3rd paragraph	These sentence conflict and there are no mitigation requirements since any ferrets found are experimental which carry no protection requirements.
J. Schmidt	Page 6-98, Table 6-53	Areas crossed by power lines	This table needs to be updated, no tribal lands are crossed as pointed out above and in DR responses and only 0.5 miles of TNC easement crossed.
E. Salisbury	6-117 / 6.4.10	Agreement was amended in 2013. The Programmatic Agreement provides a streamlined process for assessing potential impacts to cultural and historic resources including those lands that have not yet been surveyed. The Programmatic Agreement includes a stipulation that requires complete identification and evaluation of historic properties within the Project APE. Any future surveys could result in the identification of additional cultural resources that would require the adjustment of pole and other infrastructure siting to avoid damaging the resource or site adverse effects.	Replace cultural and historic resources with historic properties; make suggested edits in red.
E. Salisbury	6-117 / 6.4.10.1	The types of historic and cultural resources likely found with the project areas for each power line are described in Section 3.9. Most of the power line ROWs have had cultural resource surveys completed at least in part, including literature research and field surveys. However, to fully comply with the stipulations of the Programmatic Agreement, the entire ROWs would be surveyed prior to making determinations about whether the construction or operation of the power lines and substation would have adverse effects on cultural resource. Cultural resources associated with Cornfield Gating survey of each pump station power line are described below with any associated impacts that could occur.	Replace cultural and historic resources with historic properties; make suggested edits in red.
E. Salisbury	6-117 / 6.4.10.2	Typical impacts associated with the construction and operation of transmission and distribution lines include damaging or destroying archeological artifacts or surface historic resources while accessing or constructing the line. Construction of the proposed transmission lines could involve various cultural resources impacts to historic properties, including the following:	Make suggested edits.
E. Salisbury	6-119 / 6.4.10.2		It isn't clear in the bulleted list whether WAPA will own Bowdoin and O'Fallon Substations.
E. Salisbury	6-119 -	Individual PS locations	Keystone believes they should all be No Effect Determinations - no sites would be impacted based on the recommendations given.
E. Salisbury	6-119 / 6.4.10.2	(PS-09) Additional mitigation measures regarding flagging of restricted areas, vehicle travel limitations, staging locations, and construction procedures have also been proposed to minimize potential impacts. SHPO provided BLM with concurrence for site eligibility determinations, avoidance and mitigation strategies as well as a "No Adverse Effect Determination" for the original alignment on August 4, 2015.	Unclear. Minimizing potential impacts presumes an adverse effect. Also SHPO's review of mitigation strategies (unless those strategies all involve avoidance) also presumes an adverse effect. However, it is stated that there is concurrence on a No Adverse Effect Determination.
E. Salisbury	6-120 / 6.4.10.2	(PS-09) Additional Class III inventory was undertaken in 2018 and 2019. SHPO has provided BLM with concurrence for site eligibility determinations, avoidance and mitigation strategies as well as a "No Adverse Effect Determination" related to these alignment shifts on September 26, 2019.	No summary of survey results provided. SHPO's review of mitigation strategies (unless those strategies all involve avoidance) presumes an adverse effect. However, it is stated that there is concurrence on a No Adverse Effect Determination.
E. Salisbury	6-120 / 6.4.10.2	(PS-10) SHPO provided BLM with concurrence for site eligibility determinations, avoidance and mitigation strategies as well as a "No Adverse Effect Determination" for the original alignment on September 18, 2014.	No summary of survey results provided. SHPO's review of mitigation strategies (unless those strategies all involve avoidance) presumes an adverse effect. However, it is stated that there is concurrence on a No Adverse Effect Determination.
E. Salisbury	6-120 / 6.4.10.2	(PS-11) An Unanticipated Discovery Plan would be developed and implemented to ensure minimization of impacts on unknown cultural resources that may be inadvertently encountered during construction or operation of the proposed transmission line.	The UDP has already been developed.
E. Salisbury	6-121 / 6.4.10.2	(PS-12) As part of adherence to the Programmatic Agreement, a Level Class I file search was conducted to identify previously recorded cultural resources and previously completed resource investigations within the vicinity of the proposed transmission line.	Make suggested revisions.
E. Salisbury	6-121 / 6.4.10.2	(PS-12) Subsequently, a Level Class III cultural resources field survey was completed for the proposed 115-kV transmission line route identifying four archaeological sites and one isolated find within close proximity.	Make suggested revisions.
E. Salisbury	6-121 / 6.4.10.2	(PS-12) Based on this process, it is expected that there would be negligible, if any, impacts on cultural resources (historic properties) from the construction and operation of this transmission line.	Make suggested revisions.
E. Salisbury	6-121 / 6.4.10.2	(PS-13) As part of adherence to the Programmatic Agreement, a Level Class I file search was conducted to identify previously recorded cultural resources and previously completed resource investigations within a 2-mile wide corridor centered on the proposed transmission line.	Make suggested revisions.
E. Salisbury	6-121 / 6.4.10.2	(PS-13) Subsequently, a Level Class III cultural resources field survey was completed.	Make suggested revisions.
E. Salisbury	6-121 and 6-122 / 6.4.10.2	(PS-13) Prior to transmission line construction, field surveys would be completed for all unsurveyed areas/areas during consultation with Montana SHPO. Upon completion of consultation, any known cultural resources historic properties would be mitigated and avoided during prior to construction and operation. An Unanticipated Discovery Plan would be has been developed and will be implemented to ensure minimization of impacts on to unknown cultural resources historic properties that may be inadvertently encountered during construction or operation of the proposed transmission line.	Make suggested revisions.
E. Salisbury	6-122 / 6.4.10.2	(PS-14) As part of adherence to the Programmatic Agreement, a Level Class I file search was conducted to identify previously recorded cultural resources and previously completed resource investigations within a 2-mile wide corridor centered on the proposed transmission line.	Make suggested revisions.

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E. Salsbury	6-122 / 6.4.10.2	(PS-14) Subsequently, a Level Class III cultural resources field survey was completed for the proposed 115-kV transmission line route identifying three archaeological sites prehistoric isolated finds, which are not eligible for listing in the NRHP and avoidance measures are not recommended (Baer et al. 2010). However, not all areas of the proposed route have been surveyed, and portions of the route have changed; therefore, these resources may no longer be within the PS-14 corridor. been rerouted meaning that some originally identified sites may not be located within the current corridor. All identified sites have a prehistoric cultural affiliation, are isolated finds and are recommended not eligible for listing in the National Register. Avoidance measures are not recommended in regard to these sites.	Make suggested revisions. Do we not know what the new route looks like and therefore know which resources are still included within the new corridor?
E. Salsbury	6-122 / 6.4.10.2	(PS-14) Prior to construction, any known sites historic properties would be marked to avoid adverse impacts or sites recommended for avoidance. An Unanticipated Discovery Plan would be has been developed and will be implemented to ensure minimization of impacts on unknown cultural resources historic properties that may be inadvertently encountered during construction or operation of the proposed transmission line. As such, it is expected that there would be negligible impacts on cultural resources historic properties from the construction and operation of this transmission line.	Make suggested revisions.
E. Salsbury	6-122 and 6-123 / 6.4.10.2	(PS-15) Subsequently, a Level III cultural resources field survey was completed of the proposed 115-kV transmission line route identifying two archaeological sites and one isolated find three archaeological sites, including two historic features and one feature of unknown cultural affiliation (Salisbury et al. 2010). However, not all areas of the proposed route have been surveyed, and portions of the route have been rerouted changed meaning that some originally identified sites resources may not be located within the current corridor. Of the resources identified, one is a historic isolated find, which by definition is not eligible for listing on the NRHP and avoidance is not required. The two archaeological sites consist of a historic homestead/artifact scatter, recommended as eligible for listing on the NRHP, and an unaffiliated stone cairn, which is potentially eligible. Avoidance of these two resources was recommended. Identified archaeological sites include an isolated find, a homestead/artifact scatter and a stone cairn. One site is recommended as not eligible for the National Register, one is recommended as eligible, and one is recommended as potentially eligible. Avoidance and additional consultation are the management recommendations given for the eligible and potentially eligible features.	Make suggested revisions. Do we not know what the new route looks like and therefore know which resources are still included within the new corridor?
E. Salsbury	6-123 / 6.4.10.2	(PS-15) Efforts would be made to mark any potentially affected sites in the ROW so that pole placement and construction equipment could avoid any potentially eligible archaeological sites. An Unanticipated Discovery Plan would be developed and implemented to ensure minimization of impacts on unknown cultural resources that may be inadvertently encountered during construction or operation of the proposed transmission line. Based on implementation of the Programmatic Agreement and associated avoidance measures, it is expected that there would be negligible impacts on cultural resources from the construction and operation of this transmission line.	Change to: Prior to construction, any known historic properties would be recommended for avoidance. An Unanticipated Discovery Plan has been developed and will be implemented to ensure minimization of impacts on unknown historic properties that may be inadvertently encountered during construction or operation of the proposed transmission line. As such, it is expected that there would be negligible impacts on historic properties from the construction and operation of this transmission line.
E. Salsbury	6-123 / 6.4.10.2	(PS-16) Subsequently, a Level III cultural resources field survey was completed of the proposed 115-kV transmission line route identifying seven archaeological sites in total, including three prehistoric features, three historic features, and one feature of unknown cultural affiliation (Salisbury et al. 2010). However, not all areas of the proposed route have been surveyed, and portions of the route have been rerouted meaning that some originally identified sites may not be located within the current corridor. Identified archaeological sites include isolated finds, an artifact scatter, a stone cairn and several homesteads. Three of the archaeological sites are recommended to be not eligible for the National Register, two are unevaluated, one is recommended as eligible for the National Register and one is recommended as potentially eligible for the National Register.	Replace text with: Subsequently, a Level III cultural resources field survey was completed of the proposed 115-kV transmission line route identifying seven archaeological resources in total, including two prehistoric isolated finds, one prehistoric previously recorded artifact scatter, three historic homesteads, and one unaffiliated stone cairn (Salisbury et al. 2010). However, not all areas of the proposed route have been surveyed, and portions of the route have been changed meaning that some originally identified sites may not be located within the current corridor. The two isolated finds and one historic homestead are determined not eligible for listing in the NRHP. The prehistoric artifact scatter and one historic homestead are unevaluated. The remaining historic homestead is determined eligible and the cairn is potentially eligible. Avoidance was recommended for the eligible, potentially eligible, and unevaluated resources.
E. Salsbury	6-123 / 6.4.10.2	(PS-16) Efforts would be made to mark any known cultural resources to avoid them during pole placement and other construction activities. An Unanticipated Discovery Plan would be developed and implemented to ensure minimization of impacts on unknown cultural resources that may be inadvertently encountered during construction or operation of the proposed transmission line. Based on site avoidance and the implementation of the Plan, it is expected that there would be negligible impacts on cultural resources from the construction and operation of this transmission line.	Change to: Prior to construction, any known historic properties would be recommended for avoidance. An Unanticipated Discovery Plan has been developed and will be implemented to ensure minimization of impacts on unknown historic properties that may be inadvertently encountered during construction or operation of the proposed transmission line. As such, it is expected that there would be negligible impacts on historic properties from the construction and operation of this transmission line.
E. Salsbury	6-124 / 6.4.10.2	(PS-17) Subsequently, a Level III cultural resources field survey was completed for the proposed 115-kV transmission line route. An isolated find (SD SHPO 2018) identified during the survey was recommended as not eligible for listing by the National Register. South Dakota SHPO subsequently reviewed the feature and confirmed its ineligibility for listing by the National Register and concurred with the No Historic Properties Affected determination for construction of the PS-17 transmission line. An Unanticipated Discovery Plan would be developed and implemented to ensure minimization of impacts on unknown cultural resources that may be inadvertently encountered during construction or operation of the proposed transmission line. As such, it is expected that impacts on cultural resources from the construction and operation of this transmission line would be negligible.	There is a reference to an isolated find in this section, but it did not come from the results of the Salisbury 2010 report. If additional surveys were conducted, that should be noted. Assuming that this is an error, the following is the suggested text revision: Subsequently, a Level III cultural resources field survey was completed for the proposed 115-kV transmission line route and no resources were identified. An Unanticipated Discovery Plan has been developed and implemented to ensure minimization of impacts on unknown historic properties that may be inadvertently encountered during construction or operation of the proposed transmission line. As such, it is expected that impacts on historic properties from the construction and operation of this transmission line would be negligible.
E. Salsbury	6-124 / 6.4.10.2	(PS-18) Sites include a farmstead, farm equipment, a water well and a trash dump. The isolated find and one archaeological site were recommended as not eligible for listing by the National Register. The remaining sites were unevaluated in regard to National Register eligibility.	Replace with: The isolated find consists of farm equipment. The sites include a farmstead, a water well, and a trash dump. The isolated find and the water well are recommended as not eligible for listing in the NRHP. The farmstead and the trash dump remain unevaluated with regard to its NRHP eligibility.
E. Salsbury	6-124 / 6.4.10.2	(PS-18) Avoidance by spanning the transmission lines over the unevaluated sites within the survey corridor was recommended for elimination the potential for adverse effects.	Replace with: Avoidance of the unevaluated sites was recommended by spanning the transmission lines over the resources.

