SALMON SAFE

1001 SE Water Ave, Ste. 450
Portland, OR 97214
info@salmonsafe.org

June 21, 2024

Paige Scheid
City of Shoreline
17500 Midvale Avenue N
Shoreline, WA 98133-4905

Dear Paige:

Congratulations regarding conditional Salmon-Safe recertification for the City of Shoreline!

In the judgment of Salmon-Safe and our independent Science Team, the City of Shoreline is awarded Salmon-Safe recertification subject to ongoing compliance with the nine conditions outlined in the attached June 10, 2024 report of the Science Team.

To formalize certification, kindly sign this letter in the space provided below, indicating that the City of Shoreline agrees to the conditions, and email it back to anna@salmonsafe.org.

Thanks to the City and its internal Salmon-Safe team for the commitment and enthusiasm towards maintaining Salmon-Safe certification. We look forward to working with you and City communications staff to publicly recognize the recertification achievement.

Kind regards,

Anna Huttel, RA
Certification Director

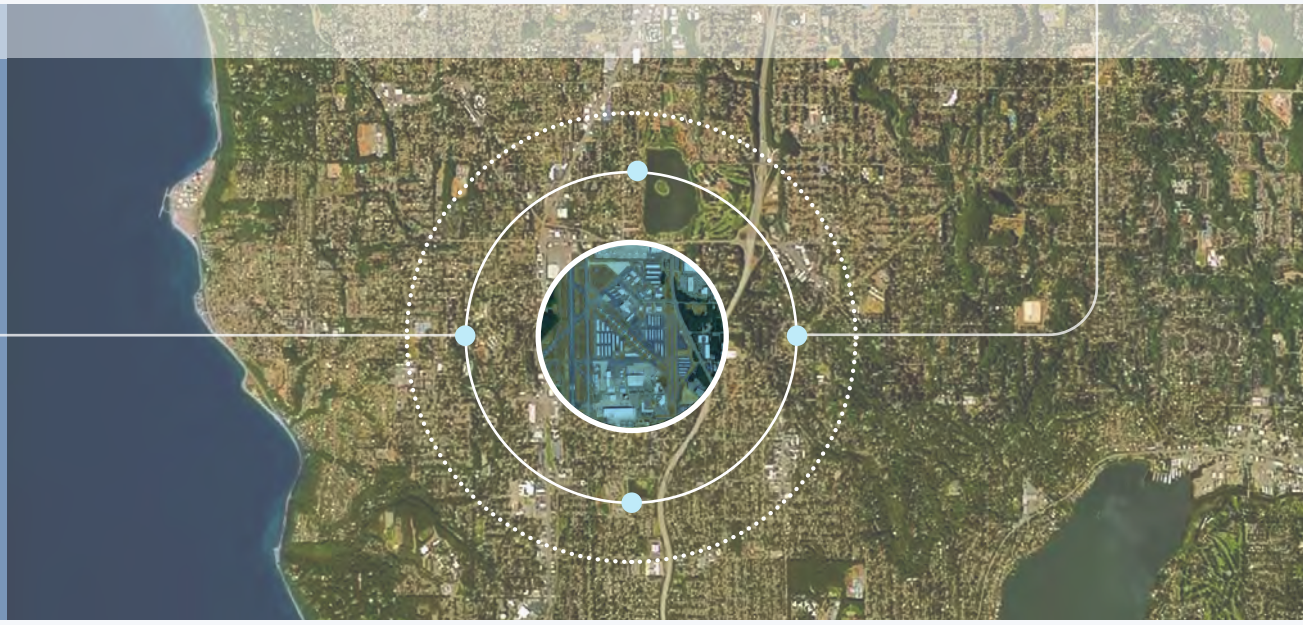
City of Shoreline agrees to meet the conditions outlined in the attached certification report dated June 10, 2024.

Paige Scheid _____ June, 21, 2024 _____

Authorized Representative Date

SALMON-SAFE INC.

REPORT OF THE SCIENCE TEAM REGARDING SALMON-SAFE RECERTIFICATION OF THE CITY OF SHORELINE, WASHINGTON



Salmon-Safe Inc.

