

2024 Surface Water Utility Annual Progress Report

| Informe anual de la empresa de servicios
públicos de aguas pluviales y superficiales 2024

| Relatório anual de serviços públicos de águas
pluviais e superficiais de 2024

| Годовой отчет предприятия по ливневой и
поверхностной воде за 2024 год

| 2024 年风暴和地表水公用事业年度报告



City of Kirkland Public Works
Surface Water Utility

Message from the Director of Public Works

Dear City Council and members of the Kirkland community:

The Public Works Department and its Surface Water Utility are proud to deliver the Surface Water Utility 2024 Annual Report, which highlights the work and accomplishments by the divisions that support the Utility.

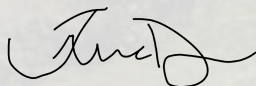
The Divisions' 2024 work plan supported Council's Goals of creating and maintaining Dependable Infrastructure, Vibrant Neighborhoods and a Sustainable Environment. Through diligent planning, implementation, monitoring, and maintenance of stormwater systems, staff are working to protect Kirkland's natural environment and ensure smart growth.

Using best practices, sustainable development opportunities, and community education, the team is making strides toward creating a healthier environment and vibrant future for Kirkland.

Highlights

- To ensure dependable stormwater infrastructure for years to come, the staff began long-range planning in 2024 for the repair or replacement of the City's aging stormwater pipes. Hundreds of miles of underground pipes are being mapped, assessed, and graded for condition and prioritized for replacement and repair.
- To advance surface and stormwater projects and programs, the Divisions have successfully secured and leveraged \$872,666 in grant funding.
- In 2024, the Surface Water Utility began operating under a new National Pollutant Discharge Elimination System permit. Staff have been adapting to the changing regulations and climate conditions and integrating those hurdles into day-to-day operations.
- The excellent and innovative work of the Divisions was recognized by the National Association of Flood and Stormwater Agencies (NAFSMA) as well as the Water Environment Foundation (WEF) for the 132nd Square Park Stormwater Vault and Park and online Watershed Health Dashboard.

We invite you to review this Surface Water Utility 2024 Annual Progress Report and see how the Divisions' efforts reflect a commitment to City Council Goals and an investment in Kirkland's future.



Truc Dever
Director of Public Works



Our Year In Review

The Surface Water Utility, referred to as “the Utility,” operates within the Public Works Department and supports five primary goals, shown in the graphic below.

Three divisions work together to support the Surface Water Utility.

Primary Goals



Reduce flooding in our streets and neighborhoods.



Build and maintain drainage infrastructure.



Improve water quality in our creeks, wetlands, and lakes.



Improve aquatic habitat.



Education and engage our community.

The **Operations and Maintenance Division**

maintains utility infrastructure, responds to spills, and strives to keep water flowing through the system.

The **Surface Water Engineering and Planning Division**

provides strategic planning, engineering expertise, education and outreach, regulatory compliance, environmental monitoring and assessment, and pollution prevention assistance.

The **Capital Improvement Program Division**

provides strategic and timely development of funding, design, property acquisition, and construction of utility projects.

Para pedir información sobre este documento en español, comuníquese con el coordinador del Título VI escribiendo a titlevicoordinator@kirklandwa.gov o llamando al (425) 587-3831.

Чтобы запросить перевод этого документа на по-русски, свяжитесь с координатором по вопросам Раздела VI по электронной почте titlevicoordinator@kirklandwa.gov или по номеру (425) 587-3831

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Surface Water Strategic Plan



Year Two of Implementing the 2023 Surface Water Strategic Plan

The 2023 Surface Water Strategic Plan, referred to as “the Strategic Plan,” assessed our current programs, showed ongoing commitments, and identified priorities for implementation into the late 2020s. Staff will continue to bring new or enhanced programs and projects identified in the plan to Council for funding consideration during biennial budget discussions.

Thanks to our Council for supporting a 2025-2026 budget that maintains existing services and provides strategic investments to help protect our environment, meet the needs of the community, and support the Utility in complying with local, state, and federal regulations!

