Grand Oaks Vegetation Management Plan
Highly Protected Significant Vegetation Areas

Grand Oaks Summit Homeowners Association
Adopted October 10, 2018

Summary

Six distinct common areas comprising about eight acres in Grand Oaks are designated as "Highly Protected Significant Vegetation" and must be managed consistent with the Section 4.12 of the City of Corvallis, Land Development Code. Only very limited activity can occur in these natural areas without having a management plan that has been approved by the City. Since no approved plan exists, very limited vegetation management has occurred since the inception of Grand Oaks. Invasive species have proliferated. In order to control invasive species and sustain the health of the native oak and other native tree, shrub and ground cover species; a vegetation management plan has been developed by a volunteer planning team of Grand Oaks residents and associates. An equally important focus for the team has been to manage the natural areas for the safety of people and homes in Grand Oaks and for their natural aesthetic appeal. The planning team has met with several natural resource specialists to build a technically sound plan. The plan proposes conducting two projects using different demonstration approaches to control invasive and other undesirable vegetation species and to promote healthier conditions for native species. These projects will be significant tasks. Over the first three years of implementation, the goal is that the two approaches would be applied over a total of two acres. The demonstration sites will provide the Grand Oaks community with insight into how to manage the remaining acreage. Upon the evaluation of the two approaches, management prescriptions can then be determined for the remaining six acres. Funding for the projects will be sought from agencies and organizations that support the control of invasive species and oak restoration. If a homeowner or a group of volunteers want to "adopt" an area adjacent to their home(s) or other areas outside the two projects, a process to gain approval from the Landscape Committee to do so will be provided. Approval will be contingent upon the proposed activities being aligned with the purpose and goals of the Grand Oaks Vegetation Management Plan for HPSV.

Acknowledgements:

For making onsite visits and providing suggestions for how we might successfully achieve our goals - Thanks to Wallace Jennings - Natural Resources Conservation Service, Jonathan Pywell - Urban Forester for the City of Corvallis, Donna Schmitz - Benton County Soil and Water Conservation District, and Brad Withrow-Robinson – OSU Extension Forester

For their guidance and support - Thanks to the Grand Oaks Landscape Committee: Renee Brooks, Gail O'Malley, Chesney Sharp, and Reed Walter; and the Grand Oaks Board of Directors: Kristen Barberis, Josh Cooper, Anna Korenev, Jimmy Perez, and David Rockhold; Willamette Community Management – Kurt Powell

For the development of the plan - Thanks to the volunteer planning team members and associates: Rollie Baxter, Jeff Uebel, Sarah Uebel, Ann Kraeger, and Mike Schnee.

A Short History of the "Grand Oaks" Oaks

When Grand Oaks was proposed as a residential subdivision, the City identified several stands of significant trees that the City wanted protected. One of the areas included the row of old oaks extending from near West Hills Road over the hill toward Reservoir Road. Previous to the subdivision, the area on both sides of this oak strip was farmed (See Appendix A). The farming activity generally kept the ivy, blackberry, poison oak, wild plum, and cherry under a degree of control. Other areas set aside included an oak strip on the East edge of the subdivision and oak, fir and some pine stands along Reservoir Road and on the West side of the subdivision. See the map in Appendix A for locations.

At the time of subdivision, the City's Land Development Code (LDC) required the developer to set aside these tree stands in certain tracts of land, some of which are now designated as "Highly Protected Significant Vegetation Areas" (HPSV). The purpose of the designation was to protect certain trees and wildlife habitats. Property owners (the Homeowners Association in this case) must submit and obtain approval of a management plan by the City prior to undertaking extensive activities in the designated areas. Some Homeowners Association (HOA) lands are not designated HPSV and the HOA may determine how to manage these tracts without City approval.

Since the original subdivision was approved in about 1999, little maintenance work has been done in the natural areas owned by the HOA, whether they are HPSV or other non-designated natural areas. Some dangerous trees have been removed or topped and some trimming has been done along the central path leading from West Hills Road to Reservoir Road.

Because little maintenance has occurred in these tracts of land, ivy has grown up many of the oaks, the wild plums have proliferated and other invasive species have thrived. In some cases, the health of the oaks and other desirable plant species are in jeopardy. In order to restore and sustain the health of the oaks and other species, some maintenance activities are needed or advisable. (See photos in Appendix B)

This year, several members of the Grand Oaks community have investigated the conditions of these tracts of land, spoken to forest and tree experts and consulted with the City. This document is a plan prepared by and for the consideration of the Grand Oaks community.

Purpose

The purpose for management within HPSV areas in Grand Oaks is to:

- Provide for the safety of people and homes through pruning or removal of hazardous trees and or wildfire fuels.
- Maintain safe and intact natural areas that promote native vegetation and wildlife habitat within Grand Oaks.
- Allow for the control of undesirable vegetation intruding along paved trails and/or into HPSV areas, or otherwise detracting from the aesthetic or environmental values associated with an HPSV area.
- Help maintain the large legacy Oregon White Oaks and other significant vegetation in the HPSV areas.

Goals

Vegetation Management Goals

- Promote the vitality of the native tree species. Encourage the vitality of the dominant native tree species on each HPSV site. Where Oregon White Oak is the dominant tree species it will be favored over other tree species.
- Support the development and maintenance of habitat for native wildlife and plants.
- Protect soil, air, and water quality when conducting management activities.
- Support statewide efforts to control invasive or noxious vegetation species. See the Oregon Department of Agriculture Noxious Weed Policy.

Community Values Goals

- Costs of implementing this plan shall not cause HOA dues to increase.
- HOA will seek funding and other assistance for management within HPSV areas from agencies or organizations interested in supporting vegetation management to protect/enhance the public values associated with these areas while achieving the HOA purposes for managing these areas.
- Comply with City of Corvallis Ordinance Chapter 4.12 – "Significant Vegetation Protection Provisions
- HOA may conduct regular, periodic activity to achieve the purpose of its plan without seeking approval from the City. Alternatively - have a timely, reliable, and predictable process for working through any issues with city administrators.
- Promote homeowner understanding, enjoyment and engagement in managing HPSV areas. Provide educational opportunities regarding HPSVs and the management of resources.
- Recognize the varying tolerances within the Grand Oaks community to vegetation management methods such as vegetation removal and use of herbicides. Use approaches that will be effective to meet the purpose and that minimize the use of methods that might cause concern within the community.
- Work with homeowners immediately adjacent to HPSVs to find effective approaches that also support the homeowners' enjoyment of their property.
- Homeowners or other volunteers will be encouraged to lead or to participate in management activities that will support the purpose and goals for managing HPSVs.

Planning Areas and Plan Duration

This vegetation management plan applies to the approximately eight acres of HPSV designated lands located in six distinct patches within the ownership of the Grand Oaks Summit Association.

