



**PORTLAND PARKS & RECREATION**

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# Habitat Management & Trail Plan Marshall Park Natural Areas June 2009

## **Habitat Management & Trail Plan**

### **Marshall Park Natural Areas**

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*Cover photo: Marshall Park entrance sign*

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*Foley-Balmer Natural Area*



# Introduction & Background



The splashing of Tryon Creek over the Marshall Cascades welcomes visitors to Marshall Park. Resident cut-throat, rainbow and cutbow trout are sometimes seen swimming in the creek. The forested canyon offers Portlanders a cool respite from the summer heat, and resident and migrating wildlife a home for nesting, feeding and travel. The trilliums can be seen in early March as they poke through the wet soils and burst into full bloom by April. Migratory birds breed or visit the park on their way north to summer nesting grounds and then again in the fall as they return to warmer climates.

## Purpose of the Plan

Marshall Park Natural Areas – Marshall Park, Foley-Balmer Natural Area, and Jensen Natural Area – make up 37.7 acres of wooded open space in southwest Portland, between SW 12th Drive, SW 18th Place, and SW Lancaster Road. (Appendix A, Location Map) The habitat management and trail plan (the plan) is designed to set the course for habitat management, stewardship, and the trail system for the natural areas. The plan lays the foundation for habitat protection and enhancement, as well as recreational access and use, and will guide stewardship activities and sustainable trail construction. The plan is also a reference document providing a variety of background and environmental assessment information.

At the present time, no City funding is allocated for the implementation of the plan though this does not preclude interim activities and projects at the site. Portland Parks & Recreation (PP&R) staff and neighbors will continue to remove invasive plant species and replace with natives. Neighbors, school groups, scouts or other organizations can assist in trail building and other habitat enhancement activities in cooperation with PP&R.

## Location & Context

Marshall Park Natural Areas is located in southwest Portland, within the Tryon Creek Watershed. The southern boundary of Marshall Park is adjacent to open space land purchased by Metro and managed by Oregon Parks and Recreation Department (ORPD) as part of Tryon Creek State Natural Area (Appendix A, Watershed Map). Otherwise, the park and natural areas are bordered by residential streets and houses. Tryon Creek flows through the three sites.

Tryon Creek Watershed covers an area of approximately 4,142 acres, or 6.5 square miles (CoP/BES 2005), and includes 645-acre Tryon Creek State Natural Area. Approximately 24 percent of the watershed is impervious surfaces (parking lots, buildings, streets). The mainstem is about seven miles long, free flowing from its headwaters near Multnomah Village to its confluence with the Willamette River. Overall the watershed is a “flashy” urban stormwater system that causes undercutting of the streambanks, erosion and sediment deposition (CoP/BES 2005).

Before it was dedicated as a park, the site was first used as a rock quarry. In the 1940s the Marshall family used the park as a “summer getaway,” spending summers in a cabin they built with a view of the cascade. They also built a swimming pool adjacent to the creek. Other than a few pool tiles, the stone bridge is all that is left

## Introduction & Background

of the Marshall estate. The original 10-11 acres for Marshall Park were donated to the City of Portland by F. C. and Addie Marshall on June 13, 1951. Additional acreage was added to the original donation in the 1950s for a total of approximately 26 acres. Foley-Balmer and Jensen Natural Areas were purchased with money from the 1996 Metro Bond Measure for the purpose of natural resource protection. Portland Parks & Recreation (PP&R) has an intergovernmental agreement with Metro (Tryon Creek IGA Ordinance #171795) to manage these sites as natural areas.

### The Planning Process

Planning for the trail and habitat management of Marshall Park began in June 2008. PP&R staff attended a series of neighbor association and Tryon Creek Watershed Council meetings in June and July (Appendix B) to:

- Explain the planning process.
- Discuss the experience people would like to have at the park.
- Listen to ideas on trail layout, wildlife management, play structure design, and other park functions.

On July 10 a community meeting was held at Marshall Park to discuss park planning, management, and stewardship in concert with a review of the proposed bridge replacement alternatives. Approximately 40 people attended the meeting.

Throughout July and August a series of walks in the park with the PP&R project planner took place. During the walks, neighbors expressed their views on a variety of trail issues and management options. PP&R staff also attended additional neighborhood meetings to seek input on the plan.

PP&R created a project web page on [www.portlandparks.org](http://www.portlandparks.org) where the public could access handouts and other information about the sites; answer a questionnaire, review maps, the draft habitat management plan, and the preliminary trail design; and submit comments on the trail design and draft management plan. During the summer of 2008, PP&R posted a general use questionnaire about preferred park uses on the project web page. One hundred and twenty three people completed the questionnaire. The results show there are a wide variety of park uses and many functions and values that are important. Appendix C is a summary of the comments.

The discussions with the public and responses to the questionnaire indicate that park users would like:

- A walking trail with views of the creek that is flat, easy to walk.
- Trails to keep feet dry in the winter and spring.
- A structured play and picnic area that allows guided access to the creek.
- To explore the possibility of adding a restroom near the play area.
- Protection of sensitive natural resources including streams, wetlands, amphibians, wildlife, and fish.
- A safe trail connection to Tryon Creek State Natural Area, other natural areas, and Marshall Park.

- Both historical and environmental education and interpretation opportunities.
- Two kiosks for posting information, maps, and park rules.
- Directional signage within the park.
- To see resident fish populations and the return of coho salmon to the Marshall Park Cascades.

In July 2008, PP&R formed a Technical Advisory Committee (TAC) that met monthly to review the natural resources of the site and public input to create a preliminary trail layout, propose access points, and develop an overall habitat management plan. This information was reviewed by the public and then refined by the technical team to finalize the plan.



*Trail sign in Marshall Park*



# Marshall Park and Adjacent Natural Areas Today

## General Conditions and Existing Use

Marshall Park is primarily managed to maintain and protect its natural area values. There is a small picnic and play area adjacent to SW 12th Drive. Walking trails are located in the 400-foot-wide canyon that connects the park to Tryon Creek State Natural Area. The park is dominated by Douglas fir, western red cedar, grand fir, and big leaf maple forest. (Appendix A, Aerial Photo) There is a mixed understory of native and invasive plant species. Neighbors and PP&R staff have been working to remove the invasive weeds. The canyon is a natural drainage basin formed by the west slope of the Palatine Hills, the hills northwest of Mt. Sylvania, and Tryon Creek. Within Marshall Park is a waterfall framed by rock boulders. Rainbow, cutthroat, and cutbow trout and sculpin have been observed in the creek. There is a recent report (2008) that Chinook salmon were observed in Marshall Park. A variety of migrating and resident birds use the park for nesting, feeding, and resting. Bats are found along the creek and deer, coyote, raccoon, and smaller mammals have been observed in the park.

There are a series of planned and social (informal) walking trails throughout the park used by neighbors for enjoyment of nature and to walk their dogs. One of the notable features of the walking trail system is a small stone bridge which spans Tryon Creek. The park is an important link (SW Trail #6) in the proposed Hillsdale to Lake Oswego Trail, which is designated as a regional trail on Metro's Regional Trail plan. SW Trail #5 also goes through Marshall Park (Appendix A, Existing Trails).

Foley-Balmer Natural Area is a 9.6 acre natural area that is predominately mixed evergreen-deciduous woodland dominated by Douglas fir and big leaf maple with a mixed understory. There is a one-acre meadow at the entrance to the site off of SW Collins Court. The Foley property had been used primarily as a stable for over 90 years. Before that it was a rich and lush forest with Tryon Creek running through the heart of it. The natural area includes walking paths and a footbridge crossing Tryon Creek.

Tryon Creek runs through the 2.4-acre Jensen Natural Area. The riparian habitat along the creek is in poor ecological health, dominated by invasive plant species. The upland forest is dominated by Douglas fir and big leaf maple with a predominantly native plant understory. Presently, there is no access to this site.

## Zoning

The Marshall Park Natural Areas are a mix of Open Space (OS) and Residential 20,000 (R20) zoning. The OS zone is "intended to preserve and enhance public and private open, natural and improved park and recreational areas identified in the Comprehensive Plan." (33.110) R20 allows for one residential development for every 20,000 square feet. All park and natural areas within the planning area are within the environmental protection zone that "provides the highest level of protection to the most important resources and functional values." (33.430.015) Areas within the plan are designated either conservation (c) or protection (p) (Appendix A, Zoning Map). Proposed trails and other developments within the

## Marshall Park and Adjacent Natural Areas Today

environmental zone will need to be reviewed and permitted by the Bureau of Development Services to ensure the activities are allowed.

### Physical Environment

Within Marshall Park Natural Areas elevations range from 400' (above sea level) at the highest point on the slope in western Foley-Balmer Natural Area to 200' at the lowest point on the eastern property line in southern Marshall Park. Canyon walls surrounding Tryon Creek have slopes ranging from 10-30% (10%=one foot of elevation gain for every ten feet of horizontal distance). Throughout the natural areas, riparian areas along the creek are usually flat benches, with occasional gentle slopes (0-10%).

Two soil types are found at the site. Soil on the higher upland slopes around Tryon Creek and its tributaries is classified by the USDA Natural Resources Conservation Service (NRCS 1983) as Cascade Silt Loam, 8-15 percent slope (7C). The soil on the lower slopes near and in the creek bottom is Cascade Silt Loam, 15-30 percent slope (7D). These two somewhat poorly drained soils are on convex side slopes of broad, rolling ridgetops and are formed in silty materials. Permeability is slow, runoff is medium, and the hazard of erosion is moderate to high (Appendix D, Desired Future Condition).

### Vegetation

Marshall Park Natural Areas are composed of a 37.7-acre natural area of mainly evergreen and deciduous forest habitat. There is a one-acre meadow habitat at Foley-Balmer and riparian forest runs along Tryon Creek. The tree canopy is dominated by Douglas fir, big leaf maple, western hemlock, western red cedar, grand fir, red alder, and black cottonwood. Understory plants include vine maple, sword fern, Indian-plum, Oregon grape, and salmonberry. Other species that can be found at Marshall Park are beaked hazelnut, lady fern, skunk cabbage, inside-out flower, Indian pipe, stinging nettle, and western wahoo.

The ecological health for Marshall Park (completed in October 2004) ranges from poor in the northern portion to fair/good south of the stone bridge (Appendix E, Vegetation Mapping & Summaries). The ecological health for Foley-Balmer was rated fair in 2004 and Jensen Natural Area was rated fair to poor. Invasive species occur throughout most of the habitat and pose a serious threat to native plants in the understory. These include horse chestnut, Norway maple, English holly, English ivy, garlic mustard, Japanese knotweed, English laurel, and Himalayan blackberry. PP&R staff are working to eliminate garlic mustard while volunteers have been removing holly and ivy. Riparian plantings have been installed along the mainstem of Tryon Creek and a one-acre restoration was completed south of the picnic area. The meadow area in Foley-Balmer was weeded and seeded with native plants.

### Wildlife

Marshall Park provides a diverse habitat for wildlife. The perennial stream provides year-round water. The multi-layered, dense forest composed mainly of native vegetation contains most of the habitat elements, food sources, and cover for wildlife. Generally the habitat is dominated by native herbs, shrubs, and trees. The shrub layer is approximately 25% non-native, the herb layer 10% non-native with English ivy being the dominate weed, and the canopy layer only 3% non-native. There is a moderate amount of down wood that provides

habitat diversity and other elements for wildlife. Social trails and off-leash dogs have adversely impacted the habitat values (Appendix F, Wildlife Assessments).

Bird surveys (point counts) conducted during the spring of 1999 (Hennings 2003) recorded 21 species, including both resident and migrating song birds. The Marshall Park bird checklist compiled by neighbors over many years of casual observation includes over 50 species. Local residents include black-capped chickadees, Bewick's wren, downy woodpecker, and great horned owls. Migrating birds include a suite of warblers, cedar waxwings, and kinglets (Appendix F). Twenty bird species are designated as special status species (CoP/BES 2007).

Black-tailed deer, raccoons, and coyotes have been seen in the natural areas. Recent bat surveys have recorded bat use in the deciduous trees along the creek. An amphibian survey is underway (2008).

### Fish

The following is a brief synopsis of historic and current salmon use of Tryon Creek Basin (CoP/BES 2005c):

- Chinook spawn and rear in mainstem reaches of large river systems such as the Willamette River and the Clackamas River. Tryon Creek is a small tributary to the lower Willamette River, and it has not been thought that chinook would have historically populated the subbasin. However, juvenile and adult chinook historically used the lower confluence region during yearling and subyearling development, and recent surveys shows that they continue to rear and reside here today (ODFW 2005, and City of Portland). Also, in 2008 three non-fin clipped juvenile chinook were captured in Tryon Creek. One was captured above the Marshall Park Cascades and two below the SW Boones Ferry culvert (USFWS 2008).
- Coho historically spawned and reared throughout the Tryon Creek Basin. The upstream extent of their anadromy is not known; based on the geomorphology of the channel and valley hillslopes, however, they probably spawned at least up to the confluence of Tryon Creek and Arnold Creek (Lower Tryon) and up to the bottom of Marshall Cascades (Middle Tryon). Again, recent monitoring by the U.S. Fish & Wildlife Service (USFWS) found juvenile coho salmon in Lower Tryon Creek up to the SW Boones Ferry culvert, and regularly capture coho in the confluence reach below Highway 43.
- Steelhead (winter-run) historically spawned and reared throughout the Tryon Creek Basin. The upstream extent of their anadromy is not known; based on the geomorphology of the channel and valley hillslopes, however, they likely spawned up to (and perhaps beyond) Marshall Cascades (Middle Tryon). Steelhead are regularly captured in mainstem reaches of Tryon Creek. Findings from USFWS suggest that steelhead continue to express anadromous behavior, leaving Tryon Creek in the spring.

In addition to salmon use, cutthroat, rainbow, and cutthroat/rainbow hybrids have been observed along the entire stream reach of the mainstem of Tryon Creek. The fish are year-round residents and habitat conditions support spawning and rearing (CoP/BES 2005c). Historically, lamprey are believed to be reared in Tryon Creek. However, in recent years, they have only been documented in the lowest reaches of the creek below Highway 43.

## Marshall Park and Adjacent Natural Areas Today

Also, coastal cutthroat trout have been observed both entering and leaving the creek below Highway 43, indicating both resident and migratory populations.

Presently there are barriers below Marshall Park that prevent coho from moving upstream. The culvert at SW Boones Ferry Road, a private dam below Marshall Park, Marshall Cascades, and the culvert under SW 18th Place are significant barriers under most water-year conditions. (CoP/BES 2005c) Though Marshall Cascades is a natural barrier, it probably was the upstream extent of anadromous fish movement under most flow conditions. Under the present habitat conditions, coho spawning and rearing would probably not be supported but steelhead and rainbow trout are possible.

### Issues and Challenges

Presently, the ecological health of Marshall Park ranges between good (16%), fair (38%), and poor (46%) (Appendix E). Access to the site is through a variety of informal entrances with the majority of users entering the park from SW 12th, SW 18th or Maplecrest Drive. There is a web of trails that create loops and allow for through hiking. The ecological health of the Foley-Balmer Natural Area has been rated 76% fair and 24% poor. There is one trail that goes from SW Collins Court to SW Lancaster Road. The ecological health of Jensen Natural Area is split between fair and poor. There is no access to this site.

Invasive species and informal trails have created a number of issues and challenges that impact the ecological health of the areas:

***Habitat fragmentation.*** The network of trails divides interior habitat, reducing the core habitat for wildlife and birds especially in the northern and western portion of Marshall Park.

***Impacts to sensitive habitats.*** Trails adjacent to Tryon Creek and its tributaries impact the stream through eroding banks, potentially degrading water quality.

***Invasive species.*** These degrade the ecological health of the natural areas and limit available food supply for native species.

***Dogs.*** Off-leash dogs disturb wildlife – especially nesting birds, create trail erosion, and their feces, if not picked up, can cause water quality problems and carry diseases harmful to wildlife. Also off-leash dogs in the creek cause water quality problems.

***Illegal dumping.*** Piles of yard debris or trash are often found in and adjacent to the natural area. Yard debris often has weed seeds that spread into the natural area.

***Narrow bands of park land and natural area connectivity.*** The narrow band of land south of the stone bridge is problematic in that park users unknowingly enter private property. Also, the park and natural areas are now connected only by roads as there are private properties separating them.



# Recommendations



The properties are managed primarily as natural areas with a small active play and picnic area. Low impact activities such as wildlife viewing, hiking and walking on the designated trails, and environmental education are encouraged. Improvements should complement, enhance, and protect the natural resource values and sensitive areas.

## *Guiding Principles*

- Protect and enhance the natural area values of the park so users continue to experience the benefits of enjoying nature.
- Protect and enhance terrestrial, avian and salmon habitat along the creek and in the upland habitats.
- Provide a sustainable, contoured trail system to provide pedestrian access and visual access to the forest and streams, and safely connects to other natural areas and the regional trail system.
- Create a welcoming and safe play and picnic area that encourages use of the park by neighbors and the community.
- Improve park information, and directional signage that enables people to locate the park more easily, navigate within its boundaries, follow park rules, and connect to other natural areas and trails.
- Provide educational opportunities for all ages on the ecology and history of the park and natural areas.
- Work cooperatively with neighbors and community stewards to manage the park and natural areas for the enjoyment and safety of all users.

## *Proposed Actions*

- Remove invasive species and plant native vegetation to improve the ecological health of the natural areas.
- Restore stream and riparian habitat in anticipation of coho and steelhead returning to Marshall Park Natural Areas and meet the Salmon Safe Certification requirements.
- Enhance habitat for shrub and cavity nesting birds, and bats.
- Design a sustainable trail system, including connections for both people and wildlife between Tryon Creek State Natural Area, other natural areas, regional trails and Marshall Park. Trails will be built to minimize maintenance by using high quality, long-lasting, and least toxic materials.
- Purchase additional land from willing sellers to provide habitat and trail connectivity between the park and associated natural areas, and increase the width at narrow sections.
- Determine the location, number and types of park amenities including a community meeting area, nature based play area appropriate for the native park setting, picnic area, and bathroom.

## Recommendations

- Incorporate education about the park's history and natural environment into the interpretive information by locating areas for historical, environmental interpretation, and key messages. This includes locating 2-3 kiosks and/or notice boards at key access points.
- Identify opportunities to work with community and local schools on environmental education, stewardship, trail building, maintenance, and overall management of the natural areas.

### ECOLOGICAL HEALTH

***Remove invasive species and plant native vegetation to improve the ecological health of the natural areas.*** As discussed in the Vegetation section, the health of the natural areas is rated from poor to good. Removal of invasive species and replanting native vegetation will continue to improve the habitat.

The Desired Future Condition (Appendix D) guides the vegetation management and the restoration trajectory at the site over the long term. The DFC for the Marshall Park Natural Areas is an evergreen-dominated upland forest dominated by Douglas fir, western red cedar, western hemlock and grand fir. Within the upland forest, invasive species will continue to be removed and a native understory planted.

The riparian forest along Tryon Creek and its tributaries will be dominated by black cottonwood and Oregon ash with an understory of red alder, salmonberry, red-Osier dogwood, willows, ferns and sedges. PP&R, Friends of Marshall Park and other community groups have been removing invasive species and planting the riparian areas along the main stem of Tryon Creek. The riparian corridor adjacent to the tributary stream within the northern portion of Marshall Park has been degraded and in some places removed. The trail use adjacent to the creek has created erosion. To recreate room for a riparian corridor, the trail may be re-aligned closer to the uphill slope, sections of the stream bank stabilized and the riparian corridor replanted. Additional technical studies have been completed to determine the stability of the slope in this area (Appendix I). (See Circulation section for complete description of trail improvements.)

The small meadow area at Foley-Balmer Natural Area will be managed as an Oregon white oak community with a grassland understory. Oregon white oak and associated shrubs have been planted at the upper part of the meadow. The grassland is dominated by non-natives. Native grasses will be introduced but the understory will remain a mix of native and non-native species.

The most common invasive species within the Marshall Park Natural Areas are English ivy, English holly and Himalayan blackberry. Unfortunately garlic mustard, a recent invader in the area, is also growing in the park. PP&R staff and neighbors have been working on eradicating the plant before it spreads and degrades the ecological health of the areas. Pending funding, Protect the Best program staff and volunteers will be working in Marshall Park in 2009 to remove invasive species.

