

Johnson Creek Volunteer Parks Naturalist Handbook 2018



**PORTLAND
PARKS & RECREATION**

Healthy Parks, Healthy Portland

TABLE OF CONTENTS

About JCWC and PP&R

- Contact information
- Who We Are
 - Johnson Creek Watershed Council
 - Portland Parks & Recreation

Volunteer Parks Naturalist Program Information

- Overview and Expectations of Volunteer Parks Naturalist Program
- Volunteer Park Steward Program Team Members

About the Natural Areas

- Johnson Creek Watershed Overview
- Locator Maps
- Natural Area information:
 - Beggar's-tick Wildlife Refuge
 - Brannen Property
 - (The) Buttes Natural Area
 - Clatsop Butte Nature Park
 - Cottonwood Creek Natural Area
 - Deardorff Creek Natural Area
 - Errol Heights Natural Area
 - Foster Floodplain and adjacent Springwater Corridor trail
 - Indian Creek Natural Area
 - Johnson Creek Park
 - Kingsley D. Bundy Park
 - Mitchell Creek Natural Area
 - Powell Butte Nature Park
 - Tideman Johnson Park
 - Veteran's Creek Natural Area
 - Wahoo Natural Area

Volunteer Park Naturalist Documentation

- Report Form link: *to be provided during training*
- iNaturalist Project link: *to be provided during training*
- PP&R Volunteer Application, PP&R Criminal Background Check, PP&R Code of Conduct and the Media Policy *will be completed during the Volunteer Park Naturalist training.*

Additional Resources

- Regional Guides (books & websites)
- Winter twig identification
- Invasive species information

CONTACT INFORMATION

Courtney Beckel

Johnson Creek Watershed Council

Volunteer & Outreach Coordinator

courtney@jcw.org

office: 503.652.7477

Contact regarding: JCWC website; training or summer potluck; sharing photos, poems or artwork for publication to the JCWC community

Susan Hawes

Portland Parks & Recreation

Johnson Creek Watershed Stewardship Coordinator

susan.hawes@portlandoregon.gov

office: 503.823.6131

cell: 503.823.5937 (text OK)

Contact regarding: PP&R follow-up to reports, site-specific questions

Park Rangers

Portland Parks & Recreation

rangercallcenter@portlandoregon.gov (checked 1x/week)

503.823.1637

- To report campsites, illegal or non-compliant activity that does not require 911

RID

Metro

503.234.3000

Or use the online reporting form. Report form and more information about the RID program:

<https://www.oregonmetro.gov/tools-living/garbage-and-recycling/rid-patrol>

- To report dumpsites

Best contact for reporting:

PdxReporter App (Free)

- To report campsites, dumpsites and illegal or non-compliant activity that does not require 911
- Can be used on any web-enabled smartphone, tablet or desktop computer.
- A very quick and convenient way to interact with city bureaus and report problems and maintenance issues within Portland city limits.

For more information about App: <https://www.portlandoregon.gov/transportation/article/405043>

To download:

www.Pdxreporter.org

Note: You will be asked to create or use your www.portlandoregon.gov website account login to download and use the App.



WHO WE ARE - JCWC

JCWC: Johnson Creek Watershed Council

The Johnson Creek Watershed Council was established in 1995 by community members committed to restoring Johnson Creek, a vibrant creek with many challenges. **Our mission is to promote restoration and stewardship of a healthy Johnson Creek Watershed through sound science and community engagement.** Our programs and community engagement efforts should serve all residents of the watershed.

Johnson Creek Watershed Council welcomes ALL people that live, work, and play around Johnson Creek. We acknowledge there is a legacy of systematic inequalities within our watershed. The council is devoted to doing our part to heal the legacy of systematic racism and inequality by enriching the lives of all people who touch the Johnson Creek Watershed.

JCWC Core Beliefs:

- Thriving natural areas sustain and enrich human communities.
- Humans have a responsibility to protect and steward the natural world, not solely for their needs and desires, but for its own inherent value.
- Sound science must be the basis for watershed restoration and management.
- An informed and engaged public is essential to the health of the Johnson Creek Watershed.
- By acting with integrity and listening respectfully to all interests and perspectives, we can create lasting positive change in Johnson Creek Watershed.

JCWC Goals:

- Restoration projects are strategically selected to improve the overall health of the watershed. Landowners and volunteers participate in restoration projects and help with their long-term maintenance.
- JCWC is guided by a comprehensive scientific framework for watershed health that is broadly accepted. The framework helps guide JCWC in its land use and low impact development policy positions, restoration, research, and education efforts.
- Landowners and residents in the Watershed and throughout the metropolitan region take pride in Johnson Creek and understand how a healthy Johnson Creek Watershed improves the quality of life in our community.
- JCWC is truly place-based: its office is a community hub and gathering place, a physical manifestation of JCWC's vision, and central to people's experience of Johnson Creek.
- JCWC is a well-respected and influential advocate, particularly with decision makers up- and downstream, for sound land use and development policy and best land use practices in the Watershed.
- JCWC is a well-established, respected sustainable organization with the human and financial resources and effective stakeholder partnerships to carry out its program plans and actualize its mission.



PP&R: Land Stewardship Division

Portland Parks & Recreation Land Stewardship Division encompasses both “developed” Parks and Natural Areas. The Johnson Creek Watershed Stewardship Program falls within the Land Stewardship Division Natural Areas East work unit.

The overarching mission of Land Stewardship Natural Areas East is to preserve, protect, and restore Portland's natural resources to provide nature in the city. This mission applies to all PP&R parks, including developed parks. Important goals and objectives include:

- A focus on sustainable and ecological land management in all PP&R Parks, including “developed” Parks.
- Building a more equitable organization that is capable of serving the entire community and addressing inequities impacting communities of color.
- Acquiring sufficient lands to protect existing resources and to protect locally significant natural areas.
- Increasing the amount of protected habitat land.
- Expanding urban forest on city streets and within parks.
- Protecting, expanding and restoring interconnected ecosystems and wildlife corridors.

Land Stewardship Natural Areas created a Restoration Plan that guides our work:

<https://www.portlandoregon.gov/parks/article/323540>. Of particular interest to the Johnson Creek Volunteer Parks Naturalist Program, a focus of the Restoration Plan is to restore areas along tributaries and the mainstem of Johnson Creek to support watershed-based salmon recovery by protecting, expanding and restoring salmon habitat throughout the watershed. ***The work of Johnson Creek Volunteer Parks Naturalists directly supports this goal by informing PP&R staff about Parks conditions and needs.***

PP&R Stewardship Program

PP&R Land Stewardship Natural Areas Stewardship Program is split to cover four sections of the City, each with a corresponding Stewardship Coordinator:

- Isabel LaCourse, Willamette River Watershed Stewardship Coordinator
- Mary Verrilli, Westside Stewardship Coordinator
- Susan Hawes, Johnson Creek Watershed Stewardship Coordinator
- Yoko Silk, Columbia Slough Watershed Stewardship Coordinator

All stewardship coordinators work with school classes, youth groups, businesses, (Park) Friends groups, watershed councils, religious organizations, non-profits and many other community groups to support engagement and ecological enhancement efforts in our city's natural areas. Building connections and authentic relationships with communities of color, culturally diverse groups and underserved communities is a strong focus of the Stewardship Program.

