Jackson Soil & Water Conservation District
89 Alder Street Central Point OR 97502
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www.jswcd.org

Stormwater Management Rebate Program

Contact Information:

Applicant Name(s):

Address:

Phone:

E-Mail:

Office use only

Application Number:

District Rep:

Table of Contents:

Project Information

Township, Range, Section, Taxlot: _____

Adjacent Stream if applicable_____

Stormwater area size (ft^2): _____

Access to storm drain? (Y/N) _____

Stormwater Feature(s): _____

_____

Rebate Amount: _____

Stormwater Program Information

Jackson Soil & Water Conservation District (JSWCD) offers a rebate to mitigate stormwater and improve water quality to Jackson County residents. The landowner is responsible for all project costs above the rebate amount. Please read the eligibility criteria, terms and conditions, and project requirements below and follow the instructions carefully. Work with JSWCD staff during the development of your project to ensure that you meet all incentive requirements. JSWCD is a non-regulatory agency that promotes voluntary conservation practices primarily on private lands.

Why Stormwater Mitigation?

According to the Environmental Protection Agency (EPA), "stormwater" is defined as rainwater or melted snow that runs off streets, lawns, and other sites and naturally soaks into the ground, replenishing aquifers and streams. Impervious surfaces prevent this replenishment process, and therefore contribute to drainage and water quality problems.

The purpose of stormwater mitigation is to achieve one or more of the following:

- Reduce onsite erosion
- Reduce offside impacts from sedimentation
- Reduce the quantity of stormwater leaving the site to levels that will not adversely affect downstream receiving channels
- Improve the quality of stormwater runoff leaving the site
- Reduce drainage problems on property

Eligibility Criteria

- Property is in Jackson County, Oregon.
- Project requires stormwater features to filter, deter, drain or store stormwater. See the next section for the stormwater features list.
- Project scope does not require large-scale multi-landowner stormwater mitigation (*maximum JSWCD contribution: $5,000*); consult with JSWCD for alternative funding opportunities.
- Applicant owns the land or has authorization to implement the project.
- Applicant has legal access to a source of water to irrigate stormwater feature plantings (if applicable).
- Applicant can demonstrate the ability to maintain the project.

Stormwater Features (*check all that apply*)

- ☐ **Bioswale**
- ☐ **Planter Box**
- ☐ **Rain Garden**
- ☐ **Rainwater Harvest**

Average Cost for each Stormwater Feature

Stormwater Feature	Cost Per Measurement	JSWCD payment per measurement	Maximum metric JSWCD will pay for
Bioswale	$4 per square ft	$2 per square ft	2,500 square ft
Planter Box	$8 per square ft	$4 per square ft	1,250 square ft
Rain Garden	$4 per square ft	$2 per square ft	2,500 square ft
Rainwater Harvest	$2 per gallon	$1 per gallon	5,000 gallons

Bioswales

What are Bioswales?

Bioswales are linear vegetated depressions in the landscape that convey and treat runoff from a variety of surfaces. Runoff may be piped or channeled. As water passes through the swale, some runoff infiltrates into the soil, and vegetation naturally filters pollutants from water prior to reentering a stormwater system.

Types of Bioswales

Dry Swale
Drains quickly, usually vegetated or grassy. There is an underlying filter bed that allows them to drain more rapidly between storms.
Wet Swale
More marsh-like, can be located in areas with high groundwater tables or poorly draining soils.

Bioswale Sizing

The size of bioswale is dependent on the volume of water it will receive. Flow depths should not exceed 6 inches, as water quality treatment decreases after this depth. For runoff flowing over and out of the facility, 9 minutes is the minimum recommended retention time for adequate water-quality treatment.

Dry Bioswale in Sunriver, OR.

A bioswale can be designed in the following cross-sectional shapes:

- Trapezoidal (most frequent, easiest to maintain, causes the least scouring, creates the least runoff, but most difficult to build due to soil)
- Parabolic (acceptable if its width is equal to trapezoidal design)
- Triangular or v-shaped (acceptable as curb replacement in low-density areas)

Soil Testing

Native soils should be tested in the proposed swale location to determine the soil infiltration rate. Soils with low permeability (ex. clay) should incorporate soil amendments. Infiltration rates should be high enough to pass at least small storms through the soil column from treatment, but not so high that stormwater doesn't have enough "retention time" in the soil (ex. too much sand). The ideal infiltration rate is between ½ inch and 12 inches per hour. The top 18 inches of soil is typically amended with organic compost and soil mixtures to create a sandy loam soil. The resulting soil mix should be 60% sandy loam and 40% compost (free of weeds and pollutants)

For plant establishment and stormwater treatment, the soil pH should be between 5.5 and 7.5.

Plants

Bioswales with more vegetation have a greater capacity to treat and filter stormwater. Appropriate bioswale vegetation will reduce, slow and filter water flow, prevent erosion, and control weeds.

Vegetation should be selected based on the following characteristics:

- Four to five inches tall
- Deep root systems
- Tolerance to flooding

- Survivability in the local climate conditions without fertilizers, herbicides, or insecticides
- Drought tolerant, little maintenance and watering needed
- Native plants are preferred and always recommended. They provide habitat to insects and birds and are resilient to the native landscape. See *Appendix A* for a full native plant list for bioswales

Pollutant Removal

Bioswales remove pollutants by settling out sediments, infiltration through soils and media, and biological uptake through plantings within the facility. The Center for Watershed Protection estimates the concentration phosphorus-removal rates are 20-40%, and nitrogen-removal rates 25-35%. Grassy swales have been found to have lower removal rates than vegetated swales.

Bioswale Features

☐ **Dimensions***:* in low-density areas where the bioswale is often used in place of curbs, a minimum length of 100 feet is recommended. The bottom width of a bioswale ranges from 2 to 8 feet.

☐ **Check Dams***:* berms used to slow velocities and ensure that water flows down into the soil and not out of the outlet too quickly. Check dams can be constructed of stone or timber (but never use treated wood) and are generally 3 to 6 inches high. Within the facility, slopes greater than 5% could cause high flow velocities, potentially leading to erosion. In this case, check dams should be installed (*Oregon Sea Grant*).

☐ **Energy Dissipaters***:* rocks (commonly referred to as riprap) are often placed at the entrance of bioswale inlets to reduce the effects of erosion and to slow water flow. Rough materials are recommended in order to slow flow, such as thick vegetation, baffles, or even modified catch basins.

☐ **Soils and Medium:** to reduce erosion, 2.5 to 3 inches of rock mulch is recommended. This is preferred over bark mulch because the latter tends to float. Feeding the plants as needed with compost tea will supply needed nutrients.

Construction

Swales should be constructed before impervious surfaces are installed and allowed to establish before runoff is directed to them. For infiltration facilities, equipment should only be operated along the sides of swales, rather than on the bottom, in order to prevent soil compaction and disturbance If the soils are exposed to rain, fine soil particles that are picked up and moved around may clog the native subgrade soils, so it is important to rake the surface to loosen soil before proceeding. If the swale is dug by hand, raking will also be required, since foot traffic in the facility area may be unavoidable.

Construction placement
Do not construct a bioswale within 10 feet from a foundation or 5 feet from a property line.

