Green Stormwater Solutions Pilot Project Proposal

Chris Korwel – Stormwater Program Coordinator

City of Lake Forest Park – Public Works Department

July 2025

The Problem:

Stormwater runoff from urban development is the number one source of pollution in Puget Sound. We are contributing to this problem everyday.

What am I proposing?

- **20 Green Stormwater (GSI) Projects on residential properties to help the City manage stormwater, to increase resident involvement in community stewardship, and promote sustainable practices.**
- **This project would be funded in equal parts by the homeowners and a grant from King Conservation District.**
- **This is a low-risk investment of City resources with the potential for many positive benefits to the community!**

Photo Credit: Tox-Ick.org

Why am I proposing this?

- Stormwater infrastructure was traditionally designed to shuttle water off-site and out of sight as quickly as possible.
- This creates expensive resource management and pollution generation issues that are out of sync with the free stormwater management services natural processes provide automatically.
- One effect of treating rainfall as runoff is all the toxic substances from our urban environment end up washed into the water we swim in, the fish we eat, and the wildlife we love.
- We can address these problems in ways that are less costly, centralized, and reliant on city infrastructure!

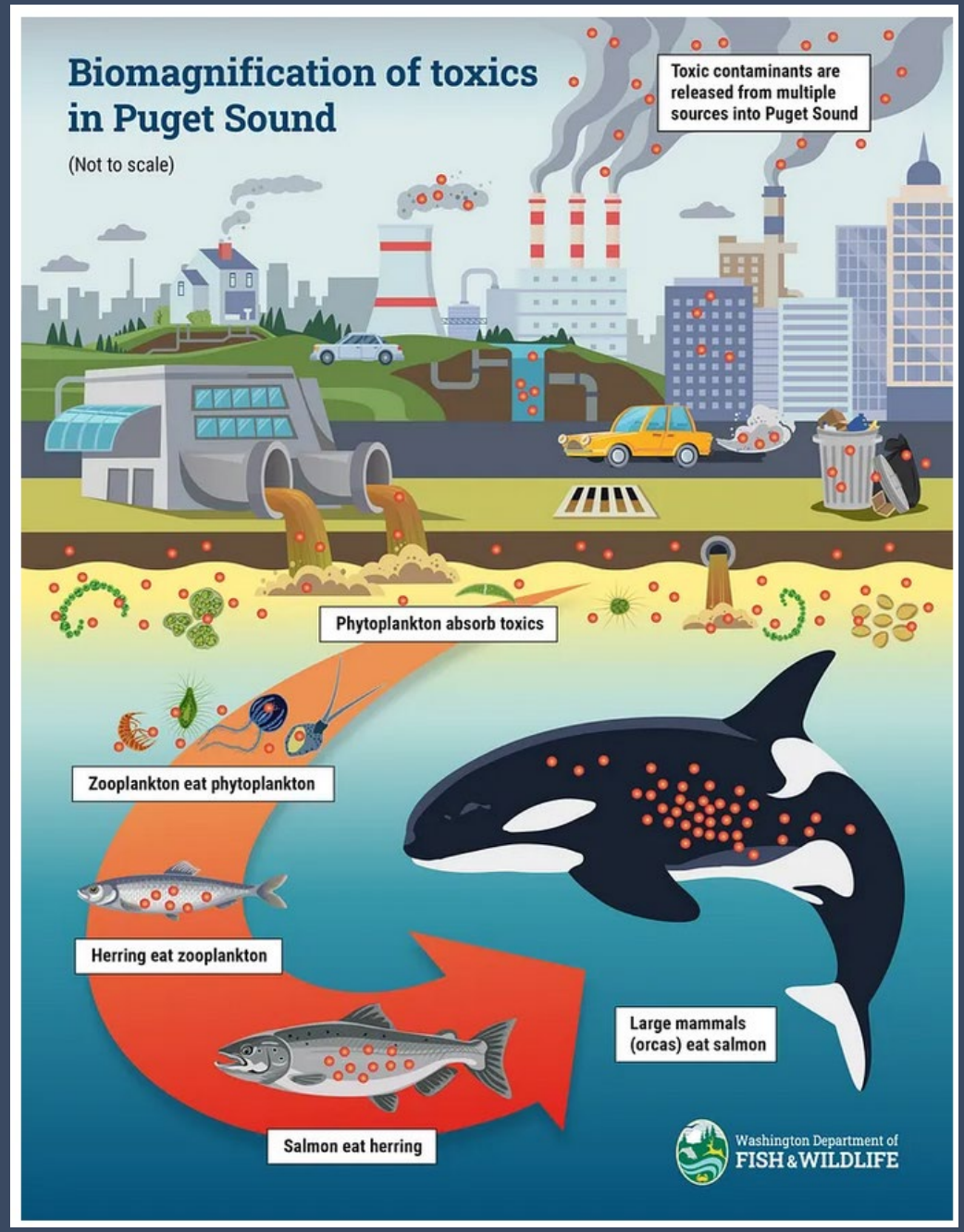


Photo Credit: Washinton Department of Fish and Wildlife

Why am I proposing this?