### FISH

***Restore stream and riparian habitat in anticipation of coho and steelhead returning to Marshall Park Natural Areas and meet the Salmon Safe Certification requirements.*** City of Portland Bureau of Environmental Services (BES) has surveyed and mapped the fish

passage barriers from the mouth of Tryon Creek to the Marshall Park Natural Areas. The major barriers are:

- The culvert under SW Boones Ferry Road
- A private dam off of SW Maplecrest Road
- The culvert underneath SW 18th Street

The Oregon Department of Transportation (ODOT) recently (2008) modified the culvert under OR 43 to allow for fish passage. Since the completion of the work, wild coho have been seen in Tryon Creek State Natural Area. The culvert replacement underneath SW Boones Ferry Road is on the BES Capital Investment Plan for completion by 2013. As funding becomes available the City of Portland will work with partnering agencies to remove the additional fish barriers. Perhaps in the next 20 years, wild coho and steelhead will return to Marshall Park Natural Areas.

## WILDLIFE

***Enhance habitat for shrub and cavity nesting birds, and bats.*** The informal bird list and 1999 bird survey (Appendix F, Hennings 2003) for Marshall Park Natural Areas shows that a wide range of birds use the area. The array of habitats provides feeding, nesting, and resting opportunities for winter resident, breeding, and migrating birds. The natural areas have the potential to provide increased opportunities for cavity and shrub nesting birds.

To increase habitat for cavity nesters, snags should remain in the park (except where they are hazardous to park users) and additional snags installed or created. The continued revegetation of the understory will increase habitat for shrub nesters. It is also important that invasive removal stop during nesting season to ensure that shrub nesters are not disturbed.

<b><i>Shrub Nesters</i></b>	<b><i>Cavity Nesters</i></b>
Swainson's Thrush Yellow Warbler Common Yellow-throat Willow Flycatcher Spotted Towhee	Downy Woodpecker Pileated Woodpecker Red-breasted Sapsucker Northern Flicker Chickadee Wren

Preliminary bat surveys were conducted along Tryon Creek and its tributary in the summer 2008. The surveyors recorded calls and noted where bats were observed. Bats were observed along the small tributary in the north end of the park flying in the clearings. Little brown myotis, big brown bats, and hoary bats were identified through sound recordings. Bats are insectivores that control mosquito and other night flying insects. Their numbers are declining in the metropolitan area because of the destruction of habitat. Additional surveys to learn about their habits and habitat needs should be continued in the natural areas. Once these factors are determined, bat habitat enhancements should be considered.

Larger mammals such as deer, raccoons, and coyotes will continue to use the natural areas and the connection to Tryon Creek State Natural Area. When the trail crossing at SW Boones Ferry Road is designed and constructed it should include wildlife passage for mammals that use the natural areas in the lower Tryon Creek Watershed.

## Recommendations

Amphibian surveys are currently (2009) taking place. The survey results should give an idea of types and numbers of amphibians using the natural areas. Based on this information, enhancements will be considered.

### CIRCULATION

***Design a sustainable trail system, including connections for both people and wildlife, between Tryon Creek State Natural Area, other natural areas, regional trails, and Marshall Park. Trails will be built to minimize maintenance by using high quality, long-lasting, and least toxic materials.*** Number and types of trails vary throughout Marshall Park Natural Areas. (Appendix A, Existing Trail) Within the northern section of Marshall Park there are two loops, including a well-used trail along a tributary to Tryon Creek. A trail crosses the mainstem of Tryon Creek on a new bridge (2009) then switchbacks up the canyon to connect to a small triangle of trails that are accessed off SW Maplecrest Drive. SW Trail #5 runs east-west through the park between curves on SW Maplecrest Drive. SW Trail #6 enters Marshall Park at the northwest corner at SW 18th Place and continues south of SW Maplecrest to SW 11th Drive, going through the park and crossing property managed by Oregon State Parks & Recreation (OSPR). SW Trail #6 is part of an informal loop trail in the area south of SW Maplecrest Drive. There is only one trail that crosses Foley-Balmer Natural Area. Walkers use SW Collins Court and SW 18th Place to connect between this natural area and the main park. There are no trails in Jensen Natural Area.

The planned trail layout (Appendix A, Proposed Trails) will provide a variety of loop trails allowing the user to experience both the forest and the creek, improving and maintaining the through trail (SW Trail #6) and closing social trails that are difficult to maintain or too steep. The majority of trails will be soft-surface for pedestrian use only. One trail from the proposed parking area will be compacted for possible use by wheelchair or scooter users. The trail from SW 12th Place to the bridge over Tryon Creek will be accessible. All trails will be constructed or rebuilt to PP&R's trail design standards and care taken to avoid conflicts with sensitive wildlife habitats or nesting sites. Directional signage, park rules, and maps will be designed and installed as part of the trail improvements.

#### ***Northern Section of the Park to the Stone Bridge***

Presently there are a variety of trails in this portion of the park. The plan will improve the majority of the trails and close a few that are difficult to maintain, create erosion problems or fragment habitat. The following are details of trail improvements and closures:

##### ***1. Trail along the creek, including the bridge, intersection and steep segment to SW 18th Place***

- Need to stabilize the slope adjacent to the trail/stream to plan for stream restoration/trail stability.
- Options for improving or relocating the trail include:
  - a. Rebuild the section closest to the creek, placing boulders and planting vegetation along the creekside edge.
  - b. Relocate the trail segment closest to the creek up slope and close segment by the creek.
  - c. Create a creek crossing upstream that connects to the trail on the west side and close the downstream section of the trail.
  - d. Relocate the creek away from the trail.



- Intersection of trails at the bridge – narrow trail by placing rock and split rail fencing, and replanting.
  - Build steps and fence the steep western approach to the bridge and sign as steep and use caution.
  - Long-term solution to steep trail segment is to purchase additional land from willing landowners and reroute the trail.
2. *SW Trail #6: wide, compacted path and parking area off of SW 18th Place*
    - Pave the parking lot using pervious pavement.
    - Provide parking for users who are disabled.
    - Build one entrance trail from the parking area and close all other trails.
    - Build new section of trail at the bottom to make it less steep and connect the trail to the bridge over Tryon Creek.
  3. *Trail from SW 12th Drive to Tryon Creek Bridge*
    - Improve trail and bridge over tributary stream to meet ADA trail standards.
    - Close steep trails along SW 12th Drive into the park.
  4. *Trail adjacent to SW 13th Drive and connecting neighborhood trails*
    - Close steep trail from western end of SW 13th Drive.
    - Improve and sign trail from the eastern end of SW 13th Drive.
  5. *Triangle trails north of SW Maplecrest Drive*
    - Close the existing trail that goes east to the main trail.

### ***Southern Section of Marshall Park including the adjacent property managed by Oregon State Parks (OSP)***

The general concept is to formalize the loop trail that goes through Marshall Park and the adjacent property managed by OSP. The trails will be rebuilt where needed and directional signage installed. Social trails will be closed, signed, and revegetated. The following details trail improvements and closures:

1. *Informal trail (SW Trail #6) (north-south) from SW Maplecrest Drive to SW 11th Drive*
  - Maintain basic trail alignment.
  - Rebuild section of trail to the east at major draw to move it away from new house at 1284 SW Maplecrest Dr.
  - Construct bridge over the draw and install riparian planting along the streambank.
2. *Informal trail (north-south) from SW Maplecrest Drive going west, near Tryon Creek (the creek is on private property)*
  - Pull the trail west, away from the backyards of private property owners.
  - Construct boardwalk and fencing at seep area.
  - Close and revegetate trails that appear to be dog runs down to the creek.
  - Bridge stream at second crossings where there is currently a board.
  - Sign junction clearly to direct people back to SW Trail #6.

## Recommendations

3. *Connecting trail (east-west) that links 1 and 2 above*
  - Rebuild trail according to alignment recommended by Oregon State Parks.
  - Directional signage at both junctions to keep users on trail.
4. *SW Trail #6 just north of Maplecrest Drive*
  - Replace the culvert.
  - Build a bridge where there is now a board.
5. *Relocate or rehabilitate the social trail from SW Maplecrest Drive that enters the park from the east*

### ***Foley-Balmer Natural Area***

Rebuild the trail at the western portion of the natural areas, leading up to SW Lancaster Road. Presently, the trail is very steep. The trail will be rebuilt to follow the land contours.

### ***Accessible Trails***

One of the highlights of Marshall Park is the view of Marshall Cascades from the bridge over Tryon Creek. The trail plan includes improving the trail from SW 12th Street to the bridge so that it will be accessible. This includes replacing the narrow bridge over the tributary to Tryon Creek and an at-grade trail onto the bridge. Trails will also be improved from the SW 12th Street entrance to the picnic/playground area. Presently, there is no area to provide accessible parking at SW 12th Street. A drop-off area will be designated.

Trail improvements are also planned from the parking lot on SW 18th Street to the bridge over Tryon Creek. The terrain in this area is steep and it is not possible to build a trail according to ADA standards. However, improvements will be made to greatly reduce the trail grade by adding a switchback at the lower end and providing “pullouts” along the trail.

## ACQUISITION

### ***Purchase additional land from willing sellers to provide habitat and trail connectivity between the park and associated natural areas, and to increase the width at narrow sections.***

Trail and habitat connectivity between the Marshall Park Natural Areas are fragmented by SW 18th Place and private homes and lots. When the culvert is replaced underneath SW 18th Place (no date set for replacement), there will be an opportunity to create both fish and wildlife passage. With the addition of key parcels, a trail connection could be made between the park and the natural areas. Within Marshall Park the park narrows south of the stone bridge to less than 100 feet wide. Additional park property could protect Tryon Creek in the area and provide a wider travel corridor for both park users and wildlife. PP&R has limited funds available from the Metro 2006 natural areas bond measure to purchase property or conservation easements from willing sellers.

## DEVELOPED AREA

***Determine the location, number and types of park amenities including a community meeting area, nature based play area appropriate for the native park setting, picnic area and bathroom.*** A small portion of Marshall Park adjacent to SW 12th Drive is developed with picnic tables and a playground. Presently, an older swing/slide set is located in the floodplain of the creek and there are two picnic tables at the base of the hill. PP&R will look into the feasibility of the construction of a water viewing platform. This platform would

allow directed access to the water near the nature-based play structure without impacting stream hydrology and health.

This area will continue to be used for play and picnic activities. The area will have:

- A new nature-based play structure relocated outside of the floodplain
- Picnic tables
- Bathroom facilities (most likely a port-a-potty covered within a permanent enclosure)
- Community gathering area

When money becomes available, a detail layout and design will be completed with input from the community.

### INTERPRETATION AND SIGNAGE

***Incorporate education about the park’s history and natural environment into the interpretive information by locating areas for historical, environmental interpretation, and key messages.*** This includes locating 2-3 kiosks and/or notice boards at key access points. Install an interpretive kiosk at the SW 12th and SW 18th entrances. Interpretive information about the natural area and the history of the park will be the main focus of the kiosks. There will also be room for neighborhood and PP&R announcements, and a general trail map. Park rules will also be posted on the kiosks. Install notice boards at the SW Collins Court entrance to Foley-Balmer Natural area, SW Maplecrest Drive, and SW 11th Drive that have a general trail map, park rules, and park and community notices.

Within the park and natural areas directional signage will be installed to assist users in finding their way. The directional signs at Marquam Nature Parks would be a good template. Sign design and placement will be completed when funds are available.

### MANAGEMENT

***Identify opportunities to work with community and local schools on environmental education, stewardship, trail building, maintenance, and overall management of the natural areas.***

#### ***Stewardship***

Stewardship activities, such as removing invasive species, planting native species, and monitoring ecological health, to protect and enhance the habitat areas within the site will be completed by PP&R, neighbors, and other groups. Neighbors will continue to be the “eyes and ears” of the park in reporting unwanted behavior and assisting PP&R staff in making sure users are aware of the rules. PP&R works with groups to develop a stewardship agreement that details the scope of work and defines specific roles for each group and/or neighbors. Once agreements are in place, PP&R and the group will review and revise them periodically to ensure that it continues to be an effective document (Appendix G, Sample Stewardship Agreement).

#### ***Rules***

Marshall Park Natural Areas provide habitat to sensitive plants, fish, and wildlife, and the forests and creeks offer important air and water quality benefits to the community. Following the rules and protocols protects natural area values and enhances the experience for all users. Park rules are listed in City Code Title 20. Rules that pertain to natural areas include (for full set of rules, see Title 20):

## Recommendations

1. No possession of weapons except handguns lawfully carried
2. No tree climbing, walking on fences or laying on picnic tables
3. No temporary or permanent structures or excavations
4. No dumping yard debris or trash
5. No vegetation removal except where permitted or supervised by City staff
6. No fires or fireworks
7. No tobacco products within twenty-five feet of any play structure, picnic table or designated children's play area
8. No injury, harm or disturbance to wild animals
9. Dogs must be on leash in natural area parks unless posted that dogs are not allowed.
10. Dogs are not allowed in streams, lakes or ponds
11. Dog waste must be picked up and disposed of in a trash container
12. No fishing, wading, swimming or bathing except in areas designated by the PP&R director

### ***Dogs***

Many studies have documented the effects of domestic dogs on wildlife. Dogs are recognized as predators by wildlife and their presence may stress wildlife and reduce breeding success. Visiting dogs can transmit diseases to wild populations or pick up diseases carried by wildlife. Uncollected dog feces can result in fertilization which may favor invasive plant species. Dogs can also contribute to the spread of undesirable species through seeds in their fur. In 2008, PP&R adopted a Dogs in Natural Areas Policy to ensure a quality experience for all users. The rules and protocol for dogs in natural areas must be followed:

- Dogs must be on leash at all times.
- Dogs are only allowed on the trails.
- Owners must pick up and properly dispose of the dog's waste.

### **TRAIL CONSTRUCTION, MAINTENANCE AND USE**

Walking and hiking are only allowed on designated trails. Social trails create erosion and fragment important habitat, degrade the value of the natural area for wildlife, and damage sensitive areas. Presently, bicycle riding is not allowed on trails in Marshall Park Natural Areas.

Trail construction and maintenance will be accomplished through a variety of methods, including PP&R staff, contract crews, and volunteers. PP&R staff or contractors will lay out trail modifications. They will then work with crews and volunteers to build, re-contour, and close trails.



# Implementation Strategy



## Cost Estimate

The estimate is meant to provide a general idea of what construction would cost to implement the structural elements of the plan, as shown on the trail map in Appendix A. The costs are estimated on hiring contractors to complete the work and include a construction contingency for time and materials.

### *Habitat Restoration*

- Invasive species removal – one time by contractors
- Native plant material for restoration – 9,000 plants
- Habitat structures
- Temporary fencing – 500 feet

### *Trails*

- Construction of new soft surface hiking trails – 4,900 feet
- Construction of new accessible trails – 470 feet
- Rehabilitate existing soft surface hiking trails – 4,000 feet
- Close and revegetate soft surface hiking trails – 2,150 feet
- Close and revegetate gravel road – 740 feet
- Bridges over tributary streams:
  - Two (2) foot bridges in southern area of Marshall Park
  - One (1) accessible bridge in the northern end of the park
- One (1) culvert replaced
- Build crib wall steps from SW 18th St. to the tributary to Tryon Creek

### *Interpretive/Information Signs*

- Kiosk (2)
- Notice boards (3)
- Interpretive signage (3)
- Directional signs
- Natural area rules signs (3)

### *Developed Park Amenities*

- Nature-based play structure
- Permanent enclosure for the port-a-potty
- Paved parking lot off of SW 18th with one handicap space and 4 parking spaces
- Water viewing platform (optional) – 500 square feet

### *Engineering and Permitting*

- Bureau of Development Services environmental review
- Streambank restoration design and permits

***Total Estimated Cost (if all work completed by contractors): \$660,711***

### Implementation Schedule

Presently (June 2009) no funds are allocated for the improvement of Marshall Park Natural Areas by the City of Portland. PP&R will work with other public agencies, neighborhood associations, Tryon Creek Watershed Council, Oregon State Parks, and other partners to find grant funds and donations. Tasks address the need for continued restoration and enhancement and others focus on trail construction and maintenance. The following is an outline of recommended activities to be completed:

#### ***Habitat Restoration and Enhancement***

- Continue removal of invasive species.
- Replant native species.
- Remove social trails and replant.
- Monitoring ecological health of the natural areas.
- Address stream erosion concerns through cooperation with the Bureau of Environmental Services
- Install fencing to protect plantings and sensitive habitat areas.

#### ***Trail Construction and Maintenance***

- Rebuild a variety of trails to PP&R hiking standards as described in the Trail Design Guidelines (May 2009).
- Locate kiosks at agreed upon trail entrances on SW 25th and SW 30th.
- Ongoing trail maintenance.
- Coordinate with SW Trails, Inc. on the placement of SW Trail #5 signage.

#### ***Environmental Education and Signs***

- PP&R will work with neighborhood schools to develop interpretation concepts and sign design.
- PP&R will produce and install a natural area sign.
- PP&R will post natural area rules.

## References



1. Booth, D.B. 1991. Urbanization and the Natural Drainage System – Impacts, Solutions, and Prognosis. *The Northwest Environmental Journal* 7: 93-118.
2. City of Portland, Bureau of Environmental Services. 2007. Terrestrial Ecology Enhancement Strategy Summary and Update.
3. City of Portland, Bureau of Environmental Services. 2005. Fanno and Tryon Creeks Watershed Management Plan. Tryon Creek Watershed Overview. Part 1, Chapter 2:1.
4. City of Portland, Bureau of Environmental Services. 2005. Fanno and Tryon Creeks Watershed Management Plan. Biological Communities Tryon Creek Watershed. Chapter 11: 1, 9, 12.
5. Hennings, Lori A. and W. Daniel Edge. 2003. Riparian Bird Community Structure in Portland, Oregon: Habitat, Urbanization, and Spatial Scale Patterns. *The Condor* 105:288-302.
6. Portland Parks & Recreation. 2007. Tread Lightly with your Dogs in Natural Areas.
7. Portland Parks & Recreation. 2005. Dogs in Natural Area Parks.
8. USDA Natural Resources Conservation Service (formerly USDA Soil Conservations Service). 1983. Soil Survey for Multnomah County.
9. U.S. Fish & Wildlife Service. 2008. Tryon Creek Restoration Monitoring Project FY 2008 Progress Report.



