

Welcome

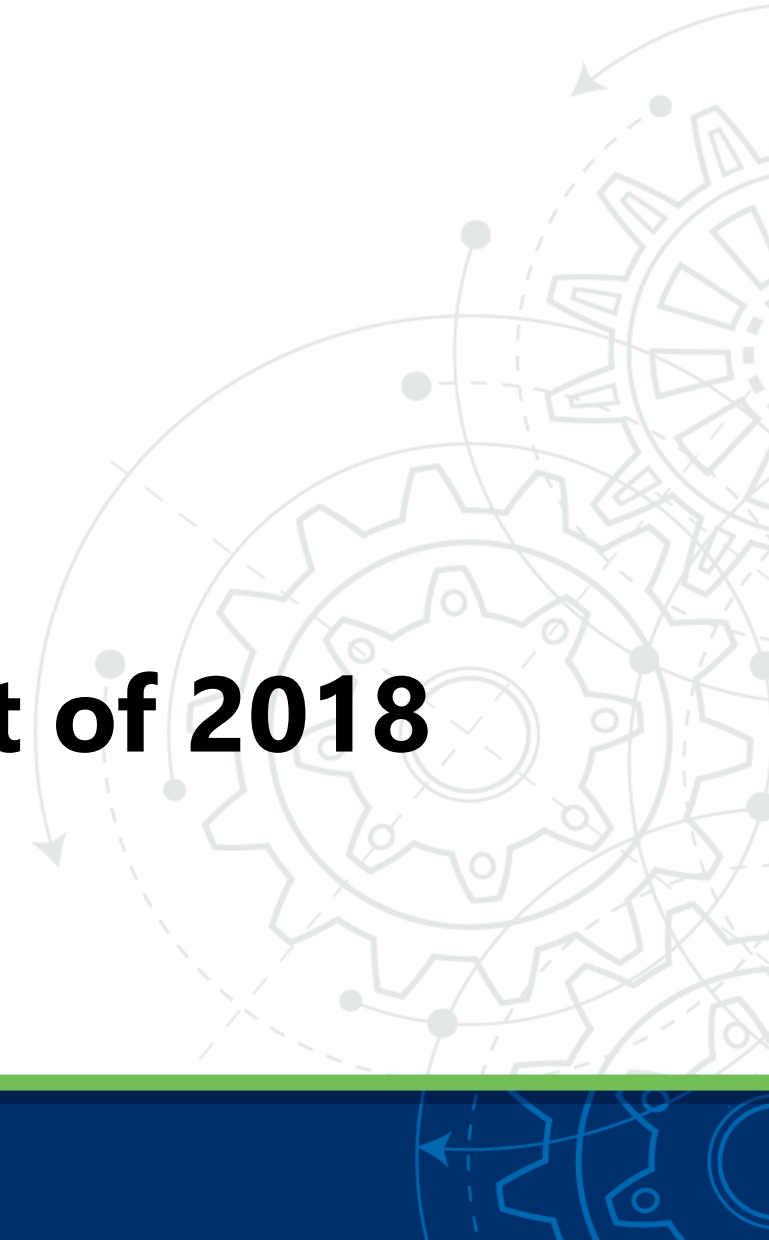
We will begin momentarily...



Ten Things You Need to Know

America's Water Infrastructure Act of 2018

What's Required? And How Do I Get Started?



Meet the Presenters



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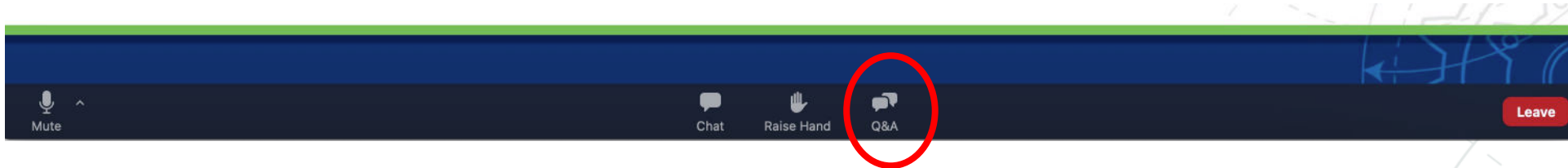


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Housekeeping

Ask Your Questions!



