PORTLAND PARKS & RECREATION

Healthy Parks, Healthy Portland

Habitat Management & Trail Plan

April Hill Park Natural Area

May 2010

DRAFT

Habitat Management & Trail Plan
April Hill Park Natural Area

May 2010 – ***draft***

Portland Parks & Recreation Project Staff

Brett Horner, Program Manager/Strategic Planning Projects
Emily Roth, Project Manager/Senior Planner
Kendra Petersen-Morgan, Ecologist/City Nature West
Josh Darling, GIS Specialist

Technical Assistance
Astrid Dragoy, Zone Manager/City Nature West
Dan Moeller, Supervisor/City Nature West
Greg Hawley, Trail Technician
Nancy Gronowski, Senior Planner

Cover photo: April Hill Park entrance sign

Portland Parks & Recreation
1120 SW Fifth Avenue, Suite 1302
Portland, Oregon 97204
503-823-PLAY
www.PortlandParks.org

Nick Fish, Commissioner
Zari Santner, Director

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April Hill Park Natural Area

Introduction & Background

The nearly 10-acre April Hill Park in southwest Portland includes nearly equal amounts of active recreation areas and natural resource habitats. The Habitat Management and Trail Plan addresses the habitat portion of the park, which includes a 2-acre wetland, a segment of Woods Creek, a perennial spring, and a wide range of plants and wildlife. The natural area is slowly being restored, but it includes non-native vegetation, an incised stream, and many social trails that impact the wetlands and the banks of Woods Creek.

The wetlands provide a home to chorus frogs, long-toed salamanders, and rough-skinned newts. Woods Creek is lined with large western red cedars, snags that provide habitat to cavity nesting birds, and several plants rarely found in the Portland metro area. The diversity of plants and wildlife enhances visitor experiences in the park throughout the year. In early spring the chorus frogs are singing and the plants are breaking bud; summer visits reveal flowering Pacific hellebore and an opportunity to seek a shady respite near the tree-lined banks of Woods Creek; fall is a time to observe the turn of the seasons as the bigleaf maple display an autumn array of color; and winter provides quiet solitude.

Purpose of the Plan

The Habitat Management and Trail Plan will set the course for habitat restoration, stewardship, and an improved trail system in the natural area. The plan will lay the foundation for habitat protection and recreational access and use, and will be used to guide stewardship activities and construction of a sustainable pedestrian trail. The plan is also a reference document providing 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 maintenance and other habitat enhancement activities in cooperation with PP&R.

Location & Context

April Hill Park is located in the Maplewood neighborhood in southwest Portland. The site is bordered by residential streets, houses, and a residential care center. The site is connected to Woods Memorial Natural Area by Woods Creek. Gabriel Park is a half mile to the east. (Appendix A – Location Map)

April Hill Park is a 9.8-acre hybrid park situated in the Woods Creek Subwatershed of Fanno Creek. The park is comprised of an ecologically

rich 5-acre natural area and a 5-acre developed park that includes an accessible play area, a soccer field, and picnic benches. This natural area is surrounded by residential development and its location provides a unique oasis for flora and fauna in the area. Woods Creek, which flows west through the park, is connected to a larger vegetated corridor that is protected by environmental zoning and eventually connects to the mainstem of Fanno Creek near Oregon Episcopal School. April Hill Park is composed of forested wetland, riparian, and upland habitats. Douglas fir, grand fir, bigleaf maple, western hemlock and Pacific yew are mentioned in the 1851 Vegetation Survey of this area. (Appendix A – maps and aerial photograph)

Over time Woods Creek has been degraded by development and the removal of riparian habitat (*BES Tryon and Fanno Creek Watershed Management Plan 2005*). The Watershed Plan identifies the natural area at April Hill Park as having good potential for restoring a stable channel and instream habitat and providing flood flow benefits.

The natural area slopes to a relatively flat wetland area adjacent to the creek. There is a perennial spring at the northern tip of the natural area that feeds the wetland and eventually flows into Woods Creek. The majority of the natural area site is zoned as open space with an environmental overlay. The natural area is presently used by neighborhood residents for enjoying nature. There is social trail system through the natural area.

The Planning Process

PP&R began the planning for the trail and habitat management of the natural area in November 2009 with a meeting of interested park neighbors. The meeting was to:

- Explain the planning process.
- Learn about habitat functions and values.
- Discuss the experience people would like to have at the park.
- Listen to ideas on trail layout, design, and function.

PP&R staff presented the draft guiding principles and actions, and a draft trail map at the Maplewood Neighborhood Association meeting on February 8, 2010. Another meeting with park neighbors was held on March 9, 2010 to review and discuss the preliminary concept including trail layout, access points, trail surface, habitat management, and stewardship. (Appendix B – Meeting Notes)

April Hill Park Natural Area Today

General Conditions and Existing Use

The 5-acre natural area within April Hill Park provides habitat for a diversity of plants and animals in the Woods Creek Subwatershed. Working with the Bureau of Environmental Services (BES) revegetation program and local neighborhood groups, PP&R's ecologist has been coordinating the removal of invasive species and replanting of native species to improve the ecological health of the natural area.

The natural area is predominately used by local residents for enjoyment of nature, but that has resulted in a network of social trails throughout the natural area. These social trails have fragmented the habitat and adversely impacted the wetlands and creeks. They are not sustainable with respect to their layout, width, erosion control, set back from sensitive natural areas, and structures such as bridge crossings.

Physical Environment: Topography, Soils, and Geology

Elevations in the natural area range from 330 feet (above sea level) on the northern property line to 270 feet at the lowest point on the western property line, where Woods Creek flows into a culvert. Topography throughout the park is gradual with slopes not exceeding 10%.

The three types of soil at the site are classified by the USDA Natural Resources Conservation Service (formerly USDA Soil Conservations Service) as Cascade-Urban land complex (0-8 percent slope, 8B), Cornelius-Urban land complex (3-8 percent slope, 11B) and Cascade silt loam (30-60 percent slope, 7E). Cascade-Urban land complex underlies 75% of the site.

Cascade-Urban land complex soils are poorly drained and found on convex side slopes of broad, rolling ridgetops that are typically comprised of soils that have been graded, filled or disturbed. Permeability is slow, runoff is slow, and the hazard of erosion is slight. These soils are often characterized by a seasonally high water table and a highly compacted fragipan at 20 to 30 inches. A perennial spring runs through the area dominated by Cascade-Urban land complex soils which modifies the soil moisture content.

Vegetation

The upland areas of April Hill Park Natural Area are dominated by a deciduous forest mixed with conifers. The tree canopy is dominated by bigleaf maple and western red cedar (Appendix E – Vegetation Summary). Non-native sycamore maple has become a dominant component of the tree canopy throughout the natural area. During 2008-2010, enhancement of the natural area has included the removal of sycamore maples to begin to restore the native canopy. The removal of

these non-native trees will be a continual operations challenge since there are numerous seed sources adjacent to the natural area. Mid-story trees include non-native cherry and holly while the understory of the upland edges of the park is largely dominated by English ivy.

Western red cedar is present in greater dominance throughout the riparian corridor along Woods Creek where it is found interspersed with red alder and Oregon ash. A diversity of native shrubs is found within the riparian corridor including vine maple, Pacific ninebark, black twinberry, red elderberry, and minimal amounts of salmonberry. In the understory, piggy-back plant, pacific waterleaf, and stinging nettle fill the landscape. Non-native herb Robert, English ivy, and English holly are found throughout the riparian area. Garlic mustard is a species of concern that is found throughout the riparian area on both the north and south bank of Woods Creek. A small patch of angled bittercress was noted on the riparian/wetland boundary during a wetland delineation and plant inventory that was conducted in 2009.

Throughout the wetland, reed canarygrass dominates the herbaceous layer with small clusters of red-osier dogwood, black twinberry, Douglas spirea, and Sitka willow. Despite the dominance of the non-native reed canarygrass, many native plants exist throughout the wetland including skunk cabbage, Pacific water parsley, American brooklime, false hellebore, and sawbeak sedge. A small patch of common monkey-flower was found on the south side of the creek within the wetland boundary. Non-native jewelweed is found widely dispersed throughout the wetland.

Wildlife

For a small natural area, April Hill teems with wildlife. A neighbor who is an avid birder has recorded 69 species in April Hill Park and vicinity (Appendix F – Wildlife). Observations include great blue heron, belted kingfisher, pileated woodpecker, and numerous warblers and flycatchers. Neighbors have observed an immature bald eagle, raccoons, and coyotes. An amphibian study in the natural area has recorded long-toed salamanders, rough-skinned newts, and chorus frogs in the wetland.

Issues and Challenges

In 2004 the ecological health of April Hill natural area was categorized as severely degraded to fair. The area around the spring at the northern end of the natural area was in fair condition. The ecological health degrades moving towards the creek due to the dominance of non-native vegetation. Since 2009, contract crews have been removing non-native tree species throughout the natural area and neighbors have been removing non-native shrubs and plants. There are numerous non-sustainable, social trails created by pedestrians. The informal use has created a number of issues and challenges:

Habitat fragmentation. The network of social trails divides interior habitat, reducing the core habitat for wildlife and birds.

Impacts to sensitive habitats. The network of social trails impacts the wetland area and creates numerous stream crossings, potentially degrading water quality and damaging amphibian habitat.

Invasive species. Invasive species degrade the ecological health of the natural area and limit available food supply and habitat for native species.

Dogs. Off-leash dogs disturb wildlife, create trail erosion, and cause water quality problems. Their feces, if not picked up, can lead to unsafe levels of bacteria in our creeks and spread diseases to pets and wildlife.

Streambank Erosion. Woods Creek is incised and disconnected from the floodplain. When storms occur, the creek bed fills up and large volumes of water move quickly downstream (flashy) causing flooding and erosion problems. A broken outfall from an adjacent private property has created erosion and water quality challenges in the immediate vicinity of the park.

Encroachment. The park boundary has not been clearly defined and encroachment has occurred; piles of yard debris or trash are often found in and adjacent to the natural area.

Woods Creek

Habitat Management and Trail Plan

Recommendations

The natural area at April Hill Park is designated to protect and enhance the wetland, stream corridor, and associated forest areas. Any improvement or activities should avoid or minimize impacts to the natural resource values and sensitive areas. Low impact activities such as wildlife viewing, hiking/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, restore, and enhance upland, riparian, wetland, and stream habitats for native terrestrial, avian, and fish species.
- Protect, restore, and enhance the natural area functions and values so users continue to experience the benefits of enjoying nature.
- Design and build a sustainable pedestrian trail, including a viewing platform that allows users visual access to the forest, wetland, and stream and can be used year around.
- Provide educational opportunities for all ages on the ecology of the natural area and improve park information that enables people to comply with park rules.
- 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.
- Work cooperatively with neighbors and community stewards to maintain the natural area and trail system 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 area.
- Enhance habitat for shrub and cavity nesting birds and bats.
- Pursue opportunities to improve amphibian habitat.
- Post natural area park boundaries.
- Design a sustainable trail system. Minimize maintenance by using high quality and long-lasting materials to connect neighborhoods on both sides of the parks.
- Identify areas for environmental interpretation and develop key messages about the park's natural environment into the interpretive information.
- Identify opportunities to work with community and local schools on

environmental education, stewardship, trail maintenance, and overall management of the natural area.

