District Experiencing Surge in Capital Improvement Needs

Welcome to the first issue of Project Pipeline, a new quarterly newsletter to keep you abreast of the latest projects around the District. Our vision for the District has always been focused on meeting our region's needs today and tomorrow, and we are constantly looking ahead to ensure that we plan for and meet that demand in the most cost-efficient manner possible.

Our Capital Improvements Program (CIP) is experiencing a surge as we work to expand our system for future growth, rehabilitate aging infrastructure, and meet additional regulatory requirements.

**WATER**

In our water system, the District is expecting to spend $535 million through FY18 with 80% of our CIP projects going towards increasing capacity. Projects like the Main Stem Pump Station, pipeline relocations in Parker, and additional ground storage in Frisco and McKinney will help with this, but the addition of the Lower Bois d'Arc Creek Reservoir will comprise the bulk of that plan.

Roughly 10% of our water CIP is for aging infrastructure and 7% for improved efficiencies, both of which are evident in the major overhaul of our Wylie Water Treatment Plant (WTP) complex. Our oldest plant, WTP I will get the biggest facelift including chemical improvements and work on clearwells (underground storage tanks), sedimentation basins, valves, sludge pumps, and more.

**WASTEWATER**
As we look ahead to FY18, the District will spend $154 million in CIP for the wastewater system, including $74 million for the Upper East Fork Interceptor System (UEFIS), $55 million for the Regional Wastewater System, and $25 million for smaller Sewer Systems. Nearly 65% targets capacity while 33% focuses on aging infrastructure. The UEFIS expenditures include the Indian Creek Lift Station and force main #2, North McKinney and Wilson Creek Lift Station improvements, Beck Branch parallel interceptor, and the McKinney and Prosper parallel interceptor.

Some of the major wastewater projects will take place in FY17. The first is the expansion of the treatment capacity of the Wilson Creek Regional Wastewater Treatment Plant (RWWT) to 64 MGD. The South Mesquite RWWT is upgrading from chlorine disinfection to UV disinfection. The budget for the RWWT includes optimizing the Floyd Branch RWWT, improving influent flow and secondary clarifiers at South Mesquite RWWT, electrical improvements at Wilson Creek RWWT, and more.

\[ (I/I) = \text{inflow and infiltration} \]

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**WATER SYSTEM**

**Lower Bois d'Arc Creek Reservoir Is One Step Closer to Construction**

After over 10 years, the Lower Bois d'Arc Creek Reservoir project is one step closer to clearing its last hurdle - the Section 404 permit from the U.S. Army Corps of Engineers (USACE).

Last week, USACE issued a revised environmental impact study nearly two years after the initial draft was released for public comment. Following a 45-day comment period on the revised DEIS, NTMWD will work with the USACE to address additional comments received as quickly as possible to keep on the current schedule for a Record of Decision by
The District is advancing plans to begin construction in the spring of 2018. It will take three summers of construction to complete the dam and intake structure, and then another two years of adequate rainfall to fill it to an operational level, with the goal of delivering water in 2022 to meet the needs of our fast-growing region.

For more information, visit the [LBCR page](#) on the NTMWD website.

### Main Stem Pump Station and Pipeline

About half of the 72-inch-diameter pipeline has been delivered, and crews are making final preparations to begin work on the Trinity River Main Stem Pump Station and Pipeline Project. Once completed in 2019, the project will provide the NTMWD up to 90 MGD for treatment and eventual distribution to customers.

The $120 million project includes construction of a pump station along the main stem of the Trinity River near the city of Rosser in Kaufman County, about 35 miles southeast of downtown Dallas. It also includes a 17-mile transmission pipeline from the site to the East Fork Reuse Project (the wetland) near Seagoville.

The pump station will allow the District to capture water from the main stem of the Trinity River and deliver it to the north end of the 1,840-acre wetland. From there it will make its way through the wetland cells where aquatic plants and sunlight will polish the water, removing excess nitrogen and phosphorus. The "polished" water will then be pumped 44 miles through an existing pipeline to the north end of Lavon Lake and blended with other raw water sources before final treatment at facilities in Wylie.

The pipe, manufactured locally by U.S. Pipe in Grand Prairie and Northwest Pipe in Saginaw, has mostly been delivered. Pipeline installation is scheduled to begin in late April. You can keep tabs on this project by following the [MSPS project page](#) of the website.

### Water Treatment Plant I Updates

If you've been to our water treatment complex in Wylie, you may have noticed a lot of construction going on this winter. Lower water demands in cooler months have allowed the District to take portions of the plant offline for renovation and renewal. Of the four water treatment plants on site, Water Treatment Plant I (WTP1) is undergoing one of the most extensive rehabilitations.

The oldest high-service pump station at WTP1 is undergoing extensive renovations. The venerable facility that has pumped water to North Texas' member and customer cities for 60 years is being upgraded with new, more efficient higher-volume pumps. The project is scheduled to be complete in early 2018.

Also underway is the last of a three-phase renovation project that improves how various treatment chemicals are stored, pumped, and added to drinking water. These plant-wide improvements will allow vital chemicals to be more safely managed and applied by the District's operations staff. The project is slated for completion later this year.
Finally, in the arena of new construction, two new five-million-gallon clearwells (storage tanks for filtered water) were completed earlier this year and went online in March 2017. These enormous concrete tanks raise the total amount of onsite storage to nearly 50 million gallons. With these and more projects underway, our original water treatment plant will continue its long history of service for decades to come. Learn all about Our Water System on the NTMWD website.