Slide deck at: www.m-m.net

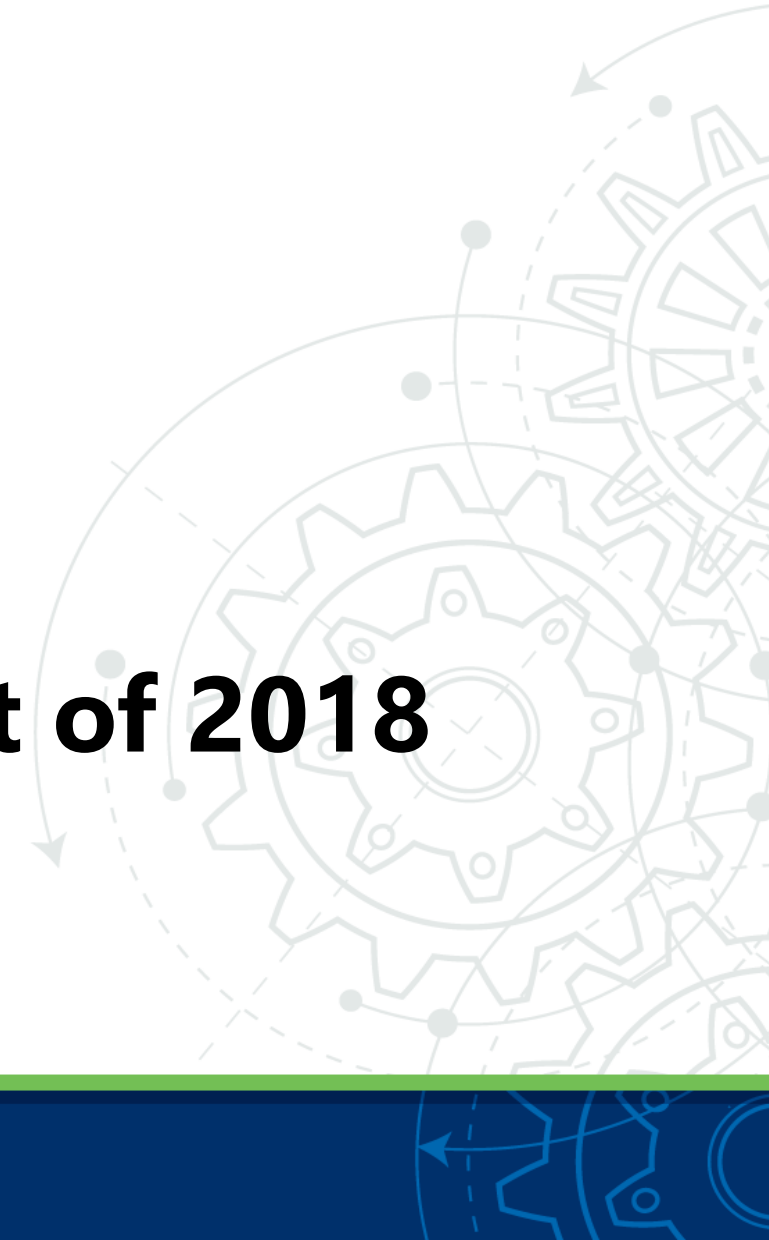
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Ten Things You Need to Know

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What's Required? And How Do I Get Started?



There are hard deadlines...

Population Served	Risk and Resilience Assessment Due	Emergency Response Plan Due
≥ 100,000	March 31, 2020	September 30, 2020
50,000 – 99,999	December 31, 2020	June 30, 2021
3,301 – 49,999	June 30, 2021	December 30, 2021

There are hard deadlines...