Implementation Strategies

ECOLOGICAL HEALTH

Remove invasive species and plant native vegetation to improve the ecological health of the natural area. As discussed in the Vegetation section, the health of the natural areas is rated severely degraded to fair. Removal of invasive species and replanting native vegetation will continue to improve the habitat.

The Desired Future Condition (DFC) is a planning tool used by PP&R to guide improving the quality of habitat for fish and wildlife and other natural resource functions and values for a specific natural area. The DFC is based on vegetative communities usually named after the tree species that dominate the canopy. Other habitat characteristics are sometimes used in the descriptions such as hydroperiod (water regime).

The DFC for April Hill Park Natural Area (Appendix D) is a mixed-conifer (evergreen) forested upland and deciduous riparian and wetland communities. The upland is currently dominated by a deciduous forest comprised largely of non-native maple which, with management will develop into a bigleaf maple forest. Community groups and contract crews have been removing invasive species and planting native trees and shrubs to increase the ecological health of the natural area. Efforts will need to continue to keep the non-native sycamore maple under control.

The wetland area adjacent to Woods Creek is dominated by reed canarygrass and other non-native species. As described in the DFC, Oregon ash will eventually dominate the wetland with small emergent and scrub-shrub wetland inclusions. Successful enhancement of this area will include the removal of invasive species. In the wetland area, PP&R and BES are exploring design options to increase habitat for amphibians and potentially reduce the distribution of invasive species by enlarging the ponded area of the wetland.

The riparian area along Woods Creek is a mix of native and non-native species including Douglas fir, sycamore maple, western red cedar, and bigleaf maple. The DFC for the area is western red cedar and associated native understory plants.

To address the channel incision which is prevalent through Woods Creek, PP&R and BES are working to design small instream structures that would slow the water through the park and increase the instream habitat functions and values.

WILDLIFE

Enhance habitat for shrub and cavity nesting birds, and bats. The bird list for April Hill Park Natural Areas shows a wide range of birds use the small natural area. The habitat variety provides feeding, nesting, and

resting opportunities for resident and migrating birds. The natural areas have the potential to provide increased opportunities for cavity and shrub nesting birds.

Shrub Nesters	*Cavity Nesters*
Swainson's thrush	Downy woodpecker
Yellow warbler	Red-breasted nuthatch
Bushtit	Northern flicker
Spotted towhee	Black-capped chickadee
	Wrens

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

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. April Hill Park contains many natural resource features that contribute to bat habitat. Those features include open ponded water, large trees, and snags. 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. A bat survey during the summer of 2010 is anticipated for April Hill Park and the data generated should help inform potential habitat enhancements in the park.

A preliminary amphibian survey was conducted in late June 2009. The surveyors recorded chorus/tree frog tadpoles and long-toed salamander larvae in drying ponds that had not completed their metamorphosis. Recommendations from this survey included deepening the ponded areas in the park to provide higher quality breeding habitat for amphibians. In 2010, a presence/absence survey was conducted and three species of pond breeding amphibians were identified in the wetlands. These species included chorus/tree frog tadpoles and long-toed salamander and rough-skinned newt larvae. Long-toed salamander larvae were most abundant followed by chorus/tree frog tadpoles and rough-skinned newt larvae.

DEMARCATING THE NATURAL AREA

Post the natural area park boundaries and associated park rules. Posting the boundaries of the natural area in the park ensures that everyone is clear about the boundaries and associated park rules. No dumping signs at key locations on the park boundary will provide information that the dumping of yard debris and trash within the natural area is not appropriate and violates City Code. Also, boundary markers remind users to stay within the park and not enter private property.

CIRCULATION

Design a sustainable trail system. Minimize maintenance by using high quality and long-lasting materials and connect neighborhoods on both sides of the park. Starting from the east and moving west across the park, the majority of the proposed trail will be built adjacent to the natural area through grassy areas that are now regularly mowed (Appendix A). The proposed trail will be built in the natural area on the edge of the west side, drop down into the right-of-way, and exit the park on SW 59 Avenue. There will be a small viewing platform off the west side trail that will allow users to visit the wetland. Most of the trail will be soft surface and boardwalks may be installed where necessary to keep user's feet dry and protect the wetland from compaction. The trail will be designed and built to the *PP&R Trail Design Guidelines* (May 2009) to ensure safety of the user and habitat protection. The proposed trail and viewing platform will offer views of the wetlands and avoid fragmenting interior habitats. Most of the existing social trails need to be removed and replanted to minimize environmental impacts to sensitive natural areas.

The key characteristics of sustainable contour trails are:

1. Keep water off the trail.
2. Lead the user to a desired destination while avoiding sensitive and wet areas.
3. Follow natural contours.
4. Keep users on the trail.
5. Offer different user experiences.

As part of the planning process, a sustainable contour trail system was designed and many of the social trails were designated for removal and replanting.

INTERPRETIVE KIOSK AND SIGNS

Identify areas for environmental interpretation and develop key messages about the park's natural environment into the interpretive information. Interpretive information about the natural area will be the main focus of signs. Information about the amphibian use, birds, and wetland plants are possible topics for the sign. Natural area rules will also be posted on the kiosk.

MANAGEMENT

Identify opportunities to work with community and local schools on environmental education, stewardship, trail maintenance, and overall management of the natural area. Stewardship activities, such as removing invasive species and planting native species to protect and enhance the habitat areas within the site, will be completed by PP&R, neighbors, and other groups. PP&R encourages local groups to complete a stewardship agreement that details the scope of work and defines specific roles for each group and/or neighbors. The agreement

is reviewed and revised periodically to ensure that it continues to be an effective document. (Appendix G – Stewardship Agreement)

Enforce natural area rules to protect the ecological health of the natural area. April Hill Park Natural Area provides habitat to sensitive plants and wildlife, and the forests and wetlands 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.

1. Many studies have documented the effects of domestic dogs on wildlife and water quality. Uncollected dog feces contribute to degraded water quality. Studies conducted near Portland, Oregon and Seattle, Washington have found that 13-20% of fecal coliform is of canine origin. 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. Dogs can also contribute to the spread of undesirable species through seeds in their fur. 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 not allowed in the wetlands and creek.
- Owners must pick up and properly dispose of the dog's waste.

2. Walk only on designated trails. Social trails create erosion and fragment important habitat, degrade the value of the natural area for wildlife, and damage sensitive areas.

April Hill Park

Cost & Implementation

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
- Plant material for restoration

Trails

- Construction of soft surface trails
- Construction of boardwalk
- Construction of viewing platform

Interpretive/Information Signs

- Interpretive signage
- Natural area identification sign
- Natural area rules signs

Total Estimated Cost (*if all work completed by contractors)****:*** To be determined

Implementation Schedule

As of May 2010, no funds are allocated for capital improvements in April Hill Park Natural Area by the City of Portland. PP&R will work with the neighborhood associations and other partners to find funds. However, there are several activities that can be done by volunteers and PP&R staff in the interim. Some tasks address the need for continued restoration and enhancement and others focus on monitoring. The following is an outline of recommended partnership activities between PP&R, neighborhood associations, volunteers, school groups, scouts, and others.

Habitat Restoration and Enhancement

- Continue removal of invasive species.
- Replant native species.
- Remove social trails and replant with native plants.

Trail Construction and Maintenance

- Locate signs at agreed upon trail locations.
- Ongoing trail maintenance.

Environmental Education and Signs

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

Red flowering currant

References

1. Portland Parks & Recreation. May 2009. Trail Design Guidelines for Portland's Park System.

2. Portland Parks & Recreation. 2007. Tread Lightly with your Dogs in Natural Areas.

3. Portland Parks & Recreation. 2005. Dogs in Natural Area Parks.

4. City of Portland, Bureau of Environmental Services. 2005. Fanno and Tryon Creeks Watershed Management Plan.

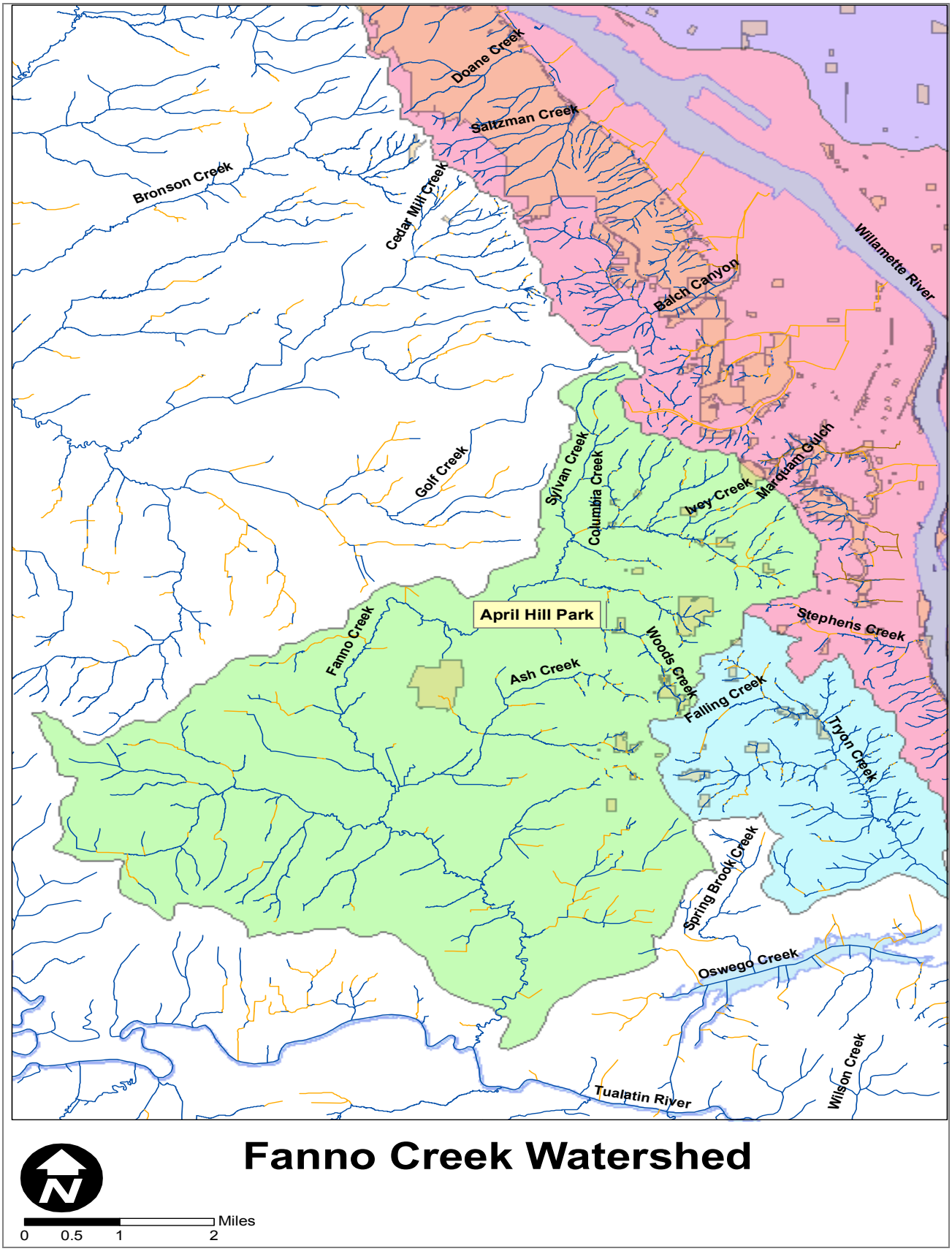
5. USDA Natural Resources Conservation Service (formerly USDA Soil Conservations Service). 1983. Soil Survey for Multnomah County.