- **Stormwater issues affect the Lake Forest Park community in many ways and may have historically not received the considerations they deserve until a problem is apparent.**
- **Efforts to address stormwater issues are often costly, slow to be implemented, and centralized.**
- **Hard infrastructure projects require large capital investments, construction considerations, and may rely on City funds for maintenance. These projects do not.**
- **The proposed projects are proactive, cost effective, relatively quick and easy to implement, and have a smaller but cumulative positive effect.**

Photo Credit: American Public Works Association

Why am I proposing this?

- Some types of projects, known as **Low-Impact Development (LID) or Green Stormwater Infrastructure (GSI)**, are specifically designed to be affordable and approachable solutions to stormwater issues.

- These types of projects**, like the pictured rain garden,** are designed to not trigger permitting review and promote sustainability through a range of resource conservation best practices.

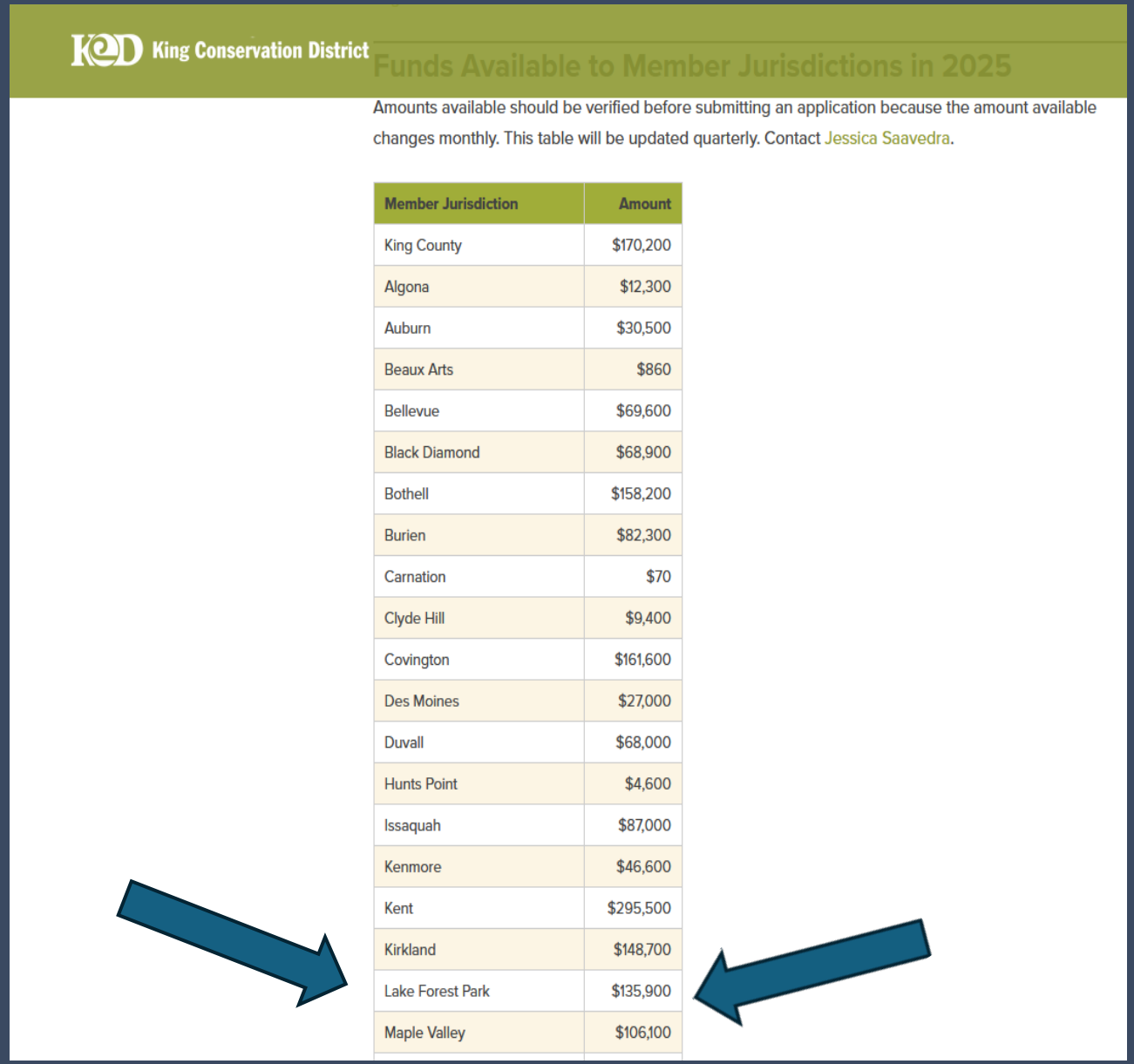
- Investment and involvement from, as well as risk to, the City are all low as the projects are owned and maintained by residents. And installed by contractors! **This also fosters community stewardship and environmental awareness.**

Photo Credit: Rain Dog Designs

That's all great – but how will we pay for this?

