Massachusetts Water Resources Authority

Sanitary Sewer Overflows
Response to EPA Rule Making

October 15, 2010

- SUMMARY OF EPA RULE MAKING
- SUMMARY OF MWRA, ADVISORY BOARD & OUTSIDE AGENCY RESPONSES

MWRA Collection System

- Over 240 Mile of Interceptors
- Over 4,000 Manholes
- 11 Pump Stations
- 5 CSO Facilities
- 5 Headworks Facilities
- 43 Wholesale Customers

43 Community Collection Systems

- Over 5,000 Miles of Sewers
- 370 Pump Stations
- Over 100,000 Manholes
- Over 400,000 Private Service Laterals
- Over 2 million retail sewer customers
- Over 1,800 Connections to MWRA Interceptors

Sanitary Sewer Overflows and Peak Flows Listening Sessions

US Environmental Protection Agency

Office of Water

Issues with NPDES Permits

- No requirements to notify public of SSOs
- Municipal satellites generally not covered
- Regulations are unclear about reporting and record keeping requirements for certain types of SSO's
- Permits contain general requirement to 'properly operate and maintain all facilities', but does not identify specific permittee actions
- NPDES regulations do not provide framework for enforcement discretion or defense for 'unavoidable' SSOs by the regulated entity
- Noncompliance with secondary treatment limits in permits for treatment facilities in collection systems

SSO Rulemaking - Background

- Developed proposed rule in 2001; would
  - Require capacity, management, and O&M (CMOM) program for sanitary sewers
  - Clarify reporting and recordkeeping requirements; require public notification
  - Clarify SSO permit requirements to municipal satellite collection systems
  - Allowed the permittee to establish defenses under limited conditions
- Developed through FACA Process
- Signed by Administrator, but withdrawn prior to publication

Massachusetts Water Resources Authority

MWRA's Role in Community Collection Systems

DEP vs MWRA Vision on Regional O&M

Wastewater Advisory Committee

September 6, 2002

MWRA's Vision on Regional O&M

- MWRA has full legal/fiscal responsibility for O&M in MWRA-owned system
- Communities have full legal/fiscal responsibility for O&M in locally-owned systems
- MWRA to provide technical & financial assistance to local communities

MWRA's Vision on Regional O&M

- MWRA to provide summary flow metering of each community and flow-based wholesale sewer charges
- MWRA, Communities, DEP & EPA to work cooperatively
- MWRA to regulate discharge of wastewater and pollutants to MWRA-owned system
- DEP & EPA to regulate communities' O&M and addition of new connections

MWRA's Enabling Act Section 26 (d) clearly delineates local responsibility for O&M of municipal-owned systems

- Section 26 (d):
  - Municipalities or local government bodies shall have charge and control of the respective water, waterworks, and sewer works owned and used by the municipality or local government….
  - Said governmental body shall manage and improve municipal water works and sewer works, extend pipes and other works as they may deem expedient, and keep the pipes, fixtures, and other works under their charge in good condition and repair…..

MWRA's Response

- Current MWRA programs are sufficient
- MWRA does not want to regulate local issues
- Role change places MWRA on a slippery slope
- Enabling Act clearly delineates local O&M responsibility

Seeking Input on Seven Questions

1. Should EPA clarify its standard permit conditions for SSO reporting, recordkeeping and public notification?

2. Should EPA develop a standard permit condition with requirements for capacity, management, operations, and maintenance programs based on asset management principles?

3. What are the costs and benefits of CMOM programs and asset management of sanitary sewers?

4. Should EPA require permit coverage for municipal satellite collection systems?

Seeking Input on Seven Questions

5. What is the appropriate role of NPDES permits in addressing unauthorized SSOs that are caused by exceptional circumstances?

6. How should EPA address peak flow diversions at POTW treatment plants?

7. How should municipalities balance all of the needs to meet water quality requirements?

1. Should EPA clarify its standard permit conditions for SSO reporting, recordkeeping, and public notification?

- EPA Ideas:
  - Provide notification to parties with a reasonable potential for exposure
  - Maintain an overflow response plan
  - Provide immediate notification of high-risk overflows to permitting and health authorities, and the public
  - Make an annual report of all overflows available to the public

MWRA Response to Question #1

- Reasonable, standard recording and public notification of SSOs is appropriate

- Leave it up to each state to set more detailed recording and reporting requirements

- MWRA does not agree that an SSO reporting system within the Clean Water Act should include backups into buildings, or other SSOs that do not reach a receiving water of the United States

WEF Response to Question #1

- Yes, EPA should ensure that there is nationally consistent, accurate, and timely reporting, recording keeping, and public notification

- However, in order to facilitate accurate reporting and record keeping, EPA must provide a clear definition of SSOs
  - Definition should be limited to discharges covered by CWA, which includes only discharges to the waters of the US.
  - Reporting of basement backups should be limited to reporting associated with evaluation of collection system performance (i.e. CMOM reporting/auditing process)

- Public notice should be handled on a case-by-case basis with clearly defined guidelines in order not to overload public with too many inconsequential notifications.