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E. Salisbury	6-125 / 6.4.10.2	(PS-18) An Unanticipated Discovery Plan would be developed and implemented to ensure minimization of impacts on unknown cultural resources that may be inadvertently encountered during construction or operation of the proposed transmission line. Based on the concurrence with the South Dakota SHPO, it is expected would be no impacts on cultural resources from the construction and operation of this transmission line.	Replace with: An Unanticipated Discovery Plan has been developed and will be implemented to ensure minimization of impacts on unknown historic properties that may be inadvertently encountered during construction or operation of the proposed transmission line. As such, it is expected that there would be negligible impacts on historic properties from the construction and operation of this transmission line.
E. Salisbury	6-125 / 6.4.10.2	(PS-19) An Unanticipated Discovery Plan would be developed and implemented to ensure minimization of impacts on unknown cultural resources that may be inadvertently encountered during construction or operation of the proposed transmission line. Based on the concurrence with the South Dakota SHPO, it is expected would be no impacts on cultural resources from the construction and operation of this transmission line.	Replace with: An Unanticipated Discovery Plan has been developed and will be implemented to ensure minimization of impacts on unknown historic properties that may be inadvertently encountered during construction or operation of the proposed transmission line. As such, it is expected that there would be negligible impacts on historic properties from the construction and operation of this transmission line.
E. Salisbury	6-125 / 6.4.10.2	(PS-20) In adherence to the Programmatic Agreement, the cooperative conducted a database record search of any known cultural or historic resources (SD SHPO 2011a).	The file search would have been done prior to the surveys which took place in 2009. If subsequent file searches took place was it based on a different route in 2011? Were these surveys based on that search?
E. Salisbury	6-126 / 6.4.10.2	(PS-20) Subsequently, a Level III cultural resources field inventory was completed for the proposed route identifying three archaeological sites including two isolated finds and an artifact scatter (Salisbury et al. 2010). However, not all areas of the proposed route have been surveyed, and portions of the route have been rerouted meaning that some originally identified sites may not be located within the current corridor. Two of the sites were historic and one was determined to be prehistoric. All three sites were recommended as not eligible for listing by the National Register. The remaining portion so of the ROW would need to be surveyed prior to completing consultation with the South Dakota SHPO and initiating construction.	Replace text with: (PS-20) Subsequently, a Level III cultural resources field inventory was completed for the proposed route identifying three archaeological resources including two isolated finds, one prehistoric and one historic, and a historic artifact scatter (Salisbury et al. 2010). However, not all areas of the proposed route have been surveyed, and portions of the route have been rerouted meaning that some originally identified sites may not be located within the current corridor. All three resources were recommended as not eligible for listing in the NRHP. The unsurveyed portions of the ROW would need to be inventoried prior to construction.
E. Salisbury	6-126 / 6.4.10.2	(PS-20) The cooperative proposes to mark the boundary of each identified site, regardless of whether it is eligible for listing. These sites would be avoided during construction.	Is this accurate? It is not required, nor recommended. None of the three resources (0)d to date along this route require avoidance.
E. Salisbury	6-126 / 6.4.10.2	(PS-20) An Unanticipated Discovery Plan would be developed and implemented to ensure minimization of impacts on unknown cultural resources that may be inadvertently encountered during construction or operation of the proposed transmission line. Given the protective and avoidance measures, it is expected that there would be negligible impacts, if any, to cultural resources from the construction and operation of this transmission line.	Replace with: An Unanticipated Discovery Plan has been developed and will be implemented to ensure minimization of impacts on unknown historic properties that may be inadvertently encountered during construction or operation of the proposed transmission line. As such, it is expected that there would be negligible impacts on historic properties from the construction and operation of this transmission line.
E. Salisbury	6-126 / 6.4.10.2	(PS-21) In adherence to the Programmatic Agreement the cooperative conducted a database record search of any known cultural or historic resources (SD SHPO 2011b).	The file search would have been done prior to the surveys which took place in 2009. If subsequent file searches took place was it based on a different route in 2011? Were these surveys based on that search?
E. Salisbury	6-126 / 6.4.10.2	(PS-21) Subsequently, a Level III cultural resources field inventory was completed for the proposed route identifying 16 archaeological sites including farmsteads, isolated finds, and artifact scatters (Salisbury et al. 2010). However, not all areas of the proposed route have been field surveyed, and portions of the route have been rerouted meaning that some originally identified sites may not be located within the current corridor. Of the 16 sites, nine were recommended as not eligible for the National Register, four were unevaluated and three were recommended as eligible. Avoidance by spanning the transmission lines over the unevaluated and eligible sites within the survey corridor was recommended.	Replace text with: Subsequently, a Level III cultural resources field inventory was completed for the proposed route identifying 10 archaeological sites and 6 isolated finds (Salisbury et al. 2010). However, not all areas of the proposed route have been field surveyed, and portions of the route have been rerouted meaning that some originally identified sites may not be located within the current corridor. The six isolated finds were determined not eligible. Of the remaining ten sites, three are not eligible, four remain unevaluated, and three are eligible. Avoidance by spanning the transmission lines over the unevaluated and eligible sites within the survey corridor was recommended. In addition, no ground disturbance was recommended to occur within 100 feet of the site boundaries.
E. Salisbury	6-126 / 6.4.10.2	(PS-21) The cooperative proposes to mark the boundary of each identified site, regardless of whether it is eligible for listing. These sites would be avoided during construction.	Is this accurate? It is not required, nor recommended.
E. Salisbury	6-126 / 6.4.10.2	(PS-21) An Unanticipated Discovery Plan would be developed and implemented to ensure minimization of impacts on unknown cultural resources that may be inadvertently encountered during construction or operation of the proposed transmission line. As such, it is expected that there would be no impacts on cultural resources from the construction and operation of this transmission line.	Replace with: An Unanticipated Discovery Plan has been developed and will be implemented to ensure minimization of impacts on unknown historic properties that may be inadvertently encountered during construction or operation of the proposed transmission line. As such, it is expected that there would be negligible impacts on historic properties from the construction and operation of this transmission line.
E. Salisbury	6-127 / 6.4.10.2	(Nebraska Power Lines) All proposed power lines in Nebraska (those associated with Pump Stations 22, 23, 23a, 24, 25, and 26) would be constructed by PPDs, which are not subject to the NHPA. However, the Department, a signatory to the Programmatic Agreement, would consult with the Nebraska SHPO in accordance with Section 106 of the NHPA.	This is confusing - is it subject to NHPA or not? Further: Section 7.3.4, Page 7-8 states: The proposed MAR would require local power provider's to construct, operate and maintain power lines and substations to service pump stations for MAR pipeline and single power line connections to MLVs. These activities are considered connected actions and potential impacts are analyzed by each resource area within Chapter 6, Electrical Transmission and Distribution Lines.
E. Salisbury	7-17 / 7.4.9	Known sensitive areas for archaeological sites primarily include areas adjacent to major water features.	This is not accurate. Suggest deleting sentence.
E. Salisbury	7-17 / 7.4.9	To minimize development costs, project proponents would likely choose sites and routes within previously disturbed properties and ROWs, and they would avoid known historic site properties to the extent practicable to comply with Section 106 of the NHPA during project implementation. Future projects could contribute to cumulative impacts on cultural resources to the extent that they would disturb known or currently unidentified archaeological sites and historic structures, historic properties or districts in urban mitigation for previously disturbed historic properties. However, as with past and ongoing projects, proponents would avoid known historic sites properties (preferred mitigation strategy) or mitigate impacts to resources them (e.g., record and archive cultural artifacts) in compliance with Section 106.	Revise as suggested. It is unclear what in-place mitigation refers to - consider deleting.
J. Schmid	Page 6-3, Table 6-2	Topsoil segregation throughout this table Consistency with conservation measures in the HCP	Change all instances to "up to 12 inches of topsoil." Conservation measures need to be made consistent with the HCP.
V. Hanigan	Page 6-6/ Table 6-3/Hydrostatic Least Test	Keystone will avoid temporary water reductions by withdrawing only the volume of water needed and returning water back to its source within a 30-day period for any withdrawals from a river.	Change text to read: "Keystone will avoid temporary water reductions by withdrawing only the volume of water needed for hydrotesting as outlined in their permits. Water will be returned to its source within a 30-day period, except where hydrotest water is used to test multiple spreads. At the conclusion of hydrotesting, the remaining water will be returned to the source except for consumptive uses such as dust control and HDD mud make-up."

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Reviewer	DSEIS Document Page / Section Number	Verbatim Language	Comments
V. Hanigan	Page 6-3/ Table 6-3/ Piping Plover	Keystone will avoid temporary water reductions by withdrawing only the volume of water needed and returning water back to its source within a 30-day period for any withdrawals from a river.	Change text to read: "Keystone will avoid temporary water reductions by withdrawing only the volume of water needed for hydrotesting as outlined in their permits. Water will be returned to its source within a 30-day period except where hydrotest water is used to test multiple spreads. At the conclusion of hydrotesting, the remaining water will be returned to the sourceexcept for consumptive uses, such as dust control and HDD mud make-up."
V. Hanigan	Page 6-10/ Table 6-3 Rufa Red Knot	During aerial surveillance, aircraft will maintain at least 1,000 feet of elevation.	Change wording to say (per DR 1.29): "During operations, aerial surveillance would be conducted 26 times per year at intervals no greater than once every 3 weeks with quick aircraft passes at an altitude of about 1,000 feet."
V. Hanigan	Page 6-10/ Table 6-3 Rufa Red Knot	Keystone will avoid temporary water reductions by withdrawing only the volume of water needed and returning water back to its source within a 30-day period for any withdrawals from a river.	Change text to read: "Keystone will avoid temporary water reductions by withdrawing only the volume of water needed for hydrotesting as outlined in their permits. Water will be returned to its source within a 30-day period except where hydrotest water is used to test multiple spreads. At the conclusion of hydrotesting, the remaining water will be returned to the source except for consumptive uses, such as dust control and HDD mud make-up."
V. Hanigan	Page 6-11/ Table 6-3 / Whooping Crane	Keystone will avoid temporary water reductions by withdrawing only the volume of water needed and returning water back to its source within a 30-day period for any withdrawals from a river.	Change text to read: "Keystone will avoid temporary water reductions by withdrawing only the volume of water needed for hydrotesting as outlined in their permits. Water will be returned to its source within a 30-day period except where hydrotest water is used to test multiple spreads. At the conclusion of hydrotesting, the remaining water will be returned to the source except for consumptive uses, such as dust control and HDD mud make-up."
V. Hanigan	Page 6-13/ Table 6-3 / Pallid Sturgeon	Keystone will avoid temporary water reductions by withdrawing only the volume of water needed for hydrotesting as outlined in its permits. Water will be returned to its source within a 30-day period except where the hydrotest water is used to test multiple spreads. At the conclusion of hydrotesting, the remaining water will be returned to the source.	Change text to read: "Keystone will avoid temporary water reductions by withdrawing only the volume of water needed for hydrotesting as outlined in their permits. Water will be returned to its source within a 30-day period except where hydrotest water is used to test multiple spreads. At the conclusion of hydrotesting, the remaining water will be returned to the source except for consumptive uses, such as dust control and HDD mud make-up."
J. Schmidt	Page 6-14 to 6-15	AIBI impacts and mitigation measures	Needs to be made consistent with the HCP
V. Hanigan	Page 6-17/ Table 6-3 /Western Prairie Fringed Orchid	Keystone will avoid temporary water reductions by withdrawing only the volume of water needed for hydrotesting as outlined in its permits. Water will be returned to its source within a 30-day period except where the hydrotest water is used to test multiple spreads. At the conclusion of hydrotesting, the remaining water will be returned to the source.	Change text to read: "Keystone will avoid temporary water reductions by withdrawing only the volume of water needed for hydrotesting as outlined in their permits. Water will be returned to its source within a 30-day period except where hydrotest water is used to test multiple spreads. At the conclusion of hydrotesting, the remaining water will be returned to the source except for consumptive uses, such as dust control and HDD mud make-up."

Treasure State Resources Association

TREASURE STATE
RESOURCES ASSOCIATION
OF MONTANA

P.O. Box 1709
Helena, MT 59624
(406) 443-5541
treasurestateresources.org
Email: info@treasurestateresources.org

November 18, 2019

U.S. Department of State
Re: Keystone XL Pipeline Draft SEIS
Docket # DOS-2019-0033

On behalf of the Treasure State Resources Association (TSRA) I'd like to go on record in support of the Draft Supplemental Environmental Impact Statement for the Keystone XL Pipeline, and particularly the determination that the project would have no significant environmental impact. That determination follows from extensive study of the geology, soils, water resources, wetlands, wildlife, air quality and noise, terrestrial vegetation, fisheries, species at risk (including sage grouse), cultural resources, greenhouse gas emissions and climate change. That affirms the years of review this project has undergone – all of which demonstrate it can be built without impact to the environment.

TSRA is a coalition of business and industry, organized labor, agriculture, motorized recreation interests and more than twenty other associations in Montana. Our mission is to promote and enhance the Montana Way of Life through responsible resource development.

The proposed Keystone XL Pipeline fits within our stated mission by offering jobs that pay well, and much-needed tax revenue to many of our rural counties. It also offers safe, reliable delivery of fuel needed to shore up our national security interests and protect our economy. And again, all this is accomplished while also protecting the natural environment.

In sum, the project has undergone an incredible level of scrutiny over the past ten years. We encourage you to finalize the SEIS as soon as possible. It is time to move forward and build the pipeline.

Thank you for your consideration of our comments.

Sincerely,

Peggy Trenk, Executive Director
Treasure State Resources Association

Two Rivers Economic Growth

November 6, 2019

Tayla Snapp

Community Relations and Stakeholder Outreach Specialist

TC Energy

Dear Tayla,

On behalf of Two Rivers Economic Growth, please accept this letter of support for the Keystone XL Pipeline in Valley County Montana. Our organization feels that this would be of great benefit to our community. The number of jobs created, tax credits allotted and general economic boost would allow us more opportunities to make improvements within our rural communities. These dollars will fund schools, counties, natural resources districts, fire districts, community college districts, and other local subdivisions in our county. Upon completion of construction, good-paying jobs necessary to operate, monitor, and maintain the pipeline will be filled by Montana natives, most of who are in Valley County where every new, quality job is an important boost to the local economies. Plus, construction activity will result in supply store and food purchases as well as service station goods and fuel from local rural retailers and restaurants along the route. For these reasons and others, we strongly back the construction of the Keystone XL pipeline in Valley County and offer our support.

