

### **UTILITY IMPROVEMENTS & RATES PLAN**

Like many cities, the City of Natalia has aging utility facilities and infrastructure that require attention. In order to make affirmative findings, qualified engineers perform system assessments to ensure any vulnerabilities are addressed and remedial approaches are provided. Many questions play a factoring role when making such determinations; such as, does the systems quality meet state standards? Are facilities failing to keep up with production? How old are the systems, what are their initial lifespan, and how much longer can we keep operating the systems under their current condition? Where can we make improvements to avoid potential violations? Can our utility system handle growth while sustaining the existing services at the same level? With this mind, City Council then has to make the most difficult decisions that ultimately result in resident dissatisfaction; however, decisions are based on the necessity of the entire city, not by individuality; and deemed in the best interest of the public's health, safety and welfare for human life and system facilities by maintaining resource reliability while limiting liabilities.

The City of Natalia, with the assistance from USDA Rural Development and M&S Engineering, has progressively worked towards making utility facility and infrastructure improvements since May 2015; whereas, City Council finally accepted the results of the Preliminary Engineering and Evaluation Report of the city's current utility system in March 2016, and decided to headfirst with the projects regarded as high priority for both the water and sewer systems. The City has received a low-interest loan from USDA of 1.875% for a 40-year term, in addition to being awarded grant funds for system improvements. There are several further steps the City and Engineers must perform before commencing on the phases of construction, but for the foremost, the City is on the right path of progression. The projects identified were rated as high priority:

#### **WATER IMPROVEMENTS (\$1,327,360.00)**

**Well Site Upgrades:** This project would improve the performance and reliability of the City's (2) existing raw water wells and the back-up well. Work would include the addition of standby power at the primary well site in the form of a diesel generator and associated automatic transfer switch. New flow meters would also replace old existing meters at both sites with newer technology. The project would include servicing of the existing well pumps, new control valves, and a video inspection of the condition of each well to ensure the wells will continue to provide a reliable water source into the future. Having a well site located more than four miles north of the City limits also poses problems with additional time needed for maintenance staff responding to any issues at the well site. For this reason, back-up power will also be added to existing SCADA infrastructure at the well site and at the elevated tank site by the addition of battery back-up, and at City hall with a permanent standby generator, to ensure that operations can be reliably monitored and controlled remotely during periods of power outage at these locations. This project was given the highest priority because of the criticality of having back-up power at the City's only primary water source.

**Upgrades to the Oldest Portion of the Water Distribution System:** Areas of the City (approximately 10,000 feet of main, or 25% of the distribution system) have been identified as having old, galvanized water mains. These areas have also been identified as suffering from breaks/leaks most often. Replacement of these mains with new PVC mains would reduce breaks and leaks, ultimately decreasing the amount of water that is pumped and lost in the system. System-valving will be analyzed to determine the proper protocol for isolating the NISD School and Love's Travel Center, so that these sites may be served directly by the elevated tank without interruption of water in the event of a break in the system. New hydrants will be spaced to provide residents with improved fire flow within a reasonable distance from any structure. This project was given high priority due to the City's high rated water loss.

**Emergency Interconnect with East Medina Special Utility District:** A new interconnect with East Medina Special Utility District would allow for a temporary water source in the event of a break in the City's pipe from the wells along FM 463, a major failure (lightning strike) at the well site, or if repairs are being completed requiring shutdown of the well site. A suitable location for this interconnects is at the intersection of CR 675 and FM 463. This project is relatively easy to construct due to the City's water main being in close proximity to East Medina's main coupled with the benefit of having a reliable water source should the City's well be down for any extended period of time.

#### **SEWER IMPROVEMENTS (\$987,000.00)**

**Redirect the Love's Travel Center Lift Station through New Pipeline to WWTP:** A new sewer pipeline (combination force main and gravity main) would allow the Love's lift station to pump in a dedicated line to the WWTP. This project would require new pumps at Love's Travel Center lift station sized for the new discharge force main and approximately 6,400 feet of new pipe line along FM 6717, discharging to the wet well at the Plant pump station at the City's WWTP. This project would also include curbing around the lift station to keep surface stormwater inflow from entering the wet well; helping to reduce flow spikes at the WWTP during major rain events. The primary purpose for this project is to reduce wastewater flows entering the City's Ballfield lift station. The Love's lift station flows currently are re-pumped at the Ballfield lift station, and the project would remove this burden. Should any new flows be added at the south end of the City, through development or through new connections from residents currently on septic systems, the new pipeline could also serve as a primary collector for this area of the City. This project is considered of the highest priority in that it not only fills the immediate need of relieving flows into the Ballpark lift station, but also adds system flexibility by establishing a second primary conveyance to the WWTP as well as a collector for any new development along the I-35 corridor.