NACWA Response to Question #1

- Public should be notified of spills that pose a risk to public health
- Most NACWA members are already subject to notification requirements imposed by EPA regulations and guidance under CWA, local ordinances, or state regulations
- Any additional federal requirements on monitoring and reporting should acknowledge programs already in place, and ensure that any new requirements do not interfere with existing efforts or impose duplicative , unnecessary, or unduly costly mandates
- EPA does not have the authority to require reporting, monitoring, or notification of overflows which do not reach waters of the US
- Recognizes that there will be cases in which an overflow which does not reach waters of the US may pose threats to public health or the environment
- In these cases, protocols concerning reporting and/or notification should be developed and controlled by the utilities, local public health authorities, and the state environmental regulators.

2. Should EPA develop a standard permit condition with requirements for CMOM programs based on asset management?

- EPA Ideas:
  - Properly manage, operate, and maintain collection system at all times
  - Provide adequate capacity
  - Take all feasible steps to prevent SSOs
  - Develop capital improvement programs for assets reaching end-of-use
  - Define the level of service provided to customers

MWRA Response to Question #2

- MWRA favors proper management, operations and maintenance programs of collection systems
- Requirements should not include specific standards as all collection systems differ
- Capacity is a separate issue, presently not defined nor is there criteria developed to define it
- Proper asset management should involve good O&M practices, annual/sustainable investments in sewer rehabilitation, and appropriately engineered capacity improvements
- Proper asset management does not include investing in oversized capacity projects aimed at capturing extreme peak flows, the expense of which will limit funding for good O&M practices and annual rehabilitation
- Therefore, it is not appropriate to deal with capacity issues through a standardized NPDES permit requirement, but rather a comprehensive planning and public process guided by a regulatory framework which allows for an informed discussion of its impacts

WEF Response to Question #2

- A general permit condition should cover the principles of a CMOM program.

- Specific details should be addressed in EPA guidance. The EPA guidance should reflect the WEF/NACWA "Core Attributes of Effectively Managed Collection Systems" and WEF's "Guide to Managing Peak Wet Weather Flows in Municipal Wastewater Collection and Treatment Systems"

NACWA Response to Question #2

- Clear requirements for sewer management will assist municipalities in establishing and maintaining sufficient funding to adequately manage and operate their collection systems – currently this does not exist nationally; regulations of SSOs is patchwork of state and regional approaches

- SSOs should be addressed through a nationally consistent technology-based BAT/BCT approach using the MOM concept as the standard for measuring compliance

- Adequate system capacity should be established through development of a site-specific capacity assurance plan, using a metric such as site-specific design storms or overflow recurrence characteristics to develop performance standards that is protective of water quality and public health

3. How should EPA clarify permit coverage for municipal satellite collection systems?

- EPA Ideas:
  - Municipal satellite must have permit; or
  - Permit for regional operator must require regional operator to implement CMOM, reporting, and other provisions in satellite systems
  - Include satellite systems as co-permittees and require all co-permittees to implement CMOM provisions
  - Use a general permit for each State

MWRA Response to Question #3

- POTW should only be responsible, in its NPDES permit, for the parts of the system that it owns and/or operates.

- Locally owned and operated collection systems should not be in a POTW's NPDES permit.

MWRA Advisory's Board's Response to Question #3

- EPA should only expect MWRA and other POTWs to be responsible for parts of the sewer system that it owns and operates

- Local collection systems should not be incorporated into MWRA's NPDES permit

WEF Response to Question #3

- Satellite collection systems must be held accountable for managing, operating and maintaining their collection system to minimize the risk of SSOs for their customers and the POTW receiving flows from the satellite collection system.

- All satellite collection systems should adopt the Core Attributes of Effectively Managed Wastewater Collection Systems as part of their required asset management program. This should be a general permit condition for satellite collection systems.

NACWA Response to Question #3

- Satellite collection systems must be brought into the CWA permit program
- In order to address all capacity and flow issues in situation where there is one or more satellite collection systems, all satellite systems involved must be subject to some type of capacity controls
- Private sewers and collection systems must also be considered as well when determining how to better regulate the flow coming from satellite systems
- Collection system owners/operators should be required to establish MOM and capacity assurance programs
- Permits should be issued directly to collection system owner/operator, but existing regional agreements should be studied to determine other possible approaches
- EPA should provide flexibility to state and regional NPDES permitting authorities to issue joint permits to multiple co-permittees on a regional or system-wide basis

4. What is the appropriate role of NPDES permits in addressing unauthorized SSOs that are caused by exceptional circumstances?

- EPA Ideas:
  - SSO discharges remain prohibited
  - Enforcement defenses analogous to bypass/upset provisions
    - For wet weather SSOs, enforcement discretion if:
      - Severe natural conditions, and
      - No feasible alternatives
      - Does not contain advanced approval language but specific criteria (e.g. design storm) could possible be in permit
  - For other SSOs, affirmative defense if notice; and
  - SSO was an exception, beyond reasonable control; and
  - Took all reasonable steps to stop and mitigate

MWRA Response to Question #4

- MWRA supports the development of a standard permit condition that would provide a framework for evaluating the specific circumstances of overflows.