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$\geq 100,000$	March 31, 2020	September 30, 2020
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Potential for \$25,000/day fine by EPA





Risk and Resilience Assessments (RRAs)

- Must consider an all-hazards approach to assessing risk
 - Malevolent acts
 - Potential natural hazards
 - Cybersecurity



J100 Reference Threats

Malevolent Threats by Threat Category

Aircraft	Assault Team	Maritime	Vehicle Borne Bomb	Contamination of Product	Directed / Sabotage	Theft or Diversion	Cyber Insider	Cyber Outsider
A1 - Helicopter	AT1 - 1 Assailant	M1 - Small Boat	V1 - Car	C(B) - Biotoxin	S(PI) – Physical Insider	T(PI) – Physical Insider	CI1 - Insider	CO1 - Cyber Outsider Attackers
A2 - Small Plane	AT2 - 2–4 Assailants	M2 - Fast Boat	V2 - Van	C(C) - Chemical	S(PU) – Physical Outsider	T(PU) – Physical Outsider	CI2 - Trusted Insider / Accidental	CO2 - Criminal Group
A3 - Regional Jet	AT3 - 5–8 Assailants	M3 - Barge	V3 - Midsize Truck	C(C) - Explosive	AS - Active Shooter	T(CI) - Cyber Insider		CO3 - Terrorist
A4 - Large Jet	AT4 - 9–16 Assailants	M4 - Deep Draft Ship	V4 - Large Truck (18 Wheeler)	C(P) - Pathogen		T(CU) - Cyber Outsider		CO4 - Foreign Intelligence Service
				C(R) - Radionuclide				

Random (Natural Disaster) Reference Threats by Hazard Category						Dependency & Proximity Threats	
Earthquake	Floods	Hurricanes	Ice Storms	Tornadoes	Wildfires	Dependency	Proximity
EQ1 - PGA 0.0 - 0.2	F1 - 100 Year Flood	H1 - Category 1	I0 - Minimal Damage	T0 - Fujita 0	W1 - FRG1	D(T) - Transportation	D(P) - Proximity
EQ2 - PGA 0.2 - 0.4	F2 - 500 Year Flood	H2 - Category 2	I1 - Isolated Outages	T1 - Fujita 1	W2 - FRG2	D(C) - Key Customers	
EQ3 - PGA 0.4 - .08		H3 - Category 3	I2 - Scattered Outages	T2 - Fujita 2	W3 - FRG3	D(E) - Key Employees	
EQ4 - PGA 0.8 - 1.1		H4 - Category 4	I3 - Numerous Outages	T3 - Fujita 3	W4 - FRG4	D(S) - Key Suppliers	
EQ5 - PGA > 1.1		H5 - Category 5	I4 - Prolonged Outages	T4 - Fujita 4	W5 - FRG5	D(U) - Utilities	
			I5 - Widespread Outages	T5 - Fujita 5			

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resilience:

“an ability to recover from or adjust easily to misfortune or change.”

—Merriam-Webster Dictionary



Tools

- RRA and ERP can be prepared under different formats
- RRA prepared first – EPA's VSAT is acceptable format
 - Template is available, but a learning curve
 - System information, system assets, personnel, and etc.
- Emergency plan and procedures
- Mitigation plan and procedures

PRELIMINARY SCREENING OF THREAT - ASSET PAIRS

[illegible]

WHEAT RESULTS

Asset/Threat Pair: Electrical service/S(PU) - Physical outsider - Monetized Risk Summary

Risk Metrics	Baseline	Improvement
Monetized Risk	\$88	\$127
Utility Financial Impact	\$35,000	\$425,000
Regional Economic Impact	\$0	\$0
Fatalities	0	0
Injuries	0	0
Vulnerability Likelihood	50%	6%
Annual Threat Likelihood	0.005	0.005

Tools

- ERP is prepared after RRA
- AWIA template is a good source
- Extensive amount of information to be provided
 - Template is available, but a learning curve



Cybersecurity

- Internal security with RRA and ERP
- Initiated with 22 questions for AWWA Cybersecurity Tool
- Template/spreadsheet populates from these questions
- Enter status of >85 controls



Cyber Security Questions

Process Control System

1. Are any data transferred to or from your PCS network, by any electronic means?

Additional Details:

Examples of electronic data transfer include both automatic (e.g. automated export of data from the **PCS** environment) and manual (e.g. transfer of data to/from the **PCS** environment via thumb drive). Examples of data that may be transferred include:

- Water quality data collected by the **PCS** and transferred for regulatory reporting
- Asset performance data for asset management
- Operating system / software patches and updates

☐ Yes

☐ No



Process Control System

2. Do users manually transfer any electronic data to or from your PCS environment?

Additional Details:

Users include anyone internal or external with access to **PCS**. This may include operators, technicians, and third-party consultants. Users are able to initiate transfer of data to and from the **PCS**. Examples of manual data transfer include:

