

**Finding of No Significant Impact
Rocky Flats Surface Water Configuration**

DOE/EA-1747
LMS/RFS/S06335

Errata Sheet

On page 3 of the Finding of No Significant Impact (FONSI), Carol M. Borgstrom is the Director of the Office of NEPA Policy and Compliance which is GC-54, not GC-20.

**U.S. Department of Energy
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May 2011

AGENCY: U.S. Department of Energy

ACTION: Finding of No Significant Impact (FONSI)

SUMMARY:

The U.S. Department of Energy (DOE), Office of Legacy Management (LM) conducted an Environmental Assessment (EA), DOE/EA-1747, which analyzed the potential impacts associated with breaching of dams at ponds A-3, C-2, Present Landfill (PLF), A-4, and B-5 at the Rocky Flats Site (RFS) located in Jefferson County, Colorado. All discussion, analysis, and findings related to the potential impacts of construction and operation of the proposed project are documented in the Final EA and are incorporated herein by reference.

The RFS was formerly used to process and manufacture nuclear weapons components, and cleanup and closure of Rocky Flats by DOE was completed in 2005. LM has jurisdiction and control of portions of Rocky Flats as discussed below.

The cleanup and closure of RFS was completed via a cleanup agreement under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA); a Compliance Order on Consent under the Resource Conservation and Recovery Act (RCRA); and the Colorado Hazardous Waste Act (CHWA). RCRA and CHWA are administered by the State of Colorado through the Colorado Department of Public Health and Environment (CDPHE). The final response action for RFS is specified in the final Corrective Action Decision/Record of Decision (CAD/ROD) for Rocky Flats issued on September 29, 2006. Implementation of the final response action is regulated under the *Rocky Flats Legacy Management Agreement* (RFLMA).

Twelve dams were constructed on the RFS during operation of the Rocky Flats Plant. Seven dams were previously breached by constructing notches in the dam embankments. The current project involves breaching the remaining five dams. Surface water retention is not required at the RFS, and the dams are not a functional part of the final CAD/ROD remedy.

The remaining five dams include the following:

- PLF Dam on No Name Gulch
- Dam A-3 on North Walnut Creek
- Dam A-4 on North Walnut Creek
- Dam B-5 on South Walnut Creek
- Dam C-2 near Woman Creek

In accordance with applicable regulations and policies, DOE invited federal and state agencies and Native American Tribes to participate in commenting on the Draft EA prior to public release. The U.S. Army Corps of Engineers (USACE), the U.S. Fish and Wildlife Service (USFWS), and CDPHE accepted the invitation. The Colorado Division of Water Resources declined to be a reviewer; however, it did note that any modifications to the dams at the RFS are required to be reviewed and accepted by the Division's Dam Safety Branch, which administers the dam safety program. DOE will coordinate with the Dam Safety Program Engineer as required prior to breaching. All comments received from these agencies prior to the issuing of the Draft EA were addressed and responses incorporated where appropriate.

USFWS provided information on threatened and endangered species that potentially could be present on site. USFWS also indicated that DOE could amend the existing Programmatic Biological Opinion (PBO) to account for impacts to the listed as "threatened" Preble's meadow jumping mouse from the proposed activities.

USACE staff has stated that the project would likely be permitted under Nationwide Permit 27, Aquatic Habitat Restoration, Establishment, and Enhancement Activities (USACE 2010). Nationwide permit verification letters are valid for a period of two years; therefore, the Proposed Action would most likely require two separate permits.

Class III cultural resource inventories of the RFS were conducted in 1989 and 1991. The State Historic Preservation Officer (SHPO) concurred with DOE's determination that these surveys were sufficient and that the Proposed Action would have "no effect" on cultural resources.

The Draft EA was made available for public and agency review on April 30, 2010. The review/comment period was 30 days. Additionally a public meeting was held on May 18, 2010, to solicit comments on the Draft EA. Public comments received during the 30-day comment period were addressed, and responses were incorporated where applicable. Many of the public comments were similar in nature, and a Common Concern Statement has been incorporated into the Final EA as Appendix A.