Figure 1 displays the "Grand Oaks Summit Landscape Map" as documented by the City of Corvallis. It shows the HPSV areas labeled "AA" "O", "P", "Q", "T", and "Z". The geographic information systems (GIS) used for the displays in this plan measure the total acreage at 7.63 acres. The size of each of the areas is listed in Table 1. The acreages for each area correspond directly with the acreages in the Benton County Tax Rolls.

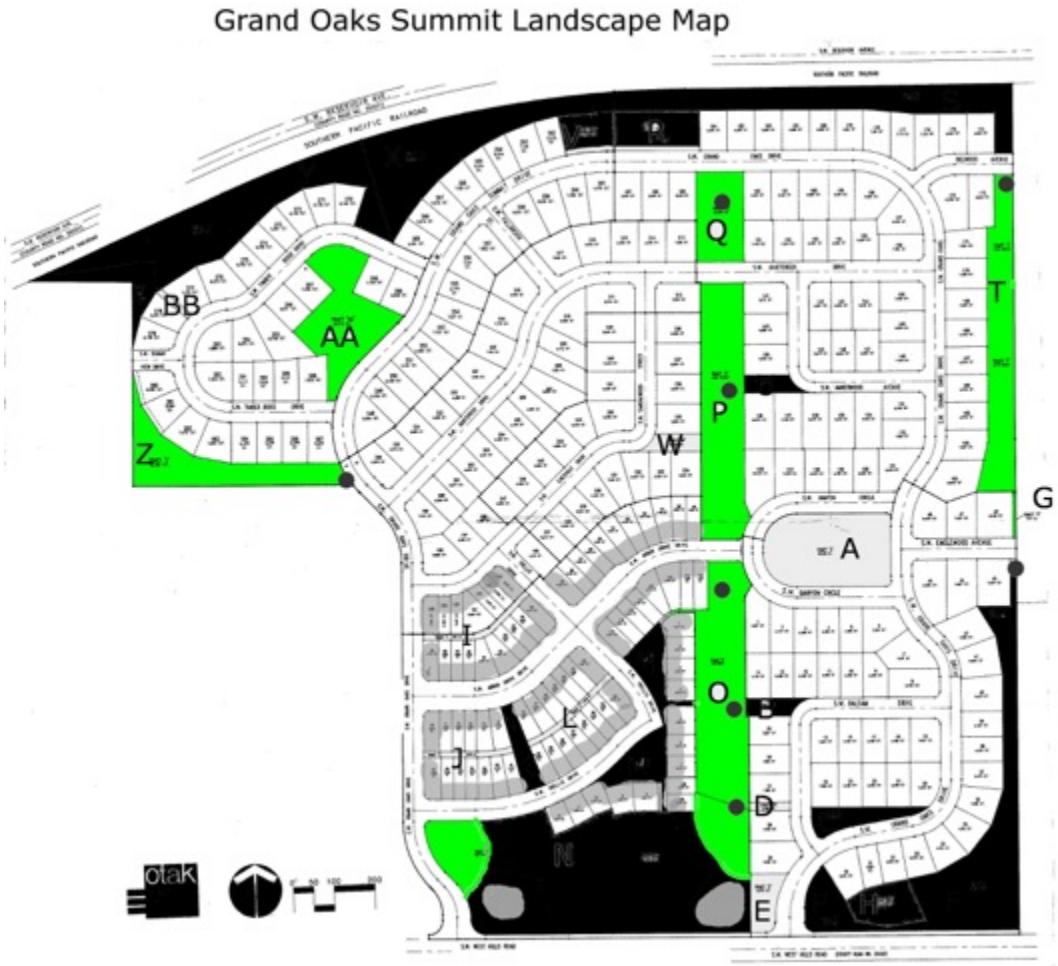


Figure 1

The plan does not have an expiration date however it will likely be updated approximately three years from the date of its anticipated initiation (2019).

Overview

Table 1 lists the acreage for the six areas.

Area Name	Total Acres	Acres in Prescription
AA	1.05	None
O	1.69	1.42
P	1.58	0.58
Q	0.61	None
Z	1.5	None
T	1.2	None
Grand Total	7.63	2.0

Table 1

All the areas contain invasive species and are threatened with increasing encroachment. Areas O and P have very high concentrations. Botanists and a wildlife biologist conducted extensive surveys of all areas to describe the plant species and communities present, and to identify at-risk or unusual plants, animals, habitats, and wetlands. No rare, state or federally listed plants or animals have been documented in any of the areas.

From a wildlife perspective, these areas have limited habitat value. Individually, they do not offer large enough patch sizes to maintain complex populations of native wildlife, especially large mammals. For squirrels, birds, amphibians, reptiles and insects, there is some value as nesting/core and cover habitats. Much foraging by these species is likely done in the surrounding developed landscape and other natural areas outside the development. The areas do have value as "connectors" for wildlife moving between larger habitat areas surrounding the Grand Oaks development. Small wetlands were documented in two of the plots. One of these wetlands contains relic oak prairie plant species such as camas and other lilies.

In the first three years of this plan, project management will focus on Areas O and P. Two demonstration sites will be used to evaluate different approaches for managing the HPSVs. Both demonstration prescriptions will protect the existing large Oregon White Oaks that dominate the overstory in these stands. The understory in both demonstration sites consists of primarily invasive or otherwise undesirable shrubs and ground covers. Demonstration Prescription #1 in Area O exerts selective and limited short-term control on invasive species and will likely require ongoing treatment over time to keep the undesirable species in check. Demonstration Prescription #2 in Area P takes a more aggressive approach that will remove most or all of the existing understory vegetation and replaces it with native shrubs and possibly Oregon White Oak seedlings.

It is anticipated that it will take the full three years to complete both demonstration prescriptions. However, whenever the approaches are completed and evaluated, they may be adjusted to better meet our stated goals or to be more effective, or less costly. Treatments in other areas may then be initiated: As of this writing, additional areas would be treated in the following priority order:

- Area T - to improve the ability to monitor and assess health of large trees.
- Northern untreated remainder of Area P - to avoid spread and re-invasion of invasives into Demonstration Site 2.
- Area AA - to protect wetland/prairie remnant and younger oak stand.
- Area Z - to help control further spread of ivy, blackberry and other invasives into Grand Oaks. (Should be coordinated with neighboring landowners.)
- Area Q - to protect the relatively high quality habitat conditions present.

Area Descriptions and Planned Management Activities

Area O (Figure 2) **and Area P (**Figure 3)

Prior to Grand Oaks Development

The row of large oaks served as a boundary between two large hayfields. Farmers tilled this area nearly to the base of the large oaks effectively minimizing the spread of invasive and native understory plants. Following the cessation of tilling, invasive species spread and dominated the understory.