1001 SE Water Ave, Suite 450
Portland, Oregon 97214
(503) 232-3750
info@salmonsafe.org

www.salmonsafe.org

June 10, 2024

RECOMMENDATION SUMMARY

The Salmon-Safe science team is pleased to recommend that the City of Shoreline, Washington, be recertified Salmon-Safe, subject to the conditions detailed in this report. The City has demonstrated a commitment to environmental sustainability and stewardship through its *Environmental Sustainability Strategy*, *Climate Action Plan*, and *Deep Green Incentive Program*[1], thereby serving as a regional and national example of environmental innovation by a municipality.

Background

In 2000, Salmon-Safe expanded beyond agricultural land certification to apply the Salmon-Safe assessment and certification process to land and water management within the urban realm. This initiative significantly advanced restoration efforts in urbanized watersheds by developing urban aquatic protection guidelines and a citizen education campaign throughout the Pacific Northwest.

Working closely with independent scientists and technical experts, Salmon-Safe developed a comprehensive certification framework oriented towards reducing impacts on water quality and fish habitat from urban land and water management practices. Since 2005, more than 80 urban sites have received Salmon-Safe certification in Oregon, Washington, and British Columbia, including key City of Portland operations and facilities, Port of Seattle Parks, and King County Parks.

In 2014, Salmon-Safe developed certification standards for highly urbanized sites. These Urban Certification Standards (*https://www.salmonsafe.org/getcertified/development*) are applicable across a variety of urban development landscapes, ranging from high-density urban infill to corporate campuses. While the standards are designed as a stand-alone program, they can also complement other leading certification standards, such as LEED, Sustainable Sites, Envision and Earth Advantage, providing a water quality and habitat-focused bioregional overlay. *Version 3.1* of the Urban Standards went into effect in June 2023.

In 2019, the City of Shoreline was the first Washington city to obtain Salmon-Safe certification. The City adopted the *Deep Green Incentive Program* (DGIP) in 2017 to encourage the highest standard for green building within the city to address greenhouse gas emissions from new buildings. During the development of the *DGIP*, the City adopted Salmon-Safe as a companion certification for the International Living Future Institute's *Net Zero Energy Building* program. Salmon-Safe certification also assists the City in implementing their *Climate Action Plan* and provides leadership to the building development community in implementing environmentally sustainable practices. To maintain Salmon-Safe certification, a city is re-assessed every five years.

[1] *https://www.shorelinewa.gov/home/showpublisheddocument/54557/638193242847170000*

OVERVIEW OF CITY OF SHORELINE FACILITIES AND POLICIES

The City of Shoreline covers approximately 12 square miles at the northwestern edge of King County and includes more than 58,000 residents. Before becoming a city in 1995, the City of Shoreline was part of unincorporated King County. Shoreline is generally bounded by the City of Lake Forest Park to the east, the City of Seattle to the south, Puget Sound to the west, and Snohomish County to the north (including the Cities of Mountlake Terrace and Edmonds, and the Town of Woodway). It is primarily residential with more than 70 percent of the households being single-family residences.

Shoreline has 412 acres of park land and open space, arrayed over 36 properties, 12 of which also include athletic fields. The City has placed a high priority on preserving trees, which cover approximately 37% of the city surface area, an increase of approximately 10 acres from the tree canopy assessment completed in 2018. Outside of the parks, other recreational activities take place in two recreation centers, and a dedicated bike/pedestrian trail that traverses the city in a north-south direction. Other municipal properties include City Hall.

In addition to Puget Sound, waterbodies in the City of Shoreline include nine streams, one lake, and wetland areas, some of which include standing water for the majority of the year. Watersheds in the western half of the city drain to Puget Sound while watersheds in the eastern half of the city drain to Lake Washington, through either Lake Forest Park or Seattle. All the streams include one or more barriers to fish passage, but salmonid use has been documented on Boeing Creek, Thornton Creek, and McAleer Creek.

The City of Shoreline follows a council-manager form of governance whereby seven elected City Council members determine policies that are responsive to citizens' needs and wishes and the City Manager that is hired by the City Council implements those policies and oversees all city departments. Departments that oversee activities and facilities that pertain to Salmon-Safe include Public Works; Recreation, Cultural, and Community Services (RCCS); and Parks. The Shoreline Surface Water Utility is responsible for managing stormwater drainage and protecting surface water quality. Drinking water is provided by Seattle Public Utilities in the western half of the city (generally west of Interstate 5) and by the North City Water District in the eastern half of the city. Wastewater services are provided by the City of Shoreline Wastewater Utility, which in 2021 assumed jurisdiction and ownership of assets and responsibilities formerly held by the Ronald Wastewater District.

