



# Post-Tropical Cyclone Harvey

## Event Report (Update #16)

<b>REPORT TIME &amp; DATE:</b>	4:00 PM EDT   Saturday, September 2, 2017
<b>INCIDENT START DATE:</b>	Friday, August 25, 2017
<b>PRIMARY LOCATION(S):</b>	Gulf Coast (Texas and Louisiana)
<b>REPORT DISTRIBUTION:</b>	Public @ <a href="https://energy.gov/oe/downloads/hurricane-harvey-situation-reports-august-2017">https://energy.gov/oe/downloads/hurricane-harvey-situation-reports-august-2017</a>

### EXECUTIVE SUMMARY

As of 12:15 PM EDT, parts of Southeast Texas are under an extended Flood Warning until further notice. In the region, partly cloudy skies are expected with highs in the upper 80s and lower 90s. Patchy fog will develop over the northern Coastal Bend to the Victorian Crossroads later tonight. According to the National Weather Service, the Neches River (not to be confused with the Nueces River) will continue to rise to near 14.8 feet by Saturday evening then begin falling. Flooding is also occurring along the river in Beaumont.

### Electricity Sector Impacts – Texas (as of 2:30 PM EDT)

- As of 2:30 PM EDT, September 2, Texas has 114,771 customer outages (1% of total state customers) according to EAGLE-I and additional utilities not captured in EAGLE-I.
  - Entergy Texas has 51,180 customer outages. This is a 3.6% decrease.
  - AEP Texas has 50,021 customer outages. This is a 1.7% decrease.
  - CenterPoint Energy has 8,597 customer outages. This is a 55% decrease.
- AEP Texas crews have re-energized 44 transmission lines and continue to work to re-energize 18 transmission lines still out of service. AEP has re-energized 56 substations. They remain working on 11 still out.
- Entergy Texas has reported there are currently 252 miles of transmission lines out and 13 flooded substations within their service territory. As of this morning, 90% of damage assessments are complete in areas not impeded by flood waters.

### Oil and Natural Gas Sector Impacts (as of 2:30 PM EDT)

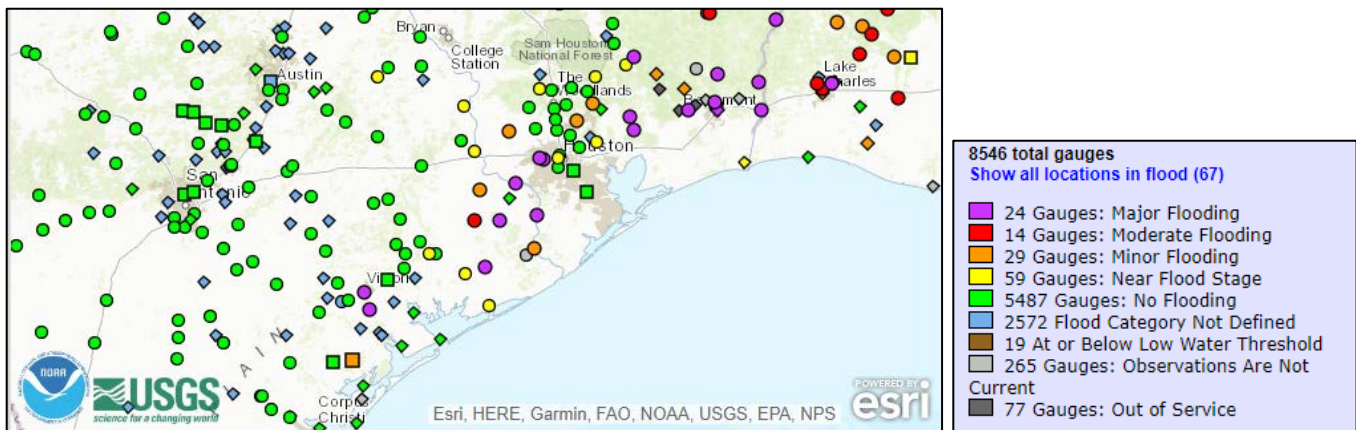
- Seven refineries had begun the process of restarting from being shut down. This process may take several days or weeks to start producing product, depending whether any damage is found. One refinery was identified as having begun restart operations since the last report. These refineries have a combined capacity of 1,528,720 b/d, equal to 15.8% of total Gulf Coast (PADD 3) refining capacity and 8.3% of total U.S. refining capacity.
- Four refineries in the Gulf Coast region were operating at reduced rates. One refinery, which had been operating at reduced rates, began operating at full rates since the last report. The refineries operating at reduced rates have a combined total capacity of 1,338,776 b/d, equal to 13.8% of total Gulf Coast (PADD 3) refining capacity and 7.2% of total U.S. refining capacity. (NOTE: Actual crude throughput (production) reductions are lower than combined capacity).
- Colonial restoration crews are assessing facilities and the pipeline right of way to ensure conditions are safe for a restart of operations from Houston and Pasadena. Work also continues

