

The standards and best practices contained in this document are required elements for new projects seeking State funding under the New Jersey Environmental Infrastructure Finance Program (NJEIFP). Further information on the NJEIFP can be found at the following link(s): <https://www.njeit.org/> and <http://www.nj.gov/dep/dwq/mface.htm>

Emergency Response Preparedness/Planning Guidance and Best Practices

DRINKING WATER SYSTEMS

An Emergency Response Plan (ERP) is a document that describes the actions a water system will take in the event of an emergency in order to protect public health by maintaining a water supply sufficient for potable use and fire-fighting. The ERP is required pursuant to the Water Allocation rules (N.J.A.C. 7:19-11.2) and the Rules and Regulations Governing the Licensing of Water Supply and Wastewater Treatment System Operators (N.J.A.C. 7:10A-1.12).

For the purposes of an ERP, an emergency is a natural or man-made event that results in a major disruption of the system's ability to function. An emergency is not an event that results from normal operational disorders such as a minor water main break.

Emergency events that should be addressed by an ERP include, but are not limited to:

- Floods, earthquakes and other natural disasters
- Power outages
- Pollutant releases
- Failure of the distribution system prime water supply source and/or treatment facilities
- Job actions (strikes, walk-outs)
- Chemical shortages and/or accidents
- Sabotage, terrorismⁱ and explosions, and
- Cybersecurity incidents.

According to N.J.A.C. 7:19-11.2, larger water suppliers (i.e. serving more than 3,000 residents) were required to develop and submit (and periodically update thereafter) an ERP. Once completed, an ERP should be considered a working document that is routinely reviewed and revised. While many systems already comply with the requirement to develop and update an ERP, NJDEP has developed a detailed ERP template (See <https://www.state.nj.us/dep/watersupply/doc/erp-template.docx>) in an effort to ensure that PCWSs comply with the requirement to regularly update and revise its ERP. This template includes the minimum contents for an ERP that complies with the Water Allocation rules noted above.

In 2018, America's Water Infrastructure of 2018 (AWIA) was passed, and contained requirements for certain public water systems to conduct Risk and Resiliency Assessments (RA) and update ERPs every five years. NJDEP regulations require a "vulnerability assessment", however, if a RA has satisfied the AWIA requirements, then this would be an acceptable substitute for the Department. AWIA also included requirements in ERPs to specifically address both physical and cyber security, malevolent acts and natural hazards, and corresponding actions to mitigate these risks. The Department has revised its ERP template to reflect these new

components, therefore allowing systems to continue using it. Systems are also encouraged to incorporate additional sections from the EPA ERP template to enhance their own ERP where feasible.

The ERP template addresses the following eight (8) sections:

1. *Emergency Response Personnel/Communications* - establishes team members, organizational structure, Incident Command System roles and responsibilities, internal and external contact information and procedures, and safety procedures.
2. *System Description* – overview of system, property protection measures, describes primary components, available interconnections and alternate sources and lists bulk water haulers or bottle water sources.
3. *Water System Contingencies & Prioritization* – a summary of water usage and system priorities ; and a description of phased water restrictions and related ordinances.
4. *Resource Inventory* – quick reference of available resources, including auxiliary power, spare parts, components, chemicals, and a list of contractors for repair and supplies. Also, an inventory of manuals, technical guidance, reports, water use advisory templates and public notices.
5. *Emergency Situations* – describes protocols for performing a vulnerability assessment (see N.J.A.C. 7:19-11.2(a)1i(7)); emergency sampling plan; emergency action plans and includes a preliminary damage assessment report. (Please refer below for an example emergency action plan).
6. *Mitigation Actions* – describes mitigation procedures or projects implemented at your utility, such as raising facilities and controls or constructing berms to protect against flood damage. *New requirement under AWIA*
7. *Detection Strategies* – describes detection strategies and methods utilities use to aid in the detection of malevolent acts or natural hazards. *New requirement under AWIA*.
8. *Emergency Response Evaluation* – a description of the evaluation process that should follow any emergency. The timeliness and effectiveness of the Emergency Response Plan should be thoroughly evaluated.

The Department recognizes that an ERP is a highly sensitive document that must be maintained confidential. Accordingly, it must be stored in a secure on-site location. It may also be necessary to maintain a copy of your ERP in a secured location off premises in the event that a normal workstation cannot be reached. If the Department requests a copy of your ERP, be sure to submit it using instructions provided at the time of the request.

DO NOT EMAIL PDFs OF ERPs TO THE DEPARTMENT.

In addition to the template available at <http://www.nj.gov/dep/watersupply/doc/erp-template.docx>, the following tools, which are compliant with the Joint ASME-ITI/AWWA J-100-1- Risk Analysis standards, may prove useful when conducting the RA under AWIA, or vulnerability assessment referred to in Section 7 of the template and required at N.J.A.C. 7:19-11.2(a)12. Note that neither AWIA or the NJDEP's requirements require a specific tool be used to complete a risk assessment, though their use is recommended if a system chooses to not engage a 3rd party to complete the assessment:

- EPA’s Vulnerability Self-Assessment Tool VSAT designed to assist with the performance of security threats and natural hazards risk assessments; more information is available at <http://water.epa.gov/infrastructure/watersecurity/techttools/vsat.cfm>
- EPA’s Water Health and Economic Analysis Tool (WHEAT) which is “designed to assist drinking water utility owners and operators in quantifying public health impacts, utility financial costs and regional economic impacts of an adverse event.”
<https://www.epa.gov/waterriskassessment/find-out-about-health-and-economic-impacts-water-utility-emergencies>
- [AEM](#) Corporation’s Program to Assist Risk and Resilience Examination (PARRE) assessment tool. This is an interactive tool that helps owners and operators to perform a probability-based risk/resilience assessment for critical assets. This tool is available for sale from AEM at <https://www.aemcorp.com/riskassessments/parre-software-tool>

The above-referenced documents should be utilized during the preparation of your ERP.

DISCLAIMER: THIS GUIDE IS INTENDED TO PROVIDE INFORMATION ABOUT HAZARD MITIGATION AND RESOURCES THAT MAY APPLY TO YOUR SITUATION. IT IS NOT INTENDED TO BE ALL-INCLUSIVE OR REPLACE OR IMPOSE NEW REQUIREMENTS BEYOND THOSE ESTABLISHED UNDER EXISTING STATUTES AND REGULATIONS, APPLICABLE BUILDING CODES AND STANDARDS, OR FUNDING CONDITIONS ASSOCIATED WITH FEDERAL AND/OR STATE DISASTER RELIEF AND MITIGATION ASSISTANCE. ALSO, IT WILL NOT BE USED BY THE NJDEP AS A SUBSTITUTE FOR AN EXISTING STATE OR FEDERAL LAW OR RULE FOR ENFORCEMENT PURPOSES.

EXAMPLE EMERGENCY RESPONSE ACTION PLAN

Example: Emergency Situation Analysis and Response

Emergency: distribution system failure – major transmission main break due to intentional action (i.e., explosive device)

Recovery Time Assessment: 1 day

Response (*Note: Some actions may be conducted simultaneously by different individuals*):

- locate break and isolate area (through valves)
- notify police, fire, NJDEP, etc.
- establish crime scene perimeter
- notify affected customers; issue appropriate notices (timeframe for loss of service, boil water notice, etc.)

- contact equipment operators
 - assemble necessary equipment and replacement parts
 - provide traffic control and other actions as dictated by the police department
 - repair damaged transmission main
 - check line for leaks
 - disinfect and flush line
 - sample/analyze
 - notify customers of problem resolution
 - restore water service
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