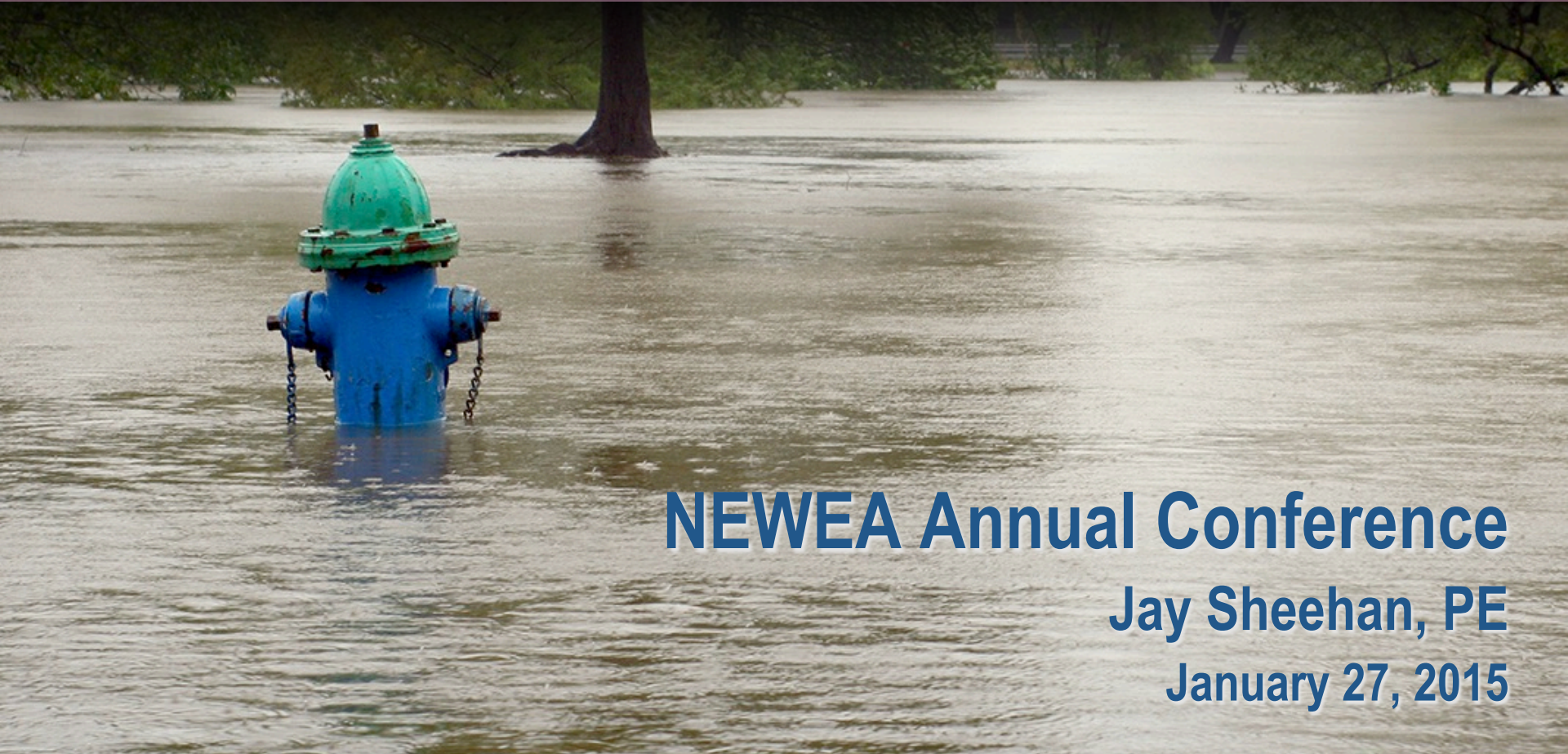


An Ounce of Prevention

Accessing Funding for
Hazard Mitigation Work



NEWEA Annual Conference

Jay Sheehan, PE

January 27, 2015



Recent Weather Events Across the US

New Jersey November 2012

“Hurricane Sandy damaged more than 100 facilities supplying drinking water to residents and sewage treatment plants, leaving New Jersey with an unexpected \$2.6 billion bill to repair, rebuild, and make the systems more resilient. The costs incurred by the super storm occurred during a period of massive underinvestment in the state’s infrastructure ...”