to resume operations from other Texas injection points, which are expected to occur after Houston/Pasadena. Currently, only Texas operations are down, and the remainder of the Colonial system continues to operate with available supply.

- FEMA has established a “Rumor Control” website: <https://www.fema.gov/hurricane-harvey-rumor-control>

**INCIDENT OVERVIEW**

- As of 12:15 PM EDT, parts of Southeast Texas are under an extended Flood Warning until further notice. In the region, partly cloudy skies are expected with highs in the upper 80s and lower 90s. Patchy fog will develop over the northern Coastal Bend to the Victorian Crossroads later tonight. According to the National Weather Service, the Neches River (not to be confused with the Nueces River) will continue to rise to near 14.8 feet by Saturday evening then begin falling. Flooding is also occurring along the river in Beaumont. The Flood Warning for the Buffalo Bayou near Piney Point Villlage in Harris County is also in effect until further notice. The Buffalo Bayou is expected to fall to a stage of 62.1 feet by Sunday morning.



**ELECTRICITY SECTOR**

**ELECTRICITY OUTAGE DATA**

ELECTRICITY OUTAGES AS OF 2:30 PM EDT 09/02/2017			
Impacted State	Current Confirmed Customer Outages	Percent of Confirmed State Customers without Power	24-hr Peak Customer Outages
Texas	114,771	1%	156,716
Total	114,771	-	*

\*There is no sum of the Peak Customer Outage column because peaks for individual utilities occur at different times; a total would not reflect peak outages.

- Texas
  - As of 2:30 PM EDT, September 2, Texas has 114,771 customer outages (1% of total state customers).
    - Entergy Texas has 51,180 customer outages. This is a 3.6% decrease.
    - AEP Texas has 50,021 customer outages. This is a 1.7% decrease.
    - CenterPoint Energy has 8,597 customer outages. This is a 55% decrease.
  - AEP Texas crews have re-energized 44 transmission lines and continue to work to re-energize 18 transmission lines still out of service. AEP has re-energized 56 substations. They remain working on 11 still out.
  - Entergy Texas has reported there are currently 252 miles of transmission lines out and 13 flooded substations within their service territory. As of this morning, 90% of damage assessments are complete in areas not impeded by flood waters.
  - CenterPoint Energy is reporting 99.62% of customers have power. High water continues to be a factor in restoration, including Brazoria County.