Programmatic Actions

The Strategic Plan identified **33 programmatic actions** to advance the Utility’s goals. Staff categorized these actions into high, medium, and low priority within the plan.

All 10 high priorities are being completed in house. Medium- and low-priority actions were unfunded in the Strategic Plan. Several have advanced through grant funding and others will rely on funding allocated in future budget cycles or through grant requests.

One of the high priority actions completed in 2024 was the **evaluation and prioritization of potential stormwater parks**. This evaluation will help to prepare Kirkland for potential co-locations of stormwater facilities and park uses to **meet multiple Council and community goals**.



5

COMPLETED
High-Priority
Actions

5

IN-PROGRESS
High-Priority
Actions

5

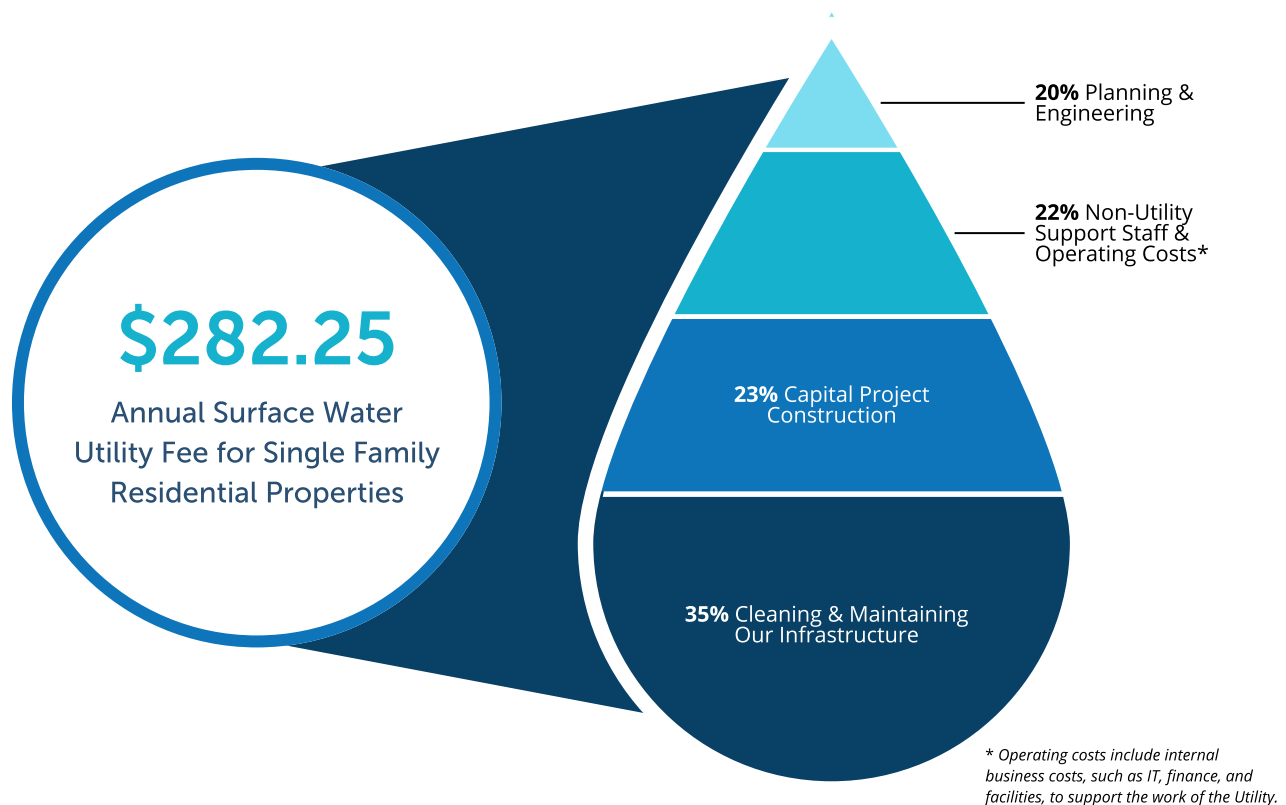
IN-PROGRESS
Medium-Priority
Actions



Your Dollars at Work

The Surface Water Utility is funded by the Surface Water Management (SWM) fee charged to all property owners. The annual fee in 2024 for a single-family residential property was \$282.25. Commercial properties are charged at a rate of \$21.88 per month plus a 7.5% utility tax for every 2,600 square feet of impervious surface on the property.

