1. Welcome and Introductions.

Action Item

2. Meeting Summary. The October 3, 2019 meeting summary will be presented for approval.
Presentation

3. Completion of Risk and Resilience Assessment and Emergency Response Plans for Cities Over 100,000.

Christine Webb, CSP, City of Fort Worth

* NCTCOG received offer of contractual assistance with meeting these requirements.
Fort Worth Water Utility AWIA Risk & Resiliency Assessment.

Christine Webb, CSP
January 15, 2020
Historical

• Public Health Security and Bioterrorism Response Act was signed into law by President Bush on June 12, 2002.
  ▪ Added SDWA Section 1433.

• Initial requirement for community water systems to conduct a vulnerability assessment by set deadlines (submit a copy to EPA) and develop an emergency response plan (certify completion to EPA).
  ▪ Assessment of system to terrorist attack or other intentional acts designed to disrupt the water system.

• Required EPA to develop stringent measures to protect the information found in or derived from the Vulnerability Assessments.

• EPA is the primary agency responsible for enforcing Section 1433, Fines up to ~57,300 daily.
# America’s Water Infrastructure Act

- Risk & Resiliency Assessments & Response Plans

<table>
<thead>
<tr>
<th>Population served</th>
<th>Risk &amp; Resilience Assessment</th>
<th>Emergency Response Plan</th>
</tr>
</thead>
<tbody>
<tr>
<td>100,000 or more</td>
<td>March 31, 2020</td>
<td>Sept. 30, 2020</td>
</tr>
<tr>
<td>50,000 or more but less than 100,000</td>
<td>Dec. 31, 2020</td>
<td>June 30, 2021</td>
</tr>
<tr>
<td>Greater than 3,300 but less than 50,000</td>
<td>June 30, 2021</td>
<td>Dec. 30, 2021</td>
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</tbody>
</table>
Each community water system serving a population of greater than 3,300 persons shall assess the risks to, and resilience of, its system. Such an assessment shall include:

- The risk to the system from malevolent acts and natural hazards;
- Pipes/conveyances, source water, water collection/intake, pretreatment, treatment, storage and distribution, electronic, computer, or other automated systems (including security);
- Monitoring practices;
- Financial infrastructure;
- Use, storage or handling of chemicals;
- Operation and maintenance; and
- May include capital and operational needs for risk management.
Risk ($) = Consequences ($) \times \text{Vulnerability} (%) \times \text{Threat Likelihood} (%)

Resilience = \text{Duration} \times \text{Severity} \times \text{Vulnerability} \times \text{Threat Likelihood}
Resiliency Framework

• Where to begin?
Tools and/or Methods

• AWIA does not require the use of any standards, methods or tools for the risk and resilience assessment or emergency response plan. Your utility is responsible for ensuring that the risk and resilience assessment and emergency response plan address all the criteria in AWIA Section 2013(a) and (b), respectively.

• The U.S. EPA recommends the use of standards, including AWWA J100-10 Risk and Resilience Management of Water and Wastewater Systems, along with tools from the U.S. EPA and other organizations, to facilitate sound risk and resilience assessments and emergency response plans.

EPA’s main goal is returning the system to compliance and protecting public health.
AWWA J-100
Risk Analysis and Management for Critical Asset Protection (RAMCAP) Standard for

Risk and Resilience Management of Water and Waste
Seven Steps

1) Asset Characterization
   - What assets do I have and which are critical?

2) Threat Characterization
   - What threats and hazards should I consider?

3) Consequence Analysis
   - What happens to my assets if a threat or hazard happens? How much money lost, how many lives lost, how many injuries?

4) Vulnerability Analysis
   - What are my vulnerabilities that would allow a threat or hazard to cause these consequences?

5) Threat Analysis
   - What is the likelihood that a terrorist, natural hazard, or dependency/proximity hazard will strike my facility?

6) Risk/Resilience Analysis
   - What is my risk and resilience?
     Risk = Consequences × Vulnerability × Threat Likelihood
     Resilience = Service Outage × Vulnerability × Threat Likelihood

7) Risk/Resilience Management
   - What options do I have to reduce risks and increase resilience? How much will each benefit in reduced risks and increased resilience? How much will it cost? What is the benefit–cost ratio of my options?
Team Selections

- Professional Assistance
- Small Core Risk and Resiliency Project management team.
- AWWA RRA Certification for project manager.
- Identified our Information-holders team.
  - Multiple divisions
  - Multiple levels within management
  - Multiple prospective.
Training & Workshops

• TRWD for Raw Water Source 9/5

• Project Kick-off- Meeting- 10/1
  • Define Our Mission- Identify what is failure
  • Background information- previous vulnerability assessments
  • Product-Worksheet