**OIL & GAS SECTOR**

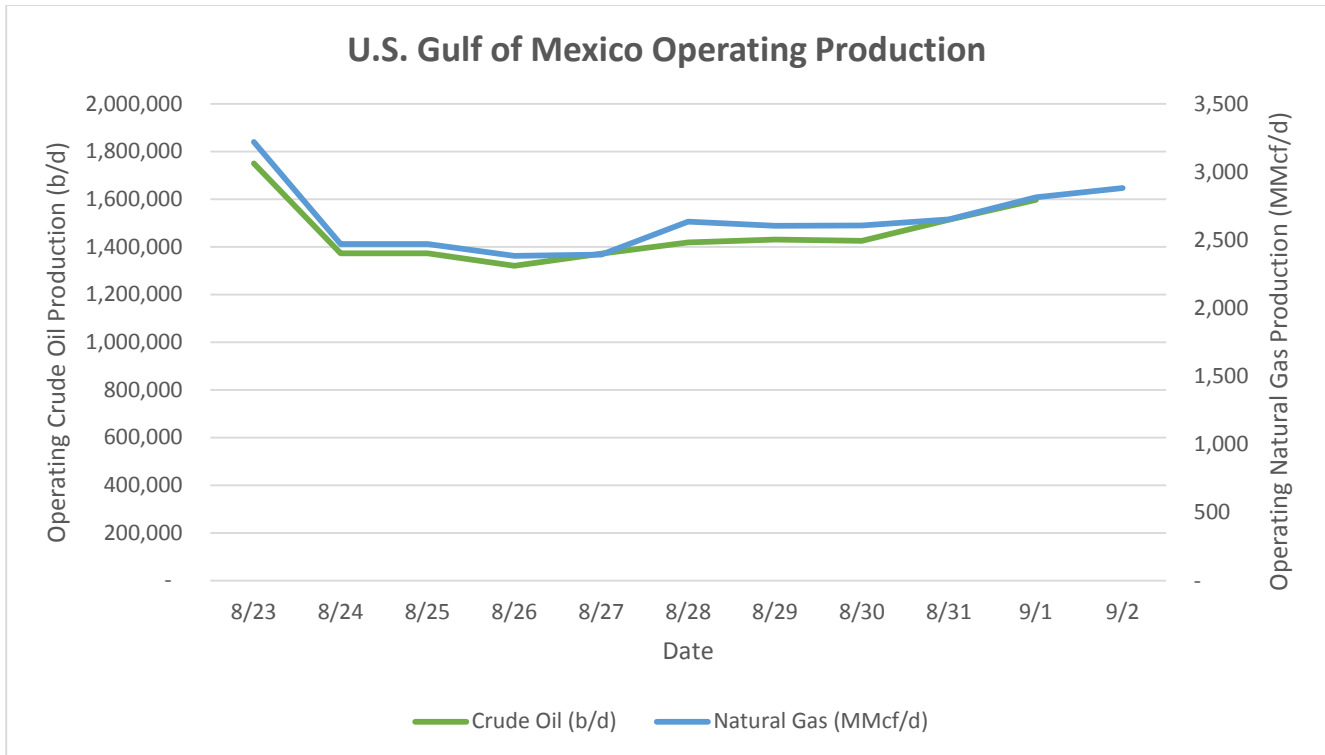
**OFFSHORE PRODUCTION**

- As of 12:30 PM EDT, September 2, 106,813 b/d (6.1%) of the oil production and 337.2 MMcf/d (10.47%) of the natural gas production in the federally administered areas of the U.S. Gulf of Mexico are shut-in, according to estimates by the Bureau of Safety and Environmental Enforcement (BSEE).

<b>U.S. Gulf of Mexico Oil &amp; Gas Production Status</b> <i>as of 12:30 PM EDT 09/02/2017</i>			
<b>Production</b>	<b>Pre-Event</b>	<b>Shut-In (09/01)</b>	<b>Shut-In (09/02)</b>
Crude Oil (b/d)	1,750,000	152,989	106,813
Natural Gas (MMcf/d)	3,220	405.99	337.2
<b>Infrastructure</b>	<b>Pre-Event Count</b>	<b>Evacuated (09/01)</b>	<b>Evacuated (09/02)</b>
Manned Platforms	737	75	43
Rigs	31	0	0

Source: BSEE: <https://www.bsee.gov/resources-tools/hurricane/activity-statistics-update>





Source: BSEE

**ONSHORE PRODUCTION**

- On August 26, the Texas Railroad Commission estimated that approximately 300,000 to 500,000 b/d of crude production had been shut-in in the Eagle Ford region from a pre-storm production estimate of 870,000 b/d. In addition, approximately 3.0 Bcf/d of natural gas production had been shut-in from a pre-storm production estimate of about 6.0 Bcf/d. The Commission had expected most idled production to come back online in the next few days.