- USB
- Portable media device
- Temporary network connections (an ad hoc network connection for transferring data from one computer to another)
- Shared drives
- Cloud file share (e.g. DropBox)

☐ Yes

☐ No

Capital Improvements

- Results of the RRA helps with CIP development
- Helps to prioritize needs
- Helps educate decision makers on project needs



Certification

- Must certify to EPA that both the RRA and ERP have been completed
- Documents are not submitted (change from VA submittal)
- Can upload a letter or certify on-line



Certification Form

Certification of Community Water System Risk and Resilience Assessment in Compliance with America's Water Infrastructure Act of 2018

Part (A): Community Water System Identification

Community Water System Name: _____

Community Water System Complete Mailing Address: _____

Public Water System Identification Number: _____

Population Served: _____

Part (B): Certification Date

Date of the certification: _____

Part (C): Certification Statement

I, _____
[Name of certifying official]

hereby certify that the community water system named under Part A, above, has *[select all that apply]*

☐ conducted ☐ reviewed ☐ reviewed and revised

an assessment of the risks to, and resilience of, its system. This assessment included an assessment of:

1. The risk to the system from malevolent acts and natural hazards;
2. The resilience of the pipes and constructed conveyances, physical barriers, source water, water collection and intake, pretreatment, treatment, storage and distribution facilities, electronic, computer, or other automated systems (including the security of such systems) which are utilized by the system;
3. The monitoring practices of the system;
4. The financial infrastructure of the system;
5. The use, storage, or handling of various chemicals by the system; and
6. The operation and maintenance of the system; and
7. Optionally, may include an evaluation of capital and operational needs for risk and resilience management for the system.

[Signature of certifying official - click to add a digital signature, or print and sign]

Updates

- Must be updated every five years at a minimum
- Must maintain records of RRA and ERP for five years



Owner's Perspective

RRA and ERP Production:

- Self-Evaluation

- Data: distribution, plant, computer controls
- Time: consider data and VSAT/AWIA template

- Collaboration

- Internal: WTP manager, Utilities Manager, Engineering, Emergency Response
- External: County and State

