The Nature Conservancy
Washington

February 25, 2022

Abbey Stockwell (Phase II Municipal Stormwater Permit Writer)
Emma Trewhitt (Phase I Municipal Stormwater Permit Writer)
Department of Ecology
300 Desmond Drive SE,
Lacey, WA 98503

Dear Ms. Stockwell and Ms. Trewhitt:

On behalf of The Nature Conservancy of Washington and our 130,000 supporters across the state, I write to thank you for your commitment to clean water, the health and well-being of our communities. Thank you for the opportunity to provide early input on the 2024 Municipal Stormwater Permit Reissuance.

Each year, millions of pounds of pollutants enter Puget Sound's complex waterways of rivers, streams, lakes, and the sound itself. These pollutants flow as untreated stormwater from a decentralized network of roads, aging and overburdened sewer pipes, and pesticide covered landscapes. Scientists have demonstrated how this pollution is killing fish and other species and threatening the existence of our iconic orcas. Human health is also suffering as we live out our lives adjacent to near-ubiquitous pollution. Communities of color are the most at risk, here and around the world, of living near contaminated air, water and soil.

Much of this stormwater runoff is from older, existing development constructed prior to the adoption of the Ecology 1992 Stormwater Management Manual. Most developed land in the Puget Sound drainage basin still discharges un-detained, untreated stormwater. Effective restoration of the Puget Sound ecosystem will need to address these older, developed areas and their legacy of pollution. The next stormwater permit must enhance stormwater runoff treatment from existing roads and infrastructure with an emphasis on green infrastructure retrofits. Projects must be prioritized based on benefits to salmon recovery and ecosystem health, reducing toxic pollution, addressing health disparities, and cost-effectiveness.

For the next permit cycle, we are tracking several priorities we think are critical to making clean water progress:

Promoting High-Impact Action at a Watershed Scale

- **Efficiencies through coordination.** Newer stormwater rules already require consideration of a nature-based approach. However, they often focus on impacts of new and site-specific development (source), and don't necessarily address the sources of legacy pollution that may be associated with the site, or the most efficient solutions for dealing with that legacy pollution from the surrounding community. Our hope is that Phase 1 and Phase 2 stormwater permits find ways to incentivize jurisdictions to coordinate with unrelated public works toward addressing community pollution from the surrounding neighborhood. For example, the City of

74 Wall Street
Seattle, WA 98121
Tel: (206) 343-4344
www.WashingtonNature.org

Seattle found that the lowest cost point in time to make green infrastructure investments is often when unrelated capital projects get built. According to the City's estimates, it would be roughly three times cheaper (per gallon of water treated) for the Seattle Department of Transportation to install a roadside rain garden while doing adjacent unrelated work. Every biennium, the legislature invests billions for the creation, improvement or renovation of roads, public facilities, including schools, hospitals, prisons, and universities. These projects present us with some of the most cost-effective ways to divert runoff originating from adjacent pollution hotspots.

- **Support flexibility and collaboration.** No two sites or stormwater situations are identical. Variables related to soil types, natural conditions, and existing site conditions make it difficult to apply prescriptive standards. Performance requirements set goals and benchmarks for GSI retrofits that must be achieved, without specifying specific standards. This approach allows the most creativity and innovation because it allows for emerging practices or new technologies. We would hope that the upcoming permit offers jurisdictions some level of flexibility (consistent with permits) to unlock innovation in the toughest pollution hotspots. In addition, 90%-95% of land across most of U.S. Urban/Suburban areas is in private ownership (source). There are reports estimating the total statewide need for stormwater infrastructure funding at around $19 billion (source). Clean water and the health of our communities will fundamentally rely on partnerships and incentives for jurisdictions to collaborate in new ways with private landowners. High-impact actions no longer just mean considering the runoff from a specific road, property, or building, but we now have great examples of properties that are making their whole community cleaner, fixing well beyond their own footprint. Regional stormwater parks can be designed and built to absolve upstream stormwater retrofit and redevelopment permit requirements if there was a clear pathway to proactively 'bank' credits for future regulatory need or fee-in-lieu funding. Regardless of type of incentive or credit program, certainty and simplicity are key to uptake.

- **Technology acceleration.** We appreciate the Ecology TAPE program and rigor it brings for vetting new stormwater technologies. And yet, many useful technologies that could dramatically buy-down the cost of stormwater action are not in use at a meaningful scale. Significant opportunities exist to accelerate progress with the use of artificial intelligence, crowdsourcing, smart sensors, and other technologies that have become mainstream in the energy sector and are still emerging in the water sector. Jurisdictions are cautious in trying new approaches or taking any risk, even if they might help overcome chronic barriers. Via the next permit, we would encourage Ecology to offer a space in the permit where jurisdictions can pilot out-of-the-box solutions – possibly through the creation of innovation zones at a watershed level. Giving jurisdictions a reason, and a place, to try new things by offering zones with the ability to offer permitting flexibility, coordination, and accelerated problem solving.

Helping Permitees Move to Action, Faster.

