North Texas Municipal Water District

“Regional Service Through Unity ...
Meeting Our Region’s Needs Today and Tomorrow”

Water Partnering Meeting

9:30 am

July 20, 2016
I. Water Supply Update - Billy George
II. LBCR & Main Stem PS Permitting Update - Billy George
III. Watershed Protection Program – Galen Roberts
IV. Crisis Communications - Mary Gugliuzza
V. Energy Conservation Rebate - Billy George
VI. Public Education Programs Update - Denise Hickey
VII. Public Relations Update - Janet Rummel
VIII. Upcoming Meetings - Billy George
I. Water Supply Update - Billy George
II. LBCR & Main Stem PS Permitting Update - Billy George
III. Watershed Protection Program – Galen Roberts
IV. Crisis Communications - Mary Gugliuzza
V. Energy Conservation Rebate - Billy George
VI. Public Education Programs Update - Denise Hickey
VII. Public Relations Update - Janet Rummel
VIII. Upcoming Meetings - Billy George
## Reservoir Elevations – July 19, 2016

<table>
<thead>
<tr>
<th>Reservoir</th>
<th>Conservation Pool Elevation</th>
<th>Current Elevation</th>
<th>Up/Down</th>
<th>% Full</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lavon 30%</td>
<td>492.0’</td>
<td>491.75’</td>
<td>-0.25’</td>
<td>98.7</td>
</tr>
<tr>
<td>Chapman 15%</td>
<td>440.0’</td>
<td>439.43’</td>
<td>-0.57’</td>
<td>96.2</td>
</tr>
<tr>
<td>Tawakoni 8%</td>
<td>437.5’</td>
<td>437.43’</td>
<td>-0.07’</td>
<td>99.7</td>
</tr>
<tr>
<td>Texoma 28%</td>
<td>617.0’</td>
<td>618.68’</td>
<td>+1.68’</td>
<td>&gt;100%</td>
</tr>
</tbody>
</table>
Water Consumption

North Texas Municipal Water District
Year 2000 with Projected Increases vs. 2016 Actual Usage
Daily Water Consumption

- 5 Year Avg (2011-15)
- 2016 Rainfall
- 2016 (7 day avg)
- 2000 Demand Plus 82.08% Increase to 2016

Updated as of 07/18/2016
I. Water Supply Update - Billy George
II. LBCR & Main Stem PS Permitting Update - **Billy George**
III. Watershed Protection Program – Galen Roberts
IV. Crisis Communications - Mary Gugliuzza
V. Energy Conservation Rebate - Billy George
VI. Public Education Programs Update - Denise Hickey
VII. Public Relations Update - Janet Rummel
VIII. Upcoming Meetings - Billy George
MSPS Permitting

- Regional General Permit 12 (USACE 404 & 408 Permits):
  - Received February 2016

- TCEQ Water Rights:
  - Draft permit noticed to downstream water right holders
  - Cities of Houston & Dallas requested contested case hearings
  - Working on wording to address concerns

- TCEQ Bed & Banks:
  - Draft permit written: requires water right amendment
MSPS Project Advancement

- Project Advancement:
  - NTMWD continues to work on securing property rights for Main Stem Water in East Fork Raw Water Supply Project (Wetland)
  - Planning for an October 2016 bond sale to fund project (commencement to occur after bond sale)
LBCR Permitting

LBCR Clean Water Act 404 Permitting Background

- June 2008: Filed permit application with USACE
- June 2015: Received comments from EPA on the Draft EIS
  - EPA rated Draft EIS as “Inadequate”
- December 2015: USACE’s initial schedule for issuing 404
- December 2017 - June 2018: Current possible schedule for USACE to issue 404
- USACE formally acknowledged January 2018 as the Record of Decision date
LBCR Permitting

Recent Coordination Activities

• June 29, 2016: Technical meeting with USACE Tulsa District staff
• June 29, 2016: Joint USACE SWD/EPA Region 6/NTMWD leadership meeting
• July 12, 2016: Technical meeting with USACE Tulsa District staff
I. Water Supply Update - Billy George
II. LBCR & Main Stem PS Permitting Update - Billy George
III. Watershed Protection Program – Galen Roberts
IV. Crisis Communications - Mary Gugliuzza
V. Energy Conservation Rebate - Billy George
VI. Public Education Programs Update - Denise Hickey
VII. Public Relations Update - Janet Rummel
VIII. Upcoming Meetings - Billy George
Watershed Planning and Protection for Lavon Lake

Galen Roberts
Watershed Manager
NTMWD

July 20, 2016
Watershed Impairments & Concerns

East Fork of Trinity River abv Lavon Lake
- Bacteria

Wilson Creek
- Bacteria

Other Concerns
- Nutrients
- Sediment
- Total Dissolved Solids

Grayson County
Collin County
Fannin County

East Fork Trinity River
Sister Grove Creek
Pilot Grove-Indian Creek
Wilson Creek

Lavon Lake Watershed Protection Plan (WPP)

- Aimed at developing a non-regulatory strategy to address existing impairments and protect against future impairments.
- Primary focus on bacteria, nutrient, and sediment pollution.
- Development will be facilitated by NTMWD in collaboration with Texas A&M AgriLife and TSSWCB through a state nonpoint source grant.
- Will be developed in Partnership with the community.
Frequently Asked Questions

- Is a WPP a regulatory or enforceable document?
- Who should attend the planning meetings?
- What is the purpose of the Lavon Lake WPP?
- What is NTMWD’s role in this process?
- What will be expected from communities in the watershed?
- What are the benefits of developing a WPP?
- Where can I go for more information?
Project Kickoff Meetings

- **Announce** the project to the public.
- **Explain** project purpose and goals.
- **Invite** public to participate in WPP development.
Project Kickoff Meetings