Respectfully,

Melissa Sigmundstad

Two Rivers Economic Growth President

Glasgow, MT-Valley County

Valley County Board of County Commissioners

Valley County
501 Court Square, #1
Glasgow, MT 59230

Phone: (406)228-6219
Fax: (406)228-9027
vccomm@valleycountymt.gov

John Fahlgren, Member
Paul Tweten, Chairman
Mary Armstrong, Member

November 18, 2019

U. S. Department of State
Re: DOS-2019-0033

Dear Sir/Madame:

We are writing on behalf of the citizens of Valley County, Montana, the vast majority of whom are strongly in support of construction of the Keystone XL Pipeline. It is a significant benefit to Valley County for its positive socioeconomic impact, and its environmental footprint and risk reduction associated with oil transportation. Valley County has the largest pipeline footprint on the proposed route. The Northern Border gas pipeline has operated in Valley County, with a similar size footprint, since 1982 with no negative environmental impact.

Increased property tax revenues from the XL Pipeline will have a major economic boost to Valley County. Property tax revenues will increase about 50% (over $7 million) in Valley County with construction of the XL pipeline. The majority of the tax revenues will provide critical support to the impacted school districts. About $1 million will come to Valley County directly to support County services; this represents 20% of our current tax revenues.

The pipeline will reduce the risk of oil spills significantly across Valley County, as well as reduce GHG emissions associated with oil transport. According to the SEIS, rail shipment of oil is 25 times more likely to experience an oil spill than oil transported through a pipeline. GHG emissions are reduced from 28 to 42% when oil is transported by pipelines instead of shipped by rail.

TC Energy is using enhanced standards, state of the art technology and independent reviews to operate the pipeline to the highest safety standards:

Incorporates 36'' diameter, corrosion-resistant pipe and construction welds reviewed by third parties and audited by the federal government.

State of the art technology will be built into the pipeline to monitor flow with automatic shut off capability.

Includes a higher number of remotely controlled shutoff valves, increased pipeline inspections and buries the pipe deeper in the ground.

Monitor the pipeline system 24 hours a day, 365 days a year through a centralized high-tech center. Satellite technology sends data every five seconds from thousands of data points to the monitoring center and if a reduction in pressure is ever detected, isolates the affected section of the pipeline by remotely closing the valves on the system within minutes.

Regular aerial and land inspections to supplement digital monitoring.

Specifically, for the Missouri River crossing, the location with the highest concern for our citizens, a horizontal directional drill crossing method will be used. The minimum distance between the pipeline and the bottom of the river will be 43 feet. Remote controlled shut off valves will be positioned on either side of the river to minimize pipeline oil loss. The 2017 risk analysis done by Stantec Consulting Services calculates that a worst-case discharge (highest volume) has an estimated occurrence interval of once in 2.23 million years at the Missouri River crossing.

TC Energy has an oil spill record that is three times lower than the US average with no catastrophic spills in the 2010 to 2017 timeframe. The most recent pipeline spill was contained immediately, as a result of the advanced pipeline technology that is in place. It is in the process of being remediated, and TC Energy is living up to its commitment.

TC Energy has been an active and extremely positive community partner, contributing about $90 K in the last 4 years to community programs for first responders, educational programs, community needs and environmental stewardship. We are confident that they will continue be an outstanding community member.

We urge you to move forward with this important infrastructure project for Valley County, the State of Montana, and for our nation.
Sincerely,

Paul Tweten

Paul Tweten, Chairman
Board of County Commissioners

John Fahlgren

John Fahlgren, Member
Board of County Commissioners

Mary Armstrong

Mary Armstrong, Member
Board of County Commissioners

Wild Idaho Rising Tide

Wild Idaho Rising Tide
301 N First Ave 209B, Sandpoint, ID 83864
PO Box 9817, Moscow, ID 83843
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Website: WildIdahoRisingTide.org

November 18, 2019

Robert D. Wing, Acting Director
Office of Environmental Quality and Transboundary Issues
U.S. Department of State
Washington, District of Columbia

Sent via PDF attachment as an organizational comment
posted at Regulations.gov, docket number DOS-2019-0033

WIRT Comments on the Draft Supplemental Environmental Impact Statement for the Proposed Keystone XL Pipeline

For the official record of docket number DOS-2019-0033, I respectfully offer these written comments and accompanying information on behalf of Wild Idaho Rising Tide (WIRT) and its over 3,200 climate activists, members, friends, supporters, and allies, as United States (U.S.) citizens and residents of Montana, Idaho, Oregon, Washington, and other states, who own property, work, and/or reside in or near the surrounding watersheds that would be directly impacted by Calgary, Alberta-based oil and gas developer TransCanada/TC Energy's proposed Keystone XL (KXL) tar sands pipeline construction and operation ("project" herein). We object to TC Energy's project invasion of communities and critical river ecosystems throughout its 1,180-mile course from Hardisty, Alberta, to Steele City, Nebraska, as insufficiently identified and analyzed in the October 4, 2019, U.S. Department of State draft supplemental environmental impact statement (draft SEIS) and accompanying public notices and pertinent government documents offering limited public information via the state department's "Releases -- Keystone XL Pipeline" website at https://www.state.gov/releases-keystone-xl-pipeline.

We also oppose the project's significant, direct and indirect, cumulative, adverse impacts on climate change, endangered species, cultural resources, socioeconomic and environmental factors, and reasonable public needs including safe and healthy, drinking and agricultural water. As further public input and information shared with the U.S. Department of State, we incorporate by reference into these remarks the written and oral comments and linked articles and documents

of WIRT and all persons and organizations raising concerns about this project, its draft SEIS, and documents and processes relevant to this KXL project analysis, presented through all local, state, and federal public processes before, during, and after this U.S. Department of State comment period on the project's draft SEIS.

WIRT earnestly and respectfully encourages and requests the U.S. Department of State to: 1) Include these and all of our written remarks and information in enclosed links in the public record for DOS-2019-0033 and related project comment periods, 2) Extend this inappropriately brief, public comment period an extra 90 days, 3) Hold additional, open, public hearings in the most project-impacted communities and in other states, not conducted like the restrictive, October 29, 2019, meeting at the Billings Hotel and Convention Center in Montana, which only accepted comments via computers or stenographers in isolated rooms, 4) Better assess in both the draft and final SEISs and their public input processes the immense significance and scope of the project, 5) Perform a more community-preferred, scientifically rigorous, independent, unbiased, full environmental impact study and statement (EIS) examining this controversial project, and 6) Select the no action alternative of any draft and final SEISs and EISs for this unnecessary and harmful, TC Energy, fossil fuel infrastructure expansion scheme.

Besides urging public participation in comments and testimony for this project's draft SEIS [1], WIRT offers these formal remarks drawn from the detailed comment suggestions and guides provided by our colleagues 350 Montana, Indigenous Environmental Network, and Northern Plains Resource Council, whose resistance to this project we fully support with these comments, through their successful, November 2018, U.S. District Court for Montana case ruling that prompted production of this draft SEIS, and via other modes. Together, we have identified these problems with current, draft SEIS analyses that do not properly evaluate KXL risks. The U.S Department of State's draft SEIS for the proposed Keystone XL pipeline:

* Chooses a dangerous location for KXL pipeline crossing of the Missouri River, directly downstream of the Fort Peck Dam spillway, which increases the possibilities of scour erosion of the riverbed surrounding the buried KXL pipe and its consequently likely exposure and inevitable leaks, due to the volume and velocity of water released by the dam over time. Less aggressive erosion has caused similarly buried pipeline spills on the Yellowstone River in Montana and under other rivers.

* Designates a KXL pipeline crossing of the Missouri River upstream of Fort Peck Reservation water intake facilities that provide drinking water for up to 30,000 members of tribal and other northeastern Montana communities

* Locates the KXL pipeline crossing of the Missouri River immediately upstream of regional, agricultural, water intake sites, and minimizes analysis of associated risks to these water users

* Significantly downplays risks to the water quality of these aforementioned communities and businesses if a KXL pipeline spill occurred

* Minimizes considerations of Keystone XL pipeline risks to the Missouri River, a waterway that functions as the lifeblood of the impacted region

* Supports a KXL pipeline leak detection system that cannot detect small, pinhole leaks and only alerts operators to two percent or more of diminished pipeline flow. A leak of one percent of the proposed Keystone XL capacity of 830,000 barrels of oil per day could result in an environmentally unacceptable, 8,300-barrel oil spill per day, causing massive pollution and damaged natural resources.

* Condones the predictable spills -- on average, about one every two years -- from a built KXL pipeline, and exacerbates construction of U.S. oil pipeline mileage and consequent spills that increased over the last decade. Among 1,584 onshore, crude oil spills, more than 270,000 barrels of oil have been lost from 39 spills, averaging 34,000 barrels per spill, during the last eight years.

* Promotes the use of toxic fracking fluid chemicals to horizontally drill the underground tunnel for the KXL pipeline under the Missouri River, a process that could pollute the Missouri and other rivers crossed by the KXL route

* Downplays the air pollution and climate impacts of the extraction, transportation, production, and combustion of the tar sands oil carried by the Keystone XL pipeline

* States that, "Fossil fuel combustion is the predominant source of greenhouse gas emissions in the United States, accounting for nearly 77 percent of cumulative greenhouse gas emissions since 1990," thus virtually acknowledging that the draft SEIS's no action alternative (no construction of the KXL tar sands oil pipeline) would best limit the global temperature increases and climate change inflicted by these emissions

* Finds that the increased transport of Western Canadian Sedimentary Basin crude oil by KXL could result in more greenhouse gas emissions from the project, and could increase global atmospheric greenhouse gas concentrations, more than the draft SEIS's no action alternative

* Admits expectations of increasing greenhouse gas pollution leading to rising surface temperatures, changes in precipitation, and increased extreme weather events and sea levels, but does not recommend averting these disasters by not building the KXL pipeline

* Recognizes the increasing hazards of changing climate that could jeopardize the KXL pipeline built to inadequate standards, and thus underscores the significant environmental risks of this project

* Envisions a pipeline free from extreme weather events, even in the aftermath of the 2019 spring floods across the Great Plains, which caused billions of dollars in damages to levees, roads, and other infrastructure

* Underestimates potential KXL pipeline damages and probable spills inflicted by a warming climate that causes more numerous, frequent, variable, intensifying, and larger extreme weather events such as tornados, thunderstorms, hurricanes, heavy rainfall, flash and river system floods, and forest wildfires in the western United States

* Presents current conditions in its deeply flawed market analysis, but does not project the later, external costs of a warming climate, such as from extreme weather and sea level rises, etc., and avoids discussing the likely carbon taxes and other measures that future U.S. administrations will enact, to transition the national economy off carbon-heavy, tar sands fuels

WIRT requests that the U.S. Department of State require additional impact evaluations through an EIS, beyond this draft SEIS. We ask that you consider and act in accordance with our and our colleagues' comments that substantively address the deficiencies of KXL project documents and processes, as we offer the counterbalance of regional insights so crucial to government and community protection of watersheds. Thank you for accepting our comments on docket number DOS-2019-0033, intended not to improve the final SEIS, but to advocate for a justifiably anticipated EIS and ultimate, U.S. Department of State selection of the no action alternative for this Keystone XL proposal, during this decisive, project review phase.

/s/ Helen Yost, MSEE
Wild Idaho Rising Tide
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[1] *WIRT Meetings, Comments on Keystone XL Pipeline* (November 18, 2019 Wild Idaho Rising Tide)
https://wildidahorisingtide.org/2019/11/18/wirt-meetings-comments-on-keystone-xl-pipeline

E.3 PUBLIC MEETING ORAL COMMENT TRANSCRIPTS

E.3.1 Oral Comment Transcripts

U.S. DEPARTMENT OF STATE

IN THE MATTER OF KEYSTONE XL PROJECT

DRAFT SUPPLEMENTAL ENVIRONMENTAL IMPACT STATEMENT

PUBLIC MEETING

BILLINGS, MONTANA

TRANSCRIPT OF PUBLIC COMMENTS
Tuesday, October 29, 2019
4:30 p.m. to 7:30 p.m.

Holly Fox, Court Reporter
1195 Mendocino Drive
Helena, Montana 9601
(406) 461-3934
hollyefox@yahoo.com

In the Matter of Keystone XL Project
Transcript of Public Comments **October 29, 2019**

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Statement by Becky Erickson:

The safety of the residents of Glasgow, Montana, would increase immensely by eliminating the numerous oil trains that are currently moving through our small community on a daily basis. With TC Energy transporting the oil underground, it will minimize the risk of an oil spill in the center of our small community.

TC Energy is an economic benefit to the city of Glasgow, local businesses, and schools. They are truly a community partner we're proud to be associated with.

Mayor Becky Erickson

Statement by Mike Waters:

Congressman Gianforte remains dedicated to moving the Keystone XL pipeline project forward. The project will create good-paying Montana jobs, increase revenues for our local communities, boost America's energy independence, and keep energy prices down. He welcomes this next step in the process. The project has been in limbo long enough.

Statement by Betty Stone:

My name is Betty Stone. I'm a business owner in Glasgow, Montana, and I'm also on the board of directors for Two Rivers Economic Growth, Valley County's economic development nonprofit organization.

Speaking as a business owner, I have been a proponent of this pipeline for over 10 years. I have made investments in my business with the belief that Keystone XL pipeline would be approved. Repeated studies, both on federal and state levels, have been completed to determine that the project can be done safely and with no significant impact to the environment. And yet, after each review, there have been further delays.

The investments in my business include over $1 million addition to our hotel. It may sound selfish, but this impacts 80 employees at the Cottonwood Inn who count on our business being successful.

TC Energy has been a great supporter of our local community, and I believe they will continue to be after the pipeline is completed. The small, rural towns and communities effected by the pipeline will receive positive economic impacts, if not directly from the construction phase, from the increased county tax base. With that increase, much needed improvements to infrastructure and

In the Matter of Keystone XL Project
Transcript of Public Comments **October 29, 2019**

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local businesses can be made. Additionally, we could increase teacher wages in our district. We have excellent schools, yet have some of the lowest teacher salaries in the state and the nation. It is becoming increasingly harder to recruit and retain quality teachers because of this.
Keystone XL is good business for Montana and for the United States. With the completion of the latest draft SEIS, I believe it is time to build the pipeline.