Jewett City, Connecticut

April 2010

**Waters rose 3ft in 1 ½
hours. Town employees,
firefighters, and the
National Guard erected
sandbag levee just in
time...waters came within
1 hour of inundating
buildings**



In 2007, York County, Maine dealt with severe floods for the second time in as many years, when the Patriots Day storm, considered the worst storm since the 1998 Ice Storm, claimed three lives and caused an estimated \$45 million in damage. The storm also damaged sewer systems. Damage to the Kennebunk Sewer District was very significant.

(Source: Maine.gov)

Impacts to Wastewater Utilities



Photo: Grand Rapids, MI Wastewater Treatment Facility (April 2013)



Impacts to Wastewater Utilities

- “Over the next 20 years, water infrastructure needs across the United States total more than \$630 billion simply to maintain current levels of service.
- Drinking water and wastewater utilities will need an additional \$448 to \$944 billion to prepare for climate change-related impacts through 2050.”

- *Natural Resources Defense Council*



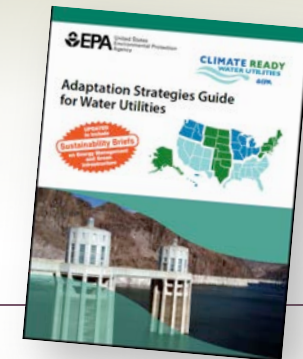
Impacts to Wastewater Utilities



- Less winter precipitation falling as snow and more as rain.
- Reduced snowpack, earlier breakup of winter ice on lakes and rivers, and earlier spring snowmelt resulting in earlier peak river flows.
- Short-term droughts (e.g. those lasting from 1 to 3 months) are projected to occur as frequently as once each summer.



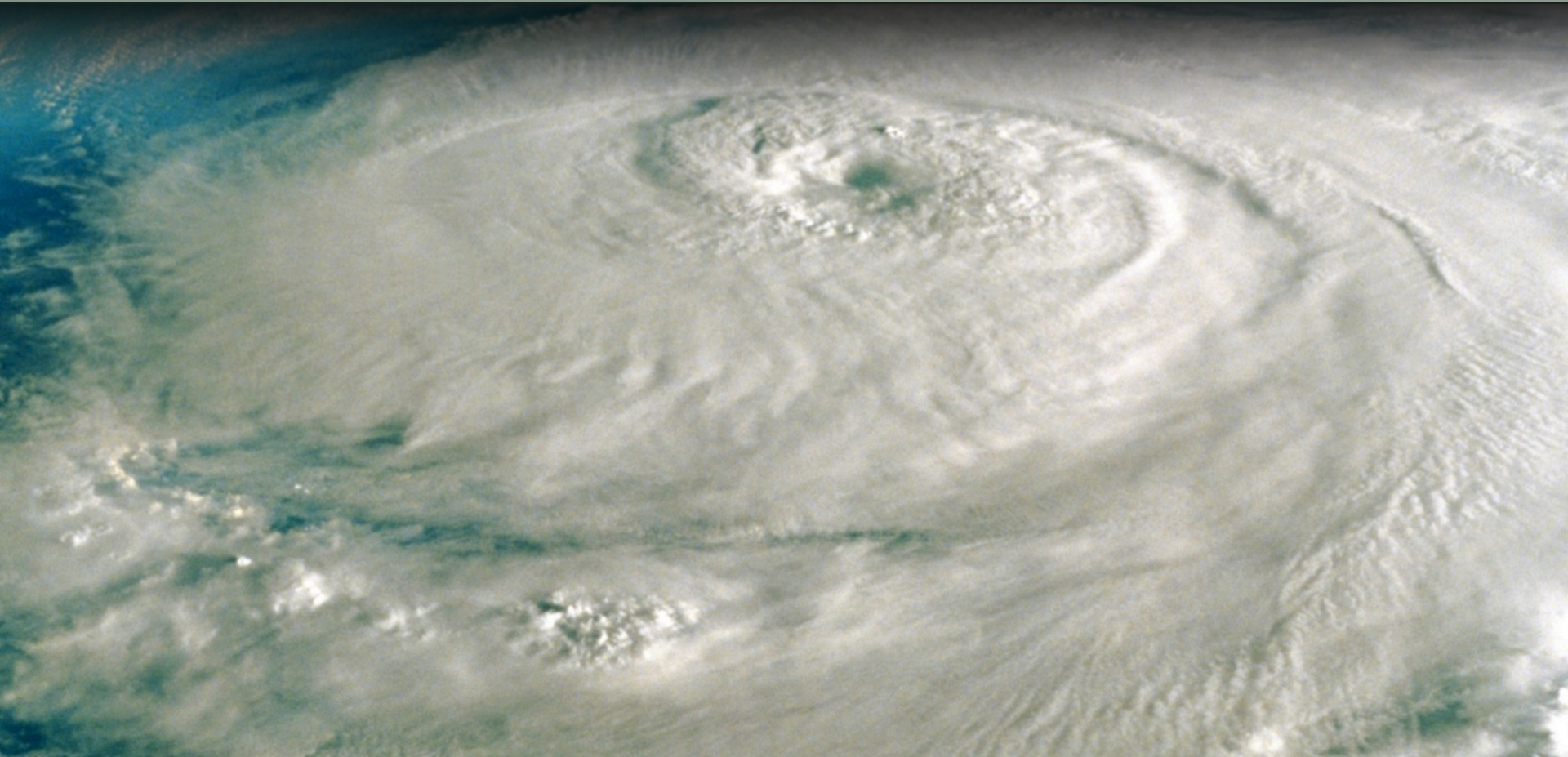
Adaptation Options for Wastewater Utilities