*Sample information sign*

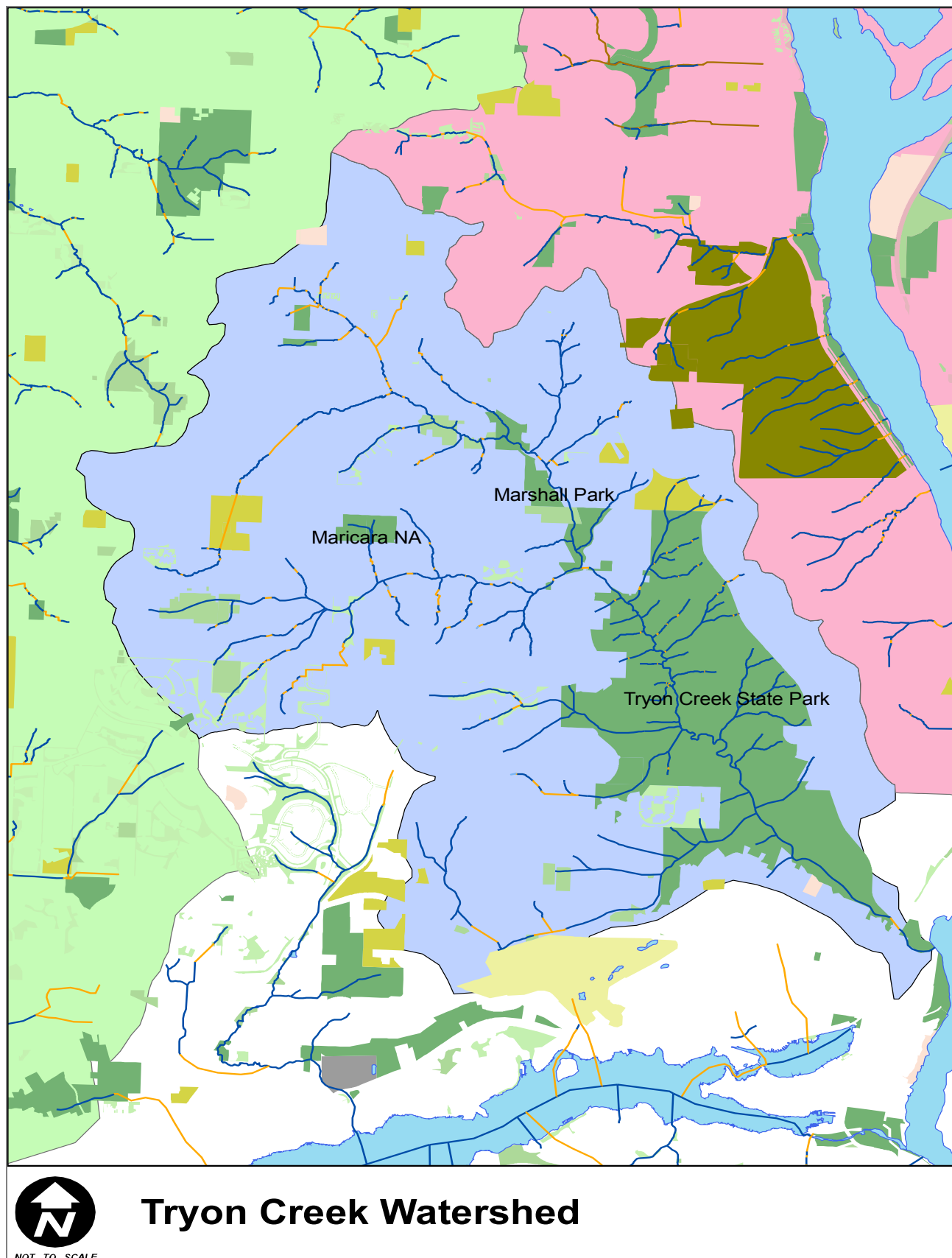
# Appendices

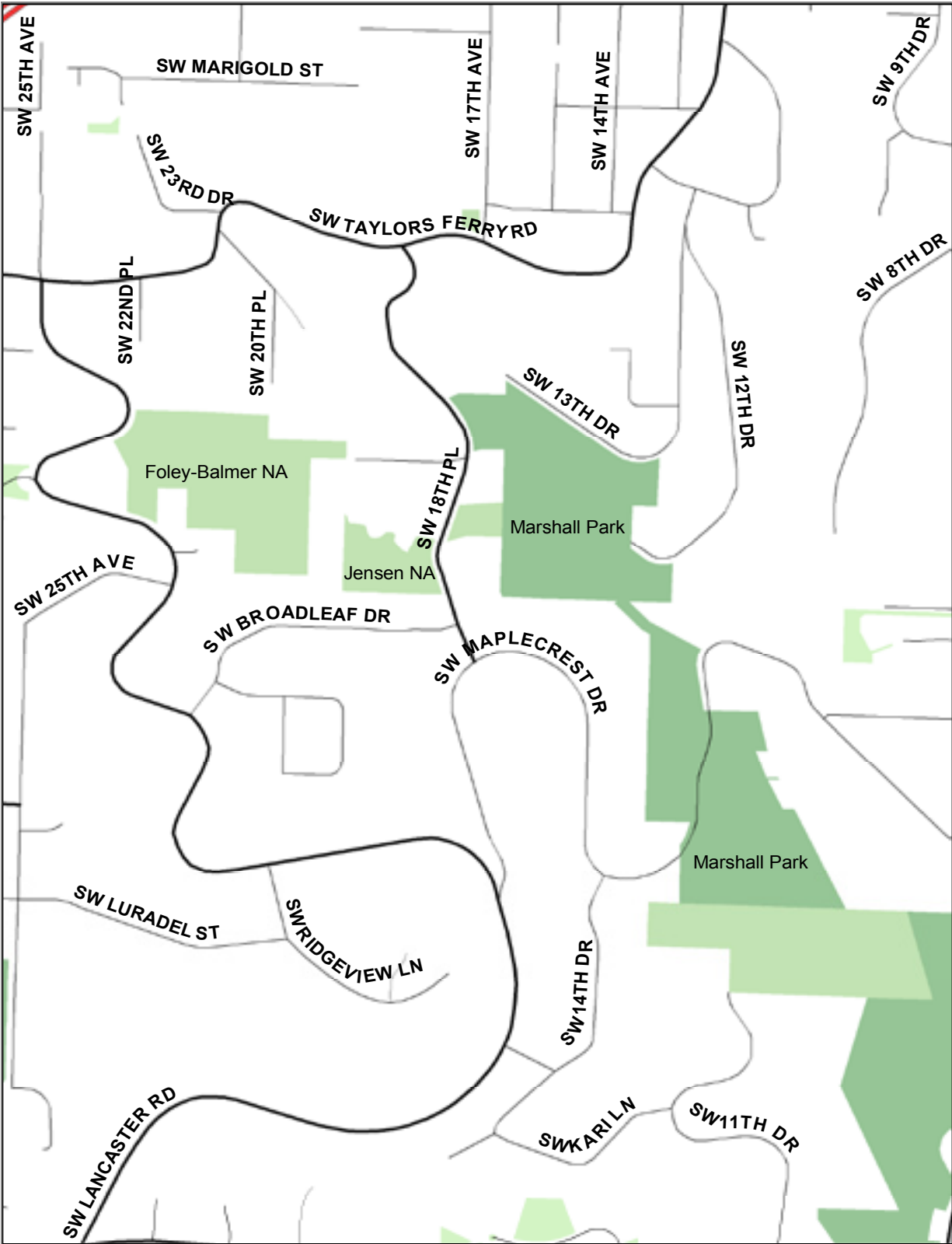


- Appendix A – Maps
- Appendix B – Public Meeting Announcements & Handouts
- Appendix C – Comment Summary
- Appendix D – Desired Future Condition
- Appendix E – Vegetation Summaries
- Appendix F – Wildlife Assessment & Bird List
- Appendix G – Stewardship Agreement
- Appendix H – Media Coverage
- Appendix I – Geotechnical Report



## APPENDIX A – MAPS





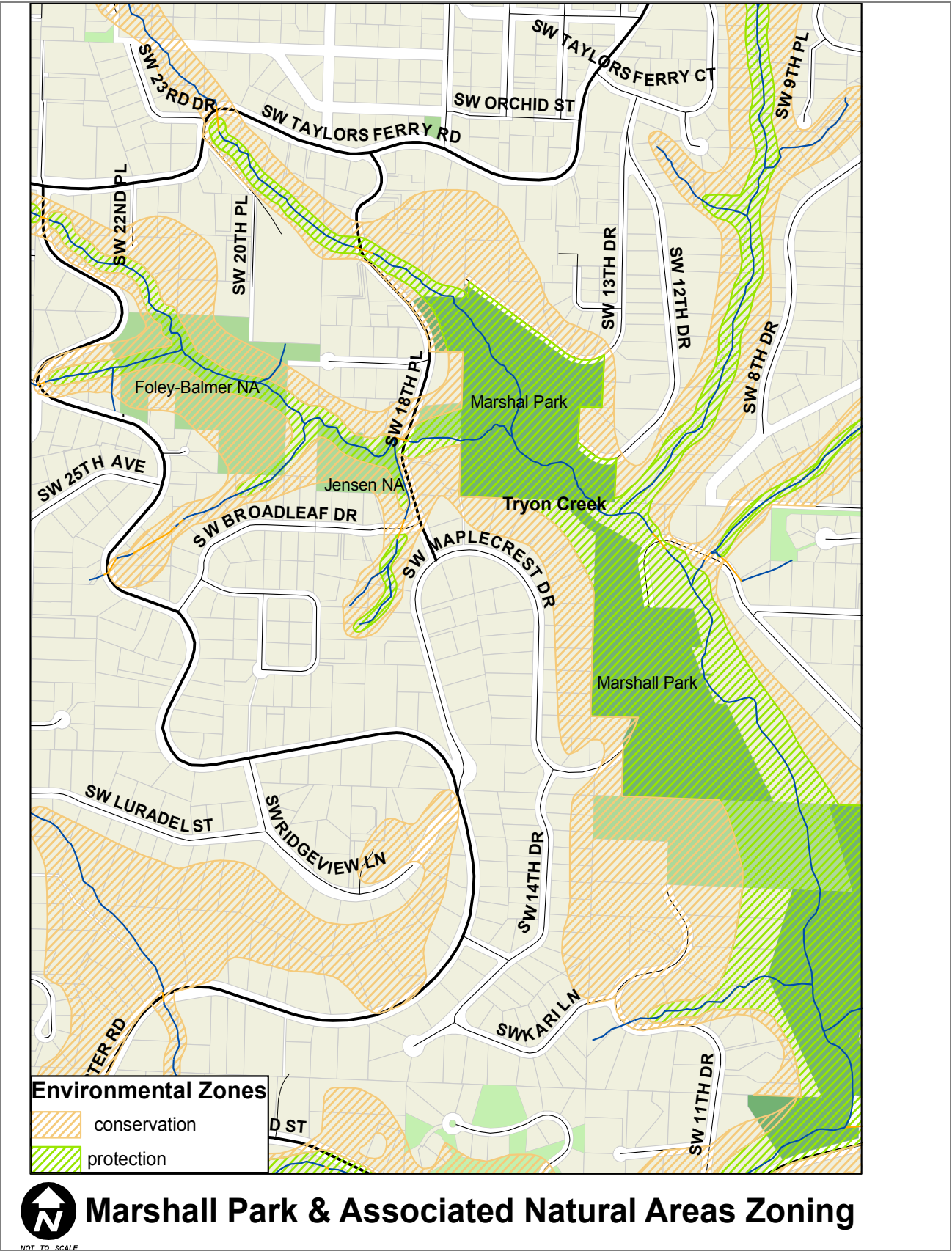
## Marshall Park & Associated Natural Areas

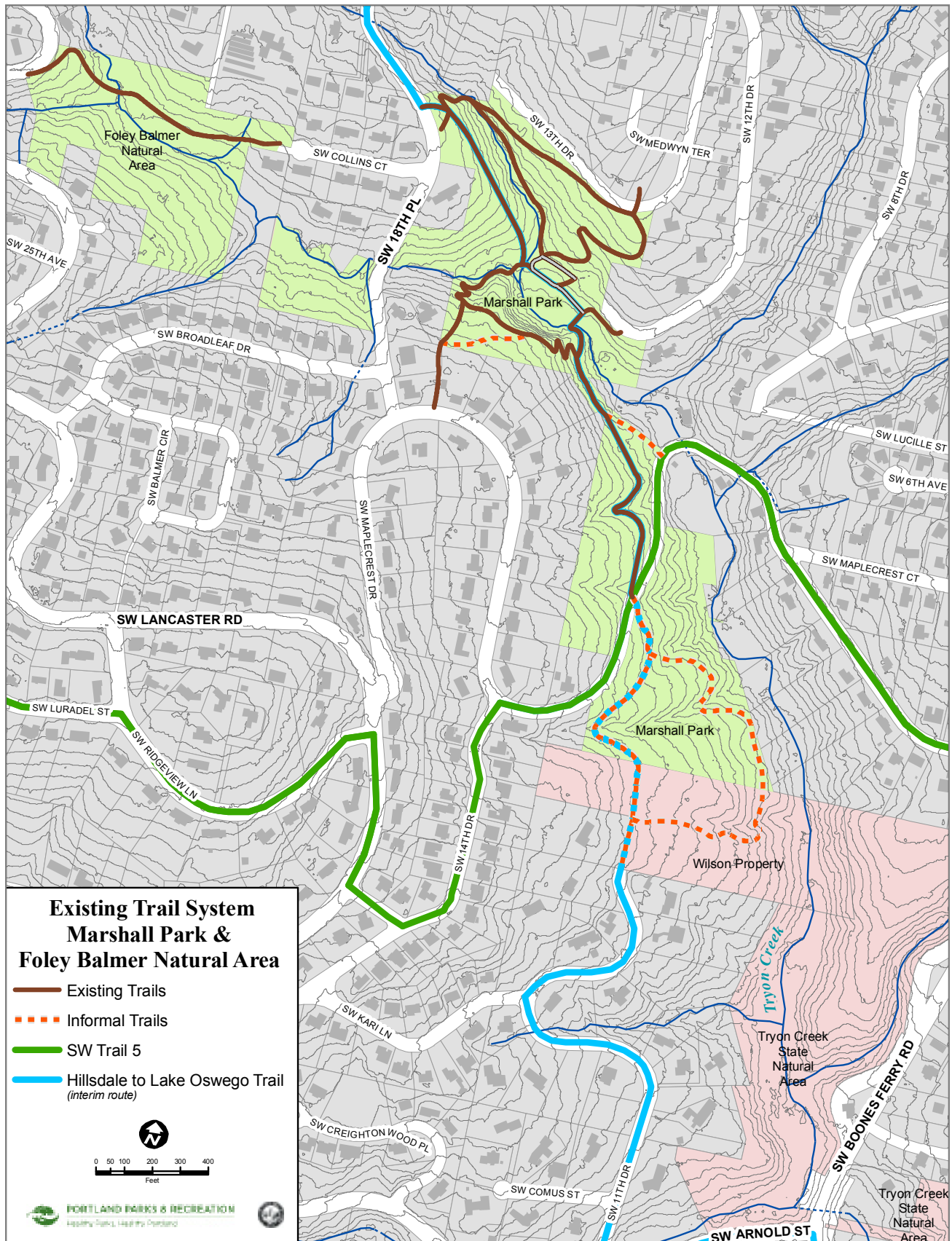
NOT TO SCALE



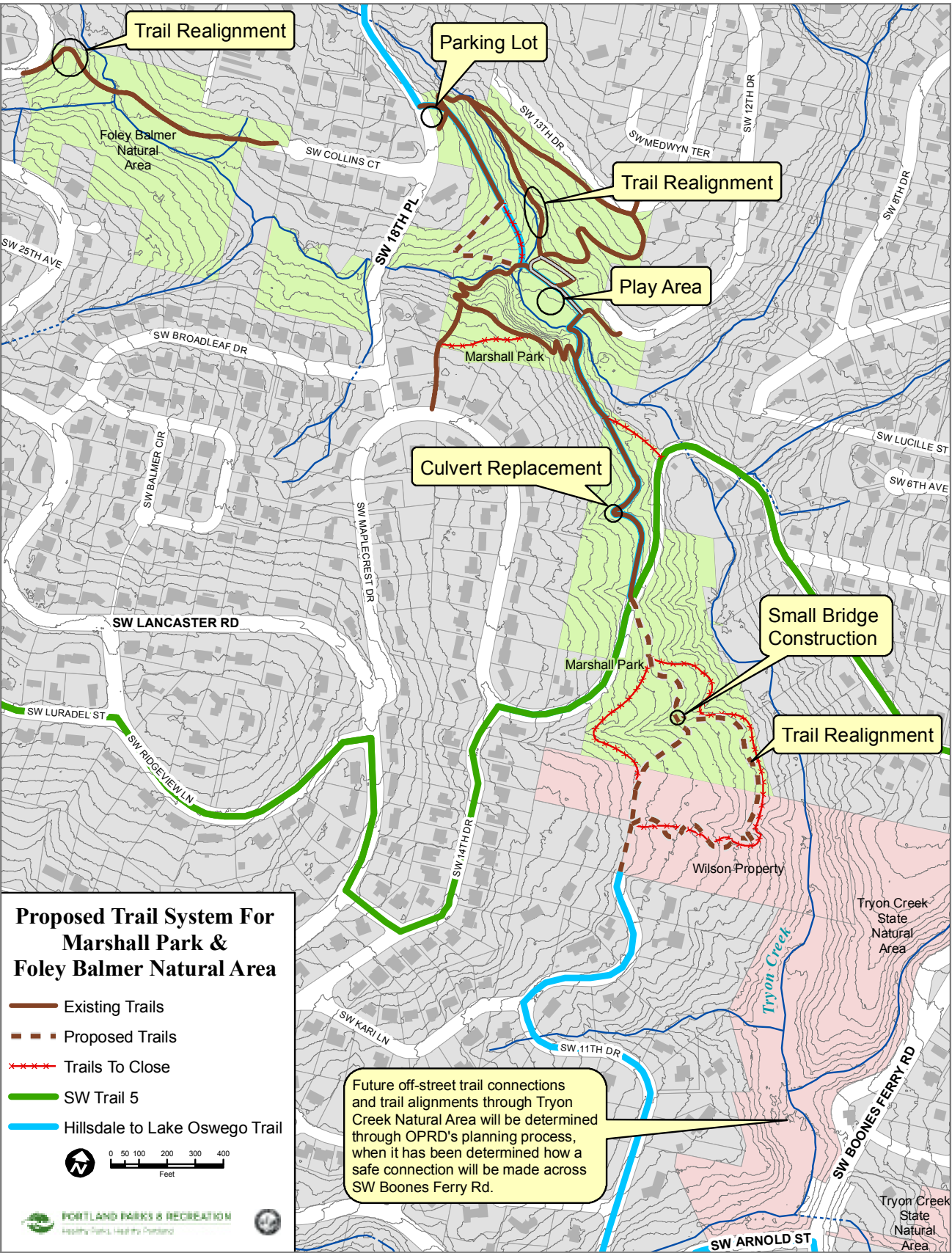












APPENDIX B – PUBLIC MEETING ANNOUNCEMENTS & HANDOUTS

# Marshall Park

## Bridge Design Review & Habitat Management Plan Kick-Off Meeting

Thursday, July 10  
6:00 – 7:30 PM

- Discuss the habitat management plan, trail layout options, and bridge designs.
- Proposed creek crossings for the bridge will be “flagged” for review.

For more information,  
call 503-823-9225.



**PORTLAND PARKS & RECREATION**

Healthy Parks, Healthy Portland



503-823-PLAY  
[www.PortlandParks.org](http://www.PortlandParks.org)

Commissioner Dan Saltzman  
Director Zari Santner

HANDOUT: JULY 10, 2008 MEETING

## **Habitat Management & Trail Plan for Marshall Park and Associated Natural Areas**

### *History of the Sites*

- The original 10-11 acres for Marshall Park were donated to the City of Portland by F. C. and Addie Marshall on June 13, 1951. Additional acreage was added to the original donation in the 1950s for a total of approximately 26 acres.
- Foley-Balmer and Jensen natural areas were purchased by Metro with money from the 1996 Metro Bond Measure for the purpose of natural resource protection. Portland Parks and Recreation (PP&R) has an intergovernmental agreement with Metro to manage the site as a natural area park.
- Arnold Creek Natural Area was acquired by PP&R in 1995.

### *General Descriptions*

Marshall Park is a natural area with hiking trails located in the middle of a 400-foot-wide canyon. The park is dominated by Douglas fir, western red cedar, grand fir and big leaf maple forest. There is a mixed understory of native and invasive plant species. The canyon is a natural drainage basin formed by the west slope of the Palatine Hills, the hills northwest of Mt. Sylvania, and by Tryon Creek that runs through it. Within Marshall Park is a waterfall framed by rock boulders.

One of the notable features of the trail system is a small stone bridge which spans Tryon Creek. Social (informal) trails run throughout the park. The playground sits on what was once the foundation of the Marshall's summer home and within the floodplain of Tryon Creek. The park is an important link in the proposed Hillsdale to Lake Oswego Trail, which is designated as a regional trail on Metro's Regional Trail plan. Oregon Parks and Recreation Department (OPRD) is currently planning for their trails at Tryon Creek State Natural Area (TCSNA). The park is nearly contiguous with TCNSA at Lower Boones Ferry Road but there are some private properties between the parks.

Foley-Balmer Natural Area is a 9.6 acre natural area that is predominately mixed evergreen-deciduous woodland dominated by Douglas fir and big leaf maple with a mixed understory. There is a 1-acre meadow at the entrance to the site. The Foley property had been used primarily as a stable for over 90 years. Before that it was a rich and lush forest with Tryon Creek running through the heart of it. The natural area includes walking paths and a footbridge crossing Tryon Creek.

Tryon Creek runs through the 2.4 acre Jensen Natural Area. The riparian habitat along the creek is in poor ecological health, dominated by invasive plant species. The upland forest is dominated by Douglas fir and big leaf maple with a predominately native plant understory. There is no access to this site.

Arnold Creek Natural Area is a .47 acre mixed evergreen-deciduous forest with both native and invasive plant species. Arnold Creek, a tributary to Tryon Creek runs through the site. There is no access to the site.

### *Habitat Management and Trail Plan*

The Marshall Park Habitat Management Plan, including the Foley-Balmer, Jensen and Arnold Creek natural areas, will focus on habitat management, trails, access, connectivity between areas and Tryon Creek State Natural Area. Through the planning process, PP&R will also evaluate the need for and appropriateness of children's play equipment and picnic facilities in Marshall Park. Numerous social trails crisscross the park and a popular trail runs along the creek. The main bridge over the creek is closed and PP&R is working on a plan to replace it. A trail crosses through Foley-Balmer Natural Area.

### *Guiding Principles*

The following planning Guiding Principles have been identified by PP&R staff:

## Appendices

- Create a sustainable habitat management plan within the Tryon Creek Watershed.
- Protect sensitive natural resources including streams, wetlands, amphibians, wildlife and fish.
- Plan for a safe trail system, including connections for both people and wildlife between Tryon Creek State Natural Area, other natural areas and Marshall Park.
- Site a structured play and picnic area.
- Provide Environmental Education and Interpretation opportunities.