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Statement by Kevin Miller:

Thank you for the time to speak today regarding the SEIS Keystone pipeline project. The IUOE represents approximately 400,000 members in the United States and our friends to the north, many of which come from the skilled construction trades. Overall, we represent heavy equipment operators, mechanics, oilers, radiographic inspection hands, public employees, medical field personnel, and stationary engineers, just to name a few. And we have the world's most renowned training center in the world located in Crosby, Texas, where our members receive world-class training and instruction so that we meet the needs and demands of our ever-growing and changing North American infrastructure, which in return, help ensure that not only our contractor partners are provided with the most qualified work force, but that our American infrastructure is built with the best and safest practices.
We have all heard that pipeline is a much safer alternative to transporting than by truck or rail, which is true. So those who are a bit confused, think of it like this, for example: When there's lightning, hailstorms, dust storms, or even tornados, where have we all been told to go for decades? Get inside and seek shelter; in certain cases, to even go downstairs for your protection. Why?

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Well, to keep us as safe as possible from the outside elements. Pipelines placed underground, just as the KXL will be, provide the same type of security, not only for the integrity of the pipeline, but the people, wildlife, and the environment.
Under S.2.5, U.S. Corps of Engineers should find this favorable because TC has made the commitment to utilize the best contractors and skilled workforce in the world, hands down – the same contractors that don't cut corners with environmental because we, too, are Americans that enjoy having clean air, water, and lands. Unlike some other transportation companies, TC has shown that it is not about the bottom dollar, because if you are hiring the best, it will not come cheap, but it sure as heck will reassure the project is built to the highest standards.
S.3.1, BLM should approve the KXL for purposes of improved grazing for both wildlife and livestock. As a sportsman and outdoor enthusiast for over 30 years, it is very clear that pipeline right-of-ways have improved habitat by enriching grasses, feed, cover, and providing protection versus the way it had been prior to a right-of-way.
A couple points to make that I feel that are necessary: One, local, state, and federal lawmakers need to consistently uphold oversight to pipeline companies and

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any other transportation companies. Two, TC understands that dust mitigation -- excuse me. Let me correct. TC needs to make sure that dust mitigation, erosion control efforts, and road maintenance and cleanups, where applicable to the project, are kept up and the cost of such repairs are not put upon the back of the taxpayer.
In short, 11 years in the making, due, in part, of good Americans doing their due diligence by pressing lawmakers to give a more detailed analysis of this project, TC Energy is now ready to build an absolute state-of-the-art pipeline system that will help strengthen America's safety and reduce independence on foreign countries' oil, some of which would love to see us all dead.
The International Union of Operating Engineers stands firmly behind TC Energy, and we strongly urge the Department of State and other public entities involved to find it in the best interest of the United States to approve and allow commencement of the Keystone XL pipeline.
Sincerely, Kevin Miller, special pipeline representative.

In the Matter of Keystone XL Project
Transcript of Public Comments **October 29, 2019**

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Statement by Todd Devlin:

My name is Todd Devlin. I'm a Prairie County Commissioner from Montana, eastern Montana. We have approximately 20 miles of the proposed Keystone XL pipeline coming through our county. It will triple our tax base. I'm also the past president of the Montana Association of Counties. I'm the vice chair of the National Association of County's Public Lands steering committee, and I was -- prior to that, I was chair of the federal lands payments of public lands for the National Association of Counties.

Looking at the EIS that was done by the Obama administration and reviewing it in depth, you'll find the EIS supplemental showed that the project, the Keystone XL project, would reduce greenhouse gases by 28 to 42 percent over status quo. Economically, it will bring $12 million to the school equalization fund for the State of Montana, which is used by every school district in the state of Montana, not just those school districts where the pipeline is. If you figure out the math on that, that's $600 million over the life expectancy of the pipeline that just goes to school equalization that every school in the state of Montana can use. On top of that, it would bring in an additional $3 billion over that 50-year period in tax

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base. That's increased tax base for local county governments.

Also in the EIS, it talked about safety. Without the Keystone pipeline, there would be six additional deaths over -- versus having the pipeline. When you convert that to the life expectancy of the pipeline, you're talking 300 deaths, which is a lot of people in eastern Montana. This was all in the EIS from the administration that would not give the presidential permit, the Obama administration.

MACo, the Montana Association of Counties, has always supported the Keystone XL project and had a resolution supporting the presidential permit. It's off the books now due to the fact that the presidential permit was signed. We're 43 percent federal land, which means we have a very difficult increasing our tax base, because 43 percent of our land is tax exempt because it's under federal ownership. When projects like this comes along, it is one of the few opportunities we have as a county to increase our tax base to provide services to the public and to the public at large.

When this project started, Prairie County brought roundtable discussions together of landowners in Prairie County, McCone County, Dawson County, and Fallon County. We had question and answer periods and open discussion with

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TransCanada. We were being the mediators, basically. The spokesman for that group came back to me and said that they had come to a deal, and she said, I can't tell you how much it was, but I can tell you this -- and I quote -- It was more than fair.

We support the Keystone XL pipeline. Thank you.

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Statement by Todd Tibbetts:

I am very much in support of the project. I'm a landowner that it crosses for a little over a mile in Dawson County, and it -- it is really going to be a -- during the year of construction, it could be kind of a zoo, but after that, it's going to -- it's going to be a long-term deal just for the county, the country. The tax dollars are going to continue to -- to come into the area for -- for the schools or what -- everything else.

And also, I don't think people realize how much of a benefit it is going to be to our rural electric telephone co-ops and other type of infrastructure suppliers. Telephone people are going to make something off of it too because ongoing communications, local -- even little, small electric things for valves and other types of infrastructure.

But Keystone has also went out of their way to put their best foot forward regarding -- they've helped support local sporting events, they've supported local, ongoing cultural programs. They have supported local fire departments.

Keystone is -- has a landowner, I think I am probably more versed than maybe some of the other people that are here giving comment. When they have come onto my property,

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like to mow or survey or do anything, they typically call at least seven days in advance to say that they're coming, which is really -- it's really good that they put their best foot forward. If they're going to be on my property, when they do the overfly through the property, they call and give us a heads up that, you know, we're going to be coming over, and so if you see an airplane or other aircraft in the area, you know, it's -- it's for us. And so I think that kind of transparency is wonderful. Also, when they were there in our area doing -- doing mowing, especially last year, when they went from tract to tract, they would clean the device with compressed air, their mower, so it would not move weeds and other type of weed seeds, biological stuff, from the one landowner to the other landowner. And the thing that I really thought was over and above is they put a -- a -- let's just call it a sled, for any other kind of means, underneath the air compressor or anything that they left overnight, so if there's any type of an oil spill or a leak or diesel spill or the water coolant or anything, it was not going to fall on the ground. It was very, very -- I mean, you can put "very, very" twice -- very, very environmentally-conscious coming forward. They replaced -- they put some gates in so that people could access the -- Keystone people could access the pipeline. They put a rope on the gate so that

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if you were maybe not strong enough put the regular loop over the gate, that you could pull on the rope and double the amount of force that you had to close and open gates. So I think that is -- has been -- is, you know, is very good.

They also say, for some landowners, a no-fuel zone if it's near a creek or a waterway. For me, it's going to be going through swamp areas -- what's just called swamp areas or drainage. And so I think me, as a landowner, have -- have a very vested interest in protecting my local environment, maybe more so than some of these other people that believe that that's what they're out there for is the environment. But the American farmer and rancher, we're probably the most concerned about the environment. And so that's -- that's where I am -- that's where I am concerned with making sure that it's -- that it's safe for my property for ongoing generations, probably more so than the Keystone people or some regulatory agency, because it's not their property.

So, in general, I think Keystone has definitely put their best foot forward on their contractors. They've put their best foot forward towards the project, and I definitely think that we should approve it, and we're making a mistake by not having it in right now.

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Statement by Patricia Iron Cloud:

I'm Patricia Iron Cloud. I'm an executive council member for the Fort Peck Assiniboine and Sioux tribe of northeast Montana. I was elected yesterday. I will serve for two terms, and we are on the same level as U.S. senators and U.S. congressmen.

When we go over there to HHS, when we go and ask for funds for -- a lot funds for our people because our land has been -- the U.S. government pays us in treaties. So that those treaties, when they come there, we have education, we have health and welfare, we have homes. We have a lot of things that the government has promised us. And most of it is to have a safe environment so our children can grow and our grandchildren can live.

But now the U.S. government is allowing the black snake, the KXL pipeline, to come through to our reservation, and it's touching -- it's only going to be just a few miles off, less than five miles off of our reservation, but it's going into the water intake for our tribe. And that tribal water is everything to our people because that's how we live.

The Missouri River covers 100 miles on the south side of our reservation. And we have five million acres of land, and we have one million acres of water for that. And

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what they're going to do with the tar sands that come in with the oil, they're going to be cleaning those tar sands out of the oil so that we can have -- that their oil will be at a better rate when they get down to wherever it's going to. But it's going to use our water, and that water is going to be contaminated.

And when it breaks -- it will break one day, and then it's going to affect not only our people, but the people that we serve. We serve all people in northeast Montana. And our -- I have 46 grandchildren. And one day I pray to have 100-and-some great-grandchildren. I only have two right now. But I'm not going to live forever.

And the people have elected me to be their voice, and the biggest voice that I have is to save our water. And in our native language, it's called "mniwiconi", and that means beautiful water. That water is our life, life for us. And so that's what we do -- we go and we basically take -- take our voices for our people because there's -- we serve so many people that -- they would love to be here today. And we had to stand in this cold weather today to give our voices to the government so the -- our president of the United States will hear our voice. And that's not right to have it -- they should have direct consultation with us. Come to our tribes, speak with us, so that we can have our voices heard. Our voices -- we don't even know if

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you're going to be transmitting that to whoever. We don't know. I'm speaking here, and I pray that it gets to the ear that will hear and listen to us, because we don't know. We're going by faith right here. The U.S. government is not sending anybody down. We have -- there's going to be a big 'ole screen up there for them -- for us to read, or listen to. We shouldn't have to do that. Whenever I go and consult with the U.S. government, I go right to the annex building in Washington, D.C., to the White House, and I speak on the stage there. And those are the things that we need to have, direct consultation.

If you, yourself, were a government employee that was part of the President, Trump's -- his entourage, we would want to speak with you, because we know that you would tell him that our hearts -- because our hearts are broken for this.

We should have a lot voices to hear. We should have our voice heard by the U.S. government. And the only way we had to hear them today is to stand in that cold weather there. Because it's going to destroy our way of living and our way of life. We live on the land. All through the summer, we don't even stay in houses. We stay in our tents. We stay down by the river. We have our celebrations there, and we fish. My sons are hunters, and they get elk and moose, and they get all the fishes out of

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there, and that's what we eat, you know. And those are the things that we have to make sure that we care for, you know? We have to speak up for our children that don't even have a voice yet. And one day they will come from heaven, and I don't want them to come here and to have to drink oil, and that's what's going to be happening if we allow this so close to our reservation and our water intake.

And for our cultural artifacts that are there -- there is Sitting Bull. My grandfather is Chief Sitting Bull, and he has his tepee ring there close by. And he travels up and down when he was alive in the 1800s. He'd come back and forth to our house. That's where I was born. And he goes to Canada so that he can have freedom. And now the same Canada that he went to, he comes -- the black snake is coming for our people. And I believe that's one way to destroy our people, and that's not right. And so that's what's going to be happening. That's why I voice my opinion so strong.

And -- to have our children be at risk, I won't have that. I have raised not only my children, but I have raised 46 foster children, and then their children and their children. Their children are going to be effected. And then my own children, they live -- and they've been in the U.S. army. My children have served tours over in Afghanistan and Iraq. They have gone over to Kuwait, two

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of them, and one is just now going to go again. I have many soldiers in my family. And one of our councilmen, he served six tours over there. And for him to have to come back to fight the U.S. government, that's not what we're there for. We're there so that we can have peace in our land. You know, so we can have food to eat, and good health, and a good place to be. And we're not going to have that if this goes through, and that's why we speak so strongly about this. Thank you.

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Statement by Tom Escarcega, Sr.:

First of all, as a citizen of the Fort Peck reservation and the United States of America, I oppose this pipeline, Keystone pipeline, going by our reservation, which is Fort Peck. It's going on the western side of our reservation, and we have some sacred site there which it's going to go through.

And the other thing is that it's going to cross two tributaries: One is the Milk River, and the main one is the Missouri River. Now, we have two projects on the reservation that, if this should break, and one of those -- the tributary or the Missouri -- it surfaces -- we understand, if it surfaces, it's going to float down to the bottom. We have our intakes of the irrigation, Fort Peck irrigation project, and then we have our newly constructed rural water project, which is the Assiniboine and Sioux rural water project. So if that's effected, it will affect 30,000 people in that northeast corner of Montana. Just not the Fort Peck reservation, but the residents that live off the reservation.

Our reservation -- our boundary for there is the -- let's see, just down a couple miles west of a town called Glasgow, which is off the reservation. And then our southern boundary is the Missouri River. Our eastern

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boundary is the state line of North Dakota, and we go up to -- and the northern boundary is the border of Saskatchewan, the southern border there. So that's the area in the northeast corner of Montana. So if that's affecting our lands, that will be really detrimental to our economy and everything. And we're saying that -- who's going to be responsible to replace all that, you know? Is the TransCanada pipeline going to be responsible to replace that?
You know, here's the other thing: If you put pipe in the ground, eventually it's going to break, so -- sometimes it breaks right away; sometimes it don't. But we're -- we hope it don't break if it does go in there, but we know it's going to break, so...
And the other thing, if it breaks, you know, we got all our traditional plants along -- some of the traditional plants along the Missouri River, which would be effected. And also the fish, the sturgeon, and some of the bird life; you know? The piping plover, they nest on sand bars, so eventually that might be effected. And we know, through the river, if it goes, it's going to be carried downstream further than what might be predicted, so...
And one of the things for us is we practice our traditional ceremonies. We get those -- our plants and everything, there, and our willows and our -- we call it

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the sacred tree, which is the cottonwood tree, and we use that for our center pole. And when -- when they put in the Fort Peck Dam, they kind of limited some of our resources. Now we're trying to build it up, what limited resources we've got; you know? We're still trying to carry on. So all that stuff is going to be effected, in my estimation; you know? So this is the reason I'm really opposed to the pipeline.
Now, I made this statement before. We're hypocrites on the Fort Peck reservation, because we have oil on the reservation. The only thing I'm really opposed to is the pipeline coming through the sacred sites and the tributary of the Milk River, and also the Missouri River. That's what I'm really opposed to, to the crossing. But other than that, you know... I guess I can stop there.
One other thing. We're not -- we're opposed to having this kind of a consultation. We need a face-to-face consultation with the KXL pipeline people. It was -- in the past, it was said that they're going to do that, but it didn't go through.

