

HJ 74: Summary of Water Reuse Systems & Design

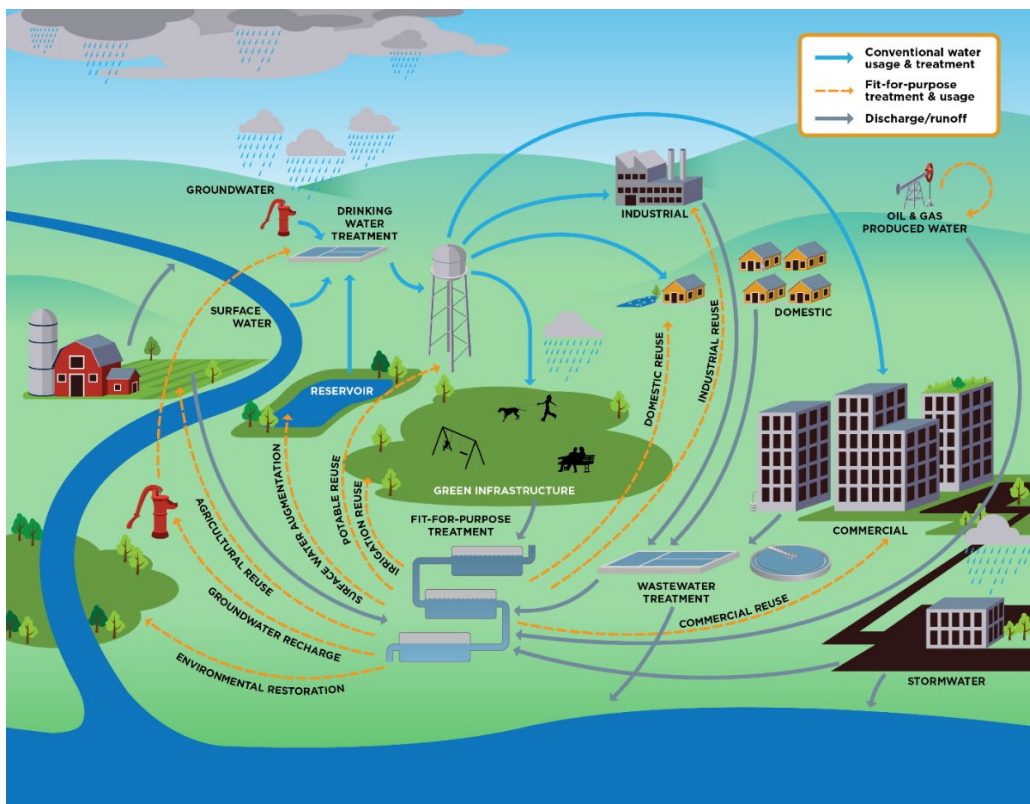
WATER POLICY INTERIM COMMITTEE
TONI HENNEMAN – OCTOBER 2025

WATER REUSE, RECYCLING, OR RECLAMATION

In the West where water can be scarce in times of drought, planned water reuse systems are gaining steam as a possible solution for drought resilience. The term “water reuse” implies the basics of how a water reuse system operates: water is recaptured, potentially treated, and then reused for beneficial or limited uses. Water reuse may also occur unplanned, such as when a community draws its water supply from a river that has received treated wastewater discharges from other communities upstream. For the purposes of HJ 74, the committee will focus primarily on planned water reuse systems.

HOW DOES IT WORK?

Water reuse systems may take many forms, depending on the system’s intended purpose, regulatory requirements of the area, environmental conditions, and other factors. This diagram¹ demonstrates some potential water reuse system “flows”:



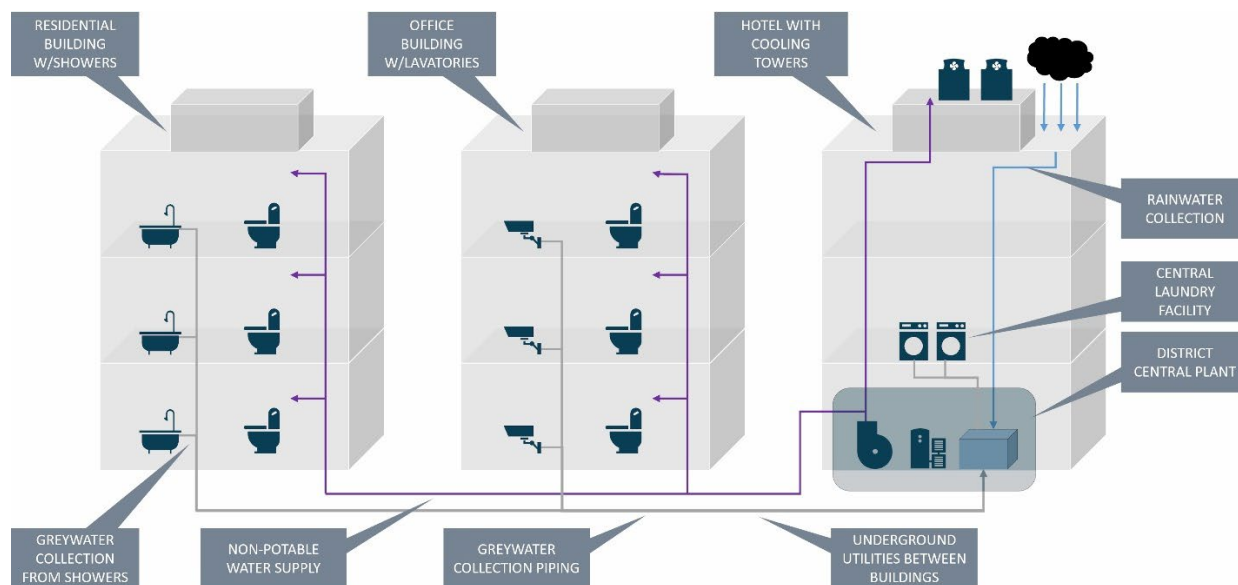
The amount of treatment required for reused water depends on the water’s intended purpose. Reused water intended for irrigation, power plants, refineries, and mills may require less treatment than water reused for a municipal water supply, for example.