Current Condition

Today, these two areas consist of a central core of very large oaks with tree canopies that occupy the vast majority of the site. The understory below the oaks consists of a heavy cover of state-listed invasive species (e.g. English Ivy, Himalayan blackberry, false brome), plus other highly invasive species including holly, cherry, English Hawthorne, and a dense stocking of plum spp. Other non-native invasive species include Herb-Robert, introduced rose species, and red-stemmed laurel. Low to moderate levels of native poison oak is present. A few native shrubs and forbs exist on the site. They include but are not limited to; Indian plum, snowberry, serviceberry, cow parsnip, sword fern, and wild cucumber.

The invasive plants are impacting the mature oaks by competing for water and nutrients. The ivy climbing the trunks is gradually increasing the risk of limb breakage or toppling the large oaks from added weight and wind resistance during severe winter storms. Invasives have virtually eradicated the native understory plant community, and are preventing natural regeneration of oaks in most of this area.

There is a narrow strip of grasses along the west side of these areas that have oak seedlings present. The oaks have sprouted from natural seeding and are about 6 inches to 18 inches in height. Tall, non-native grasses dominate the narrow strip with occasional

patches of native bunchgrasses and low growing flowers. The grasses in this area are periodically cut to minimize the fire hazard. Selected oak seedlings are protected.

Figure 2


0
100
200
Feet
N
Area "P"
1.58 Acres (Total)
Prescription #2
0.58 Acres

Figure 3

Planned Activities

1. Demonstration Prescription #1 – 1.42 acres
   The prescription will be applied on the forested portion of Area O (Figure 2). This area lies south of Arbor Grove Drive. The prescription will protect existing dominant Oregon White Oaks and treat only those invasive or undesirable species that are climbing or immediately threatening to climb on the oaks or those that pose the highest threat to spread rapidly in the next three to five years. In addition, a section of the demonstration area will be cleared of the invasive plum species that occur near the paved walking path. The treatment will utilize hand and small power equipment and will also selectively utilize herbicides. It will result in low to moderate visual change over most of the area.

   A. Tree Retention and Removal
      All dominant Oregon White Oaks will be retained unless a tree is determined to be a hazard to homes or people or is severely diseased. A certified arborist will be contacted to assess hazard or disease issues when the Landscape Committee suspects such conditions. As of this writing there are not any known hazard or disease concerns.

   B. Understory Species Control
      i. Ivy – wherever ivy is climbing the trunk of an oak or is within three feet of the base of an oak the ivy will be treated as follows:
         - If ivy is growing on the tree, cut out a twelve-inch segment of each vine of the ivy that is on the tree. Make this cut about four feet up the trunk from the base of the tree.
         - Wherever ivy is growing within three feet of the trunk of an oak tree, clear the ground for a radius of three feet around the base of each tree.
         - If practicable, remove and dispose of the ivy. Otherwise pile, mulch, and scatter the ivy that has been cleared.

      ii. Himalaya blackberry, evergreen blackberry, holly, English hawthorn, and false brome:
         - Sever the stems and dig out the root ball for individual stems or for clumps smaller than six feet in diameter.
         - Sever the stems in larger clumps and reevaluate for mechanical or herbicide treatment when sprouting occurs.
         - Remove and appropriately dispose of root balls, holly stems, *all false brome*, and other cuttings that may sprout. Pile, mulch, and scatter leaves and small branches.

      iii. Plum spp. – Between the two northern small paved crossing trails that intersect the north/south paved trail (a distance of about 200 feet or about half of the length of Area O) sever and remove or mulch all the plum stems that are growing within 12 feet of the paved north/south walking trail.

iv. Poison oak – apply herbicide to poison oak within 12 feet of any paved trails. To the extent practicable, control/eliminate poison oak throughout the area.

C. Monitoring and Retreatment – Annual basis.
Conduct Monitoring in late spring or early summer after the targeted vegetation has leafed out or would have leafed out. Mechanical retreatment may occur at any time. Herbicide treatments should be done at appropriate times to achieve effective results.

i. Monitor all oak trees for reinvasion by ivy. Re-sever any vines growing on the trunks and apply herbicide to ivy reinvading the three-foot radius that was previously cleared around the trunk.
ii. Monitor the areas where Himalaya or evergreen blackberry, holly, English Hawthorne, or false brome were severed and dug out. Apply herbicide to any new sprouts.
iii. Monitor the 12 x 200 foot strip where the plum species were removed and apply herbicide to any new sprouts.
iv. Monitor for poison oak sprouts within 10 feet of the paved trail and treat sprouts with herbicide.

2. Demonstration Prescription 2 – 0.58 acres.
This prescription will be applied in the southern portion of Area P (Figure 3). It starts at Arbor Grove Drive and continues north until it intersects with the paved trail that crosses over from Chestnut Drive. The prescription will protect existing dominant Oregon White Oaks and perform site preparation to significantly reduce or eliminate invasive species and create growing conditions to facilitate the establishment of a more desirable native shrub and herb layer. This treatment will be accomplished in stages over a three-year period and will result in a relatively high visual change in the short term.

A. Tree Retention and Removal

i. All dominant Oregon White Oaks will be retained unless a tree is determined to be a hazard to homes or people or is severely diseased. A certified arborist will be contacted to assess hazard or disease issues when the Landscape Committee suspects them. As of this writing there are not any known hazard or disease concerns.
ii. One plum tree exceeding 12” in diameter, several ranging in diameter from 4” to 10”, and many smaller saplings exist on the area. They are seed sources for initiating plum seedlings over much of the area. The larger plum will be girdled or treated with herbicide and topped at a height of about six feet. The others will be cut down. Some of the larger stems will be left on the ground to function as down wood. However, the majority of the stems and branches will be chipped or masticated and spread on the ground.

B. Site Preparation for Understory Development
   i. Prior to conducting cutting by the tracked machine in (ii), false brome will be removed from the treatment area. Herbicide treatment of the false brome may be an alternative to removal. The purpose of this step is to prevent spreading false brome by scattering it in the treatment area.
   ii. Cutting, Chipping, and Spreading.
   A tracked machine will likely be used to mechanically cut all the shrubs, plum saplings, and the ground covers on the site. The machine will also chip the material and spread the chips on the ground. The work will be accomplished with equipment and during weather conditions that will minimize soil compaction. If such machinery is unavailable; the vegetation will be cut, chipped, and spread by hand or the use of some other mechanical device.
   iii. Additional Methods to Control Understory Vegetation.
   In year one, the initial mechanical treatment might inadequately remove all the undesirable vegetation. If that occurs; hand tools, small power tools, or herbicides will be used to complete the removal. In years two and three, re-sprouting invasive or other undesirable species will be controlled using those same methods. Herbicide use will be selective and will be accomplished in accordance with all label requirements.

