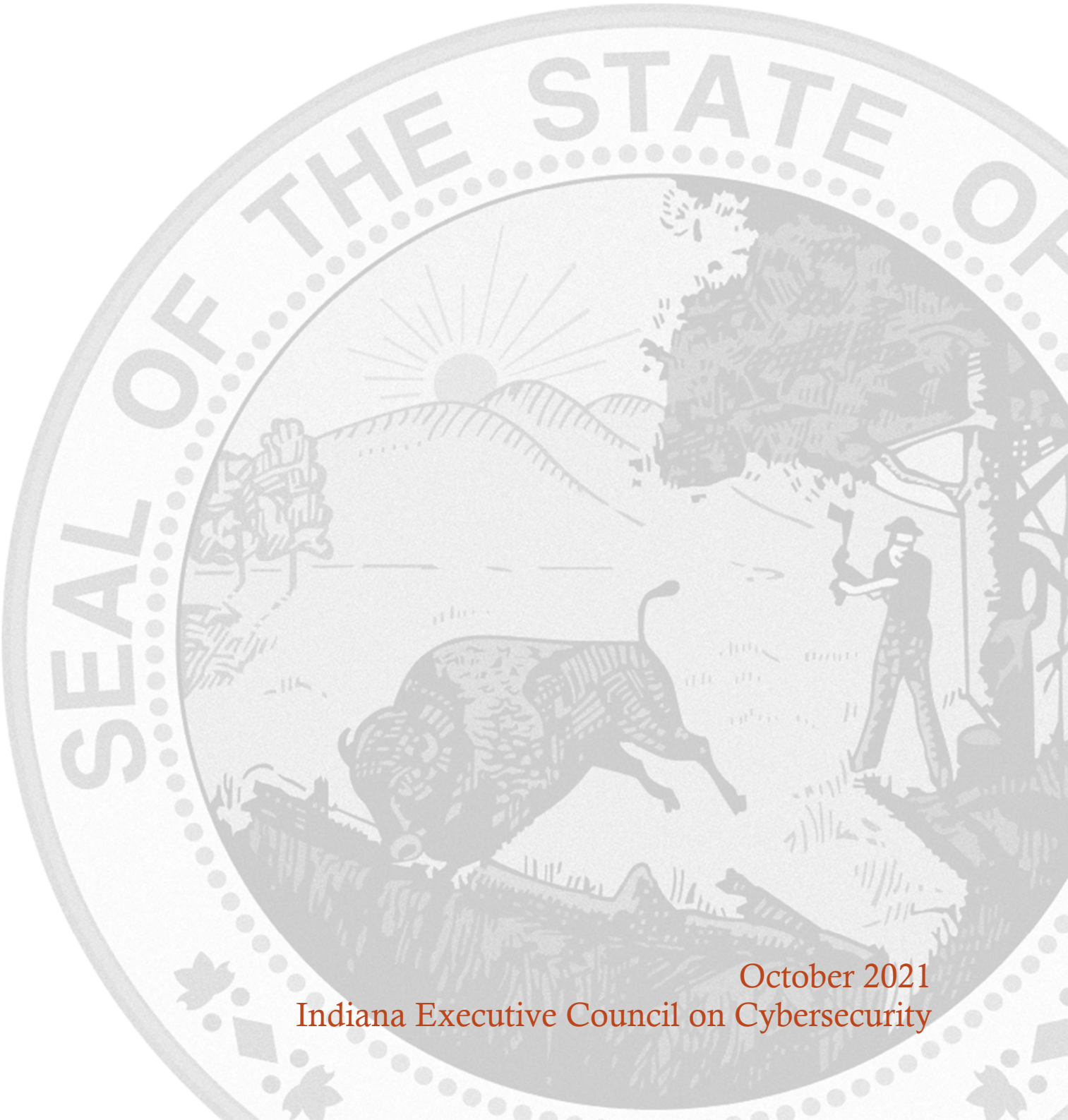
WATER & WASTEWATER COMMITTEE STRATEGIC PLAN

Chair: John Lucas
Co-Chair: Martin Wessler



October 2021
Indiana Executive Council on Cybersecurity

Water & Wastewater Committee Plan

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Committee Members

Committee Members

Last Name	First Name	Organization	Organizational Title	Member Type (Chair/Co-chair/Full-time, As needed)
Lucas	John	Citizens Energy Group	Vice President, IT Group	Chair
Wessler	Martin	Wessler Engineering	Chairman & CEO	Co-Chair
Justice	(Dr.) Connie	IUPUI	Professor	Full Time
Redman	Justin	Citizens Energy Group	Manager, Water System Control & Planning	Full Time
Moody	Chris	Evansville Water and Sewer Utility	Software Engineer	Full Time
Foreman	Jamie	City of Carmel	Drinking Water Regulatory Compliance Administrator	Full Time
Bowen	Brandon	Indiana Utility Regulatory Commission	Senior Utility Analyst	As Needed
Krevda	Stefanie	Indiana Utility Regulatory Commission	Commissioner	As Needed
Funk	Michelle	Indiana Utility Regulatory Commission	Senior Analyst	As Needed
Rockensuess	Brian	Indiana Department of Environmental Management	Chief of Staff	As Needed
Goodwin	Travis	Indiana Department of Environmental Management	Senior Environmental Manager, Security in Counter Terrorism Coordinator	As Needed
Keyler	Dawn	Wessler Engineering, AWWA, InWARN	Project Analyst II, Chair of Indiana Section AWWA Emergency Response Committee, Secretary for InWARN	Full Time
Hadley	Ryan	Indiana Utility Regulatory Commission	Executive Director	As Needed
Sansing	Ebony	Citizens Energy Group	Executive Coordinator, Information Technology	Full Time

Introduction

Introduction

The world of cybersecurity is highly complex and cluttered with information, misinformation, and disinformation. As a consequence, it is important to approach it strategically and create simplicity.

With the signing of Executive Order 17-11 by Governor Eric J. Holcomb, the Indiana Executive Council on Cybersecurity (IECC) continues its mission to move efforts and statewide cybersecurity initiatives to the "Next Level." With the ever-growing threat of cyberattacks, protecting Indiana's critical infrastructure is the focus of the IECC. Cybersecurity cannot be solved by one entity alone. The IECC works with private, public, academic, and military partners from all over the state to develop and maintain a strategic framework that establishes goals, plans, and best practices for cybersecurity.

The IECC is comprised of fifteen committees and working groups who have worked together to implement the statewide strategy of 2018 while developing an updated comprehensive strategic plan.

The following implementation plan is one of the fifteen specific plans that encompass the complete *2021 Indiana Cybersecurity Strategic Plan.*

For more information, visit www.in.gov/cybersecurity.

Executive Summary

Executive Summary

- **Research Conducted**
  - The Water/Wastewater committee conducted research in the following area:
    - Water companies / cyber security contact
    - Training for water companies on cyber security
    - Funding / legislative options for cyber security for water/wastewater companies
- **Research Findings**
  - Lack of contact information on cyber contacts at water companies within Indiana
  - No risk assessments of cyber capabilities for water companies within Indiana
  - Lack of understanding and knowledge of existing training for water company personnel
  - No current regulations around cyber security for water companies
  - Lack of risk management plans and action plans for cyber incidents

- **Committee Deliverables**
  - Cyber Contact
  - Cyber Risk Model (Plan) Update
  - Risk Tool
  - Training Plan
  - Cyber Plan Template
  - Cyber Exercise and Response Education

- **Additional Notes**
  - None

- **References**
  - None

Research

Research

1. **What has your area done in the last five years to educate, train, and prepare for cybersecurity?**
   a. The Indiana American Water Works Association (AWWA) has provided training via the AWWA website
   b. Created and ran the Indiana Crit-Ex exercises in 2015.
   c. Established an Indiana Water/Wastewater Cyber Security Training program (Pilot)

2. **What (or who) are the most significant cyber vulnerabilities in your area?**
   a. Small to mid-size water/wastewater utilities with Internet access to their Supervisory Control and Data Acquisition (SCADA) systems.

3. **What is your area's greatest cybersecurity need and/or gap?**
   a. Funding for cyber programs for small to mid-size water/wastewater utilities.
   b. Training on cybersecurity
   c. Establishing the need for cyber security as a high priority compared to infrastructure upgrades.

4. **What federal, state, or local cyber regulations is your area beholden to currently?**
   a. National Institute of Standards and Technology (NIST) cybersecurity standard, and the President's Executive Order 13956 – Modernizing America's Water Resource Management and Water Infrastructure
   b. Indiana Senate Enrolled Act 362, 2018
   c. America's Water Infrastructure Act of 2018 (AWIA)

5. **What case studies and or programs are out there that this Council can learn from as we proceed with the Planning Phase?**
   a. Indiana Crit-Ex After Action Review

6. **What research is out there to validate your group's preliminary deliverables? This could be surveys, whitepapers, articles, books, etc.**
   a. AWWA articles/papers
   b. NIST

7. **What are other people in your sector in other states doing to educate, train, prepare, etc. in cybersecurity?**
   a. Using AWWA resources and webinars/seminars.

8. **What does success look like for your area in one year, three years, and five years?**
    a. One year
        - Practical cyber training exercises (Muscatatuck, etc.)
        - Implement cyber training and assessment pilot program with Indiana Section of AWWA
    b. Three years
        - Cyber training assessments and developing cybersecurity plans for small and medium size water/wastewater utilities
        - Federal and/or State Financial support for cyber security improvements at small and medium size water/wastewater utilities
        - State Standards for cybersecurity
    c. Five Years
        - All water/wastewater utilities in Indiana participated in cyber training and assessments and have developed and implemented cybersecurity plans.

9. **What is the education, public awareness, and training needed to increase the State's and your area's cybersecurity?**
    a. Local cyber training
    b. Web-based training
    c. Local government support/awareness of the need for improved cyber preparedness

10. **What is the total workforce in your area in Indiana? How much of that workforce is cybersecurity related? How much of that cybersecurity-related workforce is not met?**
    a. Approximately 500 water/wastewater utilities and companies.
    b. Workforce at small and medium size utilities is predominantly operator based with limited to zero cyber security personnel
    c. Workforce at large municipalities and utilities typically have IT departments with cyber personnel but may not be dedicated entirely to the utility.

11. **What do we need to do to attract cyber companies to Indiana?**
    a. Crit-Ex; Cyber Gym; Grow the number of companies, whose corporate headquarters are located in Indiana. This creates the need for cyber security companies.

12. **What are your communication protocols in a cyber emergency?**
    a. Vary by utility

13. **What best practices should be used across the sectors in Indiana?**
    a. Risk based templates for evaluating cyber risk (NIST based)
    b. AWWA Cybersecurity Guidance and Assessment Tool
    c. EPA Vulnerability Self-Assessment Tool (VSAT Web 2.0)

Deliverable: Cyber Contacts

Deliverable: Cyber Contact

General Information

1. **What is the deliverable?**
   a. The deliverable will be to update a cybersecurity contact list for water and wastewater organizations. The list, developed by the Water/Wastewater Committee in 2018, is in the form of a database that will be regularly updated with contacts specific to each organizations cybersecurity initiatives. This database will work in concert with existing databases that house additional information for the individual organizations business structure. An added field will complement the focused contact information that exists and provide a direct contact for cyber related information. The Safe Drinking Water Information System (SDWIS) contains information about public water systems managed by Indiana Department of Environmental Management (IDEM). IDEM will be modified to include the added field for the 'Plant SCADA Manager'.

2. **What is the status of this deliverable?**
   ☒ Completed ☐ In-progress 25% ☐ In-progress 50%. ☐ In-progress 75% ☐ Not Started

3. **Which of the following IECC goals does this deliverable meet? Check ONE that most closely aligns. See Executive Order 17-11 for further context.**
   ☐ Establish an effective governing structure and strategic direction.
   ☐ Formalize strategic cybersecurity partnerships across the public and private sectors.
   ☐ Strengthen best practices to protect information technology infrastructure.
   ☒ Build and maintain robust statewide cyber-incident response capabilities.
   ☐ Establish processes, technology, and facilities to improve cybersecurity statewide.
   ☐ Leverage business and economic opportunities related to information, critical infrastructure, and network security.
   ☐ Ensure a robust workforce and talent pipeline in fields involving cybersecurity.

4. **Which of the following categories most closely aligns with this deliverable (check ONE)?**
   ☐ Research – Surveys, Datasets, Whitepapers, etc.
   ☒ Informational Product – Definitions, Glossary, Guidelines, Inventory, Best Practices, etc.
   ☐ Operational Product – Programs, Processes, etc. (generally can be produced within the group or with current resources)
   ☐ Operational Proposal – Programs, Processes, etc. (generally requires additional resources)
   ☐ Templates/Toolkits – Actionable Resource Kits, Turnkey Templates
   ☐ Policy Recommendation – Recommended Changes to Law

Objective Breakout of the Deliverable

5. **What is the resulting action or modified behavior of this deliverable?**
   a. The result will be a regularly updated database of cybersecurity contacts for the water/wastewater organizations in the state. This database will be managed and updated at regular intervals by the organizations through the existing update process. This contact will dispense specific focused information to the correct individual of each organization.

6. **What metric or measurement will be used to define success?**
   a. An updated database that establishes a field for cyber security contacts. Cybersecurity contacts are updated by the individual organizations of medium and large operators.

7. **What year will the deliverable be completed?**
   ☒ 2021 ☒ 2022 ☒ 2023 ☒ 2024 ☒ 2025+

8. **Who or what entities will benefit from the deliverable?**
   a. State organizations like IDEM, Department of Homeland Security (DHS), Indiana Utility Regulatory Commission (IURC), and Indiana State Police (ISP) will have the right contact for cyber security related information sharing.
   b. Other industry organizations like Indiana Water/Wastewater Agency Network (INWarn), AWWA, Indiana Water Environment Association (IWEA) will also be able to information share using the database.

9. **Which state or federal resources or programs overlap with this deliverable?**
   a. Indiana Department of Environmental Management (IDEM) will manage the database.