Want to learn more?

Volunteers or anyone else can learn more about us by visiting the nature section of our website at www.portlandparks.org.

PROGRAM INFORMATION

Overview

The Johnson Creek Volunteer Parks Naturalist program is a partnership between the Johnson Creek Watershed Council (JCWC) Volunteer Program and Portland Parks and Recreation (PP&R) Johnson Creek Watershed Natural Areas Stewardship Program. The purpose of the program is to assist JCWC and PP&R with collecting and reporting up-to-date and accurate information about what is happening in our natural areas. Parks Naturalists act as “eyes and ears”—reporting issues of concern or wildlife sightings—and as ambassadors, interacting positively with neighbors and visitors on site. Parks Naturalists also keep our natural areas clean through periodic litter patrol.

Expectations

Parks Naturalists are expected to:

- Attend required trainings and events
- Visit your site each month
- Interact positively with other park visitors and staff
- Complete the online Volunteer Parks Naturalist report form
- Report camps and dumpsites to the PP&R Rangers or RID
- Report feedback provided by other park visitors

Park Naturalists may also:

- Keep an observation log (lists) or other writings (poems, etc.) in a Naturalist notebook
- Photograph wildlife, flowers, plants or other observations
- Photograph from a particular location each visit, to document seasonal and annual site changes
- Document common and uncommon flora and fauna into the specified iNaturalist project
- Create a Bird list and post on eBird

Program Team Members

- **JCWC Volunteer & Outreach Coordinator – Courtney Beckel**
Recruits Volunteer Parks Naturalists, manages Volunteer Parks Naturalist Report forms, implements the end-of-year volunteer survey and JCWC volunteer recognition event. Together with PP&R Stewardship Coordinator, jointly implements the Volunteer Parks Naturalist Training and the Summer Volunteer Parks Naturalist Potluck.
- **PP&R Johnson Creek Watershed Stewardship Coordinator – Susan Hawes**
Your PP&R point-of-contact. Ensures that Report Form and iNat content is directed to appropriate PP&R staff for follow-up. Together with JCWC Volunteer & Outreach Coordinator, jointly implements the Volunteer Parks Naturalist Training and the Summer Volunteer Parks Naturalist Potluck.
- **PP&R Ecologist – Christian Haaning**
Designates natural area location and scope of project for Volunteer Parks Naturalists. Works with PP&R staff to implement follow-up to Parks Naturalist reports.
- **Volunteer Stewards – You!**
Visits assigned site and reports observations.

JOHNSON CREEK WATERSHED OVERVIEW

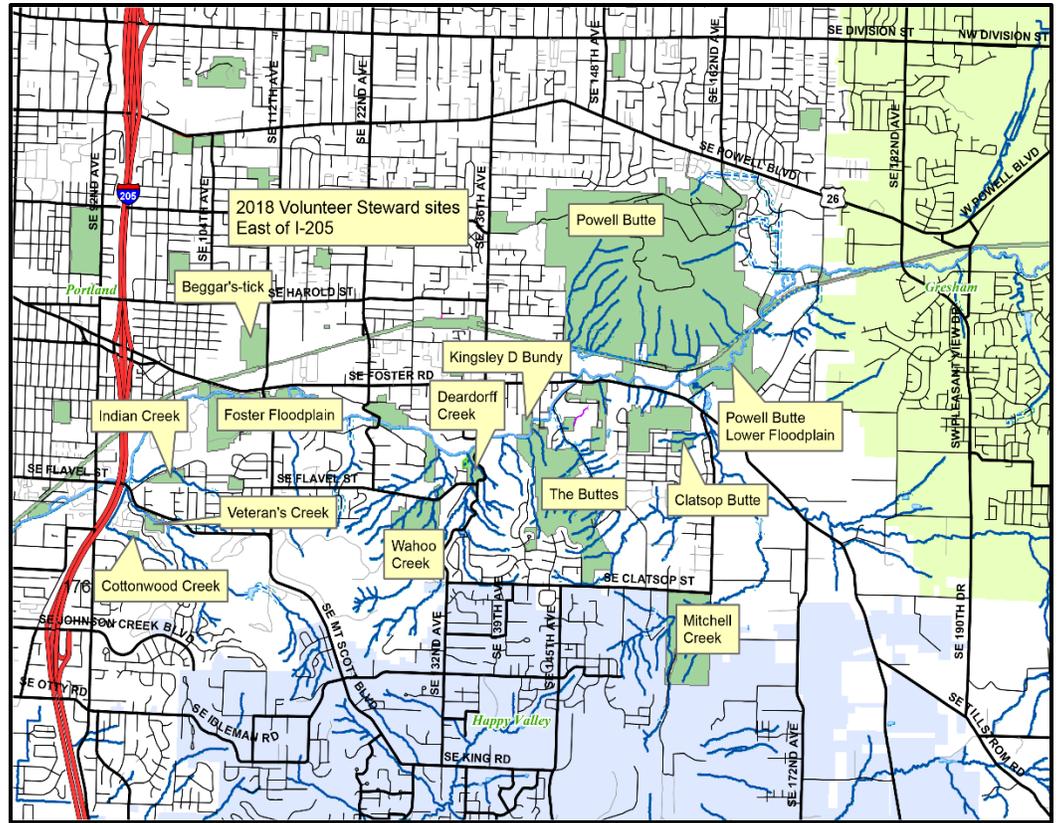
Johnson Creek is a 26-mile (42 km) tributary to the Willamette River in Portland, Oregon's metropolitan area. Fed by numerous springs and an average of 36 inches (910 mm) of annual rainfall, the creek drains 54 square miles (140 km²) of rural and urban landscapes that are occupied by over 175,000 people in Clackamas and Multnomah Counties. Johnson Creek originates in the agricultural foothills of Mount Hood near Boring and flows westward through the cities of Gresham, Portland, Damascus, Happy Valley, and Milwaukie to enter the Willamette River 18.5 miles above its confluence with the Columbia River. The Johnson Creek watershed includes the subwatersheds of Badger Creek, Sunshine Creek, Kelley Creek, Mitchell Creek, Veterans Creek, Crystal Springs Creek, and smaller streams.

Prior to European settlement, the watershed was heavily forested and was used by Native Americans for fishing and hunting. In the 19th century, settlers cleared much of the land for farming, which data suggest was the main driver for increased flooding. As urban density and development increased in the floodplain in the early 20th century, floods became a growing concern. In the 1930s, the Works Progress Administration of the federal government lined the lower 13 miles (21 km) of Johnson Creek with rock to control the floods.

