Lessons Learned From 12 Months of Conducting Risk and Resilience Assessments and Emergency Response Plan Reviews

Arcadis. Improving quality of life.

About Arcadis

Founded in 1888 in the **Netherlands**

Top Female Friendly Companies
in the World, named by Forbes in 2022

Ranked #1 ESG Risk Rating Score
In our industry by Sustainalytics

40,000+ Projects
around the world

4th Largest
Architecture business in the world

Platinum Medal 2022
EcoVadis Sustainability Ratings

€4 Billion
in revenues in 2022

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Today's Presenter

Jonathan Reeves, CMCP



National Growth and Client Development Lead - Resilience

- Director of Emergency Management DC Water and Sewer Authority
- One of the first utilities in the country to do a combined water system and wastewater system RRA
- 25 years experience developing and managing Crisis and Emergency Management programs
- Currently work for Arcadis based in Seattle, WA

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America's Water Infrastructure Act of 2018

Mandates **water systems** serving **>3,300** to:

- ✓ Conduct Risk and Resilience Assessment
- ✓ Update RRA & Emergency Response Plans every **five** years
- ✓ Certification to the EPA



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AWIA Deadlines

POPULATION SERVED	RISK & RESILIENCE ASSESSMENT DEADLINE	EMERGENCY RESPONSE PLAN DEADLINE
 Large CWS: 100k+	03/31/2025	09/30/2025
 Medium CWS: 50K+<100k	12/31/2025	06/30/2026
 Small CWS: 3,300+< 50k	06/30/2026	12/30/2026

Certification required for each deadline. EPA penalty for non-compliance up to $25,000/day.

Where is our data coming from?

- Our team has conducted 250+ or more Risk and Resilience Assessments
- Covering utilities in 30+ states and territories
- A team of 30 specialists and hundreds on local support staff
- Team meets and workshops after each engagement cycle to identify lessons or issues



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Strengths

- Utilities have a great understanding of assets and operational risks - less so the further from operations you are
- Tracking mitigation over the 5-year cycle has improved
- Incorporating CIPs, Master Planning, hydraulic modeling, and asset management support utilities efforts that will reduce uncertainty and increase efficiency
- There has been an increase in emergency incident data collection from 2020 to 2025 has been good compared to the initial RRA



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Areas for Improvement

- Develop a BCP. Start with a process criticality assessment, Business Impact Assessment (BIA), start with the highest risk processes and build from there
- Highest ranked threats are not often included in the Emergency Response Plan (ERP) highest ranked threats need an incident specific ERP
- Document support resources and provide resource lists (Support contractors, Generator Specifics)
- Identify mitigation projects that reduce risk and ensure that they are listed in the County hazard mitigation plan and the utility CIP as projects – Not included then ineligible for state/federal funding



Basically, utilities still need to get in compliance and meet the letter of the law. They need to take it seriously. Yes, the requirement is to have a plan, but the expectation is that you can implement it.

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Lessons Learned and Best Practices



- Set up an RRA multi-discipline Work Group to work through the process
- Prioritize assets and ensure there is a multiple stakeholder discussions.
- Link all assets the threats and gain multiple perspectives on the threats
- Engage external stakeholders to provide the 'outside looking in' engage with local law enforcement, FBI office
- Consider reputational damage as part of your financial impacts and threats
- Track identified mitigation projects and ensure completion for the next five year cycle - really impresses the auditors.

Yes, the requirement is to have an RRA. But people are making it so complicated and then forgetting the end point. Which is to identify some risk and try to close the gap.