### *Public Involvement*

During July and August, PP&R staff led a series of walks in the park, posted a survey on the project web page, and talked to neighbors to gather input on the plan. This is what we've heard so far:

- Keep the trail along the creek in the north portion of the park. The trail is flat, easy to walk, and provides views of the creek.
- Rebuild trails to keep feet dry in the winter and spring.
- Keep a structured play and picnic area in the park that allows guided access to the creek.
- Explore the possibility of adding a restroom near the play area.
- Protect sensitive natural resources including streams, wetlands, amphibians, wildlife, and fish.
- Ensure safe trail connections to Tryon Creek State Natural Area, other natural areas, and Marshall Park.
- Provide both historical and environmental education and interpretation opportunities.
- Construct two kiosks.
- Plan for resident fish populations and the return of Coho to the Marshall Park Cascades.

PP&R staff will be attending neighborhood association meetings during the fall to gather more input; the draft management plan is scheduled for public review in December and January.

A project web page is posted at [www.PortlandParks.org](http://www.PortlandParks.org). Activities, descriptions and maps of the planning area will be posted on the web page. Habitat management and trail options will be posted for comment. The comment period will be announced on the web page and through the SWNI News, SW Trails, and neighborhood association publications and websites. PP&R encourages you to send us your comments throughout the planning process.

### *Bridge Replacement*

Alternatives for the Marshall Park bridge replacement were presented at a community meeting in July, as well as on the project web page. The majority of people preferred a timber bridge to be relocated approximately 25 feet upstream from the current bridge location. PP&R will contract for a timber bridge with a deck that would be the least slippery. The bridge will be built at the preferred location as long as a slope of 5% or less can be achieved. If this slope requirement is not possible, the bridge will be rebuilt in the present location. Engineering will begin shortly and a determination on slope and location will be the first task. Updates will be posted online: go to [www.portlandparks.org](http://www.portlandparks.org) and click on Projects/ Natural Area Projects/Marshall Park.



## Marshall Park Habitat Management Plan Community Questionnaire

We are ready to begin the process for developing a habitat management and trail plan for this and nearby natural areas. We'd like to get your input! The deadline to submit responses is **Friday, August 29, 5:00 PM**. Questionnaires may also be completed online: Go to [www.portlandparks.org](http://www.portlandparks.org) and look for the link under What's New. Or mail or fax your completed questionnaire to:

**Portland Parks & Recreation 1120 SW Fifth #1302 Portland, OR 97204 FAX: 503-823-5570**

### HABITAT MANAGEMENT PLAN

1. Why do you typically visit this natural area? (Check all that apply.)

- |   |   |
|---|---|
| <input type="checkbox"/> Picnic/eat lunch                 | <input type="checkbox"/> Watch wildlife                   |
| <input type="checkbox"/> Take a break/rest/relax          | <input type="checkbox"/> Exercise                         |
| <input type="checkbox"/> Meet friends                     | <input type="checkbox"/> Bring children to the playground |
| <input type="checkbox"/> Enjoy the stream                 | <input type="checkbox"/> Walk the dog                     |
| <input type="checkbox"/> While hiking the SW Trail system | <input type="checkbox"/> Other: _____                     |

2. What is particularly important to you in this natural area? (Check only one response for each item.)

- | Yes                      | Maybe                    | No                       |  |
|--------------------------|--------------------------|--------------------------|--|
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Wildlife viewing                         |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Restrooms                                |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Native plantings                         |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Environmental education / interpretation |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Trails                                   |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Children's play area                     |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Picnic tables                            |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Community gathering space                |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Access to the stream                     |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Connection to other natural areas        |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Peace & quiet                            |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Other _____                              |

### STAY INFORMED!

To receive project updates and/or meeting notifications, please PRINT the following information.

Name \_\_\_\_\_

Address \_\_\_\_\_

City/State \_\_\_\_\_ Zip \_\_\_\_\_

Phone \_\_\_\_\_ (day) \_\_\_\_\_ (eve)

Email \_\_\_\_\_



## APPENDIX C – COMMENT SUMMARIES

MARSHALL PARK MANAGEMENT PLAN Comment Results 9/5/08		
Are you familiar with the location of Marshall Park?		
Yes	59	100.0%
Why do you typically visit this natural area? (Check all that apply.)		
Picnic/eat lunch		
No	111	90.2%
Yes	12	9.8%
Take a break/rest/relax		
No	94	76.4%
Yes	29	23.6%
Meet friends		
No	111	90.2%
Yes	12	9.8%
Enjoy the stream		
No	80	65.0%
Yes	43	35.0%
Watch wildlife		
No	98	79.7%
Yes	25	20.3%
Exercise		
No	88	71.5%
Yes	35	28.5%
Bring children to the playground		
No	111	90.2%
Yes	12	9.8%
Walk the dog		
No	90	73.2%
Yes	33	26.8%
While hiking the SW Trail system		
No	106	86.2%
Yes	17	13.8%
Other		
walking		
Biking - don't close trails to bikes!		
Ivy Removal, Neighborhood gathering place for meetings		
meditate		
Re: Trail - the trail that loops around by the new houses - stream is at the bottom.		
This place has a unique feel because of its geography allowing it to be hidden in an otherwise highly populated area. the least development the better. It is a gem.		
To use the swing sets.		
Use the swings on occasion.		
walking, berry picking		
What is particularly important to you in this natural area? (Check one response for each item.)		
Wildlife viewing		
Yes	32	60.4%
Maybe	12	22.6%
No	9	17.0%
Restrooms		
Maybe	20	41.7%
No	19	39.6%
Yes	9	18.8%
Native plantings		
Yes	33	62.3%

Maybe	14	26.4%
No	6	11.3%
Environmental education / interpretation		
Maybe	21	41.2%
No	16	31.4%
Yes	14	27.5%
Trails		
Yes	56	93.3%
Maybe	4	6.7%
Children's play area		
Yes	24	46.2%
Maybe	18	34.6%
No	10	19.2%
Picnic tables		
Yes	29	55.8%
Maybe	12	23.1%
No	11	21.2%
Community gathering space		
Yes	19	38.0%
Maybe	18	36.0%
No	13	26.0%
Access to the stream		
Yes	42	75.0%
Maybe	9	16.1%
No	5	8.9%
Connection to other natural areas		
Yes	35	63.6%
Maybe	17	30.9%
No	3	5.5%
Peace & quiet		
Yes	47	81.0%
Maybe	10	17.2%
No	1	1.7%
Other		
All of the current trails are important to this park. There is a wide variety of easy and difficult trails. I hope they will be maintained in the future.		
Can we have a neighborhood moratorium on weed blowers?		
Could we please ban whining kids from the park and/or their poor parenting adults with them?		
Dog friendly park.		
Don't go over board with the signage in the park. Clean up the suds in the stream and allow children as well as animals to play in it! Keep the trails primitive as well as some of the stream crossings. Portland has enough manicured trails, some of us prefer a bit of a challenge.		
Encountering the beauty and the sounds of the waterfall as a wilderness area, with minimal signs of human presence, is what makes this park so special.		
Exercise. I've lived and walked here 32 years and I do not want this part of the trail closed. Don't close this section by the creek! (see pic on comment form)		
Having a wide choice of trails, especially trails close to the stream. Those are the prettiest and most easily accessible trails in the park. Please don't close the stream trails. A central kiosk would really help with education & interpretation, as well as making it more of a community gathering space, and a meeting place. Add a couple of simple benches next to the central kiosk, and you've hit the bulls eye!		
I am concerned about trail and user impacts on the creek and wildlife. For interpretive/educational and intrinsic value, people need to have access to the stream, but in defined ways & location(s) that minimize the overall impact.		

## Appendices

I am not in favor of the culvert connection to Tryon for hikers as the cost is unreasonable for the effort.
I have been coming to Marshall for 45 years...we don't need a bridge at these prices.
I think a restroom in the central area near the turn around would be good. Does not have to have running water.
I'm there every day with my kids. I would help contribute to a play structure.
If "access to the creek" means building structures, I would prefer that it remain in its current natural state. I like this park because of its unique undeveloped nature.
It is important to keep the quiet, secluded feeling to this park while making sure families feel comfortable playing and hiking here. I also feel strongly that dogs visiting the park need to be kept on leashes at all times and dog owners be held accountable for cleaning up after their dogs.
keeping the ruggedness of the trails! that is why i live down the street from this particular park. it is peaceful and my dogs enjoy it. adding bathrooms and signs and whatnot seems like it would make it more accessible which would also make it more crowded. why are you putting dogs on leash sign? it should be an off-leash park so we can all have some freedom. if getting into the stream is a problem, then maybe have tighter fencing along the stream? the water is soooooo dirty that i can't imagine fish would actually live in it at this point.
mandatory leash law should be enforced!
mandatory leash law should be enforced! Would like the loop trail maintained and kept as it is. Would like to see a kiosk at each entrance to the park.
My family and I walk this park frequently, sometimes daily, as we live so close. Peace & quiet, and a natural environment, are the most important to me. Yesterday evening I was disturbed to see someone's graffiti (in chalk) on the flat rocks at the waterfall above the closed bridge. I visit this spot to meditate because waves and waterfalls create negative ions which help induce relaxation. A bat and squirrels are the only wildlife I have ever seen in Marshall park in 3 years. My children are 9+ years old, but adults like swings too. Often there are people and unleashed dogs in the stream, and I have seen fathers leading their children to walk off the designated paths. Education about preserving nature without adding a lot of distracting signs would help.
Natural resource protection is important, but allowing people access to appreciate it is just as important. We have a urban growth boundary to restrain development; lets make the most the areas that we do have access to... Please take a balanced approach and don't keep us out (e.g., prohibiting dogs, blocking off stream access, etc). Metro does enough of that!
Please desist from use of noisy leaf blowers. Give fat man bonus for this job; rake and sweep with breathers for fatigue in fresh quiet air. Reconnect with inherent goodness of self and world. Leaf blowers bad idea #1
Quiet out of the way benches or places to sit and view the stream while reading. Bishop's Close has this feel near the stream although the topography is different. Keep it natural and secluded please.
Regarding access to the stream, I enjoy being able to see it and walk along it, but I don't need to walk into it. However, I think it's important for kids to be able to access the stream if they want. Such opportunities are important for kids to get in touch with nature.
the city ought not use leaf blowers around the area, as it disrupts the peace and quiet of this tranquil haven.
There was some discussion of a kiosk for park notices. Not a bad idea if it is SMALL. The one at the entrance to Maricara, for example, is too big. Something off to the side and 2ft square would be adequate.

This park is a gem, but needs significant work to get it into the condition it deserves. I would love to see play area include some sculptural or natural elements that could be used by adults and children for play\exercise, balancing skills or building. The park is getting increasing use, more dogs, joggers and a resurgence of mountain bike use lately. I am concerned about degradation of the park, and lack of concern or understanding that Tryon Creek is a fish bearing stream and should be treated with care. Some education would be great. I understand peoples desire to be near the creek but do have concerns about people and dogs in the creek. Also at least one kiosk to help promote community, park history, appropriate uses, nature sightings, walks, and restoration activities. I would like to see the connection with Tryon Creek state Park be made at some point, and remove the demand or rogue trails that are in the creek flood plain. The northernmost trail that comes down from the 18th Dr. parking lot is dangerously steep, and has creosoted wood railroad ties near the creek that I would love to see removed. I do think a bathroom might be necessary at some point as this trail is linked with the larger trail system. It also makes it easier to hold work parties, and to have people with young children using the park.

## Appendices

MARSHALL PARK MANAGEMENT PLAN Comment Results 5/1/09		
Guiding Principles		
The seven guiding principles (page 9) set the course for the plan from habitat protection to working cooperatively on stewardship activities. The guiding principles are comprehensive and set the direction for the plan.		
I like this section	8	88.9%
I don't like this section	1	11.1%
I think the guiding principles would be more successful if:		
connect the dots - focus on trails that connect Marshal Park with Tryon Creek Park, and with the Foley-Balmer and Jensen Natural Areas.		
Good job. I hope you don't mind my pointing out typos for correction in the final. On P. 9 first bullet parks should be singular delete the 's'.		
I have already submitted comments on the plan and I am only going to comment on the revised proposed trail map		
We need to remember that this is a small and narrow city natural area, not a wilderness. The top priority for enhancing the natural area should be the removal of invasive plants, not the removal of well used neighborhood connector paths.		
Ecological Health		
Protecting and restoring native habitats are the primary actions. Invasive species removal and replanting native vegetation will continue to improve ecological health.		
I like this section	8	100.0%
I think the habitat protection action would be more successful if:		
focus on removing invasive species and on controlling visiting dogs		
I particularly like the discussion regarding the meadow area at the Foley-Blamer area. Will this also apply to the upper meadow area more to the NW? (the one where the tiki torches were) It would be helpful to be clear on the intent for that area. It might be good to clarify that planting of the riparian area near the Cascades will be done in a manner that still permits some views from the trail (assuming that that is still in the plan).		
More emphasis should be placed on ivy removal. The ecological evaluations were done nearly 6 years ago. Since that time, there has been many acres of ivy removed. Under the existing plan, none of these locations will be helped by the 'protect the best ' crews. The ivy will once again begin to take over if unchecked. Many trillium have been saved by the ivy removal.		
Fish		
Restore stream and riparian habitat in anticipation of coho and steelhead returning to Marshall Park Natural Areas. In cooperation with the Bureau of Environmental Services and other agencies, remove the fish passage barriers along Tryon Creek.		
I like this section	7	100.0%
I think fish habitat improvement would be more successful if:		
re-open the streams to native fish		
Wildlife		
Enhance habitat for shrub and cavity nesting birds, and bats.		
Continue revegetation of the understory with native plants, leave snags in the park where safe, and enhance habitat for bats.		
I like this section	8	100.0%



Trails & Trail Surface		
The proposed trail layout provides soft-surface pedestrian trail access and an ADA accessible trail to nature where appropriate, giving the users an opportunity to enjoy and experience wildlife, habitats, and streams. The number and types of trails vary throughout the park and natural areas with options for loops, and through hiking. An ADA trail provided access to the Marshall Cascades. The trails take the user through the Douglas fir forest, and offers views of the stream and cascades. All trails will be built to PP&R trail specifications.		
I like this section	7	70.0%
I don't like this section	3	30.0%
I think this trail layout or surface would be more successful if:		
connect the dots - focus on trails that connect Marshal Park with Tryon Creek Park, and with the Foley-Balmer and Jensen Natural Areas.		
I agree with closing off the informal trail that goes just north of the stream up to 18th place. We need a formal trail with steps that is safer.		
I am concerned about the trail from Maplecrest that links in above the Cascades. It is steep and increases the ongoing erosion, unless more is done to address the seepage and slope sloughing. Under item 5. on page 13 I don't really see anything addressing the trail that will be kept that is the western edge of the triangle trail. This trail will need work if it is kept. It might do better to bring it in a little further west.		
I appreciate that the revised map shows a closure of the informal trail that is in the Tryon Creek flood-plain on the Wilson property and going into the TCSNA property. It is much better to move it away from the sensitive habitat. I did think that there would be a chance to view that section of creek from a viewing platform in the area where people are currently crossing the creek. I realize that the access is steep and would require work to make it a maintainable trail, but think it might be a compromise. I think people will still go down to the creek there unless a significant barrier is constructed. None of the maps show the informal trail that has developed from 18th above the closed bridge area, as a result of the bridge closure. It might be a good idea to address this trail in the final plan and show that it will be closed, since many people have been using it as an access point to the park, and some of them moved to the area after it developed.		
Please do not 'close the social trail from SW Maplecrest Drive that enters the park from the east'. I so depend on that. I live on SW 12th and walk daily to Lewis and Clark College. Closing that would add another 1/4-1/2 mile each way to my already long walk. Improve it if you can.		
Please do not close the shortcut trail that is the most direct route from Marshall Park center to Maplecrest Dr. towards Tryon Creek Park and Lewis & Clark. Forcing walkers to take Maplecrest Dr. up to the main trail is impractical. The proposed route is four times as long and has more elevation gain, so it is most likely that a shortcut will simply be recreated. It is also dangerous to walk along that narrow, hilly and curvy section of Maplecrest Dr..		
Steep trails should be left alone. All trails should not be made ADA compliant. Part of hiking for exercise is being able to choose to take a more difficult path.		
Trails & Trail Surface/CIRCULATION: Part of the park's wonder is the variety of trails. By all means focus on maintaining the main trails, but do not close the others.		
Two of the existing trails proposed for removal should be kept. The one near the right of way entrance from Maplecrest provides a nice gentle slope and is in excellent condition. The alternative is very steep and slippery leading to the waterfall. The other trail provides access from Maplecrest (toward Lewis and Clark). This provides a much shorter route for neighbors to enter the park. Maintaining the drains would improve the existing trails. Every winter the green drain by the trail along the small creek fills with mud and is cleaned by neighbors. The water from the circle at the end of 12th Ave is not draining like it used to due to the ditch adjacent to the gravel road filling in. This ditch drains under the trail, but that drain is plugged. Water now runs down to the future play area, causing the center trail to be muddy. The ADA trail should come from 12th ave and follow the small creek. This would provide the user with a trail through the Douglas fir forest and creek view points without being so steep.		

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Acquisition		
Additional land will be acquired from willing sellers to provide habitat and trail connectivity between natural areas and widen pinch points within Marshall Park. Purchase of key parcels will improve both wildlife and pedestrian connectivity in the park and natural areas.		
I like this section	7	87.5%
I don't like this section	1	12.5%
I think willing seller acquisition would be more successful if:		
connect the dots - focus on trails that connect Marshall Park with Tryon Creek Park, and with the Foley-Balmer and Jensen Natural Areas.		
It would be nice to have some information posted about this in the park so adjacent land holders are aware of this and know who to contact.		
The money to purchase the land should also be used to expand the parking on 12th Ave. Handicapped parking there would allow access to the park without requiring the very steep access (for a wheelchair) from 18th.		
Developed Area		
Determine the location, number, and types of park amenities including a community meeting area, nature based play areas, picnic area, and restroom. The developed area will be located near the present picnic area, and details will be worked out through a community design process once funds are available.		
I like this section	5	62.5%
I don't like this section	3	37.5%
I think the developed area would be more successful if: (All Large Text Values)		
A bathroom would attract vagrants and drug dealers. I would have a porta potty only, open only during the day on weekends. I would rather spend money on leash law enforcement than on a bathroom.		
I am against the development of the park for a gathering area, pit toilet etc. There are already problems with people driving to the end of 12th and staying there to smoke etc. I am afraid providing means for them to stay would further encourage misuse of the park.		
Let's keep development to a minimum and focus on a "natural area" feel. A small bathroom facility would be nice, but a community gathering area and water viewing platform are overkill.		
There is limited existing open space in the park to move the play area. Raise the low lying area with fill where the swings are and leave the play area where it is. This was not even flooded during the '96 floods.		
Interpretation & Signage		
Incorporate education about the park's history and natural environment into the interpretive information. Provide directional signage within the park. Locate 2-3 kiosks and/or notice boards at key access points, and install 2 interpretive signs.		
I like this section	6	75.0%
I don't like this section	2	25.0%
I think interpretation and signage would be more successful if:		
I don't want large kiosks at the entrances. The ones placed at Maricara park are overwhelming. The less signage the better.		
nice, but a lower priority		
There should be less emphasis on educational signs. Let park visitors focus on experiencing nature without getting a lecture.		
Where trails are being closed off or people redirected what will the barriers be, will there be any educational signage in the redirect? This will be especially important at the newly created loop that will close off the trail along the creek going towards the TCSNA.		

Project Prioritization		
Please rank these projects in order of priority (1-9):		
Trail construction		
9		37.5%
4		25.0%
1		12.5%
3		12.5%
7		12.5%
Trail maintenance		
1		62.5%
2		25.0%
8		12.5%
Design and construction of the play area		
9		28.6%
2		14.3%
3		14.3%
4		14.3%
5		14.3%
7		14.3%
Installation of kiosks		
5		28.6%
9		28.6%
3		14.3%
6		14.3%
8		14.3%
Installation of notice boards		
9		42.9%
4		14.3%
5		14.3%
7		14.3%
8		14.3%
Development of environmental and historical interpretation signage		
5		57.1%
9		28.6%
7		14.3%
Directional signage		
6		42.9%
9		42.9%
8		14.3%
Habitat restoration - invasive species removal and planting		
2		42.9%
1		28.6%
4		14.3%
6		14.3%

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Parking lot improvements		
9		42.9%
3		28.6%
1		14.3%
8		14.3%
Others (please list)		
Note that now that there is one notice board this is a little less critical If TCSNA did not have an ADA accessible trail I would making the parking lot and ADA trail a higher priority.		
We have to enforce the leash law. In addition to scaring wildlife, and damaging stream beds, dogs scare me when they bark and charge at me. The owner always tries to ensure me that they are friendly but this behavior is not friendly to me.		
General Comments		
All of these plans look great to me but I am disheartened to read there is no funding to implement them. Thanks to everyone involved and let's hope we can find the funds to preserve this important resource.		
Maintaining the trails should be the top goal of Portland Parks & Recreation.		
Signage for creek identification		
Thank you for asking for community input and thank you for putting this plan together!		
I'd like to see the park better maintained for people. Trail maintenance, especially near the play area is sorely needed(where the trucks drive). The stone bridge needs some attention before it gets worse and falls apart. Modify the parking on 12th to provide for ADA accessible, eliminating the need for the 18th ave parking improvements. Don't spend the valuable resources on trail removal. Spend it instead on invasive species removal. The Foley-Balmer tract is becoming overgrown with blackberries and ivy since its purchase.		
Overall a very nice job on the management plan. Thanks for all of the hard work! Now the challenge is getting funding for implementation. Typo on p 19? Developed park amenities - first bullet should that be nature based ? The park is seeing increasing use by bicycles and this is not really addressed in the plan. (unless I missed it.) It maybe should be in issues and challenges and then clearly stated how that will be addressed assuming the intent is no bikes.		