- **September 13, 2016**
  6:00 pm - 7:30 pm
  *Myers Park & Event Ctr.*

- **September 20, 2016**
  3:00 pm - 4:30 pm
  *NTMWD Engineering Training Room*
Next Steps

1. **September** – Project Kickoff Meetings

2. **October** – Texas Watershed Steward Workshop

3. **November** – Monthly WPP Development Meetings begin (*5-6 months*)
Texas Watershed Steward Workshop

- Introductory training in the fundamentals of watershed management
  - ½-day training (4 hrs.)
- October 13, 2016
  - Myers Park & Event Ctr.
  - Start time TBA
Galen Roberts
Watershed Manager
NTMWD

groberts@ntmwd.com
Agenda

I. Water Supply Update - Billy George
II. LBCR & Main Stem PS Permitting Update - Billy George
III. Watershed Protection Program – Galen Roberts
IV. Crisis Communications - Mary Gugliuzza
V. Energy Conservation Rebate - Billy George
VI. Public Education Programs Update - Denise Hickey
VII. Public Relations Update - Janet Rummel
VIII. Upcoming Meetings - Billy George
Are you ready for the unexpected?

To boil or not to boil
Fort Worth Water System

- 31 wholesale water customers
- About 1.2 million people in the service area
- Five water treatment plants
- 10 pressure planes
- More than 3,400 miles of pipe
FW Boil Water Notices

* April 5, 2007
* February 29, 2008
* February 4, 2016
Pipe rupture cuts water to 1,500 homes

FORT WORTH — Anestimated 1,500 homes in the northwest Fort Worth area will be without water until Friday while crews repair a ruptured main near the intersection of Willow Springs Road and Bedford Ranch Road.

Workers immediately identified the rupture, near the intersection of Willow Springs Road and Bedford Ranch Road. The replacement of a 10-inch pipe cost about $20,000 by the end of the week, said Fort Worth Water Department spokesman Mary Langford.

"They were trying to avoid the area," she said.

The affected area includes both the intersection of Willow Springs Road and Bedford Ranch Road. The repair cost is expected to exceed $20,000 by the end of the week, said Langford.

"We are working on getting the water back to the affected area," she said. "We have multiple crews working on getting the water back to the affected area."
There Had Been Reports Of Terrorist Squirrels In The Area
We Apprehended & Interrogated An Accomplice

No squirrels were harmed in the making of this PowerPoint presentation.
* Tank was drained for approximately 10 minutes
* About 7:30 p.m. Feb. 4
* Pressure was quickly restored
* Good chlorine residuals at points monitored by SCADA
2016 BWN

- News release, including a map of affected area, distributed at 2:08 a.m.
- Posted on Twitter, Facebook Page, Nixle
- News release and map sent to Mayor, Councilmembers and aides and all Water Department employees
* News release sent to city communications office to post on the website
* EOC was notified and asked to make Northwest ISD aware of the situation. There are four NWISD schools in the affected area.
* Notified Consumer Health Section of Code Compliance
2016 BWN

* 2 water tankers dispatched for water distribution
* FO warehouse coordinated bottled water deliveries
* EOC received permission to set up distribution sites at 2 NWISD schools
* Samplers sent out after daybreak
Lessons learned

- Have a plan
- Practice
- Team work
- Know the media before a problem occurs
- Be available
- Do after-action de briefing & update plans
Lessons learned

* Should have initiated call out system at 6 a.m.
* Updated messaging to explain delay in sampling
* Use ISD systems for disseminating information
advancing water management for a better Fort Worth

MyH2O
This is NOT a meter project!
This IS a data project!
Building the Data Value Chain

Asset Management
- Asset Profitability
- Asset Utilization
- Customer Profitability
- Rate & Price Design
- Develop KPI’s
- ROI Decision-Making
- Financial Modeling

Operations
- System-wide Leak Detection
- On-Demand Read
- Interval Data History
- Pumping Optimization
- Hydraulic Modeling

Customer Care
- Leak Detection Alert
- Monitor & Control Consumption
- High Consumption Notice
- Web-Enabled Account Access
- Reduce Entry to Private Property
- Time-Based Rate Incentives
- Custom Billing

Meter Data
- Improved Billing
- Improved Accuracy
- Lower Labor Cost
- Single Data Repository
- Increasing

NTMWD 7/20/2016
Questions?

Mary Gugliuzza
Media Relations & Communications Coordinator
City of Fort Worth Water Department
Office: 817-392-8253
Cell: 817-991-8403
Communicating in a Crisis

- Be the first source for information
- Provide regular updates
- Speak with one voice
- Express empathy early
- Show competence and expertise
- Remain honest and open
- Stay calm
Communicating in a Crisis

* Don’t over-reassure
* When the news is good, state continued concern before providing reassuring updates
* Under promise and over deliver
* Acknowledge that there is a process in place
* Give people things to do
Communicating in a Crisis

- Stick to your what you know
- Anticipate questions
- Rehearse responses
- Provide back-up material
- Refer to credible 3rd-party sources
- Never say “no comment”
- Say so if things have changed
Communicating in a Crisis

* Always tell the truth
* Never guess
* Never answer a hypothetical question
* Correct misinformation
* Correct false premises
* Avoid opinion questions
* Avoid superlatives
Communicating in a Crisis

- Do not be defensive
- Take control of the interview
- Never go off the record
- Avoid jargon
- Keep your answers brief
- Make your point no matter what
- Don’t repeat negative statements in your answer
Communicating in a Crisis

- Look at the reporter not the camera
- Don’t stand at attention
- Don’t rock
- If seated, don’t lean back; keep both feet on the floor; don’t cross legs
- It’s OK to use your hands to be expressive
Communicating in a Crisis