**WASTEWATER SYSTEM**

**Stewart Creek West Plant Expansion**

Water and wastewater services are the cornerstone of economic development and expansion. As cities like Frisco continue to attract new businesses and residents, NTMWD must work to help meet the growing demands for these services.

The Stewart Creek West Wastewater Treatment Plant (WWTP) is currently rated as a 5 MGD facility, and growing needs require expanding the capacity and operations of this plant. The expansion of the Stewart Creek West WWTP will allow us to treat and discharge up to 10 MGD once the project is completed and will be expanded to 15 MGD upon future improvements.

Working closely with the City of Frisco, the project consists of construction of a berm with landscaping to create a nice visual barrier, enhanced odor-control measures, enclosed primary treatment areas, and back-up power sources. To help meet our reuse goals, the plant will consistently produce high quality effluent that the city can use for irrigation and can be discharged into Stewart Creek. The project is expected to be completed in 2018. Follow the Stewart Creek West project page on our website.

**Rowlett Creek Wastewater Treatment Plant Expansion**

Located in Plano, the Rowlett Creek Regional Wastewater Treatment Plant (RWWTP) is undergoing a major overhaul. Originally constructed in 1959, this plant was adopted from the City of Plano into the NTMWD system as the Board’s first action as a new regional wastewater service provider in the 1970s.

The plant, which has a daily average flow of 24 MGD, is getting an expansion to handle the wet weather flows currently testing its 60 MGD peak flow capacity. The new and improved plant will ultimately be expanded to 120 MGD peak flow capacity through phased advanced treatment technologies, but the current phase will expand peak flow capacity to 77.5 MGD.

This phase may take up to three years to complete due to several challenges, including the restricted space of the site and the need to maintain existing treatment capacity. The project is also complex, incorporating enhanced nutrient removal to meet stringent regulatory requirements and a new Lower Cottonwood Lift Station with 30-inch force main.
and 42-inch interceptor pipelines. Learn more about Our Wastewater System on our website.

South Mesquite Plant Filter and UV Improvements

The South Mesquite Regional Wastewater Treatment Plant serves the cities of Rockwall, Heath, Forney, Mesquite and Seagoville with an average daily flow capacity of 33 MGD. To continue meeting increasing regulatory requirements and improve plant safety, we are upgrading the plant from chlorine to ultraviolet (UV) disinfection.

UV is the preferred method of wastewater disinfection because it is very effective in destroying up to 99.9% of harmful microorganisms. It is also safer for the environment by eliminating the chlorine disinfection by-products in the effluent (treated wastewater) normally discharged into the stream.

Another significant advantage of UV disinfection is the improved safety of the plant. Risks to personnel and surrounding communities will be greatly reduced with the removal of the chlorine (Cl2) and sulfur dioxide (SO2) tanks from the plant. The removal of Cl2 and SO2 also means that the plant will no longer be required to meet EPA Risk Management requirements associated with these two chemicals. Potential security threats will be reduced, as will the heavy truck traffic delivering the chemicals. The addition of UV disinfection requires that a new electrical building be constructed and a new transformer installed.

SOLID WASTE SYSTEM

Landfill Gas Harvesting

Last summer, NTMWD added 23 new gas wells to the 121 Regional Disposal Facility (landfill) in Melissa. Combined with the existing wells, this brings our total to 89 gas wells on site. These wells allow us to harvest the methane gas produced by the decomposition of solid waste within the landfill to help control odor.

The majority of the gas is currently burned in a candlestick flare, but we are working with Morrow Renewables on a gas-to-energy production project. This new project will allow us to capture and clean the gas and convert it to natural gas that will help generate revenue and offset the operating costs of our solid waste system. This program is expected to be online by the end of 2017. Learn more about Our Solid Waste System on our website.

Projectmates to Improve Efficiencies and Project Management
To help the District manage the significant number of projects in the most efficient manner, we are implementing a construction management software program called Projectmates. The web-based software platform will allow project teams, contractors, and design consultants to collaborate and manage projects efficiently and securely.

The program features collaborative tools for document and photo management, scheduling, and reporting, and will be utilized as the new standard for management and delivery of all NTMWD planning, design and construction projects.

We are currently in the implementation phase, which will last through mid-year. All CIP projects in nomination, validation, design, and pre-construction phases are being managed through Projectmates. By 2019, the tool will be fully deployed and all projects will be managed through this portal. For more information, visit https://www.ntmwd.com/projectmates/.

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Business Opportunities

Learn About Becoming a Contractor or Consultant

NTMWD invites talented, experienced and ethical contractors, consultants, and suppliers to bid on design and construction projects that align with their experience and expertise.

For each project, we have a consultant and one or more contractors. Consultants are pre-qualified and selected whereas contractors must bid on the project. We are constantly working on a variety of projects as part of our CIP plan to maintain and repair aging infrastructure and to expand our system to meet the growing demands of our region.

For more information on becoming a contractor or consultant, or to view and bid on upcoming projects, visit the Business Opportunities page of our website.

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IN THE NEWS

Mar. 25: Lower Bois d'Arc Creek Reservoir project nearing decision

Mar. 21: NTMWD to host open house to get public input on the Wetland Center Master Plan

Mar. 6: Maintenance may affect taste and smell of Little Elm water

Jan. 31: Company plans to capture methane gas at Melissa landfill

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