This fee ensures the City advances our Council and Strategic Plan goals. The graphic below depicts how the average Kirkland homeowner's SWM fee is divided.



Capital Project Highlights

The City of Kirkland **completed design on two stormwater projects** in 2024, NE 85th Street/122nd Avenue NE Stormwater Improvements and NE Juanita Drive and 86th Avenue NE Storm Improvements Project. These are two of the Strategic Plan's nine funded projects. These nine projects focus primarily on **infrastructure and flooding improvements** as the plan identified these as the highest capital investment needs.

2024 Accomplishments

Pipes used in Infiltration Wells



100th Ave NE Modular Wetland

The City completed installation of a modular wetland, which filters pollutants from stormwater flowing to Juanita Creek. This grant-funded project is within the 100th Avenue Northeast Roadway project. The modular wetland cleans approximately nine acres of upstream area, including a high-use intersection.

North Rose Hill Infiltration Wells

The City began construction on the first public Underground Infiltration Wells to improve water quality in Forbes Creek by cleaning and filtering stormwater.

Maintenance Center Yard Upgrades

This completed project constructed three canopy structures to prevent rainwater from entering areas with stored materials that could leach pollutants while improving operational efficiency of the Yard.

Maintenance Center Yard after upgrades.



Construction of the modular wetlands on 100th Ave.





Reduce Flooding in Our Streets and Neighborhoods

Experts suggest that Kirkland will face more intense rainstorms and flooding than it has historically. To prepare for this, the City is inspecting and maintaining storm drains, pipes, and ditches. City Council has also invested in **upgrading aging drainage** infrastructure.



Maintenance staff inspecting canister filters.

In designing long-term solutions for the change in climate, staff are creating models of the City's stormwater pipe networks. Staff are prioritizing the modeling of Kirkland's flood-prone areas to make the largest impact. These models are an opportunity to **better understand and analyze our current drainage networks.**

43
flood call responses

13,457
creek inspections at 182
inspection sites

13,615 cubic ft.
of sediment cleaned out

299,112 ft.
of stormwater pipe cleaned

3,521
catch basins cleaned

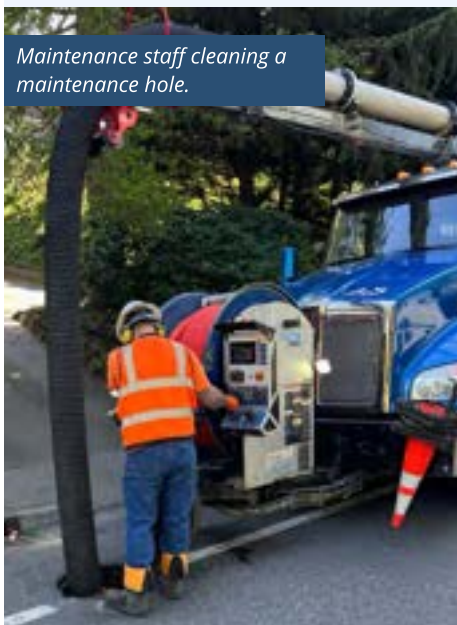
619
private drainage sites
inspected

203
new catch basins

17
new public stormwater facilities



Build and Maintain Drainage Infrastructure



Maintenance staff cleaning a maintenance hole.

The Storm Crew **inspected 71% of our City's maintenance holes** in 2024, putting us far ahead of the 2024-2025 two-year maintenance cycle.

Staff are creating an **Aging Pipe Plan** that focuses on the City's repair and replacement of pipes based on their condition, risk, and life expectancy. To determine which pipes should be prioritized for repair and replacement, Public Works leadership prioritized specific staff in all divisions to be certified in pipe assessment. Pipe assessment is the analysis of a pipe's condition based on video footage from inside the pipe.