Your message must be:

* Simple
* Timely
* Accurate
* Relevant
* Credible
* Consistent
I. Water Supply Update - Billy George
II. LBCR & Main Stem PS Permitting Update - Billy George
III. Watershed Protection Program – Galen Roberts
IV. Crisis Communications - Mary Gugliuzza
V. Energy Conservation Rebate - Billy George
VI. Public Education Programs Update - Denise Hickey
VII. Public Relations Update - Janet Rummel
VIII. Upcoming Meetings - Billy George
Energy Conservation Rebate

- H.R. 4615 – Water Conservation Tax Parity Act
  - Introduced on February 25, 2016 by Reps Jared Huffman and Dana Rohrabacher
  - Referred to House Committee on Ways and Means
- Seeks tax exemption for water conservation rebate programs
- Mirrors Congress declaring energy and conservation rebates non-taxable in 1992
Agenda

I. Water Supply Update - Billy George
II. LBCR & Main Stem PS Permitting Update - Billy George
III. Watershed Protection Program – Galen Roberts
IV. Crisis Communications - Mary Gugliuzza
V. Energy Conservation Rebate - Billy George
VI. Public Education Programs Update - Denise Hickey
VII. Public Relations Update - Janet Rummel
VIII. Upcoming Meetings - Billy George
<table>
<thead>
<tr>
<th>City</th>
<th>07/15/2016</th>
<th>06/14/2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>Allen</td>
<td>230</td>
<td>220</td>
</tr>
<tr>
<td>Farmersville</td>
<td>55</td>
<td>55</td>
</tr>
<tr>
<td>Forney</td>
<td>82</td>
<td>80</td>
</tr>
<tr>
<td>Garland</td>
<td>111</td>
<td>99</td>
</tr>
<tr>
<td>McKinney</td>
<td>747</td>
<td>698</td>
</tr>
<tr>
<td>Mesquite</td>
<td>294</td>
<td>285</td>
</tr>
<tr>
<td>Plano</td>
<td>1,533</td>
<td>1,454</td>
</tr>
<tr>
<td>Princeton</td>
<td>113</td>
<td>115</td>
</tr>
<tr>
<td>Richardson</td>
<td>493</td>
<td>386</td>
</tr>
<tr>
<td>Rockwall</td>
<td>191</td>
<td>176</td>
</tr>
<tr>
<td>Royse City</td>
<td>33</td>
<td>29</td>
</tr>
<tr>
<td>Wylie</td>
<td>322</td>
<td>319</td>
</tr>
<tr>
<td>Wetland</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Tawakoni</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>121 RDF</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td><strong>WMY Total</strong></td>
<td><strong>4,207</strong></td>
<td><strong>3,919</strong></td>
</tr>
</tbody>
</table>

**WaterMyYard Subscribers – 4,207**

**Frisco WaterWise Subscribers – 16,439**

NTMWD - WMY has 15 Weather Stations 12 Rain Gauge Systems

**Water My Yard**

Customer Subscribers
- Cash SUD - 1
- Melissa - 50
- Murphy – 74
- Sachse - 71

Joining soon: Parker

www.WaterMyYard.org
Goldwater Project

Water Savings by 2070
Through Water Conservation

In the 2017 State Water Plan

the total water conservation goal = conservation + conservation from water loss
## Goldwater Project

**Goldwater Slide (converted acre-feet to million gallons)**

<table>
<thead>
<tr>
<th>Region</th>
<th>2020</th>
<th>2070</th>
<th>Region</th>
<th>2020</th>
<th>2070</th>
</tr>
</thead>
<tbody>
<tr>
<td>City of Plano</td>
<td>476</td>
<td>959</td>
<td>City of Lucas</td>
<td>27</td>
<td>126</td>
</tr>
<tr>
<td>City of Garland</td>
<td>226</td>
<td>241</td>
<td>City of Melissa</td>
<td>15</td>
<td>278</td>
</tr>
<tr>
<td>City of McKinney</td>
<td>246</td>
<td>1,250</td>
<td>Town of Sunnyvale</td>
<td>14</td>
<td>78</td>
</tr>
<tr>
<td>City of Mesquite</td>
<td>61</td>
<td>215</td>
<td>City of Parker</td>
<td>15</td>
<td>110</td>
</tr>
<tr>
<td>City of Frisco</td>
<td>564</td>
<td>1,381</td>
<td>City of Farmersville</td>
<td>3</td>
<td>15</td>
</tr>
<tr>
<td>City of Richardson</td>
<td>197</td>
<td>404</td>
<td>City of Crandall</td>
<td>5</td>
<td>18</td>
</tr>
<tr>
<td>City of Allen</td>
<td>249</td>
<td>385</td>
<td>City of Josephine</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>City of Rowlett</td>
<td>27</td>
<td>67</td>
<td>Ables Springs WSC</td>
<td>1</td>
<td>6</td>
</tr>
<tr>
<td>City of Wylie</td>
<td>20</td>
<td>62</td>
<td>Caddo Basin SUD</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>City of Rockwall</td>
<td>107</td>
<td>419</td>
<td>Cash SUD</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>City of Little Elm</td>
<td>11</td>
<td>30</td>
<td>College Mound WSC</td>
<td>2</td>
<td>17</td>
</tr>
<tr>
<td>City of Sachse</td>
<td>31</td>
<td>66</td>
<td>Copeville SUD</td>
<td>1</td>
<td>11</td>
</tr>
<tr>
<td>City of Murphy</td>
<td>40</td>
<td>85</td>
<td>East Fork SUD</td>
<td>2</td>
<td>10</td>
</tr>
<tr>
<td>City of Forney</td>
<td>9</td>
<td>73</td>
<td>Forney Lake WSC</td>
<td>5</td>
<td>50</td>
</tr>
<tr>
<td>City of Terrell</td>
<td>24</td>
<td>187</td>
<td>Gastonia-Scurry SUD</td>
<td>2</td>
<td>20</td>
</tr>
<tr>
<td>Town of Prosper</td>
<td>65</td>
<td>336</td>
<td>Lavon WSC</td>
<td>3</td>
<td>46</td>
</tr>
<tr>
<td>City of Royse City</td>
<td>3</td>
<td>65</td>
<td>Mt. Zion WSC</td>
<td>3</td>
<td>46</td>
</tr>
<tr>
<td>City of Bonham</td>
<td>11</td>
<td>45</td>
<td>City of Nevada/Nevada WSC</td>
<td>0</td>
<td>15</td>
</tr>
<tr>
<td>City of Fate</td>
<td>10</td>
<td>102</td>
<td>Rose Hill SUD</td>
<td>1</td>
<td>10</td>
</tr>
<tr>
<td>Town of Fairview</td>
<td>30</td>
<td>95</td>
<td>Seis Lagos UD</td>
<td>11</td>
<td>15</td>
</tr>
<tr>
<td>City of Princeton</td>
<td>3</td>
<td>51</td>
<td>Wylie N.E. SUD</td>
<td>1</td>
<td>14</td>
</tr>
<tr>
<td>City of Kaufman</td>
<td>3</td>
<td>22</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Where to find Data?**