## APPENDIX D – DESIRED FUTURE CONDITION

### TIMELINE

1/8/07 Site Visit and Draft DFC: Steve Lower, PP&R Assistant Ecologist, and Mart Hughes, PP&R Ecologist

2/28/09 Completion of Draft DFC: Kendra Petersen-Morgan, PP&R Ecologist

### LANDSCAPE SETTING

The natural resources within Portland are a small piece of the vast web of ecosystems that once covered all of North America. Portland is located in the northwest coniferous forest biome. Within our forest biome, additional combinations of flora and fauna can be identified on smaller and smaller scales. Portland straddles the area where Washington-Oregon western hemlock forest meets the warmer, drier Willamette Valley vegetation zone and the cooler zones of the Columbia Gorge. The natural corridors of the Columbia and Willamette Rivers converge at Portland. Their valleys bring together the harsh climates of the interior Columbia Plateau, and the mild climates of the coast and the Lower Willamette Valley. The Tualatin Mountains to the west and the Boring Lava Domes to the east are fingers of the Coast range and the Cascade Range that extend into the City. Remarkable communities of native plants and animals still flourish in Portland with the rivers and forest corridors serving as travel paths and sources of food and cover (adapted from *The Portland Environmental Handbook*. 1997).<sup>1</sup>

### TOPOGRAPHY

Marshall Park Natural Area is composed of Marshall Park, Jensen Natural Area, and Foley-Balmer Natural Area. Elevation ranges from 400' (above sea level) at the highest point on the slope in western Foley-Balmer Natural Area to 200' at the lowest point on the eastern property line in southern Marshall Park. In Foley-Balmer Natural Area, the canyon surrounding Tryon Creek has slopes ranging from 10-30% (10%=one foot of elevation gain for every ten feet of vertical distance). Tryon Creek runs along the northern property line in Jensen Natural Area, where upland slopes are 20-30%. In northern Marshall Park, Tryon Creek and a tributary that feeds into it from the north run through a ravine that has slopes ranging from 10-30%. In southern Marshall Park, the landscape slopes down from the western boundary to the eastern boundary (20-30%) where it abuts Tryon Creek (just outside the property line). Throughout Marshall Park Natural Area, riparian areas along the creek are usually flat benches, with occasional gentle slopes (0-10%).

### SOILS

Two soil types are found at the site. Soil on the higher upland slopes around Tryon Creek and its tributaries is classified by the USDA Soil Conservation Service as Cascade Silt Loam, 8-15 percent slope (7C).<sup>2</sup> The soil on the lower slopes near and in the creek bottom is Cascade Silt Loam, 15-30 percent slope (7D). These two somewhat poorly drained soils are on convex side slopes of broad, rolling ridgetops and are formed in silty materials. Permeability is slow, runoff is medium, and the hazard of erosion is moderate (7C) to high (7D). These soils are well suited to Douglas fir in areas that are not under cultivation. Other species that can be found include western red cedar, red alder, grand fir, western hemlock, big leaf maple, willow, Pacific dogwood, bitter cherry, thimbleberry, salal, vine maple, trailing blackberry, sword fern, and snowberry (see Appendix I for Latin names).

### CURRENT VEGETATION

Marshall Park Natural Area is composed of a 37.7-acre natural area of mainly evergreen and deciduous forest. Other habitat types include grassland and periodically flooded deciduous forest. The major components of the tree canopy are Douglas fir, big leaf maple, western hemlock, western red cedar, grand fir, red alder, and black cottonwood. Understory plants include vine maple, sword fern, Indian-plum, red elderberry, dull Oregon grape, tall Oregon grape, and salmonberry. Beaked hazelnut, lady fern, skunk cabbage, inside-out flower, Indian pipe, stinging nettle, and western wahoo are other species

## Appendices

of interest. Invasive species occur throughout most of the habitat and pose a serious threat to native plants in the understory. These include horse chestnut, Norway maple, English holly, English ivy, Japanese knotweed, English laurel, and Himalayan blackberry.

### DESIRED FUTURE CONDITION (DFC)

The Desired Future Condition (DFC) is a systematic inquiry process to guide ecological restoration and part of PP&R's Ecosystem Management Strategy (the strategy). The strategy is an organized approach to improving the quality of habitat for fish and wildlife and other natural resource functions and values. The strategy consists of the following steps: (1) Inventory, (2) Determination of Desired Future Condition, (3) Assessment, (4) Prescription, (5) Intervention, and (6) Monitoring. Applied over time, the sequence of steps forms a cycle termed an "adaptive management loop." Using consistent protocols and GIS technology, Ecosystem Management enables PP&R's natural resources staff to qualify and quantify the condition of natural resources in its portfolio of responsibilities.

To describe vegetative community composition, habitat is subdivided into ecological units defined by recognized plant alliances. An alliance is an accepted vegetation category used by the National Vegetation Classification System (NVCS) that identifies a plant community type based on the presence of dominant and/or diagnostic species in the predominant or uppermost stratum. Typically, the alliance is named after the tree species that dominate the canopy. For example, the Douglas Fir-Western Hemlock Forest alliance (DF-WHF) has an upper tree canopy that consists mainly of Douglas fir and western hemlock. Habitat characteristics such as hydroperiod are also used to name some alliances, e.g., Oregon Ash Seasonally Flooded Forest alliance (OASFF). See Appendix II for details on how DFC alliances are assigned.

### DFC FOR TRYON CREEK NATURAL AREA

The DFC for Marshall Park Natural Area is an evergreen-dominated upland forest, a small deciduous upland forest, and several patches of deciduous periodically flooded forest. Douglas fir, western red cedar, western hemlock, and grand fir will continue to be important components of the evergreen forest canopy. Although deciduous trees will be replaced as dominant species in the upland forest, big leaf maple will nonetheless remain present in the subcanopy. Changes in the species composition in the evergreen-dominated upland forest are expected to occur through natural regeneration and succession. The following alliances are DFC recommendations for each of the parks within the Tryon Creek Natural Area (Natureserve 2007)<sup>3</sup>:

#### Upland Forest Communities

##### **Western Red Cedar Forest (WRCF)**

*(Thuja plicata Forest Alliance)*

Western red cedar is the dominant tree species in this forest type, with a canopy less than 50m in height. Western red cedar usually occurs in mixed-species stands and is found in pioneer, seral, and climax stages of forest succession. Other species that can be found in the overstory include Douglas fir, western hemlock, and grand fir. Big leaf maple and black cottonwood may form a subcanopy in stands of this alliance. A few of the many species found in the shrub layer include vine maple, dull Oregon grape, and salmonberry. Sword fern, maidenhair fern, and lady fern can be found in the herbaceous layer. Wide seed distribution allows western red cedar to invade disturbed habitat.

In the DFC, this forest alliance will replace deciduous habitat, covering more than half of Foley-Balmer Natural Area, and part of northern and most of southern Marshall Park. In Marshall Park, grand fir will continue to be a component of this alliance, particularly in the southeastern corner where a number of large, healthy trees are growing. Western red cedar is growing and regenerating in Marshall Park, particularly in the southern half. In Foley-Balmer, western red cedar is regenerating in areas currently



dominated by red alder and big leaf maple (see Appendix II for descriptions of community types that have been removed from the DFC).

### **Douglas Fir Forest (DFF)**

*(Psuedotsuga menzeisii Giant Forest Alliance)*

This system is a forest dominated by Douglas fir in the tree canopy (35-50m high) and the tree regeneration layer. Grand fir can be codominant in some areas, but there is little or no western hemlock or western red cedar. There is typically a well-developed understory of evergreen or deciduous shrubs, or graminoids. Scouler's willow and Pacific madrone can be present but are subordinate. There is a well-developed understory of deciduous or evergreen shrubs, and graminoids. Oceanspray, snowberry or baldhip rose are diagnostic and typically dominant. Other shrubs that may be important include salal, tall Oregon grape, dull Oregon grape, and beaked hazelnut.

The DFC for all of the upland in Jensen Natural Area and the upland surrounding the canyon bottom in the northern half of Marshall Park is Douglas Fir Forest (DFF). These areas are relatively dry upland sites strongly dominated by Douglas fir; succession by other coniferous species is not anticipated.

### **Western Hemlock Giant Forest (WHGF)**

*(Tsuga heterophylla Giant Forest Alliance)*

These forests are characterized by a multi-tiered, mixed species canopy over 50m in height that is dominated by western hemlock. Douglas fir and western red cedar are commonly found in the canopy. There is often a secondary forest stratum (20-35m) that can be composed of big leaf maple and western yew. A tall shrub layer and a well-developed herbaceous layer are also typical of these forest communities. Shrubs can include vine maple, salal, tall Oregon grape, and salmonberry. Herbaceous species include sword fern.

A 1.6-acre area on the southern end of Marshall Park is currently occupied by this community, which will be retained for the DFC. This is a community that is dominated by large, healthy western hemlocks, with western red cedar codominant at this site. Without major disturbance, this community type is not expected to change for many hundreds of years.

### **Oregon White Oak Forest (OWOF)**

*(Quercus garryana Forest Alliance)*

This woodland alliance is dominated by Oregon white oak in the tree canopy, which ranges in height from 20-35m. In the Willamette Valley, Oregon white oak is often the sole dominant although big leaf maple and Douglas fir may be present.<sup>4</sup> Shrub species include beaked hazelnut, snowberry, and serviceberry. The herbaceous understory is composed mostly of grasses. This is the most drought-tolerant forest community that occurs in western Oregon and requires well-drained soils. Before European settlement, dry season fire suppressed invading conifers; without a disturbance regime, Oregon white oak is eventually overtopped and killed by conifers.

This vegetation type is planned for the grassland and adjacent red alder forest (1.8 acres total) in the northeastern corner of Foley-Balmer Natural Area. This particular DFC is based on habitat suitability (relatively dry soils), historical presence of Oregon white oak in the region, and PP&R staff recommendation. The area proposed for this community type currently has a sparse canopy cover of early-successional, deciduous trees, offering an opportunity to establish habitat that has largely disappeared in the region due to development and fire suppression.

This habitat is being actively managed – plantings and weed control – to encourage the establishment and maintenance of Oregon White Oak Woodland. PP&R has planted Oregon white oak, Douglas' spiraea, black hawthorn, thimbleberry, and snowberry in the grassland area and is clearing the red alder

## Appendices

forest for future plantings. Portions of the woodland will be managed for open grassland which will include the planting of native forb species. Currently, Himalayan blackberry and English ivy control is necessary throughout the wooded buffer of the project. Meadow knapweed has been noted within the grassland in one discrete location and will be a focus of treatment.

### Riparian Forest Communities

#### **Oregon Ash Seasonally Flooded Forest (OASFF)**

*(Fraxinus latifolia Seasonally Flooded Forest Alliance)*

This forest community is dominated by Oregon ash in the tree canopy and occurs on poorly drained swales and riparian areas. The tree canopy has 50-80% cover and reaches a height ranging from 10-25m. Toward the drier edges of a stand, big leaf maple or Oregon white oak may occur in small numbers. In stands near active stream channels, red alder, black cottonwood, and willow species may be present. The shrub layer is usually sparse, and can consist of black hawthorn, Douglas' spiraea, snowberry, and trailing blackberry, while the herbaceous layer is usually dominated by slough sedge.

In Foley-Balmer Natural Area, seasonally flooded habitat currently dominated by red alder will support Oregon Ash Seasonally Flooded Forest (1.4 acres). Red alder dominates this habitat now, however Oregon ash should overtop and replace the alder as the forest matures. PP&R has planted Oregon ash, salmonberry, Pacific ninebark, red-osier dogwood, and slough sedge at this site. Stinging nettle infests a small section of this habitat. In Marshall Park, the southern half of what is currently a cultural area (0.3 acres) will be converted to Oregon Ash Seasonally Flooded Forest. This area has the hydrology to support Oregon Ash Seasonally Flooded Forest, however it will require considerable rehabilitation, including planting the appropriate suite of native plants and removal of Himalayan blackberry and English ivy. PP&R has planted Douglas' spiraea and baldhip rose at this site. A scrub-shrub buffer will be planted along the outer edge of the riparian corridor to create a blending of the natural area and developed park.

#### **Black Cottonwood Temporarily Flooded Forest Alliance (BCTFF)**

*(Populus balsamifera ssp. Trichocarpa Temporarily Flooded Forest Alliance)*

Black cottonwood dominates an open to moderately dense tree layer (25-60% canopy cover) that is less than 25m tall in this briefly flooded forest community. Temporarily flooded forest is distinguished from seasonally flooded forest by its longer hydroperiod. Stands can occupy broad floodplains or form narrow bands along stream banks. Tree associates that can be found growing in these forests are red alder and Oregon ash. A shrub layer is usually present and the herbaceous layer is typically sparse. Shrub species can include red-osier dogwood, Douglas' spiraea, and snowberry. Graminoid cover is typically less than 10% but can be as high as 80%.

This forest type is expected along creeks in Jensen Natural Area and Marshall Park. It is expected to be a mixture of black cottonwood, red alder, and Oregon ash. Big leaf maple and western red cedar are not typically associated with this alliance, however both species currently occur in the canopy and are expected to be present in the future. Salmonberry is the dominant shrub; red-osier dogwood, huckleberry, trailing blackberry, and snowberry are other shrubs currently present. English ivy is a serious problem. In southern Marshall Park, black cottonwood is well-established along the southern property line and is expected to persist for years.

### DFC: WILDLIFE HABITAT

The forest community composition planned for Marshall Park Natural Area will provide structurally complex and diverse habitat for a wide range of native wildlife species. Over time the habitat is expected to develop more heterogeneous structure that will provide food, shelter, and reproduction opportunities

for wildlife. To the extent that it is practical, non-native plant species will be removed to encourage the establishment of native vegetation. As the forest adds structure and native diversity, the repatriation of plant and animal species that historically occupied the site should occur consistent with the sustainability of populations on a site of this size. The surrounding forest will support birds, reptiles, and small mammals (see Appendix IV for a list of species associated with the DFC). Dead trees will be left standing for cavity-nesters and other wildlife, while downed trees will provide shelter to small mammals and reptiles on the forest floor. Streams and the riparian habitat currently support cutthroat and rainbow trout and might support anadromous fish populations in the future if physical barriers below Marshall Park Natural Area were removed.

## REFERENCES

1. Portland Environmental Handbook. 1997. Bureau of Planning. Portland, Oregon.
2. United States Department of Agriculture, Soil Conservation Service and Forest Service, in Cooperation with Oregon Agricultural Experiment. 1983. Soil Survey of Multnomah County, Oregon <http://soildatamart.nrcs.usda.gov>
3. Natureserve. 2007. <http://www.natureserve.org/explorer/>
4. Franklin, J.F. and C.T. Dyrness. 1988. Natural Vegetation of Oregon and Washington. OSU Press.
5. Johnson, D.H. and T.A. O'Neil. 2001. Wildlife Habitat Relationships in Oregon and Washington. Oregon State University Press.

## APPENDIX I. PLANT SPECIES LIST

Baldhip Rose ( <i>Rosa gymnocarpa</i> )	Norway Maple ( <i>Acer platanoides</i> ) Japanese Knotweed ( <i>Polygonum cuspidatum</i> )
Beaked Hazelnut ( <i>Corylus cornuta</i> var. <i>Californica</i> )	Oceanspray ( <i>Holodiscus discolor</i> )
Big Leaf Maple ( <i>Acer macrophyllum</i> )	Oregon Ash ( <i>Fraxinus latifolia</i> )
Bitter Cherry ( <i>Prunus emarginata</i> )	Oregon White Oak ( <i>Quercus garryana</i> )
Black Cottonwood ( <i>Populus balsamifera</i> ssp. <i>trichocarpa</i> )	Pacific Dogwood ( <i>Cornus nuttallii</i> )
Black Elderberry ( <i>Sambucus racemosa</i> ssp. <i>pubens</i> var. <i>melanocarpa</i> )	Pacific Madrone ( <i>Arbutus menziesii</i> )
Black Hawthorn ( <i>Crataegus douglasii</i> )	Pacific Ninebark ( <i>Physocarpus capitatus</i> )
Bracken Fern ( <i>Pteridium aquilinum</i> )	Pacific Rhododendron ( <i>Rhododendron macrophyllum</i> )
Douglas Fir ( <i>Pseudotsuga menziesii</i> )	Pacific Waterleaf ( <i>Hydrophyllum tenuipes</i> )
Douglas' Spiraea ( <i>Spiraea douglasii</i> )	Piggy-back Plant ( <i>Tolmiea menziesii</i> )
Dull Oregon Grape ( <i>Mahonia nervosa</i> )	Red Alder ( <i>Alnus rubra</i> )
English Holly ( <i>Ilex aquifolium</i> )	Red Elderberry ( <i>Sambucus racemosa</i> ssp. <i>pubens</i> )
English Ivy ( <i>Hedera helix</i> )	Red Huckleberry ( <i>Vaccinium parvifolium</i> )
English Laurel ( <i>Prunus laurocerasus</i> )	Red-Osier Dogwood ( <i>Cornus stolonifera</i> )
Grand Fir ( <i>Abies grandis</i> )	Redwood Sorrel ( <i>Oxalis oregana</i> )
Himalayan Blackberry ( <i>Rubus discolor</i> )	Salal ( <i>Gaultheria shallon</i> )
Honeysuckle ( <i>Lonicera involucrata</i> )	Salmonberry ( <i>Rubus spectabilis</i> )
Horse Chestnut ( <i>Aesculus hippocastanum</i> )	Scouler's Willow ( <i>Salix scouleriana</i> )
Horsetail ( <i>Equisetum hyemale</i> )	Serviceberry ( <i>Amelanchier alnifolia</i> )
Indian Pipe ( <i>Monotropa uniflora</i> )	Skunk Cabbage ( <i>Lysichiton americanus</i> )
Indian-Plum ( <i>Oemleria cerasiformis</i> )	Slough Sedge ( <i>Carex obnupta</i> )
Inside-Out Flower ( <i>Vancouveria hexandra</i> )	Snowberry ( <i>Symphoricarpos albus</i> )
Lady Fern ( <i>Athyrium filix-femina</i> )	Stinging Nettle ( <i>Urtica dioica</i> )
Maidenhair Fern ( <i>Adiantum pedatum</i> )	Sword Fern ( <i>Polystichum munitum</i> )

## Appendices

Tall Oregon Grape ( <i>Mahonia aquifolium</i> )	Western Trillium ( <i>Trillium ovatum</i> )
Thimbleberry ( <i>Rubus parviflorus</i> )	Western Wahoo ( <i>Euonymus occidentalis</i> )
Trailing Blackberry ( <i>Rubus ursinus</i> )	Western Yew ( <i>Taxus brevifolia</i> )
Vine Maple ( <i>Acer circinatum</i> )	Wild Ginger ( <i>Asarum caudatum</i> )
Western Hemlock ( <i>Tsuga heterophylla</i> )	Willows ( <i>Salix spp.</i> )
Western Red Cedar ( <i>Thuja plicata</i> )	

### APPENDIX II. CRITERIA FOR ASSIGNING DFC ALLIANCES

The development of the DFC relies on surveys of existing vegetation, historical records of vegetation, hydrology, and PP&R staff recommendation. The current vegetative community is the principal guide for developing the DFC, with the recognition that natural regeneration and succession operating on existing plant communities will determine the future vegetation structure. An important assumption made in assigning community types in the DFC is that disturbance may be moderate to high in portions of urban parks and natural areas due to existing infrastructure, an influx of invasive species from surrounding properties, and/or cultural/social constraints. Additionally, disturbance may be incorporated into the DFC when a cultural, security, and/or habitat benefit has been identified. Examples include managing a forest system for mid-succession composition to reduce wildfire risk where development encroachment on the natural area is high or utilizing fire as a tool to retain an early-succession composition for habitat diversity. As a consequence, the DFC may plan for early to late successional alliances. The planning time frame for this DFC document is considered to be 25-50 years. Planning beyond this time frame presents the challenge of incorporating the unforeseen impacts such as climate change.