- MWRA supports an affirmative defense rather than enforcement discretion. Appropriate criterion would be having an approved MOM plan and being in compliance with the MOM plan.

- MWRA believes the existing “zero-discharge” standard is not technologically achievable and is not supported by science. There will always be a storm that can overwhelm as system.

WEF Response to Question #4

- EPA should continue to recognize that exceptional circumstances can cause unavoidable failures of real world systems. NPDES permit systems should reflect such recognition of exception circumstances beyond the control of POTWs or owners of collection systems.

- EPA should develop a regulation for collection system failures, which would support a standard permit condition, to provide an affirmative defense for exceptional circumstances or conditions beyond the control of the utility, provided that the utility has adopted and continues to implement the Core Attributes of Effectively Managed Wastewater Collection Systems.

NACWA Response to Question #4

- Any regulation must include a meaningful defense of overflows that are beyond the reasonable control of the collection system operator
- A zero-discharge standard for SSOs is technologically impossible and does not reflect the risks posed to water quality by overflows
- The "prohibition and excuse" approach adopted in the NPRM imposes an unrealistic standard that would expose even the best-designed and operated systems to costly enforcement actions with little environmental benefit
- Systems that are in compliance with the capacity assurance and MOM requirements of the final regs. should not be held liable for overflows that are caused by exceptional circumstances beyond the control of the system operator
- Protection from liability for SSOs should be either in the form of a permit shield defense or available as a specific affirmative defense that will protect the collection system operator from citizen suit liability

5. How should EPA address peak flow diversions at POTWs?

- EPA Ideas:
  - Finalize the draft Peak Flows Policy
  - Incorporate the Peak Flows Policy into SSO rulemaking
  - Finalize draft Implementation Guidance (including Utility Analysis Guidance)

MWRA Response to Question #5

- Current bypass regulation does not apply to the management of peak flows (this is in agreement with NACWA's comments)
- Provisions should be made to authorize peak flow scenarios at POTW's as well as permitting of peak excess flow treatment facilities in the collection systems
- MWRA strongly recommends that NPDES permits include appropriate standards for permitting of peak excess flow treatment facilities located in the collection system

6. What are the costs and benefits of CMOM programs and asset management of sanitary sewers?

- EPA
  - 10 Years of CMOM Experience
    - Economic Analysis
    - Defined Health Benefits
    - Reductions in SSOs
  - Principles of Asset Management
    - Relationship between CMOM and Asset Management

MWRA Response to Question #6

- MWRA agrees with NACWA that Management, Operation, and Maintenance requirements should not prescribe specific standards for collection system management, which should be site-specific.

7. How should municipalities balance all of the needs to meet water quality requirements?

MWRA Response to Question #7

- It is important that any new federal mandates must be matched with federal funds.
- Several issues raised by EPA as possible components of an SSO policy are individually complex, and each warrants individual and careful discussion through a public process with considerable stakeholder involvement. **This will take time**
- We ask EPA to establish a public and stakeholder process that acknowledges the complexity of these issues, prioritizes issues, considers phased decision-making and implementation to best address the current risks, demands and existing regulatory burdens, and considers the differences that may exist among regional contexts as well the differences in system conditions and problems faced by permittees or potential permittees.
- MWRA agrees with NACWA that EPA should explore inclusion of watershed-based planning principles that provide flexibility to prioritized collection system management activities based on risk and potential environmental benefit.

MWRA's Advisory Board Response to Question #7

- EPA cannot and must not introduce any new federal mandates without the matching funds to implement them

- Broad-based SSO regulations places into the NPDES permit could place substantial financial impacts on communities at a time when there is less money and significantly less personnel

WEF Response to Question #7

- When possible, managing wet weather flows should be approached on a watershed basis considering all water pollution problems, sources, and priorities

- Environmental and financial sustainability must be carefully weighed

- A watershed wet weather management strategy should support the best use of available resources to cost-effectively address the most pressing water quality problems first, then proceeding at a sustainable pace to address remaining problems

- The wet weather management strategy should provide flexibility and time to apply tools that focus on sustainable practices, green infrastructure and pollution prevention in concert with more traditional approaches

I/I Local Financial Assistance Program

- Program began May 1993
- $260M budgeted through FY18
- $196M distributed through August 2010
- $40 million new funds budgeted for FY14
- 45 percent grant / 55 percent interest-free loan
- Loan repayment over 5 years
- 43 communities – 392 projects funded

- Program Goal
  - Projects are intended to at least offset ongoing collection system deterioration to prevent a net increase in regional I/I

I/I Local Financial Assistance Program - Results

- 1100 miles sewer TV inspected (22%)
- 100 miles sewer replaced or CIP lined (2%)
- 110 miles sewer tested/chemical sealed (2%)
- 1,800 sewer spot repairs
- 5,800 service connection repairs (1.5%)
- 5 miles underdrains sealed

I/I Local Financial Assistance Program - Results

- 750 catch basins disconnected
- 35 miles storm drains new or replaced
- 9,000 manholes rehabilitated/sealed (9%)
- 1,400 manhole covers replaced/inflow seals installed (1.5%)
- 450 sump pumps redirected
- 6,000 downspouts/area drains disconnected