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Statement by Karen Jarussi:

First of all, I think that this project has been studied in the past and found not to be in the interest of our country to do, and that has somehow been overlooked as it's been revived by Trump, and I don't understand how he can do that.
Second of all, I -- the Canadian tar sands are incredibly toxic, terrible, corrosive oil. And as you transport it through these pipes, there is no way to ensure the safety of that transmission. And it's going over aquifers, it's going over land that should not be contaminated for the sake of foreign oil companies who are trying to transport their oil to refineries for export to other countries.
It doesn't help our energy needs. It give profit to everybody but us, and we bear all the risk. And there's not going to be enough jobs created to warrant that. They are short-term construction jobs, maybe maintenance jobs, but not enough of an economic impact to justify the risks that we bear.
And I think that, to exercise eminent domain against people's lands for a private profit entity, with climate change lurking over the horizon as it is -- or, really, right here in our face -- there's no justification for

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ramming through more fossil fuel extraction of these extremely toxic hydrocarbons, just to profit oil companies -- foreign oil companies. So, I guess that's it.

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Statement by Ken Koch:

I just think that the way this has kind of been set up is not really an actual consultation or public hearing kind of thing, and it kind of stymies any type of actual discussion about this, so I'm pretty frustrated, as a citizen, about that. I don't think it's done right. We have an adage; we say, You're doing it wrong. That's about all I got.
I hope that in the future these kinds of things can be much more open to the public like, you know, we're told that it's supposed to be, so... Appreciate it. Thanks for your work.
Oh, and little more add-on there maybe. I don't think this is a good idea with this pipeline. That's just my two cents.

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Statement by Charles Barrett:

Basically I was just going to say I support the Keystone pipeline. I think it would be a good thing for jobs in Montana. And I've been around the oil patch my whole life in the Glendive area, the Williston area, and I've seen more pipelines across all the country. I have no problem with them at all. I think they're a great thing, and I like the work -- I like that they bring work to Montana and high-paying jobs. So I just wanted to say I'm in support of it.

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C E R T I F I C A T E

STATE OF MONTANA)
ss.
COUNTY OF LEWIS AND CLARK)

I, HOLLY FOX, Freelance Court Reporter and a Notary Public for the State of Montana, do hereby certify that the foregoing transcript is a true and correct record of the proceedings given at the time and place hereinbefore mentioned; that the proceedings were reported by my in machine shorthand and thereafter reduced to typewriting using computer-assisted transcription.
IN WITNESS WHEREOF, I have set my hand and seal on this 5th day of November, 2019.

/s/ Holly E. Fox

Holly E. Fox

BILLINGS HOTEL AND CONVENTION CENTER

Public meeting regarding the Keystone XL Pipeline

10-28-19

4:30 p.m. to 7:20 p.m.

The following public comments were taken in machine shorthand by Barbara Morgenweck, Registered Professional Reporter of the National Court Reporters' Association.

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According to the supplemental EIS, rail shipment of oil is 25 times more likely to experience an oil spill than oil transported through a pipeline.

Green house gas emissions are reduced from 28 to 42 percent when oil is transported by pipelines instead of shipped by rail.

We in Valley County welcome TC Energy and the pipeline and believe it is high time that pipeline construction was allowed to commence. Thank you.

KIM RICKARD: Kim Rickard, R-I-C-K-A-R-D, P.O. Box 1173, Helena, Montana 59624. My name is Kim Rickard. I am the business manager for Laborers' International Union of North America, Local 1686 Montana, representing 1,418 proud construction and public sector members throughout the State of Montana.

I want to thank you for giving me the opportunity to speak on their behalf today regarding the TC Energy Keystone XL pipeline project. The construction of the Keystone XL pipeline will employ 5 to 600 laborers in our union from the State of Montana.

Our members are experienced trained and ready to build this pipeline. This project has always been and will be a crucial path to allow men and women of Montana to provide for their family, pay their bills and support local businesses.

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MARY ARMSTRONG: Mary Armstrong, county commissioner in Valley County, Montana.

Again, I am Mary Armstrong, county commissioner for Valley County, Montana. Construction of the TC Energy Pipeline is a significant benefit to Valley County for its positive socio-economic impact and its environmental footprint and risk reduction associated with oil transportation.

Increased property taxes will have a major economic boost to Valley County.

Property tax revenues will increase about 50 percent. That is over $7 million in Valley County with construction of the XL Pipeline.

The majority of the tax will make its way to the impacted school district. About 1 million will come to Valley County directly to support county services. This represents 20 percent of our current tax revenues.

TC Energy has been an active community partner contributing about $90,000 over the last four years to community programs for first responders, educational programs, community needs and environmental stewardship.

The pipeline will reduce the risk of oil spills significantly across Valley County as well as reduce green house gas emissions associated with oil transport.

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This project will enable these workers to provide health insurance coverage for themselves and their families in addition to a living wage which in turn will support the small businesses within our communities and create many spinoff jobs.

Building this pipeline will pump over $420 million into our State's economy including over 285,000,000 into the wallets of working families throughout Montana.

While the economic benefits are many, they would mean little if we do not do this pipeline safely.

One of our unit training funds priorities is to maintain pipeline safety by insuring it provides a qualified workforce for operators and contractors to comply with federal pipeline safety regulations.

The pipeline course teaches participants the safety procedures and work practices required to work on pipeline construction projects. All phases of pipeline construction are addressed including the front-end work, pipe handling, pipe coding, and back-end work.

In addition to the pipeline safety course by unit training has developed an operator qualifications course that is designed to certify participants as qualified evaluators for operator qualifications for testing evaluation of specific tasks performed by

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pipeline workers.
Based upon the US Department of Transportation pipeline operator qualification requirements, the course prepares workers to qualify in the 14 covered tasks associated with pipeline work.
In short, our members are trained to recognize abnormal conditions and take the proper corrective action to mitigate these hazards.
I would also like to bring to your attention that the members of Laborers' Local 1686 are Montanans and environmentalists too. We commend TC Energy's environmental principles, such as, minimizing environmental impacts to our water safety and protecting biodiversity.
Laborers' Local 1686 agree that we need to deal with climate change and expand the use of renewable energy, but the reality is we still need oil. We need it from a nation we can trust and we need jobs.
We live here, recreate here and want to continue to raise our families here and leave our legacy, but we need jobs to do so.
With this hearing, we are one step closer to creating thousands of good jobs for Montana's working families.
Once again, I thank you for the time to speak

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on behalf of the 1,418 members of Laborers' Local 1686 living in Montana, and we strongly urge the US Department of State to issue the permit to TC Energy to build the Keystone XL pipeline.
TORY KOLKHORST: Senator D-A-I-N-E-S, statement from Senator Daines, Steve, S-T-E-V-E. It's long over due we get the Keystone XL pipeline project in motion for Montana jobs and our American energy independence. Daines said 80 million in the new local revenues, 16 million for Montana schools and universities and over 800 high paying construction jobs are on the line.
I'm glad to have led the fight with the Trump administration to get this project off the ground, and I'm grateful the administration is hosting this important meeting here in Montana and encourage all Montanans to weigh in.
KERRY MCKAY: I am against this pipeline. We don't need it. There is too much at-risk; mainly, human life, wild animals. We need them. They are part of us. When it breaks, it goes to our water resources.
Cancer is running rampant where we are from. Not stating it is the pipeline, but the chemicals of the chem trails probably and all of this goes hand in hand. I want my grandchildren to be able to go to the faucet

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and get clean drinking water or drink from our creek.
You can't eat the oil, can't drink the oil. This is a money thing. It is not a human thing, and the stealing of the land, claiming imminent domain from ranchers and our farmers, that is greed, strictly greed.
This is nothing but a money thing that is going to leave our state soon as it has done. 12 people will be employed year round, no more.
The sensors on the pipelines don't work. When they break, they don't work or there would be no pipeline spills.
There is a way to go green. Montana is made of natural resources to go green with the wind and the sun so we don't need this.
They have no right to kill us for it. If Canada cannot figure out how to get it down their selves, we don't have to be their dumping ground.
DOUG MARTENS: My name is Doug Martens, M-A-R-T-E-N-S. Address is Box 47, Forsyth, Montana 59327.
As a county commissioner from coal country, I know the critical role that efficient transmission plays in getting Montana's natural resources to market.
TC Energy has done their due diligence and thoroughly analyzed the potential impacts of the project

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and the results are clear.
The Keystone XL pipeline is the safest, cleanest, and most feasible way to transport crude oil from Canada which is currently being transported by rail.
The significant tax revenue that this project will provide for local governments to invest in infrastructure and schools will go a long way in replacing the $17 million being lost due to the early closure of coal strip units 1 and 2.
The Keystone XL pipeline will create an estimated 12,000 jobs in Montana, South Dakota, and Nebraska which will increase the flow of capital through our rural communities.
We urge the approval of the Keystone XL pipeline so this important project can move forward.
ANONYMOUS: I am vehemently opposed to the Keystone pipeline. The green house gas emissions that result from the extraction of the tar sands oil is extreme, will have a end of -- huge impact on the overall emissions of the North America.
Many scientists have said that the tar sands oil extraction is, quote, game over, quote, for the climate. Continued extraction of these oils and the transportation of them through the United States for

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refining is unnecessary and extremely dangerous.
We as a society need to be turning to renewable energy sources like solar and wind. We need to stop our dependence on oil. US is already one of the largest exporters of oil in the world. We do not need to support Canadian companies in this project.
The risk for leakage is tremendous. The leak detection system that the Keystone pipeline uses will not detect small leaks. The risk for water and land contamination is extreme.
There will be no turning back from leaks from this pipeline. Leaks in any pipeline are inevitable. This whole project will be extremely detrimental to human, animal and climate health.
WADE SIKORSKI: Wade, W-A-D-E, Sikorski, S-I-K-O-R-S-K-I. My name is Wade Sikorski. I live on a ranch in southeastern Montana that my great grandfather first homesteaded in 1911.
Although the Keystone pipeline will not pass through my family's ranch in Fallon County, Montana, it will only be a short distance away.
The pipeline will cross the Little Beaver Creek near our place, and it will put at-risk if there are any leaks. Although the Little Beaver Creek also does not run through our ranch, I have fished in it as a

child and I have regularly cut hay for neighbors whose meadows were flooded by it.
The Little Beaver Creek is the lifeblood of our community, playing a vital role economically, ecologically and in our community history.
The thought of what the Keystone pipeline could do if it leaked troubles me greatly.
I am almost 64 years old now, and I know how the climate has changed from when I was a child, how the winters have become milder, the droughts have become more prolonged and severe, and extreme weather events like hailstorms and tornados have become more common.
When I was a child, we never had any tornados of any significance. We heard of the damage they could do in North Dakota, but they never did anything to us.
In the last couple years in southeastern Montana, they have become powerful enough to pick up a farm tractor, one that was big enough to be the first thing you run to and hide under if you saw a tornado coming and it smashed it to pieces, most of them small enough to pick up by hand and spreading them over miles.
Another tornado almost ate the whole town of Baker a few years ago before it hit Baker Lake and lost its energy.
Hailstorms have become an increasingly

significant threat to my family's farming operation. A few years ago except for some winter wheat fields miles away from the central part of the ranch, we were hailed entirely out. Nothing like it had ever happened to us before in the whole history of my family's ranch.
Before the storm, a heavy steel building that my family had built years before I was born had a few dents in it, most of them spread so far apart you couldn't reach from one to another. Now the dents almost touch each other.
If we allow the climate crisis to continue worsening, doing things like building the Keystone pipeline, farming will not just suffer, it will become impossible.
Higher temperatures, changing precipitation patterns, more extreme weather, and a long list of increasing disease, insect, and weed problems that will come with higher temperatures will make it more likely that crop yields will fall abruptly at a certain point.
According to plant scientists, for example, photosynthesis works best at a temperature range between 68 degrees and 77 degrees Fahrenheit and it stops completely around 90 degrees Fahrenheit.
If Trump gets what he wants and he builds the Keystone, days of 90 degrees Fahrenheit might be a cold

wave for much of the world during the growing season by the end of the century.
According to a business as usual climate model developed for the federal government, southeastern Montana might have as many as 50 days a year with temperatures over a hundred degrees Fahrenheit by the end of the century whereas we usually don't have any now.
If we do as Trump wants, temperatures will rise enough by the end of the century -- according to a paper by Wolfram Schlenker and Michael Roberts called, "Estimating the impact of climate change on crop yields," -- temperatures will cause corn yields in the U.S. to fall by 79 percent, soybean yields by 74 percent, and cotton yields by 67 percent. That is only from rising temperatures and does not include the effects of extreme weather events, shifts in precipitation, or the impact of increasing disease and insect pests.
Unlike the law that Trump defied when he ordered the construction of the Keystone pipeline, the laws of physics can't be broken. The basic chemistry of photosynthesis is a given, and so, plant scientists are not going to save us from the future climate scientists are promising.

The only way to insure that crop yields are going to be able to feed nine billion people expected by the end of the century is to prevent temperatures from regularly exceeding 90 degrees during the growing season.

For the sake of the world's children, we cannot build the Keystone pipeline.

JOHN OSTLUND: John Ostlund, O-S-T-L-U-N-D, Yellowstone County commissioner. The Keystone XL Pipeline has been in the permitting process for over ten years. It has been extensively reviewed and studied by multiple administrations, as well as national, state, and local agencies.

Time and again, TC Energy has shown that this project will provide a safe, reliable and cost effective means of transporting a critical natural resource; and in the process of doing so will create thousands of jobs in Montana.

These jobs will in turn create economic opportunity for our rural communities and provide a much needed revenue source for local governments. Additionally, the Keystone XL pipeline will play a key role in the future energy security of our nation.