Materials List

☐ **Rocks**
- Washed drain rock (3/4 inches, 12-inch layer)
- Rocks to create swale
- Rocks for overflow

☐ **Piping**
- PVC piping for overflow and outflow

☐ **Plants**
- Refer to plant list and design for plants and placement

☐ **Compost** and **Soil**
- For amendments and berms

☐ **Mulch**
- For water retention and weed suppression

Installation Instructions

1. **Observe and map your site**
   - ☐ Assess how water flows on the property.
   - ☐ Create a property map, mark existing features, storm drain locations, etc.
2. **Determine the location of the bioswale**
   - ☐ Bioswales are designed convey and treat water. Common placements are along contour lines or in place of where a pipe would go, commonly between an impervious surface and storm drain.
3. **Assess soil**
   - Refer to "soil testing" section
4. **Determine the length of the bioswale**
5. **Constructing a bioswale**
   - ☐ Create channel
   - ☐ Install drains, if nedded
   - ☐ Install rock
   - ☐ Install soil
   - ☐ Install plants
   - ☐ Install mulch
6. **Maintain the bioswale**

Maintenance

Regular bioswale maintenance is important to ensure low stormwater velocity and increased filtration

- Inspect swales once every 3 months
- Remove sedimentation buildup at least once a year and after each large storm event
  - Also remove when it builds to 4 inches, covers grasses, or reaches 25% of desired volume
- Reseed & revegetate as needed
- Repair eroded areas
- Regrade as needed
- Manage vegetation pests
- Avoid fertilizers, herbicides, and pesticides for all areas draining to and within the bioswale
- Mow grassy swales at least once a year
- Do not irrigate beyond establishment period; unnecessary irrigation will impact infiltration rates and alter the natural drainage (or lack thereof in dry seasons) patterns.

Call Before You Dig!
Before you dig your bioswale, dial 8-1-1 and request a free utility locate for your entire property; ensure all of your utilities are marked prior to breaking any ground. This service is completely free, and the call center is open 24/7.

Vegetated Swale
Source: Clean Water Services

Planter Boxes

What are Planter Boxes?

Planter boxes are structures or containers with open bottoms to allow stormwater, primarily rooftop runoff, to temporarily hold and filter stormwater. They contain a layer of gravel, soil, and vegetation. Stormwater runoff temporarily pools on top of the soil, and then slowly infiltrates through the planter into the ground, or an existing drainage system. Pollution reduction is achieved as the stormwater filters through the soil. Planter boxes come in many sizes and shapes, and are made of stone, concrete, brick, plastic, or wood.

Purpose of Planter Boxes

To reduce stormwater runoff flow rate, volume, temperature, pollutants, and recharging groundwater.

Types of Planter Boxes:

Infiltration planters
Passive design, stormwater collects in planter box (with soil and vegetation) and naturally infiltrates into the ground, ideal for well-drained soil types.
Flow-through
Active design, excess water is piped into existing storm drain system, ideal for poorer soil types.

Design Considerations

Location

- Infiltration planter boxes should be located greater than 10 feet from a building (or closer if engineered to protect the foundation of the building) and are only applicable on well-drained soil types (Type A and B soils).
- Flow-through planter boxes may be located within 10-feet of a building and must be designed as a contained system and lined for watertightness with an outlet pipe.
- Additional irrigation is optional as required to ensure plant viability.
- Locate planter boxes at least 5 feet away from property lines

Sizing

Typical planter boxes are approximately 3.5-feet deep and may vary in length and width.

- The minimum width shall be 30-inches.
- The length x width shall be designed to equal 1/12 of the impervious area desired for stormwater treatment with the planter box.

Planter Box in Ashland, OR.

Materials List

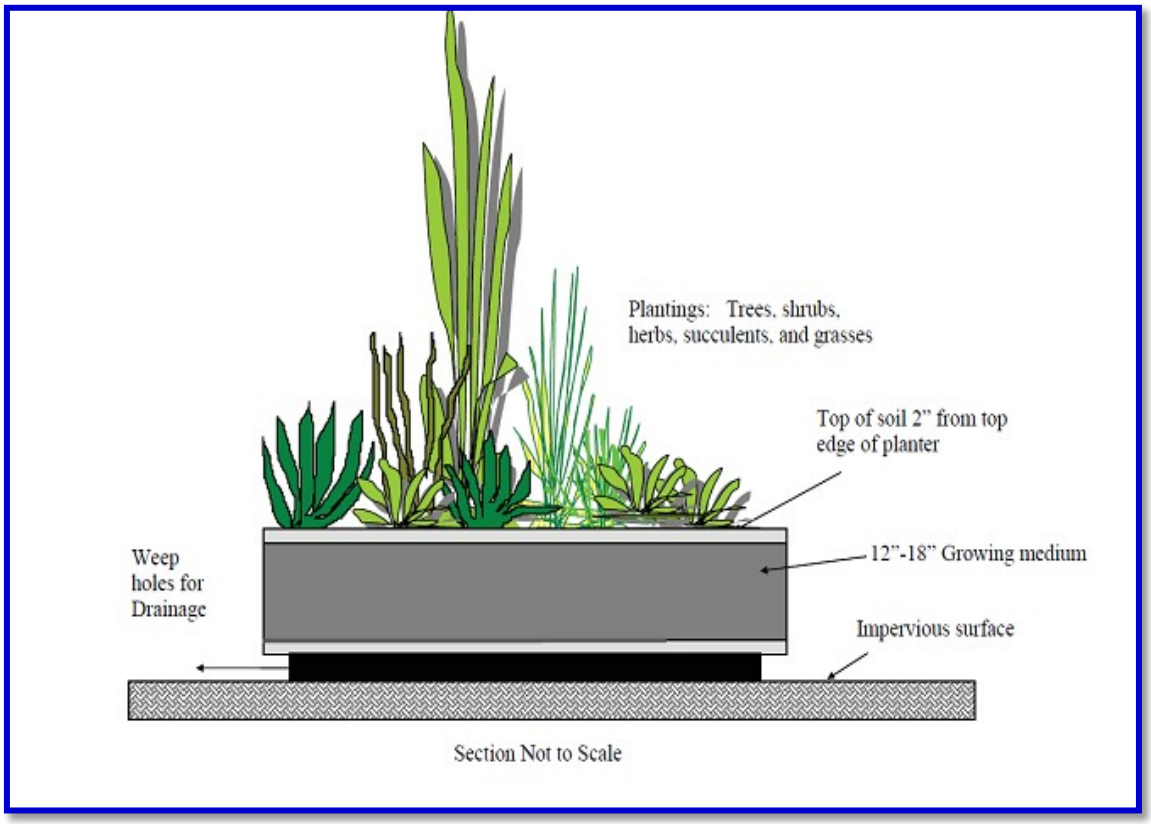
- ☐ **Structures** can be made of brick, stone, plastic, or pressure treated wood (lined to prevent leaching). Structures should be constructed water-tight if used within 10-feet of a building. If used directly adjacent to a building, a waterproof membrane is required in addition to the structural material.
- ☐ **Soil** that is amended for amble infiltration
- ☐ **Plants** that love stormwater, refer to the plant list attached.
- ☐ **Gravel rock** below the soil shall have a maximum size of 3/4-inch.
- ☐ Flow-through planter boxes are required to provide **filtration fabric** between the soil and gravel layers.
- ☐ **Overflow pipe** shall be a reverse bend trap installed as shown on the diagram

Vegetation

A variety of shrubs and small trees can be used for infiltration planters. Plants must be suitable for seasonally moist and dry soil conditions. Avoid permanent irrigation if possible. Planters are likely to need watering and weeding in the first one to three years (*City of Portland*).