King Conservation District works with organizations to promote natural resource conservation through best management practices, including stormwater management.

- **Their member jurisdiction fund has $130,000+ sitting in it waiting just for us!**
- **These funds get added to annually, are not state or federal, and do not require match.**
- **Lake Forest Park hasn't capitalized on this program in 15 years! They could have reclaimed that unused money from us after 3 years!**



King Conservation District

Funds Available to Member Jurisdictions in 2025

Amounts available should be verified before submitting an application because the amount available changes monthly. This table will be updated quarterly. Contact Jessica Saavedra.

Member Jurisdiction	Amount
King County	$170,200
Algona	$12,300
Auburn	$30,500
Beaux Arts	$860
Bellevue	$69,600
Black Diamond	$68,900
Bothell	$158,200
Burien	$82,300
Carnation	$70
Clyde Hill	$9,400
Covington	$161,600
Des Moines	$27,000
Duvall	$68,000
Hunts Point	$4,600
Issaquah	$87,000
Kenmore	$46,600
Kent	$295,500
Kirkland	$148,700
Lake Forest Park	$135,900
Maple Valley	$106,100

We are in their service area and not taking advantage of their services.

Our residents are paying into this through their property taxes.

Property Tax Information

King Conservation District is an independent public agency established in 1949 by the Washington Conservation Commission under chapter RCW 89.08 RCW to assist landowners to protect and enhance natural resources. KCD serves 35 jurisdictions (34 cities and King County). The incorporated cities of Enumclaw, Federal Way, Milton, Pacific, and Skykomish are not included in KCD's service area. Below is information about King Conservation District (KCD) rates and charges reflected in your King County property tax statement. If you have questions about your King County property taxes, please call the Property Tax Information Line: 206-296-0923 or 206-263-2890.

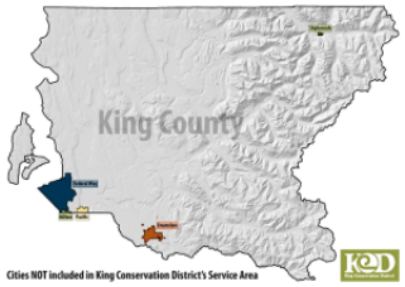
KCD Service Area

KCD wants to hear from you about our 2025 Rate Renewal. We will be presenting and taking feedback at two listening sessions scheduled in May. See links below.

There are no upcoming Events at this time.

More Information About the 2025 Rate Renewal

For many years King Conservation District was financed by a special assessment under RCW 89.08.400 based on a per parcel rate. In February, 2012 the Washington State Legislature passed HB-2567 to provide conservation districts with financing options of either per parcel assessments or a system of rates and charges.



Cities NOT included in King Conservation District's Service Area

On July 30, 2012, King Conservation District's Board of Supervisors adopted a system of rates and charges on agricultural, residential, institutional/public, commercial, open space, and vacant/undeveloped parcels within the KCD's service area. The rates and charges were allocated based on both the direct and indirect benefits of programs and services to landowners. Forest lands and federally-recognized tribal reservations within KCD's service area are the only properties exempt from rates and charges.

On November 13, 2012 the King County Council approved Ordinance 17474 authorizing an Interlocal Agreement (ILA) with King Conservation District to cooperate on efforts to assist landowners with improving water quality and conserving natural resources within King County. The ordinance included approval of KCD's proposed system of rates and charges to finance its programs and services.

KCD Member Jurisdiction Program Guidelines list "Direct Improvement of Natural Resource Conditions", "Pilot and Demonstration Projects", "Capacity Building" and "Education and Outreach" as approved actions.

This project would be all these things!

