Letter of Intent to
Submit an NPDES Effectiveness Study Proposal

All fields must be completed

1. Proposed Study Title: The Stormwater Benefits of Urban Tree Planting

2. Short Description of Proposed Study:

   The proposal is to study the many diverse benefits of strategically planned urban tree planting, including the capacity of canopy cover to reduce rainfall volume that comes in contact with impervious surfaces, how canopy cover in urban settings reduces stormwater temperature, and the benefits and differences between deciduous and conifer tree planting in urban area.

2. What specific Stormwater Management Program condition(s) or other permit condition(s) in the NPDES W. WA. Phase I and/or Phase II Municipal Stormwater Permit does your study address?

   Phase I Permit: Low impact development best management practices

   Phase II Permit: Low impact development best management practices

3. How will this study inform, assess effectiveness and/or support implementation of the specified NPDES permit conditions (e.g., project goal) and future permit conditions?

   Trees can mitigate the volume of stormwater and reduce temperature of runoff by capturing, redirecting, absorbing and transpiring rainfall. Canopy over impervious surface is most effective. This study will quantify the value of urban trees by measuring stormwater reduction in urban areas with tree canopy vs those with little or no canopy.

4. What are the anticipated measurable outcomes or deliverables of this proposed study?

   Reduced rainfall that comes in contact with impervious area due to tree canopy coverage. Reduced temperature of stormwater runoff due to tree canopy coverage. Notable differences that conifers and deciduous offer for canopy coverage and stormwater management.

5. How does this study advance regional understanding for stormwater management?

   The study will demonstrate the value of adding additional trees to the urban landscape as a tool to mitigate stormwater impacts to receiving waters, reduced volume and temperatures. It will reveal positive economic impacts from avoided costs associated with additional built infrastructure, and the health, social and environmental benefits provided by trees to the community.

6. Applicant(s) Contact Information:

   Name: Linden Lampman
   Organization: Washington State Department of Natural Resources
   Phone: (360) 902-1703
   Email: linden.lampman@dnr.wa.gov

7. Permittees you are coordinating with (Provide contact information):

   City of Tacoma
   City of Puyallup
   Western Washington University

8. Select Stormwater Work Group study category (select all that apply):

☐ Source Control	☐ Retrofits	☐ Education & Outreach
☑ LID	☐ O&M	☐ Other:

Submit LOI to Brandi Lubliner (WA Department of Ecology) via email at Brandi.Lubliner@ecy.wa.gov