Planter Boxes shall include the following per 25 square feet:

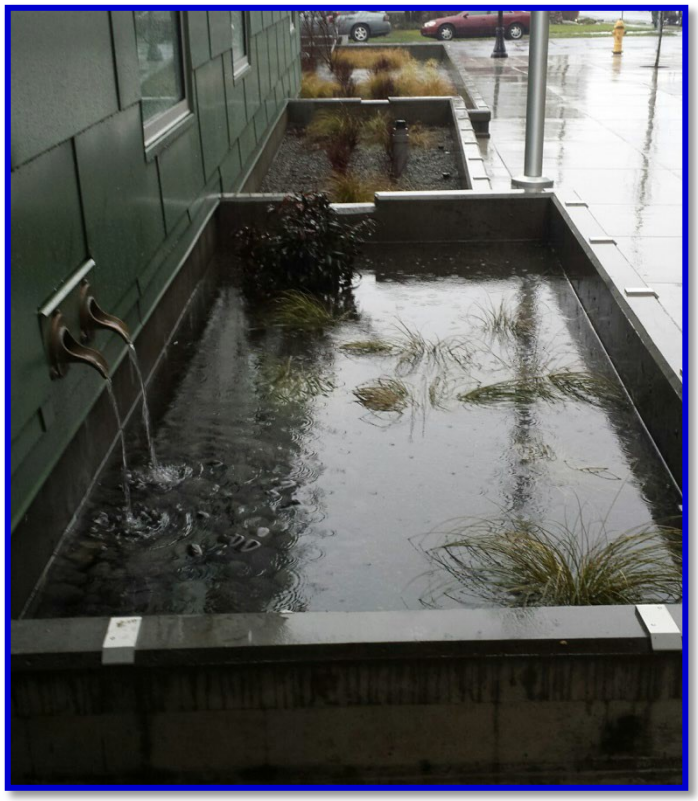
- 1 - large shrubs/small trees (3-gallon container or equivalent)
- 3 - shrubs/large grasses (1-gallon container or equivalent)
- Ground cover placed 24-inches on center (to achieve a minimum of 50% ground cover when planted).



Infiltration Planter
Source: Rogue Valley Stormwater Design Manual

Operations and Maintenance:

- ☐ Splash guards for the downspouts shall be inspected and modified as needed to reduce erosion of the filter/media soil
- ☐ Planter Boxes shall be inspected after major storm events to ensure water standing in the reservoir is drained between 3-4 hours after the storm event. If adequate drainage does not occur, the topsoil may need to be amended with sand. Holes that provide a direct route from the surface to the drain rock shall be filled in with soil.
- ☐ Remove litter or debris.
- ☐ The structure shall be inspected for any cracks or leaks and repaired accordingly.
- ☐ Vegetation shall be irrigated and mulched as needed to maintain healthy plants with a density that prevents soil erosion. Fallen leaves and debris shall be removed. Invasive plants shall be removed.



Planter Box in Portland,

Rain Gardens

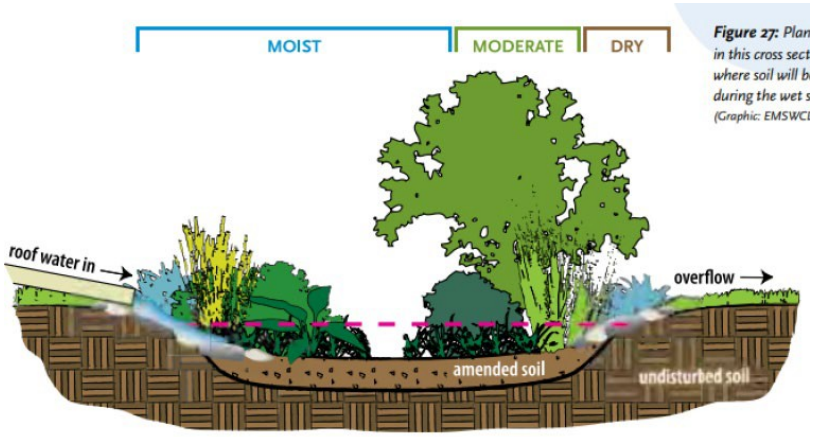
What are Rain Gardens?

A rain garden is a sunken garden bed that collects and treats stormwater runoff, primarily from rooftops, driveways, sidewalks, parking lots, and streets. It is a landscaped area in a basin shape designed to capture runoff and settle and filter out sediment and pollutants. Runoff is piped or channeled to the basin, where it is temporarily stored until it infiltrates the soil. Other names for rain gardens that are often used include bio retention basins and vegetated basins.

There are two kinds of rain gardens:

1. **Infiltration**- cleanses, detains, and reduces stormwater runoff volumes by allowing water to seep into the surrounding soils; planted (more common)
2. **Filtration**- cleanses and detains stormwater runoff, routed using piping; engineered (less common)

Do not install a rain garden near a building or fence line; this could lead to unwanted structural damage. Specifically, do not install a rain garden within 3 feet of a sidewalk, within 6 feet from a basement, within 2 feet form a crawl space or slab, or within 10 feet from a retaining wall/fence.



Source: EMSWCD

Purpose of Rain Gardens

To enhance stormwater management, water conservation, erosion control, water quality, and wildlife habitat.

Goal of Rain Gardens

To allow water to be retained in an area with plants and soil, and to allow the water to pass through the plant roots and back in the soil.

Installation Instructions

1. **Observe and map your site.**
   - ☐ Assess how water flows on the property.
   - ☐ Create a property map, mark existing features, storm drain locations, etc.

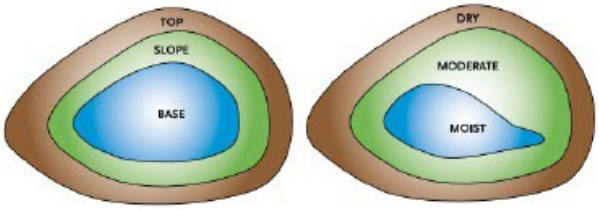
2. **Determine the location of the rain garden**
   - ☐ Needs to be near the rain gutter downspout
   - ☐ Shouldn't be on a slope, near septic drainage, within 3 feet of the groundwater table, or in soils with poor drainage or contaminated soils
   - ☐ Don't construct a rain garden within 10 feet of a foundation or 5 feet from a property line

3. **Assess soil**
   - ☐ Determine soil type to determine amendments needed
   - ☐ Soil testing by hand techniques: feel test, ribbon test, mason jar test, and the infiltration test
   - ☐ Online soil resource (listed below in resources)
   - ☐ Soils that drain less than ½ inch per hour are not likely suitable for a rain garden
   - ☐ Make soil amendments

4. **Determine the size of the rain garden**
   - ☐ Calculate roof area, and multiply by either 0.1 (10%) for well drained soils or 0.2 (20%) for poor drained soils to size the rain garden. This is the size the rain garden should be *at least*, to allow enough time for water to infiltrate
   - ☐ The ponding depth for a rain garden should be between 6-24 inches, depending on the infiltration rate (see Table 2 below).