The Shoreline City Council adopted a resolution in 2022 that formally recognized climate change as an emergency threatening the community's health and well-being. The City's *Climate Action Plan* (CAP) was also updated in 2022 to address the climate emergency. The *CAP* outlines a pathway to reduce climate pollution in Shoreline by 60% by 2030. The *CAP* also includes strategies to reduce waste, support healthy ecosystems, and increase community resilience. Strategies for achieving the healthy ecosystem objective are described in the *Urban Forest Strategic Plan* (2023) and the *Green Shoreline 20-Year Forest Management Plan* (2022). The latter document describes restoration guidelines for Shoreline's forested parks and natural areas.

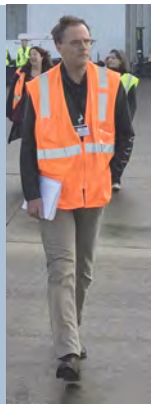
THE ASSESSMENT PROCESS

The assessment process consisted of a desktop review of documentation on how conditions contained in the previous certification report were addressed and a field review, culminating in a recertification report (this document). These tasks were conducted by Salmon-Safe staff and the interdisciplinary Science Team with expertise in salmon species and their habitat, aquatic ecosystems, and innovative stormwater management, as summarized below.

Science Team

The Science Team for this project was composed of Tad Deshler, Dr. Richard Horner, and José Carrasquero. Mr. Deshler and Dr. Horner were part of the team that conducted in the original assessment in 2018.

Tad Deshler: *Environmental Scientist, Coho Environmental*



Mr. Deshler's practice focuses on environmental assessment and impact analysis, with particular focus on the interaction between built and natural environments. Much of his project work has centered around aquatic sites, or at the interface between aquatic sites and the adjacent upland environments, where understanding the transport mechanisms that connect upland and in-water environments is paramount. Tad earned a BA degree in Aquatic Biology from the University of California at Santa Barbara and an MS degree in Animal Science from the University of California at Davis. Tad also has specialized expertise in sediment assessment and management, risk assessment, and chemical transport and fate studies.

Dr. Richard Horner: *Stormwater Management Expert, University of Washington*

Dr. Horner received engineering BS and MS degrees from the University of Pennsylvania and a PhD in Civil and Environmental engineering from the University of Washington in 1978. Following 13 years of college teaching and professional practice, he joined the University of Washington research faculty in 1981, where he held appointments in Civil and Environmental Engineering, Landscape Architecture, and the Center for Urban Horticulture. His principal research interests involve analyzing the effects of human activities, especially in urban areas, on freshwater ecosystems and solutions that protect these resources. Dr. Horner founded the Center for Urban Water Resources Management in 1990 to advance applied research and education in these areas. He is now emeritus research associate professor and splits his time between private practice and some continuing university research.

José Carrasquero: *Fisheries & Marine Biologist*

José holds BA and MS degrees from the University of Washington. He brings more than 30 years of experience to his work. He performs feasibility assessments for instream, riparian, and floodplain salmon habitat projects. He reviews construction projects to assess whether they comply with local, state, and federal laws. Through these project reviews, he evaluates construction plans and recommends best management practices and mitigation measures. As a technical expert, José has participated in the development of guidance documents supporting planning and regulation under the Growth Management and Shoreline Management Acts. For the Puget Sound Partnership, José reviews and scores projects submitted for funding through the Puget Sound Acquisition and Restoration program, and the Recovery Funding Board. He also provides feedback on local Chinook recovery planning and adaptive management through work plan and project list reviews.

Site Assessment

The team from the City of Shoreline assembled documentation that was reviewed by Salmon-Safe Science Team members before, during, and after the site assessment. Members of the Science Team and Salmon-Safe staff met virtually with the project team on February 15, 2024, and had the opportunity to discuss specific site attributes. The Science Team then visited multiple Shoreline sites on March 7, 2024, including the North Maintenance Facility (NMF), Brugger's Bog Park, Ballinger Open Space, Ballinger Maintenance Facility (under construction), Ronald Bog Park, Hidden Lake Dam Removal project, and bioretention facilities along Aurora Avenue North, accompanied by City and Salmon-Safe staff. The Science Team, supported by Salmon-Safe staff, met the following week to review the certification criteria against notes taken during the process. On April 3, 2024, the Science Team and Salmon-Safe staff finalized conditions for recertification and reached a final unanimous decision on recertification.

City of Shoreline staff show the Salmon-Safe Science Team the wetland restoration work completed at Ronald Bog Park.