- Three main categories of adaptation options:
 - **Planning strategies** - use of models, research, training, supply and demand planning, natural resource management, land use planning, and collaboration at watershed and community scales;
 - **Operational strategies** - efficiency improvements, monitoring, inspections, conservation, demand management, and flexible operations
 - **Capital / infrastructure strategies** - construction, water resource diversification, repairs and retrofits, upgrades, phased construction, and new technology adoption



Hazard Mitigation Planning

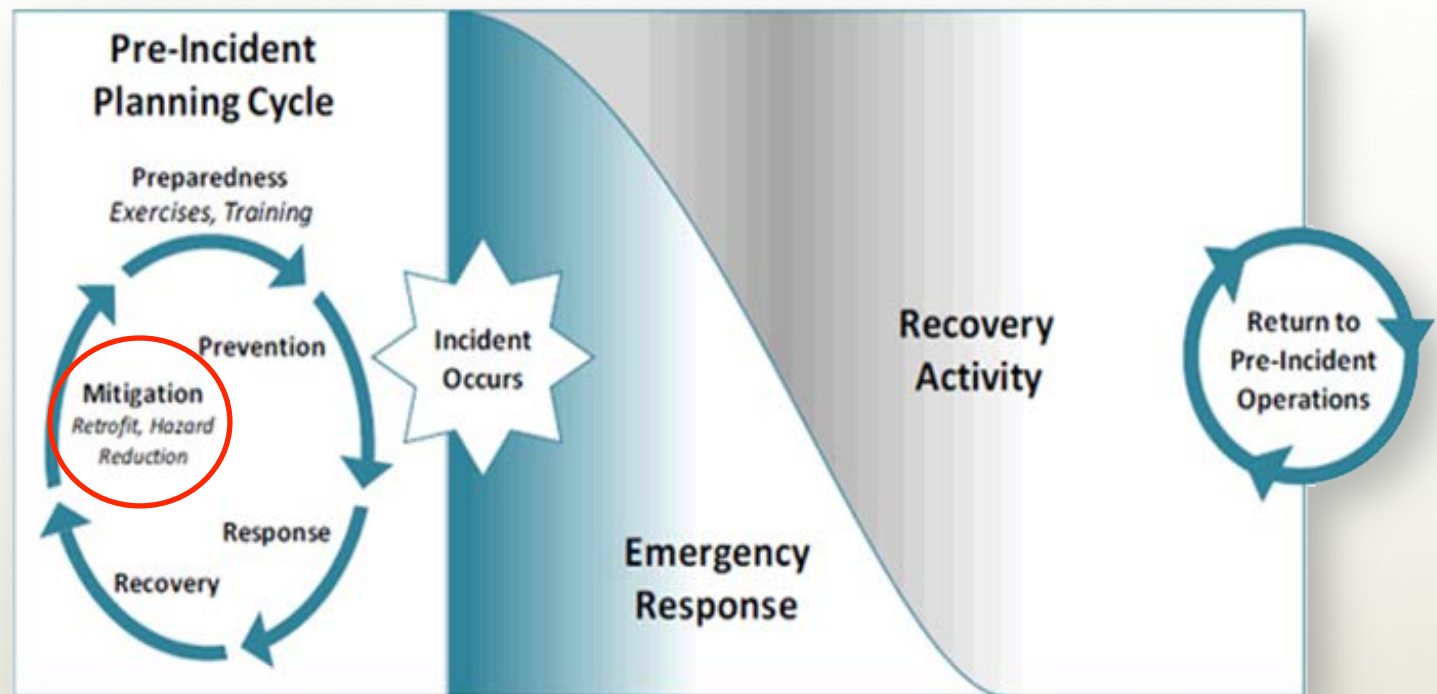




Hazard Mitigation Planning

- What Can Utilities Do?
- Hazard Mitigation Plans
- FEMA Hazard Mitigation Program Eligibility
- FEMA Programs
- Projects for Wastewater Utilities
- Fed FUNDS
- Other Funding Sources

Emergency/Incident Planning, Response and Recovery



Graphic: US Environmental Protection Agency

What Can Utilities Do?

- **Participate in developing a community or regional mitigation plan**
 - Utility input into such plans is often a prerequisite for obtaining hazard mitigation funds for utility projects.
- **Communicate with local government officials and State Hazard Mitigation officer**
 - Ensure that critical utility infrastructure, equipment, and facilities are included in their community's hazard mitigation plan
- **Implement Mitigation Measures**
 - Reduce or eliminate the loss of life, property, essential services, critical facilities (e.g., utilities)
 - Minimize the time and costs of recovery

Hazard Mitigation Plans

