DEP discussions with Clean Water Council-NJ on asset management 2008

2000-2010 National promotion of water infrastructure asset management And CWC Recommendations

2012 Superstorm Sandy

2013 DEP Asset Management and other resiliency guidance

2014 SRF WRRDA requirements: fiscal sustainability plan (asset management)

2020 Where do we want to be?
• Long term investment strategies, asset management plans in place and being implemented

* Evolution of Asset Management
* Ensure owners/operators of water systems proactively maintain the mechanical and technical components of their system in a cost-effective manner

* Assist owners and operators by clearly defining metrics for asset management

* Provide technical assistance to owners/operators to aid in the development of each system’s AM Plan

* Goals
* Asset Management Guidance and Best Practices document
* Assessment Guide for review of AM Plans (CSO permittees)
* DEP review of community drinking water systems’ AM plans/ Capacity Development Program
* AM planning set-aside (EIFP)
* NJEIFP requirements for AM Plan certification
* Education in public forums
* Cross-program collaboration (WRM, C&E, EIFP)
* Industry workgroup (AWWA-NJ, NJWEA, AEA-NJ, NJWA)

* Current Support
Covers five components of asset management:

1. Asset Inventory/ Mapping & Condition Assessment;
2. Level of Service;
3. Identification of Critical Assets;
4. Life-Cycle Costing of Assets; and
5. Long-Term Funding Strategy

Consistent with existing guidance

* Gives details & examples of how to perform each step
* Being reviewed by our Industry workgroup

* Draft Technical Guidance
* Locate & identify assets
* Determine condition
  * Remaining life (service history, operator knowledge, manufacturer recommendations)
  * Value
  * Energy use
* Create an inventory (database)
* Digitize location data (GIS mapping)

* Asset Inventory/ Mapping & Condition Assessment
* Level of Service goals:
  * Inform prioritization of investment
  * System-related:
    * Maintenance scheduling
    * Worker safety
    * Reduction in unaccounted for water losses or line breaks
  * Customer-facing:
    * Rates
    * Response time
    * Consistency in service (water pressure)
* **EPA defined criticality:**
  * Probability of failure
    * age
    * vulnerability
    * operator experience
    * service history
    * deficient capacity
  * Consequence of failure (impacts/costs)
    * social (reduced level of service, traffic disruption)
    * environmental (contamination, odors, threat to wildlife)
    * economic (lost revenue, unbudgeted maintenance costs)
* Ranking (risk analysis)

* **Identify Critical Assets**
* Maintenance and repair schedule
* Associated Capital Improvement Plan (CIP)
* Prioritization:
  * High criticality (probability and consequence of failure)
  * Level of service goals
    * Improving efficiencies
    * Reducing costs
    * Improving customer service
    * Reducing line breaks

* Life-Cycle Costing
* How it is going to get done

* Source of revenue (internal/external):
  * Grants/loans
  * Utility rates

* Should be adequate to cover:
  * O&M
  * Routine repair/replacement
  * Debt service
  * Capital improvements
  * Emergencies

* Long-Term Funding Strategy
* **Purpose:** Assess status of asset management planning amongst State water utilities

* Designed with assistance from Industry workgroup

* **What was asked:**
  * Assets inventoried? Mapped?
  * Condition assessment of more than 50%?
  * Criticality assessment?
  * Long-term funding strategy?
  * Intent to complete

* [Baseline Survey](https://njeit.wufoo.com/forms/p1tgnh6y0g05thr/)
* Response Rate
* Status:
  * Inventory
  * Condition Assessments
  * Criticality Assessments
  * Funding Strategy
  * Intent to Complete

* Results
181 Wastewater Systems

- Large: 62%
- Medium: 20%
- Small: 18%

362 Drinking Water Systems

- Large: 53%
- Medium: 21%
- Small: 26%

* Who we heard from
Wastewater Systems (181)
* 83% have done some inventorying
* 76% have inventoried >50% assets

Drinking Water Systems (362)
* 69% have done some inventorying
* 87% have inventoried >50% assets

- $1,000 or greater: 16%
- $5,000 or greater: 24%
- $10,000 or greater: 2%
- Critical/Vulnerable: 31%
- All Assets: 21%

- $500 or greater: 6%
- $1,000 or greater: 16%
- $5,000 or greater: 16%
- Critical/Vulnerable: 28%
- All Assets: 15%

- $500 or greater: 1%
- $1,000 or greater: 38%
- $10,000 or greater: 2%
- Critical/Vulnerable: 21%
- All Assets: 15%
Wastewater Systems (118)
* 67% have mapped >50% assets
  * Collection systems: 84%
  * Treatment systems: 60%

Drinking Water Systems (362)
* 76% have mapped >50% assets
  * Treatment systems: 73%
  * Distribution systems: 78%
Wastewater Systems (153)

* 46% have done criticality assessment, 54% have not

Drinking Water Systems (251)

* 53% have done criticality assessment, 47% have not

* Criticality Assessments
Wastewater Systems (157)
* 60% have done condition assessment of more than 50% of assets inventoried

29 SMALL SYSTEMS
- Yes: 69%
- No: 31%

28 MEDIUM SYSTEMS
- Yes: 57%
- No: 43%

100 LARGE SYSTEMS
- Yes: 70%
- No: 30%

Drinking Water Systems (251)
* 71% have done condition assessment of more than 50% of assets inventoried

54 SMALL SYSTEMS
- Yes: 67%
- No: 33%

47 MEDIUM SYSTEMS
- Yes: 79%
- No: 21%

150 LARGE SYSTEMS
- Yes: 70%
- No: 30%
Wastewater Systems (181)

* 72% intend to complete some aspect of asset management

* Of 110 systems, over 80% systems intend to have some aspect of AMP done in next three years

* Already completed or in progress:
  * 70%: inventory
  * 50%: mapping
  * 54%: condition assessment
  * 48%: criticality assessment

Drinking Water Systems (362)

* 78% intend to complete some aspect of asset management

* Of 211 systems, over 90% systems intend to have some aspect of AMP done in next three years

* Already completed or in progress:
  * 62%: inventory
  * 62%: mapping
  * 52%: condition assessment
  * 53%: criticality assessment

* Intent to Complete
Intent to Complete (for Drinking Water Systems)

- Inventory: 0%
- Mapping: 10%
- Condition: 20%
- Criticality: 30%

- Completed: 60%
- In Progress: 30%
- 6-12 months: 10%
- 1-3 years: 20%
- 4-6 years: 30%
- 7+ years: 40%
* 69% all wastewater respondents have a long-term funding strategy
  * 81% large systems
  * 62% medium systems
  * 34% small systems

* 70% all wastewater respondents have a long-term funding strategy
  * 77% large systems
  * 69% medium systems
  * 55% small systems

(Funding for: O&M, rehabilitation, repair and replacement of prioritized system components, inventory and mapping, condition assessment, etc.)
* Determine requirements and reasonable implementation schedule
* Launch website to provide resources and links, update frequently
  * Including templates, AM checklist
* Enhance financial incentives under EIFP for AM planning and implementation
* Database for retaining information on system’s status

*What’s next for NJ*