Our country currently imports over 7 million barrels of oil a day from unstable nations. Keystone XL

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will provide energy from a stable neighboring country in a way that will stimulate our local economy.

There is no doubt that it is time to move the project forward.

RAMEY GROWING THUNDER: Ramey, R-A-M-E-Y, Growing Thunder, two words, and I am with the F-O-R-T P-E-C-K Tribes, T-R-I-B-E-S, and specifically the language and cultural department. I want to read a letter.

I am from the tribe language and cultural department, P.O. Box 1027, Poplar, Montana 59255. Our office number is (406)768-3520.

To the United States Department in Washington D.C. That is who it is to. To the United States Government, the Fort Peck Tribes strongly oppose the XL Pipeline coming within several Miles of our Fort Peck Indian Reservation.

There are several reasons, three.

No. 1, we would like an extensive environmental impact statement to study the number of sacred sites and burial grounds that will be destroyed and disturbed by the construction of this project.

No. 2, the pipeline goes under the Missouri river 45 miles up river from the tribes' water intake plant which serves tens of thousands of residents,

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native and non-native with potable water. It also provides the livestock with clean water.

Should it break, it will destroy our water source for people, livestock, and crops.

No. 3, we hope you take this into consideration and listen to our concerns. Our voice has been ignored in this process so far, and we want a fair shake, and No. 4, the set up here for the hearing is not a fair consultation. We deserve a hearing on our tribal homelands.

Thank you for listening, Ramey Growing Thunder. I am the director of the language and cultural department.

ROB SAND: Rob Sand, S-A-N-D, I am from Killdeer, North Dakota. I live -- my drinking water comes out of Lake Sakakawea which is on the Missouri river so I am a down streamer, and I am just really concerned about all the environmental problems having to do with tar sands process.

First of all, mining it, and then it going down through our lovely country and then to be shipped overseas.

I just want to say that it -- there is just so much -- I just have so much concern about how wise this is. I consider it not to be wise at all, a great danger.

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So that is probably about all I have to say. I have a granddaughter now. I have been concerned about our climate, but with the granddaughter, I know that that is what motivates me the most I think in terms of knowing that it's-- that I need to speak up for her.

RICHARD DUNBAR: Richard Dunbar, Phillips County commissioner and I am president of the oil, gas, and coal counties, and I am a rancher in Whitewater, Montana.

I guess, I would just like to say Phillips County is the county where the pipeline comes out of Canada into the United States.

And I have known about this project since 2008 so we have been working with TransCanada over ten years on trying to get this project off the ground, and they have came and there is like 47 Miles of access road in Phillips County so they came and did a road inventory, and they actually did a road inventory in every county, and we wrote up one road agreement that fit all six counties that pipeline goes through that we abide by; and just this last summer, they came through and did $20 million worth of upgrades to the county roads in eastern Montana which was a huge -- and there was I don't know how many jobs but there was probably 50, 60 people so 50, 60 jobs in the different counties over the

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summer.
So during construction and getting ready for the pipeline, there will be a lot of jobs, but once it is done the jobs will probably be minimal because the pump stations are all electric. So that TransCanada has went through the process did the EIS, NEPA process.
In 2011, we did the same thing kind of what we are doing here today, went to Glendive testified for the pipeline, support of it and stuff, and every year since then we have been going back to the state department in D.C., meeting with different people there in support of the pipeline in trying to get this thing off the ground; and the EIS, if people would read the EIS, it basically said there will be a negative impact on the environment if you take the oil off the rail out of the trucks and put it in a pipe.
So, I mean, the EIS, I mean, there was nothing that stuck out in the EIS that said that this pipeline shouldn't be moving forward.
So in the tax base that this pipeline will produce in all the counties is they become the No. 1 taxpayer in every county that they pass through, and some counties, the tax base would be 2 to 3 fold of what the original base is plus all of the electric co-ops that will be servicing the pump stations will double or

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triple their loads which will benefit all the co-op members in keeping their rates stable down in the long run, and this is just another step in the process that TransCanada has to go through.
The state department is doing this process, but it is all just another hold up for it, and in all reality, it is just time to move forward with this project and get it in the ground and get some oil.
The oil is going to be going to Port Arthur, Texas where they got refineries that can handle the type of crude the oil sends that come out of Canada, and it will keep them refineries going instead of we used to be bringing it in from the mid eastern countries now with the US being the No. 1 producer in oil. That lessened some, but this oil is going down to where they have the refineries to refine the crude and to get it to the markets that it needs to, and we are just in support of the whole project, and I mean I think TransCanada has done a good job of trying to keep everybody informed and work through the process, and they have been more than patient I think over the 10 or 12 years they have been working on it so.
I guess that is -- I don't know what else I got to say. That is about it.
DANNY EAGLEFEATHERS: My name is Danny

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Eaglefeathers. I am representing Northern Cheyenne tribe. I am Northern Cheyenne tribal counsel, Busby District. This is about the pipeline, right? I guess, what I would start out with is I can't understand the lack of respect for Indian people.
This is our homeland and it always has been and our spiritual beliefs, mother nature, and the sacredness of water. I don't understand how the federal government or anybody could overlook that and disrespect it.
The United States has always been the homeland of native people, and I speak on behalf of my tribe. We strongly oppose the pipeline, any pipeline because of the lack of the data, the way the federal government shares data.
Pipelines they say are safe, but in speaking with Congressman Gianforte, they only talk about the pre construction of pipelines and they don't talk about the actual functional pipelines. They don't talk about the actual functioning pipelines, and sure, when something is new, it is safe. It don't take long for, I guess, disaster to strike.
All these pipelines across America that are functioning, all the leaks and -- there is more leaks unreported than that are actually reported. And on

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behalf of the Northern Cheyenne Tribe, I would like to call out John Tester or Senator John Tester. It was the Indian vote that got him into office, and he should go up to bat for the Indian people and say no to Keystone pipeline, XL, whatever they want to change their name to. I think that will be it.
(At 7:30 p.m. the matter was completed)

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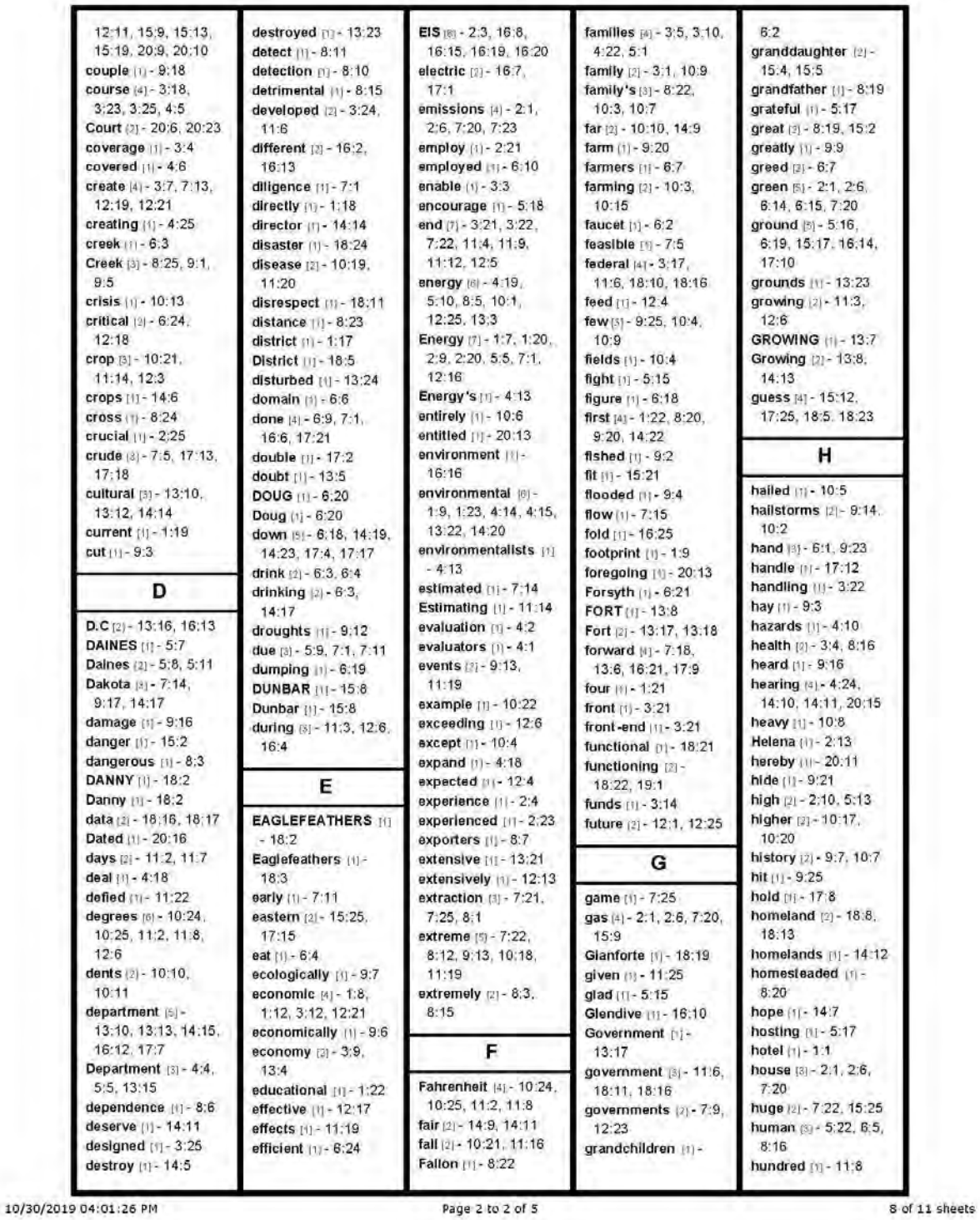
STATE OF WYOMING)
) SS:
COUNTY OF PARK)

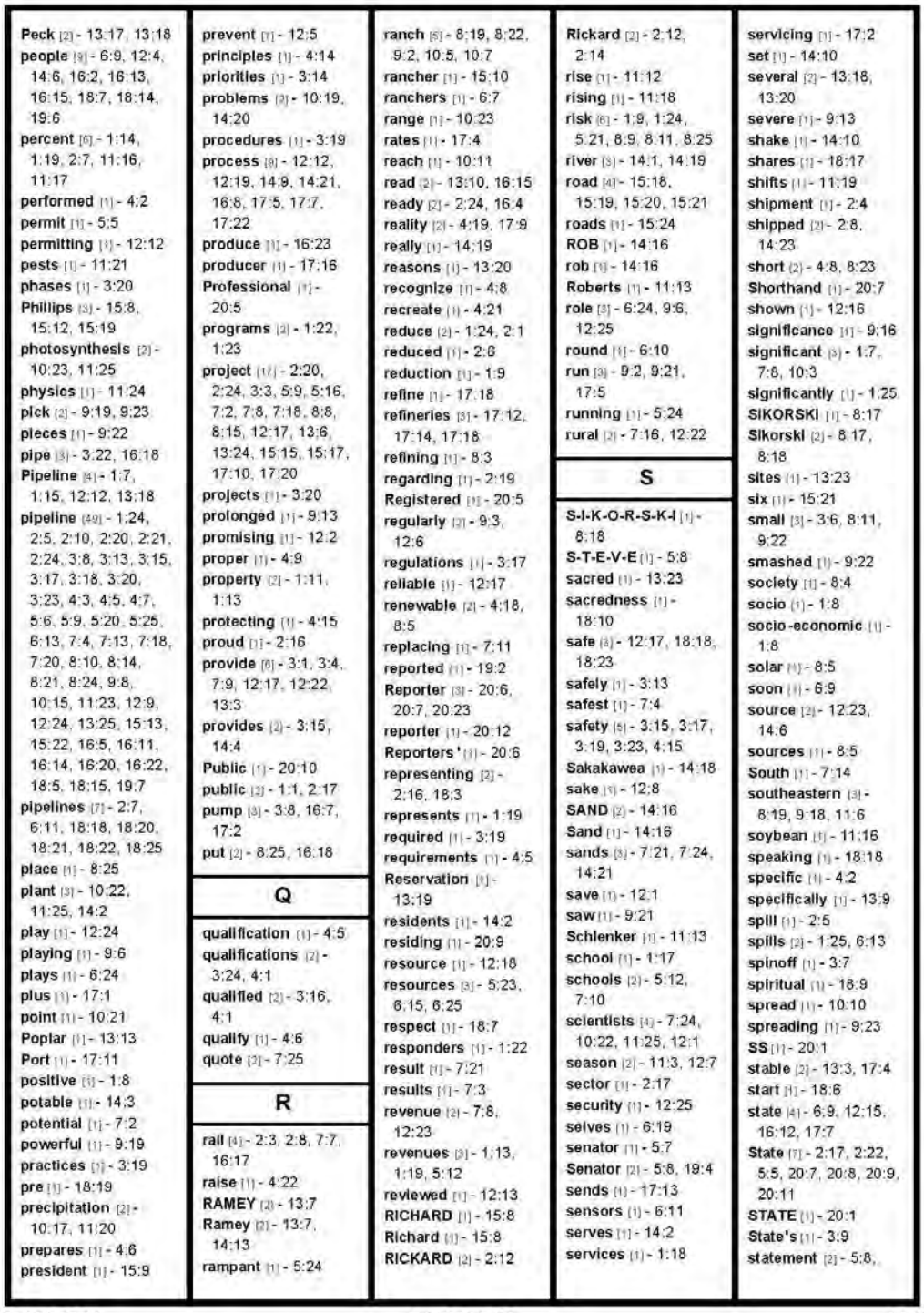
I, Barbara Morgenweck, Registered Professional Reporter with the National Court Reporters' Association and Certified Shorthand Reporter in the State of Washington, License No. 299-06, and also in the State of New Mexico residing in the State of Wyoming, County of Park, and Notary Public in and for the County of Park, State of Wyoming, do hereby certify:

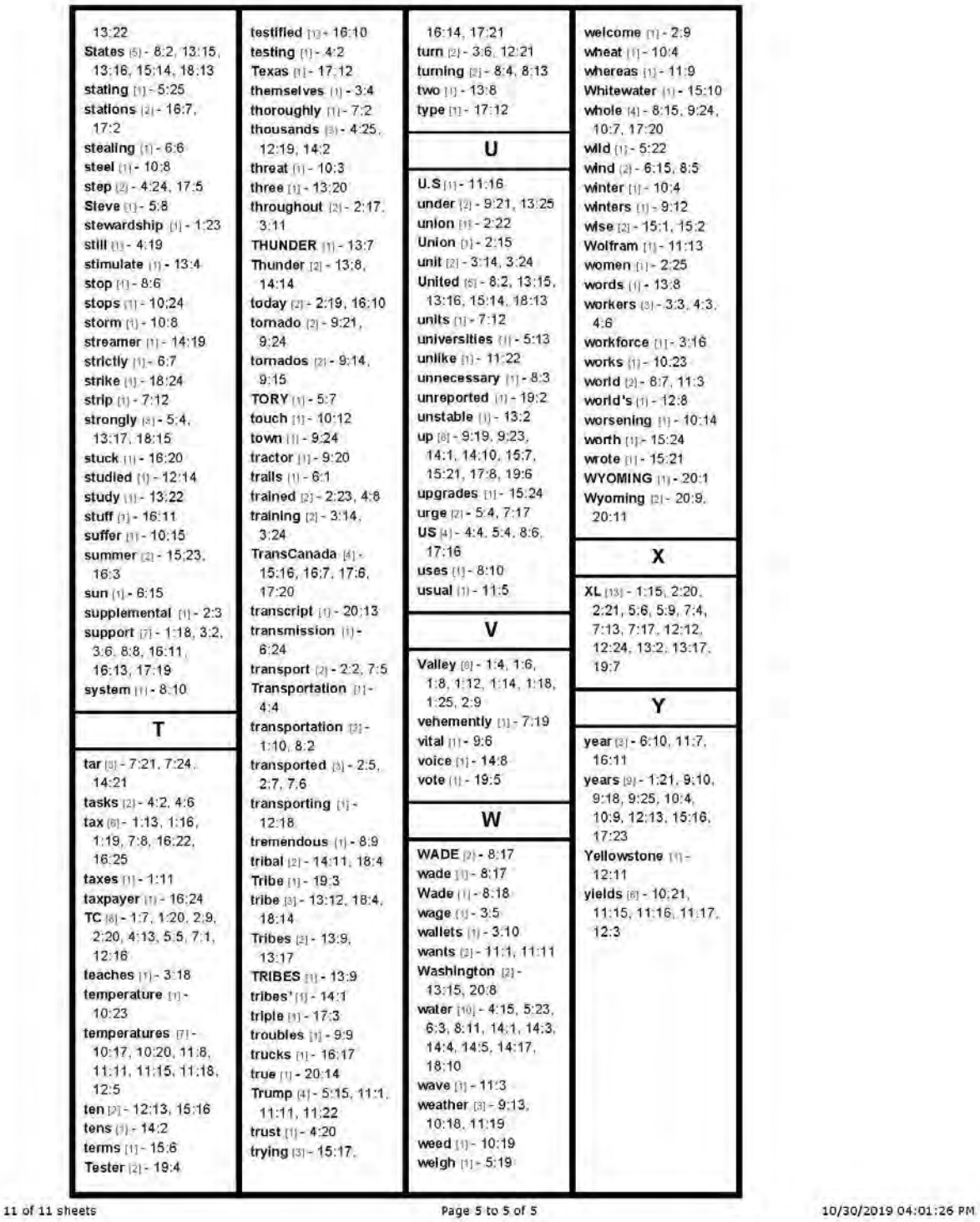
That I did appear and act as reporter for the above entitled matter, and that the foregoing transcript, containing 20 pages, is true and correct and contains all matters offered at said hearing.

Dated this 30th day of October, 2019.

_____
Barbara Morgenweck
Official Court Reporter







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U.S. DEPARTMENT OF STATE

IN THE MATTER OF KEYSTONE XL PROJECT
DRAFT SUPPLEMENTAL ENVIRONMENTAL IMPACT STATEMENT
PUBLIC MEETING
BILLINGS, MONTANA

TRANSCRIPT OF PUBLIC COMMENTS

Tuesday, October 29, 2019
4:30 p.m. - 7:30 p.m.

Vonni R. Bray, RDR, CRR
P.O. Box 125
Laurel, MT 59044
(406) 670-9533 Cell
vonni.bray@gmail.com

STATEMENT BY MELANIE SCHWARZ.

MS. SCHWARZ: On behalf of the board of directors of Big Sky Economic Development Authority and Big Sky Economic Development Corporation, we offer these comments in support of the Keystone XL Pipeline Project.

Big Sky Economic Development is a public/private partnership responsible for stewarding economic growth and job creation in Yellowstone County, Montana. Our organization strongly believes that the Keystone XL Pipeline Project will bring significant and positive economic impact to our state.

Billings, the largest city in Montana and the urban hub for industry in south central Montana — including agriculture, energy, medical, transportation, and finance — is uniquely positioned to support the Keystone XL Project through our vast network of businesses and vendors as well as a highly trained workforce.

This project represents an opportunity for us to support the energy needs of our nation while providing Montana businesses, large and small, with the opportunity to grow and expand.

While this economic opportunity is vital, we are also keenly aware of the need for stringent

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ATTACHMENTS

environmental and safety considerations for the area being developed under this project. Big Sky Economic Development, along with many private businesses, work every day to manage and understand the delicate balance between industry and environment. We live and work in a community that supports three refineries along our most valuable community asset, the Yellowstone River.

In the past several years, added protections were established by the Pipeline and Hazardous Materials Safety Administration to better protect environmental assets. These added protections, supported by our industry leaders as well as TransCanada, represent our commitment to protecting the environment while allowing industry to coexist and thrive.

We ask you to continue towards completion of the Keystone XL Pipeline Project, as it represents a valuable opportunity for our state to grow through private investment, job creation, and increased taxes.

Respectfully submitted.

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Statement by LISA DEVILLE - October 29, 2019

STATEMENT BY LISA DEVILLE.

MS. DeVILLE: So good afternoon. My name is Lisa DeVille, and I oppose the Keystone XL Pipeline and the EIS in its entirety. My indigenous name in the white man's language is "Accomplishes Everything." I'm an enrolled member of the Mandan, Hidatsa, and Arikara Nations.

I and my family live in Mandaree on Fort Berthold in North Dakota. I am a member of Fort Berthold Protectors of Water and Earth Rights; it's a grassroots group.

We live in the front lines of oil and gas, where we witness every day the environment's impacts, health impacts, and social impacts. We witness how our people have changed depending on money. We are losing our identity. We are losing our way of life because we are allowing Mother Earth to be killed with every oil and gas well extracted and pipelines constructed as if they are the blood veins of Mother Earth.

First, I would like to tell you of some social impacts we are experiencing from oil and gas development on Fort Berthold. Man camps have brought many different lifestyles, the increase of drug addiction with my people, prostitution, and much trash, garbage. This past summer, my family and I picked up

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Statement by LISA DEVILLE - October 29, 2019

area east of Mandaree near Lake Sakakawea. Crestwood was not held accountable nor were they fined. Little cleanup by Crestwood, but they did give Mandaree money to build a Head Start with their name on it.

Mandaree tribal leaders put our children's blood on it by saying Head Start was for our babies. Those two 2014 Crestwood Pipeline spills continue to slowly die -- or our spills -- that spill slowly is -- our land is slowly dying.

The other day, Crestwood requested our tribal council, asking for no responsibility and relinquish from these two 2014 pipeline spills.

To prove with facts, Duke University, along with myself, Walter my husband, and Nicole with DRC, helped conduct the brine spills associated with unconventional oil development in North Dakota study.

Quotes from the Dakota Resource Council's press release: Quote, "Accidental wastewater spills from fracking related to oil production in North Dakota have caused widespread water and soil contamination, a Duke University study finds.

"Researchers found high levels of ammonium, selenium, lead, and other toxic contaminants as well as high salts in the brine-laden wastewater, which primarily comes from hydraulically fracked oil wells in

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Statement by LISA DEVILLE - October 29, 2019

nearly 200 bags of trash in 3 miles on Highway 22. Oil and gas industry can leave whenever they want, but we live with the aftermath.

I believe it is important to remember where you came from. Our ancestors died. They got killed protecting our land. We left our land in the federal government's hands; today we have global warming and climate change. Indigenous beliefs of Mother Earth are different than the white man's or any other race.

I'm here today to tell you that no oil and gas pipeline is safe. Oil and gas industry in North Dakota will convince that they have the safest way. This is what they say to my people. They come into Mandaree school, telling our children that they have the safest way. Our tribal leaders tell the people that the pipelines will take care of transporting oil and gas.

Mandaree, my community, has had one of the biggest brine spills, also known as saltwater, in North Dakota. In July 2014, Crestwood spilled when their pipeline broke and spilled 1 million gallons of brine 5 miles north of Mandaree, near Bear Den Bay and near our drinking water intake.

Not too long after, in August 2014, Crestwood Pipeline broke and spilled 250 gallons in Independence

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Statement by LISA DEVILLE - October 29, 2019

the Bakken region of western North Dakota.

"In 2015, members of the Dakota Resource Council accompanied Dr. Avner Vengosh and others from Duke University to spill sites to collect samples, also taking them on a tour of the Mandaree area. At one site, the researchers were still able to detect high levels of contamination in spill water four years after the spill occurred.

"Streams polluted by the wastewater contained levels of contaminants that often exceeded federal guidelines for safe drinking water or aquatic life -- or aquatic health.

"Soil at the spill sites was contaminated with radium, a naturally occurring radioactive element found in brines, which chemically attached to the soil after the spill water was released," end quote.

So Crestwood Pipelines continued to spill in Mandaree area. In 2019, Crestwood Pipelines spilled over 20 times. The MHA tribal leaders continue to try and cover it up. There is retaliation on the MHA tribal employees if they speak out about any oil and gas impacts.

So what spills into the Missouri River upstream flows downstream, jeopardizing drinking water for over 750,000 people. The Missouri River is

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important to the Mandan and Hidatsa people because that is where my ancestors lived for many years before we were put on reservations.

Industry continues to lie to my tribal leaders. My tribal leaders will listen to industry over their own people.

It was just recently revealed that in 2016, the North Dakota State Health Department accepted a report of industry spill of 10 gallons in the Oneok Plant in western North Dakota until a whistle-blower exposed documentation that the spill was actually 11 million gallons. This happened during the NODAPL protests in 2016 but only just came to light and is a gross indication of the lengths that industry and corrupt government will go to protect industry. Self-reporting does not work.

I also wanted to mention thanks to organizations like the American Legislative Exchange Council. We are seeing model legislation being spread and passed across the country that criminalizes protests and protesters as well as paving the way for large, dirty industries to externalize the cost of production by enforcing communities like mine to bear the brunt of pollution.

This must stop. We must honor our original

instructions as indigenous people of this land, to honor and protect all life within those so-called boundaries.

Today it is important to educate our tribal people on federal regulations such as the Environmental Protection Act, NEPA. The more knowledge they have, the understanding they will have to protect their people.

An environmental impact statement must be completed prior to any oil and gas development and its transportation. It is the federal government's trust responsibility to protect indigenous nations and to have a federal consultation with the indigenous nations.

Thank you.

And I've also attached the DRC press release, which was on the study we completed in North Dakota on the brine spills, on the pipelines, and also Duke University's study.

(Attachments 1 and 2 Received)

STATEMENT BY COMMISSIONER DENNIS TESKE.

MR. TESKE: Speaking from a county commissioner's viewpoint, there will be job creation with this pipeline, many short-term jobs that will directly affect my community and my county. The maintenance pump stations and pipelines, the Bakken, which affects my area because of the region we're in, the revenue will go up because of the transportation the pipeline will provide to that oil.

The economy is very raw and hard because of cattle prices, wheat prices, corn prices. It's not a stable economy because of that. We're rural. It's not stable. XL is a boom for eastern Montana because it's stability of tax revenue stream.

The pipeline will add jobs and real estate property tax and school revenue. The pipeline is a safe and dependable resource to supply natural resources. The pipeline is a good neighbor; it has facilitated grants in our county and also upgraded our county roads at their expense.

The greater issue is this pipeline provides national security for our nation. We are better secured with our neighbors to the north than the hostiles that are in the Middle East.

If you ask me, I am for this pipeline

100 percent. As a public official, as a citizen of my county, and as a representative to the people, I have not heard one negative comment from anybody, any citizen, that lives in my county. It's all been positive.

STATEMENT BY SENATOR FRANK SMITH.

SENATOR SMITH: I'm Senator Frank Smith from Poplar, Montana. I represent the people of Fort Peck Reservation that are directly impacted by the proposed pipeline.

We weren't consulted or given a hearing about this dangerous project. I had to drive almost five hours, or more than 300 miles, to be here today. Why didn't the State Department organize a meeting for my community?

The Keystone Pipeline is just upstream from us. Why is it that we had to be outside today in the cold to make our voices heard? Why can't we have an open hearing for all the witnesses instead of forcing people into private rooms to express their opinion? This is not how public comment is supposed to happen. This is not how free speech works. These should be inside the building over where we're preparing for public hearing instead of standing outside in the cold to make sure the press and people hear the voice.

Keystone XL Pipeline sits right under the Fort Peck spillway in the Missouri River, just upstream from the drinking water intake. This water system serves tens of thousands of people in our community, even those beyond us. The irrigation intake is even

closer to the pipeline crossing, which serves the farmers and ranchers.

We know from history that this -- that the question is not if the pipeline spills but when. The tar sands is nasty stuff and is -- that is impossible to clean up when it leaks. Our water system will be destroyed by an XL Project spill. We refuse to sacrifice our water for the sake of a Canadian oil company.

While preparing our water, it is a most important issue for the pipeline. We have other concerns too. Right now we have seen 12 to 14 trucks a day carrying North Dakota crude oil through our reservation.

