State Perspectives on Sustainability in Water Programs

Association of State and Interstate Water Pollution Control Administrators

Ellen Gilinsky, Ph.D.

Past President and Virginia DEQ Water Division Director

Incorporating Sustainability in the USEPA

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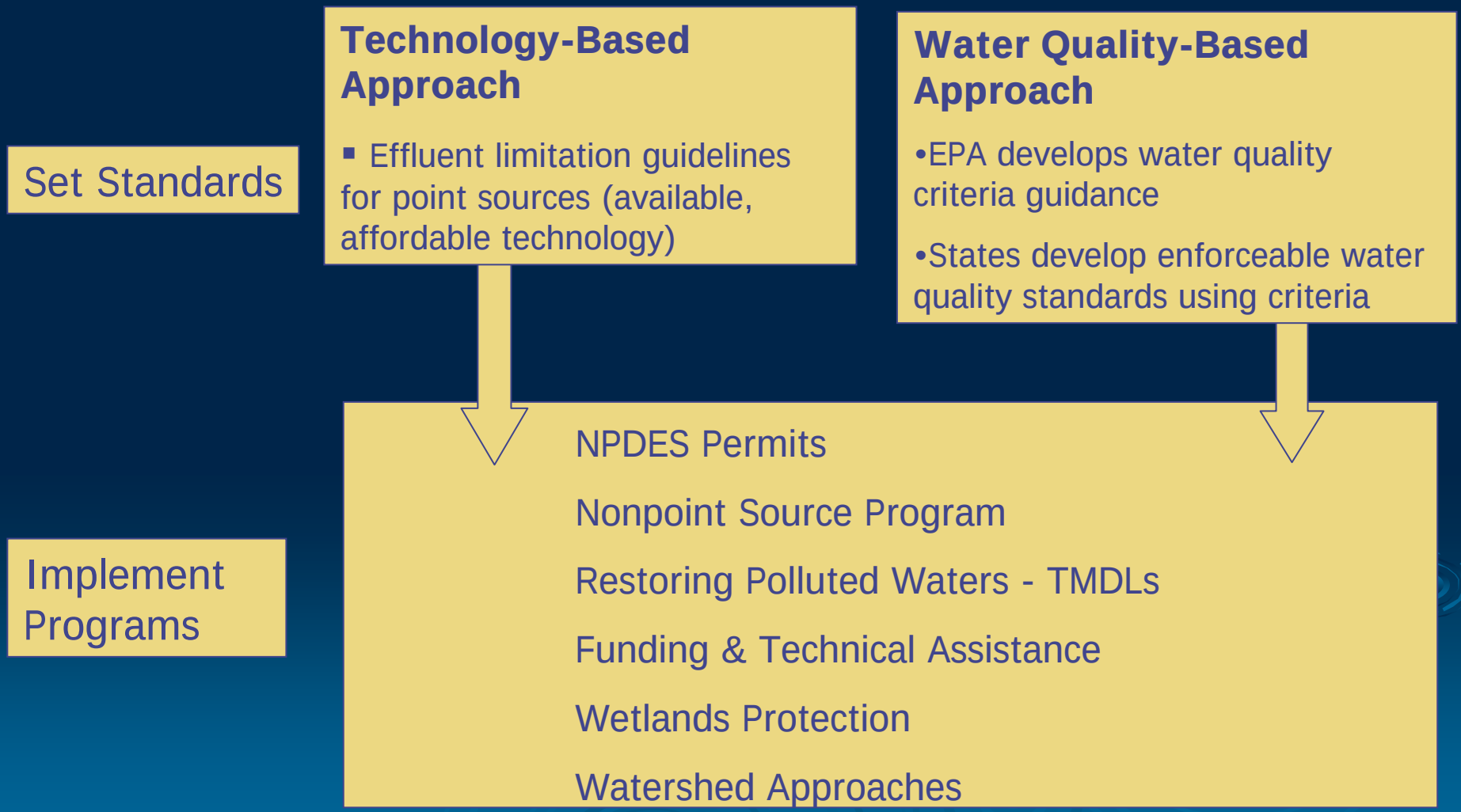
Clean Water Everywhere for Everyone

Clean Water Act Framework for Protecting and Restoring the Nation's Waters



But as the saying goes…….