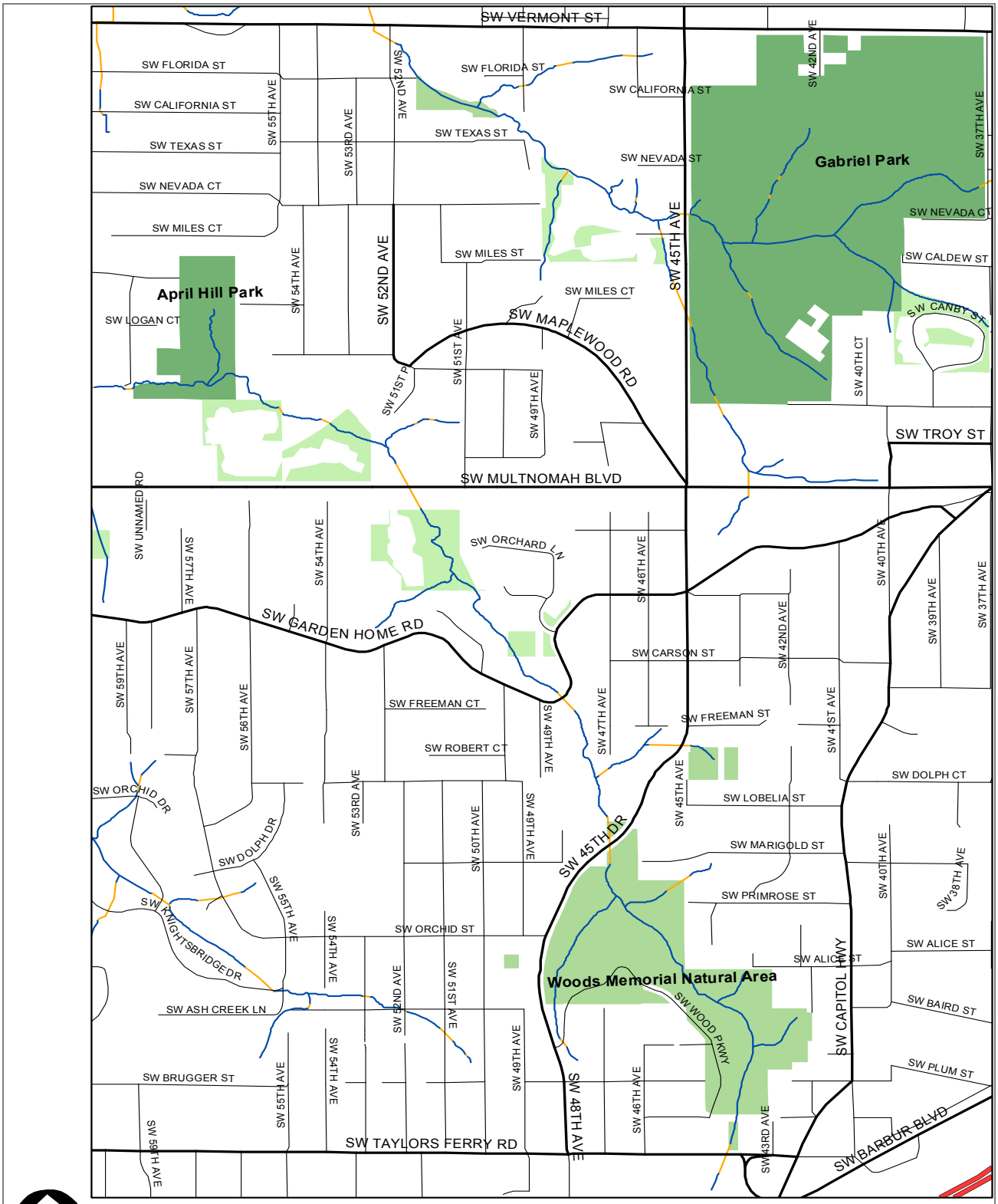
Information sign

Appendices

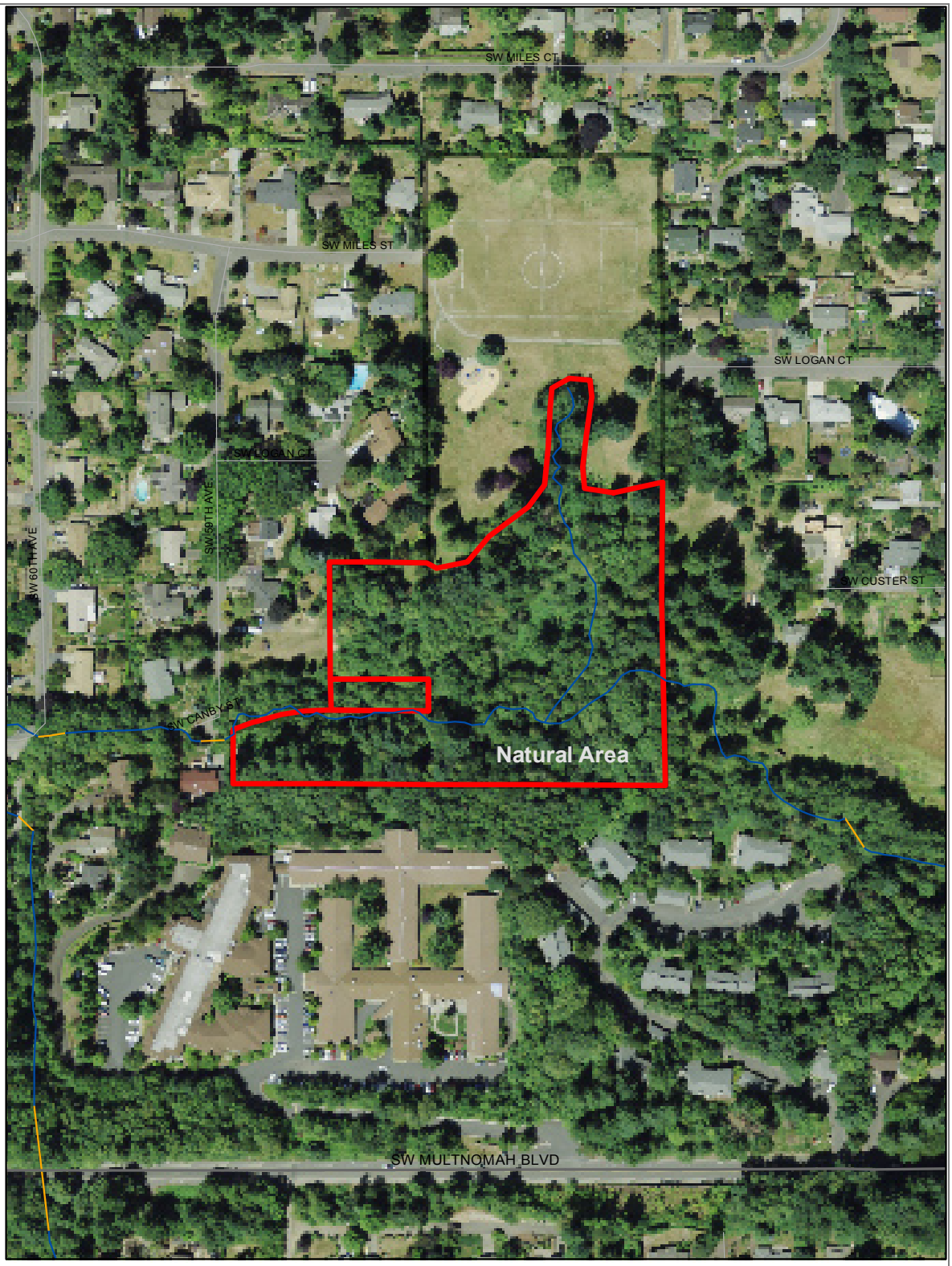
Appendix A – Maps
Appendix B – Public Meeting Information
Appendix C – Comment Summary
Appendix D – Desired Future Condition
Appendix E – Vegetation Summaries
Appendix F – Wildlife Survey & Bird List
Appendix G – Example Stewardship Agreement