- Hazard mitigation plans document essential services and critical facilities, describe potential hazards, and identify projects that may mitigate the damage to these services and facilities



FEMA Hazard Mitigation Program Eligibility

FEMA Hazard Mitigation Assistance Program Eligibility for Water and Wastewater Utilities			
FEMA Program	Eligibility for FEMA Program		
	Publicly Owned ¹	Private Not for Profit (PNP)	Private for Profit (PFP)
Pre-Disaster Mitigation Program (PDM)	YES	No, but Local Government can apply on utility's behalf ²	No, but Local Government can apply on utility's behalf ²
Flood Mitigation Assistance Program (FMA)	YES	No, but Local Government can apply on utility's behalf ²	No, but Local Government can apply on utility's behalf ²
Repetitive Flood Claims Program (RFC)	YES	No, but Local Government can apply on utility's behalf ²	No, but Local Government can apply on utility's behalf ²
Hazard Mitigation Grant Program (HMGP)	YES	YES	No, but Local Government can apply on utility's behalf ²
Public Assistance Grant Program (PAGP)	YES	YES	NO

¹ Publicly owned utilities typically are part of a local government or municipality and any subapplications are submitted as a part of the local government's subapplication packet.

² While not usually an eligible subapplicant for this program, PNP and PFP utilities that are considered critical infrastructure (such as those that are sole service providers for an area) may be able to get their local governments to apply on their behalf. For more information, please contact your [State Hazard Mitigation Officer](#).