- Reporting

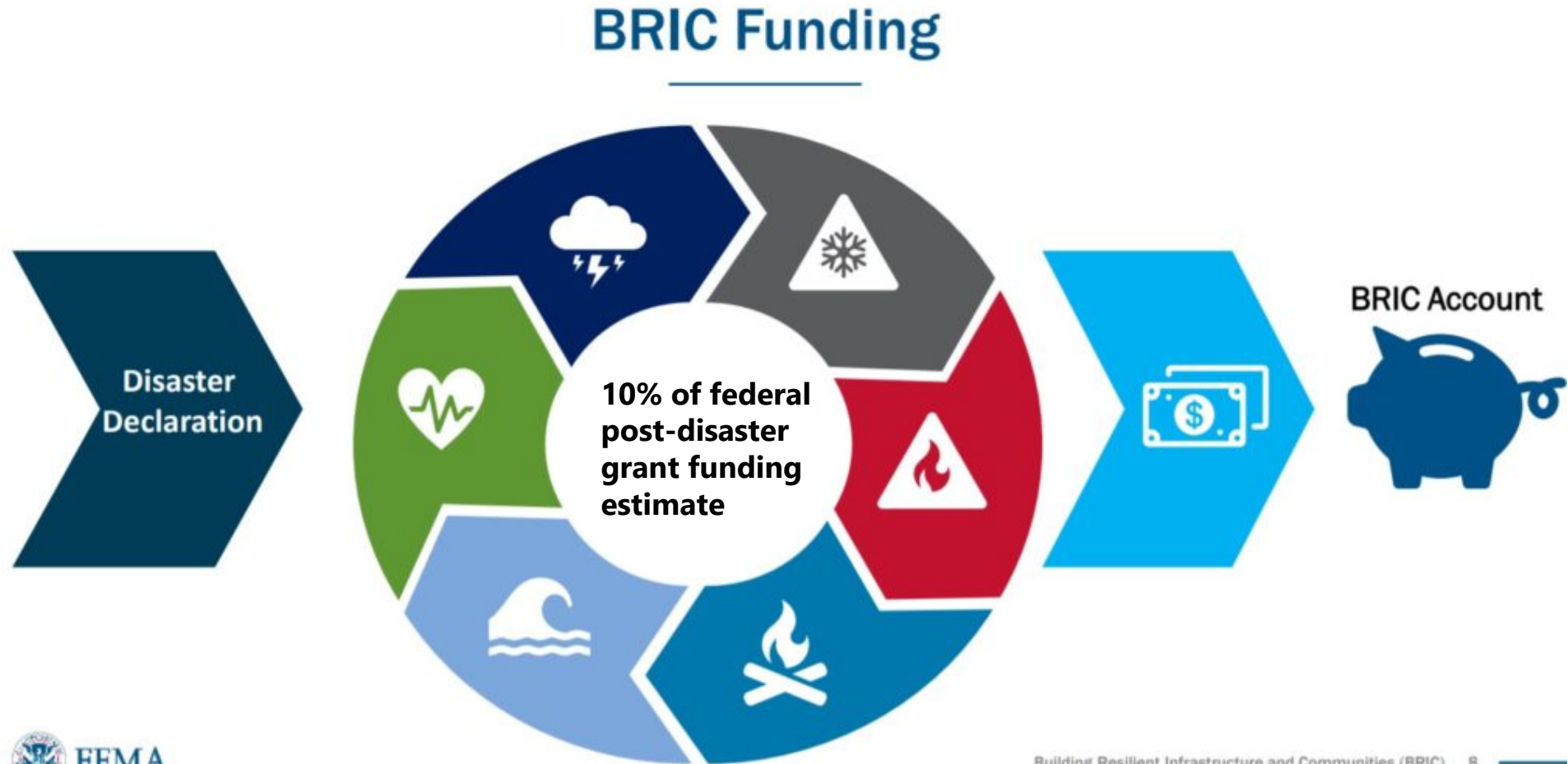


Stakeholder Input

- RRA and ERP are planning level documents
- Input and guidance required from utility's staff
- Input and guidance required from emergency responders
- Support from utility leadership, decision makers, and elected leadership

CAPITAL IMPROVEMENT PROJECTS			
PROJECTS	Carryover budget from prior years	Spend	Defer
Street/Traffic/Public Safety			
1 Fire Hydrant Replacement	\$34,393	\$34,393	\$0
2 Moraga Canyon Sports Fields	\$148,168	\$148,168	\$0
3 Tree Removals	\$15,000	\$15,000	\$0
4 Community Pool	\$600,000		\$600,000
5 Survey Monuments	\$6,852		\$6,852
6 Pedestrian Path Signage	\$10,000		\$10,000
7 Ramona/Ronada intersection	\$50,000		\$50,000
Sub-Total: Street/Traffic/Public Safety	\$864,413	\$197,561	\$666,852

Future Funding Opportunities

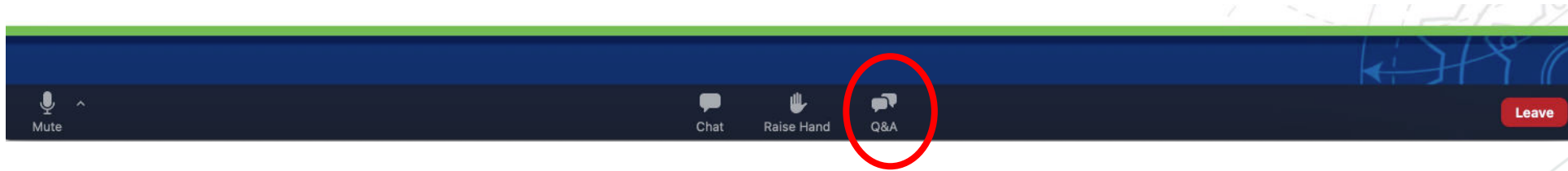


10 Things You Need to Know...

- Schedule
- Time
- Resilience
- Tools
- Cybersecurity
- Capital Improvements
- Stakeholder Input
- Certification
- Updates
- Deadline



Questions?



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Blog Posts:

- *Ten Things You Need to Know About America's Water Infrastructure Act*
- *American Water Infrastructure Act: What's New and How to Develop Your Community's Plan*

Stay In Touch



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Thank You!



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