C. Planting
   Planting of native shrubs or Oregon White Oak seedlings might occur in year two however it is likely that this will not occur until year three so as to ensure that the undesirable shrubs and ground covers have been adequately controlled. Planting should occur during the late fall season, after receiving some fall precipitation.

D. Monitoring and Retreatment
   i. Year One. An onsite meeting will be held with the contractor before any work is done to assure that the objectives are clearly communicated. The contractor will also be monitored when the work is being performed. Photo points will be established and pre and post implementation conditions will be documented.
   ii. Year Two. The demonstration area will be inspected in late spring or summer to determine if undesirable shrubs or ground covers emerge during the growing season. Those that do emerge will be mechanically removed and/or treated with herbicide.
   iii. Year Three. Inspect the area in late spring or summer to determine if undesirable shrubs or ground covers emerge during the growing season. Mechanically remove and/or treat with herbicide. . Post project photos, an assessment of the treatment, and a final report will prepared for the Board and project partners.

iv. Year Four and Beyond. Monitor the condition of any planted trees, shrubs, and ground covers. Monitor the demonstration area in late spring or summer to determine if undesirable shrubs or ground covers emerge during the growing season. Continue management to encourage the vigor of the desired vegetation and to control any undesirable vegetation.

Area Q (Figure 4)
Prior to Grand Oaks Development
The area was part of a larger forest of primarily native tree shrub and ground covers that fringed the agricultural fields. The lack of disturbance slowed the invasion of non-native plant species (Appendix A).

Figure 4

Current Condition
The area consists of a central core of oaks with tree canopies that occupy most of the site. The mature oaks tend to be smaller (8"-24" diameter) than in Areas O and P. There are one or two very large and a few (4+) smaller Douglas-fir trees in the stand that are competing with the oaks. Other tree species include: isolated Pacific madrone saplings, a few cherry saplings, a large big leaf maple and a large cherry. In contrast to Areas O and P, there are relatively high amounts of down wood. The understory consists of dense native shrubs and forbs, with a light intrusion of invasive species in the interior of the stand and heavier densities around the edges.

Planned Activities
While in need of treatment, Area Q is the lowest priority among the remaining areas. During the first three years of the plan, no activities are currently planned. However as information from the demonstration prescriptions comes in and when adequate resources are available, additional areas will be treated.

Area AA (Figure 5)
Prior to Grand Oaks Development
The area was forested with primarily native tree, shrub, and ground cover (Appendix A).

Current Condition
This is a dense stand of oaks, generally ranging from 10 to 16 inches in diameter. There are some small Pacific madrone trees in the stand. There are also a few scattered conifer trees that are competing with the oaks. The conifers are located mainly in southern third of the area.

There is low-moderate cover of state listed invasive species (e.g. ivy, Himalayan and evergreen blackberry, false brome), plus large specimens of introduced rose, English hawthorn and some holly. Moderate to heavy levels of poison oak are present. Throughout much of Area AA there are more desirable native plants than in Areas O or P. Native shrubs (including Oregon grape) and forbs are comparatively abundant (60-80% cover). There is a "wet area" in the northern half of this area that contains a number of desirable native wet-prairie flowers such as camas, delphinium, and several species of lilies.

On the west side of the area, several species of landscaping plants are spreading into and becoming established in the natural area. The species include bamboo, vinca minor and butterfly bush. To the north, across the street, there is a dense concentration of Scotch broom and blackberry along the sidewalk on the southern edge of the non-HPSV natural area. All of these plants present high risk for further spread into Area AA and should be removed.

Planned Activities
Area T is second in the priority list of the remaining areas for treatment. During the first three years of the plan, no activities are currently planned. However as information from

the demonstration prescriptions comes in and when adequate resources are available, additional areas will be treated.

Figure 5

Area Z (Figure 5)

Prior to Grand Oaks Development

Similar to the current condition, the area was forested with primarily native tree, shrub, and ground cover (Appendix A).

Current Condition

The eastern two-thirds of the area is dominated by Douglas-fir trees with just a few scattered oaks that have been overtopped by the Douglas-fir for some time. The western third of the stand is a stand of oaks. The understory consists of primarily native shrub and herb species with a developing understory of invasive species (ivy, blackberry, false brome). There is a significant amount of poison oak throughout the stand.

Area Z is part of a larger natural area. Adjacent to and immediately to the south and the west are natural areas owned by adjoining landowners. Coordination and collaboration on treatments might be possible.

Planned Activities

Area Z is third on the priority list of the remaining areas for treatment. During the first three years of the plan, no activities are currently planned. However as information from the demonstration prescriptions comes in and when adequate resources are available, additional areas will be treated.

Area T (Figure 6)

Current Condition

The trees in this area include relatively large conifers, oaks, and other hardwoods. Cherry trees are well established and are competing with the mature oaks.

The understory density is highly variable with native shrubs, forbs, herbs, and sword fern throughout the area. Invasive species are also present and actively spreading

Planned Activities

Area T is at the top of the priority list of the remaining areas for treatment. During the first three years of the plan, no activities are currently planned. However as information from the demonstration prescriptions comes in and when adequate resources are available, additional areas will be treated.

Figure 6

Hazard Tree Assessment and Decision-making

For all the areas, if the Landscape Committee determines a tree is an immediate and extraordinary threat to homes or people or is severely diseased it may be pruned or removed if it has been determined to pose excessive risk by a certified arborist and the appropriate City of Corvallis staff approves the removal. The Landscape Committee commissions a hazard assessment by a certified arborist periodically. However if a specific situation arises where the committee is suspicious of a tree's condition, a certified arborist will be contacted to assess hazard or disease issues. As of this writing there are not any known hazard or disease concerns.

Community Awareness of Herbicide Use

If and when herbicides are used, prior to application - the areas will be identified with flagging, signs or other on site indicators. An announcement of intended herbicide application will be distributed through the community email distribution.

Homeowner or Volunteer Adoption of Sites

If a homeowner or a group of volunteers want to "adopt" any portion of an HPSV site adjacent to their home(s) or other areas outside of designated projects, approval of a plan describing the location/timing of all proposed activities must be obtained from the Landscape Committee. Approval will be contingent upon the proposed activities being aligned with the purpose and goals of the Grand Oaks Vegetation Management Plan for HPSV.

Adaptive Management and Plan Amendments

As the results of Demonstrations 1 and 2 are evaluated, there may be changes made to the approaches described in this plan. Any changes that might reasonably be expected to affect the integrity of the native tree species in the areas will be submitted to the Corvallis Urban Forester as an amendment to this plan. Such amendments will have to be approved by the city prior to implementation.

Reporting

By January 30th of each year following implementation of the plan, the Landscape Committee will submit a report to the HOA board documenting the management activities that were undertaken in projects or homeowner/volunteer adoption sites during the previous calendar year. The activities will be briefly described and the acreages treated will reported.