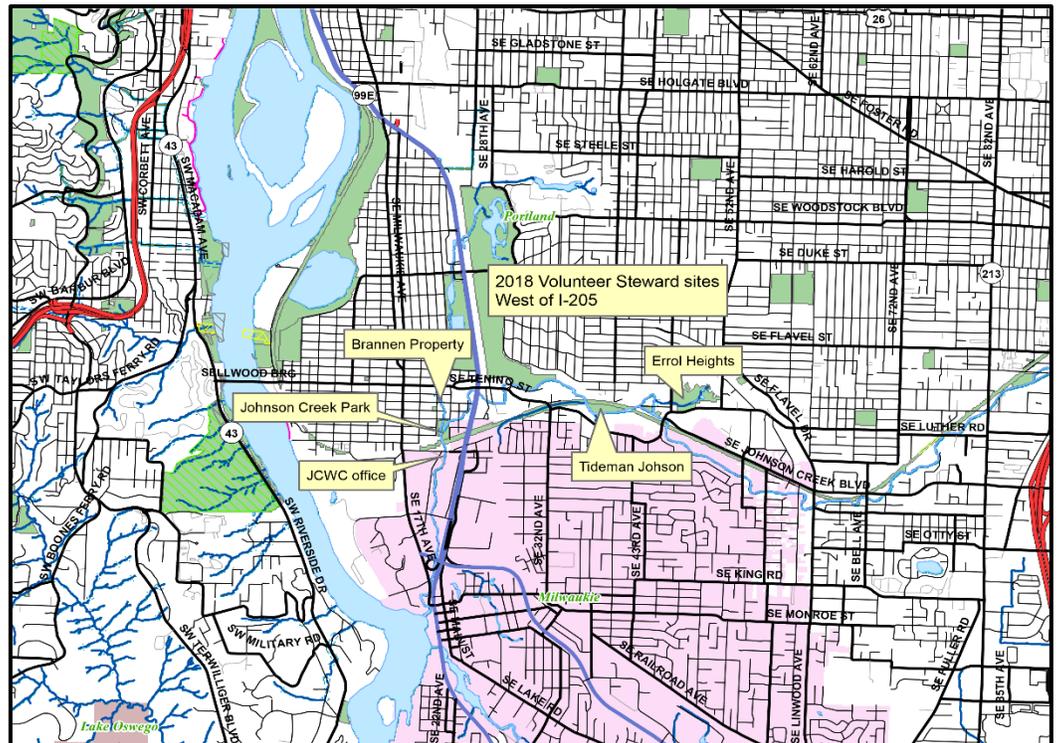
Today, 72% of Johnson Creek Watershed is within the current Urban Growth Boundary of metropolitan Portland. The 4,600 acres of parks and open spaces in the watershed include natural areas, a wildlife refuge, a rhododendron garden, a botanical garden, a national cemetery, and a 21-mile (34 km) bike and pedestrian path called the Springwater Corridor Trail (a former railway line) that follows the creek for much of its length.

Johnson Creek is free-flowing along its main stem and is one of the only creeks in the Portland area that provides habitat, though polluted, for **threatened Steelhead trout and Coho and Chinook salmon**, as well as for cutthroat trout. The Watershed is also home to **sensitive species such as red-legged frogs, painted turtles, freshwater mussels, and pileated woodpeckers**. Over the last two decades, there has been major public and private investment in reconnecting Johnson Creek to its floodplain and restoring riparian forests and in-stream habitat.

JOHNSON CREEK WATERSHED LOCATOR MAP - EAST



JOHNSON CREEK WATERSHED LOCATOR MAP - WEST



BEGGAR’S-TICK WILDLIFE REFUGE

SE 111th & Springwater Corridor, just north of Foster Road

21-acre Beggar’s-tick Wildlife Refuge is named after the Beggar’s-tick native wetland indicator plant, two species of which occur in the northern end of the Refuge (*Bidens cernua* and *frondosa*). In late August and through September these plants form a beautiful sea of yellow as the marsh at the northern end of the site dries out. The beggar’s-tick seeds have little “double barbs” which allow them to hitch a ride on the fur of deer, other animals or passing hikers. Dedicated as a wildlife refuge in 1990 by Multnomah County and formerly an industrial dump, PP&R Natural Areas took over management in 2009/10. Historically the site was farmed with blueberries, used for grazing horse and in 1968 was purchased by Multnomah County to act as a catch-basin for stormwater runoff.

Beggar’s-tick is now a mix of shrubby upland and wetlands and emergent marsh that hosts the species-of-concern northern **red-legged frog** (*Rana aurora*) and the sensitive bird species **willow flycatcher** (*Empidonax traillii*). Northern red-legged frogs need still waters such as the Beggar’s-tick pond to breed. Willow flycatchers need willow and brushy thickets to breed. Long-toed salamander, northern Pacific tree frog, migrating ducks and hummingbirds, and the uncommon Alder Dagger moth and its caterpillar larvae also appear on site, and green heron and cottontail rabbit has been documented here by PP&R staff. According to *Wild in the City*, “in addition to being important habitat for a diversity of fauna and flora, the [Beggar’s-tick] refuge is an important component of water quality and floodwater management within the Johnson Creek watershed by storing stormwater and removing the associated sediment and pollutants.”

Although the site is, according to the authors of *Wild in the City*, one of most pristine wetlands in the Portland metropolitan area, it is constantly threatened by illegal camping activities and invasive species. During 2015-2016, the health of this site was severely affected by very extensive illegal camping.

Volunteer enhancement activities at this site currently include: a partnership with the Lents Springwater Corridor Habitat Restoration Project and ECO (which bring local elementary school students to the site for native planting projects and environmental education), and a partnership with the Wisdom of the Elders, whose members assist with this project through site preparation and student mentorship.

Access: Tri-met bus: 71; 17 stops on Holgate and it’s a .8 mile walk south to the site. Beggar’s-tick is adjacent to the Springwater Corridor trail. There is a small parking lot on site.



Left: Nodding beggar’s-tick (*Bidens cernua*) © Bob Klips
Right: Common beggar’s-tick (*Bidens frondosa*) © www.pfaf.org



BRANNEN PROPERTY

SE 21st & Umatilla

This property, acquired just prior to 2010, is a small (1/3 acre), but important natural area through which Crystal Springs flows as it heads towards its confluence with Johnson Creek. The Memorandum of Understanding between PP&R and Bureau of Environmental Services (BES) Crystal Springs Creek is a major tributary to Johnson Creek

The former owner's house and carport was deconstructed in 2010 by the Bureau of Environmental Services (BES) and restoration of the site was begun at this time. BES removed invasive species and established and enhanced the native riparian, upland and wetland plant communities (yes, all within this little site!) by seeding the site with native grasses, sedges and forbs, and installing 280 tree seedlings and cuttings and 500 shrubs. An interpretive sign was installed February 2015. In June of 2017, 3 river otters (1 adult and 2 juveniles) were seen frolicking on site.

Access: Tri-met bus: 70; stop: SE 17th & Tenino. Walk 1 block south to Umatilla and then 4 blocks east to Brannen Property. Streetside parking available.