An ounce of PREVENTION

Is worth a pound of cure

We need to move from remediation to protection and prevention

Drivers for Sustainability in Water Programs

- Ever increasing number of impaired waters
- Compliance with TMDLs and nutrient limits
- Costs of emerging technologies and clean up efforts
- Need for energy efficiency
- Finite water resources and need for water conservation

EPA off to a good start with Sustainable Infrastructure Initiative

- EPA Initiative to change way we view, value, manage and invest in our drinking water and wastewater infrastructure
- Incentivize facilities to inventory and properly manage their assets and charge fees sufficient to support that investment
- Fund projects that don’t just fix a compliance problem but plan and construct with a holistic approach

Better Management

- Effective Water Utility Management Initiative – EPA working to identify attributes of sustainable utilities and to promote effective utility management.
- Asset Management - managing infrastructure capital assets to minimize the total cost of owning and operating them, while delivering the desired service levels.
- Environmental Management Systems - environmental stewardship becomes part of the daily responsibility for employees across an entire organization.
- Energy Efficiency & Renewable Energy Opportunities - Energy and water efficiency are closely linked. Savings in one area can often translate into savings in the other, and integrating energy efficient practices into the daily management and long-term planning of the water sector will contribute to long-term sustainability and reduce impacts of climate change.

Water Quantity Considerations

- Sustainable water supply planning to meet current and future beneficial uses of water
- Create a water planning partnership among federal, state, local, regional interests and the public
- Consider all sources of water holistically – surface water, groundwater, desalination, water reuse
- Create Drought Ready Communities
- Consider long term watershed effects of flow alterations from withdrawals

Reclamation and Reuse

We need to do better at promoting Water Reuse :

- Develop a flexible regulatory frame work at the national and state levels for water reclamation and reuse
- Continue to provide adequate funding through SRF for projects that include water reuse
- Identifying water reuse as a means to increase water supply in local/regional water supply plans
- Identifying water reuse as a means to initially meet a nutrient cap or to accommodate future growth under the cap
- Coordinating with other state agencies and NGOs to ensure that all regulations, policies and guidelines are consistently promoting and encouraging water reuse that is protective of human health and the environment

Where we stand

- Will need to use a combination of green technology, trading and reuse to provide wastewater solutions for a growing Virginia
- Sustainable practices and a watershed approach will help us get there
- Localities will have to utilize asset management and full cost pricing to adequately maintain their systems
- State will continue to provide low cost funding for capital projects through a robust SRF

Watershed Approaches are More Sustainable

- Watershed Based Permitting
- Water Quality Trading
- Source Water Protection
- Green Infrastructure
- Wet weather integration
- Holistic Wastewater Management – centralized and decentralized

EPA has started a Healthy Watersheds Initiative

- Augments the watershed approach with proactive, holistic aquatic ecosystem conservation and protection.
- Healthy watersheds form the critical ecological support system or building blocks that anchor our water quality restoration efforts
- Encourages states, local governments, watershed organizations to take a strategic, systems approach to conserve healthy components of watersheds, and, therefore, avoid additional water quality impairments in the future.

How Do We Prevent Loss of Healthy Watersheds?

- Help states identify those healthy watersheds and portions of watersheds that need protection
- Develop tools to conduct integrated assessments
- Through permitting and conservation maintain sustainable flows
- Help promote implementation of protection and conservation programs that will maintain good water quality

Suggestions for a Research Agenda

What information can help us get to truly sustainable approaches

For Water Infrastructure

- Document cost savings from sustainable practices to help promote them – rather than sole reliance on incentives
  - Maintenance costs saved by utilities
  - Long term costs savings to watershed by using Low Impact Development and Green Infrastructure solutions

For environmental benefits and health and safety considerations

- Water reuse
- Biosolids
- Endocrine disruptors

For ecosystem services

- How can we put monetary value on the various services ecosystems to incentivize protection and wise planning

How to get there…….

- Provide flexibility in regulatory programs as we shift from enforcement to prevention model
- Allow for adaptive management in our water programs
- Shift to performance based criteria that leave room for innovation
- Fill knowledge gaps

We are at the dawn of what we can accomplish through sustainable solutions