The Salmon-Safe Science Team revisits the North Maintenance Facility to view material storage and handling practices.

City of Shoreline staff show the Salmon-Safe Science Team a straw wattle providing catch basin inlet protection at the North Maintenance Facility.

GENERAL OBSERVATIONS AND CONCLUSIONS

In the judgment of the Science Team, the City of Shoreline continues to demonstrate a high level of environmental stewardship in accordance with Salmon-Safe standards. This is demonstrated by their Environmental Sustainability Strategy (2008), *Deep Green Incentive Program* (2017), updated *Climate Action Plan* (2022), *Green Shoreline 20-Year Plan* (2022), and the *Urban Forest Strategic Plan* (2023), and the manner in which they have addressed conditions from the original certification, as described in more detail below.

Previous Conditions

CONDITION 1 from the 2019 certification

APPLY SALMON-SAFE MODEL STORMWATER GUIDELINES TO NEW, EXPANDED, AND REDEVELOPED CITY FACILITIES

City staff completed a comparison of Salmon-Safe guidelines with Ecology's *Stormwater Management Manual for Western Washington* in 2022 and identified areas where Salmon-Safe standards were more stringent. Salmon-Safe guidelines were applied to the design of the Ballinger Maintenance Facility, which is currently being constructed. The City prepared a checklist of Salmon-Safe guidelines that can be used for future projects. One of the steps in the checklist is to conduct an independent plan review of the project stormwater management plan and design to determine if additional protection of salmon and salmon habitat can be achieved following guidance in Appendix F of the Urban Standards v3.1. *The Science Team considers this condition to have been satisfied.*

CONDITION 2 from the 2019 certification

INCORPORATE GREEN STORMWATER INFRASTRUCTURE (GSI) INTO THE STANDARD ROADWAY CROSS-SECTION TO IDENTIFY PREFERRED LOW-IMPACT DEVELOPMENT TECHNIQUES FOR RIGHT-OF-WAY

The City updated their *Engineering Development Manual* along with standard GSI plans in 2020. *The revised materials met the condition requirements.*

CONDITION 3 from the 2019 certification

IMPROVE STORMWATER MANAGEMENT AT NORTH MAINTENANCE FACILITY

In early 2019, galvanized metal parts, bark, and sand and gravel that were previously stored in the open at the NMF were placed under tarps, thereby temporarily protecting them from stormwater runoff. Wood chips that were previously stored at this facility have since been removed. Although these actions represent improvements to stormwater management, there are still many additional improvements that are warranted, as described below in the Recertification Conditions section.

Since the 2019 certification, the City completed a *Distributed Maintenance Facilities Study* that concluded it was not feasible to create a single large Public Works maintenance facility. Instead, the City plans to make improvements to four existing city-owned facilities, including the NMF. Work is currently underway to relocate diesel and gasoline tanks and street sweeper solid waste and wastewater decanting away from the NMF site to the new Ballinger Maintenance Facility site. Complete redevelopment of the NMF site, which will include new stormwater facilities, is under consideration, consistent with Salmon-Safe guidelines. Based on work the City has completed to date, the Science Team considers this condition to have been partially satisfied. The Science Team will review stormwater management elements for the renovated NMF, as described below in the Recertification Conditions section.

CONDITION 4 from the 2019 certification

IMPROVE INVENTORY OF STORMWATER INFRASTRUCTURE

This condition asked for an update to the existing GIS layer in the next *Surface Water Master Plan* (SWMP) update. However, the 2018 version of the *SWMP* is still the most current. Work on the update was initially expected to begin in 2022 and be completed around the end of 2023, but was pushed back due to a combination of pandemic budget challenges and staffing changes. The City selected a consultant team to complete the update before the end of 2024. Thus, this condition remains to be satisfied.