Source: U.S. Environmental Protection Agency





FEMA Funding – Applicant/ Subapplicant

- The “applicant” is the state, territory, commonwealth or Indian tribal government
- Applicants must solicit “subapplications,” assist in their preparation and submit them to FEMA for consideration
 - The "subapplicant" is the local government that owns/operates the utility or an eligible PNP utility that submits a subapplication for FEMA assistance to the applicant

FEMA Funding – Applicant/ Subapplicant

- Eligible PFPs would be required to have local government officials apply on their behalf and would not technically be an applicant or subapplicant
 - If funding is awarded, the subapplicant becomes the "subgrantee" and is responsible for managing the subgrant and complying with program requirements.
 - To submit a subapplication, utilities should contact the State Hazard Mitigation office.

Funding Programs for Utilities





FEMA Public Assistance Grant Program

- **Eligible applicants include public drinking water and wastewater utilities**
 - The program **does not** cover for-profit drinking water or wastewater utilities.
- **Eligibility requirements:**
 - Be required as the direct result of a Presidentially declared disaster;
 - Be performed at a facility that had been in active use at the time of the disaster;
 - Occur within the designated disaster area; and
 - Be the legal responsibility of the applicant at the time of the disaster

FEMA Public Assistance Grant Program

- Post-Disaster
- Publicly owned and private not for profit utilities are eligible
- Example:
 - Nashville Metro Water Services – May 2010
 - Experienced severe flooding including loss of one of its two water treatment plants, one of its three wastewater treatment plants, loss of pumping facilities and some water/wastewater infrastructure
 - Submitted more than 230 project worksheets associated with these repairs to FEMA Public Assistance

Difference Between Hazard Mitigation and Public Assistance

FEMA Hazard Mitigation Grant Program (404 Mitigation)	FEMA Public Assistance Program (406 Mitigation)
A separate grant program that is funded by FEMA but is administered by state officials in locations that have been declared part of a Federal Disaster Declaration region.	Is implemented through the FEMA PA Program, is not standalone and is in conjunction with FEMA PA Program restoration and recovery programs.
Can be used throughout the state in most disasters, on <u>damaged</u> and <u>non-damaged</u> facilities for the purpose of hazard mitigation.	Can only be used to fund hazard mitigation on the <u>damaged</u> element of a facility to prevent <u>future damage</u> . The mitigation work must be cost-effective and be reasonably performed as part of the work or measure that will reduce the potential for damage to a facility from a disaster event.



FEMA Pre-Disaster Mitigation Program

- Publicly owned water and wastewater utilities are eligible
- **Nationally** competitive program based on priority for funding in State mitigation plan
- Utilities should contact State Hazard Mitigation officer for information regarding how to apply



FEMA Flood Mitigation Assistance Program

- Pre and Post Disaster
- Publicly owned water and wastewater utilities are eligible
- Implement measures that reduce/eliminate long term risk of flood damage
- State prioritizes and selects project applications based on an allocation that is derived from the total # of NFIP insurance policies and total # of repetitive loss properties within a state



FEMA Repetitive Flood Claims

- Pre and Post Disaster
- Publicly owned water and wastewater utilities are eligible
- Reduce flood damages to insured properties that have had one or more NFIP claims
- FEMA ranks all eligible mitigation project sub-applications on basis of greatest savings to NFIP as demonstrated by the BCA



Categories of Projects for Wastewater Utilities





6 Mitigation Project Categories for Wastewater Utilities

- Preventive Measures
- Property Protection
- Emergency Services Measures
- Structural Projects
- Natural Resource Protection
- Public Information

Preventive Measures & Property Protection

■ Preventive Measures

- Replacing pumps
- Building elevated platforms for electrical service panels
- Raising electrical controls above the base flood elevation

■ Property Protection

- Flood proofing and wind proofing facilities
- Elevation of facilities
- Elevation of electrical systems



Emergency Services Measures & Structural Projects

■ Emergency Services

- Elevation of generators and associated fuel tanks to keep a facility operational during power outages
- Upsizing culverts to better handle flood surges
- Retrofitting pump stations with electrical connections for portable generators

■ Structural Projects

- Flood proofing and wind proofing facilities
- Elevation of facilities
- Elevation of electrical systems