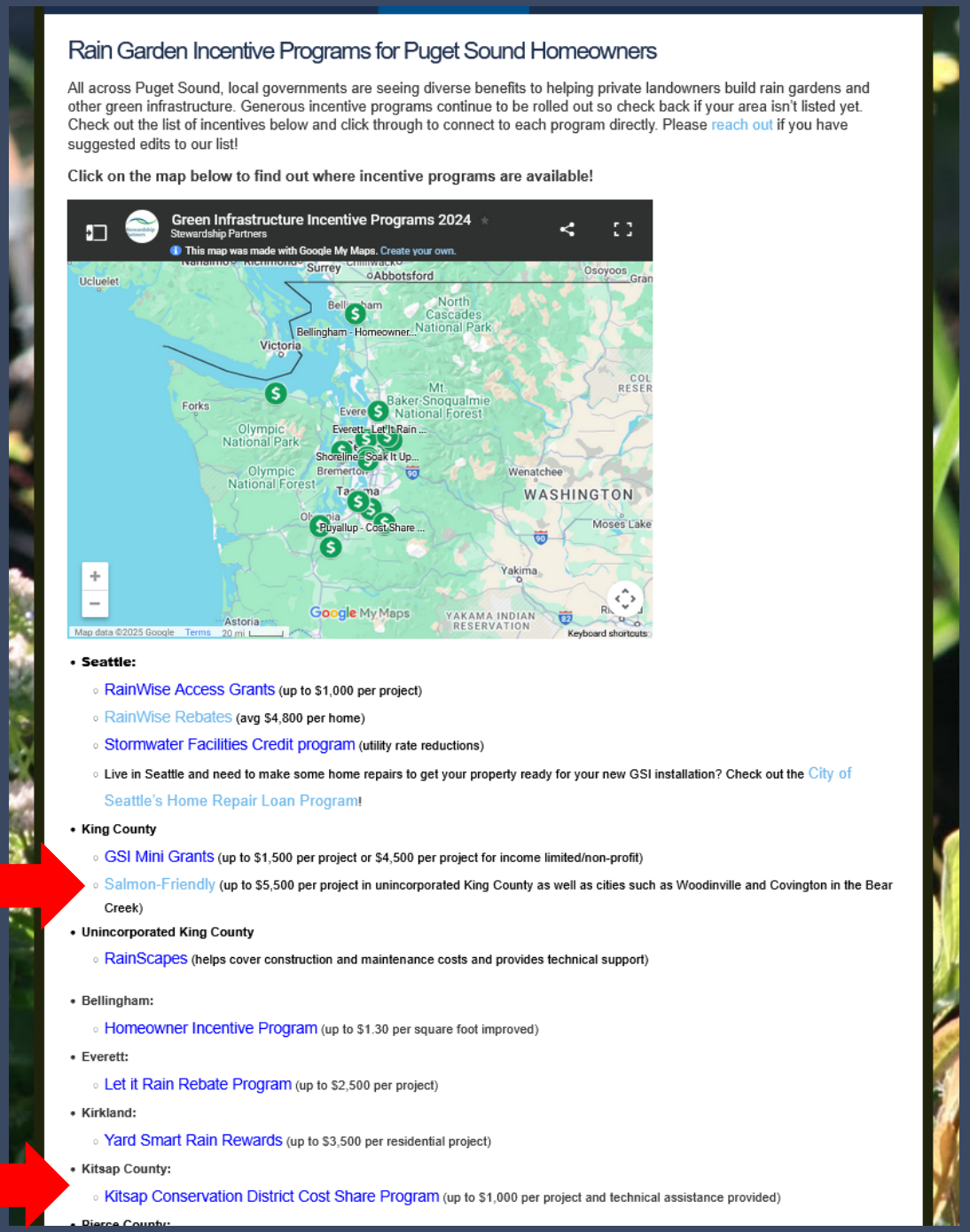
Image credit: King Conservation District

Similar Programs

In recent years rain garden incentive &/or rebate programs have been popping up all around Puget Sound as agencies try to address an important regional issue.

I helped create this one.

And worked for this one for many years.