CONDITION 5 from the 2019 certification

ASSESS WATER CONSERVATION EFFORTS

The City prepared a memo in 2021 comparing water use in 2019 and 2022 at Shoreline facilities to a 2013 water use baseline. These comparisons provided useful data for each facility. The onset of the COVID-19 epidemic in 2020 reduced water use at many facilities. However, the data for that year are less useful for longer trend analysis. Since that analysis was completed, the City has updated the type of data they are collecting from the irrigation flow meters. Monthly water use is still being tracked by facility, but water use is also being tracked by individual irrigation zones within each facility. This additional level of accuracy will facilitate fine-tuning of the irrigation systems beyond what would be possible using the overall facility analysis. *The Science Team considers this condition to have been satisfied.*

CONDITION 6 from the 2019 certification

ADOPT SALMON-SAFE CONSTRUCTION STANDARDS

Work on this condition is linked to Condition 1. The City completed a checklist describing Salmon-Safe construction standards related to stormwater management. As with the checklist prepared per Condition 1, the Condition 6 checklist also includes an independent plan review step that is intended to further reduce short- and long-term adverse impacts from stormwater associated with construction projects. *The Science Team considers this condition to have been satisfied.*

CONDITION 7 from the 2019 certification

IMPROVE WATER QUALITY MONITORING PROGRAM

Like Condition 4, this condition is tied to an update to the *SWMP*, which is currently being revised. The City started evaluating the current water quality monitoring programs in 2020 and developed options to meet this condition. Ultimately, the *SWMP* update will determine which program option the City implements. The City plans to survey the public in the spring of 2024 to solicit their opinions on which of three potential *SWMPs* is most appropriate. The Science Team considers this condition to have been partially satisfied.

CONDITION 8 from the 2019 certification

IMPROVE SNOW REMOVAL AND ICE CONTROL PLAN

An outside expert prepared an alternatives analysis for the City in 2021. *The Science Team confirmed that the analysis met Salmon-Safe guidelines and the intent of this condition.*

CONDITION 9 from the 2019 certification

UPDATE THE IPM PLAN

The City's IPM Plan was revised and enacted in 2021 in accordance with this condition.

CONDITION 10 from the 2019 certification

ENHANCE BIODIVERSITY IN PARKS WHEN CONVERTING TURF OR LANDSCAPED AREAS

A memo concerning opportunities to create nature patches in Shoreline parks was provided in May 2021. More than 150 landscaped areas of city parks were identified for potential conversion to nature patches. To date, restoration work has begun at approximately 75% of these sites. The initial emphasis for many of these sites has been on weeding and chipping turf areas to control re-growth of undesirable vegetation. Going forward, the emphasis will be on the addition of plants with limited water needs that can provide forage, habitat, and aesthetic beauty. City staff have chosen to focus on high visibility areas, such as park entrances, rental pavilions, and parking islands, to maximize community impact and make use of underutilized land to provide ecosystem services. Steep slopes and hillsides will be maintained as meadows with a mixture of flowers and grasses of varying heights. The City has made excellent progress on this condition. Given that progress and the framework that has been established, the Science Team considers the intent of the condition to have been satisfied, although there is still additional work to do in implementing that restoration framework.

CONDITION 11 from the 2019 certification

COMPLETE SUBSTANTIAL DESIGN OF STORMWATER MANAGEMENT PROJECTS WITH HABITAT RESTORATION ELEMENTS

The City has completed three projects and others are in progress. The Ballinger Open Space Restoration was completed 2018. The Ronald Bog wetland restoration/mitigation project was completed by Sound Transit in 2020. Phase 1 of the Hidden Lake Dam Removal was completed in 2022. Phase 2 of this project (NW Innis Arden Way Boeing Creek Culvert Replacement) is scheduled for construction in summer 2024. The Science Team visited the Hidden Lake and Ronald Bog projects during the field assessment and was impressed with the habitat restoration elements in both projects. *The Science Team commends the City of Shoreline for their efforts on completing stormwater management projects with habitat restoration elements and considers this condition to have been satisfied.*

The 25th Ave NE Flood Reduction/Brugger's Bog Park Expansion Project has reached 60% design and is currently being "rebranded" as the Ballinger Creek Habitat Restoration Project, which is being evaluated by USACE for potential funding contributions. The Science Team visited this site during their field assessment and reviewed the conceptual restoration design. Although this project is relatively far along in the design process, the Science Team believes that improvements should be made to the design to improve salmon habitat, as described below in the Recertification Conditions section.

CONDITION 12 from the 2019 certification

INCORPORATE HABITAT AND FISH USE INFORMATION INTO *SURFACE WATER MASTER PLAN*

Like Conditions 4 and 7, this condition is tied to an update to the *SWMP*, which is underway. The City has indicated that salmon health is one of the major themes that will be used to guide the update in addition to climate resiliency and equity. The Science Team considers this condition to have been partially satisfied.