Additional Questions

10. **What other committees and/or working groups will your team be working with to complete or plan this deliverable?**
    a. None

11. **Which state agencies, federal agencies, associations, private organizations, non-profit organizations, etc. will need to be involved to complete or plan this deliverable?**
    a. IDEM

12. **Who should be main lead of this deliverable?**
    a. Travis Goodwin

13. **What are the expected challenges to completing this deliverable?**
    a. Timely updates by the individual organizations required to supply the contact information.

Implementation Plan

14. Is this a one-time deliverable or one that will require sustainability?

☐ One-time deliverable
☒ Ongoing/sustained effort

Tactic Timeline

Tactic	Owner	% Complete	Deadline	Notes
Modify IDEM SDWIS Database to include new field	IDEM/Travis Goodwin	100	11/2017	IDEM completed database modifications
Request organizations to submit 'Plant SCADA Manager' to IDEM for updates	IDEM	100	1/2018	Requests made to organizations. Awareness shared by partnering organizations INWarn, AWWA
Update database upon receipt of information	IDEM	100	2025	IDEM recently completed the regular update prior to inclusion of the 'Plant SCADA Manager'. Next regular update cycle anticipated to have better return.

Resources and Budget

15. Will staff be required to complete this deliverable?

☒No ☐ Yes

16. What other resources are required to complete this deliverable?

Resource	Justification/Need for Resource	Estimated Initial Cost	Estimated Continued Cost, if Applicable	Primary Source of Funding	Alternate Source of Funding	Notes
Database maintenance	Database exists and team to complete. Additional field with minimal additional effort required to complete.	10 hours of database configuration.	2 minutes per field update (550 organizations)	IDEM operations		

17. What is the greatest benefit of this deliverable?

a. State organizations like IDEM, DHS, IURC, and ISP will have the right contact for cybersecurity related information sharing.
b. Other industry organizations like INWarn, AWWA, IWEA will also be able to information share using the database.

18. How will this deliverable reduce the cybersecurity risk or impact? What are the estimated costs associated with that risk reduction?

a. This deliverable will expedite information sharing with the appropriate subject matter expert. Information could be critical information, education, awareness specific to Indiana's water and wastewater sector.
b. Benefits also include supporting organizations will have the right individual to share information and reach out for information that may support other organizations or the cause.

19. What is the risk or cost of not completing this deliverable?

a. Cost avoidance by organizations creating their own contact list and time saved by having the information available to pertinent parties. Not completing the deliverable will continue the challenge of identifying the right contact for cybersecurity in the water and wastewater sector.

20. What defines success and/or what metrics will be used to measure success? What is the baseline for your metrics?

a. Database configuration and usage of the database available to supporting organizations as well as the state for expedited information. Success will be to have the 'Plant SCADA Manager' field completed for 95% of community water systems serving over a population of 3,301 or more people.

21. Are there comparable jurisdictions (e.g., other states) that have similar projects that we can compare this project to using the same metrics?

☒No ☐ Yes

22. Are there comparable jurisdictions (e.g., other states) that does not have a comparable project that we can use as a control to show what happens if Indiana does not complete the deliverable?

☐No ☒ Yes

a. New York Department of Health, Division of Environmental Health Protection

Other Implementation Factors

23. List factors that may negatively impact the resources, timeline, or budget of this deliverable?

a. Completion of the database is dependent on community water systems submitting contact information. Regular updates will be required for usefulness.

24. Does this deliverable require a change from a regulatory/policy standpoint?

☒No ☐ Yes

25. What will it take to support this deliverable if it requires ongoing sustainability?

a. Ongoing support is already managed through IDEM and its current entry into the existing SDWIS database.

26. Who has the committee/working group contacted regarding implementing this deliverable?

a. IDEM – Travis Goodwin and Brian Rockensuess

27. Can this deliverable be used by other sectors?

☐No ☒ Yes

a. All sectors could use for information sharing. A contact database for other sectors could be created where applicable

Communications

28. Once completed, which stakeholders need to be informed about the deliverable?

a. State organizations: IDEM, IDHS, IURC, and ISP.
b. Other industry organizations: INWarn, AWWA, IWEA

29. Would it be appropriate for this deliverable to be made available on Indiana's cybersecurity website (www.in.gov/cybersecurity)?

☒No ☐ Yes

a. Critical contact information should not be shared. IDEM should manage contact information requests specific to critical infrastructure.
b. Reference Indiana Code 5-14-3, where several references are made to excepted from disclosure the names and contact information of individuals.
c. More specifically as the disclosure relates to sections:
   i. IC 5-14-4(b)(19)(L)
   ii. IC 5-14-4(b)(8)

30. What are other public relations and/or marketing considerations to be noted?

a. None

Evaluation Methodology

Objective 1: Indiana Department of Environmental Management maintains a cybersecurity contact information for 85 percent of Indiana water and wastewater organizations to be reviewed annually.

Type: ☒ Output ☐ Outcome

Evaluative Method:

☒ Completion
☐ Award/Recognition
☐ Survey - Convenient
☐ Survey – Scientific
☐ Assessment Comparison
☐ Scorecard Comparison
☐ Focus Group
☐ Peer Evaluation/Review
☐ Testing/Quizzing
☐ Benchmark Comparison
☐ Qualitative Analysis
☐ Quantifiable Measurement
☐ Other

Deliverable: Cyber Risk Model (Plan)

Deliverable: Cyber Risk Model (Plan) Update

General Information

1. **What is the deliverable?**
   a. The deliverable is to review and update the 2019 deliverable of a risk framework assessment tool for the industrial control system that uses the NIST Cybersecurity Framework and AWWA Cybersecurity tool that is end user friendly. The tool should have the capability to be completed through a one-day onsite visit. The resulting tool could be modified by other working groups and organizations to fit specific needs that may not be found in the water/wastewater industrial control systems.

2. **What is the status of this deliverable?**
   ☐ Completed ☐ In-progress 25% ☐ In-progress 50%. ☒ In-progress 75% ☐ Not Started

3. **Which of the following IECC goals does this deliverable meet? Check ONE that most closely aligns. See Executive Order 17-11 for further context.**
   ☒ Establish an effective governing structure and strategic direction.
   ☐ Formalize strategic cybersecurity partnerships across the public and private sectors.
   ☐ Strengthen best practices to protect information technology infrastructure.
   ☐ Build and maintain robust statewide cyber-incident response capabilities.
   ☒ Establish processes, technology, and facilities to improve cybersecurity statewide.
   ☐ Leverage business and economic opportunities related to information, critical infrastructure, and network security.
   ☐ Ensure a robust workforce and talent pipeline in fields involving cybersecurity.

4. **Which of the following categories most closely aligns with this deliverable (check ONE)?**
   ☐ Research – Surveys, Datasets, Whitepapers, etc.
   ☐ Informational Product – Definitions, Glossary, Guidelines, Inventory, Best Practices, etc.
   ☒ Operational Product – Programs, Processes, etc. (generally can be produced within the group or with current resources)
   ☐ Operational Proposal – Programs, Processes, etc. (generally requires additional resources)
   ☐ Templates/Toolkits – Actionable Resource Kits, Turnkey Templates
   ☐ Policy Recommendation – Recommended Changes to Law

Objective Breakout of the Deliverable

5. **What is the resulting action or modified behavior of this deliverable?**
   a. The result will be a standard method for organizations with Indiana and the U.S. to perform a risk assessment that is user friendly and the capability to conduct onsite visits. Currently organizations are using various methods and standards to perform assessments. This deliverable will be consistent with the NIST framework and industry specific AWWA cybersecurity tools.

6. **What metric or measurement will be used to define success?**
   a. Testing will be performed by conducting two Risk Assessments (RA) on Indiana water companies. Success will be the refinement of the template to enable completion of an assessment within one day for organizations with varying business structures and size.

7. **What year will the deliverable be completed?**
   ☐ 2021 ☒ 2022 ☐ 2023 ☐ 2024 ☐ 2025+

8. **Who or what entities will benefit from the deliverable?**
   a. Water and wastewater (W/WW) entities will benefit by having a mitigation report and areas of improvement identified. Entities will be able to demonstrate improvement by using a consistent tool for measuring improvements to their cyber posture. Other entities with industrial control systems will benefit by using the template tailored specifically to their organizations.

9. **Which state or federal resources or programs overlap with this deliverable?**
   a. Department of Homeland Security has an assessment through ICS-CERT that provides similar results.

Additional Questions

10. **What other committees and/or working groups will your team be working with to complete or plan this deliverable?**
    a. Other groups with similar initiatives could share the product outcome for performing their own assessments within their groups.

11. **Which state agencies, federal agencies, associations, private organizations, non-profit organizations, etc. will need to be involved to complete or plan this deliverable?**
    a. Indiana Finance Authority to provide resources in order for entities to complete assessments.
    b. American Water Works Association has expressed an interest in Indiana's initiatives focusing on cybersecurity for the industry.
    c. Academia (IUPUI / Purdue University) in development of the assessment and resources to perform assessments.
    d. DHS (ICS-CERT) would be beneficial to come alongside the working group to share resources and development tools.

12. Who should be main lead of this deliverable?

a. Professor Connie Justice

13. What are the expected challenges to completing this deliverable?

a. Challenges are the resources to develop the assessment template. Once developed additional resources to perform the assessments (500 + entities * 8 hours = 4000 contact hours).

Implementation Plan

14. Is this a one-time deliverable or one that will require sustainability?

☐ One-time deliverable

☒ Ongoing/sustained effort

Tactic Timeline

Tactic	Owner	% Complete	Deadline	Notes
Questionnaire	Justice and W/WW Group	100	4/30/2022	
Risk Assessment Documentation	Justice	100	4/30/2022	
Risk Assessment Onsite Beta Test	Justice	100	4/30/2022	
Risk Assessment Report	Justice	100	6/15/2022	
Review Assessment Results with W/WW Group	W/WW Group	100	6/15/2022	
Rewrite Questionnaire/Report if needed	W/WW Group	n/a	6/15/2022	

Resources and Budget

15. Will staff be required to complete this deliverable?

☒No ☐ Yes

16. What other resources are required to complete this deliverable? (Examples include software, hardware, supplies, materials, equipment, services, facilities, etc.)

Resource	Justification/Need for Resource	Estimated Initial Cost	Estimated Continued Cost, if Applicable	Primary Source of Funding	Alternate Source of Funding	Notes
W-WW Council Group	Expertise	0	0	N/A	N/A	
Graduate Students	Professional Education	0	0	N/A	N/A	
Dr. Justice	Expertise	0	0	N/A	N/A	
Dr. Kevin Morley, AWWA	Expertise	0	0	N/A	N/A	
Lewisville Water	Expertise	0	0	N/A	N/A	
Speedway Wastewater	Expertise	0	0	N/A	N/A	

Benefits and Risks

17. What is the greatest benefit of this deliverable?

a. State of Indiana and AWWA will have a risk assessment model for water and wastewater utilities. This model allows a statewide standard and measurement tool to assist each individual water and wastewater utility with measuring their risks and the state a method to measure statewide risks.
b. Regularly conducted risk assessments close cybersecurity vulnerabilities and mitigate before the vulnerabilities are compromised allowing the sector to understand their cybersecurity posture.

18. How will this deliverable reduce the cybersecurity risk or impact? What is the estimated costs associated with that risk reduction?

a. Along with action plan for each utility, the risk model will allow the water and wastewater companies to reduce risk for their utility and will thus reduce risk to the State of Indiana overall.
b. The risk assessments allow for determination of a baseline security measure that can show improvement with additional risk assessment results. More important, the risk assessment will identify chinks in the armor of employee security education, training, and awareness (SETA) so a proper SETA program can be initiated and maintained. Additionally, the risk assessment allows for the sector to prioritize the most sensitive areas of cybersecurity that need attention and investment.
   We are unable to estimate the costs at this time but will be in a better position after utilities have completed risk assessments.

19. What is the risk or cost of not completing this deliverable?

a. If water and wastewater infrastructure is not protected, there could be a serious threat to the safety of the water supply and wastewater could breach into homes of Indiana citizens. Executive Order 13636 - Improving Critical Infrastructure Cybersecurity, states that "The cyber threat to critical infrastructure continues to grow and represents one of the most serious national security challenges we must confront."

20. What defines success and/or what metrics will be used to measure success? What is the baseline for your metrics?

a. Baseline is an initial risk assessment score with mitigations to be implemented. Success is defined as successful completion of risk assessment with a score and the implementation of at least one mitigation recommendation.

21. Are there comparable jurisdictions (e.g., other states) that have similar projects that we can compare this project to using the same metrics?

☒No ☐ Yes

22. Are there comparable jurisdictions (e.g., other states) that does not have a comparable project that we can use as a control to show what happens if Indiana does not complete the deliverable?

☐No ☒ Yes

a. The AWWA has developed a cyber self-assessment tool that is available to any company nationwide that can be used by any W/WW utilities. The AWWA has developed an updated online cyber security tool which incorporates the risk tool developed by the W/WW committee. This nationwide tool will be utilized going forward by Indiana utilities.

Other Implementation Factors

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23. List factors that may negatively impact the resources, timeline, or budget of this deliverable?

a. The lack of volunteers' time to accomplish initial tasks.

24. Does this deliverable require a change from a regulatory/policy standpoint?

☐No ☒ Yes

a. Water and Wastewater cybersecurity committee will work with the Architectural and Industrial Maintenance (AIM) committee, IDEM, and the Indiana Finance Authority (IFA) to ensure the template meets their requirements; and approved by IDEM and IFA as acceptable in order to meet State Law SEA 362.

25. What will it take to support this deliverable if it requires ongoing sustainability?

a. To support this deliverable in the future, a tool will need to be created to simplify the risk assessment for the sector client.

26. Who has the committee/working group contacted regarding implementing this deliverable?

a. Indiana AWWA, IDEM, State of Indiana Cybersecurity Program Director

27. Can this deliverable be used by other sectors?

☐No ☒ Yes

a. This risk assessment can be used by all sectors

Communications

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28. Once completed, which stakeholders need to be informed about the deliverable?

a. Indiana water and wastewater companies, AWWA, Indiana Office of Technology (IoT), IDHS, IDEM.