APPENDIX A – MAPS

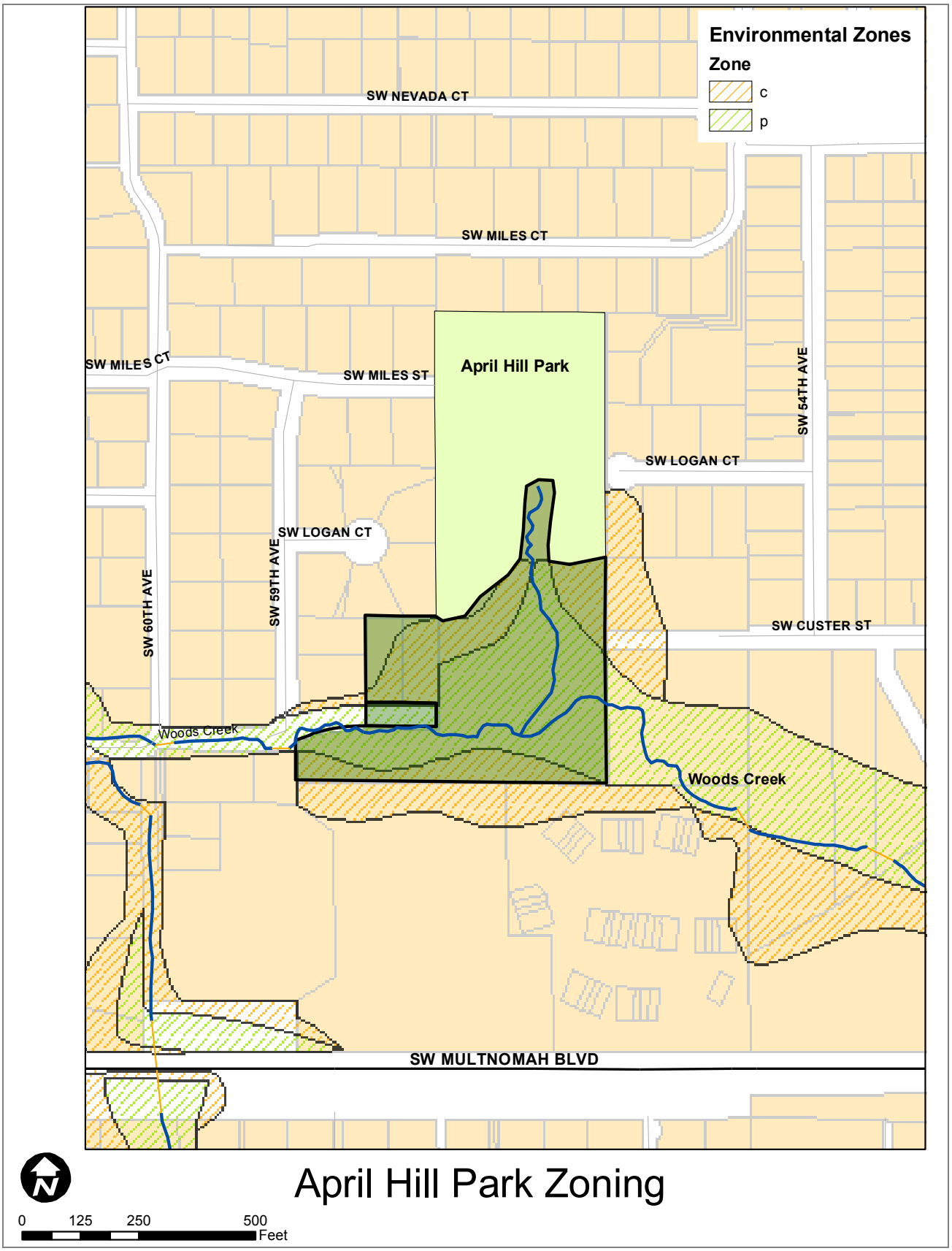




April Hill & Other Parks



April Hill Park Aerial Photograph



April Hill Park Zoning

April Hill Park Proposed Trail & Viewing Platform

APPENDIX B – PUBLIC MEETING INFORMATION

April Hill Natural Area Habitat Management &Trail Planning Meeting #1

Tuesday, November 17, 2009
6:30 PM
Southwest Community Center

Meeting Notes

6:30 Welcome, Introductions, Sign-in

Attending:

Emily Roth, Portland Parks & Recreation
Kendra Petersen-Morgan, Portland Parks & Recreation
Anne-Marie Fischer, Jill Gaddis, Leanne Hartman

6:40 Planning Process Overview – Emily Roth

- 2 meetings, one for input, one to present proposed habitat management and trail layout

Emily reviewed the planning process and working with the group to develop guidelines and actions. The group agreed to add a spring walk-through.

- Your input tonight – experience, knowledge, plan guidelines

The following input was given and discussed:

- Look at the outfall from the convalescent home, it appears to be broken and "suds" come out the pipe
- What is the status of the ROW and the fence?
- Sewer project in the natural area. Kendra has historic photos showing the project.
- Is it possible to increase the size of the natural area in the park? Emily and Kendra will meet with the Developed Park staff to discuss this possibility.
- Discussion of invasive species focused on sycamore maple treatment and garlic mustard eradication.
- Is there water quality data for Woods Creek?

Draft Plan – the group discussed what they would like to see in the plan:

- Welcoming, inviting place to explore – safe, view corridor and a easy to walk on trail
- Education – let children explore the natural area
- Stewardship activities to experience the wetland
- Trail connections to SW 60th and Canby, if possible to Garden Home
- Access to the creek, and a bridge over the creek
- Continue community involvement in restoration and maintenance
- Dog Control
- Emphasis the species diversity found in the park

Project web page – PP&R will set up a project web page.

7:00 About the Park

- Park Ecology/Desired Future Condition (DFC) – Kendra Petersen-Morgan

Kendra explained the DFC for the park. It will be posted on the project web page.

- 25-year planning document that articulates the ecological goals and vegetation alliances for the park
- Three vegetation alliances: Bigleaf Maple Deciduous Forest; Oregon Ash Seasonally Flooded; and Western Red-cedar Seasonally Flooded
- Mapped Existing Information – Emily and Kendra

- Zoning Map – showing the environmental zones
- Watershed Map – Fanno & Tryon Creek
- Topography Map
- Ecological Health from the PP&R Vegetation Survey

All maps will be posted on the project web page.

7:50 Next Steps – meeting date, tour of the proposed trail, layout and draft plan discussion

Jill will check in with the chair of the Maplewood NA to see if Kendra and Emily can be on the agenda in February to talk about the planning process.

Basketball Coach Reports

Maplewood

Multnomah

Marshall Park

HANDOUT: FEBRUARY 8, 2010 MEETING

April Hill Park Natural Area - Draft Habitat Management and Trail Plan

Summary of Issues and Challenges

Presently, the ecological health of the natural area in April Hill Park ranges from fair to severely degraded (2006 Inventory). Access to the natural area is through a web of informal trails. Invasive species, down cutting of the stream, informal trails, and use have created a number of issues and challenges:

1. Impacts to sensitive habitats. The network of informal trails impacts the wetland area resulting in numerous stream crossings, the potential degradation of water quality, impacts to native amphibian habitat, and damage to sensitive wetland vegetation.
2. Invasive species. These degrade the ecological health of the natural area, limit available food supply and habitat diversity for native species.
3. Dogs. Off-leash dogs disturb wildlife, create trail erosion, and cause water quality problems. Their feces, if not picked up, can lead to unsafe levels of bacteria in our creeks and spread diseases to pets and wildlife.
4. 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.
5. Streambank Erosion. Woods Creek is flashy, incised, and disconnected from the floodplain. A broken outfall from a private property has created erosion and water quality challenges.
6. Encroachment. The park boundary has not been clearly defined and encroachment has occurred.

Site Concept and Strategies

The natural area at April Hill Park is designated to protect and enhance the wetland, stream corridor, and associated forest areas. Any improvement or activities should avoid or minimize impacts to the natural resource values and sensitive areas. Low impact activities such as wildlife viewing, hiking/walking on the designated trails and environmental education are encouraged. Improvements should complement, enhance, and protect the natural resource values and sensitive areas.

The habitat management and access plan for the natural area is based on the following four objectives:

1. Protect, restore, and enhance habitat and sensitive areas through additional invasive species removal, planting, and closing informal trails.
2. Pursue opportunities for intergovernmental partnerships to address streambank erosion issues.
3. Design a pedestrian trail that provides appropriate access to the natural area and visual access to the forest, wetland, and creeks.
4. Identify opportunities to work with the community and local schools on stewardship, trail building, and maintenance and overall management of the natural area.

Guiding Principles

1. Protect and enhance the natural area values so users continue to experience the benefits of enjoying nature.
2. Protect and enhance terrestrial, avian, and fish habitats.
3. Create a welcoming and safe viewing area that allows users visual access to the wetland and stream.

4. Provide educational opportunities for all ages on the ecology of the natural area.
5. Work cooperatively with neighbors and community stewards to manage the park and natural area for the enjoyment and safety of all users.

Proposed Actions

1. Remove invasive species and plant native vegetation to improve the ecological health of the natural area.
2. Restore in-stream and riparian habitat for cut-throat trout and to meet the Salmon Safe Certification requirements.
3. Enhance habitat for shrub and cavity nesting birds, and bats.
4. Pursue opportunities to improve amphibian habitat.
5. Design a sustainable trail system. Trails will be built to minimize maintenance by using high quality and long-lasting materials.
6. Incorporate education about the park's natural environment into the interpretive information by locating areas for environmental interpretation and key messages.
7. I dentify opportunities to work with community and local schools on environmental education, stewardship, trail maintenance, and overall management of the natural area.

Neighborhood Reports

Maplewood

Multnomah

Markham

Estate Planning Made Easy

MULTNOMAH Tree Experts, LTD.

(503) 452-8160

SW Hills Residential League

April Hill Natural Area Habitat Management &Trail Planning Meeting #3

Match 9, 2010
6:30 PM
Southwest Community Center

Meeting Notes

6:30 Welcome, Introductions, Sign-in

Attending:

Emily Roth, Portland Parks & Recreation
Kendra Petersen-Morgan, Portland Parks & Recreation
Brian Crise, Jill Gaddis, Karen Williams, Laurie DeVos

6:40 Review of the Guiding Principles and Actions – Emily Roth

The group reviewed the changes from the neighborhood meeting on February 8, 2010. Changes included:

- Added an educational objective that included interpretive signage and compliance with park rules.
- Added actions to survey and mark park boundaries, and additional signage about dogs.

7:00 Park Ecology – Kendra Petersen-Morgan

- Amphibian survey recorded long-toed salamanders, rough-skinned newts, and chorus frogs.
- Rare plants found in the wetland include: yellow monkey flower, Pacific hellebore, skunk cabbage, and a variety of sedges and rushes.
- Working with the Bureau of Environmental Services (BES) on a wetland enhancement and adding in-stream structures. BES has a Watershed Enhancement Grant for the work.
- Neighbors have seen an immature bald eagle at the park.
- Seven coyotes were seen in the neighbor's yard.

7:20 Proposed Trail Layout – Emily and Kendra

- Suggested viewing platform adjacent to the wetland to minimize impacts to the wetland.
- Is it possible to bridge the creek, allow access to both sides?
- A loop was not planned to avoid impacts to the wetland.
- Partner with the convalescent home for a possible trail through their property.
- Continue trail to SW Canby and 60th through the ROW along the creek. PP&R will look into this suggestion.

7:50 Next Steps – draft plan and walk-through

- Draft plan by the beginning of April with a 2-week comment period.
- Walk through the park on May 15 to talk about the draft plan as part of the Art in the Park event.
- Finalize the plan by the beginning of June.

Appendices

APPENDIX C – COMMENT SUMMARY

Not yet available.

Appendices

APPENDIX D – DESIRED FUTURE CONDITION

LANDSCAPE SETTING

April Hill Park is a 9.79-acre hybrid park situated in the Fanno Creek Watershed. The park is comprised of an ecologically rich 5-acre natural area and a 4-acre developed park that includes a disabled access play area, soccer field, and picnic benches. April Hill Park is situated centrally in Fanno Creek Watershed in the Woods Creek Subwatershed. This natural area is surrounded by residential development and its location provides a unique habitat oasis for flora and fauna in the area. Woods Creek, which flows west through the park, is connected to a larger vegetated corridor that is protected through environmental zoning and eventually connects to the mainstem of Fanno Creek at the confluence near Oregon Episcopal School. April Hill Park is composed of forested wetland, riparian, and upland habitats. Douglas fir, grand fir, bigleaf maple, western hemlock and Pacific yew are mentioned in the 1851 Vegetation Survey of this area.[1]

TOPOGRAPHY

Elevation ranges from 330' (above sea level) on the northern property line to 270' at the lowest point of the western property line, where Woods Creek flows into a culvert. Portions of the site have been graded to accommodate the current location of the soccer field as well as an adjacent property on the west boundary that included a fill project for development. Topography throughout the park is gradual with slopes not exceeding 10%.