Goldwater Project
Recommended Water Management Strategies for Water User Groups
Chapter 5, Section D

http://www.regioncwater.org/Documents/Final%202016%20Region%20C%20Water%20Plan/Section%205D.pdf
Plano

Plano is a city of about 270,000 located in southwest Collin County and southeast Denton County. Plano provides water to a portion of The Colony and to some manufacturing within the city. The city receives all of its water supply from NTMWD. Water management strategies for Plano are conservation and additional water from NTMWD. Table 5D.30 shows the projected population and demand, the current supplies, and the water management strategies for Plano.

<table>
<thead>
<tr>
<th>Table 5D.30: Projected Population and Demand, Current Supplies, and Water Management Strategies for the City of Plano</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>(Values in Ac-Ft/Yr)</strong></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Projected Population</td>
</tr>
<tr>
<td>Projected Water Demand</td>
</tr>
<tr>
<td>Municipal Demand</td>
</tr>
<tr>
<td>Customer Demand (The Colony)</td>
</tr>
</tbody>
</table>
## Region C Plan

### (Values in Ac-Ft/Yr)

<table>
<thead>
<tr>
<th></th>
<th>2020</th>
<th>2030</th>
<th>2040</th>
<th>2050</th>
<th>2060</th>
<th>2070</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manufacturing Demand (12% of Collin Co)</td>
<td>415</td>
<td>467</td>
<td>518</td>
<td>565</td>
<td>613</td>
<td>666</td>
</tr>
<tr>
<td><strong>Total Projected Demand</strong></td>
<td>70,635</td>
<td>73,075</td>
<td>75,772</td>
<td>76,118</td>
<td>76,272</td>
<td>76,525</td>
</tr>
<tr>
<td><strong>Currently Available Water Supplies</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>North Texas Municipal Water District</td>
<td>63,589</td>
<td>54,103</td>
<td>51,595</td>
<td>48,700</td>
<td>45,581</td>
<td>42,193</td>
</tr>
<tr>
<td>NTMWD (for The Colony)</td>
<td>1,106</td>
<td>1,532</td>
<td>1,554</td>
<td>1,598</td>
<td>1,622</td>
<td>1,617</td>
</tr>
<tr>
<td>NTMWD (for Manufacturing)</td>
<td>382</td>
<td>358</td>
<td>366</td>
<td>376</td>
<td>383</td>
<td>384</td>
</tr>
<tr>
<td><strong>Total Current Supplies</strong></td>
<td>65,076</td>
<td>55,993</td>
<td>53,515</td>
<td>50,673</td>
<td>47,586</td>
<td>44,194</td>
</tr>
<tr>
<td><strong>Need (Demand - Current Supply)</strong></td>
<td>5,559</td>
<td>17,082</td>
<td>22,257</td>
<td>25,445</td>
<td>28,686</td>
<td>32,331</td>
</tr>
<tr>
<td><strong>Water Management Strategies</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Water Conservation</td>
<td>1,460</td>
<td>2,135</td>
<td>2,640</td>
<td>2,458</td>
<td>2,698</td>
<td>2,942</td>
</tr>
<tr>
<td>Water Conservation (The Colony)</td>
<td>12</td>
<td>26</td>
<td>26</td>
<td>37</td>
<td>50</td>
<td>65</td>
</tr>
<tr>
<td>Water Conservation (Manufacturing)</td>
<td>0</td>
<td>1</td>
<td>11</td>
<td>16</td>
<td>17</td>
<td>19</td>
</tr>
<tr>
<td>Additional Water from NTMWD</td>
<td>3,971</td>
<td>14,370</td>
<td>18,819</td>
<td>21,995</td>
<td>24,780</td>
<td>27,924</td>
</tr>
<tr>
<td>Add'l Water from NTMWD for The Colony</td>
<td>82</td>
<td>442</td>
<td>620</td>
<td>765</td>
<td>928</td>
<td>1,118</td>
</tr>
<tr>
<td>Add'l Water from NTMWD for Manufacturing</td>
<td>33</td>
<td>108</td>
<td>141</td>
<td>173</td>
<td>213</td>
<td>263</td>
</tr>
<tr>
<td><strong>Total Water Management Strategies</strong></td>
<td>5,559</td>
<td>17,082</td>
<td>22,257</td>
<td>25,445</td>
<td>28,686</td>
<td>32,331</td>
</tr>
<tr>
<td><strong>Reserve (Shortage)</strong></td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>
## Goldwater Project