**Replace the Utility Crossing of Fort Ewell Creek:** The condition of the current aerial gravity sewer crossing of Fort Ewell Creek is of concern. There are signs of erosion around the base of the pipe supports, which are located in the flow line of the creek. A failure of this pipeline would result in a discharge of untreated wastewater into the Creek, the environmental effects of which could include impacts to both flora and fauna. This project would construct a new crossing with supports located out of the primary flow line of the creek, if possible, and installed with enough depth to ensure erosion is not an issue. Additional room could be left to install a water main alongside the wastewater main, as the existing water main is located with minimal cover below the creek bottom. This project is considered of high priority due to the possible environmental impacts to the Fort Ewell Creek should one of the existing supports collapse and a discharge occur.

**Reduction of Non-Wastewater Treatment at WWTP:** The City's WWTP experiences high flow spikes, often times exceeding the permitted discharge flow allowance, during periods of heavy rain. It is believed that these flow spikes are due to inflow and infiltration into the gravity collection system. Replacing aged wastewater gravity mains reduces infiltration of ground water into the system. Similarly, rehabbing or replacing manholes showing signs of deterioration helps reduce both groundwater infiltration and stormwater inflow (in cases of deteriorating rims and lids). The project would likely run in 3 phases: 1) Inspection of selected gravity sewer lines and of manholes to determine condition; 2) Cleaning/jetting of select lines; and 3) Lining and/or replacement of select lines and/or replacement of select manholes. The area was selected based on the frequency of leaks, breaks, and repairs for both the water mains and gravity sewers. Completing projects within a given area allows the construction efforts to run in parallel, which will limit impacts to surrounding residences and businesses to a single project timeframe. This also effectively reduces the cost of construction of both projects through bidding the projects together and allowing one contractor to perform both efforts. This project is of high priority due its long term effect on loadings into the WWTP and the resulting long term energy cost savings and plant treatment efficiencies.

**Minor Repairs at the Ballfield Lift Station:** During an onsite visual inspection of the Ballfield Lift Station, the station was found to be in good condition overall with all major components in working order. One item that is in need of immediate attention, however, was the wall brackets that secure the stainless steel pump rails in place. These brackets are heavily corroded and should be replaced. While the work may be relatively minor, the impact of these brackets failing would be the inability to pull pumps for servicing and possibly great expense if there is future damage to the pump rails. The existing brackets will be replaced with stainless steel brackets to ensure the longevity of the repair. This project is of high priority due to the possible damage caused (and additional repair expense required) if the brackets were to fail.

**REFINANCING SERIES-2015 WATER PURCHASE**

For many years, the City struggled with providing the community with a sufficient amount of water supply to support its needs; especially when the City's permitted water rights is reduced during drought conditions as an EAA restriction, essentially having to lease water year after year. And, to afford the additional expenses for water-right transfers the City adopted a Water Pass-Thru "WPTC" charge that would recover those added costs for water-right leases, purchases, management and permitting fees from the utility consumers.

Continuing to lease additional water each year was determined not to be the best suitable option for long-term planning. Subsequently, the City Council approved a practical investment to purchase additional water rights in in order to maintain and prosper long-term for betterment of the community. There being, by August 2016 the City filed the purchase (Transfer by Sale Application) of 60-acre feet of water rights to the city's authorized water permit with EAA; effectively increasing the City's water rights permit from 266.667 to 326.667 acre-feet of water. This purchase was financed through a Combination Tax and Limited Pledge of Revenue Certificate of Obligation for an amount of \$350,000, not including accrued annual interest; and to be refinanced through USDA Rural Development Loan/Grant Funding Program.

**FIVE-YEAR UTILITY RATE STRUCTURE PLAN**

To sustain safe and reliable water and wastewater resources, restructuring of utility rates were necessary to address the imbalance of revenue and expenses, and to additionally generate sufficient revenue to cover annual inflation of maintenance and operating costs. The City of Natalia conducted a Utility Rate Study, led by Raul Gonzales, Operations Management Specialist of Communities Unlimited, Inc., which were reviewed and modified numerous times by the City Council and City Administrator before determining that a gradual rate-increase plan was the most realistically affordable process to accomplish the planned infrastructure improvements and to afford the repayment of such debt.

The five-year utility rate structure plan results from the number of customers, the amount of capital debt to be imposed, and the costs for the short-lived assets of the capital debt. The generation of reserve funds for future capital investments, replacement, or improvements not subject to this new indebted obligation will be afforded by the adoption of a Capital Improvements Program Fee, which will replace the WPTC Fee, to specifically plan for capital improvement project expenses and contingencies.