5. **Constructing a rain garden**
   - ☐ Once the rain garden placement is located, design the overflow and irrigation plans prior to installing
   - ☐ Excavate the site, either by hand or with machinery
   - ☐ Grade & rake soil to reduce compaction
   - ☐ Install PVC pipe for diverting water into the rain garden, and the overflow; grade the pipe to drop 1 inch every 10 feet, buried 1 foot down
   - ☐ Install rock, amended soil, mulch, plants, and a berm at least 2 inches high to keep in water

6. **Choose the "right plant for the right place"**
   - ☐ Select plants that require no chemical inputs
   - ☐ Select plants requiring little to no water once established, while being water tolerant in wet months
   - ☐ Choose plants based on plant zones – Moist/base: plants prefer moist conditions
     - ➢ Moderate/intermediate: plants can tolerate moist or dry soils
     - ➢ Dry: plants thrive in drier soil
     - ➢ Refer to JSWCD website for full plant lists



7. **Maintain the rain garden**
   - ☐ Weed
   - ☐ Prune plants
   - ☐ Mulch as needed
   - ☐ Check on irrigation system, water until plants are established

Rain Garden Materials

☐ <u>Infiltration Rain Garden materials list</u>

- **Rocks**
  - Washed drain rock (3/4 inches, 12-inch layer)
  - Rocks to create swale
  - Riprap at entrance (prevent erosion)
  - Rocks for overflow
- **Piping**
  - Downspout connector
  - Perforated high density polyethylene pipe (4-inch)
  - Piping for overflow and outflow
- **Plants**
  - Refer to plant list and design for plants and placement
- **Compost** and **Soil** for amendments and berms (to prevent flooding)
- **Mulch**

In special cases Filtration Gardens (engineered) should be used instead of Infiltration Gardens, containing an impermeable liner:

- The seasonal high groundwater table is higher than 36 inches from the bottom of the rain garden
- The bedrock is higher than 24 inches from the bottom of the rain garden
- In potential stormwater hotspots (vehicle fueling areas, industrial loading, unloading, and material storage areas)
- In contaminated soils or groundwater
- On slopes exceeding 10% or in landslide areas where adequate setbacks cannot be met of a large storm. The overflow should be designed so that it will not clog or back up. This can be done either through an underdrain, an armored notch in a berm, or controlled outlet pipe to approved location for overland flow.

Call Before You Dig!
Before you dig your rain garden, dial **8-1-1** and request a free utility locate for your entire property; ensure all of your utilities are marked prior to breaking any ground. This service is completely free, and the call center is open 24/7.

☐ Filtration Rain Garden materials list

- **Rocks**
  - Washed drain rock (3/4 inches, 12-inch layer)
  - Rocks to create swale
  - Riprap at entrance (prevent erosion)
  - Rocks for overflow
- **Piping**
  - Downspout connector
  - Perforated high density polyethylene pipe (4-inch)
  - Piping for overflow and outflow (underground to storm drain)
- **Impermeable liner (60-mil PVC) or Bentonite clay mat**
  - In situations where water should not be allowed to infiltrate the underlying soils due to **nearby structures** (adjacent impervious pavement, site and building walls, etc.), property lines, steep slopes (high erosion potential), high water tables, or possible groundwater contamination
- **Plants**
  - Refer to plant list and design for plants and placement
- **Compost** and **Soil** for amendments and berms (to prevent flooding)
- **Mulch**

Rain Garden in Central Point

Rainwater Harvest

What is Rainwater Harvest?

Rainwater harvest is the process of capturing stormwater runoff from a roof and redirecting the stormwater into a storage container via a pipe for later use.

Benefits of Rainwater Harvest

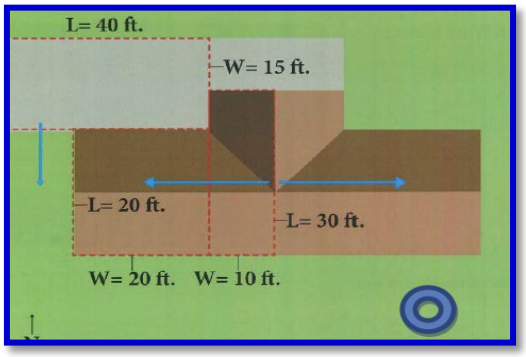
There are many benefits to rainwater harvest. Installing a rainwater harvest system can avoid erosion, deter pollution, improve stormwater quality, reduce the quantity of stormwater runoff, provide supplemental landscaping/garden irrigation, livestock watering, supplemental water storage during dry months and fire danger, and water bill savings.

Installation Steps

1. **Determine property needs**
   Observe site, current features, current water usage and needs, current drainage patterns and possible issues.

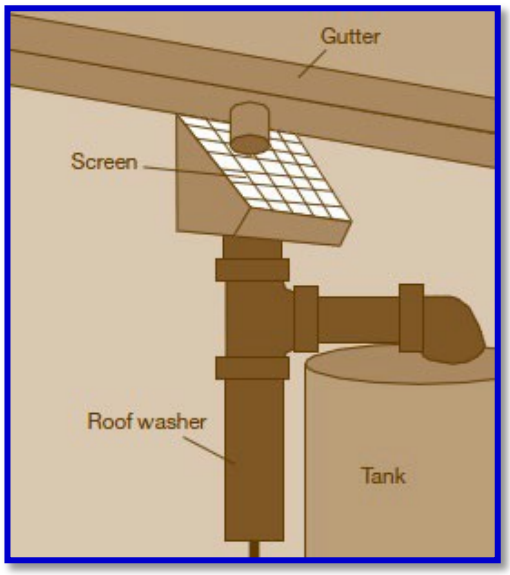
2. **Determine location of rain harvest system.** Pick a flat, level location alongside the building you will be collecting roof runoff from. If the land is more sloped, a concrete pad or other materials to level the ground may be necessary.

3. **Determine sizing of rain harvest system**. Calculate total impervious surfaces (roof, driveway, etc.). Multiply this value by the average annual rainfall in your area and the evapotranspiration (ET) constant to calculate the total rainfall captured per year, aka the maximum storage capacity.