29. Would it be appropriate for this deliverable to be made available on Indiana's cybersecurity website (www.in.gov/cybersecurity)?

☐No ☒ Yes

30. What are other public relations and/or marketing considerations to be noted?

a. Defer to State of Indiana Cybersecurity Program Director

Evaluation Methodology

Objective 1: The Water/Wastewater Committee and partners will review and update the Cyber Plan Template for Indiana water/wastewater companies in 2022.

Type: ☐ Output ☒ Outcome

Evaluative Method:

☒ Completion
☐ Award/Recognition
☐ Survey - Convenient
☐ Survey – Scientific
☐ Assessment Comparison
☐ Scorecard Comparison
☐ Focus Group
☐ Peer Evaluation/Review
☐ Testing/Quizzing
☐ Benchmark Comparison
☐ Qualitative Analysis
☒ Quantifiable Measurement
☐ Other

Objective 2: Make the updated Cyber Plan Template available online or on water/wastewater utilities by in 2022.

Type: ☐ Output ☒ Outcome

Evaluative Method:

☒ Completion
☐ Award/Recognition
☐ Survey - Convenient
☐ Survey – Scientific
☐ Assessment Comparison
☐ Scorecard Comparison
☐ Focus Group
☐ Peer Evaluation/Review
☐ Testing/Quizzing
☐ Benchmark Comparison
☐ Qualitative Analysis
☐ Quantifiable Measurement
☐ Other

Deliverable: Risk Tool

Deliverable: Risk Tool Update

General Information

1. **What is the deliverable?**
   a. Review the 2020 deliverable of a risk framework assessment tool for the industrial control system that uses the NIST Cybersecurity Framework and AWWA Cybersecurity Tool that is end user friendly as it is incorporated into the training deliverable. The tool should have the capability to be completed through a one-day onsite visit. The resulting tool could be modified by other working groups and organizations to fit specific needs that may not be found in the water/wastewater industrial control systems.

2. **What is the status of this deliverable?**
   ☐ Completed ☐ In-progress 25% ☐ In-progress 50% ☒ In-progress 75% ☐ Not Started

3. **Which of the following IECC goals does this deliverable meet?**
   ☐ Establish an effective governing structure and strategic direction.
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Objective Breakout of the Deliverable

5. **What is the resulting action or modified behavior of this deliverable?**
   a. The result will be a standard method for organizations to perform a risk assessment that is user friendly and the capability to conduct onsite visits. Currently organizations are using various methods and standards to perform assessments. This deliverable will be consistent with the NIST framework and industry specific AWWA cybersecurity tools.

6. **What metric or measurement will be used to define success?**
   a. The Indiana W/WW cybersecurity assessment has been incorporated into the AWWA Cyber Security Tool that is available to all Water Utilities in the U.S.

7. **What year will the deliverable be completed?**
   ☐ 2021 ☒ 2022 ☐ 2023 ☐ 2024 ☐ 2025+

8. **Who or what entities will benefit from the deliverable?**
   a. Water and wastewater entities will benefit by having a mitigation report and areas of improvement identified. Entities will be able to demonstrate improvement by using a consistent tool for measuring improvements to their cyber posture. Other entities with industrial control systems will benefit by using the template tailored specifically to their organizations.

9. **Which state or federal resources or programs overlap with this deliverable?**
   a. Department of Homeland Security has an assessment through ICS-CERT that provides similar results.

Additional Questions

10. **What other committees and/or working groups will your team be working with to complete or plan this deliverable?**
    a. Other groups with similar initiatives could share the product outcome for performing their own assessments within their groups.

11. **Which state agencies, federal agencies, associations, private organizations, non-profit organizations, etc. will need to be involved to complete or plan this deliverable?**
    a. Indiana Finance Authority will provide resources in order for entities to complete assessments.
    b. American Water Works Association has expressed an interest in Indiana's initiatives focusing on cybersecurity for the industry.
    c. Academia (IUPUI / Purdue University) is in development of the assessment and resources to perform assessments.
    d. DHS (ICS-CERT) would be beneficial to come alongside the working group to share resources and development tools.

12. **Who should be main lead of this deliverable?**
    a. Professor Connie Justice

13. **What are the expected challenges to completing this deliverable?**
    a. Challenges are the resources to develop the assessment template. Once developed additional resources to perform the assessments (500 + entities * 8 hours = 4000 contact hours).

Implementation Plan

14. Is this a one-time deliverable or one that will require sustainability?

☐ One-time deliverable

☒ Ongoing/sustained effort

Tactic Timeline

Tactic	Owner	% Complete	Deadline	Notes
Review and modify initial documents for accuracy		100	TBD based on funding	
2 RA with IoT to establish technical standards		100	TBD based on funding	
Questionnaire	Justice/W/WW Group	100	TBD on project plan	NIST CSF/AWWA
Review Questionnaire	W/WW Group	100	TBD on project plan	
Risk Assessment Scoring Matrix	Justice	100	TBD on project plan	
Review of Risk Assessment Scoring Matrix	W/WW Group	100	TBD on project plan	Output score and where entity ranks in relation to others. Mitigation recommendations. Training needed.

Resources and Budget

15. Will staff be required to complete this deliverable?

☒No ☐ Yes

16. What other resources are required to complete this deliverable? (Examples include software, hardware, supplies, materials, equipment, services, facilities, etc.)

Resource	Justification/Need for Resource	Estimated Initial Cost	Estimated Continued Cost, if Applicable	Primary Source of Funding	Alternate Source of Funding	Notes
Dr. Connie Justice	Risk Assessment Content	0	0		N/A	
Programmers	Programming expertise	80,000.00	No Response	AWWA	N/A	
IoT	Expertise	0	TBD		N/A	

Benefits and Risks

17. What is the greatest benefit of this deliverable?

a. Speed consistency, ease of use, the ability of water/wastewater companies to conduct without third party support.
b. The ability to automate the risk assessment will allow for
   i. Ease of use
   ii. Uploading data from risk assessment to a repository
   iii. Data can be used as a baseline for measuring effectiveness of program

18. How will this deliverable reduce the cybersecurity risk or impact? What are the estimated costs associated with that risk reduction?

a. More utilization since local Water or Wastewater utilities can use the tool to establish the utilities' cyber risk profile.
b. Estimated costs associated = 400 water companies x 16 hours x 2 people to conduct assessment onsite. Having an electronic tool will allow many if not all of the utilities to prepare the risk assessment themselves, thus reducing the estimated hours to conduct a manual risk assessment.

19. What is the risk or cost of not completing this deliverable?

a. If water and wastewater infrastructure is not protected, there could be a serious threat to the safety of the water supply and wastewater could breach into homes of Indiana citizens. Executive Order 13636 - Improving Critical Infrastructure Cybersecurity, states that "The cyber threat to critical infrastructure continues to grow and represents one of the most serious national security challenges we must confront."

20. What defines success and/or what metrics will be used to measure success? What is the baseline for your metrics?

a. Cyber Risk Tool available online at AWWA.org website.

21. Are there comparable jurisdictions (e.g., other states) that have similar projects that we can compare this project to using the same metrics?

☒No ☐ Yes

22. Are there comparable jurisdictions (e.g. other states) that does not have a comparable project that we can use as a control to show what happens if Indiana does not complete the deliverable?

☒No ☐ Yes

Other Implementation Factors

23. List factors that may negatively impact the resources, timeline, or budget of this deliverable?

a. Program scope creep
b. Problems with programming features of risk assessment software

24. Does this deliverable require a change from a regulatory/policy standpoint?

☒No ☐ Yes

25. What will it take to support this deliverable if it requires ongoing sustainability?

a. Support of modifying model to changes of NIST model
b. IoT support to modify the tool

26. Who has the committee/working group contacted regarding implementing this deliverable?

a. IDEM, State of Indiana Cybersecurity Program Director

27. Can this deliverable be used by other sectors?

☐No ☒ Yes

a. This risk assessment can be used by all sectors

Communications

28. Once completed, which stakeholders need to be informed about the deliverable?

a. Indiana water and wastewater companies, AWWA, IoT, IDHS, IDEM

29. Would it be appropriate for this deliverable to be made available on Indiana's cybersecurity website (www.in.gov/cybersecurity)?

☐No ☒ Yes

30. What are other public relations and/or marketing considerations to be noted?

a. State of Indiana Cybersecurity Program Director

Evaluation Methodology

Objective 1: Water/Wastewater Committee develops Cyber Assessment Risk Tool within 12 months of securing funding.

Type: ☒ Output ☐ Outcome

Evaluative Method:

☒ Completion
☐ Award/Recognition
☐ Survey - Convenient
☐ Survey – Scientific
☐ Assessment Comparison
☐ Scorecard Comparison
☐ Focus Group
☐ Peer Evaluation/Review
☐ Testing/Quizzing
☐ Benchmark Comparison
☐ Qualitative Analysis
☐ Quantifiable Measurement
☐ Other

Objective 2 Make tool available to 80 percent of Indiana AWWA members on AWWA.org for use by Indiana W/WW companies within 12 months of launching.

Type: ☐ Output ☒ Outcome

Evaluative Method:

☒ Completion
☐ Award/Recognition
☐ Survey - Convenient
☐ Survey – Scientific
☐ Assessment Comparison
☐ Scorecard Comparison
☐ Focus Group
☐ Peer Evaluation/Review
☐ Testing/Quizzing
☐ Benchmark Comparison
☐ Qualitative Analysis
☒ Quantifiable Measurement
☐ Other

Deliverable: Training Plan

Deliverable: Training Plan

General Information

1. **What is the deliverable?**
   a. The main deliverable is a Training Plan, consisting of three main components:
      i. An assessment survey that identifies the skills required by each actor within the system to fulfill their responsibilities utilizing the best practices of cybersecurity. Each skill will be mapped to a requirement for the industry, in the case of the Water Sector, the AWWA interpretation of the NIST standards. The skills themselves will be mapped against sources where the training required to satisfy the requirement can be obtained. A weighting will be assigned to each role/skill providing a scorecard of the skills gap.
      ii. A method for the reporting of assessment results into a (state) database to allow for the guidance of academia and course providers in the development and refinement of coursework, i.e., a managed database of training statistics.
      iii. A glossary of common terms will be developed to allow for cross sector utilization of the training plan. This will allow an organization to view cybersecurity holistically across their organization.

2. **What is the status of this deliverable?**
   a. Pilot Training has been developed. Waiting on funding to roll out to the State.
   ☐ Completed ☐In-progress 25% ☒ In-progress 50%. ☐ In-progress 75%. ☐ Not Started

3. **Which of the following IECC goals does this deliverable meet? Check ONE that most closely aligns. See Executive Order 17-11 for further context.**
   ☐ Establish an effective governing structure and strategic direction.
   ☐ Formalize strategic cybersecurity partnerships across the public and private sectors.
   ☒ Strengthen best practices to protect information technology infrastructure.
   ☐ Build and maintain robust statewide cyber-incident response capabilities.
   ☐ Establish processes, technology, and facilities to improve cybersecurity statewide.
   ☐ Leverage business and economic opportunities related to information, critical infrastructure, and network security.
   ☒ Ensure a robust workforce and talent pipeline in fields involving cybersecurity.

4. **Which of the following categories most closely aligns with this deliverable (check ONE)?**
   ☐ Research – Surveys, Datasets, Whitepapers, etc.
   ☒ Informational Product – Definitions, Glossary, Guidelines, Inventory, Best Practices, etc.
   ☐ Operational Product – Programs, Processes, etc. (generally can be produced within the group or with current resources)
   ☐ Operational Proposal – Programs, Processes, etc. (generally requires additional resources)
   ☒ Templates/Toolkits – Actionable Resource Kits, Turnkey Templates
   ☐ Policy Recommendation – Recommended Changes to Law

Objective Breakout of the Deliverable

5. **What is the resulting action or modified behavior of this deliverable?**
   a. The desired outcome of the Training Plan will be a significant reduction in the skills gap within Industrial Control System providers, Water Facility OT/IT personnel and associated admin and support staff.

6. **What metric or measurement will be used to define success?**
   a. The Training Plan will have as a central aspect a Skills/Responsibilities matrix with which an organization can map skills required by role and the training required to satisfy that requirement. Using the initial assessment as their baseline, they will be able to quantify both their absolute gap, but also their growth, or lack thereof over each period.

7. **What year will the deliverable be completed?**
   ☐ 2021 ☒ 2022 ☒ 2023 ☒ 2024 ☐ 2025+

8. **Who or what entities will benefit from the deliverable?**
   a. The completed and executed training plan will benefit each water entity that utilizes it to quantify their skills gap and then measure growth in developing critical cybersecurity skills in a prioritized manner.

9. **Which state or federal resources or programs overlap with this deliverable?**
   a. TBD

Additional Questions

10. **What other committees and/or working groups will your team be working with to complete or plan this deliverable?**
    a. This is to be established. The committee lead will work with the Cybersecurity Program Director to define other sectors and/or committees that might have interest in collaborating on this effort.

11. **Which state agencies, federal agencies, associations, private organizations, non-profit organizations, etc. will need to be involved to complete or plan this deliverable?**
    a. Indiana AWWA, IFA, IDEM

12. **Who should be main lead of this deliverable?**
    a. Dr. Connie Justice Campbell

13. **What are the expected challenges to completing this deliverable?**
    a. Time and resources. This will require a significant effort in research and implementation.

Implementation Plan

14. Is this a one-time deliverable or one that will require sustainability?

☐ One-time deliverable

☒ Ongoing/sustained effort

Tactic Timeline

Tactic	Owner	% Complete	Deadline	Notes
Develop project plan	Training Working Group and W/WW Committee	100	TBD based on funding	
Develop roles by job function	Training Working Group and W/WW Committee	25	TBD on project plan	
Develop framework of skills required of each role within entity	Training Working Group and W/WW Committee	50	TBD on project plan	
Coordinate with industry associations for distribution and collection of survey	Training Working Group/W-WW Committee	75	TBD on project plan	

Resources and Budget

15. Will staff be required to complete this deliverable?

☒No ☐ Yes

16. What other resources are required to complete this deliverable? (Examples include software, hardware, supplies, materials, equipment, services, facilities, etc.)