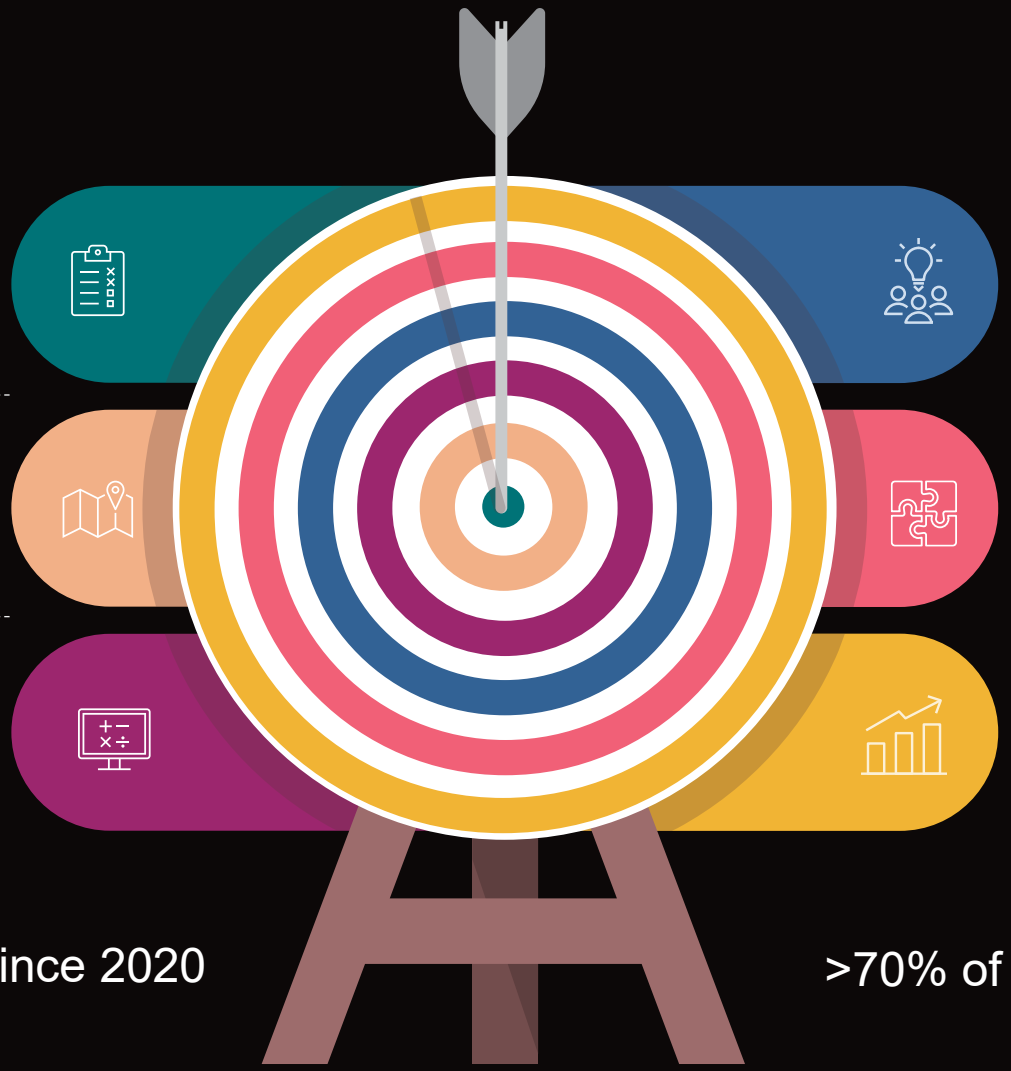
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EPA Target Areas

INCOMPLETE
- Both RRA & ERP
- Covers law
- Whole system

ASSETS
- Covers law
- Not just treatment plant
- Address climate change

SHOW WORK
- Methodology
- See the math



FIND COPY
- Know where stored
- Can produce docs

FOLLOW LAW
- Each category
- Update new assets & threats
- Update cost $ est.

MITIGATION
- Due diligence
- Point to projects completed or planned

100+ enforcement actions since 2020

>70% of systems inspected in violation

https://www.epa.gov/enforcement/enforcement-alert-drinking-water-systems-address-cybersecurity-vulnerabilities

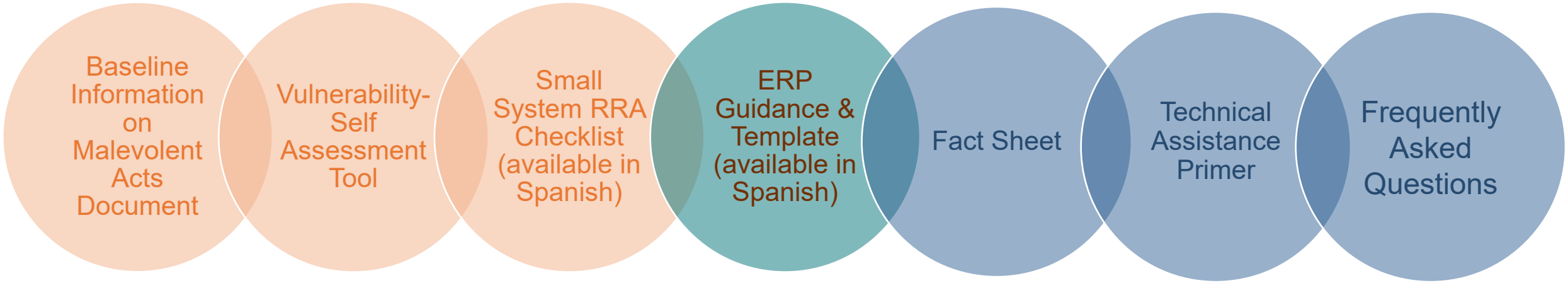
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Compliance Visit Lessons Learned

- Yes, the requirement is to have an RRA. But people are making it so complicated and then forgetting the end point. Which is to identify some risk and try to close the gap. Simple as that.
- Have a list of mitigation projects that you've completed for historical purposes. Auditors love this
- Provide a law enforcement crosswalk and the RRA and ERP section(s) cited
- Auditors aren't always as familiar with your system or your documentation. Prior to the audit develop a story and narrative that explains your journey
- Is the response teams or management team activating and using the tools. Tracking lessons learned and activations is critical in the five year cycle update

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EPA's SDWA Section 1433 Resources



***RRA resources: orange**

***ERP resource: blue**

***Additional resources: green**

Available at www.epa.gov/waterresilience/awia-section-2013

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Next Steps

Keys to Success:

1. Budget now, start as early as possible!
2. Don’t wait until last minute. Submit early.
3. Focus update on EPA areas of interest and known gaps.
4. Demonstrate due diligence.

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