DOE has determined that the proposed project would not result in any significant environmental impacts, and preparation of an Environmental Impact Statement (EIS) is not required. The basis for this determination is described in this FONSI. Copies of the EA and this FONSI are available to all interested persons and the public through the following contact:

Tracy A. Riberio
National Environmental Policy Act (NEPA) Compliance Officer
U.S. Department of Energy
Office of Legacy Management
2597 Legacy Way
Grand Junction, CO 81503
720-248-6621
Tracy.Ribeiro@lm.doe.gov

The documents are also available on the DOE website at:
http://nepa.energy.gov/environmental_assessments.htm or on the Rocky Flats website at:
http://www.lm.doe.gov/Rocky_Flats_NEPA.pdf

For general information regarding the DOE NEPA process contact:

Carol M. Borgstrom
Director, Office of NEPA Policy and Compliance (GC-20)
U.S. Department of Energy
1000 Independence Avenue, SW
Washington, D.C. 20585
202-586-4600, or leave a message 800-472-2756.

SUPPLEMENTAL INFORMATION:

Purpose and Need:

The purpose of the Proposed Action is to reduce or eliminate the retention of surface water to return the RFS surface water flow configuration to the approximate conditions existing prior to construction of the dams. The general purposes of the proposed dam modifications are to:

- Create a pond and drainage system that minimizes or eliminates maintenance and operation of the existing dams,
- Preserve and enhance wetlands and habitat to the extent practicable,
- Modify (breach) the dams such that they can be reclassified from jurisdictional to non-jurisdictional structures under the Office of the State Engineer regulations, if possible, while achieving the first two objectives stated above, and
- Reduce or eliminate the off-line storage of surface water at the site and the resultant need for a Substitute Water Supply Plan (and subsequent Augmentation Plan) to replace out-of-priority depletions via the Broomfield Water Lease and ultimately, filings with the water court for storage rights.

The dams are no longer needed for the original purpose. Breaching of the dams would reduce DOE costs and would not change DOE's obligations to monitor surface water and meet standards as required by RFLMA.

Description of the Proposed Action:

The Draft EA described that the Proposed Action would be implemented in two timeframes, with the PLF, A-3, and C-2 breaching to occur in 2011, and A-4 and B-5 breaching to be completed within the 2015 to 2018 timeframe. However, based on public concern statements, DOE has determined that postponing breaching the terminal dams A-4, B-5, and C-2 until the 2018 to 2020 timeframe would best serve to address concerns stated by local governments. The regulations for implementing the NEPA allow for modifications between the release of the Draft and Final EA in response to public comments (40 CFR 1503.4 (a)). Therefore, the Proposed Action for this Final EA entails breaching the terminal dam C-2 during the same timeframe as breaching terminal dams A-4 and B-5 (2018 to 2020). Accordingly, the timeframe for breaching the terminal dams A-4, B-5, and C-2 has been changed to 2018 to 2020 throughout this Final EA. Dams A-4, B-5, and C-2 would be operated in a flow-through configuration until breached.

Although completing the proposed action in 2011 is a valid option, DOE will complete part of the Proposed Action at a later date as suggested by the public. DOE believes this represents a more sound course of action. The timing for breaching of all dams was mainly determined based on project management, funding availability, expected costs, and public acceptance for breaching related to each of the individual dams. Therefore, the Proposed Action is divided into two timeframes:

- Breaching the dams at ponds A-3 and PLF in 2011 and;
- Breaching the dams at ponds A-4, B-5, and C-2 in the 2018 to 2020 timeframe.

The average construction duration for dam breaching at each structure is approximately 11 weeks. To modify the dam, a "breach" or "channel" would be cut into each dam to reduce its jurisdictional height, thus creating a lower-profile.

DOE would operate Ponds A-4, B-5, and C-2 in flow-through mode prior to the construction work to breach these dams. The discharge rates would be adjusted as necessary to maintain lower pond levels than normally encountered in the previous batch-and-release mode. This will serve to reestablish a continuous flow to the creeks downstream of the dams, allow the areas to become dry enough for construction, and allow erosion controls and revegetation along the pond edges to be started before the dam breach construction work.

Dam-specific information is provided in the text of the EA. The following generalized construction sequence is similar for all five dams:

- Dewater the pond using existing discharge valves, and/or pumping as necessary, several months prior to construction work (preceding winter/spring).
- Mobilize for construction: set up staging area, erosion controls, and stockpile area.
- Install a temporary coffer dam upstream for potential storm events (manage retained water upstream using pumps).