Rain Garden Incentive Programs for Puget Sound Homeowners

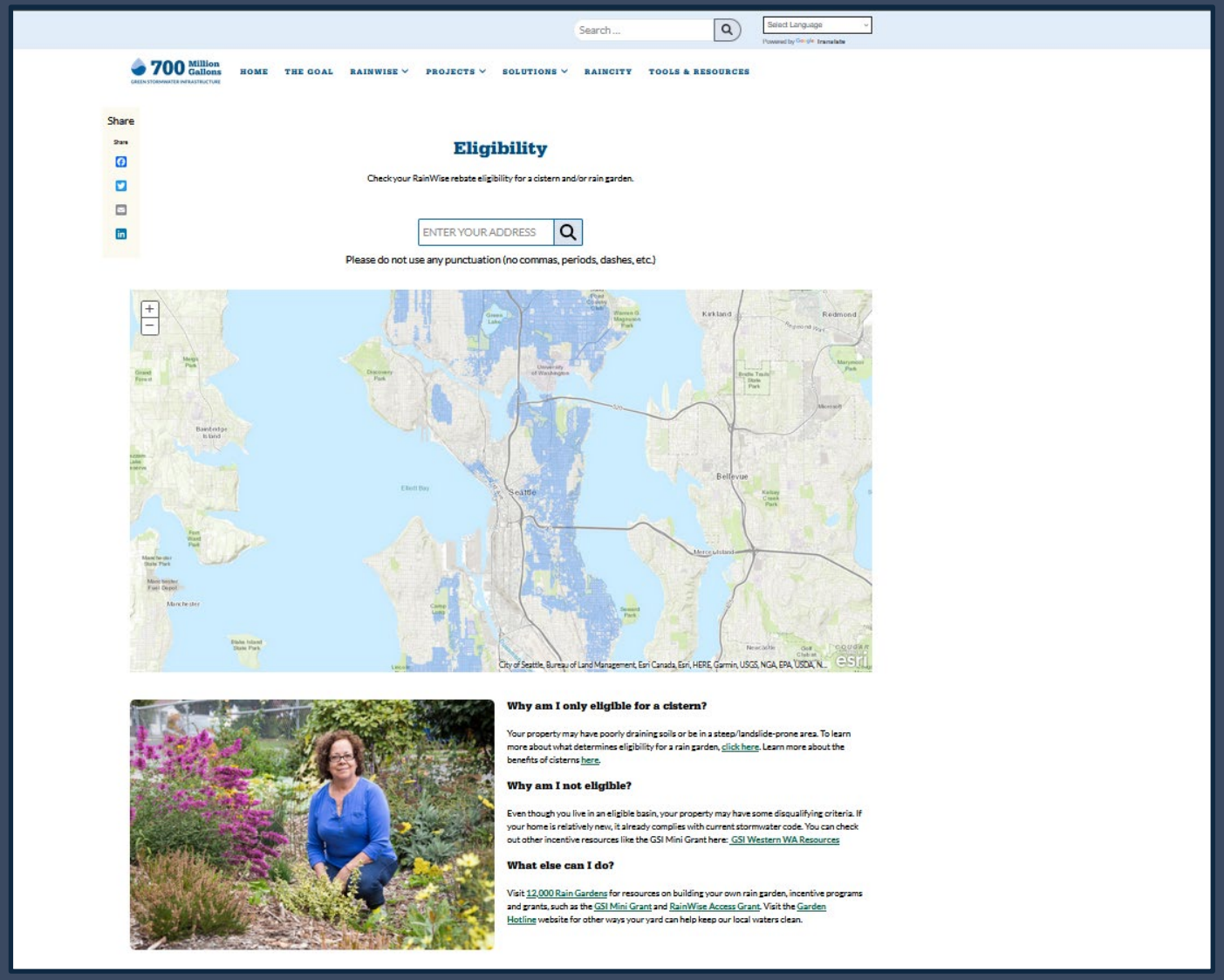
All across Puget Sound, local governments are seeing diverse benefits to helping private landowners build rain gardens and other green infrastructure. Generous incentive programs continue to be rolled out so check back if your area isn't listed yet. Check out the list of incentives below and click through to connect to each program directly. Please reach out if you have suggested edits to our list!

Click on the map below to find out where incentive programs are available!

- **Seattle:**
  - RainWise Access Grants (up to $1,000 per project)
  - RainWise Rebates (avg $4,800 per home)
  - Stormwater Facilities Credit program (utility rate reductions)
  - Live in Seattle and need to make some home repairs to get your property ready for your new GSI installation? Check out the City of Seattle's Home Repair Loan Program!
- **King County**
  - GSI Mini Grants (up to $1,500 per project or $4,500 per project for income limited/non-profit)
  - Salmon-Friendly (up to $5,500 per project in unincorporated King County as well as cities such as Woodinville and Covington in the Bear Creek)
- **Unincorporated King County**
  - RainScapes (helps cover construction and maintenance costs and provides technical support)
- **Bellingham:**
  - Homeowner Incentive Program (up to $1.30 per square foot improved)
- **Everett:**
  - Let it Rain Rebate Program (up to $2,500 per project)
- **Kirkland:**
  - Yard Smart Rain Rewards (up to $3,500 per residential project)
- **Kitsap County:**
  - Kitsap Conservation District Cost Share Program (up to $1,000 per project and technical assistance provided)
- **Pierce County:**

- **I'm familiar with many of the existing programs in the region and how they work.**
- **I already have the skills and knowledge to implement this in LFP.**
- **We can look to these other programs for guidance and resources. And to study their successes and failures.**

How will the program work?