The North Dakota crude is mixed with Canadian tar sands to make it thin enough pump through the Keystone Pipelines already built. That's because the tar sand's oil is so thick and messy, it can't even flow through pipes without being diluted.

How many more trucks will be disrupting our community, even every day if another section of Keystone is put on land? What effect would this have on our roads and quality of life?

The bottom line is the pipeline puts more money in the pockets of each Canadian energy company

while threatening essential services for my community and others along the proposed XL pipeline.

They can try to silence our voices, but we will be heard. We can never forget that the people, you and me and everyone else who is standing up across the country, we hold the power. We have the right to make decisions about our communities, not everybody else.

This is our land, our water, our climate. And we are here today to protect these precious gifts. We must stop the Keystone XL Pipeline.

Thank you.

STATEMENT BY ALEX SMITH.

MR. SMITH: I believe -- my biggest concern with this pipeline is it does not provide anything beneficial to the Fort Peck tribes. And as currently serving on the Tribal Executive Board, I think that it is my duty to put my people first. And this only brings harm not only to my people but the reservation and the environment as a whole.

That's why I believe that this pipeline should not exist and should not be built. Because it will just hurt everybody in the end game and provides nothing.

Yes, it might provide jobs. But jobs and boosting the economy is only short-term, and it will have long-term, devastating effects.

That's all.

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Statement by KEVIN NELSON - October 29, 2019

STATEMENT BY KEVIN NELSON:

MR. NELSON: I just approve the pipeline, and hopefully it goes forward.

(Meeting concluded at 7:30 p.m., October 29, 2019.)

Gray Reporting (406) 670-9131

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REPORTER'S CERTIFICATE

I, Vonni R. Gray, a Registered Diplomate and Certified Realtime Reporter, certify that the foregoing transcript, consisting of 17, is a true and correct record of the proceedings given at the time and place hereinbefore mentioned; that the proceedings were reported by me in machine shorthand and thereafter reduced to typewriting using computer-assisted transcription.

IN WITNESS WHEREOF, I have set my hand at Laurel, Montana, this 5th day of November, 2019.

Vonni R. Gray, RDR, CRR
P.O. Box 433
Laurel, MT 59044
(406) 670-9533 - Cell
(888) 297-9272 - Fax
vonni.gray@gmail.com

Gray Reporting (406) 670-9131

E.4 SAMPLE NOTICES

E.4.1 Sample Hard Copy Distribution Letter

United States Department of State

Bureau of Oceans and International Environmental and Scientific Affairs

Washington, D.C. 20520

October 4, 2019

Point of Contact Name (receiving hard copy)
Agency
Title
Address
Address

Dear Point of Contact,

This letter serves as notification that the United States Department of State (Department) Draft Supplemental Environmental Impact Statement (SEIS) for the proposed Keystone XL Project will be available online at the Department's website https://keystonepipeline-xl.state.gov/ for public review and comment beginning October 4, 2019. The Department has identified you as a point of contact for your organization, and as such, requests that you forward this notification to other interested individuals within your organization.

The Department prepared the Draft SEIS in response to the United States District Court, District of Montana's order to supplement the 2014 Keystone XL Final SEIS relating to greenhouse gas emissions, oil spills, cultural resources, and market analysis. In September 2018, the Department published a notice of availability of the Draft SEIS for the Proposed Keystone XL Pipeline Mainline Alternative Route in Nebraska. Prior to this Draft SEIS, the Department prepared a Draft Environmental Assessment (EA) and Draft SEIS regarding the Mainline Alternative Route (MAR) in Nebraska and published Notices of Availability that announced the availability of the draft documents in the Federal Register (FR) (83 FR 36659 and 83 FR 48358, respectively). The public comment period extended from July 30 to August 29, 2018 on the Draft EA and from September 21 to November 8, 2018 for the Draft SEIS. The Department considered comments received during both the Draft EA and the Draft SEIS public comment periods in this new Draft SEIS document. Consistent with the National Environmental Policy Act of 1969, the Draft SEIS supplements the 2014 Keystone XL Final SEIS, considers the direct, indirect and cumulative impacts related to changes in the Project since 2014 and incorporates updated information and new studies, as applicable.

Under the Proposed Action, TransCanada Keystone Pipeline, L.P. (Keystone) would construct the Keystone XL Project. This would include approximately 162 miles of construction, connection, operation and maintenance along the MAR of the proposed new 36-inch diameter pipeline and related ancillary facilities within Nebraska that were not analyzed within the 2014 Keystone XL Final SEIS.

The 45-day public comment period ends on November 18, 2019. Comments received or postmarked by November 18, 2019 will be considered in preparing the Final SEIS.

Beginning October 4, 2019, comments may be submitted online at http://www.regulations.gov by entering "Keystone XL" into the search field and following the prompts. Comments submitted by mail should be addressed to: M. Ross Alliston, U.S. Department of State, Office of Environmental Quality and Transboundary Issues (EQT), Bureau of Oceans and International Environmental & Scientific Affairs (OES), 2201 C Street NW, Room 2726, Washington, DC 20520. Comments should be identified as intended for the Draft SEIS for the Keystone XL Project.

Comments are not private and may be posted online and/or published in the Final SEIS. The comments will not be edited to remove identifying or contact information, and the Department cautions against including any information that one does not want publicly disclosed.

The Department will convene a public meeting in Billings, MT on Tuesday October 29, 2019, at the Billings Hotel & Convention Center, 1223 Mullowney Lane, Billings, MT from 4:30 PM to 7:30 PM. The purpose of the meeting is to provide an opportunity for the public to gain information about the project and talk with government officials. The meeting will be an open house format with opportunities to submit comments via hand-written comment forms, electronic comment stations, and one-on-one verbal comments to a stenographer. Attendees will be able to speak one-on-one with Department representatives. Please note that in the interest of the security of all attendees, certain items will not be permitted inside the public meeting space. In particular, the following items are prohibited from the meeting space: bags, weapons, bottles, air horns, mega-phones, posters, signs and alcoholic beverages. The Department intends to make a free speech area available outside the meeting space where individuals may gather with signs and posters.

If you require additional information or have any questions, please contact me at AllistonMR@state.gov.

Thank you for your interest in the Keystone XL Project and the Draft SEIS.

Sincerely,

M. Ross Alliston
Presidential Permitting Team Leader

Enclosure

E.4.2 Sample Notification Letter

United States Department of State

Bureau of Oceans and International Environmental and Scientific Affairs

Washington, D.C. 20520

October 4, 2019

Point of Contact Name
Agency
Title
Address
Address

Dear Point of Contact,

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If you require additional information or have any questions, please contact me at AllistonMR@state.gov.

Thank you for your interest in the Keystone XL Project and the Draft SEIS.

Sincerely,

M. Ross Alliston
Presidential Permitting Team Leader

E.4.3 Sample Library Hard Copy Distribution Letter

United States Department of State

Bureau of Oceans and International Environmental and Scientific Affairs

Washington, D.C. 20520

October 4, 2019

Library Manager
Library
Address
Address

Dear Library Manager:

The United States Department of State (Department) is providing your library the enclosed Draft Supplemental Environmental Impact Statement (SEIS) for the Keystone XL Project. We would appreciate you making the enclosed document available for public review at your library beginning October 4, 2019 through November 18, 2019. We also request that you do not allow this document to be removed from the library.

Project Background and Public Review Process

The Department prepared the Draft SEIS in response to the United States District Court, District of Montana's order to supplement the 2014 Keystone XL Final SEIS relating to greenhouse gas emissions, oil spills, cultural resources, and market analysis. In September 2018, the Department published a notice of availability of the Draft SEIS for the Proposed Keystone XL Pipeline Mainline Alternative Route in Nebraska. Prior to this Draft SEIS, the Department prepared a Draft Environmental Assessment (EA) and Draft SEIS regarding the Mainline Alternative Route (MAR) in Nebraska and published Notices of Availability that announced the availability of the draft documents in the Federal Register (FR) (83 FR 36659 and 83 FR 48358, respectively). The public comment period extended from July 30 to August 29, 2018 on the Draft EA and from September 21 to November 8, 2018 for the Draft SEIS. The Department considered comments received during both the Draft EA and the Draft SEIS public comment periods in this new Draft SEIS document. Consistent with the National Environmental Policy Act of 1969, the Draft SEIS supplements the 2014 Keystone XL Final SEIS, considers the direct, indirect and cumulative impacts related to changes in the Project since 2014 and incorporates updated information and new studies, as applicable.

Under the Proposed Action, TransCanada Keystone Pipeline, L.P. (Keystone) would construct the Keystone XL Project. This would include approximately 162 miles of construction, connection, operation and maintenance along the MAR of the proposed new 36-inch diameter pipeline and related ancillary facilities within Nebraska that were not analyzed within the 2014 Keystone XL Final SEIS.

The Department invites interested parties to comment on the Draft SEIS during the 45-day public comment period that ends on November 18, 2019. Comments received or postmarked by November 18, 2019 will be considered in preparing the Final SEIS. Beginning October 4, 2019, comments may be submitted online at http://www.regulations.gov by entering "Keystone XL" into the search field and following prompts. Comments submitted by mail should be addressed to: Mr. Ross Alliston, U.S. Department of State, Office of Environmental Quality and Transboundary Issues (EQT), Bureau of Oceans and International Environmental & Scientific Affairs (OES), 2201 C Street, NW, Room 2726, Washington, DC 20520. Comments should be identified as intended for the Draft SEIS for the Keystone XL Project.

Comments are not private and may be posted online and/or published in the Final SEIS. The comments will not be edited to remove identifying or contact information, and the Department cautions against including any information that one does not want publicly disclosed. The Department requests that any party soliciting or aggregating comments received from other persons for submission to the Department inform those persons that the Department will not edit their comments to remove identifying or contact information.

The Department will convene a public meeting in Billings, MT on Tuesday October 29, 2019, at the Billings Hotel & Convention Center, 1223 Mullowney Lane, Billings, MT from 4:30 PM to 7:30 PM. The purpose of the meeting is to provide an opportunity for the public to gain information about the project and talk with government officials. The meeting will be an open house format with opportunities to submit comments via hand-written comment forms, electronic comment stations, and one-on-one verbal comments to a stenographer. Attendees will be able to speak one-on-one with Department representatives. Please note that in the interest of the security of all attendees, certain items will not be permitted inside the public meeting space. In particular, the following items are prohibited from the meeting space: bags, weapons, bottles, air horns, mega-phones, posters, signs and alcoholic beverages. The Department intends to make a free speech area available outside the meeting space where individuals may gather with signs and posters.

The Draft SEIS and more information on the project is available on the Department's website at https://keystonepipeline-xl.state.gov/ beginning October 4, 2019.

Thank you very much for your cooperation and assistance.

Sincerely,

Ross Alliston
Presidential Permitting Team Leader

Enclosure

E.4.4 Sample Newspaper Announcement

U.S. Department of State Announces A Public Meeting and the Notice of Availability of the Draft Supplemental Environmental Impact Statement for the Proposed Keystone XL Pipeline

The U.S. Department of State (Department) announces availability of the *Draft Supplemental Environmental Impact Statement* (Draft SEIS) *for the Proposed Keystone XL Project* for public review and comment, as well as the date and location for a public meeting. Consistent with the National Environmental Policy Act of 1969, the Draft SEIS supplements the 2014 Keystone XL Final SEIS, considers the direct, indirect and cumulative impacts related to changes in the Project since 2014 and incorporates updated information and new studies, as applicable. Under the Proposed Action, TransCanada Keystone Pipeline, L.P.'s (Keystone) would construct the Keystone XL Project. This would include approximately 162 miles of construction, connection, operation and maintenance along the Mainline Alternative Route of the proposed new 36-inch diameter pipeline and related ancillary facilities within Nebraska that were not analyzed within the 2014 Keystone XL Final SEIS.

The Draft SEIS may be viewed beginning October 4, 2019 at:

The Draft SEIS is available at the following website: https://keystonepipeline-xl.state.gov/ or at the following libraries:

Fallon County Library, MT
Glasgow City-County Library, MT
Glendive Public Library, MT
McCone County Library, MT
Phillips County Library, MT
Prairie County Library, MT
Bison Public Library, SD
Faith Public and School Library, SD
Haakon County Public Library, SD
Northwest Regional Library, SD
Newell Public Library, SD
Presho Public Library, SD
Tripp County Library - Grossenburg Memorial, SD
Wall Community Library, SD
Atkinson Public Library, NE
Clarkson Public Library, NE
Columbus Public Library, NE
Crete Public Library, NE
David City Public Library, NE
Davies Memorial Library, NE
Fairbury Public Library, NE
Keya Paha County Library, NE
Neligh Public Library, NE
Norfolk Public Library, NE
Seward Memorial Library, NE
Stanton Public Library, NE

The Department invites the public to comment on the Draft SEIS during the public comment period, which ends November 18, 2019. The Department will consider all comments postmarked or received during the public comment period when preparing the Final SEIS. The Department will host a public meeting to provide an opportunity for the public to gain information about the project and talk with government officials.

A public meeting will be held as follows:

Date: Tuesday October 29, 2019
Location: Billings Hotel & Convention Center, 1223 Mullowney Lane, Billings, MT
Time: 4:30 PM to 7:30 PM

The meeting will be an open house format with opportunities to submit comments via hand-written comment forms, electronic comment stations, and one-on-one verbal comments to a stenographer. Attendees will be able to speak one-on-one with Department representatives. Please note that in the interest of the security of all attendees, certain items will not be permitted inside the public meeting space. In particular, the following items are prohibited from the meeting space: bags, weapons, bottles, air horns, mega-phones, posters, signs and alcoholic beverages. The Department intends to make a free speech area available outside the meeting space where individuals may gather with signs and posters.

Beginning October 4, 2019, comments on the Draft SEIS may be submitted at *www.regulations.gov* by entering "Keystone XL" into the search field and following the prompts. Comments may also be submitted by mail, addressed to: M. Ross Alliston, Office of Environmental Quality and Transboundary Issues (OES/EQT), U.S. Department of State, 2201 C Street NW, Suite 2726, Washington, DC 20520. Envelopes and subject line should be labeled "Keystone XL." Please note that all comments received during the public comment period may be publicized.

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