A Regulatory Primer: Emergency Response Plans Revisited

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After Incident Focus: Lessons Learned

Emergency Management	**Pre-planning/ Preparedness**	**Asset Inventory**	**All-Hazard Assessments**
Prevention Measures	**Forecasts/ Trends**	**Disaster Impact**	**Emergency Response**
Recovery/ Restoration	**Infrastructure Prioritization**	**Mitigation/ Hardening**	**Resiliency Funding**

Post Sandy Action Items

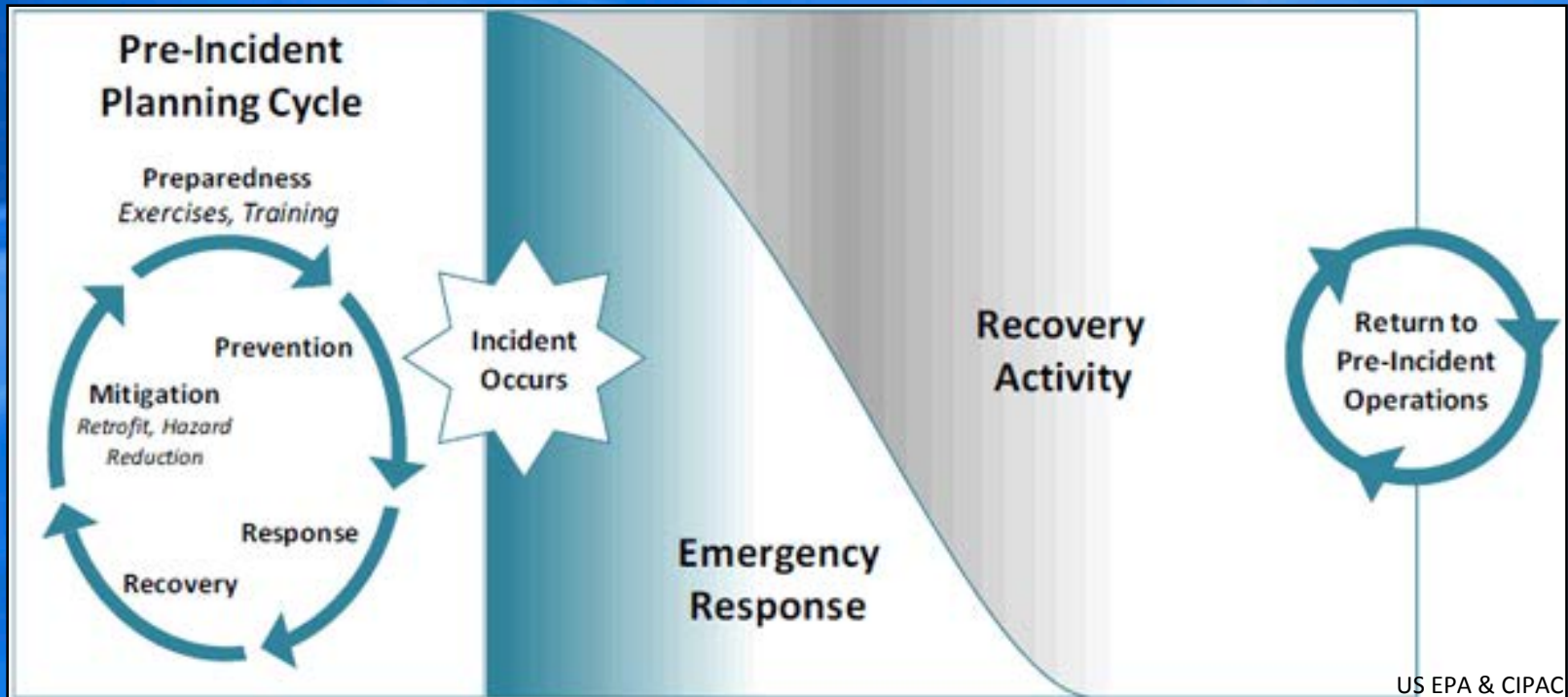Priority to fortify all critical life support systems
- Water/Wastewater Infrastructure

Integrated approach to address:
- Recovery
- Resiliency
- Protection
- Maintenance

Goal: Sustainability with proper and continuous system operation no matter what

Emergency/Incident Overview

Pre-Incident Planning Cycle

Preparedness
Exercises, Training

Prevention

Mitigation
Retrofit, Hazard Reduction

Response

Recovery

Incident Occurs

Emergency Response

Recovery Activity

Return to Pre-Incident Operations

US EPA & CIPAC

Emergency Response Planning is designed to ensure effective, continuous operation of the water or wastewater system under emergency conditions.