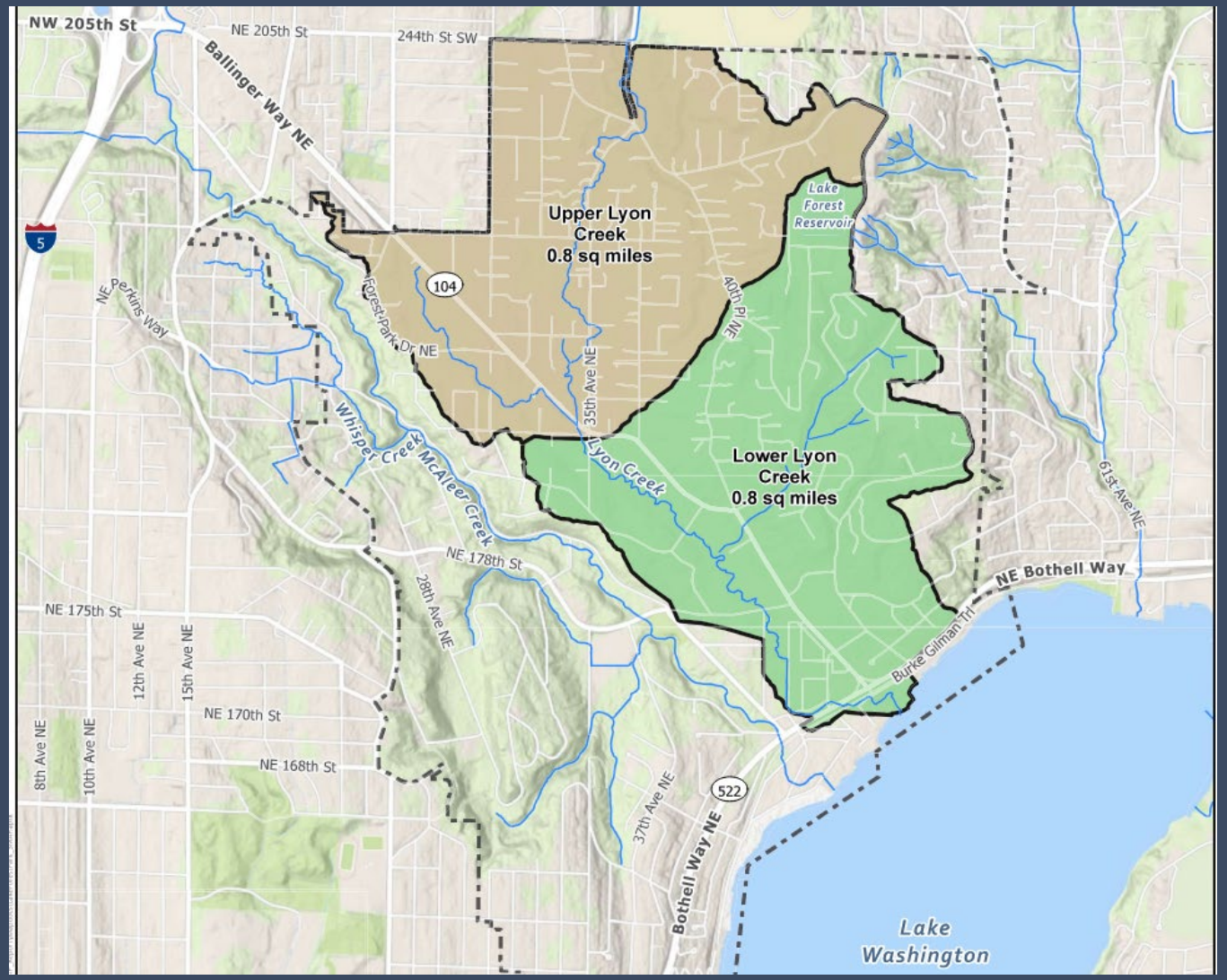
"Rainwise" page showing eligibility map and more info

Image Credit: https://www.700milliongallons.org/rainwise/eligibility/

- ✓ **This would be an incentive program where qualifying homeowners who contribute up to $5,000 per project will receive an in-kind donation of up to $5,000 in program funds towards their project. The incentive is a generous cost-share for their new project.**
- ✓ **Lake Forest Park residents who want to participate will fill out an online application. I will use the application and research to assess if the property is a good fit for our program.**
- ✓ **Applications will be scored on criteria like geographic location, size of contributing area, or amount of impervious area replaced. If their application scores high enough I will conduct an on-site consultation to answer questions and determine if installing a project would be feasible.**
- ✓ **The homeowner would then sign an agreement with the City to install and maintain their project, and to allow annual city inspection for up to 5 years.**
- ✓ **Once enrolled, homeowners would be given a list of City-approved contractors who can carry out the work. Or we may allow homeowners to do the work themselves. In either case, the participant will have one year from the signing date to complete their project.**

How will the program work?