**PETROLEUM REFINERIES**

- As of 03:00 PM EDT, September 2, nine refineries in the Gulf Coast region were shut down, according to public reports. One refinery was identified as having begun restart operations since the last report. These refineries have a combined refining capacity of 2,357,229 b/d, equal to 24.3% of total Gulf Coast (PADD 3) refining capacity and 12.7% of total U.S. refining capacity.
- Seven refineries had begun the process of restarting from being shut down. This process may take several days or weeks to start producing product, depending whether any damage is found. One refinery was identified as having begun restart operations since the last report. These refineries have a combined capacity of 1,528,720 b/d, equal to 15.8% of total Gulf Coast (PADD 3) refining capacity and 8.3% of total U.S. refining capacity.
- Four refineries in the Gulf Coast region were operating at reduced rates. One refinery, which had been operating at reduced rates, began operating at full rates since the last report. The refineries operating at reduced rates have a combined total capacity of 1,338,776 b/d, equal to 13.8% of total Gulf Coast (PADD 3) refining capacity and 7.2% of total U.S. refining capacity. (NOTE: Actual crude throughput (production) reductions are lower than the total combined capacity).

## PORTS

- The U.S. Coast Guard has set the following conditions for ports and waterways in the U.S. Gulf Coast region as a result of Harvey.

<b>Status of Texas and Louisiana Gulf Coast Ports as of 2:30 PM EDT 09/02/2017</b>		
<b>Port</b>	<b>Status</b>	<b>Date Stamp</b>
<b>Sector Corpus Christi</b>		
Brownsville	Open.	08/31/17
Corpus Christi	Port Condition Recovery. Open with restrictions. Allowing vessels up to 43' draft to transit during daytime hours only. Larger vessels allowed one-way transits during daylight hours only. Ship channel also open with restrictions. Working to reopen completely 09/04.	08/31/17
<b>Sector Houston and Galveston</b>		
Freeport	Open.	09/01/17
Galveston	Port Condition Recovery. Open with restrictions. Ship channel also open with restrictions. Limited to daylight hours for vessels with < 33' draft. Galveston Bay Entrance Channel, Outer Bar Channel, Bolivar Roads Anchorages, Bolivar Roads Channel, and Galveston Harbor open.	09/01/17
Houston	Port Condition Recovery. Open with restrictions. Houston Ship Channel above LB18 to Mitchell's Point open.	09/01/17
Texas City	Port Condition Recovery. Open with restrictions. Texas City Channel, Texas City Turning Basin, and Industrial Canal open.	09/01/17
<b>Sector Port Arthur and Lake Charles</b>		
Beaumont	Port Condition Recovery. Open with restrictions. 30' draft restriction for all waters of the Sabine-Neches Waterway.	08/31/17
Lake Charles	Port Condition Recovery. Open with restrictions. 37 feet draft restrictions of the Calcasieu Ship Channel.	08/31/17
Nederland	Port Condition Recovery. Open with restrictions. 30' draft restriction for all waters of the Sabine-Neches Waterway.	08/31/17
Orange	Port Condition Recovery. Open with restrictions. 30' draft restriction for all waters of the Sabine-Neches Waterway.	08/31/17
Port Arthur	Port Condition Recovery. Open with restrictions. 30' draft restriction for all waters of the Sabine-Neches Waterway.	08/31/17
Port Neches	Port Condition Recovery. Open with restrictions. 30' draft restriction for all waters of the Sabine-Neches Waterway.	08/31/17
Sabine Pass	Port Condition Recovery. Open with restrictions. 30' draft restriction for all waters of the Sabine-Neches Waterway.	08/31/17