Council's authorization of funding in the 2023-2024 budget provides the opportunity to partner with developers and replace aging storm pipes. In just one year, development projects **replaced 1,038 linear feet of aging storm pipe.**



Improve Water Quality in Our Creeks, Lakes, and Wetlands

Keeping our waterways protected from pollution is essential to their health. The City continues to make progress in our goal to improve the water quality of our streams, lakes, and wetlands. Staff promptly responded to nearly **300 spill response events** in 2024, keeping a substantial amount of pollution from reaching our waterways.

Kirkland understands **working with the community** is one of the best ways to protect our streams, lakes, and wetlands. The pollution prevention assistance program informs and supports the City's local business owners to be more environmentally conscious by modifying existing practices.

City staff and consultants continue providing **businesses with technical education and rebates** to reduce pollution at the source.



Improve Aquatic Habitat

Sampling stream bugs is a key indicator of the stream's biological health. Samples collected in 2024 show our streams are trending in the right direction. The **work the City is doing to keep our waterways clean might be starting to pay off!**



Collecting stream bug samples.

Interactive Stream Health Dashboard:
KirklandWA.gov/CreekHealth

The City collaborates with a dedicated team of Water Watcher volunteers to complete assessments of Kirkland stream habitats. Data collected from both staff and volunteers are added to the **interactive stream health dashboard**. The dashboard teaches residents about the aquatic habitat in their backyard and shares ways they can improve water health.

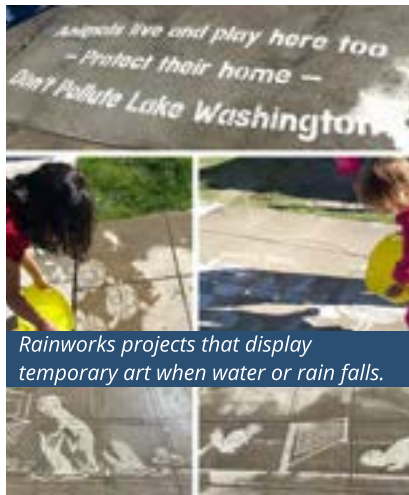


Educate and Engage Our Community

Our Education and Outreach team continues **engaging and empowering Kirkland residents** to protect our streams, wetlands, and lakes.

The City of Kirkland offers outreach events that are a way to **build our resident's investment in their local streams** while exciting them to make environmentally friendly changes in their everyday lives. Wetland Wanders are free field trips where adults enjoy a peaceful day in nature while building understanding of Kirkland's ecology.

In 2024, the City installed updated educational signage in Juanita Beach Park that teaches visitors of all ages that keeping our creeks clean starts with their actions. In creating an **equitable educational experience**, the sign is translated into Spanish, Chinese, Portuguese, and Russian. Our citizen science volunteer opportunities give residents the opportunity to **engage with their environment** through the monitoring of pet waste, storm drains, and water quality. Staff also worked with residents to install rain gardens, native landscaping, and more through our Yard Smart program.



Rainworks projects that display temporary art when water or rain falls.



City Hall for All attendees enjoying a pollution prevention focused activity.



Unveiling the Juanita Beach Park interpretive sign.



1.6K students reached through
71 classroom programs



4,480 total visitors to interactive
water quality dashboard



156 trees planted by
49 property owners with Tree Rebates



13.4K informational letters sent
to Kirkland residents



52 hands-on site visits and **5** projects
installed with Yard Smart Rain Rewards



100K+ reached across Kirkland
Conserves social media



National Recognition

Our teams are immensely proud to report that our stormwater infrastructure and communications work received national recognition! Our Interactive Creek Health Dashboard received an award from the National Association of Flood and Stormwater Agencies (NAFSMA) for Excellence in Communications. Additionally, the design and completion of 132nd Square Park's stormwater facility was honored with NAFSMA's award for Innovative Projects for Small Communities. Both projects also received 1st place in the MS4 Phase II Innovation Award from the Water Environment Federation.



Photos:

All three awards plaques for the two projects. (Upper Left)

132nd Square Park (Lower Left)

Example of a person using the Interactive Creek Health Dashboard. (Right)



KIRKLANDWA.GOV/STORMWATER