Principles of forest succession and the particular ecology of different forest trees are used to project forest community types as part of the DFC process. In Portland natural areas, the predominant evergreen canopy species are Douglas fir, western hemlock, and western red cedar, with grand fir present but less abundant. While Douglas fir is successful at colonizing disturbed habitat, it does not regenerate well in a shady understory and is out-competed by western hemlock and western red cedar. Seral forests such as Douglas Fir Forest (DFF) are often expected to be replaced by western hemlock and western red cedar if sufficient regeneration of these two species is present. Big Leaf Maple Forest (BLMF) and Red Alder Forest (RAF) are both disturbance-dependent and early successional, therefore evergreen species are expected to eventually overtop them in the absence of major disturbance. Douglas fir and/or other coniferous species are expected to become dominant in Douglas Fir-Big Leaf Maple Forest (DF-BLMF), depending on the composition of the regeneration layer. Although deciduous trees are generally replaced as dominant species in the upland forest, they nonetheless are often present as subcanopy species. The loss of deciduous species as upland canopy dominants, then, does not imply a concomitant loss in community diversity. Seasonally flooded habitat is prone to disturbance and may indefinitely support big leaf maple and red alder, however, if the opportunity for planting presents itself, these habitats may be converted to Oregon Ash Seasonally Flooded Forest (OASFF). Under certain circumstances, early successional and/or disturbance-dependent communities may be included in the DFC, e.g., Oregon White Oak Forest (OWOF), in which case appropriate management is prescribed.

### APPENDIX III. CURRENT COMMUNITIES

#### **Big Leaf Maple Forest (BLMF)**

*(Acer macrophyllum Forest Alliance)*

Communities within this type are usually strongly dominated by big leaf maple (15-20m), with canopy cover over 60%. These communities typically are embedded in a matrix of coniferous forest and they usually establish after natural or human disturbance. Douglas fir, western red cedar, western hemlock, and grand fir can be present in the canopy of these forests and Pacific dogwood and red alder can form a subcanopy. The forest understory is well developed and species-rich compared to adjacent conifer forest. Typical shrub species include vine maple, red elderberry, salmonberry, dull Oregon grape, and salal. Herbaceous species include sword fern, maidenhair fern, and bracken fern.

#### **Red Alder Forest (RAF)**

*(Alnus rubra Forest Alliance)*

This is a community strongly dominated by red alder, a short-lived deciduous tree (80-100 years) that is prolific after fire or other disturbance. These forests are 15-20m in height and have a canopy cover ranging from 60-100%. They are often associated with western hemlock and western red cedar forests. Big leaf maple can occur in the canopy and Douglas fir may be emergent through the tree layer. If conifers establish in the understory, they are expected to dominate after the alder dies or in the absence of further disturbance. A lush understory consisting of ferns, grasses, and forbs can be present in this forest type. Black elderberry, salmonberry, and vine maple are common shrubs, while sword fern and redwood sorrel are often found in the herbaceous layer.

#### **Red Alder Seasonally Flooded Forest (RASFF)**

*(Alnus rubra Seasonally Flooded Forest Alliance)*

This forest community typically occurs along low elevation streams and their floodplains and on the upland margins of wetlands. Red alder dominates the tree layer, with canopy cover ranging from 40-80%. The lush forest undergrowth is usually dominated by a deciduous shrub layer, often composed exclusively of salmonberry. A well-developed herbaceous layer can consist of lady fern, horsetail, honeysuckle, trailing blackberry, and piggy-back plant.

#### **Temperate Perennial Graminoid Vegetation with Sparse Shrub Layer (GV)**

A sparse tree canopy and open grassland habitat characterizes a 1.5-acre section in the northeastern corner of Foley-Balmer Natural Area. Tree canopy cover is only 10%.

### APPENDIX IV. ANIMAL SPECIES LIST

The wildlife species list identifies priority wildlife species that may be found associated with the DFC alliances. This list was created through a cross-walk of species associated with Johnson and O'Neils Habitat Type Classification<sup>5</sup> and the City of Portland's Special Status Species Closely Associated with Special Status Habitats List. This wildlife list does not represent species that have been observed within the natural area and the associated habitat structures required to support these priority wildlife species may or may not be present.

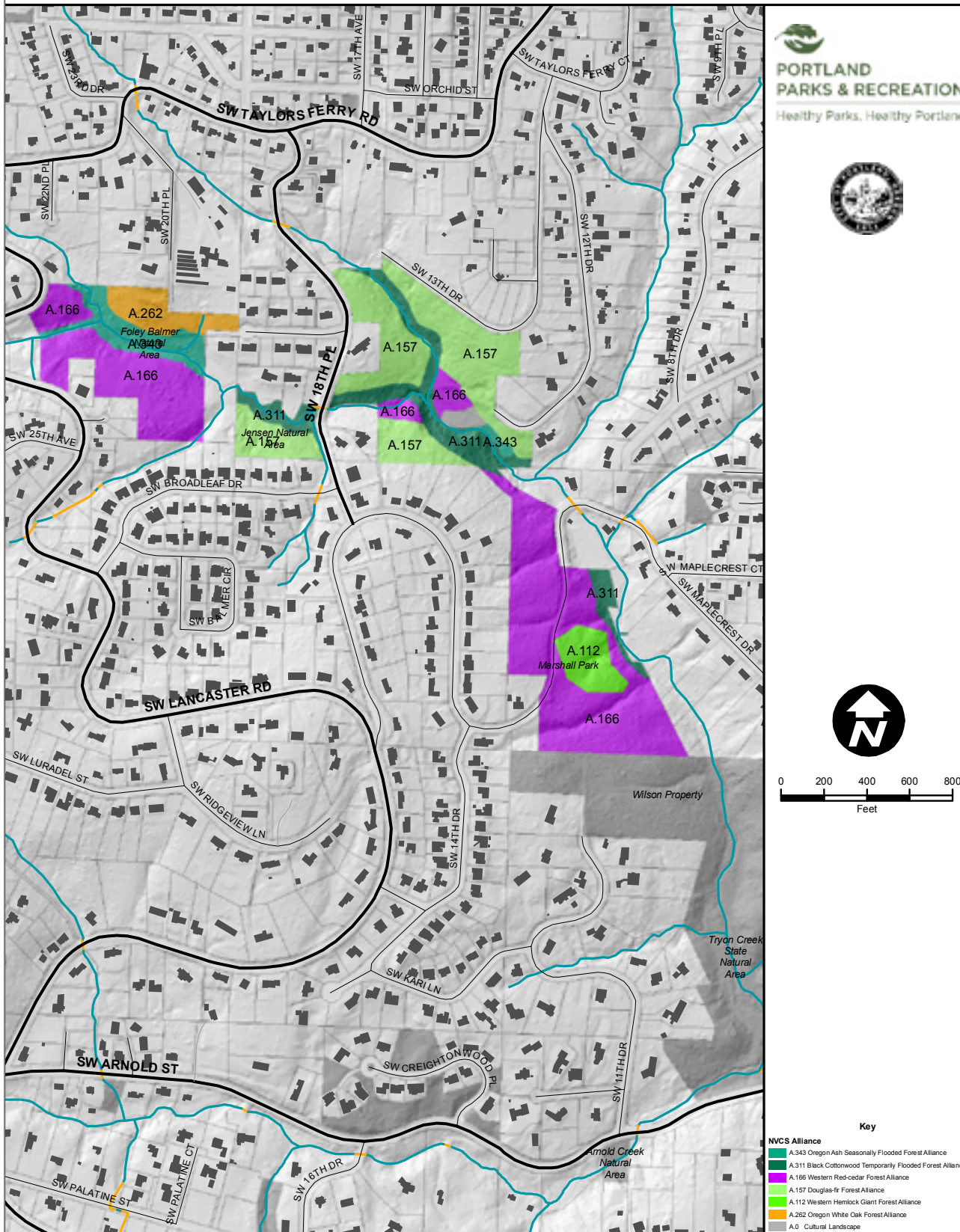


## Appendices

<b>Oregon White Oak Woodland (OWOW)</b>	
<b>MAMMALS</b>	
Red tree vole ( <i>Arborimus=Phenacomys longicaudus</i> )	Western gray squirrel ( <i>Sciurus griseus</i> )
<b>BIRDS</b>	
Band-tailed Pigeon ( <i>Patagioenas fasciata</i> ) Black-throated Gray Warbler ( <i>Dendroica nigrescens</i> )	Bullock's Oriole ( <i>Icterus bullockii</i> ) Hutton's Vireo ( <i>Vireo huttoni</i> ) White-breasted Nuthatch ( <i>Sitta carolinensis</i> )
<b>Oregon Ash Seasonally Flooded Forest (OASFF) and Black Cottonwood Temporarily Flooded Forest Alliance (BCTFF)</b>	
<b>MAMMALS</b>	
American Beaver ( <i>Castor canadensis</i> ) Northern River Otter ( <i>Lontra canadensis</i> )	White-footed Vole ( <i>Arborimus=Phenacomys albipes</i> ) Yuma Myotis ( <i>Myotis yumanensis</i> )
<b>BIRDS</b>	
Bald Eagle ( <i>Haliaeetus leucocephalus</i> ) Band-tailed Pigeon ( <i>Patagioenas fasciata</i> ) Black-throated Gray Warbler ( <i>Dendroica nigrescens</i> ) Bullock's Oriole ( <i>Icterus bullockii</i> ) Common Yellowthroat ( <i>Geothlypis trichas</i> ) Downy Woodpecker ( <i>Picoides pubescens</i> ) Great Blue Heron ( <i>Ardea herodias</i> )	Green Heron ( <i>Butorides virescens</i> ) Hooded Merganser ( <i>Lophodytes cucullatus</i> ) Red-eyed Vireo ( <i>Vireo olivaceus</i> ) Willow Flycatcher ( <i>Empidonax traillii</i> ) Wilson's Warbler ( <i>Wilsonia pusilla</i> ) Wood Duck ( <i>Aix sponsa</i> ) Yellow-breasted Chat ( <i>Icteria virens</i> ) Yellow Warbler ( <i>Dendroica petechia</i> )
<b>AMPHIBIANS &amp; REPTILES</b>	
Northern Red-legged Frog ( <i>Rana aurora aurora</i> )	
<b>Western Hemlock Giant Forest (WHGF), Western Red Cedar Forest (WRCF) and Douglas Fir Forest (DFF)</b>	
<b>MAMMALS</b>	
Long-legged Myotis ( <i>Myotis volans</i> ) Red tree vole ( <i>Arborimus=Phenacomys longicaudus</i> )	Silver-haired Bat ( <i>Lasionycteris noctivagans</i> ) White-footed Vole ( <i>Arborimus=Phenacomys albipes</i> )
<b>BIRDS</b>	
Band-tailed Pigeon ( <i>Patagioenas fasciata</i> ) Black-throated Gray Warbler ( <i>Dendroica nigrescens</i> ) Hermit Warbler ( <i>Dendroica occidentalis</i> )	Hooded Merganser ( <i>Lophodytes cucullatus</i> ) Olive-sided Flycatcher ( <i>Contopus cooperi</i> ) Pacific-slope Flycatcher ( <i>Empidonax difficilis</i> ) Varied Thrush ( <i>Ixoreus naevius</i> )
<b>AMPHIBIANS &amp; REPTILES</b>	
Northern Red-legged Frog ( <i>Rana aurora aurora</i> )	



## Desired Future Conditions for Marshall Park Natural Areas



## APPENDIX E – VEGETATION SUMMARIES





## PORTLAND PARKS & RECREATION

Healthy Parks. Healthy Portland

### Vegetation Unit Summaries for **Marshall Park (MALL)**

Report date: 10/26/2004      '\*' = non-native invasive species  
Visit data as of: 10/26/2004

#### Unit MALL\*001

**Size:** 3.61 Acres  
**NVCS Subclass:** Evergreen Forest  
**% Tree canopy:** 75%  
**Slope:** Extremely Steep (over 30%)  
**Aspect:** Northeast

**Visit date:** 6/12/2003

**Wetland indicators:** Streams, Hydrophilic Vegetation. (Surface water was present)  
**Dominant Trees:** western red cedar (*Thuja plicata*), Douglas fir (*Pseudotsuga menziesii*). **Trees > 10% cover:** western hemlock (*Tsuga heterophylla*), bigleaf maple (*Acer macrophyllum*).  
**Dominant Shrubs:** English ivy (*Hedera helix*\* > 50% cover).  
**Dominant Forbs:** sword fern (*Polystichum munitum*).  
**Additional Invasives:** common filbert (*Corylus avellana*\*), English holly (*Ilex aquafolium*\*), English laurel (*Prunus laurocerasus*\*), sweet pie cherry (*Prunus avium*\*), Norway maple (*Acer platanoides*\*), Himalayan blackberry (*Rubus discolor*\*).  
**Ecological Health:** Poor.  
**Primary Management concerns:** heavy level of invasive species, Soil Compaction, Stream Bank Erosion.

#### Unit MALL\*002

**Size:** 4.29 Acres  
**NVCS Subclass:** Mixed Evergreen - Deciduous Forest  
**% Tree canopy:** 80%  
**Slope:** Steep (20 to 30%)  
**Aspect:** Southwest

**Visit date:** 6/12/2003

**Wetland indicators:** Hydrophilic Vegetation.  
**Dominant Trees:** Douglas fir (*Pseudotsuga menziesii*), grand fir (*Abies grandis*), bigleaf maple (*Acer macrophyllum*). **Trees > 10% cover:** western red cedar (*Thuja plicata*), western hemlock (*Tsuga heterophylla*).  
**Dominant Shrubs:** Indian-plum (*Oemleria cerasiformis*), English ivy (*Hedera helix*\* > 50% cover).  
**Additional Invasives:** common filbert (*Corylus avellana*\*), English laurel (*Prunus laurocerasus*\*), sweet pie cherry (*Prunus avium*\*), English holly (*Ilex aquafolium*\*).  
**Ecological Health:** Poor.  
**Primary Management concerns:** heavy level of invasive species, Domestic Animals.

#### Unit MALL\*004

**Size:** 2.67 Acres  
**NVCS Subclass:** Deciduous Woodland  
**% Tree canopy:** 55%  
**Slope:** Flat (0 to 5%)  
**Aspect:** East

**Visit date:** 6/12/2003

**Wetland indicators:** Streams, Hydrophilic Vegetation. (Surface water was present)  
**Dominant Trees:** bigleaf maple (*Acer macrophyllum*). **Trees > 10% cover:** horsechestnut (*Aesculus hippocastanum*\*).  
**Dominant Shrubs:** Indian-plum (*Oemleria cerasiformis*).





## PORTLAND PARKS & RECREATION

Healthy Parks, Healthy Portland

### Vegetation Unit Summaries for **Foley-Balmer Natural Area (FB)**

Report date: 10/26/2004

'\*' = non-native invasive species

Visit data as of: 10/26/2004

#### **Unit FB\*001**

**Size:** 1 Acres

**NVCS Subclass:** Perennial Graminoid Vegetation

**% Tree canopy:** 10%

**Slope:** Gentle (10 to 20%)

**Aspect:** South

**Visit date:** 6/6/2003

**Wetland indicators:** Streams, Hydrophilic Vegetation. (Surface water was present)

**Dominant Grasses:** velvet grass (*Holcus lanatus*).

**Dominant Forbs:** stinging nettle (*Urtica dioica*).

**Additional Invasives:** Himalayan blackberry (*Rubus discolor\**), morning glory (*Convolvulus arvensis\**).

**Ecological Health:** Fair.

**Primary Management concerns:** heavy level of invasive species.

#### **Unit FB\*002**

**Size:** 0.76 Acres

**NVCS Subclass:** Mixed Evergreen - Deciduous Woodland

**% Tree canopy:** 50%

**Slope:** Steep (20 to 30%)

**Aspect:** South

**Visit date:** 6/9/2003

**Dominant Trees:** western red cedar (*Thuja plicata*), bigleaf maple (*Acer macrophyllum*).

**Dominant Shrubs:** Himalayan blackberry (*Rubus discolor\**).

**Additional Invasives:** European hawthorn (*Crataegus monogyna\**), English ivy (*Hedera helix\**), clematis (*Clematis vitalba\**).

**Ecological Health:** Poor.

**Primary Management concerns:** heavy level of invasive species.

#### **Unit FB\*003**

**Size:** 1.28 Acres

**NVCS Subclass:** Deciduous Forest

**% Tree canopy:** 65%

**Slope:** Steep (20 to 30%)

**Aspect:** South

**Visit date:** 6/6/2003

**Wetland indicators:** Streams, Hydrophilic Vegetation. (Surface water was present)

**Dominant Trees:** bigleaf maple (*Acer macrophyllum* > 50% cover), western red cedar (*Thuja plicata*).

**Dominant Shrubs:** English ivy (*Hedera helix\** > 50% cover), clematis (*Clematis vitalba\**), Indian-plum (*Oemleria cerasiformis*).

**Additional Invasives:** English laurel (*Prunus laurocerasus\**), English holly (*Ilex aquafolium\**), Norway maple (*Acer platanoides\**), European hawthorn (*Crataegus monogyna\**), common filbert (*Corylus avellana\**).

**Ecological Health:** Fair.

**Primary Management concerns:** moderate level of invasive species.



## PORTLAND PARKS & RECREATION

Healthy Parks. Healthy Portland

### Vegetation Unit Summaries for **Jensen Natural Area (JEN)**

Report date: 10/26/2004

'\*' = non-native invasive species

Visit data as of: 10/26/2004

#### **Unit JEN\*001**

**Size:** 1.09 Acres

**NVCS Subclass:** Deciduous Woodland

**% Tree canopy:** 60%

**Slope:** Extremely Steep (over 30%)

**Aspect:** North

**Visit date:** 6/17/2003

**Wetland indicators:** Streams, Hydrophilic Vegetation. (Surface water was present)

**Dominant Trees:** bigleaf maple (*Acer macrophyllum*), red alder (*Alnus rubra*). **Trees > 10% cover:** Oregon ash (*Fraxinus latifolia*).

**Dominant Shrubs:** Indian-plum (*Oemleria cerasiformis* > 50% cover).

**Additional Invasives:** common filbert (*Corylus avellana*\*), morning glory (*Convolvulus arvensis*\*), Japanese knotweed (*Polygonum cuspidatum*\*), English ivy (*Hedera helix*\*), European hawthorn (*Crataegus monogyna*\*), English holly (*Ilex aquafolium*\*).

**Ecological Health:** Poor.

**Primary Management concerns:** moderate level of invasive species, Yard Debris.

#### **Unit JEN\*002**

**Size:** 1.15 Acres

**NVCS Subclass:** Mixed Evergreen - Deciduous Forest

**% Tree canopy:** 80%

**Slope:** Extremely Steep (over 30%)

**Aspect:** North

**Visit date:** 6/17/2003

**Wetland indicators:** Streams, Hydrophilic Vegetation. (Surface water was present)

**Dominant Trees:** bigleaf maple (*Acer macrophyllum*), Douglas fir (*Pseudotsuga menziesii*). **Trees > 10% cover:** western red cedar (*Thuja plicata*).

**Dominant Shrubs:** vine maple (*Acer circinatum*), Indian-plum (*Oemleria cerasiformis*), Oregon grape (*Berberis nervosa*).

**Dominant Forbs:** sword fern (*Polystichum munitum*).

**Additional Invasives:** morning glory (*Convolvulus arvensis*\*), English laurel (*Prunus laurocerasus*\*), European hawthorn (*Crataegus monogyna*\*), English holly (*Ilex aquafolium*\*), English ivy (*Hedera helix*\*), clematis (*Clematis vitalba*\*).

**Ecological Health:** Fair.

**Primary Management concerns:** moderate level of invasive species.



## **APPENDIX F – WILDLIFE ASSESSMENT & BIRD LIST**

### **Marshall Park (one general unit)**

#### **Water**

1. Seasonality and Quantity: Perennial stream (score 7 of 8) that provides permanent water source for wildlife, but lacks wetlands or ephemeral streams that are needed by amphibians.
2. Channel morphology, complexity, and alteration: Moderate (score 3 of 6) amount of bank erosion and sedimentation within the stream bed. However, there is large wood in the stream in limited reaches. The implication is that aquatic invertebrate community has been simplified, resulting in fewer food resources for the in-stream and terrestrial vertebrates. Social trails have created bank erosion and reduced cover adjacent to the streams. Actions: increase complexity of the stream through placement of large woody debris. Close social trail and improve existing trails along the stream.
3. Proximity to cover: Vegetation along the stream corridor is moderate (score 5 of 8). Trails adjacent to the stream have reduced the vegetation density. The park is mainly forested allowing cover for wildlife.
4. Diversity: Perennial streams and limited wetlands (scored 8 of 8) are within the park providing more than one type of water available for wildlife use.