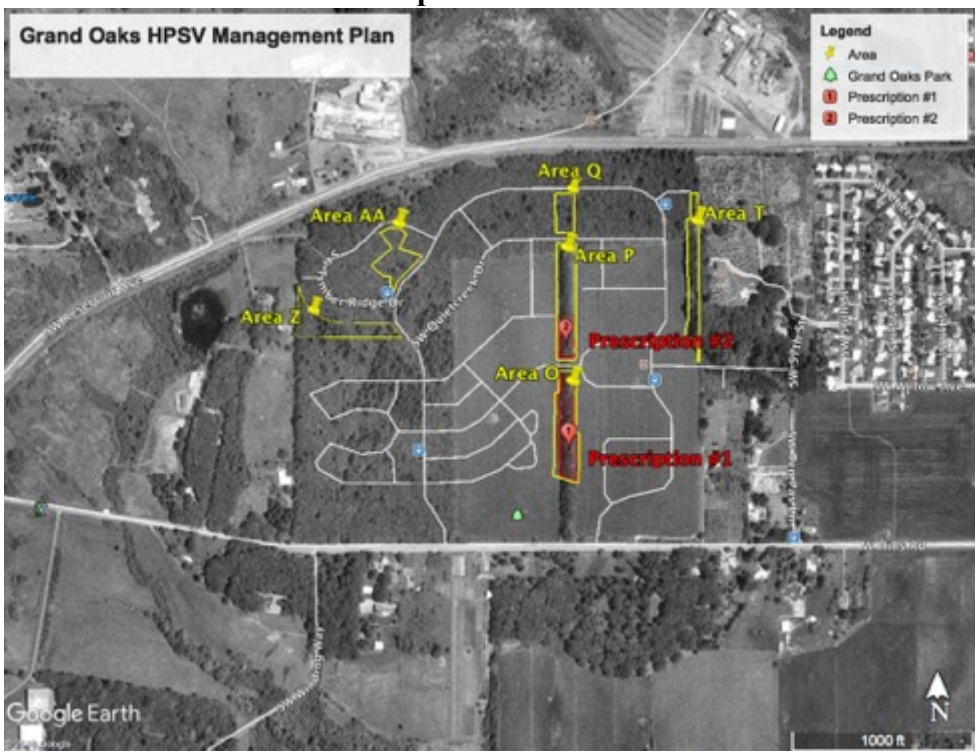
HOA Retains the Right to Not Implement This Plan

As described in the goals, spending on the implementation of this plan will not affect HOA dues. It is anticipated that funding assistance for the activities in the plan can be obtained from organizations interested in controlling invasive species or Oregon White Oak restoration. If funding is not found to support the plan, volunteer assistance will be sought. Lack of funding or lack of willing volunteers could prevent implementation of some or all of the plan. In approving this plan, the City of Corvallis agrees that the HOA may choose to not implement all or any part of this plan.

Appendix A – Planning Areas & Pre-Development Land Use

Grand Oaks Development 2018

Grand Oaks Site – Pre-Development 1994



The G.O. streets you see were not there at the time. Today's streets are displayed for reference.

Appendix B

Area O

Area P

Area Q

Area T

Appendix C Inventory Data Sheets

2018 Grand Oaks HPSV Vegetation Survey

As a preparatory step in the development of a management plan for the Grand Oaks Homeowners Association's "Highly Protected Significant Vegetation" (HPSV) areas, vegetation surveys were conducted in three site visits in March 2018. Surveyors were Jeff Uebel (wildlife/fisheries biologist and Grand Oaks resident) and Sarah Uebel (botanist and Corvallis-area resident). Jeff recently retired from a 38 year career as habitat biologist with the US Forest Service in Oregon and Washington. Sarah has over 19 years experience in western Oregon conducting field botanical inventories, surveys to locate rare plants, laboratory lichen and bryophyte identification, restoration of native plant communities, and environmental education. She currently works for the US Forest Service, and has worked with the USDA Pacific Northwest Forestry Sciences Laboratory and local non-profit wildland conservation organizations.

This survey was based on vegetation inventories conducted in 2002 and 2003 by the City of Corvallis to identify and assess significant tree groves and wildlife habitats in and near the City. That information was used by the City as a basis for designating HPSV areas. Results of this current survey were reported using the same form and area identification and description information used in the original inventory.
That original inventory described conditions within two large blocks of forest with significant tree groves and wildlife habitat value in the area where the Grand Oaks neighborhood was later developed:

- Donovan Oak Forest, Map Area W-9, 7.57 acres surveyed 05/27/2003. This area included the 1.2 acre HPSV-designated site "T" in the Grand Oaks HPSV Vegetation Management Plan.
- Timberhill West, Map Area W-2, 24.79 acres surveyed 11/26/2002. This area included the HPSV-designated sites "O" (1.69 acres), "P" (1.58 acres), "Q" (0.61 acres), "AA" (1.05 acres) and "Z" (1.5 acres).

The 2018 survey visited and described only the portions of the original map units that are mapped as HPSV sites owned and administered by the Grand Oaks Homeowners Association (sites O, P, Q, T, Z and AA; please refer to map in the Vegetation Management Plan). Approximately one hour was spent per site recording presence of native and non-native plant species, as well as documenting the forest habitat conditions there. Results were used to create a comprehensive plant list (refer to plant species spreadsheet), as well as updating the information on the original inventory forms (see attached six forms.)

Corvallis Natural Features Inventory
Vegetation Subpolygon

Habitat Site: West Hills Rd West; first survey 9/16/2002 **Map:** W13 (Gr Oaks Area O) **Size:** O:1.7ac
Site #: W-8B **Subpolygon** A (GO "Area O") **Date:** 03/18/2018 **Observers:** J&S Uebel
GPS Location: Foot survey from north to south **Method:** Visual ID, ~ 1 hour

Dominant Cover Type: Woody
ARA Type: 8 Hardwood > 70% closed canopy
Other ARA Types: None
% of Total Cover Trees: 90 **Shrubs:** 05 **Herbs/Vines:** 05 **Bare:** 0

Trees:
Type: Deciduous
Dominant Species: Oregon white oak
Secondary Species: Dense non-native invasive plum, >80% of understory.
Comments: Very old, fallen but live non-native plums along path in NE corner.
% Total Cover: ○ <10% ○ 10%-50% ○ 50%-90 ● >90%
% Invasive Cover: ○ <10% ● 10%-50% ○ 50%-90 ○ >90%
% Native Cover: ○ <10% ○ 10%-50% ● 50%-90 ○ >90%