Natural Resource Protection & Public Information Projects

■ Natural Resource Protection

- Bank stabilization projects that protect adjacent infrastructure from damage, such as installation of rip rap and filter fabric
- Vegetation management projects to improve drainage of stormwater
- Wetland restoration to prevent stormwater and sewer backups

■ Public Information

- Install a contamination warning system



Eligible Uses of Selected Federal Disaster Funding for Response, Recovery, and Mitigation Efforts

Program	Emergency Repairs ¹ (M, R)	Planning and Design (M)	Construction / Capitalization (M, R)	Operation and Maintenance (R)	Technical Assistance ² (M, R)	Applicable to Private-for-profit Systems (M, R)
FEMA PA	✓	✓	✓			
FEMA HMGP		✓			✓	✓
EPA DWSRF	✓	✓	✓		✓	
EPA CWSRF	✓	✓	✓			
EDA Economic Assistance Programs		✓	✓			
HUD CDGB	✓		✓		✓	
HUD Section 108 Loan Guarantee			✓		✓	
SBA Disaster Loans	✓		✓	✓		✓
USDA ECWAG	✓	✓	✓	✓	✓	
WRDA 92, Section 219		✓	✓		✓	

¹ M = Activity is related to Mitigation; R = Activity is related to Response/Recovery

² Technical Assistance = May include activities undertaken to help utilities recover from disasters (e.g., providing assistance to assess damages and identify restoration needs).

Water: Fed FUNDS

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Federal Funding for Utilities – Water/Wastewater – in National Disasters (Fed FUNDS)

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- [Wastewater](#)
- [WaterSense](#)
- [What You Can Do](#)

Welcome to EPA's Federal Funding for Utilities – Water/Wastewater – in National Disasters (Fed FUNDS). The purpose of Fed FUNDS is to provide tailored information to water and wastewater utilities about applicable federal disaster funding programs. The Fed FUNDS Web pages address national-level disasters, but could also apply to large-scale and even local disasters that result in service interruptions and significant damage to the critical water/wastewater infrastructure. Utilities can use the five buttons in Fed FUNDS to obtain key information and application forms on federal disaster funding.

Click on a button below to browse the contents of the website.

Use Pre-Disaster	Use During a Disaster	Use Pre- or Post-Disaster
		
		

| [Disclaimer](#) |

If you have any comments on the website, please e-mail your feedback to EPA at WSD-Outreach@epa.gov.



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You are here: [Water](#)»[Water Infrastructure](#)»[Water Security](#)»[Grant & Funding](#)»[Fed FUNDS](#)»Which Funding Is Right for You?

Which Funding Is Right for You?

A tremendous amount of information is available about various federal disaster funding programs. To help you save time and effort in determining which program(s) are most appropriate for your water/wastewater utility, answer the following four questions. This simple screening will produce a printable summary report that will offer useful website links and provide tips for water/wastewater utilities to apply for funding.

Click the appropriate button to answer the question.

1. How would you characterize your water/wastewater utility?

- Public
- Private Non-Profit
- Private For-Profit

2. Are you interested in learning about funding opportunities to repair damage to your utility from a significant incident such as a Presidentially-Declared Disaster?

- Yes
- No

3. Are you interested in funding for mitigation activities that reduce disaster losses and protect life and property from future disaster damages?

- Yes
- No

4. Are you a rural utility serving a town with a population of less than 10,000?

- Yes
- No

[Submit for Summary Report](#)

Which Funding Is Right for You?

[Fed FUNDS Home](#)

You have reached the end of the "Which Funding Is Right for You?" screening process. Your answers to the screening questions are shown below. Based on your responses, the Federal Disaster Funding Summary Report provides suggested disaster funding programs and tips that may be of interest to your utility.

[Revisit Responses](#)[Print](#)

Federal Disaster Funding Summary Report

1. You indicated that you are a public water or wastewater utility.

2. You indicated that you are interested in learning about funding opportunities to repair damage to your utility from a significant incident such as a Presidentially-Declared Disaster.