• 2 Day Workshop- All Information Holders 10/31- 11/1
  • How to Break the system
  • Product- Threat-Asset Matrix 190 pairs

• Division Meetings
  • Closely exam Threat Asset Pairs and the Whys?
## Status

<table>
<thead>
<tr>
<th>Step</th>
<th>Description</th>
<th>Question</th>
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<tbody>
<tr>
<td>1</td>
<td>Asset Characterization</td>
<td>What assets do I have and which are critical?</td>
</tr>
<tr>
<td>2</td>
<td>Threat Characterization</td>
<td>What threats and hazards should I consider?</td>
</tr>
<tr>
<td>3</td>
<td>Consequence Analysis</td>
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<tr>
<td>4</td>
<td>Vulnerability Analysis</td>
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<td></td>
<td></td>
<td>Resilience = Service Outage × Vulnerability × Threat Likelihood</td>
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<tr>
<td></td>
<td></td>
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</table>
Status

• The RRA draft Report will be completed and submitted to Fort Worth Water.
• Water review draft by end of February
• Finalize RRA Report by March 13. (This is when the information will be provided to the wholesale customers.)

Timeline:
- By May 15 - Draft of WQMP completed
- By May 22 - Public Comment period begins, Documentation in newspaper
- July 1 - Public Hearing and WRC meeting
- July 1 - July 27 - Address comments from public
- July 28 - Deadline to submit draft to TCEQ
- July 28 - August 11 - Address comments from TCEQ
- August 27 - NCTCOG’s Executive Board to approve
- August 30 - Final WQMP due to TCEQ
Discussion


- Data that needs to be updated:
  - Population estimates
    - Include NCTCOG’s 2020 estimates
  - Impaired water bodies
    - Update with data from 2016 Integrated Report
  - Sanitary Sewer Overflow data
  - Watershed Protection Plans (WPP) in region
    - Add Joe Pool Lake and Rowlett Creek
  - CWSRF applications reviewed

- Comments/questions?
Discussion


- Proposed changes to 2020 WQMP
  - Not include DMR data in Appendix C

- Last year to include TPDES permit data in Appendix B. Next year to begin mapping locations of On-Site Sewage Facilities in region

- Transition from developing document and focus efforts on creating WQMP as an online, more user-friendly mapping tool.

- Comments/questions
### Discussion

#### 5. Update on Water for North Texas Resource Library.


<table>
<thead>
<tr>
<th>Water Supply</th>
<th>Water Conservation</th>
<th>Water Quality</th>
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<tbody>
<tr>
<td>Lake Levels</td>
<td>Smartscape</td>
<td>Water Treatment</td>
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<td>Stormwater</td>
<td>Rainwater Harvesting</td>
<td>OSSFs</td>
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<td>Emergency Water Issues</td>
<td>Residential Water Efficiency</td>
<td>Pet Waste</td>
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<td>Fats, Oils, and Greases</td>
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<td>Green Infrastructure</td>
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</tbody>
</table>
Discussion

6. Topics for Workshops/Webinars and Annual Watershed Stakeholder Meeting.

- Stakeholder meeting - March 19, 2020, 9:30 a.m. at NCTCOG’s William Pitstick Conference Room

- Topic ideas for both the Stakeholder meeting and the workshops/webinars:
  - Environmental Protection Agency to discuss PFAs?
  - TCEQ to discuss 319 non-point source funding?
  - More ideas?
Other Business and Roundtable Discussion

7. NCTCOG Updates.

- NCTCOG Webinar - Tuesday, January 28, 2020 at 1:00 p.m.
  “Managing Overabundant Wildlife to Protect Water Quality of the Dry Comal Creek and Comal River, New Braunfels, Texas.”
  https://www.addevent.com/event/gp4139771

8. Future Agenda Items.

- Suggestions for future agenda or presentation topics?
Other Business and Roundtable Discussion

WRC members are welcome to share what is happening in their communities.

10. Schedule for the next meeting
- The next WRC meeting is scheduled for:
  Thursday, April 30, 2020
  10:30 a.m., Centerpoint Two, First Floor Metroplex Conference Room

WQMP Links

► Document

► Online mapping tool
Staff Contacts:

- Elena Berg  
  Environment and Development Planner  
  eberg@nctcog.org  
  817-608-2363

- Cassidy Campbell  
  Senior Environment and Development Planner  
  ccampbell@nctcog.org  
  817-608-2368

- Tamara Cook  
  Senior Program Manager of Environment and Development  
  tcook@nctcog.org  
  817-695-9221

- Edith Marvin  
  Director of Environment and Development  
  Emarvin@nctcog.org  
  817-695-9211