Shrubs/Sapling:
Type: Deciduous
Dominant Species: Non-native plum, blackberry
Secondary Species: Indian plum, hazelnut, poison oak
Comments: Non-native reddish-stem laurel (spp?), English hawthorne and holly are low density but distributed throughout. Large blackberry thickets in northeast, middle and southwest of site.
% Total Cover: ○ <10% ○ 10%-50% ● 50%-90 ○ >90%
% Invasive Cover: ○ <10% ● 10%-50% ○ 50%-90 ○ >90%
% Native Cover: ○ <10% ● 10%-50% ○ 50%-90 ○ >90%

Herbaceous:
Dominant Species: Ivy
Secondary Species: Isolated sword ferns, wild cucumber
Comments: Native groundcover very sparse under heavy shade and competition from ivy and blackberry.
% Total Cover: ○ <10% ○ 10%-50% ● 50%-90 ○ >90%
% Invasive Cover: ○ <10% ○ 10%-50% ● 50%-90 ○ >90%
% Native Cover: ● <10% ○ 10%-50% ○ 50%-90 ○ >90%

Site #: WC-8 A

Corvallis Natural Features Inventory
Vegetation Subpolygon

Habitat Site: West Hills Rd West; first survey 09/16/2002 **Size:** O=1.69 ac
Site #: W-8B **Subpolygon** A (Grand Oaks "Area O") **Map:** Area O

Rare, Threatened, or Endangered (RTE) Species

ORNHIC Plant Community: ◉ None Noted ○ Listed Community Noted
ORNHIC Database: ◉ No Record ○ Documented Record
RTE Species Observed: None RTE Potential Habitat: 5b, 5c, 5d
RTE Species Comment:

Other Factors

General Health/Condition: Irregular 'line' of large to very large old oaks (2-4' dbh); little to no oak reprod. beneath. Native herbs and forbs largely absent. Understory dominated by ivy, plum seedling/saplings and blackberry thickets.

Unique Features: Old, collapsed wire fence runs N/S along mid-line of this strip. Old oaks display various growth forms- single and multi-trunks, columnar to broad crowns.

Restoration Potential

Recommended Actions: Remove ivy- especially climbing, flowering growth on old oaks. Eliminate large thickets of blackberry. Remove non-native plum, restore native shrub/forbs.

Current Efforts: Grassy area west of pathway has oak seedlings 6-36" high. They are marked & protected from mowing in summer. 4 eastside patches are tended by adj owners.*

COMMENTS * Tended patches: all 4 attempted to remove/control blackberry and ivy with varying success. One (south end) has used non-native landscaping plants (euphorbia, laurels, etc) for aesthetics and to prevent re-growth of ivy and blackberry.

Chickadees observed.

Site #: WC-8 A

Corvallis Natural Features Inventory
Vegetation Subpolygon

Habitat Site: West Hills Rd West; first survey 9/16/2002 **Map:** W13 (Gr Oaks Area P) **Size:** P:1.6 ac
Site #: W-8B **Subpolygon** A (GO "Area P") **Date:** 03/18/2018 **Observers:** J&S Uebel
GPS Location: Foot survey from north to south **Method:** Visual ID, ~ 1 hour

Dominant Cover Type: Woody
ARA Type: 8 Hardwood > 70% closed canopy
Other ARA Types: None
% of Total Cover Trees: 90 **Shrubs:** 05 **Herbs/Vines:** 05 **Bare:** 0

Trees:
Type: Deciduous
Dominant Species: Oregon white oak
Secondary Species: Non-native invasive plum
% Total Cover: ○ <10% ○ 10%-50% ○ 50%-90 ● >90%
% Invasive Cover: ○ <10% ● 10%-50% ○ 50%-90 ○ >90%
% Native Cover: ○ <10% ○ 10%-50% ● 50%-90 ○ >90%
Comments: Irregular line of very large oaks (2- 4' dbh, spaced ~30' apart). Mature non-native plums (10-12" dbh) are balance of overstory. Young and older plums form dense wall along the west border.

Shrubs/Sapling:
Type: Deciduous
Dominant Species: Non-native plum saplings (west side); blackberry thickets and plum on east side
Secondary Species: Indian plum, hazelnut, poison oak
% Total Cover: ○ <10% ○ 10%-50% ● 50%-90 ○ >90%
% Invasive Cover: ○ <10% ● 10%-50% ○ 50%-90 ○ >90%
% Native Cover: ○ <10% ● 10%-50% ○ 50%-90 ○ >90%
Comments: Native shrub cover (30%, scattered). English hawthorne, holly, red-stem laurel are low density but distributed throughout. Lg blackberry thickets in NE portion of site.

Herbaceous:
Dominant Species: Ivy (90-100% groundcover as well as climbing up oaks.)
Secondary Species: Isolated sword ferns, wild cucumber, poison oak. False brome throughout.
% Total Cover: ○ <10% ○ 10%-50% ● 50%-90 ○ >90%
% Invasive Cover: ○ <10% ○ 10%-50% ● 50%-90 ○ >90%
% Native Cover: ● <10% ○ 10%-50% ○ 50%-90 ○ >90%
Comments: Native groundcover very sparse under heavy shade and competition from ivy, blackberry, and false brome. Non-native "jack in pulpit" in center- remove.

Site #: WC-8 A

Corvallis Natural Features Inventory
Vegetation Subpolygon

Habitat Site: West Hills Rd West; first survey 09/16/2002 **Size:** P=1.58 ac
Site #: W-8B **Subpolygon** A (Grand Oaks "Area P") **Map:** Area P

Rare, Threatened, or Endangered (RTE) Species

ORNHIC Plant Community: ● None Noted ○ Listed Community Noted
ORNHIC Database: ● No Record ○ Documented Record
RTE Species Observed: None RTE Potential Habitat: 5b, 5c, 5d
RTE Species Comment:

Other Factors

General Health/Condition: Irregular 'line' of large to very large old oaks (2-4' dbh); little to no oak reprod. beneath. Native herbs and forbs largely absent. Understory dominated by ivy, plum seedling/saplings and blackberry thickets.

Unique Features: Old, collapsed wire fence runs N/S along mid-line of this strip. Old oaks display various growth forms- single and multi-trunks, columnar to broad crowns.

Restoration Potential

Recommended Actions: Remove ivy- especially climbing, flowering growth on old oaks. Eliminate large thickets of blackberry. Remove most non-native plum, restore native shrub/forbs.

Current Efforts: Grassy area west of pathway has oak seedlings 6-18" high. They are marked & protected from mowing in summer.

COMMENTS Varied thrush and gray squirrel observed. 'Rough' kid's play trail runs the length of this area; tree 'fort' at base of large oak observed in northern portion.

Very large, old non-native plum (1'+ diameter) located just north of trail crossing in middle of unit. Girdle and top?

