

Challenges and Opportunities Informing the Vision for Clean Water



Our regional wastewater system plays an important and daily role in protecting Puget Sound and local freshwater bodies, ensuring clean water for our communities. In 2025, King County is developing a Vision for Clean Water to guide the development of our regional wastewater system and plan for future generations through the year 2100.

This document describes 11 key issues affecting our wastewater system and what we are doing to address them now and in the coming decades. These are drivers which will inform the development of the Vision. By addressing these challenges and embracing these opportunities, we can ensure our wastewater system can meet the needs of the region equitably and well into the future.

Aging infrastructure



Much of King County's wastewater treatment system was built more than 50 years ago. To keep providing reliable services, protect our environment and public health, and tackle future challenges like climate change, new regulations, earthquakes, and cyberattacks, we need to replace and upgrade our equipment and infrastructure. The County regularly checks the condition of our infrastructure and proactively plans necessary upgrades. Ensuring our infrastructure is sustainable over time will likely require substantial investments as we adopt best practices and adapt to changing conditions.

Changing regulations



The rules governing wastewater systems are always evolving to improve water quality. In the decades ahead, King County will need to find ways to meet changing standards, like controlling toxic chemicals and reducing the amount of nutrients entering Puget Sound. Meeting these rules will need ongoing investments, more technological innovation, and communication with regulatory agencies. As we look to the future, King County can anticipate new rules and embrace innovation to cost-effectively meet or go beyond requirements, explore ways to influence future policy, and ultimately provide greater water quality benefits.

Climate change



Climate change is bringing weather extremes to most of the world, including the Pacific Northwest. We will experience larger, more severe storms as well as periods of extreme heat and drought. Our wastewater system is adapting and innovating to become more resilient to large, disruptive weather events. We are committed to reducing greenhouse gas emissions and using more renewable resources, while also making our system more resilient to these changing conditions. As climate change accelerates and energy costs rise, we will need new and better ways to mitigate the impacts.

Community engagement



King County regularly engages with community members and partners, including our component agencies and local elected officials, on capital projects and educational programs. In the coming years, the County has an opportunity to boost these connections and act as a community “anchor” by providing a forum for clean water conversations and working to enhance the benefits that come with investments to better meet community needs and priorities. Recognizing that utility services may not be front of mind for many people, we aim to make these discussions more accessible, relevant, and collaborative.

Customer affordability of wastewater services



Some households in King County struggle to afford their utility bills, especially with the high cost of living in our region. Downturns in the regional economy could exacerbate the affordability challenges for these households. The County is working to better understand local affordability, develop metrics to measure it, and focus on actionable solutions. Opportunities to explore could include acting as a resource in partnership with local sewer agencies to expand financial assistance through Customer Assistance Programs (CAPs), better reaching multifamily households, and working with national organizations, peers, experts, and consultants to advocate for wastewater funding.

Digital technology and artificial intelligence



Technology is transforming the way wastewater systems operate, offering new opportunities to enhance efficiency. In the future, digital technologies could help us monitor the system more effectively, spot problems before they occur, and respond quickly when issues arise. However, there are challenges and uncertainties with tools like artificial intelligence (AI), including cybersecurity and

privacy concerns. As we look at incorporating new technologies, we will need to prioritize the security and safety of our system.

Emergency preparedness



Natural and human-caused disasters like earthquakes, severe flooding, and cyberattacks, though rare, are a part of life in the Pacific Northwest. In the coming decades, these events could have catastrophic impacts on wastewater services and pose risks to public health and safety. King County is upgrading its infrastructure to handle seismic events, enhancing data security, and following disaster response plans to ensure essential functions continue during emergencies. Continued investment and innovation in emergency preparedness and mitigation will be critical in preparing our system to withstand future disasters and protect our communities and the environment.

Equity and social justice



King County has adjusted many of its practices to reduce racial and social disparities and improve outcomes in communities that have historically been underserved. Following the Equity and Social Justice Strategic Plan, King County is advancing pro-equity policies. We will need to make sure that wastewater investments avoid, minimize, and mitigate impacts to local communities, especially those traditionally under-served and where such impacts have been disproportionately heavy. There are also opportunities to advance equity with investments, including employment and job training, and improved education.

Pollution reduction and source control



High water quality is key to a healthy and thriving Puget Sound region. While water quality in our rivers and lakes has greatly improved since the 1950s, there is still more to be done. New chemicals of concern, whose sources and impacts are not fully understood, pose emerging challenges for our system, which is not currently designed to remove these chemicals. We need to invest in strategies to remove or reduce pollutants, including collaborating with regulators, local partners, and communities to prevent sources of pollution from entering the waste system in the first place.

Population growth



By the end of the century, King County’s population could more than double, and we will need to expand our infrastructure to keep up with the growing demands on our system. This may involve building new pipes, pumps, and treatment facilities. The County is tracking potential problems from additional flows and planning to ensure the system can handle increased population without compromising service quality for our customers and our region’s waters.

Workforce development



King County employs a highly skilled workforce with competitive benefits and professional development opportunities. However, like many utilities across the country, we face challenges filling open positions and keeping staff, partly because of the high cost of living in our service area. As older employees retire, we need to make sure there are enough qualified people to fill these important, skilled roles. In the coming decades, King County will continue exploring creative ways to strengthen our recruitment and retention efforts and build a strong workforce across the region’s water-sector utilities that can meet future demands.

Your input matters

King County is developing a Vision for Clean Water to address the 11 issues in this document. The future of clean water should reflect our shared values. Wastewater treatment affects your health, your finances, and the environment.

Your ideas will influence how we manage and maintain wastewater for the next 75 years. Get informed and learn more by visiting our website: www.kingcounty.gov/VisionforCleanWater.

