



**US Army Corps  
of Engineers** ®  
Fort Worth District

# Public Notice

Applicant: North Texas Municipal Water District/Greater  
Texoma Utility Authority

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Project No.: SWT-0-01311

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Date: October 21, 2011

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The purpose of this public notice is to inform you of a proposal for work in which you might be interested. It is also to solicit your comments and information to better enable us to make a reasonable decision on factors affecting the public interest. We hope you will participate in this process.

## **Regulatory Program**

Since its early history, the U.S. Army Corps of Engineers has played an important role in the development of the nation's water resources. Originally, this involved construction of harbor fortifications and coastal defenses. Later duties included the improvement of waterways to provide avenues of commerce. An important part of our mission today is the protection of the nation's waterways through the administration of the U.S. Army Corps of Engineers Regulatory Program.

## **Section 10**

The U.S. Army Corps of Engineers is directed by Congress under Section 10 of the Rivers and Harbors Act of 1899 (33 USC 403) to regulate *all work or structures in or affecting the course, condition or capacity of navigable waters of the United States*. The intent of this law is to protect the navigable capacity of waters important to interstate commerce.

## **Section 404**

The U.S. Army Corps of Engineers is directed by Congress under Section 404 of the Clean Water Act (33 USC 1344) to regulate the *discharge of dredged and fill material into all waters of the United States, including wetlands*. The intent of the law is to protect the nation's waters from the indiscriminate discharge of material capable of causing pollution and to restore and maintain their chemical, physical and biological integrity.

## **Contact**

Name: Mr. Andrew Commer

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Phone Number: 918-669-7400

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**PUBLIC NOTICE**  
**(15-DAY COMMENT PERIOD)**

Permit Number: SWT-0-01311

Interested parties are hereby notified that the District Engineer (DE) is considering modification of a Department of the Army permit issued in 1987 under the authority of Section 10 of the Rivers and Harbors Act of 1899 and Section 404 of the Clean Water Act. The permit authorized the construction and operation of a raw water intake structure in Lake Texoma with a transfer pipeline and outfall on West Prong of Sister Grove Creek for in-stream delivery to Lake Lavon. The applicant's water treatment plant lies adjacent to Lake Lavon, and this system allows the permittee to blend the saline Texoma waters with less saline waters of Lake Lavon prior to treatment.

The modification of the permit is necessary to assure that the operation authorized by the permit minimizes adverse impact on fish, wildlife, and the natural environment.

Name of Co-Permittees: North Texas Municipal Water District (NTMWD)  
Post Office Box 2408  
Wylie, TX 75098

Greater Texoma Utility Authority (GTUA)  
5100 Airport Drive  
Denison, TX 75020

Location: The water intake structure is located in Wisdom Cove of Lake Texoma, approximately 3.5 miles due west of Denison Dam, Grayson County, Texas. The project site can be found on the Pottsboro, Texas, 7.5 Minute U.S. Geological Survey (USGS) Quadrangle Map. The intake structure is located near Latitude 33.8465° N, Longitude 96.6301° W, NAD83.

History: In 1987, the Tulsa District issued a Section 10/404 permit to co-permittees NTMWD and GTUA to construct a water intake structure in Lake Texoma (Red River watershed) for the purpose of supplementing the water into Lake Lavon to meet regional water supply demands. The NTMWD's raw water intake structure contains two 47 million gallon per day (MGD) pumps and transfers 84,000 acre feet of water to a 72-inch pipeline which conveys the water approximately 30 miles to an outfall in West Prong of Sister Grove Creek near Howe, Texas. The water then flows in channel approximately 25 miles to Lake Lavon (Trinity River watershed) where NTMWD's water treatment plant (WTP) is located.

Zebra mussels (Dreissena polymorpha), an invasive exotic species, were first discovered in northeastern North America in 1988 and spread rapidly throughout the Great Lakes system and into the Ohio, Mississippi, and Tennessee River systems. Zebra mussels have been spread widely across the country mainly through transfers of boats and water-borne equipment and the movement of water through the tributary system and through water distribution systems. Zebra

mussels pose environmental harm in the displacement of native mussel species and other phytoplankton consumers and change in the biomass balances in affected waters. Zebra mussels pose economic impacts for additional maintenance costs to remove them from water control structures, intakes, pipelines, cooling systems, etc.