HYDROLOGY

Woods Creek flows east to west through the southern section of the park and is fed by a perennial spring that originates near the base of the soccer field. This spring, in addition to runoff and precipitation, feeds a wetland in the interior of the park that remains saturated throughout the winter and early spring. Long-time residents have reported that the park area was historically full of many seeps and springs and that prior to the grading of the soccer field children would ice skate on the ponded water in the winter. A proposal in the early 1990s called for restoring the upper wetland through the daylighting of the natural spring; however, the site was later drained to create the current soccer field. Woods Creek exhibits typical characteristics of tributaries within the Fanno Creek basin with a high percentage of impervious surface which contributes to the high stormwater runoff and velocities that result in down cutting of the in-stream channel, stream bank instability, and undercutting.[2] A sanitary gravity main line runs parallel to the creek and within the creek bed at the western edge of the property.

SOILS

The dominant soil type at this site is classified by the USDA Natural Resources Conservation Service (formerly USDA Soil Conservation Service) as Cascade-Urban land complex (0-8 percent slope, 8B).[3] Over 75% of the site is dominated by the Cascade-Urban land complex. In addition to these dominant soils, an acre of Cornelius-Urban land complex (3-8 percent slope, 11B) is found in the northwest upland corner of the park and one acre of Cascade silt loam (30-60 percent slope, 7E) is found in the southern riparian area.

The Cascade-Urban land complex soils are poorly drained, found on convex side slopes of broad, rolling ridgetops that are typically comprised of soils that have been graded, filled or disturbed. In relatively undisturbed areas, permeability is slow due to a perched water table that is restricted by a compact fragipan layer. Runoff is slow and the hazard of erosion is slight. Permeability is variable in areas of disturbance. These soils are often characterized by a seasonally high water table and a highly compacted fragipan at 20 to 30 inches. Plants that tolerate droughty conditions and a seasonably high water table should be selected if drainage and irrigation are not provided. A perennial spring runs through the area dominated by Cascade-Urban land complex soils which modifies the soil moisture content.

Cornelius-Urban land complex soils are moderately to well-drained. Soils in this complex are typically located in areas that are disturbed due to grading, filling or other site modification for development. Historically these soils were associated with rolling terraces. Areas that have been relatively undisturbed include yards and open land around and between buildings which is typical of development associated with this complex within the park. These areas exhibit slow water permeability and available water capacity is 6 to 8 inches.

Cascade silt loam soils are somewhat poorly drained, found on convex side slopes of broad, rolling ridgetops and are formed in silty materials. Permeability is slow, runoff is rapid, and the hazard of erosion is high (7E). 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, bigleaf maple, Pacific dogwood, bitter cherry, thimbleberry, salal, vine maple, trailing blackberry, sword fern, and snowberry. (See Appendix I for Latin names.)

CURRENT VEGETATION

The upland portions of April Hill Park Natural Area are largely dominated by a mixed-deciduous forest interspersed with conifers. Non-native sycamore maple, western red cedar, and bigleaf maple dominate much of the overstory throughout the upland portions of the park. The dominance of sycamore maple within the park's natural area reflects the popularity of this tree as a street tree throughout the Maplewood neighborhood. The midstory contains non-native cherry and holly while the understory of the upland edges of the park is largely dominated by English ivy.

Western red cedar is present in greater dominance throughout the riparian corridor along Woods Creek where it is found interspersed with red alder and Oregon ash. A diversity of native shrubs is found within the riparian corridor including vine maple, Pacific ninebark, black twinberry, red elderberry, and minimal amounts of salmonberry. In the understory, piggy-back plant, Pacific waterleaf, and stinging nettle fill the landscape. Non-native herb-bennet, English ivy and English holly are found throughout the riparian area. Garlic mustard is a species of concern that is found throughout the riparian area on both the north and south bank of Woods Creek. A small patch of angled bittercress was noted on the riparian/wetland boundary during a wetland delineation and plant inventory that was conducted in 2009.

Throughout the wetland, reed canarygrass dominates the herbaceous layer with small clusters of red-osier dogwood, black twinberry, Douglas spiraea, and Sitka willow dotting the landscape. Despite the dominance of reed canarygrass many compelling native species exist throughout the wetland including skunk cabbage, Pacific water parsley, American brooklime, false hellebore, and sawbeak sedge. A small patch of common monkeyflower was found on the south side of the creek within the wetland boundary. Non-native jewelweed is found widely dispersed throughout the wetland.

The northern most 4.5 acres of the park have been designated as developed park. This area includes a mowed soccer field and a disabled access play area surrounded by horticultural trees. Over 90% of the vegetative cover is non-native throughout this area.

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 APRIL HILL PARK NATURAL AREA

The DFC for April Hill Park is a mixed-conifer forested upland and deciduous riparian and wetland communities. The upland is currently dominated by a deciduous forest comprised largely of non-native maple which with management will develop into a Bigleaf Maple Forest Alliance (BMF). Invasive removal and native plantings will be necessary to guarantee the health and diversity of the upland forest with a particular focus on sycamore maple removal. Oregon Ash Seasonally Flooded Forest Alliance (OASFF) will eventually dominate the wetland composition with small emergent and scrub-shrub wetland inclusions. The riparian area will be comprised of a Western Red Cedar Seasonally Flooded Forest Alliance (WRCSFF). The following alliances are DFC recommendations for April Hill Park (Natureserve 2007)[4]:

Bigleaf Maple Forest Alliance (BMF)
(Acer macrophyllum Forest Alliance)

This community type is strongly dominated by bigleaf maple which forms a diffuse canopy that is often interspersed with conifers such as Douglas fir and western red cedar. The alliance represents a disclimax community that is often the result of logging or other disturbances. Other deciduous species such as red alder may be present in the tree stratum. The forest understory is usually species-rich and well-developed, and may be dominated by either shrubs or a rich mixture of ferns and forbs. Vine maple is the dominant shrub species in stands of this alliance and may be joined by red elderberry, salmonberry, thimbleberry, and salal. The herbaceous layer is usually dominated by a tall fern layer comprised largely of sword fern and lady fern.

The DFC for upland habitat at April Hill Park is Bigleaf Maple Forest (BMF). Currently the overstory of the upland is dominated by non-native sycamore maple which in its current distribution has disrupted the native canopy. Large western red cedar can also be found throughout the park interspersed but not dominating the tree stratum. If the sycamore maple can be selectively removed from the canopy over time, a native maple population has the potential of being introduced and colonizing the area. Recent efforts have been made to control sycamore maple throughout the site, but the initial treatment undertaken in the fall of 2008 has not proven to be successful. Additional treatment occurred in the fall of 2009 which included modifications to the treatment approach and methodology. It should be noted that several "mother" trees exist within the immediate vicinity of the park on private property and that continued monitoring of sycamore maple dispersal throughout the park will be necessary.

If natural succession is allowed to progress throughout the site, an alliance based upon conifer dominance is likely to develop throughout the upland although that process exceeds the planning duration for this DFC. English ivy and holly are found interspersed throughout the upland and should be controlled prior to an increase in their distribution.

Oregon Ash Seasonally Flooded Forest (OASFF)
(Fraxinus latifolia Seasonally Flooded Forest Alliance)

This habitat type is typically associated with low-elevation riparian areas and wetlands that are seasonally flooded in the winter, spring, and occasionally summer. Soils are typically comprised of poorly drained silts or clays with evident gleying. Oregon ash dominates the tree canopy of this alliance. Stands with active stream channels will include red alder, black cottonwood, and willow species. Shrubs when present include Douglas spiraea, black hawthorn, and snowberry. The herbaceous layer is dominated by slough sedge and may include other graminoids such as Dewey sedge, one-sided sedge or needle spikerush. Other common herbaceous species include Galium and Veronica species as well as large-leaved avens.

The DFC for the majority of the April Hill wetland is Oregon Ash Seasonally Flooded Forest; however, central portions of the wetland will be managed to maintain a mosaic of emergent and scrub-shrub components. Wetland hydrology is supplied by a perennial spring and high water table which creates areas with obligate wetland plants such as skunk cabbage, American brooklime, and common monkeyflower. To increase the range and distribution of such compelling wetland plants it is necessary to address the dominance of reed canarygrass in the understory. The conversion of the edges of the wetland into a scrub-shrub dominated system will be utilized to out-compete reed canarygrass. Sycamore maple has invaded the edges of the wetland and was removed or converted into snags in the fall of 2009.

Western Red Cedar Seasonally Flooded Forest (WRCSFF)
(Thuja plicata Seasonally Flooded Forest Alliance)

This alliance is characterized by a seasonally wet flood regime and a canopy height that is less than 50 meters. In some areas, Douglas fir and grand fir share the upper tree canopy with the dominant species, western red cedar. Deciduous trees such as red alder and bigleaf maple are typically found in the subcanopy. Common shrubs associated with this alliance include vine maple, salmonberry, and trailing blackberry. A diverse assemblage of herbaceous species are found within this alliance including skunk cabbage, lady fern, Pacific waterleaf, sword fern, western trillium, and vanilla leaf.

The alliance as currently comprised at April Hill Park is dominated by western red cedar and does not include the significant presence of additional conifer species such as Douglas fir or grand fir. The midstory is dominated by red alder, Oregon ash, and sycamore maple. Sycamore maple, as in other areas of the park, will continue to be a target species for removal. Small saplings will be removed by hand while larger trees will either be cut or retained as snags. Opportunities for additional plantings to stabilize degraded portions of the streambank exist throughout the riparian corridor. Currently, several social trails and access points exist along the creek which has degraded the vegetation composition and denuded portions of the creek bank. Woods Creek is also incredibly incised throughout the entirety of the park. Several natural brush piles have established within the creek, but a more comprehensive solution to instream erosion should be investigated to support greater riparian health. One option may be to include check dams within the creek through a program that is under development at the Bureau of Environmental Services. Garlic mustard is prevalent throughout the riparian area and was treated in 2009 as part of the City of Portland's comprehensive garlic mustard control program.

DFC: WILDLIFE HABITAT

The forested and wetland community composition planned for April Hill Park will enhance the structurally complex and diverse habitat for a small range of native wildlife species, primarily birds (see Appendix III).[5] Cavity-nesting species such as downy woodpeckers and northern flickers have been observed on the site and chorus frogs can be heard in the spring. To the extent that it is practical,

non-native plant species will be removed to encourage the establishment of native vegetation. 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. Over time the habitat is expected to develop more heterogeneous structure that will provide food, shelter, and reproduction opportunities for wildlife.