#### **Food**

1. Variety: Mature native overstory and a mixture of native and non-native understory that provide a variety of food sources (score 7 of 8) for a variety of wildlife.
2. Quantity: Large quantity of food is available (score 7 of 8) from native plants, including seed, berries, and nuts. Ivy and blackberry patches reduce the score. Action: continue removal of invasive species.
3. Seasonality: Year around food is available for wildlife (score 7 of 8). The food sources come from a diversity of native plants.

#### **Cover**

1. Structural Diversity: Multi-layer, vertical stratification of vegetation (score 7 of 8) found throughout the park. There are a variety of age classes allowing for cover for a range of wildlife.
2. Variety and seasonality: Moderate to high (score 6 of 8) reflecting a mix and seasonality of plants within each vegetative layer. This is important for cover, feeding, and reproduction.
3. Nesting and denning sites: There are a variety of nesting and denning sites (score 3 of 4) such as snags, cavities, stumps, large downed wood, vegetation cover, etc.

#### **Human Disturbance**

1. Habitat modification, structures, etc.: Social trails fragment habitat throughout the park disturbing wildlife and allowing human access to all habitats in the park. Little to no interior forest is available (score 5 of 8 being low). Also, residents on the edge of the park create light and noise that potentially disturb wildlife. Action: close social trails that fragment interior forest habitats.
2. Direct human disturbance: There is moderate disturbance to wildlife activities from (score 3 of 6 being low) from trail walkers, dogs, and general road and neighborhood sounds. Action: education about keeping dogs on leash and people on designated trails.

#### **Important Habitat Features**

Generally the habitat is dominated by native herbs, shrubs, and trees. The shrub layer is approximately 25%, the herb layer 10% non-native with English ivy being the dominate, and the canopy layer only 3% non-native. There is a moderate amount of down wood (score 4 of 8) that provides habitat diversity and other elements for wildlife.

#### **Overall**

Marshall Park provides a diverse habitat for wildlife. The perennial stream provides year-round water. The multi-layered, dense forest composed mainly of native vegetation contains most of the habitat elements, food sources, and cover for wildlife. Social trails and human disturbance have adversely impacted the habitat values. Overall score of 82.

Site	Species	Totaldetections	# stations	Avg per Site/Sta/Visit
Marshall Park	American Crow	9	5	0.6
Marshall Park	American Robin	1	5	0.07
Marshall Park	Bewick's Wren	1	5	0.07
Marshall Park	Black-Capped Chickadee	13	5	0.87
Marshall Park	Brown Creeper	6	5	0.4
Marshall Park	Cedar Waxwing	3	5	0.2
Marshall Park	Chestnut-Backed Chickadee	5	5	0.33
Marshall Park	Park-eyed Junco	1	5	0.07
Marshall Park	Golden-Crowned Kinglet	2	5	0.13
Marshall Park	Hammond's Flycatcher	1	5	0.07
Marshall Park	Mallard	1	5	0.07
Marshall Park	Pacific-slope Flycatcher	3	5	0.2
Marshall Park	SONG SPARROW	26	5	1.73
Marshall Park	SPOTTED TOWHEE	5	5	0.33
Marshall Park	Steller's Jay	3	5	0.2
Marshall Park	Swainson's Thrush	3	5	0.2
Marshall Park	Warbling Vireo	1	5	0.07
Marshall Park	Western Tanager	1	5	0.07
Marshall Park	Willow Flycatcher	1	5	0.07
Marshall Park	Winter Wren	14	5	0.93
Marshall Park	Yellow-rumped Warbler	1	5	0.07
Tryon Cr State Park South	American Crow	5	5	0.33
Tryon Cr State Park South	American Robin	29	5	1.93
Tryon Cr State Park South	Anna's Hummingbird	2	5	0.13
Tryon Cr State Park South	Bewick's Wren	5	5	0.33
Tryon Cr State Park South	Black-Capped Chickadee	6	5	0.4
Tryon Cr State Park South	Brown Creeper	4	5	0.27
Tryon Cr State Park South	Downy Woodpecker	1	5	0.07
Tryon Cr State Park South	Hutton's Vireo	3	5	0.2
Tryon Cr State Park South	Pacific-slope Flycatcher	8	5	0.53
Tryon Cr State Park South	Rufous Hummingbird	2	5	0.13
Tryon Cr State Park South	SONG SPARROW	26	5	1.73
Tryon Cr State Park South	SPOTTED TOWHEE	14	5	0.93
Tryon Cr State Park South	Steller's Jay	3	5	0.2
Tryon Cr State Park South	Swainson's Thrush	1	5	0.07
Tryon Cr State Park South	Warbling Vireo	3	5	0.2
Tryon Cr State Park South	Winter Wren	11	5	0.73
Tryon Cr State Park North	American Robin	23	5	1.53

## Appendices

Site	Species	Totaldetections	# stations	Avg per Site/Sta/Visit
Tryon Cr State Park north	Anna's Hummingbird	3	5	0.2
Tryon Cr State Park north	Bewick's Wren	2	5	0.13
Tryon Cr State Park north	Black-Capped Chickadee	9	5	0.6
Tryon Cr State Park north	Black-headed Grosbeak	2	5	0.13
Tryon Cr State Park north	Brown Creeper	6	5	0.4
Tryon Cr State Park north	Cassin's Vireo	1	5	0.07
Tryon Cr State Park north	Cedar Waxwing	8	5	0.53
Tryon Cr State Park north	Chestnut-Backed Chickadee	1	5	0.07
Tryon Cr State Park north	Downy Woodpecker	1	5	0.07
Tryon Cr State Park north	Golden-Crowned Kinglet	1	5	0.07
Tryon Cr State Park north	Hammond's Flycatcher	1	5	0.07
Tryon Cr State Park north	Mallard	7	5	0.47
Tryon Cr State Park north	Northern Flicker	1	5	0.07
Tryon Cr State Park north	Pacific-Slope Flycatcher	8	5	0.53
Tryon Cr State Park north	Rufous Hummingbird	1	5	0.07
Tryon Cr State Park north	Song Sparrow	26	5	1.73
Tryon Cr State Park north	Spotted Towhee	6	5	0.4
Tryon Cr State Park north	Swainson's Thrush	4	5	0.27
Tryon Cr State Park north	Warbling Vireo	2	5	0.13
Tryon Cr State Park north	Wilson's Warbler	10	5	0.67
Tryon Cr State Park north	Winter Wren	10	5	0.67
Tryon Cr State Park north	Yellow Warbler	1	5	0.07

Lori Henning, Metro 1999 bird surveys

### Marshall Park Bird Checklist

- |  |  |
|--|--|
| <input type="checkbox"/> Great Blue Heron          | <input type="checkbox"/> Hermit Thrush         |
| <input type="checkbox"/> Green Heron               | <input type="checkbox"/> American Robin        |
| <input type="checkbox"/> Wood Duck                 | <input type="checkbox"/> Varied Thrush         |
| <input type="checkbox"/> Mallard                   | <input type="checkbox"/> European Starling     |
| <input type="checkbox"/> Sharp-shinned Hawk        | <input type="checkbox"/> Cedar Waxwing         |
| <input type="checkbox"/> Cooper's Hawk             | <input type="checkbox"/> Yellow Warbler        |
| <input type="checkbox"/> Red-tailed Hawk           | <input type="checkbox"/> Yellow-rumped Warbler |
| <input type="checkbox"/> Band-tailed Pigeon        | <input type="checkbox"/> Townsend's Warbler    |
| <input type="checkbox"/> Mourning Dove             | <input type="checkbox"/> Yellowthroat          |
| <input type="checkbox"/> Great Horned Owl          | <input type="checkbox"/> Wilson's Warbler      |
| <input type="checkbox"/> Western Screech Owl       | <input type="checkbox"/> Western Tanager       |
| <input type="checkbox"/> Vaux's Swift              | <input type="checkbox"/> Spotted Towhee        |
| <input type="checkbox"/> Anna's Hummingbird        | <input type="checkbox"/> Song Sparrow          |
| <input type="checkbox"/> Rufous Hummingbird        | <input type="checkbox"/> White-crowned Sparrow |
| <input type="checkbox"/> Red-breasted Sapsucker    | <input type="checkbox"/> Dark-eyed Junco       |
| <input type="checkbox"/> Downy Woodpecker          | <input type="checkbox"/> Black-headed Grosbeak |
| <input type="checkbox"/> Northern Flicker          | <input type="checkbox"/> Brewer's Blackbird    |
| <input type="checkbox"/> Pileated Woodpecker       | <input type="checkbox"/> Brown-headed Cowbird  |
| <input type="checkbox"/> Western Wood Pewee        | <input type="checkbox"/> Bullock's Oriole      |
| <input type="checkbox"/> Steller's Jay             | <input type="checkbox"/> House Finch           |
| <input type="checkbox"/> Scrub Jay                 | <input type="checkbox"/> Pine Siskin           |
| <input type="checkbox"/> American Crow             | <input type="checkbox"/> American Goldfinch    |
| <input type="checkbox"/> Tree Swallow              | <input type="checkbox"/> Evening Grosbeak      |
| <input type="checkbox"/> Violet-green Swallow      |  |
| <input type="checkbox"/> Barn Swallow              |  |
| <input type="checkbox"/> Black-capped Chickadee    |  |
| <input type="checkbox"/> Chestnut-backed Chickadee |  |
| <input type="checkbox"/> Red-breasted Nuthatch     |  |
| <input type="checkbox"/> Brown Creeper             |  |
| <input type="checkbox"/> Bewick's Wren             |  |
| <input type="checkbox"/> Winter Wren               |  |
| <input type="checkbox"/> Golden-crowned Kinglet    |  |
| <input type="checkbox"/> Ruby-crowned Kinglet      |  |

## Appendices

### APPENDIX G – EXAMPLE STEWARDSHIP AGREEMENT

#### STEWARDSHIP AGREEMENT FOR (NAME OF PARK OR PROPERTY)

##### **Purpose**

The purpose of this Stewardship Agreement (Agreement) is to define the roles and responsibilities of the (name of community group) and Portland Parks & Recreation (the Parties) pertaining to the maintenance and native habitat restoration of (name of park). Stewardship of (name of park) is hereby a partnership between the Parties and it is anticipated that this partnership will continue into the future.

##### **Term of the Agreement**

This Agreement will take effect on the day it is signed by both Parties. The Agreement is subject to an annual review by the parties and may be revised by mutual agreement of the Parties. Either party may terminate the agreement at any time.

##### **Plan for (name of park)**

The Desired Future Condition Statement of the *PP&R Natural Resource Ecosystem Management Plan* for (name of park) dated (date) will be used as the principal guide for the Parties in proposing, approving, and implementing all maintenance and native habitat restoration activities for the park. Projects should conform to the goals and policies outlined in the Plan. All maintenance and native habitat restoration projects shall follow the management practices, and shall meet the design standards or policies in the Plan or those of Portland Parks & Recreation. Projects inconsistent with these standards or policies shall be submitted to Portland Parks & Recreation for approval prior to implementation.

As excerpted from the Plan, the primary goals of the Parties for the improvement and restoration of (name of park) are to: (following items are examples)

- Restore and rebuild the trail system;
- Solve drainage, erosion, and landside problems and restore the creek;
- Clean up and restore the meadow;
- Enhance existing gateway entrances;
- Develop and implement a park security program.

The (name of community group) will maintain a record of work projects that will be reviewed annually by the Parties. Members of the (name of community group) must be signed up as PP&R volunteers before doing any on-the-ground work. Portland Parks & Recreation will maintain all documentation required by the City of Portland in connection with the Parties activities.

##### **Capital Improvements to (name of park)**

Capital improvements to (name of park) are not covered by this Agreement. Improvements are subject to approval by Portland Parks & Recreation outside of this Agreement.

##### **Funding Responsibilities**

Portland Parks & Recreation will assume primary financial responsibility subject to availability of funds from the City, for infrastructure maintenance projects, including but not limited to the following infrastructure elements: landscape (natural and planted) water system, roads, trails, bathrooms, sewers, and electrical. Portland Parks & Recreation will also be responsible for ensuring that approved maintenance and restoration projects comply with all applicable planning and codes and environmental regulations. The (name of community group) may assume primary funding for projects as agreed upon with Portland Parks & Recreation.

##### **Resource & Communication Contacts**

Name _____	Number _____	Primary responsibility/resource
Name _____	Number _____	Secondary responsibility/resource

\_\_\_\_\_  
(name of community group representative)

\_\_\_\_\_  
(office) \_\_\_\_\_

\_\_\_\_\_  
(name of community group)

\_\_\_\_\_  
Dated: (date)

\_\_\_\_\_  
(name of PP&R representative)

\_\_\_\_\_  
(title) \_\_\_\_\_

\_\_\_\_\_  
Portland Parks & Recreation

\_\_\_\_\_  
Dated: (date)



# APPENDIX H – MEDIA COVERAGE



## Marshall Park

Next Mtg: Thursday, June 12, 6 pm, Capitol Hill Elementary School Library, 8401 SW 17th  
Chair: Mike Charles, 503 244 6099, marshallparkchair@swni.org, marshallpark.event.org

<p><b>Marshall Park Habitat Management &amp; Trail Plan</b> Portland Parks &amp; Recreation (PP&amp;R) is embarking on the planning process to develop a habitat management and trail plan for Marshall Park. PP&amp;R is planning a series of walks through the park, as well as attending neighborhood association meetings during the summer, to gather public input throughout the planning process.</p> <p><b>JUNE</b> June 9 - Tryon Creek Watershed Council meeting at Tryon Creek State Park Nature</p>	<p>Center, 11321 SW Tervallier Blvd, 6-8 pm. PP&amp;R staff will be on the agenda to talk about the planning process, gather information on the experience they want in the park, and discuss issues and challenges.</p> <p>June 12 - Marshall Park Neighborhood Association meeting at Capitol Hill Elementary School Library, 8401 SW 17 Ave, 6 pm. PP&amp;R staff will be on the agenda to talk about the planning process, gather information on the experience they want in the park, and discuss issues and challenges.</p>	<p> June 24 - Lunch walk in Marshall Park, noon - 2 pm. Meet at the play area off of SW 12 Ave. Walk the trails and discuss the habitat management of the site, the location of the play area, and a potential trail layout with staff from Portland Parks and Recreation.</p> <p>June 26 - Maricopa Area and Marshall Park walks. Walk through these two sites with staff from Portland Parks and Recreation and members of the SWNI Trails Committee.</p>	<p>Meet at the Barber Transit Center, 9750 SW Barber Blvd, to carpool to Maricopa at 5:30 pm, or meet at Maricopa at 5:45 pm. We should be at Marshall Park around 6 pm. At Marshall Park you will have the opportunity to discuss the desired park experience, trails and habitat management with Portland Parks &amp; Recreation staff. Please contact Emily Roth, Natural Resource Planner, at emilyruth@prra.portland.oregon.gov if you plan on joining the group.</p> <p>TRA Community meeting to review the Marshall Bridge alternatives and discuss the Marshall Park habitat management and trail plan. Check for more information on the project web page at www.portlandparks.org from the Projects tab, select Natural Area Projects on the drop-down menu.</p> <p>For more information, contact PP&amp;R project manager Emily Roth at emilyruth@prra.portland.oregon.gov or 503-823-9225.</p>
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## Marshall Park habitat management and trail plan

Portland Parks & Recreation is embarking on the planning process to develop a habitat management and trail plan for Marshall Park. We are hosting a series of walks through the park, as well as attending neighborhood association meetings during the summer, to gather community input throughout the planning process. Throughout the fall, PP&R staff will be drafting the plan and have it posted to the webpage by the beginning of November. You can view maps, handouts, and other information on the project web page at [www.portlandparks.org](http://www.portlandparks.org); click on Projects, select Natural Area Projects, then select Marshall Park.

The following activities are planned for July and early August:

**July 8 - Markham Neighborhood Association meeting, 7 pm,** (Multnomah Center, 7688 SW Capitol Hwy). PP&R staff will be on the agenda to talk about the planning process, gather information on the experience they want in the park, and discuss issues and challenges.

**July 10 - Marshall Park Neighborhood Association meeting, 6 pm at Marshall Park.** PP&R staff will review the bridge alternatives and discuss the Marshall Park habitat management and trail plan. The alternative bridge locations will be "flagged" so that neighbors can view the proposed creek crossings.

**July 22 - Join PP&R staff for a walk in Marshall Park, 9 - 11 am.** Meet by the picnic tables. Walk the trails and discuss the habitat management of the site, the location of the play area, and a potential trail layout.

**August 4 - Join PP&R staff for an evening walk in Marshall Park, starting at 6:30 pm.** Meet by the picnic tables. Walk the trails and discuss the habitat management of the site, the location of the play area, and a potential trail layout.

For more information, contact project manager Emily Roth at [emily.roth@ci.portland.or.us](mailto:emily.roth@ci.portland.or.us) or 503-823-9225.



## Marshall Park habitat management and trail plan

Portland Parks & Recreation is developing a habitat management and trail plan for Marshall Park, Foley Balmer, Jensen and Arnold Creek natural areas. PP&R staff has been meeting with the neighborhood associations to gather input on the plan. On July 10 there was a well attended meeting at the park to look at the bridge replacement alternatives and continue discussion on the future habitat and trail management at the park.

PP&R staff has developed the following guiding principles for the plan:

- Create a sustainable habitat management plan within the Tryon Creek Watershed.
- Protect sensitive natural resources including streams, wetlands, amphibians, wildlife and fish.
- Plan for a safe trail system, including connections for both people and wildlife between Tryon Creek State Natural Area, other natural areas and Marshall Park.
- Site a structured play and picnic area.
- Provide environmental education and interpretation opportunities.

We would like your input on the principles and suggestions for actions. You can give us your input in many ways. We are planning a series of walks through the park, as well as attending neighborhood association meetings during the summer. We have a questionnaire on the web page at [www.portlandparks.org](http://www.portlandparks.org), click on Projects, click on Natural Area Projects and then scroll to Marshall Park. PP&R would like to hear from you throughout the planning process.

The following activities are planned for August.

**August 4** – Join PP&R staff for an evening walk in Marshall Park, starting at 6:30, meet by the picnic tables. Walk the trails and discuss the habitat management of the site, the location of the play area, and a potential trail layout with staff from Portland Parks & Recreation.

**August 16** – Drop by the Portland Bureau of Environmental Services booth at Multnomah Days to view maps and submit comments.

For more information, contact project manager Emily Roth at [emily.roth@ci.portland.or.us](mailto:emily.roth@ci.portland.or.us) or 503-823-9225.











## What neighbors told us

### Marshall Park Habitat Management and Trail Plan

We're making good progress on the habitat management and trail plan for Marshall Park, Foley Palmer, Jensen, and Arnold Creek natural areas. During August, PP&R staff led a series of walks in the park, posted a survey on the project webpage, and talked to neighbors to gather input on the plan. This is what we've heard so far:

-  Keep the trail along the creek in the north portion of the park. The trail is flat, easy to walk, and provides views of the creek.
-  Rebuild trails to keep feet dry in the winter and spring.
-  Keep a structured play and picnic area in the park that allows guided access to the creek.
-  Explore the possibility of adding a restroom near the play area.
-  Protect sensitive natural resources including streams, wetlands, amphibians, wildlife, and fish.
-  Ensure safe trail connections to Tryon Creek State Natural Area, other natural areas, and Marshall Park.
-  Provide both historical and environmental education and interpretation opportunities.
-  Construct two kiosks.



Plan for resident fish populations and the return of Coho to the Marshall Park Cascades.

PP&R staff will be attending neighborhood association meetings during the fall to gather more input; the draft management plan is scheduled for public review in December and January.

Alternatives for the Marshall Park bridge replacement were presented at a community meeting in July, as well as on the project web page. The majority of people preferred a timber bridge to be relocated approximately 25 feet upstream from the current bridge location. PP&R will contract for a timber bridge with a deck that would be the least slippery. The bridge will be built at the preferred location as long as a slope of 5% or less can be achieved. If this slope requirement is not possible, the bridge will be rebuilt in the present location. Engineering will begin shortly and a determination on slope and location will be the first task. Updates will be posted online: go to [www.portland-parks.org](http://www.portland-parks.org) and click on Projects/Natural Area Projects/Marshall Park.

For more information, contact project manager Emily Roth at [emily.roth@ci.portland.or.us](mailto:emily.roth@ci.portland.or.us) or 503-823-9225.



## Marshall Park

Next Mtg: Thursday, October 9, 6 pm

Capitol Hill Elementary School library, 8401 SW 17th

Chair Mike Charles, 503-244-6099, [marshallparkchair@swnl.org](mailto:marshallparkchair@swnl.org).

org, [marshallpark.swnl.org](http://marshallpark.swnl.org)



### Parks Report

\* Portland Parks' Emily Roth will attend the next MPNA meeting on

9th Oct. to present the selected bridge design & location, and also the first draft of the park plan.