**The City of Natalia Utility Rates Restructuring Plan becomes effective next fiscal year beginning October 1, 2017; specifically, starting on the Utility Billing Cycle beginning September 15<sup>th</sup> and ending October 15<sup>th</sup>, and being billed on November 1, 2017.**

| FISCAL YEAR :          | 2016-17              | Year 1<br>2017-18  | Year 2<br>2018-19 | Year 3<br>2019-20 | Year 4<br>2020-21 | Year 5<br>2021-22 |
|------------------------|----------------------|--|-------------------|-------------------|-------------------|-------------------|
| <b>WATER RATES</b>     | <b>Current Rates</b> | <b>Rate Study<br/>with 1.2% Annual Inflation on Volume Costs</b> |                   |                   |                   |                   |
| <b>Residential:</b>    |                      |  |                   |                   |                   |                   |
| Service Availability   | \$20.50              | \$25.00  | \$25.00           | \$25.00           | \$25.00           | \$25.00           |
| 1,001 - 10,000 gal.    | \$2.50               | \$3.30   | \$3.34            | \$3.38            | \$3.42            | \$3.46            |
| 10,001 - 30,000 gal.   | \$3.00               | \$3.80   | \$3.85            | \$3.89            | \$3.94            | \$3.99            |
| 30,001- 50,000 gal.    | \$3.50               | \$4.30   | \$4.35            | \$4.40            | \$4.46            | \$4.51            |
| 50,001 - 75,000 gal.   | \$4.00               | \$4.80   | \$4.86            | \$4.92            | \$4.97            | \$5.03            |
| Over 75,000 gal.       | \$4.50               | \$5.30   | \$5.36            | \$5.43            | \$5.49            | \$5.56            |
| <b>Commercial:</b>     |                      |  |                   |                   |                   |                   |
| Service Availability   | \$23.00              | \$27.50  | \$27.50           | \$27.50           | \$27.50           | \$27.50           |
| 1,001 - 10,000 gal.    | \$3.00               | \$3.80   | \$3.85            | \$3.89            | \$3.94            | \$3.99            |
| 10,001 - 30,000 gal.   | \$3.50               | \$4.30   | \$4.35            | \$4.40            | \$4.46            | \$4.51            |
| 30,001- 50,000 gal.    | \$4.00               | \$4.80   | \$4.86            | \$4.92            | \$4.97            | \$5.03            |
| 50,001 - 75,000 gal.   | \$4.50               | \$5.30   | \$5.36            | \$5.43            | \$5.49            | \$5.56            |
| Over 75,000 gal.       | \$4.80               | \$5.60   | \$5.67            | \$5.74            | \$5.80            | \$5.87            |
| <b>2" Commercial:</b>  |                      |  |                   |                   |                   |                   |
| Service Availability   | \$23.00              | \$55.00  | \$55.00           | \$55.00           | \$55.00           | \$55.00           |
| 1,001 - 10,000 gal.    | \$3.00               | \$3.80   | \$3.85            | \$3.89            | \$3.94            | \$3.99            |
| 10,001 - 30,000 gal.   | \$3.50               | \$4.30   | \$4.35            | \$4.40            | \$4.46            | \$4.51            |
| 30,001- 50,000 gal.    | \$4.00               | \$4.80   | \$4.86            | \$4.92            | \$4.97            | \$5.03            |
| 50,001 - 75,000 gal.   | \$4.50               | \$5.30   | \$5.36            | \$5.43            | \$5.49            | \$5.56            |
| Over 75,000 gal.       | \$4.80               | \$5.60   | \$5.67            | \$5.74            | \$5.80            | \$5.87            |
| <b>SEWER RATES</b>     |                      |  |                   |                   |                   |                   |
| <b>Residential:</b>    |                      |  |                   |                   |                   |                   |
| Service Availability   | \$16.00              | \$20.50  | \$20.50           | \$20.50           | \$20.50           | \$20.50           |
| Per 1,000 gallons      | \$1.65               | \$2.45   | \$2.48            | \$2.51            | \$2.54            | \$2.57            |
| <b>All Commercial:</b> |                      |  |                   |                   |                   |                   |
| Service Availability   | \$18.00              | \$22.50  | \$22.50           | \$22.50           | \$22.50           | \$22.50           |
| Per 1,000 gallons      | \$1.85               | \$2.65   | \$2.68            | \$2.71            | \$2.75            | \$2.78            |

**PUBLIC FORUM**

We ask for Utility Customers take necessary measures to assess their consumption history, find means of reduction, periodically check plumbing and service lines for possible water leaks, and to make necessary repairs or adjustments to reduce the waste of water. Customers, not all water leaks can be detected by sight, but one easy method you may do to check for possible water leaks on your property is by performing a 5-10 minute watch of your water meter; please be sure you are not using any water in or outside of your home when performing this task. The dials on your meter should not be moving; if movement is noticed this means you may have water leaking from your property through the meter, at this point, we suggest you call a plumber. Please report any water leaks identified and repairs performed as soon as possible; the City will review your consumption history and determine if any adjustments can be made on your sewer bill (not water); all water passed through your meter will be billed no matter the circumstances of a water leak.

**We're striving to make the City of Natalia a better place to live, eat and play; and with time and your support, we can!**

City Council meets every Third Monday of each month at 7pm at City Hall Chambers, 2078 State Hwy 132 N., Natalia, TX 78059. Agendas are posted at least 72-hours before any scheduled city council meeting on the bulletin board, and website: [www.cityofnatalia.com](http://www.cityofnatalia.com).

**We Thank You ~ City of Natalia Community Leaders.**