

## THE CHALLENGE

Water scarcity is a global crisis. Even places with an historical abundance of fresh water are at risk. The impacts of climate change, deforestation, unsustainable water use behaviors, the drawdown of major aquifers and accumulation of pollution and pharmaceuticals in our surface and ground waters all pose serious environmental, social and economic risk.

The building and regulatory communities have a leadership role to play with promoting water security. We have a choice. We can continue to design systems that use water as though it is a boundless resource, or we can begin to treat all water as precious. The timing for this paradigmatic shift is now as communities all over the world consider how to meet their growing needs for fresh water and sanitation.

**“ Leaking pipes are responsible for wasting an estimated 7 billion gallons of clean drinking water per day.”**

In North America, community water and waste systems are aging to the point that major overhauls and system replacements are urgently needed. As demand for clean water rises, leaking pipes are responsible for wasting an estimated 7 billion gallons of clean drinking water per day (American Society of Civil Engineers). Furthermore, aging wastewater treatment systems pose severe public health concerns as they discharge billions of gallons of untreated wastewater into US surface waters every year. The US EPA estimates that \$390 billion is needed over the next two decades to update or replace existing wastewater systems and/or build new ones to meet growing demands. Propping up the current infrastructure and continuing to address our urban water and wastewater needs with outmoded centralized systems threatens to bankrupt our communities.

## WATER CALL TO ACTION

**“All water is precious.  
Don't flush away our future.”**



**CASCADIA**  
GREEN BUILDING COUNCIL

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## THE INVITATION

Cascadia Green Building Council invites the building community—owners, A/E firms, developers, and builders—to re-imagine water and waste within a more holistic framework. A holistic framework, such as that envisioned within the Living Building Challenge, includes sourcing water from captured precipitation and closed loop systems, treating water without the use of chemicals, maximizing water use efficiency, and managing waste as a valuable resource.

Cascadia invites the regulatory community at all jurisdictional scales to work with Cascadia and other green building leaders to remove unnecessary code and regulatory hurdles that hinder the development of net zero water projects that are responsible and high performing.

Finally, Cascadia invites communities considering major capital investments in centralized treatment systems to carefully consider the lifecycle impacts of those systems on human and non-human communities both now and in the future. Communities should evaluate opportunities for encouraging both water conservation and decentralized systems that remove the need for or reduce pressure on centralized systems.

## THE PATH FORWARD

The green building movement has made strides over the past decade to change how people view water resources, promote water conservation strategies, and bring rainwater harvesting and low impact development strategies into the mainstream. Despite this progress, we have not come far enough fast enough to address the current water crisis. In some cases the barriers to sustainable

water systems are regulatory, and in others they are cultural—deep-rooted use behaviors and misperceptions about alternative technologies.

The good news is that simple, effective solutions are readily available for completely transforming our relationship with our most precious resource. Cascadia envisions a living future when all buildings, infrastructure and communities operate within the water budget of their site—operating with closed loop systems that meet human needs while respecting surrounding ecosystem function and downstream use needs. Part of this vision is the ultimate removal of waste streams from our water, as we should never defecate in our water supply to begin with. The flush toilet will be shelved with other outdated technologies.

The goal of Cascadia's current water campaign is to promote regulatory support for and the building community's widespread adoption of net zero water (NZW) goals and strategies. Cascadia will continue to advocate for regulatory support for decentralized, sustainable approaches to water supply and treatment options; provide NZW education and resources to the building community; and foster dialogue stimulated by widely disseminated research findings.



Cascadia has a number of water-related research efforts underway, including a best practice manual for designing NZW buildings and communities, a life cycle analysis of wastewater treatment systems in Washington's Puget Sound basin, and a series of mapping exercises that identify the regulatory pathway (and its hurdles) to net zero water. This work will continue and grow in the coming year, and with your help, we can transform the way water is managed in the built environment.

All water is precious. Don't flush away our future.