Additional Observations

As part of the site assessment, the Science Team reviewed the City's interactive GIS maps.[2] The City's inventory of GIS resources includes a delineation of critical areas (e.g., stream and wetland buffers)[3] but does not include information related to the presence of fish in City waterways, including the existence of barriers to fish passage. Proponents of projects that could impact those waterways should have ready access to this type of information because it influences the selection of appropriate best management practices for the protection of aquatic resources. Statewide inventories of fish distribution and fish passage barriers are maintained by the Washington Department of Fish and Wildlife.[4] The City should share a link to this resource on a Shoreline Surface Water Utility webpage.

While engineering standards related to stormwater management are well documented in the *Engineering Development Manual*, it is not apparent that City staff and contractors have been sufficiently trained in the manner by which construction practices follow Salmon-Safe standards and model construction-phase stormwater management guidelines, as documented in Standard U.3.4 and Appendix J of the *Urban Standards v3.1*, respectively. For example, the Science Team observed evidence of significant trackout at the entrance to the construction site for the Ballinger Maintenance Facility. The Science Team was told that sweeping was conducted daily, but the combination of schedule, equipment, and implementation of this practice appeared to be insufficient.

The City of Shoreline completed the Aurora Corridor Project in 2017. The project included the installation of multiple stormwater management features, including raingarden planters, Silva cells, Filterra® bioretention systems, and porous pavers. Some of those features are not performing as intended. Some retrofitting is warranted, as described in a 2023 report (Aurora Avenue Retrofit Design Services) prepared for the City and in the Recertification Conditions section below. That report described a condition assessment that included improvement options, schematic level plans, and probable cost estimates, with the goal of reducing ongoing maintenance costs and improving functionality of the installed landscape and stormwater elements.

---

[2] *https://www.shorelinewa.gov/our-city/maps-gis/online-interactive-maps*

[3] *shoreline.maps.arcgis.com/apps/webappviewer/index.html?id=0d3bff120e054f8b81e0ca8681351d08*
The Science Team noted that the name of this map (Property Information) does not accurately reflect its content. A name change is warranted.

[4] SalmonScape (*https://apps.wdfw.wa.gov/salmonscape/map.html*), Priority Habitat and Species (*https://geodataservices.wdfw.wa.gov/hp/phs/*), Washington State Fish Passage (*https://geodataservices.wdfw.wa.gov/hp/fishpassage/index.html*), Statewide Washington Integrated Fish Distribution (*https://geo.wa.gov/datasets/wdfw::statewide-washington-integrated-fish-distribution/about*)

RECERTIFICATION CONDITIONS

Recertification Recommendation: The Science Team recommends that the City of Shoreline be recertified as Salmon-Safe subject to nine conditions listed below. Timelines for accomplishing objectives are measured from the official date of this Salmon-Safe conditional recertification.

CONDITION 1

Complete previous conditions associated with the update of Surface Water Master Plan (SWMP)

The City of Shoreline shall complete the work associated with previous conditions 4 (improve inventory of stormwater infrastructure); 7 (improve water quality monitoring program); and 12 (incorporate habitat and fish use) as part of the ongoing update to their *Surface Water Master Plan*. Additional details on each of the deliverables associated with these three previous conditions are provided below.

- **Previous Condition 4 deliverable**

  The City will develop GIS data that differentiate between drainage areas in the City that currently receive some level of stormwater flow control or water quality treatment and areas that receive neither. The primary focus shall be on runoff from publicly-owned impervious surfaces. The analysis shall account for topography and drainage network connections but need not differentiate between treatment types or specify the degree of stormwater treatment/management that each facility provides for the contributing area. For private properties, the analysis may make simplifying assumptions about stormwater treatment (or lack thereof) based on age and type of development. Follow-on work for this deliverable is described as new Condition 2 below.

- **Previous Condition 7 deliverable**

  The City shall prepare a draft Sampling and Analysis Plan (SAP) that describes methods for the expanded stream water quality monitoring program and re-established benthic invertebrate monitoring program. The study designs shall be commensurate with funding authorized in the SWMP and shall include additional metal analytes and sampling events for storm and non-storm conditions. Field and laboratory work specified in the SAP is described as new Condition 3 below.

- **Previous Condition 12 deliverable**

  The City shall prepare a draft 2024 SWMP that incorporates existing available information on stream habitat, fish use, and other relevant

CONDITION 1 continues on next page >

stream information. The SWMP shall also include a budget for a separate, future City-wide stream study that will include stream habitat assessments and recommended habitat improvement projects (see new Condition 6 below).