### Goldwater Slide (converted acre-feet to million gallons)

<table>
<thead>
<tr>
<th></th>
<th>2020</th>
<th>2070</th>
</tr>
</thead>
<tbody>
<tr>
<td>City of Plano</td>
<td>476</td>
<td>959</td>
</tr>
<tr>
<td>City of Garland</td>
<td>226</td>
<td>241</td>
</tr>
<tr>
<td>City of McKinney</td>
<td>246</td>
<td>1,250</td>
</tr>
<tr>
<td>City of Mesquite</td>
<td>61</td>
<td>215</td>
</tr>
<tr>
<td>City of Frisco</td>
<td>564</td>
<td>1,381</td>
</tr>
<tr>
<td>City of Richardson</td>
<td>197</td>
<td>404</td>
</tr>
<tr>
<td>City of Allen</td>
<td>249</td>
<td>385</td>
</tr>
<tr>
<td>City of Rowlett</td>
<td>27</td>
<td>67</td>
</tr>
<tr>
<td>City of Wylie</td>
<td>20</td>
<td>62</td>
</tr>
<tr>
<td>City of Rockwall</td>
<td>107</td>
<td>419</td>
</tr>
<tr>
<td>City of Little Elm</td>
<td>11</td>
<td>30</td>
</tr>
<tr>
<td>City of Sachse</td>
<td>31</td>
<td>66</td>
</tr>
<tr>
<td>City of Murphy</td>
<td>40</td>
<td>85</td>
</tr>
<tr>
<td>City of Forney</td>
<td>9</td>
<td>73</td>
</tr>
<tr>
<td>City of Terrell</td>
<td>24</td>
<td>187</td>
</tr>
<tr>
<td>Town of Prosper</td>
<td>65</td>
<td>336</td>
</tr>
<tr>
<td>City of Royse City</td>
<td>3</td>
<td>65</td>
</tr>
<tr>
<td>City of Bonham</td>
<td>11</td>
<td>45</td>
</tr>
<tr>
<td>City of Fate</td>
<td>10</td>
<td>102</td>
</tr>
<tr>
<td>Town of Fairview</td>
<td>30</td>
<td>95</td>
</tr>
<tr>
<td>City of Princeton</td>
<td>3</td>
<td>51</td>
</tr>
<tr>
<td>City of Kaufman</td>
<td>3</td>
<td>22</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>2020</th>
<th>2070</th>
</tr>
</thead>
<tbody>
<tr>
<td>City of Lucas</td>
<td>27</td>
<td>126</td>
</tr>
<tr>
<td>City of Melissa</td>
<td>15</td>
<td>278</td>
</tr>
<tr>
<td>Town of Sunnyvale</td>
<td>14</td>
<td>78</td>
</tr>
<tr>
<td>City of Parker</td>
<td>15</td>
<td>110</td>
</tr>
<tr>
<td>City of Farmersville</td>
<td>3</td>
<td>15</td>
</tr>
<tr>
<td>City of Crandall</td>
<td>5</td>
<td>18</td>
</tr>
<tr>
<td>City of Josephine</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>Ables Springs WSC</td>
<td>1</td>
<td>6</td>
</tr>
<tr>
<td>Caddo Basin SUD</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>Cash SUD</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>College Mound WSC</td>
<td>2</td>
<td>17</td>
</tr>
<tr>
<td>Copeville SUD</td>
<td>1</td>
<td>11</td>
</tr>
<tr>
<td>East Fork SUD</td>
<td>2</td>
<td>10</td>
</tr>
<tr>
<td>Forney Lake WSC</td>
<td>5</td>
<td>50</td>
</tr>
<tr>
<td>Gastonia-Scurry SUD</td>
<td>2</td>
<td>20</td>
</tr>
<tr>
<td>Lavon WSC</td>
<td>3</td>
<td>46</td>
</tr>
<tr>
<td>Mt. Zion WSC</td>
<td>3</td>
<td>46</td>
</tr>
<tr>
<td>City of Nevada/Nevada</td>
<td>0</td>
<td>15</td>
</tr>
<tr>
<td>Rose Hill SUD</td>
<td>1</td>
<td>10</td>
</tr>
<tr>
<td>Seis Lagos UD</td>
<td>11</td>
<td>15</td>
</tr>
<tr>
<td>Wylie N.E. SUD</td>
<td>1</td>
<td>14</td>
</tr>
</tbody>
</table>
Region C Plan

Costs for Collin County Water User Groups

Table 5D.37 shows the estimated capital costs for Collin County water management strategies not covered under the wholesale water providers, and Table 5D.38 summarizes the costs by category. Table 5D.38 is followed by a summary for Collin County.

---

**Table 5D.37**

Costs for Recommended Water Management Strategies for Collin County Not Covered Under Wholesale Water Providers

<table>
<thead>
<tr>
<th>Water User Group</th>
<th>Strategy</th>
<th>Implemented by:</th>
<th>Quantity ** (Ac-Ft/Yr)</th>
<th>Capital Costs ($)</th>
<th>Unit Cost ($/1000 gal)</th>
<th>Table for Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Allen</td>
<td>Conservation</td>
<td>2020</td>
<td>1,180</td>
<td>$1,192,200</td>
<td>$1.28</td>
<td>$0.53</td>
</tr>
<tr>
<td></td>
<td>Additional NTMWD supplies</td>
<td>2020</td>
<td>7,315</td>
<td>$0</td>
<td>$1.70</td>
<td>$1.70</td>
</tr>
<tr>
<td>Anna</td>
<td>Conservation</td>
<td>2020</td>
<td>276</td>
<td>$71,750</td>
<td>$3.60</td>
<td>$0.00</td>
</tr>
<tr>
<td></td>
<td>Additional NTMWD supplies (CGMA)</td>
<td>2030</td>
<td>10,954</td>
<td>See GTUA in Section 5C.1.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

