

Multi-Agency Water Reuse Programs: Lessons for Successful Collaboration



Summary

Population growth, drought, and climate change all threaten our water security, but by working together to recycle water, utilities can create new, resilient supplies. Cooperation between water, wastewater, and storm water agencies is hindered, however, by the challenge of finding common ground, assigning roles, and allocating responsibilities and costs among different organizations. In this newly-published report, five national water reuse experts analyze the dynamics of interagency collaboration and offer lessons for successful recycled water projects.

Background

A product of the **Water Reuse Action Plan** (Action Item 2.16), this report was prepared for the U.S. EPA in cooperation with the WaterReuse Association to explore how agencies can successfully work together to develop recycled water resources. The report offers an **analytical framework** for understanding the dynamics of interagency collaboration supported by a detailed analysis of **case studies** in different regions of the United States. It also includes a summary of “**lessons learned**” as well as **questions and exercises** to facilitate utility collaboration, and an **annotated bibliography** of references for further study.

The authors observe that most water utilities were created to solve last century’s problems and are hard pressed to address the challenges of today. As a result, water is currently managed by a patchwork of utilities each with its own mandate, service area, management team, and financial constraints.



Agencies participating in WRAP 2.16 regional case studies.

Collaboration is complicated by complex regulations, operational details, and the inclination of agencies to control all projects within their jurisdictions. Despite this fragmented landscape, agencies from Virginia to California have found ways to focus on their common interests and have forged durable agreements that support successful water reuse programs. They provide a roadmap for overcoming challenges and serve as a model for effective leadership.

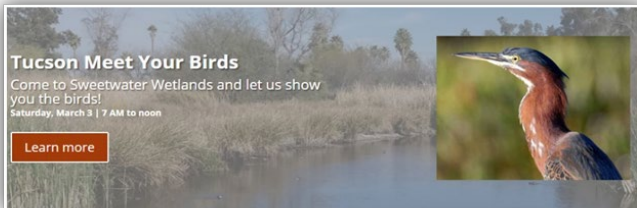
Challenges and strategies related to elements of interagency collaboration

Framework Element	Challenges	Strategies
Governance	Old mission statements narrow agency focus, restrict acceptable investments.	Relate purpose to quality of life issues; find intersections among agency goals.
Regulations	Regulatory complexity hinders some innovative reuse projects.	Review the “regulatory landscape” early on and engage with regulators from the start.
Economics	Many reuse benefits are long-term and spread across many constituencies.	Recognize and quantify avoided costs and risk reduction; find multiple benefit projects.
Management	Existing management structures don’t support joint ownership, operation.	Assign roles and responsibilities for reuse projects based on agency expertise, resources.
Leadership	Progressive managers who see the need for reuse must still gain board support.	Agency leaders take the time to build informal relationships and create formal agreements.

Case studies: Leading the way

The team evaluated five regional partnerships responsible for building successful reuse collaborations:

- By recharging a local aquifer with 100 MGD of recycled water, Hampton Roads Sanitation District (HRSD) in **Eastern Virginia** will reduce the cost of regional compliance with storm water limits by over \$1 billion. HRSD developed credit exchange agreements with more than a dozen local agencies and formed an oversight committee to address health concerns.
- By coordinating their claims on return flows to the Trinity River, agencies in **North Central Texas** kept local control of their water allocations and developed partnerships that reduce the cost of reuse projects.



Tucson Water and Pima County together created an award-winning wetland.

- Pima County and Tucson Water in **Southern Arizona** share responsibility for treating and distributing recycled water as a regional resource.

- In **Central California**, Monterey One Water (M1W) supplies nonpotable water for agricultural irrigation and highly treated water for aquifer recharge through a five-way partnership. To maintain these relationships, utility directors must balance their agency's needs with the regional interests.

- The largest water and wastewater agencies in the

Los Angeles area are building on past successes to develop audacious new projects to reuse nearly 400,000 acre-feet per year of treated effluent by looking beyond their own needs and building reuse capacity “for the common good.”

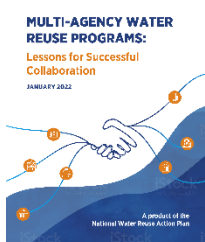
“Projects proceed at the speed of trust.”

A few of the many lessons learned from agencies working together around the country include:

- Agencies can assign roles and responsibilities through many legal structures, but agreements don't create trust—they only document it.
- Regulations limiting discharge of contaminants or withdrawal of surface or ground water supplies can motivate agencies to recycle water.
- Reuse can be justified by crediting the avoided cost of alternate projects, the value of reliability and the ecological benefits of in-stream flows.
- Transparent accounting builds trust while pilot projects can reinforce staff relationships.
- There are many kinds of leaders, but one consistent mark of leadership is the ability to help different groups identify and pursue their common goals.

Essential Elements of Water Reuse Agreements

Essential elements	Agreement parameters
System infrastructure	Condition, location, ownership
Regulatory compliance and risk management	Responsibility for compliance, liability for events
Financial terms	CAPEX, OPEX and revenues
Water quantity, quality	Annual, peak hourly flows; selected constituents
System operation and maintenance	Responsibility for O&M, emergency response
Customer relations	Delegate responsibility for safe use of recycled water
Public outreach	Represent program to public, policy makers



For More Information

Download the report through the WRAP Online Platform or contact the research team:

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