TIMELINE

The City shall complete the work associated with previous conditions 4, 7, and 12 within one year of recertification.

CONDITION 2

Develop GIS analysis to assess stormwater treatment

Once work associated with previous condition 4 is completed, per new Condition 1 above, the City of Shoreline shall build upon the previous condition 4 GIS deliverable to conduct further analysis to estimate drainage areas within the city managed by flow control, water quality treatment, and/or infiltration. The analysis shall differentiate between flow control, water quality treatment, and infiltration potential for each facility but need not specify the degree of stormwater treatment/management that each facility provides for the contributing area. For private properties, the analysis may make simplifying assumptions about stormwater treatment (or lack thereof) based on age and type of development. This assessment is intended to enable a demonstration of the degree to which watershed impacts are reduced over a long-term timeframe through application of green and other stormwater management techniques.

TIMELINE

The City shall complete the assessment of stormwater management techniques and submit it to Salmon-Safe for review by December 31, 2027.

CONDITION 3

Implement stream water quality monitoring program

Once work associated with previous condition 7 is completed, per new Condition 1 above, the City of Shoreline shall implement the monitoring described in the SAP for at least two stream locations within the city.

TIMELINE

The City shall implement the expansions to the water quality monitoring program described in the SAP and prepare a report with data and conclusions for review by Salmon-Safe within five years of recertification.

CONDITION 4

Stormwater management at North Maintenance Facility (NMF)

This condition is divided into two parts. Condition 4A refers to the NMF as it exists today and Condition 4B refers to the future condition of the NMF.

CONDITION 4A

Water quality testing and materials storage at North Maintenance Facility

The City of Shoreline shall conduct additional water quality sampling within Ballinger Creek both upstream and downstream of the NMF during rainfall events. The sampling shall be designed to determine whether or not there are adverse impacts to Ballinger Creek water quality that can be attributed to stormwater discharged from the NMF. The water quality testing will further inform operations at the site. If water quality criteria exceedances are attributed to the NMF, additional best management practices will be implemented and described in the SWPPP. Sampling shall be conducted for six storm events within one wet season (October-April) and shall include testing for dissolved and total zinc and copper, hardness, and total suspended solids. Samples shall be collect-ed at the first opportunity after the start of stormwater discharge from the yard during business hours. The time precipitation was first recorded at the closest rain gauge and the time that each sample is collected shall also be reported.

The City shall also supply covers for all waste and storage dumpsters and keep covered unless material is being added or removed and remove unused, potentially pollution-generating equipment and material, such as metal and treated wood, and properly dispose or store out of contact with rainfall or runoff, as feasible.

CONDITION 4 continues on next page >

TIMELINE

The City shall prepare a memorandum that describes the proposed sampling locations and the sampling methods and provide it to Salmon-Safe for review within three months of recertification. The City shall conduct the required sampling and prepare a report with data and conclusions and provide to Salmon-Safe for review within three months of the completion of sampling and analysis. The City shall install covers for dumpsters and complete the removal or storage of unused, potentially pollution-generating equipment and material, as feasible, within one year of recertification.

CONDITION 4B

Adhere to Salmon-Safe standards for design of updated North Maintenance Facility

The City of Shoreline shall design stormwater management systems for significant redevelopment at NMF according to standards U.1.1–U.1.11 of the Urban Standards v3.1.

TIMELINE

The City shall provide 30% design specifications related to storm-water elements of the updated NMF for Salmon-Safe review within two years of council approval for NMF upgrades.

CONDITION 5

Commit to avoidance of crumb rubber for any new or replaced City athletic fields

The City of Shoreline shall establish a written policy that commits to the avoidance of crumb rubber as infill for any new and replaced City athletic fields. There is a growing body of research documenting both human and ecological health impacts from the use of such materials in artificial turf fields.[5]

TIMELINE

The City of shall draft a written policy for Salmon-Safe review within two years of recertification.

CONDITION 6

Implement a stream characterization study to support fish habitat

The City of Shoreline shall implement a city-wide Stream Characterization and Habitat Assessment Study, which shall include prioritized habitat improvement projects. The City shall also post a link to WDFW GIS data for fish distribution and passage barriers on a Shoreline Surface Water Utility webpage.

TIMELINE

The City shall complete the Stream Characterization and Habitat Assessment Study and prepare a report for Salmon-Safe review within four years of recertification.