---

2016 Region C Water Plan
### Region C Plan

<table>
<thead>
<tr>
<th>Water User Group</th>
<th>Strategy</th>
<th>Implemented by</th>
<th>Quantity ** (Ac-Ft/Yr)</th>
<th>Capital Costs</th>
<th>Unit Cost ($/1000 gal)</th>
<th>Table for Details</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Conservation</td>
<td>2020</td>
<td>338</td>
<td>$119,273</td>
<td>$1.74</td>
<td>Q-10</td>
</tr>
<tr>
<td></td>
<td>Additional NTMWD supplies</td>
<td>2020</td>
<td>5,398</td>
<td>$0</td>
<td>$1.75</td>
<td>None</td>
</tr>
<tr>
<td></td>
<td>Increase delivery infrastructure from NTMWD</td>
<td>2030</td>
<td>5,398</td>
<td>$1,651,000</td>
<td>$0.13</td>
<td>Q-76</td>
</tr>
<tr>
<td>Parker</td>
<td>Conservation</td>
<td>2020</td>
<td>2,942</td>
<td>$1,689,481</td>
<td>$1.34</td>
<td>Q-10</td>
</tr>
<tr>
<td></td>
<td>Additional NTMWD supplies</td>
<td>2020</td>
<td>27,924</td>
<td>$0</td>
<td>$1.70</td>
<td>None</td>
</tr>
<tr>
<td></td>
<td>Conservation</td>
<td>2020</td>
<td>158</td>
<td>$21,181</td>
<td>$0.68</td>
<td>Q-10</td>
</tr>
<tr>
<td>Princeton</td>
<td>Conservation</td>
<td>2020</td>
<td>1,030</td>
<td>$245,098</td>
<td>$1.17</td>
<td>Q-10</td>
</tr>
<tr>
<td></td>
<td>Additional NTMWD supplies</td>
<td>2020</td>
<td>10,934</td>
<td>$0</td>
<td>$1.70</td>
<td>None</td>
</tr>
<tr>
<td></td>
<td>Increase delivery infrastructure from NTWMD</td>
<td>2020</td>
<td>10,934</td>
<td>$3,786,000</td>
<td>$0.22</td>
<td>Q-77 &amp; Q-78</td>
</tr>
<tr>
<td>Plano*</td>
<td>Conservation</td>
<td>2020</td>
<td>2,942</td>
<td>$1,689,481</td>
<td>$1.34</td>
<td>Q-10</td>
</tr>
<tr>
<td></td>
<td>Additional NTMWD supplies</td>
<td>2020</td>
<td>27,924</td>
<td>$0</td>
<td>$1.70</td>
<td>None</td>
</tr>
<tr>
<td></td>
<td>Conservation</td>
<td>2020</td>
<td>158</td>
<td>$21,181</td>
<td>$0.68</td>
<td>Q-10</td>
</tr>
<tr>
<td></td>
<td>Other measures</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>See Princeton in Section 5C.</td>
</tr>
<tr>
<td>Prosper*</td>
<td>Conservation</td>
<td>2020</td>
<td>1,030</td>
<td>$245,098</td>
<td>$1.17</td>
<td>Q-10</td>
</tr>
<tr>
<td></td>
<td>Additional NTMWD supplies</td>
<td>2020</td>
<td>10,934</td>
<td>$0</td>
<td>$1.70</td>
<td>None</td>
</tr>
<tr>
<td></td>
<td>Increase delivery infrastructure from NTWMD</td>
<td>2020</td>
<td>10,934</td>
<td>$3,786,000</td>
<td>$0.22</td>
<td>Q-77 &amp; Q-78</td>
</tr>
</tbody>
</table>

**Notes:** Water User Groups marked with an * extend into more than one county. **Quantities listed are for the WUG only. They do not include the WUG's customers.
### Table Q-10
Supply and Costs by Water User Group for Municipal Water Conservation

| Strategy Name | Entity Name | 2020 Volume | 2030 Volume | 2040 Volume | 2050 Volume | 2060 Volume | 2070 Volume | 2020 Unit Cost | 2030 Unit Cost | 2040 Unit Cost | 2050 Unit Cost | 2060 Unit Cost | 2070 Unit Cost | 2020 Annual | 2030 Annual | 2040 Annual | 2050 Annual | 2060 Annual | 2070 Annual | Capital Cost |
|---------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Conservation - Plano | PLANO | 1,115 | 1,790 | 3,640 | 2,457 | 1,708 | 2,941 | $445 | $215 | $127 | $137 | $125 | $115 | 496,667 | 385,000 | 335,547 | 337,213 | 337,213 | 337,213 | $ - |
| Conservation - Post Oak Bend City | POST OAK BEND CITY | 0 | 1 | 1 | 3 | 5 | 11 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | 0 | 0 | 0 | 0 | 0 | 0 | $ - |
| Conservation - Pottstown | POTTSBORO | 2 | 6 | 16 | 28 | 58 | 116 | $0 | $797 | $993 | $468 | $986 | $0 | 0 | 0 | 12,751 | 16,611 | 27,500 | 46,167 | $ - |
| Conservation - Princeton | PRINCETON | 3 | 8 | 10 | 40 | 97 | 158 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | 0 | 0 | 0 | 0 | 0 | 0 | $ - |
| Conservation - Prosper | PROSPER | 171 | 338 | 557 | 754 | 972 | 1,030 | $322 | $231 | $176 | $151 | $131 | $124 | 55,130 | 78,235 | 97,803 | 113,900 | 127,434 | 127,434 | $ - |
| Conservation - Providence Village | PROVIDENCE VILLAGE WCID | 3 | 6 | 9 | 12 | 15 | 19 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | 0 | 0 | 0 | 0 | 0 | 0 | $ - |
| Conservation - Red Oak | RED OAK | 6 | 14 | 28 | 50 | 77 | 143 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | 0 | 0 | 0 | 0 | 0 | 0 | $ - |
| Conservation - Reno | RENO | 1 | 1 | 2 | 3 | 4 | 5 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | 0 | 0 | 0 | 0 | 0 | 0 | $ - |
| Conservation - Rhome | RHOME | 5 | 13 | 22 | 40 | 58 | 80 | $1,354 | $727 | $554 | $438 | $446 | $407 | 6,768 | 9,448 | 12,193 | 19,333 | 25,867 | 32,167 | $ - |
| Conservation - Rice | RICE | 1 | 1 | 2 | 3 | 4 | 5 | $56 | $56 | $56 | $56 | $56 | $56 | $56 | 0 | 0 | 0 | 0 | 0 | 0 | $ - |
| Conservation - Rice WC | RICE WC | 3 | 6 | 12 | 28 | 50 | 77 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | 0 | 0 | 0 | 0 | 0 | 0 | $ - |
| Conservation - Richardson | RICHARDSON | 472 | 698 | 941 | 1,054 | 1,146 | 1,240 | $399 | $246 | $187 | $171 | $157 | $145 | 167,835 | 171,426 | 176,252 | 180,179 | 180,179 | 180,179 | $ - |