Source: U.S. Coast Guard



**RAIL**

- Rail is critical for the delivery of ethanol to petroleum product terminals for gasoline blending and for the movement of refinery byproducts, including propane, butanes, and sulfur out of refineries. The following rail lines have reported disruptions:

<b>Status of Texas and Louisiana Gulf Coast Rail Infrastructure as of 2:30 PM EDT 09/02/2017</b>		
<b>Rail Company</b>	<b>Status</b>	<b>Date Stamp</b>
BNSF	Major disruptions due to washouts. Houston Subdivision has resumed service, as well as greater portion of Galveston Subdivision, along with other smaller Subdivisions. Beaumont remains closed. Train loading and unloading resumed at Pearland Intermodal Facility.	09/01/17
CSX Corp.	Closely watching weather conditions in Louisiana and the southwestern portion of its operating network.	08/30/17
Kansas City Southern Railway	Force majeure and an embargo on network in Texas remains in effect. Assessments have indicated a few areas where maintenance will be required before reopening the line. When transit resumes, delays should be expected on all routes while backlogs are reduced and speed restrictions are imposed given the conditions and repair work.	09/01/17
Union Pacific	Routes through San Antonio opened up allowing for trains to be run both north and south between San Antonio and Hearne, TX. Reorganizing major rail yards at Settegast, and Englewood. Repairs complete on some infrastructure in Houston and South Texas. Cleanup operations underway at Houston yards 8/31. Repaired track between Houston and Bryan, Texas and between Houston and Angleton, Texas. Currently working on Houston-San Antonio track repairs.	09/01/17
YRC Freight	Houston terminal closed.	08/29/17