Example: 20 ft x 20 ft = 400 sq ft, 10 ft x 30 ft = 300 sq ft
Total Surface = 700 sq ft
Average Rain = 18 in/year
ET Constant = 0.46
Example: 700 sq ft x 18 in x 0.46 = 5,796 gallons/year

4. **Plan your rain harvest system**
   Determine route of rainwater harvest system, based on gutter placement, elevation (need level ground) and storm drain location (for overflow).
5. **Determine overflow route** to ensure your property is equipped for a rainwater harvest system. Examples include a bioswale, rain garden, or piping to a storm drain.
6. **Construct your system**
   Refer to the materials list below. Materials needed depends on the system setup and needs.
7. **Maintain your Rainwater Harvest System**



Maintenance

Check system is functioning properly:

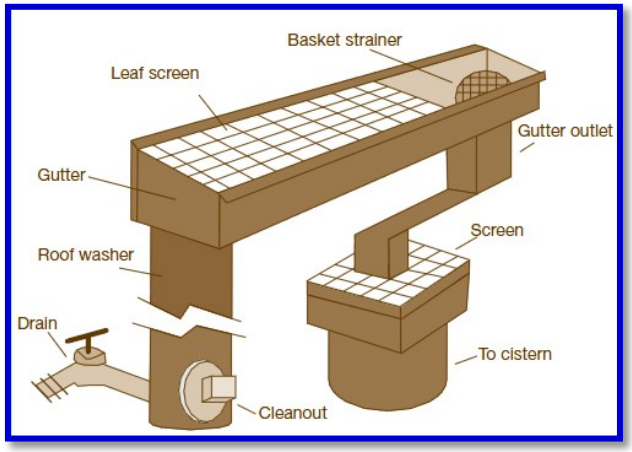
- Check for leaks and make sure all parts are securely fastened, and that screen(s) are in place.
- Clean gutters at least twice a year
- Clear downspout elbows, rain barrel screening, and overflow to prevent clogging
- Make sure gutters are level and tilted to direct water to downspouts
- Ensure overflow system is working correctly

Materials List

- ☐ **Rain Barrel (s):** Size depends on roof size and property needs.
- ☐ **Base (if applicable):** Stand, cinder blocks, concrete slab needed if rain barrel location isn't level, such as on a slope.
- ☐ **Gutter** (K style recommended)
- ☐ **Overflow:** Adapter, drain, overflow hose or corrugated plastic piping
- ☐ **Downspout**
- ☐ **PVC Piping:** Elbow and connectors, overflow pipe fittings, adapters, bushing
- ☐ Clincher strap
- ☐ **Bulkhead fittings**
- ☐ **Rubber Washer**
- ☐ **Hose, Spigot, Clamp**
- ☐ **Filter/leaf screens, basket diverter**
- ☐ **First flush diverter**
- ☐ **Float ball**
- ☐ **Gutter outlet**
- ☐ **Roof washer**
- ☐ **Cleanout**
- ☐ **Reducer**
- ☐ **Trap adapter**
- ☐ **Spigots**
- ☐ **Plugs for drain holes**
- ☐ **Pumps**
- ☐ **Tank pad**
- ☐ **Straps/bolds** to stabilize tank
- ☐ **Valves**

Installation Tools List

- ☐ Drill
- ☐ Drill bit
- ☐ Hole Saw/hole saw bit
- ☐ File or Knife
- ☐ Rubber Mallet
- ☐ Calking gun
- ☐ Pliers
- ☐ Wrench
- ☐ Scraper or a Knife
- ☐ Teflon Tape
- ☐ Scissors
- ☐ Pencil
- ☐ Sheet metal screws (downspout)



Further Reading

More detailed installation instructions and considerations can be found in the ARCSA Rainwater Harvesting Manual

Location *(check all that apply)*

- ☐ **Jackson County***
- ☐ **Ashland**
- ☐ **Butte Falls**
- ☐ **Central Point**
- ☐ **Eagle Point**
- ☐ **Gold Hill**
- ☐ **Jacksonville**
- ☐ **Medford**
- ☐ **Phoenix**
- ☐ **Rogue River**
- ☐ **Shady Cove**
- ☐ **Talent**

*Includes unincorporated communities.

Stormwater Permits

Refer to your corresponding municipality (checked above).

Consult your local planning and building department. Ask about applicable permits, plumbing codes, and piping requirements. Find out if there are any maps, as-built drawings, or site-specific constraints.
If a municipality doesn't have specific stormwater requirements as it relates to the stormwater features, JSWCD will default to the Jackson County requirements in project implementation. If a municipality has additional requirements, JSWCD will follow both in project implementation.

**Stormwater systems under 2,500 square feet are not subject to permitting in Jackson County. For systems over 2,500 square feet, see below.

There are two components to stormwater review in Jackson County Development Services, typically for commercial projects:

1. **Planning** - only applies to commercial projects as part of the site plan review. This is generally based on district and if it is looked at as part of the NPDES. The code section for this is LDO 8.8.
2. **Plumbing Code –** applies to both residential and commercial projects, although still usually applying to commercial. Check with the county to see if a permit would be required. The code section for that is storm drainage Chapter 11.

Jackson County**

Refer to Jackson County Municipal Code here https://jacksoncountyor.org/County/Codified-Ordinances

Bioswale

Jackson County looks at all piping related to the stormwater transmission. According to Jackson County, the bioswale itself falls outside of prescriptive code and is an engineered design.

Planter Box

Jackson County looks at all piping to and from, for example the overflow piping. When building a planter on a nonresidential site, a commercial building permit is required in many cases, and a clearing, grading, and erosion control permit may be required if ground disturbance is large enough.

Rain Garden

Jackson County requires a permit only if there is an overflow piping to a storm water disposal location.

Rainwater Harvest

The following table (created by JSWCD with approval from Jackson County) describes scenarios when a county permit is required for installing a rainwater harvest system. Check with Jackson County and/or your local municipality for further information.

Condition	Permit Requirements
Irrigation only system	No permit required unless other conditions in this table apply.
Potable water system	Plumbing permit. Requirements are per Oregon Plumbing Specialty Code Appendix K that applies to single-family residential use. Multi-family, commercial, and industrial potable use is not recognized under the plumbing code.
Non-potable water system (except irrigation), e.g. cooling water and toilet flushing	Plumbing permit. Requirements are per Oregon Plumbing Specialty Code Chapter 16.
Electrical equipment (such as power supply for pumps)	Electrical permit. Applies to any permanent facilities; not mobile plug in equipment.
Storage tank larger than 5,000 gallons	Building permit. May be required depending on site specific conditions. Factors include slope of the land and relationship to structures. Consult with County.
Any facilities or development located in a 100 year floodplain.	The County land Development Ordinance Section 7.2 requires a Floodplain Development Review with the Planning Department. If approved any applicable building, electrical, and plumbing permits would be required.

Ashland

Bioswale, Planter Box, Rain Garden

Refer to Jackson County requirements for Best Management Practices.

Note the City of Ashland's Prohibited Flammable Plant lists for planting near the home

https://www.ashland.or.us/Page.asp?NavID=17986

Follow land use ordinances 18.3.10 and 18.3.11 for resource protection zones.

Physical and Environmental Constraints https://ashland.municipal.codes/LandUse/18.3.10

Water Resource Protection Zone https://ashland.municipal.codes/LandUse/18.3.11

Rainwater Harvest

18.68.140(E)

Rain barrels may be located within required side or rear yards provided such installation and operation is consistent with other provisions of this Title or the Ashland Municipal Code, and as follows: 1) Rain barrels shall not exceed six (6) feet in height; and 2) Rain barrels shall be located so that a minimum clear width of three (3) feet is provided and maintained between the barrel and property line; and 3) Rain barrels shall be secured and installed on a sturdy and level foundation, or plat form, designed to support the rain barrel's full weight; and 4) Every attempt shall be made to place rain barrels so that they are screened from view of adjacent properties and public streets.

Butte Falls

Refer to Jackson County requirements.