2017 State Water Plan - Interactive


For questions about State Water Plan, please contact Matt Nelson
Water IQ / WaterMyYard Outreach Events

- August 13
  - Forney Forney Trade Days
- August 19
  - Royse City Back2School Bash
- September 10
  - Wylie Wylie Rodeo
- September 24
  - Garland Live Well – Go Green Expo
- September 25
  - Plano Plano Balloon Festival
- October 31
  - McKinney Scare On the Square
Agenda

I. Water Supply Update - Billy George
II. LBCR & Main Stem PS Permitting Update - Billy George
III. Watershed Protection Program – Galen Roberts
IV. Crisis Communications - Mary Gugliuzza
V. Energy Conservation Rebate - Billy George
VI. Public Education Programs Update - Denise Hickey
VII. Public Relations Update - Janet Rummel
VIII. Upcoming Meetings - Billy George
Public Relations Update

- NTMWD Budget/Rates communications
- Testing new website
- Next PR/Water Educators meeting Aug. 17
I. Water Supply Update - Billy George
II. LBCR & Main Stem PS Permitting Update - Billy George
III. Watershed Protection Program – Galen Roberts
IV. Crisis Communications - Mary Gugliuzza
V. Energy Conservation Rebate - Billy George
VI. Public Education Programs Update - Denise Hickey
VII. Public Relations Update - Janet Rummel
VIII. Upcoming Meetings - Billy George
Upcoming Meetings

RSVP through

www.NTMWD.com

Follow us on:

<table>
<thead>
<tr>
<th>Date</th>
<th>Month</th>
<th>Meeting</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wed</td>
<td>Aug 17</td>
<td>NTMWD</td>
</tr>
<tr>
<td>Wed</td>
<td>Sep 21</td>
<td>NTMWD</td>
</tr>
<tr>
<td>Wed</td>
<td>Oct 19</td>
<td>NTMWD</td>
</tr>
<tr>
<td>Wed</td>
<td>Nov 16</td>
<td>NTMWD</td>
</tr>
<tr>
<td>Wed</td>
<td>Dec</td>
<td>(no meeting)</td>
</tr>
</tbody>
</table>

**Meeting Time:**

9:30 a.m.

Water Partnering Meeting

Wastewater Partnering Meeting

(immediately following last item in the Water Partnering Meeting)

11:30 a.m.

Target Meeting End Time

at

NORTH TEXAS MUNICIPAL WATER DISTRICT
ENGINEERING BUILDING TRAINING ROOM
505 E. Brown Street, Wylie, TX 75098
North Texas Municipal Water District

“Regional Service Through Unity ... 
Meeting our Region’s Needs Today and Tomorrow”

Wastewater Partnering Meeting
July 20, 2016
Agenda

• Wastewater Plant Discharge Permit Renewal Updates

• NTMWD Sanitary Sewer Overflow Initiative (SSOI) Update

• Accidental Discharge or Spill Monthly Summary Form Update

• Discussion
Wastewater Plant Discharge Permit Renewal Updates
Wastewater Plant Discharge Permit Renewal Background

• Discharge permits are primary tool for regulators - TCEQ
• TCEQ adopted a basin permitting cycle and this is second iteration for Trinity Basin (All DFW and HOU metro)
• Major issues being considered by TCEQ this cycle
  – Interest in industrial contributions
  – Continued nutrient requirements
  – Increased interest in total dissolved solids and sulfates
Wastewater Permitting Update

- Permit out of cycle – Not currently in permit renewal process
- Application submitted, but draft permit not yet received
- Draft permit received and no major comments
- Draft permit received and major comments
Wastewater Permitting Update

Permit out of cycle – Not currently in permit renewal process
Muddy Creek WWTP

Current
10 MGD Daily Average
20,833 GPM 2-Hour Peak (3.0 PF)

Future
15 MGD Daily Average
31,250 GPM 2-Hour Peak (3.0 PF)
20 MGD Daily Average
41,667 GPM 2-Hour Peak (3.0 PF)

- Permit expires October 1, 2019

Sabine Creek WWTP

Current
1.5 MGD Daily Average
3,125 GPM 2-Hour Peak (3.0 PF)

