

EXPLORE STRATEGIES

DEEP OPPORTUNITIES FOR LOCALIZED WATER STRATEGIES

Big picture benefits of localized strategies



More affordable than rebuilding or replacing centralized infrastructure



Work with the natural environment to enhance water supply resilience and health



Less time-intensive to install than centralized infrastructure



Provide visibility, access, and direct economic benefits to ratepayers

A national challenge

Between aging infrastructure, dwindling water supplies, stormwater challenges, and growing equity and water quality concerns, public utilities across the country are in need of an infrastructure overhaul. But refurbishing conventional centralized infrastructure is often costly and time intensive—the US Water Alliance estimates that America’s water systems will require \$4.8 trillion over the next twenty years. What can your community afford to pay?

Diving into the next chapter

Localized or on-site water infrastructure programs provide resilient and affordable water management alternatives that can address a wide range of water resource challenges. These decentralized strategies allow cities, towns, and water agencies to either pay for or subsidize water management on property that it does not own or control. Offering both scalability and long-lasting benefits, localized strategies can effectively safeguard supply and quality, protect ecosystems, and manage urban runoff—all for a lower price tag.

COMMUNITY WATER SUPPLY

Frequent droughts in the West and increased water quality challenges in the Midwest and East are driving leaders across the country to plan for their communities' water futures more carefully and thoughtfully than ever before. Localized water management strategies provide sustainable, affordable, and resilient solutions to address the interlinked issues of water quantity and quality. They help utilities deliver a steady supply of clean water to communities while also helping ratepayers save both water and money. See the strategies that are working for water leaders around the country below.



Community water supply & quality strategies

COMMERCIAL, INDUSTRIAL, AND INSTITUTIONAL UPGRADES

Retrofits to improve efficiency for commercial and industrial spaces, including increasing cooling tower efficiency, replacing water-cooled with air-cooled equipment, and upgrading commercial appliances for kitchens and laundries.

GRAYWATER REUSE SYSTEMS

The redirection of graywater from sinks, showers, and laundry to use for irrigation.

HIGH-EFFICIENCY APPLIANCES

Commercial, industrial, and residential appliances, such as machines, dishwashers, air conditioning units, and toilets that are designed to provide the same – or better – level of service as water-guzzling devices with substantially less water.

LAND CONSERVATION

The conservation of riparian areas, wetlands, steep hillsides, and other open spaces to provide natural stormwater retention, source water quality protection, and groundwater recharge.

LEAD SERVICE LINE REPLACEMENTS

Financial programs that cover all or part of the cost of replacing lead service lines on customer property to limit damaging health effects caused by lead exposure.

LEAK DETECTION DEVICES

Devices that identify leaks in consumer-side-of-the-meter toilets, pipes, drains, and industrial systems, and send real time notifications to the asset owner.

ON-SITE NON-POTABLE REUSE SYSTEMS

The capture, treatment, and reuse of water generated by large buildings or new community development for irrigation, toilets, and air conditioning.

RAIN WATER HARVESTING

Systems to capture precipitation for use in outdoor landscaping to replace of drinking water.

SMART IRRIGATION CONTROLLERS

Smart sprinklers and irrigation controllers that use data from sensors, weather forecasts, and plant-care databases to determine watering needs and deliver just enough moisture at the right time to reduce lawn water consumption.

SOURCE WATER PROTECTION AND WATERSHED HEALTH

Protecting the lakes, rivers, streams, and groundwater that provide drinking water to reduce contamination at the source and lower water treatment costs.

TURF REPLACEMENT

Removing water-wasting turf and replacing it with landscapes that require less water.

STORMWATER

With land development reducing permeable surfaces and increasing runoff challenges, programs to manage stormwater and mitigate its effects on local water quality have become critical for ensuring environmental health. Water leaders nationwide are turning to on-site, localized infrastructure water strategies to manage stormwater directly where rain falls. This helps to reduce strain on centralized sewer systems and infrastructure, protect local water quality, minimize pollution caused by overflows, treat runoff, and even use runoff as an alternative water source. See the strategies below for managing stormwater through localized infrastructure.



Stormwater management & treatment strategies

BIOSWALES

Engineered landscape elements designed to increase infiltration of stormwater to the groundwater basin and filter out pollutants.

BLUE ROOFS

A non-vegetated roof intended to store stormwater in temporary ponds, then gradually release the water to mitigate runoff.

CONSTRUCTED WETLANDS

Man-made wetlands that mimic the stormwater capture and nutrient load reduction benefits of natural wetlands treat waste and stormwater with specific vegetation, soils, and bacteria instead of chemicals.

GREEN ROOFS

Vegetated roof with a layer of soil atop a drainage system to filter contaminants, absorb rainfall and delay runoff to reduce stress on stormwater systems, lower energy bills, reduce heat island effects, and improve air quality.

GREEN STREETS

Integration of vegetated areas into street design to facilitate storage, infiltration, and evapotranspiration of stormwater.

LAND CONSERVATION

Conserving riparian areas, wetlands, steep hillsides and other open spaces to provide natural stormwater retention, source water quality protection, and groundwater recharge.

PERMEABLE PAVEMENT

Permeable pavers and porous concrete surfaces that allow water to penetrate pavement and soak slowly into the ground rather than run off into city drains to reduce stress on stormwater systems.

RAIN WATER HARVESTING

Systems to capture precipitation to replace the use of drinking water for outdoor landscaping.

URBAN TREE CANOPIES

Planting trees to absorb stormwater and reduce heat island effects.

WASTEWATER

As both populations and commercial operations grow, so does the amount of wastewater produced within a community. Properly treating wastewater before discharge is essential to ensuring human and environmental health. At the same time, given the advance of technology, treated effluent has significant potential for reuse as non-potable – and even potable – water supply. City water leaders are exploring creative wastewater management tactics for a more efficient, sustainable future. Localized infrastructure systems can safely reuse wastewater on site or redirect to other uses without centralized treatment. See strategies to address your community's wastewater needs below.



Wastewater management & treatment strategies

CONSTRUCTED WETLANDS

Man-made wetlands that mimic the nutrient load reduction benefits of natural wetlands can effectively treat waste with specific vegetation, soils, and bacteria instead of chemicals.

GRAYWATER REUSE SYSTEMS

The redirection of graywater from sinks, showers, and laundry for use in irrigation.

ON-SITE NON-POTABLE REUSE SYSTEMS

The capture, treatment and reuse of water generated by large buildings or new community development for irrigation, toilets and air conditioning.

PRIVATE SEWER LATERAL REPLACEMENT

The replacement of cracked and leaky private sewer laterals that contribute to sanitary sewer overflows by allowing groundwater and stormwater to infiltrate into the wastewater collection system.



That's the what. Now here's the how:

Tap into Resilience is changing the definition of utility investment. Water leaders are no longer limited to the single option of expensive conventional infrastructure to address water resource challenges. Utilities can now invest at the consumer level by supporting localized strategies and experience real results. Each configuration might look different: offering **residential rebates and incentives** for everything from water-efficient appliances to drought-tolerant landscaping; deploying **commercial, industrial, and institutional rebates and incentives for high-efficiency**

retrofits or on-site water reuse systems; or working with landowners on larger-scale projects.

Whats new is how to pay for it: **because utilities can now finance these decentralized strategies as capital expenditures along with other long-term investments.** Learn more about this approach, see first-hand how communities across the country are investing at the local level, and get pro-bono tax, finance and legal assistance for scaling programs.

Ready to get your feet wet? Explore how to implement these strategies in your community by contacting tapin@waternow.org or by visiting tapin.waternow.org.