- Excavate soil from the breach channel and fill predefined fill areas (i.e., former spillways and roads to be reclaimed).
- Construct breach to engineering specs (side slopes, flowline, drop structure); armor the channel as necessary for erosion resistance.
- Regrade area upstream of channel to provide positive flow, minimize ponding, and promote establishment of quality habitat.
- Reclaim all disturbed areas.

Alternatives:

NEPA regulations and DOE’s implementation guidelines require that an EA include a discussion of the No Action alternative. The No Action alternative provides a baseline against which the effects of the Proposed Action would not be implemented and the site-specific and direct impacts associated with the Proposed Action would not occur. Under the No Action alternative, water would be routed according to current configuration and managed using the current operating protocol. Environmental monitoring would continue in accordance with RFLMA. Operation and maintenance of the dams and necessary structures would continue to require maximum resources.

Environmental Impacts:

DOE’s conclusions about the Proposed Action’s environmental impacts are based on information contained in the EA. DOE examined potential impacts on the following resources:

- Wildlife
- Migratory birds
- Threatened & Endangered Plant and Wildlife Species
- Vegetation
- Wetlands
- Floodplains
- Surface water flow
- Surface water quality
- Air quality

DOE has concluded that all potential impacts from the Proposed Action can be mitigated, as appropriate to the resource, and no impacts are considered significant. Mitigation measures may be imposed by regulation or through the final CAD/ROD for Rocky Flats. Although the dams that are proposed to be breached are not required by the CAD/ROD, certain aspects of the work are subject to institutional controls within the Central Operable Unit (COU) and regulated by RFLMA requirements. The RFLMA requirements are focused on water quality standards, monitoring, sampling, and surface disturbing activities. All RFLMA required monitoring will remain. Section 3.1.7 of the EA describes institutional controls and associated mitigation measures that are specific to all dam breaching activities, and these mitigation measures will be followed.

Table ES-2 of the Final EA provides resource-specific impact and mitigation measures. The following Table 1 provides a summary of the expected impacts, and associated mitigation measures that will be conducted in connection with the Proposed Action.

Table 1. Resource-Specific Impacts and Mitigation for the Proposed Action

Resource	Proposed Action
Wildlife	<p>Impacts:</p> <ul style="list-style-type: none"> • Restore a more natural, seasonally variable flow system to provide more consistent water for downstream habitat. • Temporary disturbance from construction noise. • Eliminate surface water habitat for species. • Reduced disturbance from human activities for monitoring and maintenance. <p>Mitigation:</p> <ul style="list-style-type: none"> • Water levels in the ponds will be drawn down prior to construction activities to provide the opportunity for species to use nearby habitats. • Vegetation at the construction footprint will be mowed to 6 inches or less to help encourage species to use other habitat locations.
Migratory Birds	<p>Impacts:</p> <ul style="list-style-type: none"> • Noise and construction activities to foraging and nesting activities in the adjacent habitat, but no fatalities are expected because of prescribed mitigation measures. • Reductions in the abundance of waterfowl at the ponds; however, these types of habitats are available within a few miles of the RFS. • Species that forage and nest in emergent and shrub wetland habitat types would potentially increase following reclamation. • Reduced disturbance from human activities for monitoring and maintenance. <p>Mitigation:</p> <p>Activities are planned to occur throughout the primary nesting season for birds (April 1 through August 31), therefore:</p> <ul style="list-style-type: none"> • A qualified biologist will conduct field nest surveys prior to and regularly throughout construction. • If the survey identifies active nests that cannot be avoided, USFWS will be contacted immediately for guidance. • Results of the surveys and information regarding the qualifications of the biologist(s) will be documented and maintained on file for potential review by USFWS (if requested) until the Proposed Action activities have been completed. • Water levels in the ponds and vegetation clearing will occur as described under wildlife impacts. Based on the results of surveys, and determination from USFWS, additional nesting deterrents may be warranted.
Threatened & Endangered Plant and Wildlife Species	<p>Impacts:</p> <ul style="list-style-type: none"> • Approximately 1 acre of Preble's mouse habitat would be impacted during construction. • Increase in Preble's habitat expected with conversion from open water to emergent wetland/shrubland. • Possible minimal impacts to individual garter snakes and northern leopard frogs. • Minimal long-term effect is expected because the re-established stream channels would provide habitat. <p>Mitigation:</p> <ul style="list-style-type: none"> • In compliance with Section 7 of the Endangered Species Act, consultation with USFWS will be conducted via an amendment to the existing Programmatic Biological Assessment. • No earth-moving activities will be started until either the approval letter or Biological Opinion from USFWS has been obtained. • Mitigation for impacts will be conducted in-situ and follow guidelines in the Programmatic Biological Assessment.