Resource	Justification/Need for Resource	Estimated Initial Cost	Estimated Continued Cost, if Applicable	Primary Source of Funding	Alternate Source of Funding	Notes
None						

Benefits and Risks

17. What is the greatest benefit of this deliverable?

a. State of Indiana and AWWA skills assessment model for water and wastewater utilities. Allows a statewide standard and measurement to assist each individual water and wastewater utility with measuring their skills gap and the state with measurement of statewide training needs.
b. Regularly conducted skills assessments close cybersecurity training gaps and mitigate vulnerabilities before they are compromised. These assessments allow the sector to understand their cybersecurity skills gap.

18. How will this deliverable reduce the cybersecurity risk or impact? What are the estimated costs associated with that risk reduction?

a. Along with action plan for each utility, the risk model will allow the water and wastewater companies to reduce risk for their utility and will thus reduce risk to the State of Indiana overall.
b. The skills assessments allow for determination of a baseline security measure that can show improvement with additional risk assessment results. More important, the risk assessment will identify chinks in the armor of employee security education, training, and awareness (SETA) so a proper SETA program can be initiated and maintained. Additionally, the risk assessment allows for the sector to prioritize the most sensitive areas of cybersecurity that need attention and investment.

19. What is the risk or cost of not completing this deliverable?

a. Along with action plan for each utility, the risk model will allow the water and wastewater companies to reduce risk for their utility and will thus reduce risk to the State of Indiana overall.
b. The risk assessments allow for determination of a baseline security measure that can show improvement with additional risk assessment results. More importantly, the risk assessment will identify chinks in the armor of employee security education, training, and awareness (SETA) so a proper SETA program can be initiated and maintained. Additionally, the risk assessment allows for the sector to prioritize the most sensitive areas of cybersecurity that need attention and investment.

20. What defines success and/or what metrics will be used to measure success? What is the baseline for your metrics?

a. Using the initial assessment as their baseline, they will be able to quantify both their absolute gap, but also their growth, or lack thereof over each period. At a higher level, success can be evaluated on both a utilization percentage, as well as qualitative.
b. Baseline is an initial risk assessment score with mitigations to be implemented. Success is defined as successful completion of risk assessment with a score and the implementation of at least one mitigation recommendation.

21. Are there comparable jurisdictions (e.g., other states) that have similar projects that we can compare this project to using the same metrics?

☒No ☐ Yes

22. Are there comparable jurisdictions (e.g., other states) that does not have a comparable project that we can use as a control to show what happens if Indiana does not complete the deliverable?

☒No ☐ Yes

Other Implementation Factors

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23. List factors that may negatively impact the resources, timeline, or budget of this deliverable?

a. The lack of volunteers' time to accomplish initial tasks.

24. Does this deliverable require a change from a regulatory/policy standpoint?

☐No ☒ Yes

a. Water W/WW cybersecurity committee will work with the AIM committee, IDEM, and the IFA to ensure the template meets their requirements; and approved by IDEM and IFA as acceptable in order to meet State Law SEA 362.

25. What will it take to support this deliverable if it requires ongoing sustainability?

a. Support by Indiana AWWA

26. Who has the committee/working group contacted regarding implementing this deliverable?

a. Indiana AWWA, AWWA, IFA, IDEM

27. Can this deliverable be used by other sectors?

☒No ☐ Yes

i. This risk assessment can be modified slightly to used by other sectors

Communications

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28. Once completed, which stakeholders need to be informed about the deliverable?

a. Indiana water and wastewater companies, Indiana AWWA, IoT, IDHS, IDEM

29. Would it be appropriate for this deliverable to be made available on Indiana's cybersecurity website (www.in.gov/cybersecurity)?

☐No ☒ Yes

30. What are other public relations and/or marketing considerations to be noted?

a. Can use this training to communicate about new cyber reporting law and outreach to local government technology directors

Evaluation Methodology

Objective 1: Water/Wastewater Committee develop an initial training plan by June 2021 and full training plan within three months of funding.

Type: ☒ Output ☐ Outcome

Evaluative Method:

☒ Completion
☐ Award/Recognition
☐ Survey - Convenient
☐ Survey – Scientific
☐ Assessment Comparison
☐ Scorecard Comparison
☐ Focus Group
☐ Peer Evaluation/Review
☐ Testing/Quizzing
☐ Benchmark Comparison
☐ Qualitative Analysis
☐ Quantifiable Measurement
☐ Other

Objective 2: Seventy percent of Indiana water and wastewater companies incorporate the training plan as a part of their operational resources within 24 months of deployment of training plan.

Type: ☐ Output ☒ Outcome

Evaluative Method:

☒ Completion
☐ Award/Recognition
☐ Survey - Convenient
☐ Survey – Scientific
☐ Assessment Comparison
☐ Scorecard Comparison
☐ Focus Group
☐ Peer Evaluation/Review
☐ Testing/Quizzing
☐ Benchmark Comparison
☐ Qualitative Analysis
☐ Quantifiable Measurement
☐ Other

Deliverable: Cyber Plan Template

Deliverable: Cyber Plan Template – Update

General Information

1. **What is the deliverable?**
   a. With the passage of SEA 362, water and wastewater utilities are required to have a cybersecurity plan. There is not an industry standard for cyber security plans for water or wastewater utilities. The NIST framework has the necessary items to establish one, but the framework is large and confusing for most water and wastewater utility personnel. There is a need for a simple and straightforward cybersecurity plan template that can be used to assist utilities in the establish of their specific plan in order to comply with SEA 362.

2. **What is the status of this deliverable?**
   ☐ Completed ☐In-progress 25% ☐ In-progress 50%. ☒ In-progress 75%. ☐ Not Started

3. **Which of the following IECC goals does this deliverable meet? Check ONE that most closely aligns. See Executive Order 17-11 for further context.**
   ☐ Establish an effective governing structure and strategic direction.
   ☐ Formalize strategic cybersecurity partnerships across the public and private sectors.
   ☒ Strengthen best practices to protect information technology infrastructure.
   ☐ Build and maintain robust statewide cyber incident response capabilities.
   ☐ Establish processes, technology, and facilities to improve cybersecurity statewide.
   ☐ Leverage business and economic opportunities related to information, critical infrastructure, and network security.
   ☐ Ensure a robust workforce and talent pipeline in fields involving cybersecurity.

4. **Which of the following categories most closely aligns with this deliverable (check ONE)?**
   ☐ Research – Surveys, Datasets, Whitepapers, etc.
   ☒ Informational Product – Definitions, Glossary, Guidelines, Inventory, Best Practices, etc.
   ☐ Operational Product – Programs, Processes, etc. (generally can be produced within the group or with current resources)
   ☐ Operational Proposal – Programs, Processes, etc. (generally requires additional resources)
   ☒ Templates/Toolkits – Actionable Resource Kits, Turnkey Templates
   ☐ Policy Recommendation – Recommended Changes to Law

Objective Breakout of the Deliverable

5. **What is the resulting action or modified behavior of this deliverable?**
   a. The result will be a standard method for utilities to establish and maintain a cybersecurity plan and program. This will provide for a significantly safer water delivery system for the State of Indiana.

6. **What metric or measurement will be used to define success?**
   a. Validation by the water and wastewater committee, with an approval vote. Review and certification of IDHS, IDE, IFS, and IoT.

7. **What year will the deliverable be completed?**
   ☐ 2021 ☒ 2022 ☐ 2023 ☐ 2024 ☐ 2025+

8. **Who or what entities will benefit from the deliverable?**
   a. Water and wastewater utilities and the citizens of Indiana.

9. **Which state or federal resources or programs overlap with this deliverable?**
   a. No Response

Additional Questions

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10. **What other committees and/or working groups will your team be working with to complete or plan this deliverable?**
    a. Local government

11. **Which state agencies, federal agencies, associations, private organizations, non-profit organizations, etc. will need to be involved to complete or plan this deliverable?**
    a. Indiana Finance Authority will need to certify the plan template.
    b. Indiana Department of Environment Management will need to certify the plan template.

12. **Who should be main lead of this deliverable?**
    a. John Lucas, Chair of the Water and Wastewater committee

13. **What are the expected challenges to completing this deliverable?**
    a. Getting the needed reviews in order to get the cybersecurity plan template completed.

Implementation Plan

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14. **Is this a one-time deliverable or one that will require sustainability?**
    ☐ One-time deliverable
    ☒ Ongoing/sustained effort

Tactic Timeline

Tactic	Owner	% Complete	Deadline	Notes
Review of cybersecurity plan template by appropriate State Agencies	John Lucas	25	1/1/2022	
Finalized cybersecurity plan template for distribution updated version by IDEM.	IDEM, IFS, IDHS, W-WW committee	0	3/1/2022	

Resources and Budget

15. Will staff be required to complete this deliverable?

☒No ☐ Yes

16. What other resources are required to complete this deliverable? (Examples include software, hardware, supplies, materials, equipment, services, facilities, etc.)

Resource	Justification/Need for Resource	Estimated Initial Cost	Estimated Continued Cost, if Applicable	Primary Source of Funding	Alternate Source of Funding	Notes
W/WW Council Group	Expertise	0	0	N/A	N/A	
IDEM	Professional Education	0	0	N/A	N/A	
IFS	Expertise	0	0	N/A	N/A	
IDHS	Expertise	0	0	N/A	N/A	

Benefits and Risks

17. What is the greatest benefit of this deliverable?

a. This will be the standard for all water/wastewater companies to establish a cybersecurity plan and improve the cybersecurity of the water and wastewater utilities for the residents of the State of Indiana.

18. How will this deliverable reduce the cybersecurity risk or impact? What are the estimated costs associated with that risk reduction?

a. This will establish a baseline level of cybersecurity for all Indiana water & wastewater utilities. This plan will improve the utilities to protect utility assets and respond to a cyber-attack much more quickly. This will reduce the risk to the residents of the state and reduce the impact of an attack.

19. What is the risk or cost of not completing this deliverable?

a. Water and Wastewater utilities will not have a baseline for establishing a security posture and will be unable to meet the requirements of SEA 362.

20. What defines success and/or what metrics will be used to measure success? What is the baseline for your metrics?

a. Establishment of a cybersecurity plan template, and the usage of this template to better secure water and wastewater utilities in Indiana.

21. Are there comparable jurisdictions (e.g., other states) that have similar projects that we can compare this project to using the same metrics?

☒No ☐ Yes

22. Are there comparable jurisdictions (e.g., other states) that does not have a comparable project that we can use as a control to show what happens if Indiana does not complete the deliverable?

☒No ☐ Yes

23. List factors that may negatively impact the resources, timeline, or budget of this deliverable?

a. The short timeframe of this effort will put stress on the individuals who are writing the plan, and on the agencies who will be responsible for reviewing and implementing the plan.

24. Does this deliverable require a change from a regulatory/policy standpoint?

☐No ☒ Yes

a. Water and Wastewater cybersecurity committee will work with the AIM committee, IDEM, and the IFA to ensure the template meets their requirements; and approved by IDEM and IFA as acceptable in order to meet State Law SEA 362.

25. What will it take to support this deliverable if it requires ongoing sustainability?

a. This template will need to be updated regularly as cybersecurity standards and methods like the NIST standard change.

26. Who has the committee/working group contacted regarding implementing this deliverable?

a. IDEM, State of Indiana Cybersecurity Program Director

27. Can this deliverable be used by other sectors?

☐No ☒ Yes

a. This template could be used with modifications by other sectors.

Communications

28. Once completed, which stakeholders need to be informed about the deliverable?

a. Indiana water and wastewater companies, AWWA, IoT, IDHS, IDEM, IFS

29. Would it be appropriate for this deliverable to be made available on Indiana's cybersecurity website (www.in.gov/cybersecurity)?

☐No ☒ Yes

30. What are other public relations and/or marketing considerations to be noted?

a. No Response

Evaluation Methodology

Objective 1: IECC Water and Wastewater Committee and partners will distribute the updated Cyber Plan Template to 50 percent of Indiana water and wastewater companies through a variety of methods (including virtual) by March 2022.

Type: ☒ Output ☐ Outcome

Evaluative Method:

☒ Completion
☐ Award/Recognition
☐ Survey - Convenient
☐ Survey – Scientific
☐ Assessment Comparison
☐ Scorecard Comparison
☐ Focus Group
☐ Peer Evaluation/Review
☐ Testing/Quizzing
☐ Benchmark Comparison
☒ Qualitative Analysis
☒ Quantifiable Measurement
☐ Other

Deliverable: Water/Wastewater Exercise and Response Education

General Information

1. **What is the deliverable?**
   a. The Water and Wastewater Committee will assist in two tabletop exercises in 2021 to simulate disasters and cyber-attacks across Indiana. These will be open to IECC members, water and wastewater partners, and Indiana healthcare organizations. The first exercise will be run by the IECC and may include members of the Water ISAC, CISA, INWarn, the City of Fort Wayne, etc.. The second exercise will be run with the National Guard at Muscatatuck Urban Training Center and will involve real-life simulations using that facility. Additionally, taking lessons learned and resources from both exercises to develop a free virtual water and wastewater workshop.