Central Point

CPMC 8.05.065 & RVSQDM.

Central Point has adopted the Rogue Valley Stormwater Quality Design Manual (RVSQDM) for guidance and standards in stormwater treatment such as Bioswales, Rain Gardens and Planter Boxes. The only ordinance Central Point has for green infrastructure involves a Maintenance Agreement (CPMA) for stormwater quality features in development or redevelopment that creates 2,500 sq.ft. or more impervious surface. The threshold isn't the feature size, but how much impervious surface the project is creating. The feature size depends on how much runoff there will be. For example, someone could make a 3,000 sq. ft. swale to treat an existing parking lot and not have to do a maintenance agreement, with the caveat of as long as they're not redeveloping the parking lot over 2500 sq. ft.

Eagle Point

Section 4.4.1, Rogue Valley Design Manual

Eagle Point has adopted the Rogue Valley Stormwater Quality Design Manual for guidance and standards in stormwater treatment such as Bioswales, Rain Gardens and Planter Boxes.

https://www.rvss.us/content/files/Stormwater/DesignManual%202021%20July%20amended.pdf

Stormwater projects are exempt from permits and city review unless for a formal development package (example: construction development for a new subdivision).

Gold Hill

Ordinance 14-05-AMENDED Erosion and Sediment Control Provisions Follow the erosion and sediment control provisions for installing stormwater features. Ask JSWCD for a copy.

Jacksonville

The City of Jacksonville does not have specific ordinances for the stormwater features; refer to Jackson County requirements for Best Management Practices.

Medford

Follow the requirements located in the following code sections:

10.729 – Stormwater Quality and Detention Facilities, Private Property

https://medford.municipal.codes/Code/10.729

9.800 – Stormwater Erosion Control: https://medford.municipal.codes/Code/9.800

Medford has adopted the Rogue Valley Stormwater Quality Design Manual for guidance and standards in stormwater treatment such as Bioswales, Rain Gardens and Planter Boxes.

https://www.medfordoregon.gov/Government/Departments/Public-Works/Rogue-Valley-Stormwater-Design-Manual

For further clarification, refer to the City of Medford Building Department "Do I Need a Permit"

https://www.medfordoregon.gov/Government/Departments/Building-Safety/Require-a-Permit

Phoenix

Chapter 3.8

Follow the stormwater management standards located in Chapter 3.8 of the Land Development Code, pages 194-198. Refer to City of Phoenix's Land Development Code https://tinyurl.com/53vyverk

Rogue River

Refer to Jackson County requirements.

Shady Cove

There are several specific Code Sections that deal with Storm Drain requirements in the City of Shady Cove:
Section 95.62: https://codelibrary.amlegal.com/codes/shadycove/latest/shadycove_or/0-0-0-1570
Section 95.63: https://codelibrary.amlegal.com/codes/shadycove/latest/shadycove_or/0-0-0-1576
Section 153.18: https://codelibrary.amlegal.com/codes/shadycove/latest/shadycove_or/0-0-0-2830
Section 154.217: https://codelibrary.amlegal.com/codes/shadycove/latest/shadycove_or/0-0-0-3866

Talent

There are several specific Code Sections that deal with Storm Drain requirements in the City of Talent:

18.115.100 – Storm Drainage and Surface Water Management:
https://talent.municipal.codes/TMC/18.115.100

13.15.040 – Prohibited Action: https://talent.municipal.codes/TMC/13.15.040

8.10.130 – Surface Waters – Drainage: https://talent.municipal.codes/TMC/8.10.130

Talent Storm Water Master Plan: Stormwater Master Plan.pdf (cityoftalent.org)
Talent Storm Drainage Standards: https://tinyurl.com/2nukfwkb
Talent Standard Details: Standard Details 9-20-17.pdf (cityoftalent.org)
Talent Storm Drain Protection Permit (< 1-acre): SDPP-Small.pdf (cityoftalent.org)
Talent Storm Drain Protection Permit (> 1-acre): https://tinyurl.com/9crvv7ax

Water Rights

If you aren't on city water and you wish to use water from the stream to irrigate your native plantings (if plants are applicable), you must have an existing water right. If your water right does not extend to the stormwater project area, you can apply for a water right transfer, or a "change in use" filed with the Oregon Water Resource Department (OWRD) (ORS 540.520).

Local OWRD Contact Information
10 S Oakdale, Room 309A
Medford, OR 97501
Phone: 541-774-6187

You can also apply for a temporary transfer of water right or permit, granted up to 5 years, lasting long enough to establish the plants, as long as the senior water rights downstream are not impacted (ORS 540.523) http://tinyurl.com/yaoepj92.

You may also use your well to water the native plantings instead of using stream water, as wells can be used for non-commercial irrigation purposes up to half (0.5) an acre. Make sure to check that irrigating plantings will not impact the amount of water available for your residential uses. Prior to using your well for non-commercial irrigation, it is recommended to get your water tested at a local lab. Excess nutrients can be toxic to certain plants.

References

- "Swales" Maria Cahill, Green Girl Land Development
- ARCSA Rainwater Harvesting Manual
- Bioswale Plant List –JSWCD
- City of Ashland Prohibited Flammable Plant List
- Godwin, D; Sowles, M (Oregon Sea Grant Extension); Cahill, M (Green Girl Land Development Solutions); "Rain Garden" Technical Guide. 2011.
- Godwin, D; Sowles, M (Oregon Sea Grant Extension); Cahill, M (Green Girl Land Development Solutions); "Swales" Factsheet. 2011.
- JSWCD Website Plant Lists - Bioswales and Rain Gardens, Planter Box
- Locating and Sizing a Rain Garden (factsheet) –JSWCD
- Natural Resources Conservation Service. "Field Office Technical Guide". 2018.
- Oregon DEQ
- Oregon Rain Garden Guide
- Rain Garden Plant List –JSWCD
- Rogue Valley Sewer Services. Rogue Valley Stormwater Quality Design Manual. 2018.
- Soil Science Society of America. "Rain Gardens and Bioswales". 2018.
- The Oregon Rain Garden Guide: A Step-by Step Guide to Landscaping For Clean Water and Healthy Streams
- United States Environmental Protection Agency. "EPA Facility Stormwater Management". 2018.
- United States Environmental Protection Agency. "What is Green Infrastructure?" .2018.
- Web Soil Survey

Project Checklist

Part 1 – Pre-application project assessment and design

- ☐ Read the entire application.
- ☐ Obtain a signature authorization from the property owner (if applicant is not property owner).
- ☐ Request a site visit with JSWCD staff for an assessment of the potential project area.
- ☐ Create a layout of the project (using graph paper or other mapping tool).
- ☐ Sign and submit this application to JSWCD.
- ☐ Receive a countersigned copy of the application.

Part 2 – Implementation (Can be completed by the landowner or a qualified contractor)

- ☐ Obtain any permits/ landscape plans necessary to complete the project. Make copies to submit to JSWCD.
- ☐ Implement stormwater project (construction/digging, planting)
- ☐ Save all receipts to submit to JSWCD. Copies of receipts are acceptable.