Zebra mussels were first discovered in Lake Texoma in 2009 and downstream of the NTMWD pipeline discharge contemporaneously. The NTMWD voluntarily entered a pumping and water diversion hiatus which is entering its 28<sup>th</sup> month. During this hiatus, zebra mussel eradication measures were implemented in West Prong of Sister Grove Creek with Texas Parks and Wildlife Department and USGS with moderate success. Sampling protocols for adults, juveniles, and reproductive DNA have been implemented in Lake Lavon in 2010 and 2011 to monitor for colonization of the lake by zebra mussels. All tests to date have been negative.

The NTWMD cites a critical need to reinitiate pumping very soon in order to maintain system capacity for its 1.6 million consumers and prevent violating (exceeding) other water right allocations it holds in Texas. The permit modification being considered would allow NTMWD to initiate pumping this winter season after completing specific actions to eliminate zebra mussels from this system. Specific actions are necessary to reduce the risk of transfer of adult zebra mussels; declining winter water temperatures reduce the risk of transfer of neutral buoyancy juvenile zebra mussel life stages.

Zebra mussel metabolic activities decrease when water temperatures drop below 68° Fahrenheit (F) and reproductive activities cease at 54°F or less. Consequently, the low water temperatures of winter provide a possible opportunity to transfer water with a substantially reduced risk of transfer of zebra mussel larvae (known as "veligers", a neutral buoyancy free floating life stage of the mussel). Provided appropriate actions are taken to clean the intake screens, nearby surfaces, and the interior of the pipeline, the chances of transferring adult zebra mussels can be substantially reduced as well.

Authority: The U.S. Army Corps of Engineers (Corps) has the authority (33 CFR 325.7) to reevaluate the circumstances or conditions of its permits and modify, suspend, or revoke Department of the Army permits as necessary in consideration of matters of the public interest, based upon non-compliance or upon changes in the circumstances related to the authorized activity. This situation is not a matter of non-compliance by the permittees. The Corps must also consider the extent to which modification, suspension, or revocation would adversely affect the plans, investments, and actions made by the permittee in reliance on the permit. Additionally, Presidential Executive Order 13112 requires that Federal agencies, to the extent practical and permitted by law, prevent, detect, and monitor for introduction and spread of invasive species. Federal agencies shall not authorize actions that are likely to cause or promote the introduction or spread of invasive species unless the benefits outweigh the potential harm and all feasible and prudent measures to minimize risk have been taken. The Corps National Invasive Species Policy states that Department of the Army permits may include special conditions to require the permittee to control the introduction or spread of invasive species.

Description of Proposed Zebra Mussel Seasonal Pumping Strategy: The proposed actions to be taken to allow winter time pumping and diversion of raw water and control the distribution and spread of zebra mussels into the Trinity River watershed include the following:

- Dewater the pipeline for up to 7 weeks allowing exposure and desiccation of any attached zebra mussels.
- Dispense calcium hypochlorite (chlorine powder) in any remaining water pools within the pipeline to exterminate any zebra mussels that have not been exposed to the air.
- Construction of pig launcher and retrieval stations for the repeated use of a flexible polyurethane-coated medium density foam plug for cleaning the interior of the pipeline. Stations are to be constructed in the uplands near the intake structure and near the Sherman Water Treatment Plant.
- Inspection and cleaning (thorough removal of attached zebra mussels) from the intake screens and surfaces. Pre-cleaning and post-cleaning inspections would be required.
- Cleaning (thorough removal of attached zebra mussels) of the interior of the 72-inch pipeline and associated blow-off and air relief valves. Install and run the pig through the pipeline up to two or three times. Areas unreachable with the pig would be manually cleaned. Pre-cleaning and post-cleaning inspections at specific access points in the pipeline would be required. Findings of all inspections would be logged and recorded.
- Mussels removed in the cleaning operation would be collected and hauled to a permitted landfill within the Red River basin.
- Water used to pass the pig through the pipeline would be discharged at the Sherman Water Treatment Plant into a 5-million-gallon detention basin, thence to Iron Ore Creek and back to the Red River. Zebra mussels and sediments deposited in the basin would be transported to a landfill in the Red River watershed.
- Water temperatures in Lake Texoma would be monitored for the initiation and termination of winter time pumping. The above listed cleaning of the intake screens and surfaces and pigging of the pipeline would not occur until the water temperature is below 54°F, and sampling has confirmed that the presence of veligers is negligible (less than 0.01 planktonic zebra mussel life forms per liter of water for the number of samples in the sampling plan).
- Prior to and throughout the proposed winter season pumping, the permittees would implement a detailed sampling plan in the vicinity of the Lake Texoma pump station and at stations in the West Prong of Sister Grove Creek. Representatives of the USGS would conduct the sampling. The sampling would be conducted to detect the presence of juvenile zebra mussel life stages in the water. In winter, once the water in the vicinity of the pump station reaches 54°F for 24 consecutive hours, a sampling event would occur