¹ “Basic Information about Water Reuse”, US Environmental Protection Agency, accessed September 19, 2025.

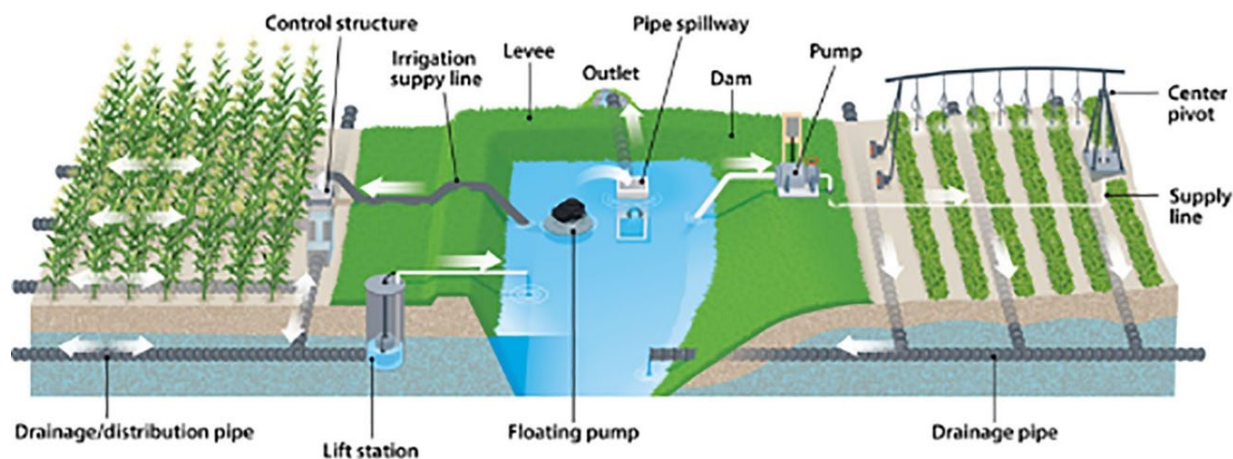
URBAN VS. RURAL APPLICATIONS

The design and application of a system may depend on the location of the system, especially whether the system is intended for use in an urban or rural setting.

CITY USE EXAMPLE



IRRIGATION USE EXAMPLE



² ["Water Reuse 101: Back to Basics"](#), Professional Plumbing, Heating, Cooling, and Piping Community, accessed September 19, 2025.

³ ["Transforming Ag Drainage: Answers to 6 big questions about drainage water recycling"](#), Iowa Soybean Association, accessed September 19, 2025.

POTENTIAL USES

The intended use of reclaimed, recycled, or reused water is critical when determining the regulatory requirements of water reuse systems. Most systems take wastewater, which may include stormwater runoff, rainwater capture, or sewage, and treat the wastewater to a level appropriate for its intended use.

Reusing wastewater for potable, human consumption requires the highest level of treatment, often using advanced treatment systems. Non-potable uses offer more diversity in both application and level of treatment.



POLICY CONSIDERATIONS

A 2008 report issued by the Western Water States Council and the Western Governors' Association⁴ identified multiple potential barriers to implementing water reuse systems, including legal, institutional, social, financial, and technological constraints.

Legal Considerations: Federal and state governments must institute provisions that regulate the content and quality of effluent and recycled water.

- Who has rights to effluent?
- How can downstream users be protected from potential injury?

Institutional/Societal Considerations: The public is often wary to accept the use of recycled water without education.

- How are end users protected from potential health risks associated with reuse?
- What are the potential environmental effects?
- What are the costs to implement water reuse systems?

Financial Considerations: Wastewater reuse systems are often restrictively expensive, especially systems for potable water reuse.

- What kind of state and federal financial incentive are available?
- How can partnerships be leveraged to create economies of scale?

Technological Considerations: Emerging technology may help provide more effective systems but may also be more expensive.

- Are current systems advanced enough to remove emerging contaminants (e.g. PFAS or pharmaceuticals)?
- Are funding sources available to aid in replacing old systems?

⁴ ["Water Needs and Strategies for a Sustainable Future: Next Steps"](#), Western Governors' Association, June 2008.