

# “One Water” Building – Implementation Checklist

*A tool for maximizing water conservation in the built environment*

## What is “One Water”?

“One Water” is a holistic approach to water management that recognizes that all water —whether it’s rainwater, stormwater, greywater, wastewater, or drinking water - is a potential resource to help meet potable and nonpotable water needs. While One Water can be applied at different scales, this document is specifically focused on One Water *buildings*.

A **One Water building** is designed to effectively utilize all water—potable\* and nonpotable (e.g. greywater, stormwater, and wastewater)—as an integrated resource. It uses a “fit-for-purpose” approach, meaning water is treated and used based on its intended use. For example, a One Water building might use nonpotable water (e.g. rainwater, AC condensate) for flushing toilets or irrigation instead of using drinking water for those tasks. This approach maximizes efficiency, reduces strain on centralized infrastructure, and builds resilience against drought and water scarcity.

\* *Potable water* is water that is safe to drink and use for food preparation, meeting health standards for human consumption. *Nonpotable water* is not safe for drinking but can be used for other purposes such as irrigation, flushing toilets, or industrial processes.

## Why It’s Important Now:

- *Water Scarcity:* Drought-prone regions like Central Texas face increasing pressure on limited water supplies. When we are not in a drought, we are between droughts.
- *Increased Demand:* As cities grow and suburbs expand, additional water will be needed to meet the needs of this growing population.
- *Weather Variability:* Extreme weather events such droughts and floods, longer dry spells, changing rainfall patterns, and rising temperatures make water supply less reliable.
- *Regulatory Shifts:* Agencies are beginning to encourage or mandate water reuse, conservation, and onsite management.
- *Economic Pressures:* Investments in new water supplies generally cost more than conserving and reusing existing supplies. One Water investments can delay or avoid the increased cost of bringing on new water supplies.

## Core Principles of a One Water Building:

- *Maximizing Water Efficiency:* Low-flow fixtures, smart irrigation, and leak detection.
- *Using Fit-for-Purpose Water:* Matching water quality to its use—e.g., using treated greywater rather than potable water for flushing toilets or irrigation.
- *Capturing Local Sources:* Harvesting rainwater and air conditioning condensate.
- *Reusing Water Onsite:* Treating greywater and blackwater for reuse when feasible.
- *Returning Water Thoughtfully:* Managing stormwater to reduce runoff and recharge aquifers.

## How It Works in Practice

### Water Sources in a One Water Building

Source	Use Potential
Public/Potable Water	Drinking, cooking, washing dishes, personal hygiene; best for potable uses or those requiring highest treatment standards for water.
Rainwater	Irrigation, cooling, toilet flushing, fire suppression. Rainwater can also be treated to potable standards, especially in single-family homes.
Condensate	Cooling towers, AC makeup supply, irrigation
Stormwater	Landscaping, infiltration
Greywater	Toilet flushing, irrigation
Blackwater	Reuse for nonpotable* uses after advanced treatment

### Technologies Often Included:

- Dual plumbing systems for nonpotable water reuse
- Onsite water capture, storage, and treatment
- Rainwater harvesting tanks
- Green roofs, pervious pavers, curb cuts, and bioswales for stormwater management
- Smart water meters and leak detectors
- High-efficiency fixtures and appliances
- Subsurface drip irrigation to reduce evapotranspiration and potential for human contact

### Benefits of a One Water Building:

- Reduces long-term water bills and infrastructure costs, and adds market value to the building
- Improves drought resilience and protects landscape investments during utility mandated curtailments
- Reduces flood impacts, and mitigates stormwater runoff and pollution
- Supports green building certifications (LEED, SITES, WELL, Living Building Challenge)
- Generates community support by demonstrating environmental leadership and innovation
- Better stewards limited water resources for current residents and future generations

### Real-World Examples:

- Travis County connected purple pipe/reuse water to 4 downtown buildings for the purpose of supplying their AC makeup water, permanently eliminating the demand for 10 million gallons of treated drinking water annually. Engineers estimate that the payback for each of the building retrofits is less than 3 years, and that, after that, the 4 buildings combined will save at least \$200,000/year in water bills.
- The Credit Human Headquarters in San Antonio has a water capture and reuse system with the capacity to hold 140,000 gallons, including 80% of rainwater collected on site and cooling tower condensate. Captured water is used to flush all toilets, provide irrigation, and supply makeup water for the cooling towers, resulting in an estimated savings of 4 million gallons of water per year.
- The Toyota Headquarters in Plano collects rainwater in a 400,000-gallon cistern storage system. They use this rainwater for irrigation and toilet flushing. Toyota anticipates saving 12 million gallons of potable water annually.

