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Latest saltwater wedge forecast released by USACE

Additional treatment facilities may not experience chloride levels that exceed 250 parts per million

NEW ORLEANS – The U.S. Army Corps of Engineers, New Orleans District released today the latest Saltwater Wedge Timeline forecast of when water treatment facilities may be impacted by saltwater intrusion.

USACE uses the National Weather Service 28-day Lower Mississippi River forecast, daily river observations and computer modeling to project the progression of the saltwater intrusion as it relates to the multiple municipal water treatment facilities along the river.

Updates based on the latest forecast:

1. Boothville: No change
2. Port Sulphur: No change
3. Pointe A La Hache: No change
4. Belle Chasse: Oct. 27 (previously Oct. 13)
5. Dalcour: Nov. 1 (previously Oct. 17)
6. St. Bernard: Nov. 8 (previously Oct. 28)
7. New Orleans Algiers: Not anticipated to experience chloride levels exceeding 250 ppm (previously Nov. 23)
8. Gretna: Not anticipated to experience chloride levels exceeding 250 ppm (previously Nov. 26)
9. West Jefferson: No change
10. New Orleans Carrollton: No change
11. East Jefferson: No change

The updated Saltwater Wedge Timeline is available on the New Orleans District website here: <https://www.mvn.usace.army.mil/Missions/Engineering/Stage-and-Hydrologic-Data/SaltwaterWedge/>

The change in forecast is largely the result of augmentation of the existing underwater sill and increased flows of the Red River, requiring less diversion at the Old River Control Structure.

Augmentation of the underwater sill, constructed in July, began in late September. As of this week construction has brought the sill up from an elevation of -55 to -30 feet from the river surface, while maintaining a channel at -55 for deep draft navigation on the Mississippi River.

In addition to the sill augmentation, rainfall in the Red River Basin has increased flows on the Red River. The combined flows of the Mississippi and Red rivers are used to calculate the Congressionally authorized 70/30 distribution at the Old River Control Structure. With increased flows on the Red River, less water is required to maintain the authorized distribution at Old River Control Structure allowing for greater flows down the Mississippi River.

The combination of the sill augmentation and increased river flows has led to a regression of the saltwater wedge upriver from the sill. The toe of the saltwater wedge was measured Oct. 9 at river mile 63.9, the approximately location of the sill.

The new forecast shows delayed impacts at facilities upriver, but water treatment facilities in Plaquemines Parish are still impacted by the saltwater intrusion. The impacts date for the Belle Chase treatment facility is now forecast for Oct. 27, about two weeks later from the previous forecast. Treatment facilities in Port Sulphur and Pointe A La Hache are currently experiencing impacts from saltwater intrusion.

USACE began barging water to the Port Sulphur and Pointe A La Hache treatment facilities to blend with water from the intakes to bring the chloride down to treatable levels. To date, USACE has delivered more than 9 million gallons of water. USACE has also mobilized Reverse Osmosis Units to support processing at water treatment facilities impacted by saltwater intrusion.

The intrusion of salt water into the river is a naturally occurring phenomenon because the bottom of the riverbed between Natchez, Miss., and the Gulf of Mexico is below sea level. Denser saltwater moves upriver along the bottom of the river beneath the less dense fresh water flowing downstream. Under normal conditions, the downstream flow of the river prevents significant upriver progression of the salt water. However, in times of extreme low volume water flow, such as what has been occurring this year, unimpeded salt water can travel upriver and threaten municipal drinking water and industrial water supplies. An underwater sill was constructed on four previous occasions in 1988, 1999, 2012 and last year in 2022.

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