THE BUTTES NATURAL AREA

SE 142nd & SE Cooper, just south of Foster Road
SE 144th, accessed from Barbara Welch Boulevard
SE 147th & Crystal Street

The Buttes Natural Area is part of the larger complex of primarily forested and steep cinder cone buttes in Portland and Gresham called the Boring Lava Domes or East Buttes. These volcanic buttes formed during eruptions that occurred several hundred thousand years ago. The volcanoes are now dormant and comprised mainly of basalts, similar to Mt. Hood and other Cascade mountains. Streams on The Buttes are generally high gradient with low to moderate flow; they supply cool clear water to Johnson Creek, supporting healthy macroinvertebrate populations, amphibians and fish. The forests were at least partially cleared in the early 1900s for agriculture and timber and, later in the century, primarily for housing development. According to the Bureau of Planning's document BORING LAVA DOMES - Supplement To The Johnson Creek Basin Protection Plan (1997), "Because of the Lava Domes' poorly drained clay soils, the recent clearing and development activities have had direct influence on water quality and quantity within the lower Johnson Creek basin, often exacerbating local flooding and increasing sedimentation and turbidity." Thus, PP&R considers intact, healthy tracts of lava dome forests such as The Buttes to be important contributors to healthier water quality in Johnson Creek.

Vegetation on The Buttes consists of a Bigleaf Maple (*Acer macrophyllum*) Forest Alliance. Most notably Douglas fir (*Pseudotsuga menziesii*) and western red cedar (*Thuja plicata*) are present, with western red cedar the most common conifer species. Douglas fir is more common on the ridges, with western red cedar dominating on the mid slopes. Red alder (*Alnus rubra*) is present. Dominant shrubs are salmonberry (*Rubus spectabilis*—restricted to stream bottoms) and Oregon grape (*Mahonia nervosa*—restricted to ravine bottoms). Oregon grape is also widely dispersed on ridges and mid slopes. Red elderberry (*Sambucus racemosa*), salal (*Gaultheria shallon*) and Red huckleberry (*Vaccinium parvifolium*) are present in trace amounts. Sword fern (*Polystichum munitum*) is the dominant ground species. Lady fern (*Athyrium filix-femina*) and bracken fern (*Pteridium aquilinum*) are present in trace amounts.

Rough-skinned newt, black-tailed deer, garter snakes and ensatina salamanders have been documented by staff on site.

Access: There is no Tri-met access near the site. Streetside parking available at all entrances.

CLATSOP BUTTE PARK

SE 156th & Evergreen and SE 155th & Belmore Heights

Clatsop Butte is a fairly new park, purchased from developers with some assistance from the Trust for Public Lands in portions since 2000. Sixteen acres of the westernmost portion of the Park site is managed as a developed Park and will eventually be developed according to the 2009 Clatsop Butte Park Master Plan: <https://www.portlandoregon.gov/parks/article/469521>. The remaining 27 acres to the east is managed as natural area, henceforth referred to as CB natural area. There are multiple other natural area parcels across the Butte: Forested land to the north and west of the Park is owned and managed by Multnomah County and Metro, and there are 3 Homeowner's Associations that manage open space: Emerald View (to the east of the Park and including a sliver of land that splits the CB natural area), Lexington Hills to the south and McGregor Heights to the north and west. According to the Master Plan and PP&R lore, the city has a vision that the entirety of Clatsop Butte Park could eventually be part of a "Forest Park East", extending west towards The Buttes Natural Area and beyond. The Park is a BEECN (Basic Earthquake **Emergency Communication Node**--pronounced beacon), a place to go after a major earthquake to ask for emergency assistance if phone service is down, or to report severe damage or injury.

Much of the natural area of Clatsop Butte Park is categorized in the Master Plan as "forest enhancement area" with a few "native meadows".

Historical aerial photographs from the US Army Corps of Engineers suggests that since 1937, the "meadow" just east of the SE 156th & Evergreen entrance was in agricultural production and the rest of the CB natural area was forested. Heavy ATV use was reported in the area prior to 2008. The "meadow" is categorized within the 2008 PP&R vegetation unit summaries as mixed evergreen-deciduous woodland in severely degraded condition. Since 2010 the area has been planted and maintained by PP&R volunteer partners using oak habitat-associated tree, shrub and wildflower species, which can be seen surviving among the dense non-native grasses. The meadow currently boasts (on a clear day) dramatic views of Mt. Hood and Pleasant Valley farms to the east.

Just north of the "meadow" and east of the developed Clatsop Park is forest categorized in the 2008 vegetation summaries as healthier evergreen forest with Douglas fir, mature big-leaf maple and multi-aged western red-cedar. Within this forest is an open, red alder-dominated slope and a deep ravine with an unnamed ephemeral stream (one of 4 in CB natural area) that drains to Kelley Creek. A PP&R-managed trail runs between the cul-de-sac at SE 156th & Belmore Heights and the Park. PP&R has performed large-scale invasive blackberry removal in the entire southern portion of this area and has partnered with Johnson Creek Watershed Council, Friends of Trees and other community groups to replant with native trees and shrubs. The CB natural area Desired Future Conditions (DFC) as noted in Appendix B of the Clatsop Butte Park Master Plan is Douglas fir-big-leaf maple forest and Douglas fir-western hemlock forest. (The DFC notes that western hemlock is currently absent, but was historically present.) Determination of DFC is ongoing and may be affected by climate change and other factors.

The northernmost portion of CB natural area was considered mixed evergreen-deciduous forest in fair health in 2008, with a dense canopy of western red cedar and big-leaf maple. This area has not yet received attention from volunteers, although staff has continued to work north through the site, removing invasive blackberry. The DFC lists this area as western red cedar seasonally flooded forest.

Also noted in Appendix B of the Plan are plant and wildlife species lists for Clatsop Butte. It is unclear whether these lists indicate the DFC of plants and wildlife, or if these were current species lists as of 2009. Wildlife reported more recently on site include black-tailed deer (including a piebald!), fox, coyote, black bear, northern flickers and pileated woodpeckers.

Like The Buttes Natural Area, Clatsop Butte Park is part of the larger complex of primarily forested and steep cinder cone buttes in Portland and Gresham called the Boring Lava Domes or East Buttes. Clatsop Butte's highest elevation is 600' and its slopes drain east to Kelley Creek, a tributary to Johnson Creek, and north to Johnson Creek itself. The soil is composed of Springwater Formation basalt, consisting of windblown silt deposits from the Missoula/Bretz floods.

Access: There is no Tri-met access near the site. Streetside parking available at all entrances.

COTTONWOOD CREEK NATURAL AREA

SE Tenino Ct., just east of intersection with SE 92nd

Cottonwood Creek Natural Area is a small (just over 1.5 acres) property with a primarily red alder and western red cedar canopy. Understory is sparse, although sword fern has a presence and almost 1000 native shrubs have been planted by volunteers since 2013. The property used to be covered in a thick layer of ivy (evidenced by looking at the surrounding properties) that has been removed by PP&R volunteers and staff since prior to 2010. Black-tailed deer have been seen on site. The stream is strongly downcut in some areas and there is apparent extensive use of the natural area by occupants of adjacent apartment complexes.

Access: Tri-met bus: 19; stop: SE 92nd & Flavel. Walk 1/3 mile south on SE 92nd, then ¼ mile uphill to the Park entrance at the Water Bureau pump station. Green line MAX: Flavel stop. Walk west on Flavel to SE 92nd, then follow the above directions. Streetside parking available.