- ✓ Properties inside the Upper and Lower Lyon Creek Watersheds would be ranked with highest priority, as these are the watersheds identified in our SMAP Report for targeted actions.
- ✓ We would engage in a limited amount of community-centered outreach using all available resources to target participants in these specific geographies.
- ✓ Projects that have applied, been approved, and sign a contract will be given technical assistance and paired with a contractor. Property owners and contractors would work together, following approved specs, to coordinate the project's implementation.
- ✓ As an enforcement mechanism, participants who do not complete their project within a year, or destroy remove or abandon it during the 5 year review period could be required to reimburse the City for the City's portion of the cost-share.



Priority Catchments in Lake Forest Park

Photo Credit: City of Lake Forest Park SMAP Report

Project Type: Rain Gardens

- Rain Gardens are the primary type of project I'd like to see implemented because they provide the most benefits relative to stormwater.
- Collecting water from a 1,000 square feet of roof area during a 1 inch rain event captures 623 gallons of water. 20 rain gardens would safely redirect 12,460 gallons of runoff from our stormwater system.
- Lake Forest Park receives about 37 inches of rain a year. That means there's potential for 461,020 gallons of stormwater a year to be captured on site, treated for pollutants, and naturally recharge into our ecosystems.

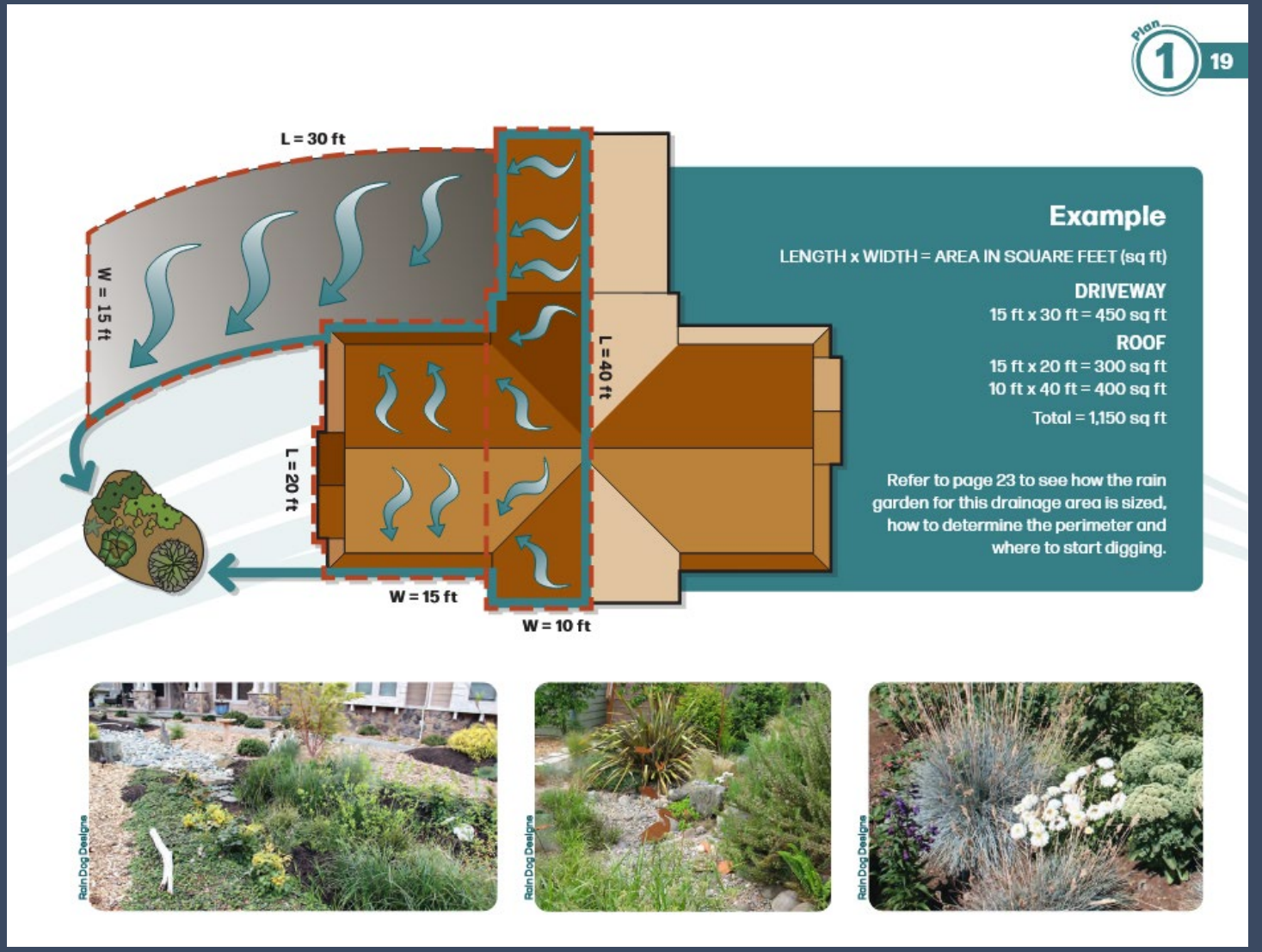


Image Credit: Rain Garden Handbook of Western Washington / Rain Dog Designs

Project Type : Native Vegetation

Native vegetation projects essentially replace existing lawn with native plant selections and compost-amended soils. They provide multiple benefits including:

- ✓ **Increased stormwater absorption onsite.**

(results in increased flood preparedness & groundwater recharge)

- ✓ **Decreased reliance on municipal water for summer watering.**

(results in increased drought preparedness)

- ✓ **More and healthier native habitat for pollinators and other local wildlife.**

(results in healthier ecosystems)

- ✓ **Less mowing and maintenance.**

(results in less fossil fuel reliance)

DEPARTMENT OF ECOLOGY
State of Washington

NEWS RELEASE June 5, 2025

Washington Drought Declaration and Advisory

Drought expanded to 19 more watersheds

OLYMPIA – The Washington Department of Ecology is expanding the drought emergency declared in April to include areas in the North and Central Cascade Mountains and parts of the Puget Sound area.

Project Type: Cisterns

- **Cisterns are large rain water storage devices collecting water from existing downspouts.**
- **They are installed above ground, providing temporary storage for reuse or release at a later time. Commonly, cistern water is used for residential gardening.**
- **They can be linked to a rain garden or more cisterns in a series.**
- **I would want a minimum cistern system size of 500 gallons for logistic reasons.**