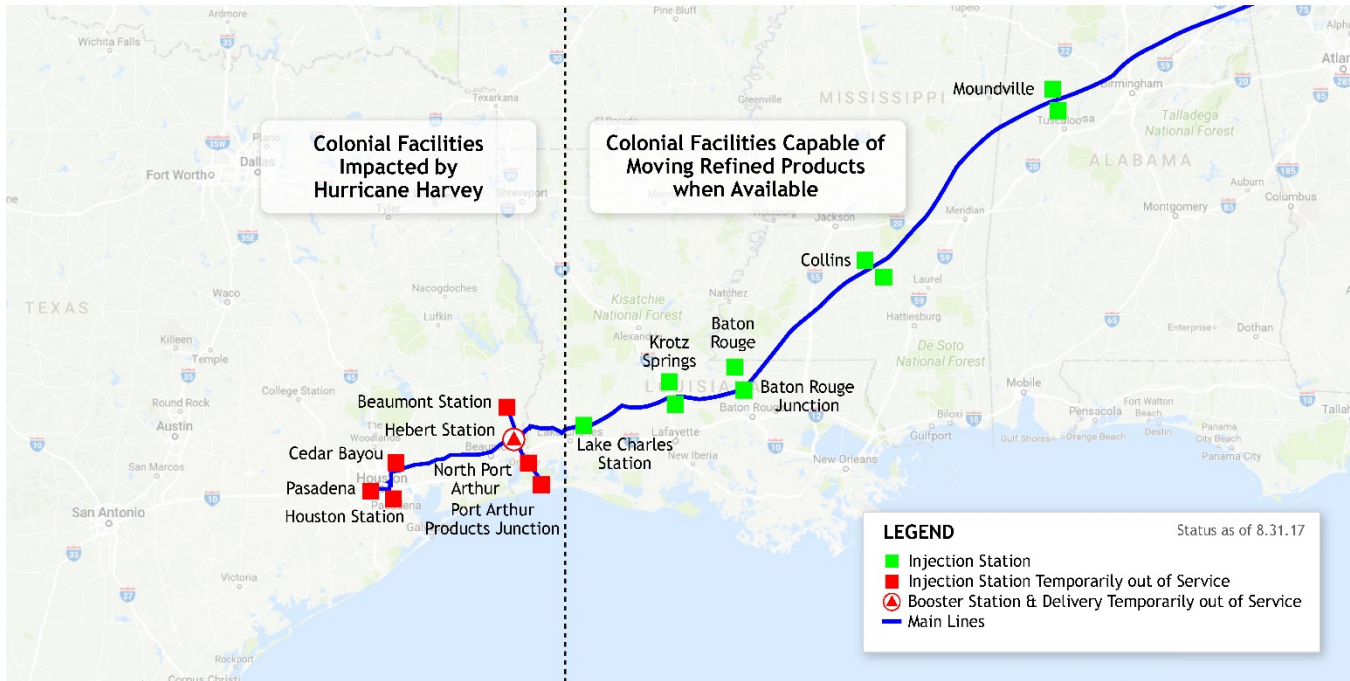
**COLONIAL PIPELINE**

- Colonial's Lines 1 and 2 continue to operate from Lake Charles east. Deliveries will be intermittent and dependent on terminal and refinery supply. The lines remain down from Houston to Hebert due to the storms.
- Colonial estimates that it will be able to return to service from Houston Sunday, following an evaluation of its infrastructure and successful execution of its start up plan. Of the 26 refineries that connect to the Colonial system, 13 are located between Houston and Lake Charles.
- Colonial is one part of the fuel delivery system, and there are multiple means of supplying the market to mitigate concerns with supply, including other pipelines, trucks, and barges.
- Colonial's top priorities remain the safety of its personnel and integrity of its system will remain the top priorities. For more updates: <https://harvey.colonialresponse.com/>



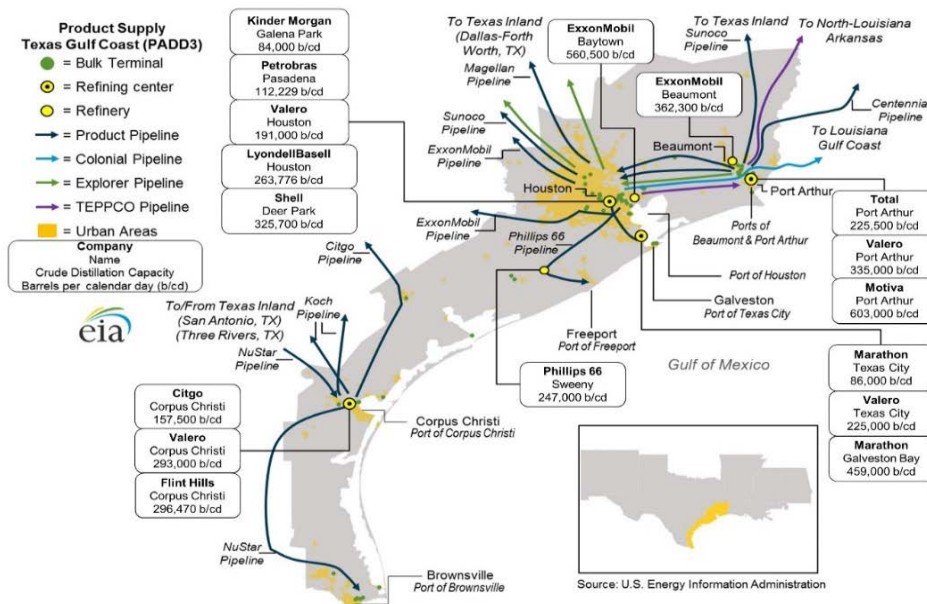


# Colonial Pipeline Gulf Coast Status Map



## OTHER PRODUCT PIPELINES

- Below is a map of refineries and petroleum product pipelines in the Texas Gulf Coast for awareness.