Site #: WC-8 A

Corvallis Natural Features Inventory
Vegetation Subpolygon

Habitat Site: West Hills Rd West; first survey 9/16/2002 **Map:** W13 (Gr Oaks Area Q) **Size:** Q:0.6 ac
Site #: W-8B **Subpolygon** A (Grand Oaks Area Q) **Date:** 03/18/18 **Observers:** J & S Uebel
GPS Location: Foot survey from north to south **Method:** Visual ID, ~ 1 hour

Dominant Cover Type: Woody
ARA Type: 8 Hardwood > 70% closed canopy
Other ARA Types: None
% of Total Cover Trees: 80 **Shrubs:** 10 **Herbs/Vines:** 10 **Bare:** 0

Trees:
Type: Deciduous
Dominant Species: Oregon white oak
Secondary Species: Sweet cherry, Douglas fir
% Total Cover: ○ <10% ○ 10%-50% ● 50%-90 ○ >90%
% Invasive Cover: ○ <10% ● 10%-50% ○ 50%-90 ○ >90%
% Native Cover: ○ <10% ○ 10%-50% ● 50%-90 ○ >90%
Comments: 2 large, mature Doug fir north end & 4+ young DF overtopping oaks.1 very large sweet cherry (3' dbh) and large bigleaf maple east-side center. Madrone sapling.

Shrubs/Sapling:
Type: Deciduous
Dominant Species: Snowberry, Indian plum, sweet cherry saplings
Secondary Species: Serviceberry, plus invasive plum, rose, and blackberry
% Total Cover: ○ <10% ● 10%-50% ○ 50%-90 ○ >90%
% Invasive Cover: ● <10% ○ 10%-50% ○ 50%-90 ○ >90%
% Native Cover: ○ <10% ● 10%-50% ○ 50%-90 ○ >90%
Comments: Poison oak is light. Invasive blackberry, sweet cherry, plum, rose and hawthorne are spreading. Some willow sprouting in landscaped areas on north end.)

Herbaceous:
Dominant Species: No dominant.
Secondary Species: Native forbs and grasses, some false brome and ivy
% Total Cover: ○ <10% ● 10%-50% ○ 50%-90 ○ >90%
% Invasive Cover: ○ <10% ● 10%-50% ○ 50%-90 ○ >90%
% Native Cover: ● <10% ○ 10%-50% ○ 50%-90 ○ >90%
Comments: North and south ends are cleared and landscaped with non-native grass and maples. Ivy is light in northern half, mod-heavy in south. False brome starting to spread.

Site #: WC-8 A

Corvallis Natural Features Inventory
Vegetation Subpolygon

Habitat Site: West Hills Rd West; first survey 9/1/2002 **Size:** Q: 0.6 ac
Site #: W-8b **Subpolygon** A (Area Q) **Map:** Area Q; 0.6 ac

Rare, Threatened, or Endangered (RTE) Species

ORNHIC Plant Community: ● None Noted ○ Listed Community Noted
ORNHIC Database: ● No Record ○ Documented Record
RTE Species Observed: None RTE Potential Habitat: 5b, 5c,5d
RTE Species Comment:

Other Factors

General Health/Condition: Redtail hawk nest (active 2016-18) in oak on north edge. Smaller dia oaks than Area O & P. Good levels of down woody debris (8-24" dia). Thick, healthy native understory (low levels herbs). Very good native vegetative and habitat quality.

Unique Features: Very large sweet cherry (3' dia) and big leaf maple in center and seeding rest of plot.

Restoration Potential

Recommended Actions: Remove ivy, Himalayan blackberry, holly and false brome (light-mod levels.) Remove sapling cherry (mod.) and plum (light); girdle/top young DF and lg cherry.

Current Efforts: Grassy landscaped areas on north and south ends: replace non-native maples & grasses with plant native oaks and grass prairie species? (Save willow on n end.)

COMMENTS This is a small area of high functioning oak woodland habitat. It could serve as template for restoration of parts of Areas O, P and T. Invasives appear to be rapidly spreading and growing within the native forest, and risk to habitat function is fairly high if not treated in next several years. Grassy landscaped areas offer opportunity to increase the size of this small area of native veg/habitat by10-20%.

Site #: WC-8 A

Corvallis Natural Features Inventory
Vegetation Subpolygon

Habitat Site: Donovan Oak Forest, first survey 052703 **Map:** W9 (Gr. Oaks Area T) **Size:** T:1.2 ac
Site #: WC-13a **Subpolygon** A (Grand Oaks Area T) **Date:** 03/18/18 **Observers:** J & S Uebel
GPS Location: Linear survey from north to south **Method:** Visual survey, ~ 1 hour

Dominant Cover Type: Woody
ARA Type: 8 Hardwood > 70% closed canopy
Other ARA Types: None
% of Total Cover Trees: 90 **Shrubs:** 05 **Herbs/Vines:** 05 **Bare:** 0

Trees:
Type: Deciduous
Dominant Species: Oregon white oak
Secondary Species: Douglas fir, grand fir, sweet cherry, big leaf maple
% Total Cover: ○ <10% ○ 10%-50% ○ 50%-90 ● >90%
% Invasive Cover: ○ <10% ● 10%-50% ○ 50%-90 ○ >90%
% Native Cover: ○ <10% ○ 10%-50% ● 50%-90 ○ >90%
Comments: A few large diameter specimens of oak and Douglas fir (>5' dbh). 1-2' dbh oaks are ~50% of canopy cover; sweet cherry ~ 33% and Douglas fir ~10%. Doug fir overtopping oak on south end.

Shrubs/Sapling:
Type: Deciduous
Dominant Species: None
Secondary Species: Himalayan blackberry, sweet cherry saplings; Indian plum and snowberry
% Total Cover: ○ <10% ○ 10%-50% ● 50%-90 ○ >90%
% Invasive Cover: ○ <10% ○ 10%-50% ● 50%-90 ○ >90%
% Native Cover: ○ <10% ● 10%-50% ○ 50%-90 ○ >90%
Comments: North half: Invasive hawthorne and holly = light.
South half: Holly light, invasive hawthorne seedling/saplings moderate. Madrone near south end.

Herbaceous:
Dominant Species: Undetermined
Secondary Species: English ivy
% Total Cover: ○ <10% ● 10%-50% ○ 50%-90 ○ >90%
% Invasive Cover: ○ <10% ● 10%-50% ○ 50%-90 ○ >90%
% Native Cover: ● <10% ○ 10%-50% ○ 50%-90 ○ >90%
Comments: Him. blackberry heavy throughout.
North half: Tansy; ivy light, but starting up trees and heavy along east edge.
South half: Ivy heavy, climbing and flowering; false brome light.