DEARDORFF CREEK NATURAL AREA

SE Deardorff Road & SE Flavel

Deardorff Creek is part of the East Buttes, a series of low hills and buttes composed of uplifted Troutdale sediments that are modified by the Bretz (Missoula) floods. Cutthroat trout (*Oncorhynchus clarkia*) has been documented in Deardorff Creek and western pearlshell in adjacent Johnson Creek. Red-legged frog (*Rana aurora*) is presumed to be present from observations in nearby woodlands, and long-toed salamander has been documented on site. Pileated woodpecker (*Dryocopus pileatus*) has been seen on site. Tracks and beds establish the presence of black-tailed deer (*Odocoileus hemionus columbianus*) and coyote (*Canis latrans*).

The vegetation is upland mixed deciduous conifer woodland with big leaf maple (*Acer macrophyllum*) as the dominant species. Cottonwood (*Populus balsamifera ssp. Trichocarpa*) and red alder (*Alnus rubra*) are present. The conifer component consists of western red cedar (*Thuja plicata*) and Douglas fir (*Pseudotsuga menziesii*). The sparse mid-level shrub component consists of hazelnut (*Corylus cornuta*), red elderberry (*Sambucus racemosa*), snowberry (*Symphoricarpos albus*), Indian plum (*Oemleria cerasiformis*) and thimbleberry (*Rubus parviflorus*). Wahoo (*Euonymus occidentalis*) is occasionally present. Oregon grape (*Berberis nervosa*) is generally absent from the east-facing slope, but present on the west-facing slope. Sword fern (*Polystichum munitum*) is the dominant ground layer species. Nettle (*Urtica dioica*) and hedgenettle (*Stachys cooleyae*) are present in the creek bottom. The east-facing slope is rich in ephemeral spring flowers, but is generally barren by late summer.

Access: There is no Tri-met access near the site. Streetside parking limited to a few pull-offs.

ERROL HEIGHTS PARK

Between SE 45th & SE 52nd, just S of Tenino Ct.

Entrances at SE 52nd & Tenino Ct., SE 45th Ave. just south of Tenino Ct. & SE Harney, 1 block east of Franz Bakery

Errol Heights Natural Area, over 16 acres, was acquired in 1999 by PP&R, with more recent additions in the southwest corner added to the Park in approximately 2013-14. An active Friends group holds restoration events the third Saturday of each month. The site is composed of a creek bottom canyon and an upland ridge. Springs emerge from the ridge and feed the wetlands in the canyon. Errol Creek provides up to 10% of cold water flow to Johnson Creek and is ideal salmon rearing habitat, providing summertime cold-water refugia and winter off-channel habitat for anadromous fish (salmon, steelhead and trout). Common trees include red alder, bigleaf maple and some Douglas fir and Oregon oak. Common plants include ryegrasses, swamp rose, sword fern, thimbleberry and snowberry. Giant horsetail and skunk cabbage grow in the wetlands. In the upland areas wildflowers such as yarrow, checkermallow, Oregon iris and lupines were planted previously by volunteers.

Two endemic and possibly rare crustacean amphipods, called “scuds” or “side-swimmers” that look like tiny shrimp occur here: *Ramellogammarus oregonensis* (found in creek and springs) and *R. similimanus* (in duck pond spring only). Other observed wildlife includes a resident beaver (look for the over 100-foot long beaver dam that bisects the wetlands!), nutria, black-tailed deer and ensatina and western red-backed salamanders.

2012 amphibian terrestrial studies reported the following as present at this site: ensatina salamander and western red-backed salamander. Northern Pacific tree frog has been recently documented on site.

The desired future condition of the natural area includes fostering the following plant communities which host a wide range of wildlife and provide erosion suppression: big leaf maple/Douglas fir forest, Oregon ash seasonally flooded forest, Oregon white oak woodland, red alder saturated forest and Douglas fir/Pacific madrone forest.

Access: Tri-met bus 75 (SE 45th & Tenino Drive stop). Trail entrance is located just south of Tenino Drive. Site is near the Springwater Corridor trail: exit trail at the SE 45th Avenue entrance and ride a short distance north and uphill on SE 45th to the Errol Heights trail entrance on the right. Street parking available at all entrances.

FOSTER FLOODPLAINS and SPRINGWATER CROSSING

SE 104th & Foster Road

The City of Portland completed work on the Foster Floodplain in 2012, and the natural area was opened to the public in the spring of 2013. Previously, the 63-acre site had been owned by a multitude of private landowners. Because these properties would flood on a regular basis when Johnson Creek jumped its banks, the City of Portland purchased the properties from 60 families over the course of fifteen years through the Willing Seller Acquisition Program, allowing the citizens to move out of the 100-year floodplain. The City then removed the homes and the Bureau of Environmental Services (BES) worked to re-engineer the floodplain, recreating the meanders of Johnson Creek and giving the floodwaters a place to go during large flood events.

The project also improves habitat for fish and wildlife, restoring over a half mile of the creek for native salmon, trout and lamprey. Pond and wetland enhancements benefit sensitive frogs and salamanders. Hidden in the grasses and shrubs are ground-nesting birds like killdeer and small mammals, including rabbits and skunk. Deer, coyote, hawks and bald eagles also use the site. 2012 amphibian egg mass studies reported the following as present at this site: northern red-legged frog, northern Pacific tree frog and long-toed salamander. Crawfish and Invasive American bullfrog has also been documented on site. The restored floodplain also improves the water quality of Johnson Creek by allowing sediments from high water events to settle onto the floodplain.

Restoration of the site helps achieve goals of the Johnson Creek Restoration Plan, which calls for improving water quality, enhancing habitat, and preventing damage from floods that occur about every 10 years or more frequently. It also provides an opportunity for BES and PP&R to work with JCWC to meet JCWC's goal of increasing canopy cover along the creek to address water temperature concerns.

The adjacent Springwater Corridor trail site at SE 103rd & Foster was previously owned by the neighboring land owner, Freeway Lands (private company). While in Freeway Lands ownership, JCWC volunteers worked on site to remove English ivy and plant native ferns and other species. Since the property has come into city ownership (~2010) and is now managed by PP&R, PP&R has been partnering with the Lents Springwater Habitat Restoration Project, Kelly and Lent elementary schools and other entities to restore the area with extensive invasives species removal and native plantings.

The adjacent Freeway Lands site is owned and managed by Freeway Lands. This site has extensive English laurel and ivy, invasive blackberry and other invasive species. JCWC is coordinating with Freeway Lands to hire contract crews to take out the large invasives, such as English laurel.

Access: Foster Floodplains parking lot @ SE 104th and Foster. Tri-met bus: 14 and 71. Foster Floodplain is adjacent to the Springwater Corridor trail. Street parking also available along Foster Road.

INDIAN CREEK NATURAL AREA

SE Knapp and SE 100th

Indian Creek Natural Area encompasses almost 7 acres around this tributary to Johnson Creek, just east of I-205. Forested overstory consists of big-leaf maple and Douglas fir, and a small portion of the site is forested understory covered in ivy, yet also consisting of native plants such as trillium, Hooker's fairy bells, duckfoot, fringedcup and other native species.