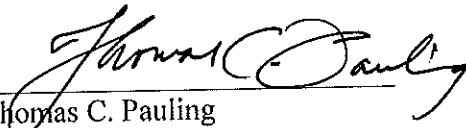
Table 1 (continued). Resource-Specific Impacts and Mitigation for the Proposed Action

Resource	Proposed Action
Vegetation	<p>Impacts:</p> <ul style="list-style-type: none"> • Clearing of 26 acres of vegetation (including noxious weeds) due to construction. • Reseeding of native species and ongoing weed control would provide a higher quality ecosystem. <p>Mitigation:</p> <ul style="list-style-type: none"> • Use of appropriate erosion controls throughout and after the project. • The guidance in the <i>Erosion Control Plan for the Rocky Flats Property Central Operable Unit</i> (DOE 2007b) will be followed. • Temporarily disturbed areas will be reclaimed following project completion using native plant species. • Revegetation will occur as soon as possible. • Noxious weeds will be controlled using appropriate weed control measures. • A qualified ecologist, botanist, or environmental scientist will oversee all mitigation measures.
Wetlands	<p>Impacts:</p> <ul style="list-style-type: none"> • Less than 0.5 acre of palustrine emergent/shrubland wetland and approximately 4 acres of open water habitat. • Five to six acres of palustrine emergent/shrubland wetland created in the former open water habitat, which would increase the aquatic resources functions and services. <p>Mitigation:</p> <ul style="list-style-type: none"> • A section 404 permit in accordance with the Clean Water Act will be required and obtained prior to any earth-disturbing activities (U.S. Army Corps of Engineers' review comments indicate Nationwide Permit 27 will be applicable). • Impacts to jurisdictional waters will be mitigated according to USACE requirements.
Floodplains	<p>Impacts:</p> <ul style="list-style-type: none"> • Minimal and limited to construction areas. • Would approximately re-establish the historic floodplain and stream channel through the pond bottoms (except at Pond C-2). <p>Mitigation:</p> <ul style="list-style-type: none"> • Same as mitigation measures for wetlands.
Surface water flow	<p>Impacts:</p> <ul style="list-style-type: none"> • Larger flows and volumes downstream compared to current conditions with return to flood conditions prior to the original construction of the dams. • Short-term erosion associated with construction. • Would eventually eliminate evaporative depletions associated with the retention of out-of-priority water. <p>Mitigation:</p> <p>A construction general permit for stormwater discharge from EPA will be required prior to commencing the work.</p>
Surface water quality	<p>Impacts:</p> <ul style="list-style-type: none"> • No direct impacts on water quality. • Individual sample results downstream are expected to show increased variability. Data indicate that remedy-related soil and infrastructure removal, revegetation, land configuration, and reductions in runoff would continue to result in water quality summary statistics that meet applicable standards. • RFLMA monitoring requirements would remain the same. <p>Mitigation:</p> <ul style="list-style-type: none"> • Monitoring in accordance with RFLMA requirements to continue. • A construction general permit for stormwater discharge from EPA will be required prior to commencing the work.
Air Quality	<p>Impacts:</p> <ul style="list-style-type: none"> • Releases of particulate matter less than 10 microns (PM₁₀), particulate matter less than 2.5 microns (PM_{2.5}), and Ozone (O₃) are expected to be minimal during construction. <p>Mitigation:</p> <ul style="list-style-type: none"> • Contractor to obtain any required air quality construction permits prior to start of the construction work. • The contractor would provide proof of age of equipment, per CDPHE requirements. • Construction activities will stop during periods of high winds.

Determination:

Based on the EA analysis, and environmental protection measures identified for the Proposed Action, no mitigation beyond that already proposed would potentially have adverse environmental impacts. A separate mitigation action plan is not required for the Proposed Action. DOE has determined that the adoption of the Proposed Action would not constitute a major federal action significantly affecting the quality of the human environment, within the meaning of NEPA. Therefore, an EIS is not required, and DOE is issuing this FONSI for the Proposed Action.

Issued:



Thomas C. Pauling
Director, Office of Site Operations

5/31/2011
Date