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While not all projects are able to implement every One Water opportunity, the following design considerations are intended to inform the building design process when evaluating new construction or major renovation projects.

### 1. Onsite Water Capture and Reuse

Item	Yes	No
Is plumbing designed to separate potable and nonpotable systems? Are nonpotable uses (toilet flushing, irrigation, cooling) supplied by nonpotable sources (rainwater, greywater, etc.)?	<input type="checkbox"/>	<input type="checkbox"/>
Has rainwater harvesting been included in the design? (E.g. for Irrigation)	<input type="checkbox"/>	<input type="checkbox"/>
Is AC condensate captured and reused? (E.g. for AC makeup water)	<input type="checkbox"/>	<input type="checkbox"/>
Is greywater being captured and treated for reuse onsite? Greywater refers to relatively clean wastewater that comes from household activities (e.g. water from bathroom sinks, showers, and laundry discharge). It can be reused for nonpotable purposes like landscape irrigation, toilet flushing, or even laundry with proper treatment.	<input type="checkbox"/>	<input type="checkbox"/>
Is blackwater being treated onsite or routed to a local reuse facility? Blackwater is wastewater that contains human waste, making it more contaminated and requiring more intensive treatment than greywater. It includes toilet water and often includes kitchen sink and dishwasher water due to grease.	<input type="checkbox"/>	<input type="checkbox"/>
Is the site connected to an external centralized reuse system (i.e. purple pipe systems)?	<input type="checkbox"/>	<input type="checkbox"/>

### 2. Water Efficiency & Smart Controls

Item	Yes	No
Are WaterSense-labeled fixtures used throughout?	<input type="checkbox"/>	<input type="checkbox"/>
Is irrigation minimized and equipped with smart controls?	<input type="checkbox"/>	<input type="checkbox"/>
Is real-time water monitoring included (smart meters, leak detection)?	<input type="checkbox"/>	<input type="checkbox"/>
Does the landscaping use native or drought-adapted plants to reduce outdoor watering needs?	<input type="checkbox"/>	<input type="checkbox"/>

### 3. Environmental Integration

Item	Yes	No
Are green infrastructure features (e.g., bioswales, rain gardens, pervious pavers) included to manage stormwater and filter pollutants?	<input type="checkbox"/>	<input type="checkbox"/>
Is stormwater captured in a way that promotes infiltration or aquifer recharge? (Note: A bioswale might filter pollutants but not infiltrate much if the subsoil is clay or it's lined.)	<input type="checkbox"/>	<input type="checkbox"/>
Do stormwater features enhance public spaces and provide added community value (e.g., aesthetics, cooling)?	<input type="checkbox"/>	<input type="checkbox"/>
Have you identified if nearby streams or wetlands exist? If yes, have you identified them and provided sufficient buffers to protect these resources?	<input type="checkbox"/>	<input type="checkbox"/>

### 4. Education and Maintenance

Item	Yes	No
Does the building educate users about different water source types? (e.g. labeling irrigation spots as rainwater or purple pipe water, purple toilet levers indicating nonpotable water is used for toilet flushing)	<input type="checkbox"/>	<input type="checkbox"/>
Have necessary maintenance staff been identified and connected to the project?	<input type="checkbox"/>	<input type="checkbox"/>

## Scoring Guidance

- **12–16 Yes Answers:** Your building is well-aligned with One Water principles.
- **6– 10 Yes Answers:** Strong progress—consider integrating more One Water features.
- **<5 Yes Answers:** Room for improvement—evaluate opportunities to improve local capture, reuse, and environmental performance.

Please note, while the state of Texas generally encourages conservation and reuse, One Water strategies should be implemented in accordance with local and state laws.

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## To learn more about One Water, check out the resources below:



### One Water Guidebook

*Hill Country Alliance & National Wildlife Federation*

This guidebook is intended to connect Hill Country communities facing growth and increased demands for water with water professionals experienced with One Water strategies, planning, implementation, design and construction.



### Net Zero Water Toolkit

*Texas Water Trade*

Net Zero Water refers to a design mindset that prioritizes the use of alternative water sources for a project's resilience and reliability. The Net Zero Water toolkit aims to help a development provide for its own water needs through the capture, storage, and treatment of compatible water sources found onsite.

This document was developed by the Hill Country Alliance. For questions about “One Water” buildings in the Hill Country, please contact [marisa@hillcountryalliance.org](mailto:marisa@hillcountryalliance.org)



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