The site came under PP&R management between 2010 and 2014. In the PP&R Natural Area Management Priority Matrix from 2014, Indian Creek is listed as having “high” natural resource function and value (which incorporates criteria such as salmon-bearing streams, connectivity to other natural areas, and active volunteer stewardship) and “fair” ecological health. Since 2014 there has been large impacts to the ecological quality of the natural area from extensive camping, dumping, creek damming and RV/vehicle use.

Also since 2014, over 400 native shrubs were planted by local elementary students from Kelly, Lent and Marysville schools with the help of the Lents Springwater Corridor Habitat Restoration Project and Ecology in the Classrooms and Outdoors (ECO). Wisdom of the Elders focused efforts on ivy removal in the southern part of the Natural Area above the Creek where there [was] a somewhat healthy variety of native understory plants; and Oregon Tradeswomen built a split-rail fence to discourage ATV and vehicular use of the site.

Much of the site’s open area was covered with invasive blackberry, which was removed by BES. The forested areas of the site remain covered with ivy, in some areas quite thickly, although extensive ivy removal by WoTE in the eastern portion of the site has been effective. Deer and skunk have been documented on site and in 2014 ECO reported that they were encountering lots of interesting insects and wildlife on their educational walks with the students.

Access: Green line MAX: Flavel stop. Walk east on Flavel 1 block, then turn left onto SE Knapp for one block. Natural Area is on the right. Street parking available.

JOHNSON CREEK PARK

SE 19th/SE 23rd & SE Clatsop

4.5-acre Johnson Creek Park sits at the confluence of Johnson Creek and Crystal Springs Creek and is a hybrid park jointly managed by natural areas and service zones departments of PP&R. The west side of the creeks is primarily “developed” (with seasonally open bathrooms, picnic tables and mowed grass) and accessible from Sellwood. The east side of the creeks, acquired after 2005, is managed as a natural area and is accessible from southbound Highway 99. Since BES completed its restoration of Crystal Springs Creek in 2014, JCWC volunteers have documented spawning salmon in Crystal Springs Creek. JCWC has worked in partnership with PP&R – CNE for at least the past seven years to remove invasive species and plant native species on the east and west sides of the Park. Other stewardship partnership projects at the Park include plantings and plant care with SW Charter School and Sellwood Middle School. Reported wildlife sightings includes great blue heron (often seen hanging out near the creeks confluence), Cooper’s hawk, bald eagle and squirrel.

Westside Access: Tri-met bus: 70. Stop: SE 17th & Clatsop. Walk 2 blocks east on Clatsop to the Park. Street parking available.

Eastside Access: Tri-met bus: 31, 32, 33, 99; 70 stops not far away and there is easy transfer to these buses downtown or on MLK/McLoughlin. Street parking available.

KINGSLEY D. BUNDY PARK

SE 141st, just S of Foster

3.47-acre Kingsley D. Bundy Natural Area was donated to PP&R by Bundy’s family. In 2002 management of the site was transferred to PP&R. The site is an intact floodplain of Johnson Creek,

with an overstory of Oregon ash (*Fraxinus latifolia*) and red alder (*Alnus rubra*) and some Douglas fir (*Pseudotsuga menziesii*) and western red cedar (*Thuja plicata*). Targeted understory species we hope to encourage or revegetate the site with include salmonberry (*Rubus spectabilis*), red osier dogwood (*Cornus stolonifera*), Douglas spiraea (*Spiraea douglasii*) and rose (*Rosa* sp.). Other species present in the native understory are Indian plum (*Oemleria cerasiformis*), snowberry (*Symphoricarpos albus*) and chokecherry (*Prunus virginiana*). Red-legged frogs and black-tailed deer are present on site.

PP&R recently acquired [2015?] the section of the property that is just northwest of the site entrance on SE 141st and BES has completed removal of the burnt house. The site has been prepped for native plantings, to happen in 2018-19.

Access: No Tri-met access. Parking space but limited turn-around at SE 141st Ave. entrance. Road to site can be muddy; in that case, park along Foster and walk the ¼ mile south on SE 141st Ave. to the entrance.

MITCHELL CREEK NATURAL AREA

SE 162nd & Clatsop/Vradenburg Rd.

Mitchell Creek Natural Area consists of about 70 acres and hosts a mixed conifer/deciduous forest dominated by Douglas fir (*Pseudotsuga menziesii*) on the upper slopes and western red cedar (*Thuja plicata*) in the creek bottom, with areas of black cottonwood (*Populus balsamifera* L. ssp. *Trichocarpa*) and big leaf maple (*Acer macrophylla*). The understory is dominated by salmonberry (*Rubus spectabilis*), piggy-back plant (*Tolmiea menziesii*) and ladyfern (*Athyrium filix-femina*). Northern Pacific tree frog has been documented on site and coyote, pileated woodpecker and Pacific giant salamander have reportedly been seen on site. Cutthroat trout have been seen in Mitchell Creek, although a culvert below the property probably prevents most of the fish from entering the property itself. (This culvert is slated to be removed when funding allows.) The invasive false brome is best identified by its apple green color, characteristics of the stem and marginal leaf hairs, and how the florets are attached directly to the rachis. It can look similar to natives California brome (*Bromus carinatus*) and Columbia brome (*Bromus vulgaris*) (both species also on site) and is thought to travel by hooking onto deer fur, so is likely near game trails.

Access: There is no Tri-met access near the site. Streetside parking limited to a few pull-offs. Streetside parking available at site location: SE 162nd and SE Sager Rd.

POWELL BUTTE NATURE PARK

SE 162nd, just S of Powell Blvd. - main entrance

This is a large site (one mile square)! Volunteer Stewards will be working in the northwest corner (accessed by SE 145th, just south of Powell). Powell Butte was logged in the late 1800's. The land was purchased by the City of Portland Water Bureau in 1925. Under a lease, the property was formally managed for agricultural purposes (grazing and farming) through 1948. Thereafter, dairy farm grazing continued on the property under an "informal" agreement until the mid-1970's. In 1980 the Water Bureau built a 50 million gallon reservoir. Construction of the second reservoir was completed in 2014. An additional two reservoirs are planned for the site, but will not be built until well into the future. In 1983 the Park Bureau joined the Water Bureau in managing the site for outdoor recreation and the

Park was officially “opened” in 1990. Various Master Plans, reflecting public input, were developed for the Butte in 1986, 1996 and 2003. The following vegetation information is from a Powell Butte Habitat Analysis of 2001.

The Butte is part of the Boring Lava Domes and is composed of Multnomah silt loam (dark brown, with dark yellowish gravelly subsoil that has moderate permeability) and Quatama loam soils (very dark brown, with dark yellowish clay-ey subsoil that has moderately slow permeability, making erosion hazards moderate to high) in the northwest corner of the Butte where our Volunteer Steward sites are located. The highest point of the Butte is 629 feet, near the apple orchard. The lowest point is the northwest corner of the site (again, where the Volunteer Steward areas are located) at 204 feet elevation. Vegetation in our corner of the Butte is Douglas fir/big leaf maple mixed forest. Additional common tree species in this area are western red cedar, red alder and Oregon ash. Common native understory shrubs include red elderberry, snowberry, oceanspray, trailing blackberry, vine maple and thimbleberry. Sword ferns and Oregon grape are abundant, and you may also see native herb species such as trillium, duckfoot and Pacific waterleaf.