Future
3 MGD Daily Average
6,250 GPM 2-Hour Peak (3.0 PF)
5 MGD Daily Average
10,417 GPM 2-Hour Peak (3.0 PF)

- Permit issued June 6
- Permit will expire March 1, 2021

Permit out of cycle – Not currently in permit renewal process
Application submitted, but draft permit not yet received.
Wilson Creek RWWTP

Current
56 MGD Daily Average
141,667 GPM 2-Hour Peak (3.6 PF)

Future
64 MGD Daily Average
155,556 GPM 2-Hour Peak (3.5 PF)

- Permit renewal application submitted March 31
- Draft permit not yet received
- RFI received regarding Lavon Lake modeling June 29
Farmersville No. 1 WWTP
- .225 MGD Daily Average
- 469 GPM 2-Hour Peak (3.0 PF)
- Permit renewal application submitted March 31
- Draft permit not yet received

Farmersville No. 2 WWTP
- .53 MGD Daily Average
- 1,104 GPM 2-Hour Peak (3.0 PF)
- Permit renewal application submitted March 31
- RFI regarding 75/90 rule received July 14
- Draft permit not yet received
Wastewater Permitting Update

Cottonwood Creek WWTP
- .3 MGD Daily Average
- 410 GPM 2-Hour Peak (2 PF)
- Permit renewal application submitted March 31
- Draft permit received June 29
- Comments (typographical errors or clarifications) submitted July 12

Seis Lagos WWTP
- .25 MGD Daily Average
- 500 GPM 2-Hour Peak (2.88 PF)
- Permit renewal application submitted March 31
- Draft permit received May 25
- Comments (typographical errors and clarifications) submitted June 8

Royse City WWTP
- .5 MGD Daily Average
- 1,389 GPM 2-Hour Peak (4.0 PF)
- Flow has been bypassed to Sabine Creek WWTP since November 28, 2006
- Permit issued March 14
- Permit will expire March 1, 2021
Draft permit received and major comments
Floyd Branch RWWTP

4.75 MGD Daily Average
6,944 GPM 2-Hour Peak (2.0 PF)

- Permit renewal application submitted February 29
- Draft permit received May 19
- Comments requesting dissolved copper variance and WET testing methodology change submitted July 11
South Mesquite RWWTP

Current
33 MGD Daily Average
57,292 GPM 2-Hour Peak (2.5 PF)

Future
41 MGD Daily Average
71,181 GPM 2-Hour Peak (2.5 PF)

- Permit renewal application submitted March 31
- Notification of request for change to WET testing methodology submitted June 23
- Draft permit received June 27
- Comments regarding change to WET testing methodology and TDS/sulfate monitoring to be submitted NLT July 21
**Wylie WWTP**

2 MGD Daily Average
3,472 GPM 2-Hour Peak (2.5 PF)

- Flow has been bypassed to Muddy Creek WWTP since June 14, 2009
- Permit renewal application submitted March 22, 2011
- Final permit has not been issued
NTMWD Sanitary Sewer Overflow Initiative (SSOI) Update
Existing NTMWD
Sanitary Sewer Overflow Initiative

• Existing SSOI limited to Upper East Fork Interceptor System
• Began participation in SSOI Program in 2010
• Expires December 2016
• Established preventative maintenance crew for UEFIS
• Considerable progress in O&M
# Annual SSOI Performance Metrics

<table>
<thead>
<tr>
<th></th>
<th>Annual SSOI Goal</th>
<th>2015</th>
<th>2014</th>
<th>2013</th>
<th>2012</th>
<th>2011</th>
<th>2010*</th>
<th>6-yr Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Manhole</strong></td>
<td></td>
<td>300</td>
<td>318</td>
<td>307</td>
<td>301</td>
<td>304</td>
<td>314</td>
<td>86</td>
</tr>
<tr>
<td><strong>Aerial crossing</strong></td>
<td></td>
<td>25</td>
<td>28</td>
<td>27</td>
<td>25</td>
<td>25</td>
<td>25</td>
<td>17</td>
</tr>
<tr>
<td><strong>Pipeline right-of-ways</strong></td>
<td></td>
<td>25%</td>
<td>25%</td>
<td>25%</td>
<td>25%</td>
<td>25</td>
<td>30%</td>
<td>7%</td>
</tr>
<tr>
<td><strong>Lift station</strong></td>
<td>Daily</td>
<td>Daily</td>
<td>Daily</td>
<td>Daily</td>
<td>Daily</td>
<td>Daily</td>
<td>Daily</td>
<td>Daily</td>
</tr>
<tr>
<td><strong>Wetwell cleaning</strong></td>
<td>-</td>
<td>2</td>
<td>3</td>
<td>6</td>
<td>5</td>
<td>9</td>
<td>2</td>
<td>1.4x</td>
</tr>
<tr>
<td><strong>Pipeline cleaning &amp; video inspection</strong></td>
<td>-</td>
<td>17,970</td>
<td>10,475</td>
<td>3,037</td>
<td>8,458</td>
<td>90,980</td>
<td>12,500</td>
<td>17%</td>
</tr>
</tbody>
</table>

*2010 data includes the three months between SSOI Agreement execution and end of FY
Authorization to enter the SSOI Program for the entire NTMWD System

• Existing UEFIS SSOI (expires Dec. 2016)
• Propose Inclusion of all other NTMWD Conveyance Systems in future agreement
  A. Upper East Fork Interceptor System
  B. Muddy Creek WWTP Conveyance System
  C. South Mesquite Regional WWTP Conveyance System
  D. Sabine Creek WWTP Conveyance System

• Benefits
  • Consolidate paperwork and reporting
  • Compliment proposed CMOM program
• SSO Plan due to TCEQ October 25, 2016
Accidental Discharge or Spill
Monthly Summary Form Update
Discussion