Part 3 – Post-Installation inspection and submission for rebate

- ☐ Request a post-implementation inspection from JSWCD.
- ☐ Review the implementation with JSWCD staff and confirm that the implementation meets or exceeds the objectives in this application.
- ☐ Provide JSWCD staff with all invoices and receipts to confirm the total cost of the project.
- ☐ Complete a W-9 form to submit with this application.
- ☐ Submit this application for a rebate payment along with the W-9 form.

Project Timeline & Additional Requirements

_____

_____

_____

_____

_____

_____

Terms & Conditions

- **All rebate funds are reimbursements to the landowner and will be paid out after the project is complete.**
- The amount of the rebate will not exceed the total project cost. The applicant will provide receipts and invoices for the project to demonstrate that the rebate amount does not exceed the total cost ofthe project.
- Projects must comply with any federal, state, local, or other ordinances that may apply.
- Only projects with a minimum cost of $100 may apply.
- JSWCD offers a rebate amounts up to $5,000. Cost metrics per stormwater features and size vary, can be found on *Page 2*. JSWCD staff will determine the size of the project area.
- Rebate funds can be used for excavation, planting, mulching, rock installation, rain harvest installation, or concrete installation. Landowners can use rebate funds to pay contractor costs for these services.
- All applicants must complete the application in consultation with JSWCD. The applicant (or landowner if different), a JSWCD representative, Jackson County Development staff, City Representative (depending on project location), and the JSWCD District Manager must sign this application before the project may begin.
- JSWCD staff will perform a pre- and post-project inspection to determine project eligibility, specify design requirements, and approve the project for reimbursement after project completion.
- The applicant permits JSWCD to collect photographs of the project prior to and after installation to document the project. Photos may also be used for promotional or educational purposes.
- All projects must be completed within 2 years of application approval. Projects will be inspected after completion to monitor new plant survival and weed regrowth.
- No rebate reimbursements will be disbursed prior to project completion as determined by JSWCD staff.
- All approved applicants will complete a W-9 form for tax reporting purposes.
- JSWCD does not endorse any particular manufacturer, contractor or product in promoting this program. JSWCD does not warranty any materials or services used during the implementation of this project.
- JSWCD offers rebate programs on a first come first served basis, contingent upon available grant funds. The approved JSWCD annual budget and JSWCD staff determine the availability of funding.
- Stormwater mitigation projects that qualify for financial assistance from other programs or agencies cannot apply for this rebate program. Projects that do not qualify for this rebate program may be eligible for other financial assistance programs. JSWCD staff can assist landowners with identifying these other funding sources and, where appropriate, assist the landowners with the planning and application process.

Project Requirements

- The area subject to this application must be in need of stormwater mitigation and must meet at least one of the Stormwater Feature categories.
- The project area subject to this application must not need additional restoration or construction work, including but not limited to; major erosion control measures, stream channel modification, removal of infrastructure, or other bank stabilization measures. JSWCD staff will make this determination.
- Applicants will use new or like new materials for stormwater feature installations, and native planting if applicable.
- Applicants will follow the guidance outlined in this application for all stormwater features. Applicants must seek approval from JSWCD staff for any changes to the project plan.

Project Design Agreement

Signatures on the next page indicate that the Applicant has reviewed the above plan with a Jackson Soil and Water Conservation District (JSWCD) representative, assumes all responsibility for this plan, and agrees to carry it out to the best of their ability. Any changes to this plan will be addressed with JSWCD prior to implementation. The Applicant also indicates that they indemnify and hold harmless JSWCD, its officers, directors, agents and employees, against any and all losses, claims (including third-party claims), damages and expenses, including reasonable and necessary attorney's fees, to the extent any such losses, claims, damages and expenses are due to the acts or omissions of the Applicant, its officers, directors, agents and employees. The Applicant shall have no obligation to indemnify JSWCD should any such losses, claims, damages and expenses result, in whole or in part, from willful misconduct or gross negligence of JSWCD, its affiliates, officers, directors, agents and employees.

Outreach Survey Questions

How did you first hear about JSWCD? (*check one*)

☐ Word of mouth/my neighbor
☐ Email
☐ Flyer/mailer
☐ Educational event/class
☐ Media: radio, news, etc.
☐ Social media
☐ Other _____

Authorizing Signatures

Applicant Signature	Print Name	Date
Landowner Signature (if different than Applicant)	Print Name	Date
JSWCD Representative Signature	Print Name	Date
Local Jurisdictional Authority (City/County) Signature	Print Name	Date
JSWCD District Manager Signature	Print Name	Date

Completion Report and Rebate Request

Total stormwater area restored: _____ *ft*^{2} Payment Issued: _____

Rebate amount per ft^2 $ _____ Issued By: _____

Rebate total: $ _____

Signatures below indicate that the Applicant has completed installation of the project as outlined in this application according to the below terms, conditions, and project requirements. JSWCD agrees to release an incentive for the above total within 30 days of the signing of this agreement.

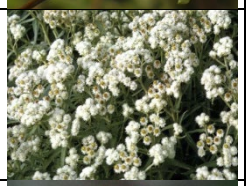
Applicant Signature	Print Name	Date
Landowner Signature (if different than Applicant)	Print Name	Date
JSWCD Representative Signature	Print Name	Date
JSWCD District Manager Signature	Print Name	Date

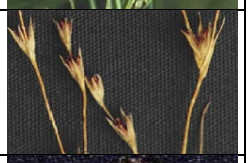
Light Needs Key
SN: Sun
SH: Shade
PS: Part Shade

Water Needs Key
B: Base (wet)
S: Slope (intermediate)
U: Upper Edge (dry)

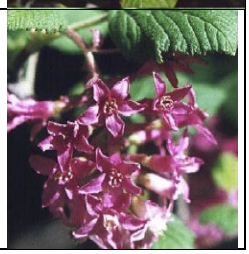
Appendix A: Stormwater Feature Plant Lists

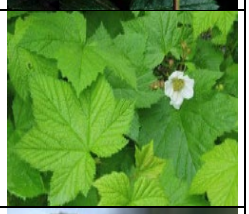
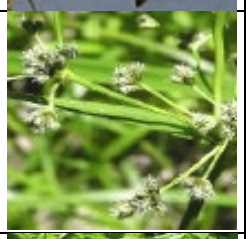
Bioswale Native Plants

Scientific Name	Common Name	Water/ Light Needs	Picture
Acer circinatum	Vine maple	S SN,PS, SH	
Alnus rubra	Red alder	B,S,U SN,PS, SH	
Amelanchier alnifolia	Serviceberry	S SN	
Anaphalis margaritacea	Pearly everlasting	U SN,PS	
Aquilegia formosa	Western columbine	S SN,PS	
Arctostaphylos columbiana	Hairy manzanita hybrid	S,U SN, PS	
Blechnum spicant	Deer fern	S PS, SH	
Calocedrus decurrens	Incense cedar	B,S SN,PS, SH	
Camassia quamash	Camas	S SN,PS	
Carex obnupta	Slough Sedge	B SN,PS, SH	
Cornus sericea	Red-osier dogwood	B,S,U SN,PS, SH	
Crataegus douglasii	Douglas hawthorne	S SN,PS, SH	