2012 amphibian egg mass and terrestrial studies reported the following as present at this site: northern red-legged frog, northwestern salamander, northern Pacific tree frog, long-toed salamander, rough-skinned newt, ensatina, western red-backed salamander, Dunn’s salamander and the invasive American bullfrog. Two recent community science Ecoblitz events on Powell Butte documented the presence of the Oregon slender salamander, until recently thought not to occur west of Gresham!

Other current volunteer restoration activities at this site include a Second Saturday of the month restoration event in partnership with Hands on Portland, plantings along the west and south side of the Butte, the Powell Butte Volunteer EcoBlitz (May 21 2016) and various litter patrol volunteers.

Access: Tri-met bus: #9. Stop: SE 162nd. ½ mile uphill walk to main Park entrance and visitors center. Bathroom available at main entrance. Street parking available at SE 148th & Center, SE Ellis & SE 145th, SE Raymond & SE 145th, and SE Circle Avenue entrances. Springwater Corridor trail entrance accessed from the Springwater, just east of SE 145th.

POWELL BUTTE LOWER FLOODPLAIN

SE 159th, just N of Foster

In approximately 2005, Bureau of Environmental Services (BES) started a floodplain reconstruction project on this 22-acre property, with the goal of providing a site to collect stormwater runoff and improve habitat, in particular for salmonoid species. BES acquired properties in the area through its Willing Seller Acquisition Program and after structure removal, diverted Johnson Creek from its old channel to a newly-constructed stream channel that better mimics the curvature of a natural stream. During this process, BES collected and inventoried 1,400 fish and moved them safely downstream. All but 2 species of fish (30 individuals) collected were native to Johnson Creek!

Johnson Creek flows through the floodplain, and the confluence between Kelly Creek and Johnson Creek is within the floodplain. The Springwater Corridor trail provides a great overview of the floodplain and there is a public viewpoint on the trail, just west of Circle Avenue, that has art tiles of native plants, fish and wildlife and offers a place for visitors to sit on riprap rocks recovered from the Creek. (Back in the 1930s, the Works Progress Administration lined the Creek with rock in an effort to channelize the Creek and prevent flooding; in fact, the riprap-lined Creek just increased the flow of the water during floods and did not prevent flooding, as was intended. Hence, the need for the recreated floodplain!)

Barred owl, bald eagles, many species of duck, northern red-legged frogs, Pacific chorus/tree frogs and rough-skinned newt have been sighted on site by PP&R staff, and 2012 amphibian egg mass studies reported the following as present at this site: northern red-legged frog, northwestern salamander, northern Pacific tree frog, long-toed salamander and the invasive American bullfrog.

The site may be accessed from the Springwater Corridor trail and also by the end of SE 159th, accessed from Foster Road. Neighbors put up red cones and a sign to block the road, but it is a public road and you can simply move the signs out of the way, replace them and proceed to the locked gate at the end of the road. (The neighbors put up the cones and signs to deter illegal dumping at the end of the road.) There is a little trail around the gate to the upland portion of the floodplain that is accessible all year. The neighbors are generally friendly and may approach you on site to determine who you are. PP&R staff has been prepping the area to the left of the gate for planting native trees and shrubs, to provide addition vegetation along the Creek to help mitigate erosion and run-off during rain events. Sunnyside Middle School and the Centennial Transition Center special needs students are planting during the winter of 2017-18, and you may also notice “habitat piles”: large stacks of logs and brush created to house various wildlife species, and in the process clearing the ground for planting.

Access: There is no Tri-met access near the site. Street parking available. See notes in above paragraph.

TIDEMAN JOHNSON PARK

Entrances at SE 45th St. & Springwater Corridor trail/Johnson Creek Blvd. and SE 37th & Tenino Ct.

Both Johnson Creek and the Springwater Corridor trail run through 6-acre Tideman Johnson Park. Like many sections of Johnson Creek, the Works Progress Administration in the 1930s channeled Johnson Creek through this stretch. Rather than preventing flooding, over 5 feet of the creek bed was scoured out over the years and the Creek flooded no less than 39 times, washing out salmon spawning beds.

Bureau of Environmental Services completed a floodplain restoration in 2006, the goals of which were to enhance and restore the floodplain, as well as to protect an exposed sewer pipe that crosses Johnson Creek, decrease erosion and reduce fish passage barriers. Overflow stream channels were also created, to hold water during flood events. 5,300 trees and shrubs were planted and large boulders and wood were installed in the Creek to enhance fish habitat and slow stream flow. A fish count prior to construction found almost 7000 individual fish in the area---99.5% of which were native. During the construction phase of the project, 22 species of fish were salvaged and relocated, including 23 individuals of Chinook salmon and 107 steelhead trout! A loop trail was built through the Park, connecting on both ends to the Springwater Corridor trail. The trail includes a boardwalk to protect sensitive areas. An “overlook” was built which at the time provided views of the newly-constructed stream channel, the view of which is now blocked by trees shading the Creek—a good thing, as the shade helps to keep stream temperature lower in the summertime, providing better fish habitat.

Overstory in the Park consists of black cottonwood and Oregon ash closer to the Creek and Douglas fir within the “woodland” at the western end of the Park. Although weeds such as invasive blackberry, ivy, jewelweed and arum are still present, the Park contains diverse native understory in many areas.

Since the floodplain restoration, the Friends of Tideman Johnson in partnership with JCWC and other volunteer groups have planted many more thousands of trees, shrubs and wildflowers in the area, removed acres of invasive species and cleaned the Park the first Saturday of each month for 8 months out of the year. Staff, volunteers and visitors have reported birds such as great blue heron, black-headed grosbeak, varied thrush, cedar waxwings, bald eagles, pileated woodpecker, hooded merganser and mallards on site, as well as wildlife including beaver, otter, pearlshell mussels, deer and coyote. 2012 amphibian egg mass studies reported the following as present at this site: northern Pacific tree frog and long-toed salamander.

Access: #75, SE 45th & Springwater Corridor trail (SCT)/Johnson Creek Blvd. bus stop. Walk west on SCT for ½ mile. Bike/Walk the Springwater Corridor trail, which traverses the site.

VETERAN'S CREEK NATURAL AREA

Mt. Scott Blvd. & SE 98th

In 2011, the City of Portland purchased and began restoring two parcels of land that surround a section of Veterans Creek, which is what we now call Veteran's Creek Natural Area. Bureau of Environmental Services was involved in the initial stages of the project, with the removal of multiple fish passage barriers and invasive species, amphibian and wetland habitat enhancement, and riparian planting. JCWC has been involved also from nearly the onset, removing invasive species with volunteers—primarily invasive blackberry and ivy—and, starting in 2014, planting native species in partnership with Friends of Trees. Since then, volunteers have planted and cared for over 3000 native trees, shrubs and wildflowers.