NJ Reg Requirements for ERPs

N.J.A.C. 7:14A-6.12   Operation, Maintenance, & Emergency Conditions

N.J.A.C. 7:10A-1.12   Duties, Records, & Reports (Licensed Operators)

N.J.A.C. 7:19-11.2   Water Purveyor Emergency Response Plans & Teams

N.J.A.C. 7:10A-1.12

Each Licensed Operator shall ensure that:

- All employees are acquainted with their particular responsibilities and obligations
  - Including protocols to be followed for a system emergency or an intervening factor which mandates deviation from routine O&M procedures
- Health and safety measures are followed to protect human health, safety, welfare, and the environment

Wastewater ERP Components

Operations & Maintenance (O&M) Manual

- Detailed description of each major treatment unit/process with relationship to related units
  - Safe operating procedure for normal operation,
  - Common operating problems,
  - Safe operating procedures during emergency conditions, and
  - Any fail-safe features

Wastewater ERP Components

- Vulnerability Analysis for each kind of potential emergency

- Evaluation of possible adverse effects on public health and the environment from that emergency

- Emergency Operations Plan that addresses each of the emergency situations described in the Vulnerability Analysis

Vulnerability Analysis

Estimate the degree of adverse impact by each type of emergency situation which could reasonably be expected to occur (including but not limited to the following):

- Natural disaster
- Civil disorder
- Strike
- Sabotage
- Faulty maintenance
- Negligent operation
- Accident

Vulnerability Analysis

Estimate of the effects of each emergency situation upon the following:

1. Power supply
2. Communication
3. Equipment
4. Supplies
5. Personnel
6. Security
7. Emergency procedures to be followed

Wastewater ERP Components

Operations & Maintenance (O&M) Manual

- Emergency Operations Plan which addresses:
  - Facility and system security
  - List of names and telephone numbers of facility personnel to be contacted in the event of an emergency
  - Each of the emergency situations described in the Vulnerability Analysis
  - Staff guidance for emergency situations

Wastewater ERP Components

Emergency Operations Plan:

- Ensure uninterrupted wastewater system operation to the maximum extent possible

- Manual of procedures for plan implementation

- Notification procedures of any appropriate regulatory agency, affected water supply purveyors, and any other municipal authority or agency

Wastewater ERP Guidance

ERP Development & Submission:

- NJPDES Subchapter 6: Conditions Applicable to All NJPDES Permits

  - O&M Manual/Emergency Operation Plan is required

- The Department shall not individually review and approve an emergency plan as part of the permit issuance process

  - NOTE: The Department is changing this condition.

Wastewater ERP Guidance

ERP Review, Revision, Update:

- Whenever there is a modification, including expansion, of the treatment works

- Any other conditions related to the plan have changed

Drinking Water ERP Components

1. Organization structure including names of emergency response team members and telephone numbers;

2. Emergency notification and communication procedures;

3. Interconnections and backup supplies to be utilized;

4. Interim water restrictions, conservation measures and alternate sources of water;

Drinking Water ERP Components

5. Coordination procedures for emergency response with other agencies;

6. Resources inventory;

7. Vulnerability assessment; and

8. Any other information the Department deems necessary to respond to unforeseen water emergencies and long-term relatively predictable water emergencies.

Drinking Water ERP Guidance

ERP Development & Submission:

• Water purveyors serving more than 3,000 residents and other purveyors when requested by the Dept

Water purveyor emergency response teams shall be comprised of managerial, technical, operations, and public information personnel to implement the ERP.

Drinking Water ERP Guidance

ERP Review, Revision, Update:

- Whenever there is a significant change to plan procedures

- In all cases, at least every 2 years

- Any change in ER personnel or their contact info shall be reported within 2 weeks after such change

- Effectiveness of the ERP shall be periodically evaluated and incorporate the results of such evaluations in the plan revisions and updates

Identify, Assess, & Characterize Hazards

Preparedness

Post-Event Response

Remediation, Protective Measures, & Mitigation

Crisis Management & Event Response

AN ALL-HAZARDS EMERGENCY MANAGEMENT CYCLE

Contingency Planning & Continuity of Operations Planning

Situational Awareness & Assessment

Paula D. Gordon, Ph.D,
http://GordonHomeland.com 4/20/2012
Modeled on an Adaptation of Todd Stewart's Counter Terrorism Strategic Model

ERP Development Tools/ Resources

US EPA Water Emergency / Incident Planning

http://water.epa.gov/infrastructure/watersecurity/emerplan/index.cfm

- Emergency Response Plan Guidance for Wastewater Systems (WERF)

- All-Hazard Consequence Management Planning for the Water Sector (CIPAC)

- Wastewater Response Protocol Toolbox: Planning for and Responding to Wastewater Contamination Threats and Incidents (US EPA)

ERP Development Tools/ Resources

- Vulnerability Self Assessment Tool (US EPA)

- Protecting Wastewater Infrastructure Assets: Asset Based Vulnerability Checklist for Wastewater Utilities (NACWA)

- Emergency Response and Preparedness: BMPs for Water and Wastewater Systems (FlaWARN)

Thank You