2. What is the status of this deliverable?
   ☒ Completed ☐ In-progress 25% ☐ In-progress 50% ☐ In-progress 75% ☐ Not Started

3. **Which of the following IECC goals does this deliverable meet? Check ONE that most closely aligns. See Executive Order 17-11 for further context.**
   ☐ Establish an effective governing structure and strategic direction.
   ☐ Formalize strategic cybersecurity partnerships across the public and private sectors.
   ☐ Strengthen best practices to protect information technology infrastructure.
   ☒ Build and maintain robust statewide cyber-incident response capabilities.
   ☐ Establish processes, technology, and facilities to improve cybersecurity statewide.
   ☐ Leverage business and economic opportunities related to information, critical infrastructure, and network security.
   ☐ Ensure a robust workforce and talent pipeline in fields involving cybersecurity

4. **Which of the following categories most closely aligns with this deliverable (check ONE)?**
   ☐ Research – Surveys, Datasets, Whitepapers, etc.
   ☐ Informational Product – Definitions, Glossary, Guidelines, Inventory, Best Practices, etc.
   ☒ Operational Product – Programs, Processes, etc. (generally can be produced within the group or with current resources)
   ☐ Operational Proposal – Programs, Processes, etc. (generally requires additional resources)
   ☐ Templates/Toolkits – Actionable Resource Kits, Turnkey Templates
   ☐ Policy Recommendation – Recommended Changes to Law

Objective Breakout of the Deliverable

5. **What is the resulting action or modified behavior of this deliverable?**
   a. The goals of these exercises are to:
      - Simulate current cyber-attacks within a safe environment to determine opportunities for improvement
      - Provide information on current capabilities and strengths
      - Give a gap analysis of where to improve and why

6. **What metric or measurement will be used to define success?**
   a. Completion of the exercises
   b. After-action report with areas for improvement

7. **What year will the deliverable be completed?**
   ☒ 2021 ☐ 2022 ☐ 2023 ☐ 2024 ☐ 2025+

8. **Who or what entities will benefit from the deliverable?**
   a. The IECC, participating water/wastewater organizations, recipients of the report, the Indiana National Guard, and other participating organizations would and have benefitted from this.

9. **Which state or federal resources or programs overlap with this deliverable?**
   a. The cybersecurity resources from the IECC, IOT, and National Guard overlapped with federal resources and AWWA, INwarn and Water-ISAC.

Additional Questions

10. What other committees and/or working groups will your team be working with to complete or plan this deliverable?

a. We will be working with the IECC committee at large on planning one of these, along with the National Guard, CISA, and IoT.

11. Which state agencies, federal agencies, associations, private organizations, non-profit organizations, etc. will need to be involved to complete or plan this deliverable?

a. We will need to work with IOT, the National Guard, CISA, and HHS/HSCC to complete this.

12. Who should be main lead of this deliverable?

a. State of Indiana Cybersecurity Program Director

13. What are the expected challenges to completing this deliverable?

a. Based upon the 2021 challenges with delivering both tabletops, it comes down to resource and time availability to plan out the scenarios. We also need time at Muscatatuck to effectively plan out the scenarios using their resources and planning.

Implementation Plan

14. Is this a one-time deliverable or one that will require sustainability?

☐ One-time deliverable
☒ Ongoing/sustained effort

Tactic Timeline

INCyber CISA Exercise – August 11, 2021

Tactic	Owner	% Complete	Deadline	Notes
Prepare with planning partners in initial, mid, and final planning meetings	USDHS CISA and IECC partners	100	Jan-July 2021	
Hold Exercise	USDHS CISA and IECC partners	100	Aug. 11, 2021	
Review AAR	Cybersecurity Program Director and USDHS CISA	100	October 2021	

INNG Homeland Defender Exercise – August 13, 2021

Tactic	Owner	% Complete	Deadline	Notes
Prepare with planning partners in initial, mid, and final planning meetings	INNG and IECC partners	100	Aug. 2021	
Initiate cyber IR component	INNG and IECC partners	100	Aug. 2021	
AAR	INNG	50	TBD	
Develop a W/WW workshop to hold virtually	IECC Partners	100	October 2021	

Resources and Budget

15. Will staff be required to complete this deliverable?

☐No ☒ Yes

Estimated Initial FTE	Estimated Continued FTE	Skillset/Role		Primary Source of Funding	Alternate Source of Funding	Notes
.5	.5	Planning		State of Indiana – INNG exercise planning	N/A	

16. What other resources are required to complete this deliverable?

Resource	Justification/Need for Resource	Estimated Initial Cost	Estimated Continued Cost, if Applicable	Primary Source of Funding	Alternate Source of Funding	Notes
Web Conferencing Platform	Needed to host the first tabletop exercise					
Muscatatuck Computing Resources	Needed for real-life simulations of IoT					

Benefits and Risks

17. What is the greatest benefit of this deliverable?

a. The greatest benefit is the production of quantitative results and action plans that detail opportunities for improvement and areas where organizations can take steps to improve.

18. How will this deliverable reduce the cybersecurity risk or impact? What are the estimated costs associated with that risk reduction?

a. This deliverable reduces the risk and impact by providing exact steps and processes organizations can take to reduce them immediately based on the exercise.
This can potentially save organizations up to millions of dollars, by allowing them to focus on more immediate threats to their people, processes, and technologies during an exercise.

19. What is the risk or cost of not completing this deliverable?

a. We will not be able to simulate current cyber threats in an environment designed to identify issues for remediation. Organizations within Indiana would not be able to identify and address these threats and dependencies, and not be able to appropriately act if one of these events occurs.

20. What defines success and/or what metrics will be used to measure success? What is the baseline for your metrics?

a. Success is the completion of the exercise itself. The metrics used to measure success will be the after-action items that we need to follow up on to address issues discovered during the exercises themselves. The baseline is based on the issues discovered, and the number is proportional to the degree of the success.

21. Are there comparable jurisdictions (e.g. other states) that have similar projects that we can compare this project to using the same metrics?

☒No ☐ Yes

a. Indiana is the only state that we are aware of that has involved federal and non-profit agencies, along with the National Guard, to the degree that we have in these exercises.

22. Are there comparable jurisdictions (e.g. other states) that does not have a comparable project that we can use as a control to show what happens if Indiana does not complete the deliverable?

☒No ☐ Yes

Other Implementation Factors

23. List factors that may negatively impact the resources, timeline, or budget of this deliverable?

a. Availability of resources at Muscatatuck to help plan out and develop the exercises there.
b. Availability of IECC resources to help plan out and develop the IECC exercise

24. Does this deliverable require a change from a regulatory/policy standpoint?

☒No ☐ Yes

25. What will it take to support this deliverable if it requires ongoing sustainability?

a. Availability of IECC members and partners to help plan out and develop the exercise

26. Who has the committee/working group contacted regarding implementing this deliverable?

a. We have been working with the State of Indiana Cybersecurity Program Director, David Ayers, healthcare partners, federal water/wastewater partners, as well as local, state, and federal partners.

27. Can this deliverable be used by other sectors?

☐No ☒ Yes

Communications

28. Once completed, which stakeholders need to be informed about the deliverable?

a. We would notify the entire IECC community and all Indiana water/wastewater organizations to participate in an online training regarding what was learned from the exercises.

29. Would it be appropriate for this deliverable to be made available on Indiana's cybersecurity website (www.in.gov/cybersecurity)?

☐No ☒Yes

30. What are other public relations and/or marketing considerations to be noted?

a. Since this is such a unique event for the state of Indiana, there will be media and conference opportunities to present this deliverable.

Evaluation Methodology

Objective 1: IECC Water and Wastewater Committee and partners will participate in USDHS CISA Exercise in August 2021.

Type: ☒ Output ☐ Outcome

Evaluative Method:

☒ Completion
☐ Award/Recognition
☐ Survey - Convenient
☐ Survey – Scientific
☐ Assessment Comparison
☐ Scorecard Comparison
☐ Focus Group
☐ Peer Evaluation/Review
☐ Testing/Quizzing
☐ Benchmark Comparison
☐ Qualitative Analysis
☐ Quantifiable Measurement
☐ Other

Objective 2: IECC Water and Wastewater Committee and partners will participate in INNG Hoosier Defender in August 2021.

Type: ☒ Output ☐ Outcome

Evaluative Method:

☒ Completion
☐ Award/Recognition
☐ Survey - Convenient
☐ Survey – Scientific
☐ Assessment Comparison
☐ Scorecard Comparison
☐ Focus Group
☐ Peer Evaluation/Review
☐ Testing/Quizzing
☐ Benchmark Comparison
☐ Qualitative Analysis
☐ Quantifiable Measurement
☐ Other

Objective 3: Working with partners, develop a water/wastewater virtual workshop and launch by October 2021.

Type: ☒ Output ☐ Outcome

Evaluative Method:

☒ Completion
☐ Award/Recognition
☐ Survey - Convenient
☐ Survey – Scientific
☐ Assessment Comparison
☐ Scorecard Comparison
☐ Focus Group
☐ Peer Evaluation/Review
☐ Testing/Quizzing
☐ Benchmark Comparison
☒ Qualitative Analysis
☐ Quantifiable Measurement
☐ Other

Objective 4: Promote virtual workshop that results in at least 100 registrants by October 2021.

Type: ☐ Output ☒ Outcome

Evaluative Method:

☒ Completion
☐ Award/Recognition
☐ Survey - Convenient
☐ Survey – Scientific
☐ Assessment Comparison
☐ Scorecard Comparison
☐ Focus Group
☐ Peer Evaluation/Review
☐ Testing/Quizzing
☐ Benchmark Comparison
☐ Qualitative Analysis
☒ Quantifiable Measurement
☐ Other

Supporting Documentation

Supporting Documentation

- Cyber Plan Template 1.0
- INNG Hoosier Defender Information Sheet
- Virtual Workshop

Cyber Plan Template 1.0

WATER AND WASTEWATER CYBERSECURITY PLAN TEMPLATE

i. VERSION HISTORY

Date	Version	Description
05/29/2018	0.1	Initial Draft
6/7/2018	0.2	Modifications – Connie Justice
6/11/2018	0.3	Modifications- Sondhi Solutions
6/11/2018	0.4	Modifications – Connie Justice
6/17/2018	0.5	Modifications- Sondhi Solutions
06/20/2018	1.0	Second Draft – Connie Justice
6/21/2018	1.1	Modifications – Connie Justice and John
6/29/2018	2.0	Lucas

7/10/2018	2.1	Third Draft – Connie Justice
7/20/2018	2.2	Modifications-Connie Justice
7/30/2018	2.3	Modifications-Connie Justice
8/15/2018	2.4	Modifications – Connie Justice
8/26/2018	3.0	Modifications – Connie Justice
9/6/2018	3.1	Fourth Draft – Connie Justice
		Modifications – Connie Justice, John Lucas, Steve Berube, Jamie Foreman, Jon Weirick
10/22/2018	4.0	Connie Justice
10/23/2018	4.1	Connie Justice
12/15/2018	4.2	Connie Justice
1/3/2019	4.3	Connie Justice

ii. CONTRIBUTORS AND ACKNOWLEDGEMENTS

This cyber security template was developed by the Water / Wastewater committee of the Indiana Executive Cyber Security Committee of the State of Indiana. This committee is a committee of business, government, and regulatory members from across the State of Indiana.

iii. IMPORTANT TERMS

Term	**Definition**

iv. TABLE OF CONTENTS

INTRODUCTION

This document is a checklist of recommendations for maintaining the overall Cybersecurity posture of a Water or Wastewater Treatment operation. To be effective, each entity must ensure the cooperation of its IT Department, the Water and Wastewater Operations, and a Cybersecurity partner (if additional expertise in this area is required). Having a plan is only the first step. At least twice a year, you should verify that people, systems and software continue to align with your cybersecurity plan. Create a ledger to ensure you've covered identified recommendations. The guide is based on NIST cyber security framework and the EPA Incident Action Checklist – Cybersecurity. This document has been established in order for Water utilities to become compliant with Indiana Senate bill 362.

HOW TO USE THIS GUIDE

The document should be followed in the creation of policies, processes, and programs and verified by a Cybersecurity lead and clearly documented as part of the regularly executed Cybersecurity maintenance routine. A secure document management repository should be used to maintain and publish all documentation revisions.

ACRONYM LIST

IT	Information Technology
EPA	Environmental Protection Agency
NIST	National Institute of Standards and Technology
CSF	Cybersecurity Framework
AWWA	American Water Works Association
US-CERT	US-Computer Emergency Readiness Team
FFIEC	Federal Financial Institutions Examination Council
IDS	Intrusion detection system
TCP/IP	Transmission Control Protocol/Internet Protocol,
ICS	Industrial controls system
NIST SP	NIST Special Publication
ERP	Emergency response plan
NCCIC	National Cybersecurity & Communications Integration Center
INWARN	
IDHS	Indiana Department of Homeland Security
ISAC	Water Information Sharing and Analysis Center (WaterISAC)
WATER-ISAC	Water Information Sharing and Analysis Center (WaterISAC)

AAR	After action report
IP	Improvement plan
SOX	Sarbanes Oxley
HR	Human resources
PII	Personally identifiable information
HIPAA	The Health Insurance Portability and Accountability Act
SCADA	Supervisory control and data acquisition
CSRC	Computer Security Resource Center (CSRC)
SANS	SANS Institute was established in 1989 as a cooperative research and education organization
DMZ	Demilitarized zone
NMS	Network monitoring system
IPSEC	Internet Protocol Security
AES	Advanced Encryption Standard
WPA2	Wi-Fi Protected Access II
DHS	Department of Homeland Security
POC	Point of Contact

CYBERSECURITY PLAN CHECKLIST INSTRUCTIONS

HOW TO USE

The Cybersecurity Plan Checklist (the checklist) is designed to check off the plan checklist items as you complete them or if you have them completed already you can check off the item.

Each link next to the check box will take you to the page with further explanation of the checklist item with links to example forms.

EASE OF USE

The checklist is designed to be easy to use, however, if you have no background in cybersecurity it is recommended that you attend training sessions and attain help with the checklist.

CHECKLIST DOCUMENTS

The checklist and documents created are living documents and should be updated on a regular basis, when systems or people change, or on a periodic basis.