Source: EIA: <https://www.eia.gov/analysis/transportationfuels/padd1n3/>

## WAIVERS

- The table below lists fuel-related waivers issued by the U.S. Environmental Protection Agency (U.S. EPA) and State agencies.
- On August 30, U.S. EPA issued a multi-state (13 states) waiver for requirements of low-RVP conventional gasoline and reformulated gasoline (RFG). Later in the day, the waiver was expanded to include 38 states and Washington, DC.

State Fuel Waivers as of 2:30 PM EDT 09/02/2017					
State	Waiver	Issued By	Effective Dates		Status
			Start	End	
Multi-state waiver	<p><b>RVP</b> standard waived for gasoline sold in affected counties where low-RVP gasoline is required (9.0 RVP or lower). Allows sale of gasoline up to 11.5 psi RVP in all states located in PADD 1, PADD 2, and PADD 3. The waiver supersedes and expands the areas covered by the August 30 waiver.</p> <p><b>RFG</b> standard is also waived in the designated regions. Also waived are provisions prohibiting the blending of RFG blendstock with conventional gasolines or blendstocks.</p>	U.S. EPA	08/30/17 Expanded: 08/31/17	09/15/17	Active
TX	<b>RFG</b> requirement waived in Houston-Galveston-Brazoria areas. Waiver expanded to four-county Dallas-Fort Worth RFG area 8/26. Allows the sale or distribution of conventional gasoline.	U.S. EPA	08/25/17	09/15/17	Active
TX	<b>7.8 psi RVP</b> standard waived for gasoline sold in 20 counties where low-RVP gasoline is required and are also under the Governor's Disaster Declaration. Waiver expanded to 98 counties required to use low-RVP fuel 8/26. Allows sale of gasoline up to 9.0 psi RVP.	U.S. EPA	08/25/17	09/15/17	Active
LA	RVP requirements of 7.8 psi and 9.0 psi waived in applicable areas. Permits the sale or distribution of winter gasoline with an 11.5 psi RVP.	State of Louisiana	08/29/17 Expanded: 08/30/17	09/15/17	Active
MI	<b>RVP</b> regulations waived. Permits the transportation and sale of motor fuels 9.0 psi RVP in Wayne, Oakland, Macomb, St. Clair, Livingston, Washtenaw, Monroe, and Lenawee counties, and up to 11.5 psi RVP elsewhere in Michigan.	State of Michigan	08/31/17	09/15/17	Active





State Fuel Waivers as of 2:30 PM EDT 09/02/2017					
State	Waiver	Issued By	Effective Dates		Status
			Start	End	
MS	RVP standards of 9.0 psi waived. Permits the sale or distribution of winter gasoline with an 11.5 psi RVP.	State of Mississippi	08/30/17	09/15/17	Active
VA	Waived the RVP limit for gasoline ethanol blends prescribed by regulations.	State of Virginia	09/01/17	09/15/17	Active

Sources: [U.S. Department of Transportation](#); Governor Office Websites

- Nine states have declared state emergencies due to Harvey. These declarations automatically waive select Federal Motor Carrier Safety Regulations (FMCSRs), including hours-of-service (HOS) regulations, for motor carriers hauling resources to aid in restoration efforts. The declarations exempt FCMSR in every state along the motor carrier’s route as long as the final destination is with the declared disaster areas in Texas or Louisiana.
- In addition, the Federal Motor Carrier Safety Administration (FMCSA) declared that issued a Regional Emergency Declaration exempting FMCSRs in the States of Texas and Louisiana. On August 31, the FMCSA expanded the Regional Emergency Declaration to additional states and Washington, DC.
- The table below summarizes emergency declarations and HOS waivers issued by states.