- Consider the FEMA Public Assistance Grant (PA) Program, which may provide funding for a facility affected by a Presidentially-Declared Disaster.
 - Follow this link to determine if a Presidential Disaster Declaration includes your jurisdiction: <http://www.fema.gov/disasters>
 - For program information tailored for water/wastewater utilities, see the FEMA PA Program topics in Fed FUNDS or go directly to the FEMA PA website and FEMA PA Forms.
 - The applicant (e.g., your local government that represents your interests and/or you) should attend an applicant briefing with FEMA (contact your state to determine the location/timing).
 - The applicant (e.g., your local government that represents your interests and/or you) should complete a Request for Public Assistance Form within 30 days of a Presidential Disaster Declaration to be eligible for FEMA funds.
 - Check out the Lessons Learned from Water/Wastewater Utilities that Participated in FEMA's PA Grant Program (PDF) (2 pp, 398K, About PDF).
- **PRIOR** to a disaster, assemble all documents on the state of your facility and equipment. This includes periodic photos of facilities and equipment, copies of maintenance records, and insurance policies.
- To document the damage, take photos and write a summary of the damage as soon as possible (when it is safe to do so) **AFTER** the disaster but **PRIOR** to performing any cleanup and repairs.
- Document every expense, including those for equipment (repair and replacement), employee overtime, and other emergency expenses used to protect the facility.

Water: Fed FUNDS

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Checklist to Prepare for Funding

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[Checklist to Prepare for Funding](#)
[Know the Basics](#)
[Establish Funding Contacts](#)
[Set Up System to Document Damage/Costs](#)
[Develop Emergency Procurement Policy/Procedures](#)
[Develop Emergency Overtime Policy](#)
[Conduct Training & Exercises](#)
[Maintain Business Operations](#)

It is critical to prepare your utility for the disaster funding application process. Certain pre-disaster activities will help a utility apply for federal disaster funding programs. Utilities can use the following checklist of activities to prepare for disaster funding. You may learn more about each activity either by clicking on the tabs shown above or the links within the checklist below. Click the following link to access a printable copy of the [Checklist to Prepare for Funding \(PDF\)](#)

(1 pg, 32K, About PDF).

Checklist to Prepare for Funding

Activities to Prepare for Funding	Typical Utility Officials Involved
<input type="checkbox"/> Know the basics of disaster funding	Emergency Manager, Operator, Finance/Accounting Department, Senior Management
<input type="checkbox"/> Contact local/state officials with connections to funding	Emergency Manager, Senior Management
<input type="checkbox"/> Set up a system to document damage and costs	Emergency Manager, Operator, Senior Management Finance/Accounting Department
<input type="checkbox"/> Develop emergency procurement policy and procedures	Emergency Manager, Operator, Finance/Accounting Department, Senior Management
<input type="checkbox"/> Develop Emergency Overtime Policy	Emergency Manager, Operator, Finance/Accounting Department, Senior Management
<input type="checkbox"/> Training and exercise on systems and procedures	Emergency Manager, Operator, Field Crews, Mutual Aid Coordinators, Finance/Accounting Department, Senior Management
<input type="checkbox"/> Maintain financial business operations	Senior Management, Emergency Manager, Operator, Finance/Accounting Department, Senior Management