REFERENCES

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2. Portland Bureau of Environmental Services. 2009. Willamette Watershed Characterization Report Hydrology and Infrastructure. *www.portlandonline.com/BES/index.cfm?c=33012&* (downloaded June 15, 2009)
3. 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*
4. Natureserve. 2007. *http://www.natureserve.org/explorer/*
5. Bureau of Environmental Services, City of Portland. 2007. Terrestrial Ecology Enhancement Strategy: Summary and Update. Portland, Oregon.

APPENDIX I. PLANT SPECIES REFERENCED IN DFC

American brookline *(Veronica americana)*	ornamental cherry *(Prunus sp.)*
angled bittercress *(Cardamine angulata)*	Pacific dogwood *(Cornus nutallii)*
bigleaf maple *(Acer macrophyllum)*	Pacific waterleaf *(Hydrophyllum tenuipes)*
bitter cherry *(Prunus emarginata)*	Pacific willow *(Salix lucida ssp. lasiandra)*
black cottonwood *(Populus trichocarpa)*	Pacific yew *(Taxus brevifolia)*
black hawthorn *(Crataegus douglasii)*	Ponderosa pine *(Pinus ponderosa)*
black twinberry *(Lonicera involucrata)*	Portugese laurel *(Prunus lusitanica)*
cleavers *(Galium aparine)*	piggy-back plant *(Tolmiea menzeisii)*
common monkeyflower *(Mimulus guttatus)*	red alder *(Alnus rubra)*
Dewey's sedge *(Carex deweyana)*	red elderberry *(Sambucus racemosa ssp. pubens)*
Douglas fir *(Pseudotsuga menziesii)*	red-osier dogwood *(Cornus stolonifera)*
Douglas spiraea *(Spiraea douglasii)*	red flowering currant *(Ribes sanguineum)*
English holly *(Ilex aquifolium)*	reed canarygrass *(Phalaris arundinacea)*
English ivy *(Hedera helix)*	salal *(Gaultheria shallon)*
English laurel *(Prunus laurocerasus)*	salmonberry *(Rubus spectabilis)*
false hellebore *(Veratrum californicum)*	sawbeak sedge *(Carex stipata)*
garlic mustard *(Alliaria petiolata)*	scouring rush *(Equisetum hyemale)*
grand fir *(Abies grandis)*	Sitka willow *(Salix sitchensis)*
hazel *(Corylus cornuta)*	Scouler willow *(Salix scouleriana)*
herb bennet *(Geum urbanum)*	skunk cabbage *(Lysichiton americanus)*
Himalayan blackberry *(Rubus discolor)*	snowberry *(Symphoriocarpos albus)*
jewelweed *(Impatiens capensis)*	sycamore maple *(Acer platanoides)*
Indian plum *(Oemleria cerasiformis)*	sword fern *(Polystichum munitum)*
lady fern *(Athyrium filix-femina)*	thimbleberry *(Rubus parviflorus)*
large-leaved avens *(Geum macrophyllum)*	trailing blackberry *(Rubus ursinus)*
lesser celandine *(Ranunculus ficaria)*	vanilla leaf *(Achlys triphylla)*
needle spikerush *(Eleocharis acicularis)*	vine maple *(Acer circinatum)*
nettles *(Urtica dioica ssp. gracilis)*	water parsley *(Oenanthe sarmentosa)*
ninebark *(Physocarpus capitatus)*	western hemlock *(Tsuga heterophylla)*
Nootka rose *(Rosa nutkana)*	western red cedar *(Thuja plicata)*
one-sided sedge *(Carex unilateralis)*	western trillium *(Trillium ovatum)*

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 time frame for community change considered is 25-50 years.

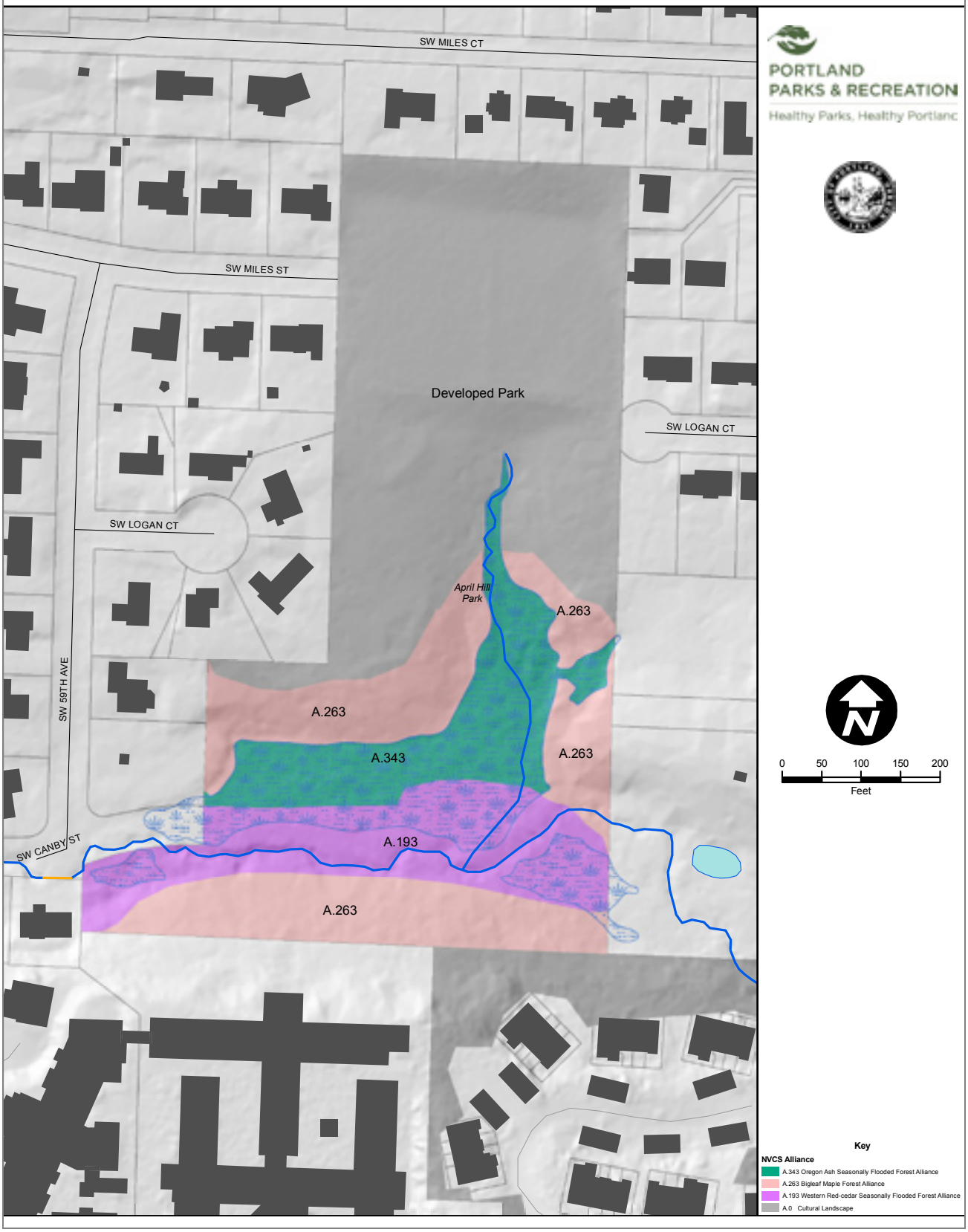
Principles of forest succession and the particular ecology of different forest trees are used to project forest community types as part of the DFC process. In Portland natural areas the predominant evergreen canopy species are Douglas fir, western hemlock, and western red cedar, with grand fir present 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. Bigleaf Maple Forest (BMF) 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-Bigleaf Maple Forest (DF-BMF), 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 bigleaf 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. WILDLIFE SPECIES LIST

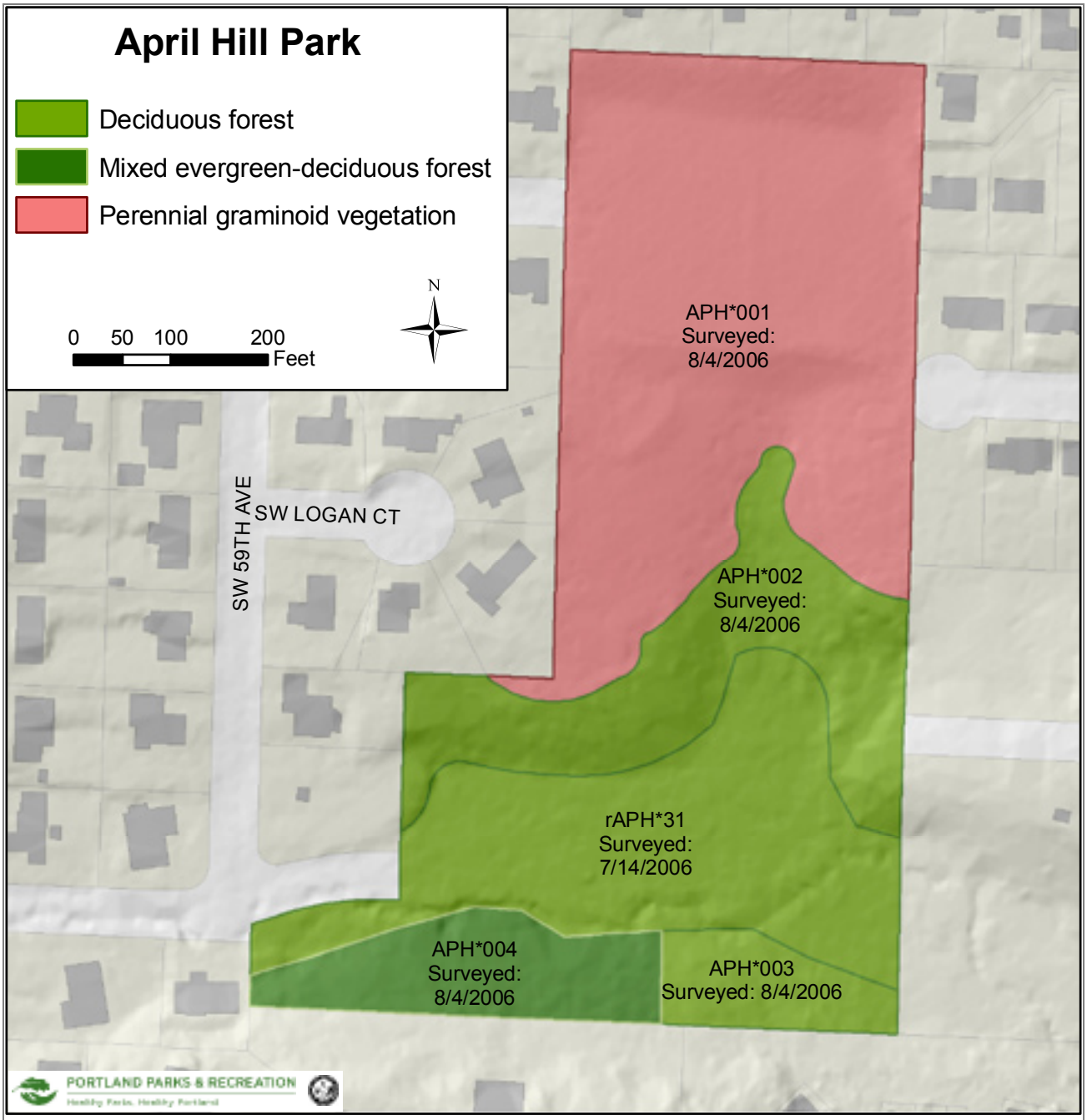
The wildlife species list identifies priority wildlife species that may be found associated with the DFC alliances. This list was created through a cross-walk of species associated with Johnson and O'Neil's Habitat Type Classification and the City of Portland's Special Status Species Closely Associated 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.