the following day. If the veliger count is within the proposed allowable limit (less than 0.01 planktonic zebra mussel life forms per liter of water for the number of samples in the sampling plan), sampling would be repeated in 2 days. All sampling actions would be logged and recorded. Initiation of pumping would not occur until the lake water temperature has descended to 54°F, all cleaning operations have been completed and inspected, and sampling has confirmed that the presence of veligers is negligible in two consecutive sampling events.

- Pumping would cease in the spring when the lake water temperature rises to 55°F for 48 hours at the pump station, unless veligers are detected sooner at which point pumping would immediately cease. Water temperatures would be monitored at the intake elevation and in shallow water in the vicinity of the pump station.

The permittees also propose to install two 6,000 horsepower pumps in the Lake Texoma Pump Station in the next few months. These two pumps would be added to the existing 4,000 horsepower pumps (47 MGD per pump) configuration. These higher capacity pumps would allow NTMWD to increase their pumping capacity from 90 MGD to 125 MGD. The higher capacity pumps would allow for more efficient pumping throughout the year and reduce the amount of time required to move the State of Texas permitted supply. The permittees project that the impact on lake levels would be minimal with the addition of these two new pumps.

Plans and Data: Information related to this action on file and may be viewed during normal working hours at the Tulsa District, U.S. Army Corps of Engineers, 1645 South 101st East Avenue, Tulsa, Oklahoma. If additional information is desired, it may be obtained from Mr. Andrew R. Commer, U.S. Army Corps of Engineers, Tulsa District, ATTN: Regulatory Office, 1645 South 101st East Avenue, Tulsa, OK 74128-4609, or telephone 918-669-7400.

Environmental Considerations: The decision whether to modify this permit will be based on an evaluation of the probable impact, including cumulative impacts, of the proposed activity and its intended use on the public interest. That decision will reflect the National concern for both protection and utilization of important resources. The benefit which reasonably may be expected to accrue from the proposal must be balanced against its reasonably foreseeable detriments. All factors which may be relevant to the proposal will be considered including the cumulative effects thereof; these include conservation, economics, aesthetics, general environmental concerns, wetlands, cultural resources, fish and wildlife resources, flood hazards, flood plain functions, land use, navigation, shore erosion and accretion, recreation, water supply and conservation, water quality, energy needs, safety, food and fiber production, mineral needs, considerations of property ownership, and, in general, the needs and welfare of the people. The DE will determine if the public interest requires modification of the permit.

Comments: The Corps is soliciting comments from the public; Federal, State, and local agencies and officials; Indian tribes; and other interested parties in order to consider and evaluate the impacts of this proposed activity. Comments concerning the issuance of this permit should be addressed to the District Engineer, U.S. Army Corps of Engineers, Tulsa District, ATTN: Regulatory Office, 1645 South 101st East Avenue, Tulsa, OK 74128-4609 not later than 15 days

from the date of this public notice. Any comments received will be considered by the Corps to determine whether to modify the issued permit. To make this decision, comments are used to assess impacts on endangered species, historic properties, water quality, general environmental effects, and the other public interest factors listed above. Comments are used in the preparation of an environmental assessment and/or an environmental impact statement pursuant to the National Environmental Policy Act. Comments are also used to determine the need for a public hearing and to determine the overall public interest of the proposed activity. Any person may request in writing, within the comment period specified in this notice, that a public hearing be held to consider this application. Requests for public hearings shall specifically state the reasons for holding a public hearing.

Vicki G. Dixon  
Acting Chief, Regulatory Office