State Emergency Declarations and HOS Waivers as of 2:30 PM EDT 09/02/2017				
State	Details	Effective Dates		Status
		Start	End	
<b>Regional (Multi-State)</b>	Regional Emergency Declaration and FMCSR waiver issued by FMCSA. Applies to Alabama, Arkansas, Colorado, Connecticut, Delaware, Florida, Georgia, Illinois, Indiana, Kansas, Kentucky, Louisiana, Maryland, Mississippi, Missouri, New Jersey, New York, North Carolina, Ohio, Oklahoma, Pennsylvania, Tennessee, Texas, South Carolina, Virginia, Washington, D.C. and West Virginia	08/25/17 Expanded 08/31/17	10/26/17	Active
Texas	State of Disaster declared for 61 counties in Texas.	08/23/17 Expanded: 08/30/17 09/01/17	TBD	Active
Louisiana	State of Emergency.	08/23/17	TBD	Active
Kentucky	HOS waiver issued for transporters of food, water, medicine, fuel and other commodities within the affected areas to aid in emergency response of affected areas. All economic	08/28/17	09/27/17	Active



State Emergency Declarations and HOS Waivers as of 2:30 PM EDT 09/02/2017				
State	Details	Effective Dates		Status
		Start	End	
	requirements normally associated with interstate motor transportation for all vehicles providing relief supplies to affected areas.			
Alabama	State of Emergency/HOS waiver issued for petroleum products and petroleum-related supplies, goods, and services in and through the State.	08/30/17	09/29/17	Active
Georgia	State of Emergency/HOS waiver issued for petroleum products through the State.	08/30/17	09/20/17	Active
Kansas	Governor acknowledged state of emergency in Texas and declared that licensing rules, registration and fuel tax permits, and oversize vehicle permit fees are waived for motor carriers and persons operating motor vehicles directly participating in the relief and restoration effort.	08/30/17	09/20/17	Active
North Carolina	State of Emergency/HOS waiver issued for petroleum products, and emergency relief supplies and services through the state.	08/31/17	09/30/17	Active
South Carolina	State of Emergency/HOS waiver issued for petroleum products through the state.	08/31/17	09/30/17	Active
Michigan	State of Emergency/HOS waiver issued for petroleum products through the state.	08/31/17	09/15/17	Active
Virginia	State of Emergency/HOS waiver issued for petroleum products through the state.	09/01/17	09/15/17	Active



**DOE Strategic Petroleum Reserve Status (from the Office of Fossil Energy)**

DOE Strategic Petroleum Reserve Site Status <i>(as of 5/2/2017)</i>				
	Bayou Choctaw Site	West Hackberry Site	Big Hill Site	Bryan Mound Site
<b>Commercial Power Availability</b>	Available	Available	Available	Available
<b>Drawdown Capability</b>	Drawdown Ready	Drawdown Ready	Drawdown Ready	Drawdown Ready

- In response to the impacts from Hurricane Harvey, the U.S. Secretary of Energy has authorized the Strategic Petroleum Reserve (SPR) to negotiate and execute emergency exchange agreements with four refineries for up to 5.3 million barrels of crude oil from SPR’s West Hackberry and Bayou Choctaw sites. Authorized exchanges are summarized in the table below.

SPR Authorized Exchanges		
Requesting Refinery	SPR Draw Down Site	Amount Authorized (up to)
Phillips 66 Lake Charles Refinery (First Request)	West Hackberry	200,000 barrels sweet crude; 300,000 barrels sour crude
Phillips 66 Lake Charles Refinery (Second Request)	West Hackberry	200,000 barrels sweet crude; 300,000 barrels sour crude
Marathon Petroleum Company	Bayou Choctaw	3,000,000 barrels sweet crude
Valero Marketing and Supply Company (First Request)	Bayou Choctaw	500,000 barrels sweet crude
Valero Marketing and Supply Company (Second Request)	Bayou Choctaw	500,000 barrels sweet crude
Placid Refining Company LLC	Bayou Choctaw	300,000 barrels sweet crude