Cybersecurity Plan Checklist

Identify

- [ ] Identify Organization Security Lead
  Identify an organization security lead for you company
- [ ] Classify data
  Identify mission critical data assets and classify data assets in order of importance. Identify personnel responsible for data asset/s
- [ ] Identify assets
  Identify Mission Critical Technology Assets
- [ ] Security policies
  A document that states in writing how a company plans to protect the company's physical and information technology (IT) assets
- [ ] Risk Assessment
  Execute a cybersecurity risk assessment to identify vulnerabilities in business and industrial control mission critical systems
- [ ] Risk Management Strategy
  A security program established to respond to security incidents monitor, discover, and handle security alerts and technical vulnerabilities, collect and analyze security data, limit the organization's risk profile and ensure that management is aware of changing/emerging risks

Protect

- [ ] Employee Training and Awareness
  Employees should be trained and be aware of cybersecurity issues and situations that can compromise the business and ruin the company's reputation
- [ ] Access Controls
  Granting access and privileges to systems, resources or information needed.
- [ ] Securing Network and Cloud
  Ensure secure communications and multifactor authentication are setup between the business and cloud providers
- [ ] Authentication Policy
  Multifactor-authentication should be used; a passphrase should be used; unique passwords for separate confidential accounts.
- [ ] Data Security
  Protect business data
- [ ] Information Protection
  Data should be protected by proper backups and testing. Proper destruction, incident response, disaster recovery, and business continuity plans in place.
- [ ] Maintenance
  Equipment maintenance/replacement program established
- [ ] Protective Technology
  Storage media management; centralized logging; Service level agreements with third party vendor; and system hardening based on criticality of systems
- [ ] Physical Access
  Physical access limited; procedures to access buildings and server rooms; and no physical plugging into network

Detect

- [ ] Anomalies and Events
  Device to identify malicious activity (intrusion detection system (IDS)) should be implemented. Logs should be used to notify of failed logins and malicious behavior.
- [ ] Continuous Monitoring
  Web filtering and patching should be used to monitor unauthorized activity.
- [ ] Detection Processes
  Register for cybersecurity alerts and advisories from water sector and government partners to be aware of new vulnerabilities and threats. Segment ICS network from business network. Restrict access of ICS network to internet unless needed.

Respond

- [ ] Response Planning
  A security and response program should be established to ensure staff is aware of security policies and incident response/notification procedures
- [ ] Respond Communications
  List of primary and backup contacts
- [ ] Analysis
  Investigate incidents, logs, and vulnerability systems; establish a digital forensics program
- [ ] Mitigation
  Contain incidents; mitigate incidents, or accept risks
- [ ] Respond Improvements
  Incorporate lessons learned; update response plans

Recover

- [ ] Recovery Planning
  Policies and procedures for system instantiation/deployment should be established to ensure business continuity
- [ ] Recovery Improvements
  Incorporate lessons learned from response plans and update response plans
- [ ] Recovery Communications
  Primary and backup contacts for personnel or vendors; points of contact for reporting a cyber incident and requesting assistance with response and recovery

1 IDENTIFY

When they happen, cybersecurity events are very stressful. This is not a time when you want to guess about who to call or where to find a serial number for an affected device. To help prepare for an event, it is important to create and maintain inventories of your assets. Knowing how those assets connect and work together is also very important. Having a list of contacts will ensure you have access to people and organizations in the event of an emergency. Building and maintaining an Information Technology Asset Inventory ensures you have critical information on your organization's technology items as they come in and out of their life cycle. Give each asset a unique code and label when entered into the inventory as they come into operation. Review the inventory at least annually and note items that are nearing "end of life" and plan to retire or replace them. Appendix A: IT Asset Inventory has a template to help you get started.

1.1 ORGANIZATION SECURITY LEAD

a. Identify an organization security lead
b. Identify emergency response team

1.2 ASSET MANAGEMENT

a. Identify mission critical data assets and classify data assets in order of importance. Identify personnel responsible for data asset/s.
b. See Exhibit 1 for data classification template
c. Identify mission critical assets
    a. Identify Mission Critical Technology Assets
        1. Applications (email applications, web browsers, productivity applications)
        2. Data (What storage devices data is stored on: hard drives, portable media, off site data backups)
        3. Servers (hardware devices that can host applications, or other virtual servers)
        4. Workstations/HMI/PLC (Systems that run SCADA software, Systems that run Business Software)
        5. Field devices (Laptops, Tablets, Cell Phones)
        6. Communications and network equipment (router, firewall, voice system)

Note: See Exhibit 2 for asset identification table template.

1.3 BUSINESS ENVIRONMENT AND GOVERNANCE

a. Governance framework is used to disseminate/decentralize decision making while maintaining executive authority and strategic control and ensure that managers follow the security policies and enforce the execution of security procedures within their area of responsibility.
b. Audit program established to ensure information systems are compliant with policies and standards and to minimize disruption of operations.
c. Framework of information security policies, procedures, and controls including management's initial and periodic approval established to provide governance, exercise periodic review, dissemination, and coordination of information security activities.

d. Security Policies and Procedures Exhibit 3

1.4 Risk Assessment

1.4.1 Conduct a Risk Assessment

a. Execute a cybersecurity risk assessment to identify vulnerabilities in business and industrial control mission critical systems using the NIST CSF/AWWA tool (Link to Indiana Water/Wastewater Risk Model will be added).
b. Create action plan to mitigate significant vulnerabilities identified in risk assessment, and act on the mitigation plan.
    a. Create an action plan that prioritizes actions needed to mitigate risk.
    b. Prioritize the implementation of protective measures
    c. Low hanging fruit-Optimize your budget in relation to identified risks.

1.4.2 Risk Management Strategy

a. A security program established to respond to security incidents monitor, discover, and handle security alerts and technical vulnerabilities, collect and analyze security data, limit the organization's risk profile and ensure that management is aware of changing/emerging risks.
b. Risk management is the process of identifying what information requires what level of protection and then implementing the proper level of protection and subsequently monitoring the protection.
   The basic risk strategy is:
    a. Identify basic information stored and used in the business
    b. Determine the classification or value of the information
    c. Inventory the assets in the business
c. Understand what threats and vulnerabilities exists in the business

1.5 *Links for Identify Section*

a. US-CERT's Protect Your Workplace Posters & Brochure: http://www.us-cert.gov/reading_room/distributable.html
b. Socializing Securely: Using Social Networking Services: http://www.us-cert.gov/reading_room/safe_social_networking.pdf
c. Governing for Enterprise Security: http://www.cert.org/governance/
d. FFIEC Handbook Definition of Reputation Risk: http://ithandbook.ffiec.gov/it-booklets/retail-payment-systems/retail-payment-systems-risk-management/reputation-risk.aspx
e. What Businesses can do to help with cyber security: http://www.staysafeonline.org/sites/default/files/resource_documents/What%20Businesses%20Can%20Do%202011%20Final_0.pdf

RETURN TO CHECKLIST

2 PROTECT

The next step in your cybersecurity plan should be to determine what protections to put in place. This helps to limit exposure and limit damage in the event of an attack. Protections can include the following:

a. A way to control access to the IT assets you identified in Step 1.
b. A plan to provide cybersecurity awareness and training to your staff
c. A method to determine how to keep data, networks and systems secure
d. A plan to make sure systems are up-to-date with patches or if you can't patch systems then have appropriate controls to make sure systems are not modified (i.e. Scada systems with whitelisting).
e. A decision to use protective technologies to help prevent threats if appropriate

2.1 EMPLOYEE TRAINING AND AWARENESS

Employees should be trained and be aware of cybersecurity issues and situations that can compromise the business and ruin the company's reputation. See Exhibit 5 for training and awareness guidelines.

2.2 ACCESS CONTROL

2.2.1 SECURING NETWORK AND CLOUD

The network infrastructure is the backbone for defenses against internal and external malicious programs and nefarious persons. Layered protection and various devices are the key to protecting internal networks from these bad actors. Cloud services are becoming common place to conduct business. Ensure secure communications and multifactor authentication are setup between the business and cloud providers. See Exhibit 6 for example template of securing network and cloud.

2.2.2 IMPLEMENT A RIGOROUS USER AUTHENTICATION POLICY

a. Multifactor-authentication should be used wherever possible.
b. Use a passphrase instead of a password. A passphrase is a phrase constructed of multiple words. An example would be: "sunwalkraindrive". A passphrase constructed of 4 words (sun + walk + rain + drive) is easy to remember but hard to guess. It is not recommended that users change their passwords because of the general predictability in which users change specific characters.
c. Use unique passphrases for separate confidential accounts.

2.2.3 DATA SECURITY

In addition to understanding data classification, it is important to protect business data. Sensitive business data should be encrypted on storage medium and data should be encrypted in transit from end to end communications. The key elements to secure data are:

a. Data at rest is encrypted
b. Data in transit is encrypted

c. Logging in place to protect against data leaks
d. Systems in place to ensure integrity of data

2.3 Information Protection Processes and Procedures

Data should also be protected by proper backups and testing. Additionally, proper destruction of data is very important, as well as having an incident response, disaster recovery, and business continuity plan in place.

a. Backup and restore of data are tested
b. Data destruction process is in place
c. Incident response, disaster recovery, and business continuity plans are in place and managed.

2.4 Maintenance

Equipment maintenance/replacement program established to maintain business continuity, availability, and integrity. See Exhibit 7 for the asset management process.

2.5 Protective Technology

a. Storage media management and disposal program established to ensure that any sensitive data/software is used appropriately and is removed prior to media disposal (including approved policies and procedures).
b. Centralized logging system including policies and procedures to collect, analyze and report to management.
c. SLAs for software and information exchange with internal/external parties in place including interfaces between systems and approved policies and procedures.
d. Program for hardening servers, workstations, routers, and other systems using levels of hardening based on criticality established. Program should include policies and procedures for whitelisting (deny-all, allow by exception).

2.6 Physical Access

a. Physical access to facilities and areas where operational equipment is running should be limited to staff who require the access to perform their job. A more liberal policy on access control is not best practice and would inevitably provide access to individuals who accidently or purposefully create problems with the environment.
b. Physical Security should be implemented to ensure access is given to areas with operational or IT systems only to those personnel who need access to these areas to perform their job duties.
c. No access to the internet should be permitted to industrial control systems unless absolutely required. If required, a web content filter should be used to limit the access to the system based on a policy.

Return to Checklist

3 Detect

Organizations must implement the appropriate measures to quickly identify cybersecurity events. The adoption of continuous monitoring solutions that detect anomalous activity and other threats to operational continuity is required to comply with this function. Organizations should have network visibility in order to anticipate a cyber incident; which should be included in your current cybersecurity plan.

3.1 Anomalies and Events

a. An intrusion detection system (IDS) should be implemented to identify malicious activity. IDS systems are designed to watch for signatures of malicious traffic, or to recognize anomalies in the underlying TCPIP communications. If anything falls outside of the normal patterns for how these protocols work, the IDS will send an alert to the administrator for the system who can then act upon the alert by implementing a firewall rule to block the offensive traffic.
b. Security Continuous Monitoring. A basic logging server should be deployed to aggregate log data from different devices to correlate alerts and notify the administrator when certain thresholds have been met (e.g. 3 or more failed logins for an account).

3.2 Security Continuous Monitoring

a. Monitoring for unauthorized personnel, connections, devices, and software is performed
b. Active monitoring for adversarial system penetration
c. Intrusion prevention systems should be configured to monitor for suspicious activity crossing your network perimeter
d. If you use a web filtering system, employees should have clear knowledge of how and why their web activities will be monitored, and what types of sites are deemed unacceptable by your policy.
e. Identification of security deficiencies in existing hardware and software.

3.3 Detection Processes

a. Continuous monitoring is a very effective way to analyze and prevent cyber incidents in ICS networks. Use intrusion detection systems, intrusion prevention systems and file integrity checkers to spot intrusions and verify web content.
b. Register for cybersecurity alerts and advisories from water sector and government partners to be aware of new vulnerabilities and threats (two sources of cybersecurity alerts are WaterISAC, which has a basic membership that is free, and ICS-CERT (https://ics-cert.us-cert.gov/alerts)).
c. Ensure the ICS network is separated from the public network. Additionally, the business network should be segmented from the ICS network using industry best practices (NIST SP 800-82 section 5).
d. Restrict internet access to industrial control systems unless there is a critical need.
e. System acceptance standards including data validation (input/output), message authenticity, and data integrity established to detect information corruption during processing.

Return to Checklist

4 RESPOND

a. Should a cyber incident occur, organizations must have the ability to contain the impact. To comply, your organization should utilize your response plan which should include processes such as:
    i. define communication lines among the appropriate parties
    ii. collect and analyze information about the event
    iii. perform required activities to eradicate the incident
    iv. incorporate lessons learned into revised response strategies.
b. The Emergency Response Plan (ERP) should be referenced and adhered to in the event of a Cybersecurity incident. The Emergency Response Team should be comprised of essential personnel that should be contacted, followed by the contacts listed in the Emergency Response Plan including all other utility personnel and media outlets as necessary. NCCIC can also assist with critical system response and recovery (888-282-0870 or NCCIC@hq.dhs.gov)

4.1 RESPONSE PLANNING

A security and response program should be established to ensure staff is aware of security policies and incident response/notification procedures. See Exhibit 8 for ERP steps.

4.2 COMMUNICATIONS

Contacts

a. Have ready access to a list of primary and backup contacts for personnel or entities (vendors, government agencies, etc.) responsible for the operation and maintenance of each critical system.
b. Next, identify priority points of contact for reporting a cyber incident and requesting assistance with response and recovery. Include any state resources that may be available such as Indiana State Police, Indiana National Guard Cyber Division or mutual aid programs (INWARN), as well as the Indiana Department of Homeland Security to assist with an attack and any other contact information needed. Exhibit 9: Emergency Contacts has a template to help organize necessary contacts.

4.3 ANALYSIS

a. Investigate notifications from detection systems
b. Understand incidents
c. Incidents are categorized appropriately per response plans
d. A forensic program established to ensure that evidence is collected/handled in accordance with pertinent laws in case of an incident requiring civil or criminal action.

4.4 MITIGATION

a. Contain incidents
b. Mitigate incidents
c. Newly identified vulnerabilities are mitigated or documented as accepted risks

4.5 IMPROVEMENTS

a. Incorporate lessons learned from response plans

b. Update response plans

4.6 CONTACTS

4.6.1 ASSESS THE DAMAGE TO UTILITY SYSTEMS AND ANY DISRUPTION TO OPERATIONS.

A checklist should be created for use in the Emergency Response Plan to verify functionality for critical business services and their supporting infrastructure. Any affected services should be documented and relayed to the administrator of the Emergency Response Plan. The administrator of the Emergency Response Plan should also document any reports of suspicious communications before or during the incident. The documentation should include date and time that information was reported.