Image Credit: Rainwise Seattle via Instagram

Project Type:
Permeable Pavement Systems

- A variety of permeable pavement options exist that are approved BMPS and have demonstrated stormwater storage and filtration capacities.
- They're the most expensive of the project types per square foot. They also have the most restrictions in terms of how and where they can be placed.
- For the purposes of this proposal, I'd only want to allow Permeable Paver systems which REPLACE existing impervious surfaces.

Image Credit: Portland.gov
(https://www.portland.gov/ppd/infrastructure/managing-rain-your-property/permeable-pavement#toc-how-permeable-pavement-works)

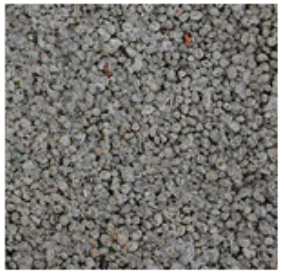
What Is Permeable Pavement?

Permeable pavement is a hard surface that has enough gaps in it to allow rain to run through it. When rain runs through permeable pavement, it collects in a base layer of gravel, then gradually soaks into the ground. Permeable pavements are sturdy enough for vehicles and heavy pedestrian traffic.

Permeable pavement is also called pervious pavement, porous pavement, pervious concrete, and porous asphalt. Below are descriptions of several choices of permeable pavement.

Porous Asphalt and Pervious Concrete

Porous asphalt and pervious concrete are like conventional asphalt and concrete but contain less fine aggregate content leaving open spaces for water to pass through and soak into the ground. Porous asphalt and pervious concrete are the most suitable for large areas including residential driveways and parking lots.



Example of pervious concrete

Permeable Paver Systems

Permeable paver systems have gaps between the pavers that allow water to pass. A layer of gravel under the paver system acts as a reservoir, holding rainwater while it soaks into the ground. Pervious paver systems are the most versatile type of permeable pavement and are suitable for residential driveways, patios, and parking lots.

Example of permeable pavers

Turf Block Systems

Turf block systems are pavers with empty spaces filled with soil and planted. Turf block systems are suitable for residential driveways.

Example of turf block

At a Glance: When to use which permeable paving solution

Property uses	Porous asphalt	Pervious concrete	Permeable pavers	Turf block
Residential driveways	Yes	No	Yes	Yes
Patios	No	No	Yes	No
Small parking lots	Yes	Yes	Yes	No

In summary:

- **This would be a pilot project. In the next 3-5 years the goal would be 20 GSI projects (rain gardens preferred) installed successfully at private residences.**
- **Project sites will be vetted for their stormwater benefits. Homeowners will apply to participate. They will pay half of the project costs and will be responsible for maintenance activities.**
- **The program will be designed to minimize costs and risks to the city as much as possible.**
- **If we finish and feel the project was a success we can look at long future funding options to make it a sustainable program.**

Rain garden installation in unincorporated King County

Photo credit: Chris Korwel