- **Jurisdictions Should be Incentivized to Complete Retrofit Projects (Versus Plan).** We've heard common frustrations about a perpetual planning cycle - where permitees spend years and significant ratepayer funding to develop highly detailed plans, that never get enacted because funding runs out. We believe that in this way perfection becomes the enemy of good, and allows the status quo to rule the day. The permit lacks a strong mechanism to require the retrofit projects to be completed. Smaller jurisdiction permits have lacked a green infrastructure retrofit planning requirement altogether. We have to make more substantive progress on addressing

stormwater impacts – particularly in more densely developed areas where the cost of retrofit (and real estate) may be high and getting higher with each passing year.

- **Consistent Data Collected.** Effective watershed-level planning requires partnerships across basins and political boundaries, as well as a shared vocabulary around metrics and reporting. Watershed boundaries do not align with political boundaries, and the actions of one jurisdiction can impact another jurisdiction's water resources. For example, upstream sources, potentially in other jurisdictions, can have significant impacts on the efforts of downstream jurisdictions to control pollution. Watershed-scale planning therefore requires a partnership among all those who have a stake in the improved health of the watershed. Data sets that are difficult to access for jurisdictions (and communities!) include mapping of outfalls, downspouts off bridges/highways, underground stormwater assets. Each permit term has improved the information available on stormwater outfalls, as each municipality has had to document its system. However, we still lack a central repository, where the public can easily access information about these systems, particularly in areas where more than one jurisdiction owns infrastructure. With mapping and locator technology improving every day, we need to increase transparency and public accountability and require that municipalities enter location information in a central repository just as they submit permit requirements to central databases. The public needs a portal to find this information easily.

- **Consistent Data Offered.** Where tools and data sets do exist, they should be offered so that they may be integrated for more affordable retrofit planning and stormwater action. For example, TNC's new Puget Sound **Stormwater Heatmap** is a useful tool for deciding how to prioritize given the gap between available resources and the needs for stormwater management. Spatial data can be viewed, or data can be aggregated, reported, and downloaded according to user-specified watershed unit. It is all open source and provided free of charge. This tool was designed buy-down the planning costs for jurisdictions take targeted, science-informed action on rolling back legacy pollution. The heatmap harnesses the power of machine learning, cloud computing, innovative traffic modeling, local monitoring data, and a suite of spatial datasets to predictively map where water pollutants and runoff are generated across the landscape. Data layers include: Precipitation (mean annual), Slope/Topography, Soils & Lithography, High Resolution Landcover, Impervious surface, Average daily traffic, Land use, Age of Development, Mean annual stormwater runoff (hydrology), Mean annual pollution loading including: TSS, Total Phosphorous, Total Copper, Total Zinc, Total Kjeldahl Nitrogen. Hydrologic output is based on the Western Washington Hydrology Model, and includes historic, current, and future conditions. It provides hydrology information across the Puget Sound landscape in comprehensive detail that allowed better flow estimates, faster. Tools typically used for this purpose were not designed for or very accurate in many of the small and urbanized basins that jurisdictions may need to analyze.

Fixing the Past, While Preparing for the Future

- **6PPD-Quinone.** In Salmon country, tight collaboration between roads and water quality priorities are becoming increasingly higher profile with the recognition of tire-rubber dust and its toxicity. If you're looking at the California Current – from BC to Northern CA and the places where salmon and orca live out their lives, 70 percent of the stormwater contamination could be treated by focusing treatment on only 1.3 percent of the land area (source). Our urban transportation corridors are stormwater pollution loading hotspots. 6PPD-quinone needs to be

addressed through a combination of source control (tire formulations) and treatment (green infrastructure that eliminates the acute toxicity). We are excited to participate with the research community as they come together regularly with Ecology to share emerging knowledge about 6PPD. And in addition, this permit must accelerate implementing large-scale use of bioretention to make progress toward reducing harm to people and aquatic life. We believe that strategically sited stormwater parks that have the most hope for retrofitting hundreds (or thousands!) of acres in a single project are the best way of accomplishing this, especially in dense urban areas. Regional facilities often have better treatment and can be more cost-effective than smaller facilities. In addition, smaller cities and towns may be able to leverage analysis at the regional level for planning and use their limited funds toward implementation.

Puget Sound is a special place on the planet. It's the heartbeat of the region—our home, the backdrop of our lives, where land and water meet to create communities, economies, and an entrepreneurial spirit that draws people from all over the world. Many of the restoration and pollution reduction investments designed to recover the Sound, also help to make the communities of Washington state healthier and our communities stronger.

Once again, thank you for your commitment and service to recovering Puget Sound, endangered salmon and Orca, and the well-being of our communities. Doing this work will require new approaches to old problems, cross-sector commitments from across our region, and for us to be in lock step with tribal partners. The challenges facing us are significant and will require difficult decisions, but together we can provide the vision, innovation, and will be necessary for both people and nature to thrive.

If you have any questions on these comments, please do not hesitate to contact me. Thank you again for the early input opportunity.

Best Regards,

Jessie Israel

Puget Sound Conservation
Director