4.6.2 FORENSICS IMAGE

a. A forensic image should be taken of the impacted systems and transferred to other secure media that is not connected to a network. If possible, the original systems that were affected should be disconnected from the network and not powered down or rebooted.
b. After containment and a forensic image has been captured and the original system has been taken off the network and preserved for evidence, restore the system function to a new system from the last known good backup before the infection occurred.
c. Never work on the original evidence when responding to a Cybersecurity incident. This will ensure the integrity of the original evidence.

4.6.3 LESSONS LEARNED

a. A Lessons Learned session should be conducted after an incident has been resolved. Each problem, it's perceived cause, and what should have been done differently should be discussed.
a. Positive feedback should also be discussed to show what went right during the response.
b. Submit the incident to WaterISAC and Indiana AWWA. The online WaterISAC incident report form can be found at https://www.waterisac.org/report-incident or a call can be placed at 866-H2O-ISAC. Additionally, report incident to Indiana AWWA.

RETURN TO CHECKLIST

5 RECOVER

5.1 RECOVERY PLANNING

Policies and procedures for system instantiation/deployment should be established to ensure business continuity.

5.2 IMPROVEMENTS

Develop a lessons learned document and/or an after action report (AAR) to document utility response activities, successes, and areas for improvement. Create an improvement plan (IP) based on your AAR and use the IP to update your vulnerability assessment, ERP and

contingency plans. See Exhibit 10 for an example AAR report.

5.3 COMMUNICATIONS

a. Organizations must develop and implement effective activities to restore any capabilities or services that were impaired due to a cybersecurity event. Organizations must have a recovery plan in place, be able to coordinate restoration activities with external parties and incorporate lessons learned into updated recovery strategy. Defining a prioritized list of action points which can be used to undertake recovery activity is critical for a timely recovery.
b. The organizations recovery plan should address damage to reputation from data breaches, criminal organizations, inappropriate employee actions.
c. Mission critical processes should be documented in the Emergency Response Plan, and the appropriate sequence should be determined and communicated by the Emergency Response Plan administrator based on the systems that have been affected.
d. If required, the public and media outlets should be notified of the incident.

RETURN TO CHECKLIST

EXHIBIT 1: DATA CLASSIFICATION TEMPLATE

Example Data Classification Template

Data	Classification	Justification	Data Owner	Data User
Executive Business Material	Restricted Confidential	Intellectual Property		Executives & Assistants
Bank Accounts - Information	Confidential	SOX		Financial Reporting
Financial Reporting Data	Confidential/Public - phases	SOX		Financial Reporting
Building Information	Confidential	SOX		Financial Reporting
Legal Case Information	Sensitive	Intellectual Property		Legal
Leasing Information	Confidential / Restricted Confidential phases	Intellectual Property		Leasing
Security video	Sensitive	Intellectual Property		Security
Custom Application Code	Sensitive	Intellectual Property		Information Services
Audit Information	Restricted Confidential	Data from all areas		Audit Services
Tax Filings	Sensitive			Corporate Tax
HR	Sensitive	PII, Laws		HR
Benefits	Confidential	HIPAA / do not submit		HR

Definitive guide to data classification:
https://infosecpartners.com/wp-content/uploads/2017/02/The-Definitive-Guide-to-Data-Classification.pdf

6 EXHIBIT 2: CRITICAL ASSET INVENTORY PER FACILITY

Facility Name: _____

AssetID	Item	Description	Serial #	Service Date	Retirement Date	Original Value	Current Value	Custodian	Department

7 EXHIBIT 3: POLICY EXAMPLES

Policy Name	Description
Security Policy	A document designed for staff that should include the security program requirements and require signoff for employees.
Emergency Response Plan	Procedures to follow in the event of a Cybersecurity breach.
Password Policy	Outlines the specific password requirements for the organization.
Acceptable Use Policy	Defines how the internet and email should be used to promote a responsible culture around Cybersecurity.

- Guide to Industrial Control Systems (ICS) Security https://nvlpubs.nist.gov/nistpubs/SpecialPublications/NIST.SP.800-82r2.pdf
- Guide for Cybersecurity Event Recovery https://nvlpubs.nist.gov/nistpubs/SpecialPublications/NIST.SP.800-184.pdf
- 21 Steps to Improve Cyber Security of SCADA Networks https://www.energy.gov/sites/prod/files/oeprod/DocumentsandMedia/21_Steps_-_SCADA.pdf
- Systems Security Engineering: Cyber Resiliency Considerations for the Engineering of Trustworthy Secure Systems https://csrc.nist.gov/CSRC/media/Publications/sp/800-160/vol-2/draft/documents/sp800-160-vol2-draft.pdf
- 10 ways to develop cybersecurity policies and best practices https://www.zdnet.com/article/10-ways-to-develop-cybersecurity-policies-and-best-practices/
- SANS Information Security Policy Templates https://www.sans.org/security-resources/policies

8 EXHIBIT 4: WATER WASTE WATER RISK ASSESSMENT (TO BE DELIVERED)

9 EXHIBIT 5: EMPLOYEE TRAINING AND AWARENESS

a. Implement a cybersecurity awareness program that includes:
    i. Social engineering
    ii. Sharing of personal information
    iii. Phishing
        1. Types of phishing attacks
        2. What can happen as a result of Phishing
    iv. Ransomware
        1. What to do in the event your system has been compromised by Ransomware
    v. Email Best Practices and what to watch for
    vi. Internet browsing acceptable use policy
    vii. Authentication (password policy, use of multi-factor authentication, and remote access where required).
b. Provide on-going cross training for critical systems and ICS staff that identifies current best practices and standards for ICS cybersecurity.
c. Provide basic network and radio communications training for ICS technicians.
d. Participate in water sector programs that facilitate cybersecurity knowledge transfer.
e. Identify appropriate certifications for internal and external staff. Include certification requirements in SLAs and contracts with external service providers.
f. Provide periodic security awareness training to employees that identifies risky behaviors and threats.
g. Promote information sharing within your organization.

10 EXHIBIT 6: SECURING NETWORK AND CLOUD

a. Network
    i. Network Separation
        1. Business systems such as email or other systems that require access to the internet should be managed on a separate physical network from the water/wastewater operation systems.
        2. A DMZ should be established for any traffic originating from outside of the internal network, although traffic of this origin should be eliminated where possible and ensure there is no connectivity to the Water/Wastewater systems network.
    ii. Network Hardware
        1. Have records of current hardware and software configurations.
        2. Maintain support contracts with critical software vendors, for example: endpoint protection (anti-virus, malware detection, log monitoring) and operating system patches in accordance with each vendor's recommended patch level if applicable
        3. It is important to maintain support contracts for software programs required to maintain the operation or protect/backup the systems.
            a. There could also be a delay in gaining access to critical software patches or system support if there is a lapse in support coverage.
            b. Software patches should be first tested on an offline system that doesn't have access to the Water/Wastewater Industrial Control System network.
            c. Once the patch is demonstrated to be safe, it can be scheduled on actual production systems.
    iii. Monitoring
        1. An NMS should be implemented to ensure alerts are sent to the network manager when a device is unavailable for a pre-determined period of time.
        2. System and Event Logs should be monitored for critical events that occur, and alerts sent to the network manager.
    iv. Cloud
        1. Interfacing with cloud environments
        2. IPSEC tunnels should be used between on premises networks and public cloud networks
        3. Firewalls should be used in cloud-based network for separation in the same manner recommended on internally hosted systems.
        4. Centralized authentication authority and multi-factor authentication should be used when accessing public cloud environments.
b. Server and Workstation Hardening:
    i. Disable services that are not required
        1. Use whitelisting software to only allow execution of required applications.
        2. Ensure system-based firewalls are not more permissive than they need to be – only allow what is absolutely necessary.
        3. Disable built-in, default accounts.
        4. Access Control should be employed and provide multi-factor authentication, pass phrases made up of 4 regular words, and unique passwords for different

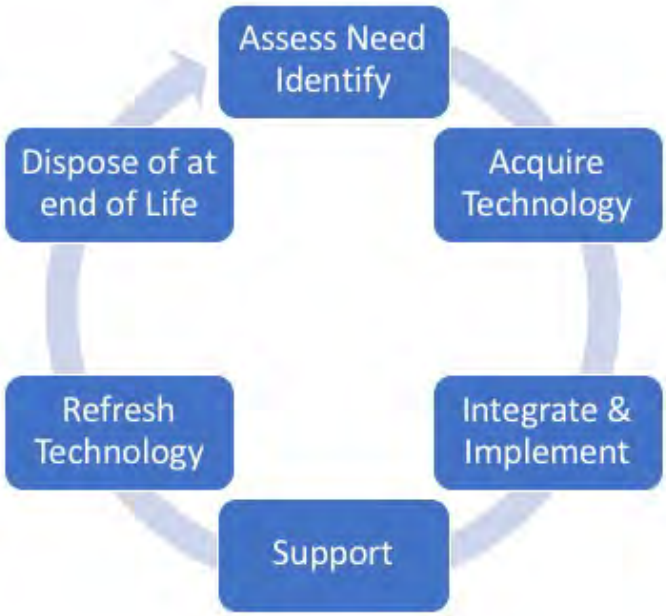
systems. Operational systems and Business systems should reside on two separate physical networks separated by firewall devices.

5. Service Level Agreements (SLAs) should be included in vendor contracts to ensure they are providing the amount of internet bandwidth and round-trip speeds agreed to in the contract, and that 3rd party personnel that work on utility systems are certified based on agreed upon industry standard certifications based on their job function.

c. Wireless and Wireless guest access secured by strong protocols, such as WPA2 with AES encryption.

11 EXHIBIT 7: MAINTENANCE LIFE CYCLE PROCESS

Asset Lifecycle Management Process



12 EXHIBIT 8: EMERGENCY RESPONSE PLAN (ERP)

An emergency response plan (ERP) is important if a cybersecurity incident were to occur that requires notification outside of the primary business. The following is a guide for possible ERP action items:

1. Contact Law Enforcement-if required
2. Contact government authorities-if required
3. Notify customers
4. Record the data lost or exposed
5. Record measures taken to reduce future exposure
6. Technical and leadership work to limit damage
7. Containment
8. Reputation risk management
9. Request outside assistance if needed
10. Begin recovery
11. Eradicate malware
12. Hold lessons learned meeting
13. Discover knowledge gained during the incident
14. Document knowledge gained during the incident
15. Refine knowledge gained during the incident

13 EXHIBIT 9: CONTACT LIST

Contact Name	Organization Name	Phone	Email	Website
	Law Enforcement			
	IT Staff/Vendor			
	SCADA Staff/Vendor			
	DHS NCCIC	**888-282-0870**		
	Local Laboratory			
	State Primacy Agency			
	Local Emergency Management Agency			
	Local Health Department			
	INWARN Chair			
	State Emergency Management Agency			

14 EXHIBIT 10: AFTER ACTION REPORT

Incident Name	[Insert the formal name of exercise, which should match the name in the document header]
Incident Dates	[Indicate the start and end dates of the incident]
Description	This incident …
Point of Contact	[Insert the name, title, agency, address, phone number, and email address of the primary exercise POC (e.g., exercise director or exercise sponsor)]

[Incident]
The strengths and areas for improvement for each core capability aligned to this objective are described in this section.
[Incident Description]
Strengths
The [full or partial] incident can be attributed to the following:
1: [Observation statement]
2: [Observation statement]
3: [Observation statement]
Areas for Improvement
The following areas require improvement to achieve the full capability level:
Area for Improvement 1: [Observation statement. This should clearly state the problem or gap; it should not include a recommendation or corrective action, as those will be documented in the Improvement Plan.]
Reference: [List any relevant plans, policies, procedures, regulations, or laws.]
Analysis: [Provide a root cause analysis or summary of why the full capability level was not achieved.]
Area for Improvement 2: [Observation statement]
Reference**:** [List any relevant plans, policies, procedures, regulations, or laws.]
Analysis: [Provide a root cause analysis or summary of why the full capability level was not achieved.]

INNG Hoosier Defender Information Sheet

INDIANA NATIONAL GUARD

Homeland Defender 2021

Exercise Director: LTC Robert Brake (INNG)

Executive Council: Chief Tom Neal (IN TF1) & LTC Robert Brake (INNG)

Safety Director: CSM Ty Benham (INNG)

Operations Director: Chief Jay Settergren (IN-TF1)

Operational Support: CPT Pemberton (INNG)

MSEL Directors: DC Steve Coover (MFD & IN-TF1) & LTC Robert Brake (INNG)

UNCLASSIFIED

INDIANA NATIONAL GUARD

HOMELAND DEFENDER 2021

POC: LTC Rob Brake

Exercise Mission

INNG host a Full Scale Exercise from 13-15AUG21 vic MUTC involving local and state resources in order to (IOT) reinforce existing relationships, create new ones and share best practices within the 1st responder community.

Exercise Purpose

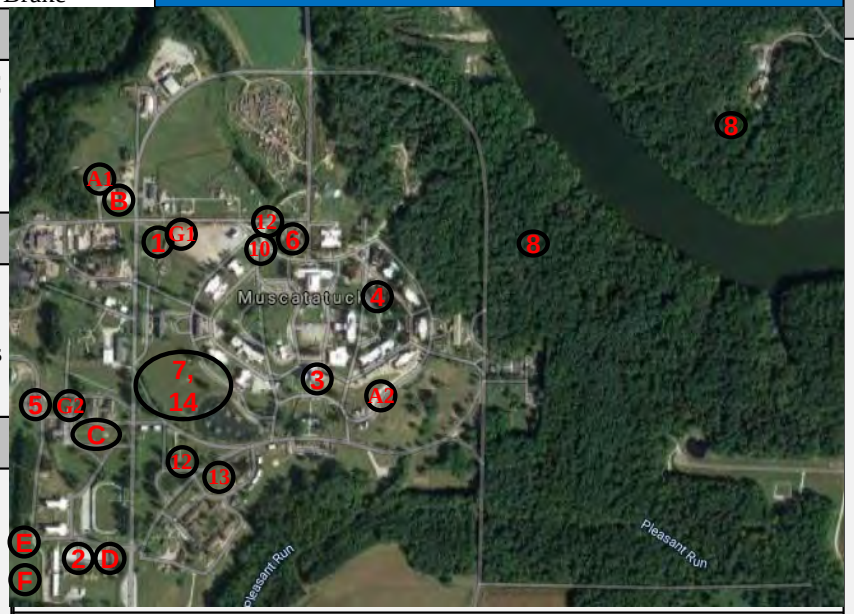
Conduct a joint training event that includes local, state & military partners, focused at the Team level, in order to increase unit/team proficiencies and integration with other 1st responders within the State of Indiana Response Forces.