\* MPNA will brainstorm some ideas for kiosk design, so we can discuss this with the Parks Dept as part of the park Plan.

**Treasurer report:** We need to collect details of MPNA expenses, donated items, and volunteer hours for NNO. Neighbors should send any applicable information to [marshallparkna@yahoo.com](mailto:marshallparkna@yahoo.com).

**Land Use:** A neighbor cut down some trees and was found guilty of an environmental conservation zone violation. The neighbor will be required to replant trees.

**Crime:** Neighbors are reminded to call 503-823-SAFE if they want to report obscured views and obscured signs that make driving more hazardous. Also if you park your car all day near a bus stop, please make sure everything is stowed away out of sight in the trunk.

**National Night Out:** The NNO picnic was a rousing success. Over 70 people attended and had a great time. A few suggestions to remember next year - start cooking earlier; maybe need a second grill; keep ice cream colder; collect more prizes for raffle.

**MPNA volunteers:** Names are being collected for 2008-2009 positions. If anyone is interested in becoming more involved, please contact the current chair, Mike Charles, at [marshallparkna@yahoo.com](mailto:marshallparkna@yahoo.com).





## Marshall Park



Next Mtg: Thursday, November 13, 6 pm  
Capitol Hill Elementary School library, 8401 SW 17th  
Chair Mike Charles, 503-244-6099, [marshallparkchair@swnt.org](mailto:marshallparkchair@swnt.org)  
[marshallpark.swnt.org](http://marshallpark.swnt.org)

1. Police Officer Caspar, our neighborhood liaison officer came to our meeting. He gave a review of recent crimes in the area, and offered some crime and safety tips. There is a new "stinger" speed sign on Taylor's Ferry that has proved effective at slowing cars. Neighbors asked a few questions, and really enjoyed the opportunity to interact with our liaison officer.

2. Stefanie Adams, Crime Prevention Coordinator, gave a presentation on her role, and described the benefits of neighborhood involvement in crime prevention. Stefanie handed out a list of important phone numbers, which included

the Police non-emergency number 503-825-3333. She spoke about Neighborhood Watches, how they can be formed, and what they can do to make a neighborhood safer. Neighborhood Watches are typically a block but can be larger or smaller. Stefanie would be happy to help anyone interested in forming a Neighborhood Watch. Contact her at [Stefanie.Adams@ciportland.oreg](mailto:Stefanie.Adams@ciportland.oreg).

3. Marshall Park Neighborhood Association filled many of its posts for the 2008-2009 year. There are still opportunities for anyone interested in volunteering some time, such as Schools Rep, Trails Rep, and Transportation. Anyone inter-

ested in being more active with MPNA, please contact Mike at [marshallparkana@yahoo.com](mailto:marshallparkana@yahoo.com).

4. MPNA has been very fortunate to have received a small grant from SWNT the past two years. It has helped us with several outreach activities, and our National Night Out event. We reviewed the status of this year's grant. And discussed ideas and needs for future grant applications.

Next month ... Emily Roth from Portland Parks will come to our November meeting to present plans for the foot bridge replacement, and a first draft of the Marshall Park Master Plan. The meeting will be Nov. 13, 6 pm at Capitol Hill School.



## Marshall Park

Next Mtg: Thursday, December 11, 6 pm  
 Capitol Hill Elementary School library, 8401 SW 17th  
 Chair Mike Charles, 503-244-6099, marshallparkchair@swni.org, marshallpark.swni.org

At our November meeting we discussed:  
**1. MARSHALL PARK IMPROVEMENTS PLAN:** Emily Roth from Portland Parks gave us the highlights of the proposed plan.



This is the first draft; it is a 20-year plan; no specific funding yet (except for the bridge).

Hikers heading for Lyon Creek will be routed to 17th instead of the lower stream trail.

- A loop trail will be established on the south side of Maplecrest.

- Many trails will be improved; single boards crossing streams will be replaced.

- The access point at the bottom of Maplecrest may be closed.

- Signage and mini kiosks will be placed at access points.

- Playground equipment will be replaced and moved to higher ground.

- They want to preserve the popular stream trail (north section).

- Steps will be built on the steep trail up to 18th.

- The picnic benches will remain.

- Handicapped parking and access to the Cascades trail is being considered.

- Bathroom facilities will be

introduced (port-a-potty).

- Maybe a viewing platform near the stream.

**2. MARSHALL PARK CONDEMNED FOOTBRIDGE:**

Emily gave us an update on the condemned footbridge in Marshall Park. The decision has been made to build a wood structure in the middle position, just slightly upstream of the current bridge. There will be a minor slope to the bridge, and it will have an access ramp. The bridge is funded and the cost estimate is within the budget. Construction will begin this winter, with completion expected in spring 2009.

**3. CRIME REPORT:** Officer Caspar, our neighborhood liaison police officer, told us about an increase in burglaries in the area. They have typically occurred during the daytime when people are at work. Doors and windows have been broken to gain entry. Small items (cash, jewelry, checkbooks) seem to be the main target. Neighbors are reminded to make sure all doors and windows are securely locked at all times. TIP: Officer Caspar suggested putting lengths of PVC piping in the window groove to prevent windows from being slid open from the outside.



## Draft Marshall Park Habitat and Trail Plan ready for your review

*Gillian Reyes, Community Outreach, Portland Parks & Recreation*

The draft Marshall Park Habitat and Trail Plan (the plan) is posted on Portland Parks & Recreation website ([www.portlandparks.org](http://www.portlandparks.org)) for review and comment until March 23, 2009. Emily Roth, Natural Resource Planner for PP&R, will attend the Marshall Park Neighborhood Association meeting on Thursday, March 12, to review the draft plan and maps. The meeting is held at Capitol Hill Elementary School Library, 8401 SW 17 Ave, 6-8 pm.

The plan is designed to set the course for the habitat management, stewardship, and trail system for Marshall Park, and Foley Balmer and Jensen natural areas. The plan lays the foundation for habitat protection and enhancement, as well as recreational access and use, and will guide stewardship activities and sustainable trail construction. It is also a reference document providing a variety of background and environmental assessment information.

The plan's guiding principles are:

- Protect and enhance the natural area values of the parks so users continue to experience the benefits of enjoying nature.

- Protect and enhance terrestrial, avian, and salmon habitat along the creek and in the upland habitats.

- Provide a sustainable, contoured trail system to provide pedestrian access and visual access to the forest and streams, and safely connect to other natural areas and the regional trail system.

- Create a welcoming, safe play and picnic area that encourages the park's use for neighbors and the community.

- Provide signage that will enable people to locate the park more easily, as well as navigate within its boundaries and connect to other natural areas and trails.

- Provide educational opportunities for all ages on the ecology and history of the park and natural areas.

- Work cooperatively with neighbors and community stewards to manage the park and natural areas for the enjoyment and safety of all users.

If you would like to learn more about the plan, please attend the Marshall Park NA March 12 meeting. To review the draft plan and add your comments, please go to [www.portlandparks.org](http://www.portlandparks.org) and look for the link under What's New.

## APPENDIX I – GEOTECHNICAL REPORT

Site reconnaissance report provided by Geocon Northwest, April 2009.

### PURPOSE AND SCOPE

This letter report presents the results of a site reconnaissance of two locations within Marshall Park, where improvements or mitigation are being considered. The proposed improvements include realignment of a trail adjacent to a tributary stream of Tryon Creek in the northern portion of the park (near the entrance on SW 12th Drive) and improvement and/or stabilization of a hillside along the west side of the park where sloughing has occurred adjacent to an existing trail. Photographs of each location for proposed improvements are provided [at the end of the report].

### SITE DESCRIPTION

Marshall Park is located in southwest Portland, with its main entrance located at the end of SW 12th Drive. The park was formerly used as a hard rock quarry before being acquired by F.C. Marshall for a summer home. He later donated the property to the City of Portland for a park. The park is approximately 26 acres in size, and has walking trails throughout the area. Tryon Creek flows through the northern portion of the park, near the areas addressed within this letter.

### GEOLOGY

Based on a review of available published geological literature, the site is located in the southern portion of the Portland Basin. The Portland Basin is a northwest trending structural depression that is approximately 20 miles wide and 45 miles long, encompassing approximately 1,310 square miles. It is bounded on the north, east, and south by the Cascade Mountain Range, and along the west by the Tualatin Mountains. Elevations of the basin range from 10 to 20 feet above mean sea level (msl) in the low lands along the western margin, and extend up to an average maximum elevation of 1,200 feet msl with a peak elevation of 3,000 feet msl in the Cascade Mountain Range to the east.

The Portland Basin is reported to be located between northwest trending right lateral fault zones and associated en echelon, and is thought to have formed through extension and down warping that began during the Miocene Epoch (23.8 to 5.3 Mya). The fault zones are thought to be a result of regional mechanics responding to oblique subduction along the Cascadia subduction zone. While faulting is associated with the development of the basin, identified faults have either been determined to not be active or have been given a low probability of activity.

The Portland Basin is underlain by older Eocene (54.8 to 33.7 Million years ago (Mya)) and Miocene sedimentary and volcanic rocks which crop out along its west, north, and eastern margins. The basement of the Portland Basin is comprised of several major bedrock units, including the Frenchmen Springs Member of the Columbia River Basalt Group (CRBG) in the site vicinity. The CRBG collectively forms a massive deposit of multiple flows that extends from eastern Washington and Oregon west to the Cascade mountain range, and has been mapped in the basin extending from the southeast to the northwest margins. It erupted as tabular flows from fissures fed by dikes over an eleven million year period during the early to late Miocene Epoch, and has an inferred maximum thickness in the Portland Basin is between 700 and 1,000 feet. Two units of the Frenchmen Springs Member are shown in the vicinity of Marshall Park, including the Basalt of Ginko and Basalt of Sand Hollow. The Basalt of Ginko is noted to be blocky to columnar jointed, dark gray to black when fresh, and red-brown to gray when weathered. The Basalt of Sand Hollow is noted to be blocky to columnar jointed with occasional entablature to colonnade jointing, dark gray to black when fresh, and green-gray to black when weathered. Near-vertical basalt slopes were observed within previous quarry areas in the park. These slopes are stable, except where overlain by silt soils as discussed below.



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Soil in the park vicinity is mapped as the Portland Hills Silt. This unit formed during the Pleistocene epoch (1.8 to 0.1 Mya), and is noted to generally be a brown, clayey, sandy SILT, that is homogenous and without structure. In the area west of the Willamette River, this silt is predominantly noted to directly overlie the CRBG. A review of the Soil Survey for Multnomah County indicates the surface soil to consist of the Cascade Silt Loam with slopes ranging between 15 and 30%. This soil is noted to be dark brown, somewhat poorly drained, with slow permeability and moderate erosion hazard. This soil is also noted to typically form a shallow mantle over the bedrock in the site vicinity. Steep soil slopes, the result of erosion, weathering, and other natural processes, are susceptible to sloughing and creep movement. This sloughing can be exacerbated where silt soils overlie basalt rock due to a low strength residual clay layer that is commonly present between the basalt rock and silt soil. Numerous areas of soil sloughing due to the above factors were observed during our reconnaissance.

### SITE RECONNAISSANCE AND RECOMMENDATIONS

Geocon Northwest conducted a site visit with representatives of the City of Portland Department of Parks and Recreation to identify the areas of interest. A more detailed geologic reconnaissance was subsequently performed to evaluate the general soil and geologic characteristics of the area. Areas of concern within the park include the following:

*Location 1:* A hiking trail adjacent to a tributary stream of Tryon Creek in the northern portion of the park (near the entrance on SW 12th Drive).

*Location 2:* A hillside along the west side of the park where sloughing has occurred adjacent to an existing trail.

#### **Location 1**

This area currently consists of a generally flat trail between a small tributary to Tryon Creek and a moderately steep slope in the northern portion of the park (near the entrance on SW 12th Drive). Tryon Creek is noted to be a salmon-bearing stream up to the impassable culvert at SW Boones Ferry Road and is understood to have a sensitive ecosystem. Pedestrian and dog traffic through this area has been observed to leave the trail and cross into and over the stream tributary, resulting in stream bank erosion and sedimentation issues that impact Tryon Creek. The adjacent slope abuts approximately 45 feet of the trail, and has several trees, ferns, and bushes growing on it. We understand that the City is reviewing whether to keep the trail in its present location or relocate it upslope. Three conceptual ideas that were considered include relocating the tributary, moving the trail upslope or moving the trail towards the hillside to facilitate riparian restoration between the trail and stream.

Relocating the existing tributary to the west, away from the trail, would require disturbance of the tributary drainage and involve construction within a sensitive environment. A temporary culvert or diversion channel would likely be required to capture and redirect the tributary stream flow during construction. The length of tributary that would need to be relocated was estimated to be approximately 80 feet. The existing tributary has a width of approximately 7 to 10 feet and is approximately 12 to 30 inches deep. A relocated tributary would need to be at least 10 feet west of the current tributary alignment to allow access for construction equipment and grading of the new stream alignment. The tributary would need to be lined with rock rip rap to protect the banks from erosion during high flow events. It is estimated that relocation costs for the tributary as discussed above would be on the order of \$40,000 to \$50,000.

Moving the trail would consist of relocating the trail to the east and rerouting the trail alignment over the existing slope. The new trail alignment would have a length of approximately 100 to 125 feet and



should be at least 20 feet east of the existing trail. This distance is intended to place the new trail beyond the influence of the existing slope and its potential for long-term sloughing. An elevation change of approximately 10 to 15 feet occurs between the existing trail and the slope area east of the trail. This option would require the removal of numerous trees and would result in a trail with significant grade changes compared with the existing flat trail. Cut slopes and/or retaining walls would be required to construct a trail with elevation changes that are suitable for pedestrians. Cut slopes would need to be excavated at an inclination of 2:1 (horizontal to vertical), therefore, a 5-foot deep cut slope would require an additional 10-foot width of slope removal. Retaining walls could be used to reduce the area of disturbance along the new trail. It is estimated that costs for moving the trail upslope could be on the order of \$25,000 to \$35,000.

The third option would be to move the existing trail so that riparian plantings could be installed along the stream edge while providing a pedestrian path that is essentially the same alignment and grade as the current path. The trail would be moved by excavating into the existing slope and constructing a retaining wall for lateral soil support. The length of retaining wall required for this option would be approximately 50 feet. The maximum height of the retaining wall would be approximately 6 to 7 feet. Several trees will likely need to be removed to allow construction of the wall. An arborist should be consulted to provide information as to how close the retaining wall may be constructed to existing trees. An estimated cost of \$20,000 to \$30,000 is associated with moving the existing trail into the hillside through construction of a retaining wall.

Based on an assessment of the above options, it is our recommendation to move the trail into the hillside with construction of a retaining wall. Moving the trail would be a feasible solution based on the lower impact to the surrounding environment including grading, tree removal or stream realignment. The costs for the two trail options are comparable. Significantly more grading would be required to move the trail to a new alignment compared with constructing a retaining wall and moving the trail into the existing hillside.

### **Location 2**

This area is located near the junction of two trails at the crest of a steep slope. The slope is reported to be slowly sloughing and presenting a hazard to future use of the trails. The crest of the slope was observed to be semi-circular, and the slope was observed to be convex in shape. The observed geometry of the slope is indicative of prior movement or surface erosion.

Two potential options were evaluated for the trail. The first option would consist of moving the trail to the south away from the area of slope sloughing. The second option would consist of supporting the upper slope surface with a retaining wall and leaving the trail in its current location.

Moving the trail to the south would require tree removal and grading to create a suitable pedestrian trail. A reconnaissance of the area suggests a new trail would have a length of approximately 100 feet. Grading operations, consisting of cuts and fills of approximately 2 to 4 feet, would be required to provide a suitable pedestrian path. Estimated costs for relocating the trail are estimated to be approximately \$20,000 to \$30,000.

The second option would consist of supporting the upper portion of the slope adjacent to the existing trail. The portion of the slope in need of support is approximately 40 feet long, with an estimated wall height of 6 to 8 feet. The site geometry is such that a pile retaining wall is recommended to support the trail. Potential wall systems may consist of 4- to 6-inch diameter pipe piles installed within the adjacent

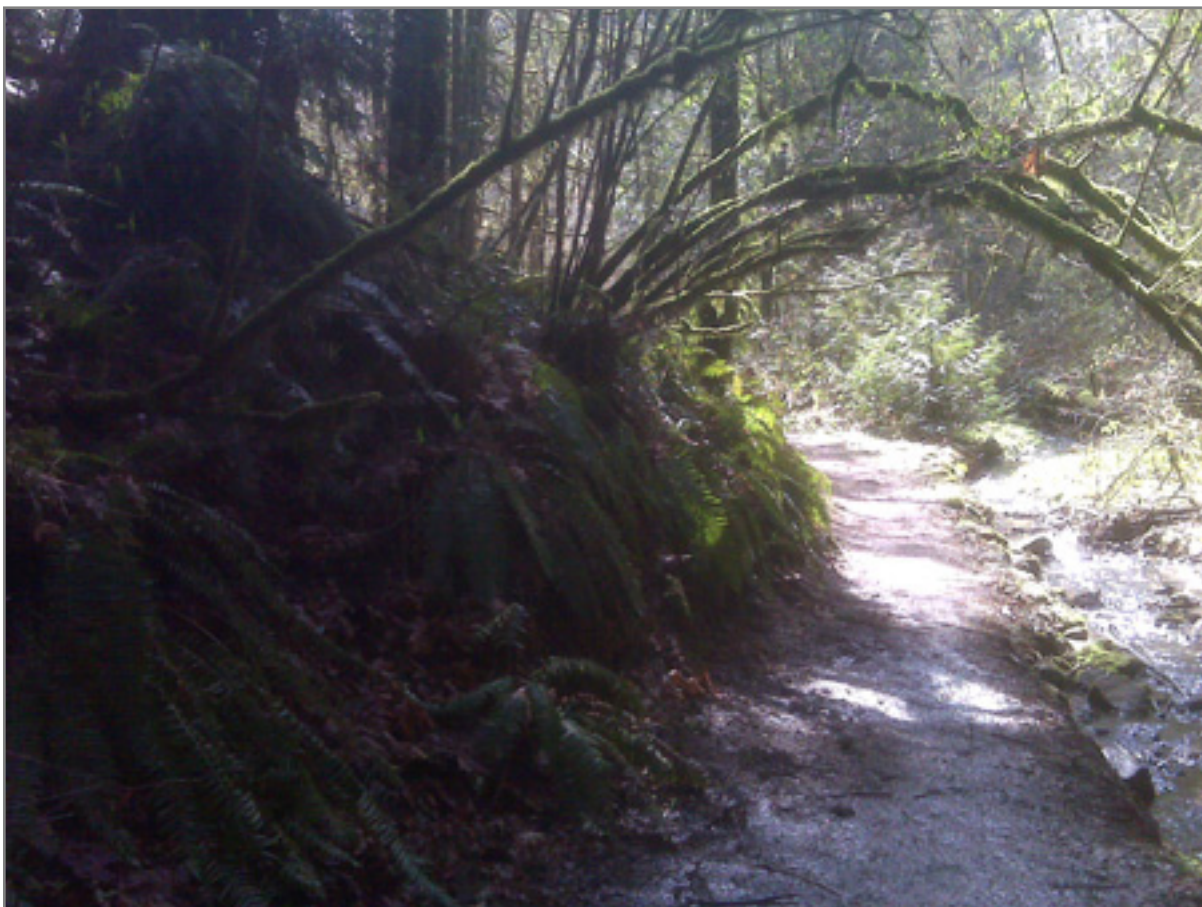
## Appendices

slope and backfilled to provide the required trail width. It is estimated that the cost for this option would be approximately \$25,000 to \$35,000.

It is our recommendation that the trail condition be mitigated through the construction of a retaining wall along the upper slope surface. The costs for the two options discussed above are similar, however, the retaining wall construction will result in significantly less disturbance and impact to the surrounding area than would the construction of a new trail.

It should be noted that the above costs have been estimated on our site reconnaissance and preliminary analysis. The costs do not include engineering and required permit fees. Other consultants, such as arborists, ecological or biological scientists, may be required to assist in evaluating final options.

It is recommended that a geotechnical investigation be completed at each of these locations to assess the soil and geologic conditions and provide design recommendations for the potential construction alternatives.



Looking at Location 1 from the east end of the subject area. Note the narrow trail between the hillside and stream tributary. The proposed excavation and retaining wall would extend on the left side of the shrub in the center of the picture, and a split rail fence would be installed between the trail and stream tributary.



Looking at Location 2 from the north end of the subject area. The area of proposed improvement is in the center of the picture, left of the trail. Note the steep and arcane geometry of the hillside. The proposed retaining wall would extend across the slope from the trail, and the ground surface would be built up/extended out (to the left) from its present location.