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Other Funding Sources





MA CZM – Coastal Community Resiliency Grant Funding

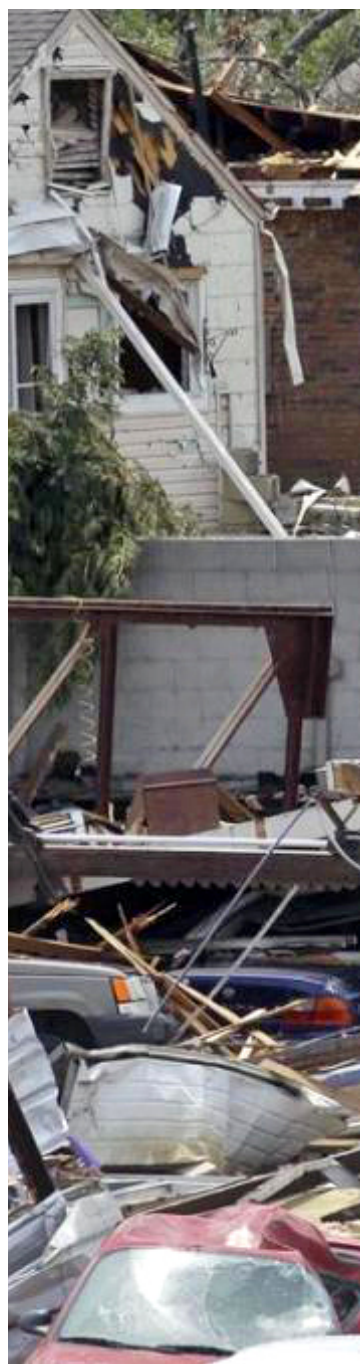
- Goal is to provide financial and technical resources for advancing new and innovative local efforts to increase awareness of climate impacts, identify vulnerabilities, and implement measures to increase community resilience.
- Approximately \$1.5 million available in 2015 grant round to support local efforts to address the effects of coastal storms, flooding, erosion, and sea level rise. Some projects include:
 - **Mattapoisett (\$47,791)** - Protecting Mattapoisett's Potable Water and Sewer Infrastructure in the Face of Climate Change: Assessing Risk and Identifying Solutions
 - **Provincetown (\$155,125)** - Increasing Coastal Resiliency and Reducing Infrastructure Vulnerability by Mapping Inundation Pathways
 - **Wareham (\$93,750)** - Wastewater Infrastructure Vulnerability Assessment and Emergency Response Plan Related to Coastal Flooding and Climate Change





New Hampshire Emergency Management Performance Grant

- The New Hampshire EMPG Program focuses on Planning, Organization/Administrative, Equipment, Training, Exercises, Mitigation and Maintenance/Sustainment to enhance and sustain all-hazards emergency management capabilities
- Would consider funding a generator at a municipal wastewater treatment plant
- 50% federal / 50% local match (cash or in-kind)
- Current performance period 10/1/14 to 9/30/15 (work has to be completed by this date)



CT HMGP – Large Utility

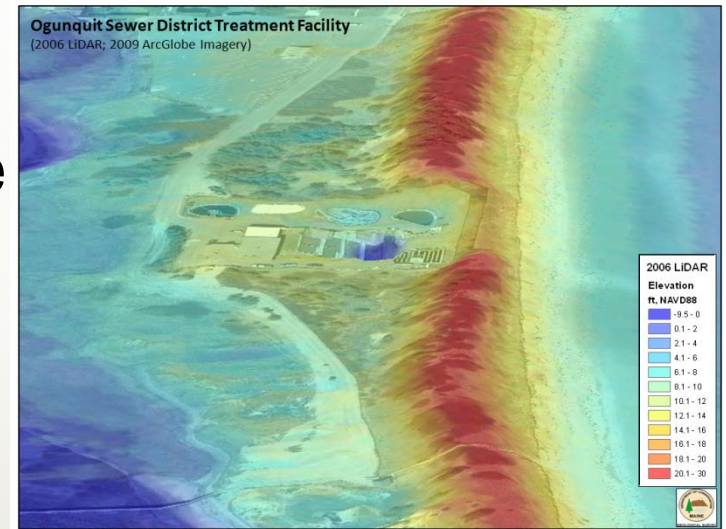
- Large utility filed for pump station mitigation projects (over \$6M) in two communities
 - Upgrade to new flood-proof door, provide new concrete steps.
 - Provide new generator on elevated platform with aluminum stairs/ access; remove and seal louvers; demolish existing underground storage tank and upgrade to above-grade tank that is above 500-year flood elevation.
 - Relocate sump pump disconnects to first floor.
 - Upgrade sanitary pumps.
 - Provide new electrical junction boxes and relocate control panels above flood grade
- Application being considered in final round for funding



Ogunquit, ME

Sewage Treatment Plant

- Adaptation options to protect Ogunquit Sewage Treatment Plant/pump stations from sea level rise and storm surge
 - Funded by: Gulf of Maine Ocean Council and Northeast Regional Ocean Council Grant Program
 - In coordination with Southern Maine Regional Planning Agency



Thank You!



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