[5] Murphy, Maire and Warner, Genoa R. "Health Impacts of Artificial Turf: Toxicity Studies, Challenges, and Future Directions", *Environ. Pollut.*, Oct. 1, 2022; 310:119841. Available for download from the NIH National Library of Medicine as PMID 35948114: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC10262297/

CONDITION 7

Implement bioretention recommendations from the Aurora Avenue retrofit project

The City of Shoreline shall implement a pilot project to improve the functionality and maintenance of the bioretention beds and swales installed during the Aurora Avenue Corridor Improvement Project. The pilot project improvements shall be monitored for a full water year, after which further design modifications may be required. If the improvements are successful in meeting the established bioretention goals, a project schedule shall be developed for additional retrofits of bioretention facilities.

TIMELINE

The City shall construct a bioretention pilot retrofit project by 2026, evaluate efficacy of the improvements by 2027, and develop a project schedule for either additional pilot test beds or additional bioretention retrofits along the corridor by 2028.

CONDITION 8

Document and implement the control of invasive plant species

The City of Shoreline shall develop and document an inventory of known locations of Class A and regulated Class B and Class C noxious weeds. Data collected by the City shall be regularly shared with King County Noxious Weeds, who record these data in a public-facing GIS portal.[6] The City shall provide a link with instructions for King County's GIS portal. Control of the inventoried noxious weeds shall be consistent with the City's IPM policy. Prioritization of work will be based on considerations of public safety, as well as targeting regulated noxious weeds and those occurring in streams and wetlands on City of Shoreline property.

TIMELINE

The City shall document populations of designated noxious weeds by type, classification, and location and submit them to Salmon-Safe for review within two years of recertification. Prioritized control will be ongoing.

[6] *https://kingcounty.gov/en/legacy/services/environment/animals-and-plants/noxious-weeds/maps*

CONDITION 9

Maximize salmon-friendly elements of habitat restoration projects that support salmonid use

The City of Shoreline shall establish a Stream Habitat Repair and Restoration Program to implement priority projects within stream habitat areas, prioritizing restoration work that benefits salmonids. The program shall be based on recommendations from the Stream Characterization and Habitat Assessment Study described above under Condition 6. The City shall begin design on one or more restoration projects located on City property, as authorized funding allows.

TIMELINE

The City shall develop the Stream Habitat Repair and Restoration Program and create a prioritized list of restoration projects for review by Salmon-Safe within four years of recertification. The City shall begin design of one or more restoration projects within the five-year certification period.

Continuing Improvement Recommendations

In addition to the conditions for certification listed above, Salmon-Safe offers the following continuing improvement recommendations, the adoption of which are not mandatory to achieve certification, but are considered Salmon-Safe best practices:

- **Partner with Shoreline Community College to develop pilot project for Salmon-Safe certification**

  The Shoreline Community College campus covers more than 80 acres within the City of Shoreline and contains significant patches of urban ecological habitat. To facilitate the preservation and enhancement of that habitat and to minimize the impact of campus operations on habitat and water quality in the City of Shoreline, we recommend that the City partner with the college on a pilot project for Salmon-Safe certification. The pilot project could be a single building or a larger development within the college. The pilot project would hopefully demonstrate to the college the environmental and educational benefits from constructing a project in accordance of Salmon-Safe standards.

- **Increase promotion of the City's *Deep Green Incentive Program***

  The City of Shoreline is in a position to promote private developments that are consistent with Salmon-Safe standards, and other certifications such as ILFI's Living Building Challenge and Living Community Challenges. The City's *Deep Green Incentive Program* provides economic (e.g., reduced permit fees), procedural (e.g., expedited permitting reviews), and project design (e.g., greater floor area ratio) incentives for projects seeking Salmon-Safe certification, but these incentives have not yet been widely utilized for private developments. We recommend that the City increase its effort in promoting this valuable incentive program.

CONCLUSIONS

Salmon-Safe and the Science Team commend the City of Shoreline for its commitment to implementing the conditions listed in this report, and to managing the City to continue to improve water quality and urban habitat over the next five years. We extend appreciation and congratulations to the City of Shoreline team for their work in preparing for the recertification assessment and assisting the Science Team in its assessment.

Kirk Peterson (center, City of Shoreline) provides an overview of the Ballinger Open Space Restoration project.

Creative Credits

Report design & layout | *Jay Tracy Studios*
Cover photo © *City of Shoreline*
Site visit & Science Team biography photos © *Salmon-Safe, Inc.*

www.salmonsafe.org