Exercise Intent

Exercise Commander Intent: Provide a realistic training opportunity for units to collectively train together IOT increase readiness and share tactics, techniques, and procedures via a scalable and nested exercise over a 2 day, weekend exercise. Once completed units, can receive a facilitated AAR based on individual unit training requirements.

Key Tasks: Alert & Mobilize, Deploy, Site Occupation, Joint /combined Operations & Redeploy all IAW NIMS.

End State: Create a realistic collective exercise from H-hour – OP3, that supports Local and State Inter Agency Integration followed by after action reviews IOT ensure State Partners meet individual and team training objectives, increase readiness and share techniques between Agencies.



Concept of Operation

A series of earthquakes occur that quickly exceeds local resources requiring assistance from Regional and State Agencies in order to meet lifesaving operational requirements.

As a result multiple agencies and units receive an Alert Orders to Deploy to staging locations. O/O units will move forward IOT conduct Site Occupation & link up with the Incident Management Team (IMT) IOT receive missions for Full Scale Operations. Once units are Mission Complete, they will begin recovery operations and redeploy to home station.

Operational Lanes:

Lane #1: Initial Command Post & Rail Yard
Lane #2: Unified Command / IMT CMD Post
Lane #3: Hospital Chemical & Radiation
Lane #4: Round Robin Skills Training
Lane #5: Cafeteria Collapse
Lane #6: School Collapse
Lane #7: TF1 Air Load Operations
Lane #8: Lost Personnel WAS
Lane #9: CYBER Ransom
Lane #10: Chaplain Teams
Lane #11: NGRF Alert and Staging Operations
Lane #12: Area Security Operations
Lane #13: Crowd Control Activities
Lane #14: Lifeline Operations

Site A: Staging (Sites 1 & 2)
Site B: MFD & CST CMD Post
Site C: CERFP & TF1 CMD Post
Site D: NGRF CMD Post
Site E: White Cell Team
Site F: Ravenswood Support site
Site G: DECON Sites (1& 2)

Participants/Enablers: 369 (82) BOG -501

CST – 20 (2)
TF1 IN – 6 (15)
CERFP – 208 (5)
CAP – 2
NGRF – 40 (5)
38th CAB – (4)
Ravenswood – (24)
IDHS Dist 8 IMT – 12
127th CB – (2)

MFD – 16 (6)
81st TC – (10)
IOT – 15 (3)
JCSD – 40
UPAD – 6 (2)
ASOS – 4
JFHQ-IN – (4)

( ) = non-participant / support role

Additional:
Role Players – (50)

IPR #1 10SEP20 → **CDC** 06-08OCT20 CAIN/MUTC → IPR #2 1NOV20 → IPR #3 4DEC20 → **IPC** 2-3MAR21 MS Teams → **MPC** 16-17MAR21 MUTC → **FPC** 11-12MAY21 MUTC → IPR #4 21JUN21 → IPR #5 19JUL21 → **Execution** 13-15AUG21 MUTC

Homeland Defender Key Events Timeline

1-12 AUG 21 Local media reports increased cyber activity to local municipalities

0330 13 AUG 21 – 4.3 MAG Earthquake

13 AUG 21 – HAZMAT call out initiates Rail Yard and Hospital Scenarios (Lanes 1 and 3)

13 AUG 21 – Second Earthquake Occurs causing multiple structure collapses (Lanes 5 and 6)

13 AUG 21 – IC Requests additional resources from JC-EMA (Lanes 2)

13 AUG 21 – State EOC assigns INNG Forces to IC

13 AUG 21 – NGRF arrives to secure govt. center (Lane 12)

14 AUG 21 – Search and Extraction of structure collapses (Lanes 5 and 6)

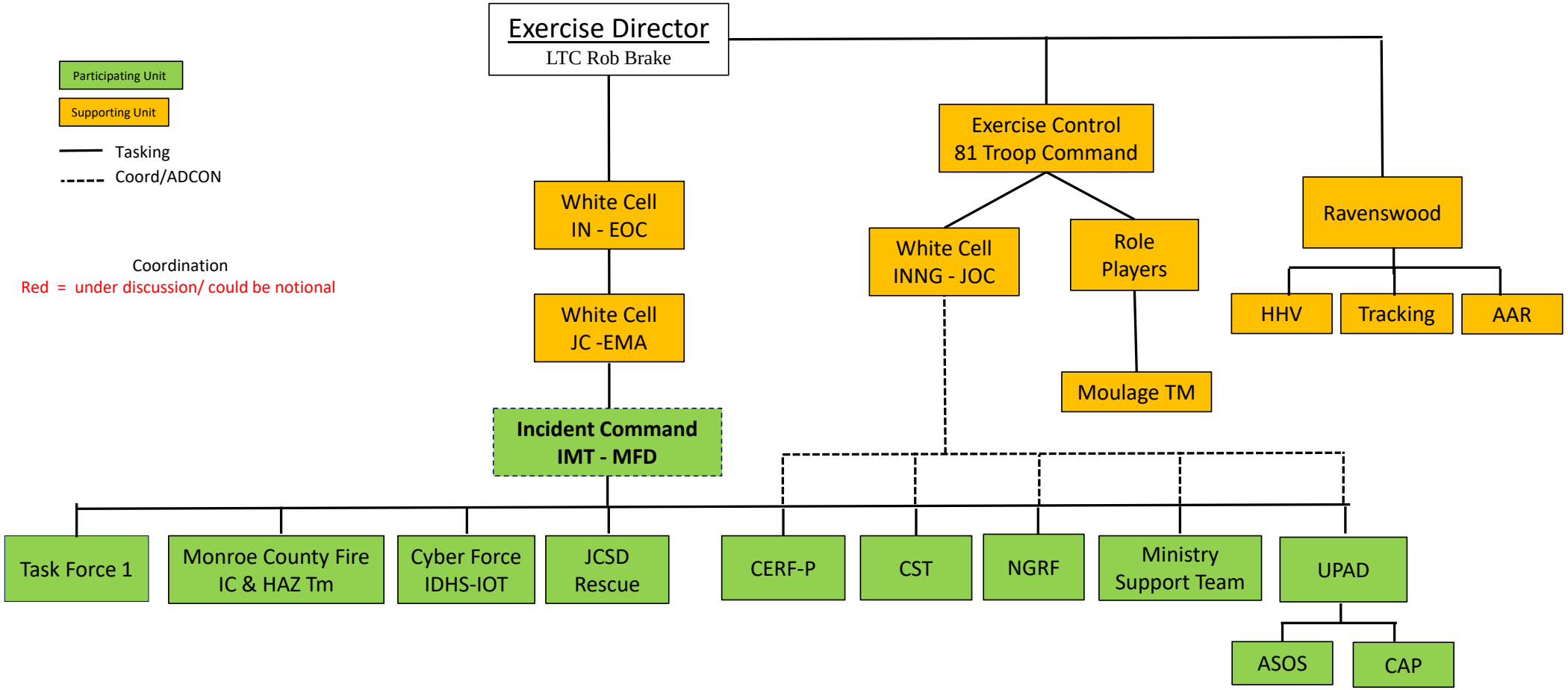
14 AUG 21 – Cyber ransom attack at water treatment facility (Lane 9)

14 AUG 21 – Increase civil unrest at govt. center (Lane 13)

14 AUG 21 – Wide area search for lost personnel (Lane 8)

INDIANA NATIONAL GUARD

Task ORG



Indiana's Cyber Readiness Advancing Rapidly

Friday, October 1, 2021

If you think about it, protecting a school, hospital, or a city's water supply from a cyberattack is a lot like a football coach drawing up a game plan for playing against the #1 team in the country – every day.

There's game film, playbooks and you always have to account for how you're going to stop the other team's best player from scoring; all the while trying to figure out what else the coach might have up his sleeve. And there's no halftime show to try and adjust to stage a comeback.

That's the challenge facing the State of Indiana in its efforts to continue rapidly moving forward in its mission to further strengthen its cybersecurity resiliency and response.

The progress that's been achieved comes as the State of Indiana and the Indiana National Guard recently hosted two cyber exercises in a partnership with several federal agencies, health care providers, and technology companies, water utility service providers, state, and local government officials, as well as state and federal emergency and law enforcement agencies.

"Conducting these exercises highlights the strength of the cybersecurity structure that exists within the state and underscores the work that's been accomplished over the past three years by

Indiana Governor Holcomb's Executive Council on Cybersecurity with our partners in the military, academic, public and private sectors," said Indiana Department of Homeland Security Executive Director Stephen Cox. "Most importantly, it represents the progress with cyber that's been achieved on behalf of all Hoosiers when we approach cybersecurity as something that is not solved by one entity alone, but by everyone at all corners of the state."

Having a playbook is especially crucial, given the fact there are not only a seemingly endless number of situations in which a cyberattack or incident can occur, but there are all kinds of circumstances and variables that can interfere with a cyber team's strategy for protecting its systems.

When Water Runs Out…

A water utility being attacked is not only scary to every city in America, but the reality of it also happening is real.

The Cybersecurity and Infrastructure Security Agency (CISA) has partnered with the State of Indiana and the City of Fort Wayne to exercise how state, federal, mutual aid, and local government would work together in a long-term cyberattack that eliminates the supply of water from the city, with a special emphasis on the secondary effects for the city's hospitals.

As the Cybersecurity Program Director for the State of Indiana, there's no question cybersecurity impacts every aspect of our daily lives. As we've seen with recent cyber incidents – everything from pipelines to water utilities to schools and hospitals – a cyberattack can create substantial effects and damage to our community and our critical infrastructure, disrupting our daily lives and safety.

When Natural Disasters Hit…

Following the completion of the tabletop exercise, a second cyber exercise as part of a full-scale functional exercise hosted by the Indiana National Guard for first responders and several military branches as well as search and rescue teams at the Muscatatuck Urban Training Center.

The grounds of the 1,000-acre facility, located in Southern Indiana, is a real city that includes a built-in physical infrastructure, a well-integrated cyber-physical environment, an electromagnetic effects system and human elements. There are more than 190 brick-and-mortar structures with roughly 1.5 million square feet under roof, 1.8 miles of subterranean tunnels, a cave complex, more than nine miles of roads, managed airspace, a 185-acre reservoir, and a cyber live-fire range.

The focus of the Indiana National Guard exercise centered on measuring how federal, state, local and private sectors respond to a devastating earthquake.

"We really need to prepare now for these acts which we've already seen here in Indiana and across the world," said Ron Pelletier, founder and chief customer officer at Pondurance, a cyber security company. "When natural disasters hit all parts of the world, we are seeing more and

more targeted cyberattacks in those affected areas. Investing now in preventative measures is the best way to avoid situations like that from becoming worse. It comes down to planning to avoid cyber breaches but being prepared to respond."

As emergency and military teams respond to the effects of the earthquake, the Indiana National Guard also tested the additional response of its incident command leadership while the cyber experts from IU Health, Citizens Energy Group, and Pondurance made the efforts more difficult by attacking the water supply in the aftermath.

It's Not "If" But "When"...

Pelletier added that Pondurance hopes disaster drills, such as these two, will raise awareness among policy makers to help fund security programs and protocols. "National, state, and community security is truly at risk here, and we need to take action now to preserve it. Waiting for the dam to burst before you repair it is a terrible maintenance strategy, and that's exactly the situation we have here across power grids, water supplies, healthcare, you name it."

Having the ability to draw on the resources and expertise required at a moment's notice to keep people safe in the event of a cyber incident or attack relies on making certain that the state and its partners have a line of communications that's always open to make sure the State of Indiana provides a response that's most effective, regardless of the circumstances.

Many of those who are participated in both state exercises also serve on the Indiana Executive Council on Cybersecurity (IECC). As defined in Executive Order 17-11 from Indiana Governor Eric Holcomb, the IECC is a first-of-its-kind collaboration, whose work as an organization within state government, is responsible for guiding the state's cybersecurity policy, It is comprised of 35 Council members and 250 advisory members, all of whom are subject matter experts represent a wide range of businesses, industries and professions, including education, finance, utilities and insurance, among many others.

The State of Indiana and its partners offer best practices, guides, toolkits, and resources to allow all organizations and critical infrastructures to mitigate, but also prepare for a cyberattack. For more information about the IECC or the State of Indiana's Cyber Strategy, visit www.in.gov/cyber.

For more information about CISA's cybersecurity services and resources, visit www.cisa.gov.

Virtual Workshop

LIVE VIRTUAL WORKSHOP

Indiana Water and Wastewater Utility Cyber Workshop

Following a mock disaster drill that included a water utility cyberattack in the midst of a mock earthquake, the state of Indiana with its partner organizations are offering a live virtual workshop on Tuesday, Oct. 5, at 3 p.m. ET for Hoosier, Indiana, water and wastewater utilities. Attendees will learn:

- How a cyberattack could occur in your utility today.
- How to prevent and prepare for common cyberattacks.
- Cyber hygiene best practices for water and wastewater utilities.
- A case study of the Oldsmar, Florida cyberattack.
- How to best respond to cyberattack with public and private organizations.

CEU: 1.5

Cost: Free

NOTE: This webcast has reached the registration capacity and is no longer accepting registrants. If you have previously registered for this webcast you may login using your email address.

romeroclm@iot.in.gov

Presented With:

Indiana University Health

citizens energy group