Deschampsia cespitosa	Tufted hairgrass	B,S SN	
Dicentra formosa	Pacific bleeding heart	S,U PS,SH	
Fragaria virginiana	Wild strawberry	B,S,U SN,PS SH	
Gaultheria shallon	Salal	S PS,SH	
Iris bracteata	Siskiyou iris	S SN,PS	
Juncus arcticus	Mountain rush	B PS	
Juncus bufonius	Toad rush	B,S SN, PS	
Juncus ensifolius	Swordleaf rush	B SN,SH	

Lonicera involucrata	Twinberry honeysuckle	S SN,PS, SH	
Lupinus polyphyllus	Bigleaf lupine	S,U SN,PS, SH	
Lupinus rivularis	Riverbank lupine	B,S SN	
Mahonia aquifolium	Tall Oregon grape	S,U SN,PS, SH	
Mahonia nervosa	Dull Oregon grape	S,U SN,PS, SH	
Mahonia repens	Creeping Oregon grape	S,U SN,PS, SH	
Mimulus guttatus	Monkey flower	B,S SN, PS	
Physocarpus capitatus	Pacific ninebark	S SN,PS, SH	

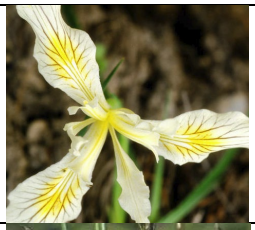
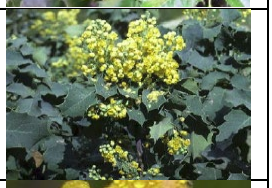
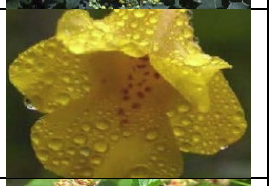
Polypodium glycyrrhiza	Licorice fern	S PS, SH	
Polystichum munitum	Western swordfern	S SH	
Populus tremuloides	Quaking aspen	B,S SN	
Pseudotsuga menziesii	Douglas - fir	U SN,PS	
Pteridium aquilinum	Western brackenfern	S SH	
Quercus garryana	Oregon white oak	S SN	
Rhamnus purshiana	Cascara buckthorn	S SN,PS, SH	
Ribes sanguineum	Red-flowering currant	S SN,PS	

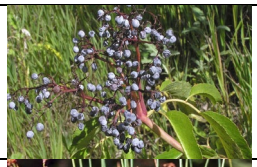
Rosa nutkana	Nootka rose	B,S SN,PS	
Rosa pisocarpa	Cluster rose	B,S SN,PS	
Rubus parviflorus	Thimbleberry	U SN,PS	
Rubus spectabilis	Salmonberry	U SN,PS, SH	
Salix lucida	Pacific willow	B,S SN,PS	
Scirpus microcarpus	Small-fruited bulrush	B SN,PS	
Spiraea douglasii	Douglas spiraea	B,S,U SN,PS	
Symphoricarpos albus	Common snowberry	S,U PS,SH	

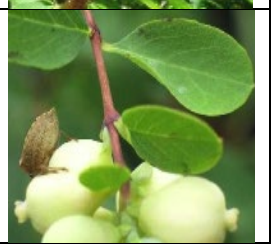
Tsuga mertensia	Mountain hemlock	U SN,PS	

Planter Box Native Plants

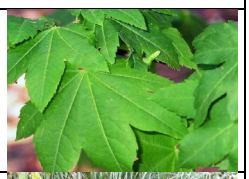
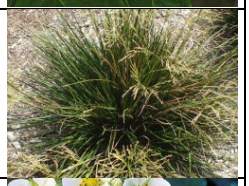
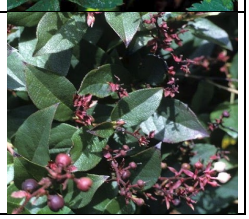
Scientific Name	Common Name	Water/ Light Needs	Picture
Acer circinatum	Vine maple	U SN, PS, SH	
Calocedrus decurrens	Incense cedar	U SN,PS,SH	
Camassia leichtlinii	Camas lily	B SN, PS	
Carex obnupta	Slough sedge	B SN,PS, SH	
Cornus sericea	Red-osier dogwood	B,S,U SN,PS, SH	
Crataegus douglasii	Douglas hawthorne	B SN, PS, SH	
Deschampsia caespitosa	Tufted hairgrass	B SN	

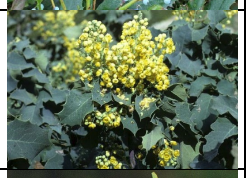
Vaccinium ovatum	Evergreen huckleberry	S SN,PS SH	
Iris bracteata	Siskiyou iris	U SN, PS	
Juncus balticus	Mountain rush	B SN	
Lonicera involucrata	Twinberry honeysuckle	B,S SN, PS, SH	
Mahonia aquifolium	Tall oregon grape	S,U SN, PS, SH	
Mahonia repens	Creeping oregon grape	B,S SN, PS, SH	
Mimulus guttatus	Monkey flower	B SN, PS	
Physocarpus capitatus	Pacific ninebark	B SN, PS, SH	
Polystichum munitum	Western swordfern	S SH	

Sambucus nigra	Blue elderberry	B SN, PS	
Scirpus validus	Softstem bulrush	B SN	

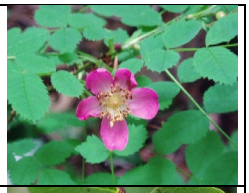
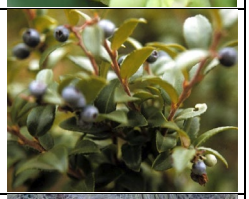
Spiraea douglasii	Douglas spiraea	B SN, PS	
Symphorica rpus alba	Common snowberry	B PS, SH	

Rain Garden Native Plants

Scientific Name	Common Name	Water/ Light Needs	Picture
Acer circinatum	Vine maple	S,U SN, PS, SH	
Carex obnupta	Slough sedge	B SN,P S, SH	
Cornus sericea	Red-osier dogwood	B,S,U SN,P S, SH	
Deschampsia cespitosa	Tufted hairgrass	B,S SN	
Fragaria virginiana	Wild strawberry	S,U SN, PS, SH	
Gaultheria shallon	Salal	S PS,SH	

Holodiscus discolor	Ocean spray	S,U SN, PS,SH	
Iris bracteata	Siskiyou iris	B,S,U SN. PS	
Mahonia aquifolium	Tall oregon grape	S,U SN, PS, SH	
Mahonia nervosa	Dull oregon grape	S SN, PS, SH	
Mahonia repens	Creeping oregon grape	S SN, PS, SH	
Oemleria cerasiformis	Osoberry	B,S,U SN, PS, SH	

Philadelphus lewisii	Mock orange	S,U SN, PS,SH	
Polystichium mutimum	Western swordfern	S SH	
Rhamnus purshiana	Cascara	S SN, PS,SH	
Ribes sanguineum	Red - flowering currant	B,S,U SN, PS	
Ribes aureum	Golden currant	B,S SN, PS	

Rosa nutkana	Nootka rose	B,S,U SN, PS	
Symphoricarpos albus	Common snowberry	S,U PS,SH	
Vaccinium ovatum	California huckleberry	S,U SN, PS,SH	
Festuca occidentalis	Western fescue	S,U PS