Bigleaf Maple Forest Alliance (BMF)	
MAMMALS	
fringed myotis *(Myotis thysanodes)* hoary bat *(Lasiurus cinereus)* long-eared myotis *(Myotis evotis)* long-legged myotis *(Myotis volans)*	silver-haired bat *(Lasionycteris noctivagans)* western gray squirrel *(Sciurus griseus)* Yuma myotis *(Myotis yumanensis)*
BIRDS	
band-tailed pigeon *(Patagioenas fasciata)* Bullock's oriole *(Icterus bullockii)* chipping sparrow *(Spizella passerina)* olive-sided flycatcher *(Contopus cooperi)* Pacific-slope flycatcher *(Empidonax dificilus)* purple martin *(Progne subis)*	Vaux's swift *(Chaetura vauxi)* western wood-peewee *(Contopus sordidulus)* white-breasted nuthatch *(Sitta carolinensis)* willow flycatcher *(Empidonax traillii)* yellow-breasted chat *(Icteria virens)* yellow warbler *(Dendroica petechia)*
AMPHIBIANS & REPTILES	
northern red-legged frog *(Rana aurora aurora)*	

Desired Future Conditions for April Hill Park



APPENDIX E – VEGETATION SUMMARIES



PORTLAND PARKS & RECREATION
Healthy Parks, Healthy Portland

Vegetation Unit Summaries for **April Hill Park (APH)**

Report date: 7/29/2009 '*' = non-native invasive species
Visit data as of: 7/29/2009

Unit APH*001

Size: 4.63 Acres
NVCS Class: Herbaceous
NVCS Subclass: Perennial graminoid vegetation
NVCS Group: Temperate grassland
NVCS SubGroup: Cultural
NVCS Ecological System: unknown
Landform: Broad flat > 600'
Slope: Flat (0 to 5%)
Aspect: South
Notes:

Visit date: 8/4/2006
Ecological Health: Severely Degraded.
% Tree canopy: 5%
% Non-Native Cover: 95
General Note:
Unit is a mowed area with a soccer field and a playground with several horticultural trees planted around the edge.
Management Note:
The soccer field accounts for heavy soil compaction. There is also soil compaction around the bases of trees.
Eco Note:

Primary Management concerns: Soil Compaction, Domestic Animals, Hardscape Infrastructure.
Visit Species:

	COVER CLASS	DOMINANT	DBH	REGENERATING	PLANTED
Pseudotsuga menziesii (Douglas fir)	1% to 10%		>30"		
Platanus occidentalis (American sycamore)	1% to 10%		20-30"		
Thuja plicata (western red cedar)	1% to 10%		20-30"		
Quercus palustris (pin oak)	1% to 10%		10-20"		
Cedrus deodara (Deodar Cedar)	trace		>30"		
Cedrus libani (Lebanon cedar)	trace		>30"		
Sequoiadendron giganteum (giant redwood)	trace		>30"		
Fagus sylvatica var. atropunicea (European coppe	trace		20-30"		
Pinus ponderosa (ponderosa pine)	trace		20-30"		
Platanus orientalis (Oriental planetree)	trace		20-30"		
Betula pendula (European white birch)	trace		10-20"		
Prunus cerasifera (cherry plum)	trace		10-20"		
Malus sp. (cultivated apple tree)	trace		5-10"		
Acer pseudoplatanus (Sycamore maple)	trace		0-5"		
Acer saccharum (sugar maple)	trace		0-5"		
Convolvulus sepium (hedge glorybind)	trace				

Unit APH*002

Size: 1.64 Acres
NVCS Class: Forest
NVCS Subclass: Deciduous forest
NVCS Group: Cold-deciduous forest
NVCS SubGroup: Natural / Semi-natural
NVCS Ecological System: unknown
Landform: Side-hill, Lower 3rd
Slope: Steep (20 to 30%)
Aspect: South
Notes:

Visit date: 8/4/2006

Ecological Health: Fair.
% Tree canopy: 75%
% Non-Native Cover: 70
General Note:

Unit is the sideslope south of the field and north of the creek riparian area.

Management Note:

There are plantings all through unit. Seems like blackberry would be more prolific, but there is virtually none present and no dead canes are visible.

Eco Note:

There is a large depression with an ephemeral stream/wetland in middle of unit.

Wetland indicators: Streams, Springs, Hydrophilic Vegetation, Saturated Soils, Standing Flowing Water.

Primary Management concerns: Invasives, Litter, Large Refuse, Yard Debris, Utility Infrastructure, Informal Trails, Encroachment.

Visit Species:

	COVER CLASS	DOMINANT	DBH	REGENERATING	PLANTED
Acer pseudoplatanus (Sycamore maple)	20% to 50%	Y	10-20"	Y	
Alnus rubra (red alder)	20% to 50%	Y	10-20"		Y
Oemleria cerasiformis (Indian-plum)	10% to 20%	Y			
Phalaris arundinacea (reed canarygrass)	10% to 20%	Y			
Thuja plicata (western red cedar)	10% to 20%		20-30"	Y	Y
Pseudotsuga menziesii (Douglas fir)	1% to 10%		>30"		Y
Populus balsamifera ssp. trichocarpa (black cott	1% to 10%		20-30"	Y	
Fraxinus latifolia (Oregon ash)	1% to 10%		5-10"	Y	Y
Corylus avellana (common filbert)	1% to 10%				
Crataegus douglasii (Douglas' black hawthorn)	1% to 10%				Y
Geranium robertianum (herb-Robert)	1% to 10%				
Hedera helix (English ivy)	1% to 10%				
Ilex aquafolium (English holly)	1% to 10%				
Ribes sanguineum (red-flowering currant)	1% to 10%				Y
Calocedrus decurrens (incense cedar)	trace		20-30"		
Acer palmatum (Japanese maple)	trace		0-5"		
Prunus sp. (cultivated cherry tree)	trace		0-5"		
Athyrium filix-femina (ladyfern)	trace				
Crataegus monogyna (European hawthorn)	trace				
Epilobium ciliatum ssp. watsonii (fringed willow	trace				
Equisetum telmateia (giant horsetail)	trace				
Impatiens capensis (spotted orange touch-me-not)	trace				
Lapsana communis (common nipplewort)	trace				
Lonicera ciliosa (western orange honeysuckle)	trace				
Polystichum munitum (sword fern)	trace				Y
Rosa pisocarpa (cluster wild peafruit swamp Rose	trace				Y
Rubus discolor (Himalayan blackberry)	trace				
Rumex obtusifolius (bitter dock)	trace				
Salix scouleriana (Scouler's willow)	trace				
Solanum dulcamara (bittersweet nightshade)	trace				
Spiraea douglasii (Douglas' spiraea)	trace				
Stachys cooleyae (Cooley's hedgenettle)	trace				
Symphoricarpos albus (snowberry)	trace				Y

Unit APH*003

Size: 0.46 Acres
NVCS Class: Forest
NVCS Subclass: Deciduous forest
NVCS Group: Cold-deciduous forest
NVCS SubGroup: Natural / Semi-natural
NVCS Ecological System: unknown
Landform: Side-hill, Lower 3rd
Slope: Gentle (5 to 10%)
Aspect: North
Notes:

Visit date: 8/4/2006

Ecological Health: Poor.
% Tree canopy: 65%
% Non-Native Cover: 85
General Note:
Unit is a shallow rising bank south of the riparian area along the creek.
Management Note:
Ivy dominates the ground cover. There is a sizable blackberry patch in the middle of the unit as well.
Eco Note:
Unit is dominated by invasives with a few common natives still present.
Wetland indicators: Hydrophilic Vegetation.
Primary Management concerns: Invasives.
Visit Species:

	COVER CLASS	DOMINANT	DBH	REGENERATING	PLANTED
Acer platanoides (Norway maple)	20% to 50%	Y	10-20"	Y	
Hedera helix (English ivy)	20% to 50%	Y			
Alnus rubra (red alder)	10% to 20%	Y	10-20"		
Acer macrophyllum (bigleaf maple)	1% to 10%		10-20"		
Fraxinus latifolia (Oregon ash)	1% to 10%		10-20"	Y	
Juglans nigra (black walnut)	1% to 10%		10-20"		
Thuja plicata (western red cedar)	1% to 10%		10-20"		Y
Geum urbanum (herb bennet)	1% to 10%				
Ilex aquafolium (English holly)	1% to 10%				
Rubus discolor (Himalayan blackberry)	1% to 10%				
Pseudotsuga menziesii (Douglas fir)	trace		>30"		
Corylus avellana (common filbert)	trace				
Epilobium ciliatum ssp. watsonii (fringed willow	trace				
Geranium robertianum (herb-Robert)	trace				
Oemleria cerasiformis (Indian-plum)	trace				
Phalaris arundinacea (reed canarygrass)	trace				
Solanum dulcamara (bittersweet nightshade)	trace				

Unit APH*004

Size: 0.82 Acres
NVCS Class: Forest
NVCS Subclass: Mixed evergreen-deciduous forest
NVCS Group: Mixed needle-leaved evergreen - cold-deciduous forest
NVCS SubGroup: Natural / Semi-natural
NVCS Ecological System: unknown
Landform: Side-hill, Lower 3rd
Slope: Steep (20 to 30%)
Aspect: North
Notes:

Visit date: 8/4/2006

Ecological Health: Fair.
% Tree canopy: 85%
% Non-Native Cover: 40
General Note:
Unit is a moderate steep slope above the riparian area to the north.
Management Note:

Eco Note:
Unit has had restoration activities. The extent of the restoration to the east may define the boundary with APH*003.
Primary Management concerns: Invasives, Litter, Large Refuse, Utility Infrastructure, Informal Trails.
Visit Species:

	COVER CLASS	DOMINANT	DBH	REGENERATING	PLANTED
Pseudotsuga menziesii (Douglas fir)	20% to 50%	Y	20-30"		
Acer pseudoplatanus (Sycamore maple)	20% to 50%	Y	10-20"	Y	
Thuja plicata (western red cedar)	10% to 20%		20-30"	Y	
Alnus rubra (red alder)	10% to 20%		10-20"		
Acer macrophyllum (bigleaf maple)	1% to 10%		10-20"		
Prunus avium (sweet pie cherry)	1% to 10%		10-20"	Y	
Corylus avellana (common filbert)	1% to 10%				
Hedera helix (English ivy)	1% to 10%				
Ilex aquafolium (English holly)	1% to 10%				
Oemleria cerasiformis (Indian-plum)	1% to 10%				
Polystichum munitum (sword fern)	1% to 10%				
Rubus ursinus (trailing blackberry)	1% to 10%				
Crataegus monogyna (European hawthorn)	trace				
Prunus laurocerasus (English laurel)	trace				
Rubus discolor (Himalayan blackberry)	trace				
Trillium ovatum (trillium)	trace				

Unit rAPH*31

Size: 2.39 Acres
NVCS Class: Forest
NVCS Subclass: Deciduous forest
NVCS Group: Cold-deciduous forest
NVCS SubGroup: Natural / Semi-natural
NVCS Ecological System: unknown
Landform: Broad flat > 600'
Slope: Flat (0 to 5%)
Aspect: West

Visit date: 7/14/2006
Ecological Health: Severely Degraded.
% Tree canopy: 70%
% Non-Native Cover: 80
General Note:
Restoration native plantings. Severe downcutting.
Management Note:
Possible sewer leak next to stream. Small culvert downstream on the western property line.
Wetland indicators: Streams, Hydrophilic Vegetation, Silt, Drift Lines, Flood Debris, Saturated Soils, Standing Flowing Water.
Primary Management concerns: Invasives, Trampling, Soil Compaction, Soil Contamination, Domestic Animals, Litter, Utility Infrastructure, Hardscape Infrastructure, Stream Bank Erosion, Informal Trails, Encroachment.
Visit Species:

	COVER CLASS	DOMINANT	DBH	REGENERATING	PLANTED

Alnus rubra (red alder)	50% to 75%	Y	10-20"	Y	Y
Hedera helix (English ivy)	50% to 75%	Y			
Phalaris arundinacea (reed canarygrass)	50% to 75%	Y			
Acer pseudoplatanus (Sycamore maple)	20% to 50%	Y	5-10"		
Oemleria cerasiformis (Indian-plum)	20% to 50%	Y			
Thuja plicata (western red cedar)	20% to 50%		>30"	Y	Y
Cornus sericea ssp. sericea (red-osier dogwood)	20% to 50%			Y	
Geum macrophyllum (largeleaf avens)	20% to 50%				
Oenanthe sarmentosa (Pacific water-parsely)	20% to 50%				
Ranunculus repens (creeping buttercup)	20% to 50%				
Tolmiea menziesii (piggy-back plant)	20% to 50%				
Pseudotsuga menziesii (Douglas fir)	10% to 20%		10-20"		Y
Populus balsamifera ssp. trichocarpa (black cott	10% to 20%		5-10"		
Fraxinus latifolia (Oregon ash)	10% to 20%		0-5"	Y	Y
Athyrium filix-femina (ladyfern)	10% to 20%				
Polystichum munitum (sword fern)	10% to 20%				
Rubus ursinus (trailing blackberry)	10% to 20%				
Acer macrophyllum (bigleaf maple)	1% to 10%		10-20"		
Acer circinatum (vine maple)	1% to 10%		0-5"		
Corylus cornuta (western beaked hazelnut)	1% to 10%		0-5"		
Agrostis capillaris (bentgrass)	1% to 10%				
Alliaria petiolata (garlic mustard)	1% to 10%				
Amelanchier alnifolia (serviceberry)	1% to 10%				
Berberis nervosa (Oregon grape)	1% to 10%				
Convolvulus arvensis (morning glory)	1% to 10%				
Equisetum telmateia (giant horsetail)	1% to 10%				
Geranium robertianum (herb-Robert)	1% to 10%				
Hydrophyllum tenuipes (Pacific waterleaf)	1% to 10%				
Ilex aquafolium (English holly)	1% to 10%				
Lapsana communis (common nipplewort)	1% to 10%				
Plantago major (common plantain)	1% to 10%				
Prunus laurocerasus (English laurel)	1% to 10%				
Rosa nutkana (Nootka rose)	1% to 10%				
Rubus discolor (Himalayan blackberry)	1% to 10%				
Rubus spectabilis (salmonberry)	1% to 10%				
Rumex obtusifolius (bitter dock)	1% to 10%				
Salix lucida ssp. lasiandra (Pacific willow)	1% to 10%				
Salix sitchensis (Sitka willow)	1% to 10%				
Sambucus racemosa (red elderberry)	1% to 10%				
Solanum dulcamara (bittersweet nightshade)	1% to 10%				
Spiraea douglasii (Douglas' spiraea)	1% to 10%				
Stachys cooleyae (Cooley's hedgenettle)	1% to 10%				
Tellima grandiflora (fringecup)	1% to 10%				
Salix sitchensis (Sitka willow)	trace		0-5"		Y
Crataegus monogyna (European hawthorn)	trace				
Daucus carota (Queen Anne's lace)	trace				
Epilobium ciliatum (willowherb)	trace				
Galium aparine (cleavers)	trace				
Holodiscus discolor (oceanspray)	trace				
Impatiens capensis (spotted orange touch-me-not)	trace				
Juncus effusus (common soft Pacific rush)	trace				
Lonicera involucrata (black four-line twinberry)	trace				
Lysichiton americanus (American yellow skunkcabb	trace				
Physocarpus capitatus (Pacific ninebark)	trace				
Prunella vulgaris var. vulgaris (common selfheal	trace				
Ribes sanguineum (red-flowering currant)	trace				
Salix scouleriana (Scouler's willow)	trace				
Scirpus microcarpus (small-fruited bulrush)	trace				
Sonchus asper (spiny sowthistle)	trace				
Symphoricarpos albus (snowberry)	trace				
Trillium ovatum (trillium)	trace				
Urtica dioica (stinging nettle)	trace				

APPENDIX F – WILDLIFE SURVEY & BIRD LIST

Wildlife Survey Results – April Hill Park (one general unit)
Survey Date: August 4, 2006

Water

1. Seasonality and Quantity: Perennial stream (score 8 of 8) that provides permanent water source for wildlife, with associated wetlands and springs that provided habitat for amphibians.

2. Channel morphology, complexity and alteration: Moderate (score 3 of 6) amount of bank erosion and sedimentation within the stream bed. The implication is that the aquatic invertebrate community has been simplified, resulting in less food resources in stream and for terrestrial vertebrates. Social trails have created bank erosion and reduced cover adjacent to the streams.

3. Proximity to cover: Vegetation along the stream corridor is moderate (score 6 of 8). Trails adjacent to the stream have reduced the vegetation density. The riparian edge has scattered trees allowing cover for wildlife.

4. Diversity: Perennial stream, springs and wetlands (scored 6 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 wildlife.

2. Quantity: Moderate quantity of food is available (score 5 of 8) from native plants, including seed, berries and nuts. Reed canarygrass and blackberry patches reduce the score.

3. Seasonality: Year around food is available for wildlife (score 7 of 8). The food sources come from a diversity of native and non-native plants.

Cover

1. Structural Diversity: Multi-layer, limited vertical stratification of vegetation (score 6 of 8) found throughout the natural area. There are a moderate range of age classes allowing for cover for wildlife.

2. Variety and seasonality: Moderate (score 6 of 8) 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 4 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 4 of 8).

2. Direct human disturbance – there is heavy disturbance to wildlife activities from (score 1of 6) from trail walkers, dogs, general road and neighborhood sounds.

Important Habitat Features

Generally the natural area is dominated by a mix on non-native and native herbs, shrubs and trees. The herb layer is approximately 50% native; the shrub layer 10% native; and the canopy layer is greater than 10% non-native. There is a large amount of down wood (score 7 of 8) that provides habitat diversity and other elements for wildlife.

Overall

April Hill Park provides a moderately diverse habitat for wildlife. The perennial stream provides year around water. The multi-layered, forest composed of a mix of non-native and 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 76.

Animal Sightings

Coyotes, chorus frogs, long-toed salamanders, rough-skinned newts, ensatina salamanders, raccoons.

Birds seen in April Hill Park and vicinity, 1996-2010			
Common Name	**in park**	**vicinity**	**status**
Canada Goose	x		x
Great Blue Heron		x	y
Mallard	x		yb
Wood Duck		x	
Turkey Vulture	x		m
Sharp-shinned Hawk		x	m
Cooper's Hawk	x		ms
Red-tailed Hawk	x		yb
Band-tailed Pigeon	x		s
Mourning Dove	x		y
Screech Owl	x		y
Great Horned Owl		x	y
Belted Kingfisher	x		s
Vaux's Swift	x		s
Anna's Hummingbird	x		y
Rufous Hummingbird	x		s
Downy Woodpecker	x		yb
Red-breasted Sapsucker	x		y
Northern Flicker	x		yb
Pileated Woodpecker		x	y
Western Wood Pewee		x	m
Pacific-slope Flycatcher	x		m
Willow Flycatcher		x	m
Olive-sided Flycatcher		x	m
Warbling Vireo		x	m
Scrub Jay	x		yb
Steller's Jay	x		yb
American Crow	x		yb
Violet-green Swallow	x		s
Barn Swallow		x	s
Black-capped Chickadee	x		yb
Chestnut-backed Chickadee	x		yb
Bushtit	x		yb
Red-breasted Nuthatch	x		yb
Brown Creeper	x		y
Bewick Wren	x		yb
Winter Wren	x		y
Varied Thrush		x	m

Birds seen in April Hill Park and vicinity, 1996-2010			
Common Name	**in park**	**vicinity**	**status**
American Robin	x		yb
Hermit Thrush	x		m
Swainson's Thrush	x		m
European Starling	x		yb
Ruby-crowned Kinglet	x		w
Golden-crowned Kinglet	x		y
Cedar Waxwing	x		s
Orange-crowned Warbler	x		m
Yellow Warbler	x		m
Yellow-rumped Warbler, Audubon's	x		m
Yellow-rumped Warbler, Myrtle	x		m
Black-throated Gray Warbler		x	m
Townsend's Warbler		x	w
Wilson's Warbler	x		m
Common Yellowthroat		x	m
Western Tanager	x		m
Black-headed Grosbeak	x		sb
Evening Grosbeak		x	m
Spotted Towhee	x		yb
Chipping Sparrow		x	m
Golden-crowned Sparrow		x	w
White-crowned Sparrow		x	m
White-throated Sparrow		x	w
Song Sparrow	x		yb
Dark-eyed Junco	x		w
Brown-headed Cowbird	x		s
House Finch	x		w
American Goldfinch	x		m
Lesser Goldfinch		x	y
Pine Siskin		x	m
Red Crossbill		x	m
House Sparrow		x	yb
Status: b=breeds here; m=migration; s=spring and summer; w=winter; y=year-around			

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)	(name of PP&R representative)
(office) _____	(title) _____
(name of community group)	Portland Parks & Recreation
Dated: (date)	Dated: (date)