The Natural Area consists of a lower riparian area near the Creek, and an upland area, consisting of Douglas fir and western red cedar overstory along the slope and a more open area where the former owner's house was situated. Apartments located along the southern edge of the property have direct access into the property and human and pet impacts are noticeable in this area. Black-tailed deer has been photographed on site. 2012 amphibian egg mass studies reported the species of concern northern red-legged frog as present at this site.

Access: Green line MAX: Flavel stop. Walk east on Flavel 1 block, then curve right onto Mt. Scott Blvd for 1/10 mile to the entrance on your right, across from SE 98th. Street parking available on SE 98th.

WAHOO NATURAL AREA

SE 128th & SE Flavel

Wahoo Natural Area was formerly owned by the Portland Council of Camp Fire Girls, which used the site for day camps from the 1950s through 1993. Thus, the land was mostly undeveloped when it came under PP&R ownership and management. The southern portion of the property may have been used for agricultural purposes.

Wahoo Natural Area sits on Cascade silt loam, which are somewhat poorly-drained soils found on rolling ridgetops that have slow permeability and a high hazard of water erosion. The primary native vegetation on site is Douglas fir, western red cedar, red alder, various ferns and Oregon grape, and there is a healthy understory of native species such as wild strawberry, fringe cup, trillium, etc. especially throughout the southern portions of the site. Deer and woodpeckers have been documented on site.

Wahoo Creek is intermittent. Stream flow is derived from natural hydrology, street runoff, and residential discharge. The summer hydrology may be augmented from irrigation from the adjacent Willamette National Cemetery. Street stormwater runoff from SE Deardorff Road is presumed to flow into the waterway. According to the PP&R Stabilization Plan, "the removal of invasive non-native weeds is required" and the stabilization goal is that the site should be managed exclusively for wildlife habitat, clean water preservation, and public natural area stewardship.

Access: There is no Tri-met access. One parking spot along Flavel.

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WEBSITES

City of Portland Invasive Species management: <http://www.portlandonline.com/bes/index.cfm?c=45696>

ConserveOnline (www.conserveonline.org) is a meeting place for the conservation community, open to anyone who wants to find or share information relevant to conservation science and practice. The Nature Conservancy created and maintains ConserveOnline in collaboration with many partners. ConserveOnline is intended to help improve the practice of conservation across organizations and national boundaries.

Early Detection Rapid Response (BES) invasive species website: <http://www.portlandoregon.gov/bes/53953>

The Cornell Lab of Ornithology: www.allaboutbirds.org

Johnson Creek Watershed Council: <http://jwcw.org/>

National Wildlife Federation's online field guides for amphibians, birds (including bird calls), butterflies, fishes, insects, mammals, native plants, reptiles, seashells, seashore creatures, spiders, trees and wildflowers: <http://www.enature.com/guides>

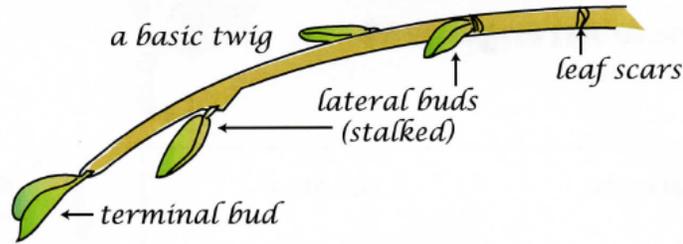
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Portland Parks & Recreation: www.portlandparks.org

United States Department of Agriculture Plants Database (<http://plants.usda.gov/>) site is a great site to search for plants by Latin or common names.

The Xerces Society for Invertebrate Conservation: www.BumbleBeeWatch.org A collaborative effort to track and conserve North America's bumble bees. Take photos of bumble bees and upload them to the site! (winter twig ID goes here)

WINTER PLANT ID



Remember to look on the ground surrounding your plant for dried leaves. Some leaves may remain on the plant. This is an extra clue.

If your twig looks like this  it is an **Opposite Arrangement**

<p>Big Leaf Maple Tree</p>  <p>Twigs dark red to green and shiny</p> <p>Terminal bud big and shaped like a king's crown, Lateral buds tiny</p> <p>Fruit (helicopter seed) is double winged, almost 50 degree angle from each other</p> <p>Often covered with moss, lichens, and Licorice ferns</p>	<p>Vine Maple Small tree</p>  <p>Twigs are deep glossy red in sun or green to reddish brown in shade</p> <p>Terminal bud is paired, similar to a deer hoof</p> <p>Arching branches, many stems</p> <p>Fruit has double wings (helicopter seeds) almost 85 degree angle</p>	<p>Oregon Ash Tree</p>  <p>Twigs deep green at tips and gray below</p> <p>Strong opposite branching</p> <p>Terminal bud is small</p>
<p>Black Locust Tree</p>  <p>Invasive, non-native</p> <p>Twigs can appear somewhat zigzag and red-brown</p> <p>Bark is gray or light brown with deep ridges and furrows</p> <p>Large thorns on bark and stems</p> <p>Large hanging pea pod shaped fruit, 2-4 inches long</p>	<p>Creek Dogwood (Red Twig Dogwood/ Red Osier Dogwood) Tall shrub</p>  <p>Twigs are thin, shiny, red in sun (green in shade)</p> <p>Buds are thin, pointed and red</p> <p>Terminal bud has two lateral buds just below</p> <p>Bark is red-brown and smooth</p>	<p>Red Elderberry Tall Shrub</p>  <p>Twigs are silvery, stout, vertical ridges of 8 sides</p> <p>Large bulky stems and twigs</p> <p>Buds are large, roundish</p> <p>Leaves out in early spring with small compound leaf clusters</p>
<p>Snowberry Shrub</p>  <p>Twigs very thin, dull brown</p> <p>Buds tiny</p> <p>Bark thin and gray</p> <p>Fruit is white, waxy berries that hang on through much of winter</p>	<p>Oregon Grape Shrub</p>  <p>Leaves compound</p> <p>Evergreen, thick leaves getting reddish tinges in fall</p> <p>Sharp toothed leaf edges, with three central veins</p> <p>Tight, yellow clustered flower buds in early spring</p> <p>Small shriveled purple fruit may remain</p>	<p>Clematis Shrub/ Vine</p>  <p>Invasive, not-native</p> <p>Thin twigs, light brown</p> <p>Old vines hang from trees like ropes</p> <p>Fuzzy, white seeds in fall/winter, looks like gray smoke</p>

COMMON INVASIVE SPECIES ON JOHNSON CREEK SITES

- Armenian blackberry (*Rubus ameniacus*, also called Himalayan blackberry)
- Clematis (*Clematis vitalba*, also called old man's beard or traveller's joy)
- Deadly nightshade (*Solanum dulcamara*, also called bittersweet nightshade)
- False brome (*Brachypodium sylvaticum*)
- Foxglove (*Digitalis purpurea*)
- Garlic mustard (*Alliaria petiolata*)
- Holly (*Ilex* sp.)
- Impatiens (usually *Impatiens capensis*, but there are several other invasive varieties)
- Ivy (usually *Hedera helix*, but there are several other invasive varieties)
- Pennsylvania ash (*Fraxinus pennsylvanica*)
- Sycamore maple (*Acer pseudoplatanus*)
- Yellow flag iris (*Iris pseudacorus*)