Site #: WC-1 A

Corvallis Natural Features Inventory
Vegetation Subpolygon

Habitat Site: Donovan oak forest **Size:** Area T 1.2 ac
Site #: WC-13A **Subpolygon** A (Grand Oaks "Area T") **Map:** W-9 (G.O. Area T)

Rare, Threatened, or Endangered (RTE) Species

ORNHIC Plant Community: ● None Noted ○ Listed Community Noted
ORNHIC Database: ● No Record ○ Documented Record ?
RTE Species Observed: None RTE Potential Habitat: 4a
RTE Species Comment:

Other Factors

General Health/Condition: Nice stand of mature oak, especially extending off Grand Oaks property to the east. DF overtopping oaks on north end. Several large oaks near southern end removed some years ago (stumps and stacked cut wood. See 1)* below.)

Unique Features: Several large oaks and Douglas fir specimens. A small pond/wetland near north end (storm drain feature?); native Juncus ensifolius and cattails present.

Restoration Potential

Recommended Actions: Remove non-native invasives, especially ivy (2 species), sweet cherry, and Himalayan blackberry. Wetland improvement- remove blackberry.

Current Efforts: Northern-most end was scalped and replanted with Doug fir, red cedar and pine (adjacent landowner?) Small oaks and invasive hawthorne are regenerating.

COMMENTS

1) *One area ~ 60' X 100' near south end appears to be actively tended; it has been cleared and several large oaks removed (close to a home.)
2) Additional potential restoration action: several large oaks near south end are overtopped by Doug fir; consider removing DF? (Girdle and/or top?)
3) Sighted flicker, acorn woodpecker, varied thrush. Heard pileated woodpecker. Raccoon sign.

Site #: WC1A

Corvallis Natural Features Inventory
Vegetation Subpolygon

Habitat Site: West Hills Rd West; first survey 9/16/2002 **Map:** W13 (Gr Oaks Area Z) **Size:** Z:1.5 ac
Site #: W-8B **Subpolygon** A(GrandOaksAreaZ) **Date:** 03/05/18 **Observers:** J&S Uebel
GPS Location: Foot survey from east to west **Method:** Visual ID, ~ 1 hour

Dominant Cover Type: Woody
ARA Type: Conifer and Hardwood > 70% closed canopy
Other ARA Types: None
% of Total Cover Trees: 90 **Shrubs:** 5 **Herbs/Vines:** 5 **Bare:** 0

Trees:
Type: Deciduous
Dominant Species: Douglas fir
Secondary Species: Oregon white oak
Comments: Western third of this area is oak forest;; eastern two-thirds is dominated by large Douglas fir (2'+ diameter). The fir in this area are overtopping residual pockets of oaks.
% Total Cover: ○ <10% ○ 10%-50% ○ 50%-90 ● >90%
% Invasive Cover: ● <10% ○ 10%-50% ○ 50%-90 ○ >90%
% Native Cover: ○ <10% ○ 10%-50% ● 50%-90 ○ >90%

Shrubs/Sapling:
Type: Deciduous
Dominant Species: Indian plum (osoberry), snowberry, Oregon grape
Secondary Species: Current, poison oak, cascara, serviceberry, native and non-native hawthorne.
Comments: Diverse shrub/understory, predominantly native. Non-natives are established and appear to be spreading.
% Total Cover: ○ <10% ○ 10%-50% ● 50%-90 ○ >90%
% Invasive Cover: ○ <10% ● 10%-50% ○ 50%-90 ○ >90%
% Native Cover: ○ <10% ○ 10%-50% ● 50%-90 ○ >90%

Herbaceous:
Dominant Species: Sword fern, numerous other native herbs and forbs
Secondary Species: Ivy, Roberts geranium, native & introduced blackberries, false brome
Comments: Diverse groundcover of native and non-native plants. Invasives are well established and spreading.
% Total Cover: ○ <10% ● 10%-50% ○ 50%-90 ○ >90%
% Invasive Cover: ○ <10% ● 10%-50% ○ 50%-90 ○ >90%
% Native Cover: ○ <10% ● 10%-50% ○ 50%-90 ○ >90%

Site #: WC-8A

Corvallis Natural Features Inventory
Vegetation Subpolygon

Habitat Site: West Hills Rd West; first survey 9/16/2002 **Size:** Z:1.5 ac
Site #: W-8B **Subpolygon** A (Grand Oaks "Area Z") **Map:** W13 (GrOaks Z)

Rare, Threatened, or Endangered (RTE) Species

ORNHIC Plant Community: ◉ None Noted ○ Listed Community Noted
ORNHIC Database: ◉ No Record ○ Documented Record
RTE Species Observed: None RTE Potential Habitat: 5b, 5c, 5d
RTE Species Comment:

Other Factors

General Health/Condition: Relatively healthy, diverse forest. Mature Douglas fir overtopping & crowding out oaks in eastern two-thirds of this block. Western third is healthy oak woodland. Noted several small trees felled near homeowner fences- none recent.

Unique Features: Grand Oaks Homeowners Association owns the northern half of this forest block; Grand Oaks Community (apartments) owns the southern half. Complicates mngt.

Restoration Potential

Recommended Actions: Control non-native blackberry (2 spp), ivy, false brome, hawthorne, cherry, other invasives. Coordinate with GO Community Apartments to treat entire forest block.

Current Efforts: None noted.

COMMENTS This is part of a nice block of very diverse western Oregon forest, featuring good examples of both conifer and oak forest types. Habitat is 'functional' but at-risk due to spreading invasives. This block differs from other GO HPSV areas in having some limited connectivity to other large blocks of forest on other ownerships to the south and west. (Consider developing an interpretive forest trail serving combined Grand Oaks developments? Would detract from habitat value...)

Site #: WC-8A

Corvallis Natural Features Inventory
Vegetation Subpolygon

Habitat Site: West Hills Rd. West; first survey 9/16/2002 **Map:** W13 (Gr Oaks Area AA) **Size:** 1.1 ac
Site #: W-8b **Subpolygon** A (Grand Oaks Area AA) **Date:** 08/20/18 **Observers:** J&S Uebel
GPS Location: Foot survey from north to south **Method:** Visual ID, ~ 1 hour

Dominant Cover Type: Woody
ARA Type: 8 Hardwood > 70% closed canopy
Other ARA Types: None
% of Total Cover Trees: 80 **Shrubs:** 10 **Herbs/Vines:** 10 **Bare:** 0

Trees:
Type: Deciduous
Dominant Species: Oregon white oak
Secondary Species: Douglas fir

% Total Cover: ○ <10% ○ 10%-50% ● 50%-90 ○ >90%
% Invasive Cover: ○ <10% ○ 10%-50% ○ 50%-90 ○ >90%
% Native Cover: ○ <10% ○ 10%-50% ● 50%-90 ○ >90%

Comments: Uniform, relatively dense stocking of smaller oak (6-24" dbh.) A few large (>12" dbh) plus 5-10 small Douglas fir (6-12") on south and west sides.

Shrubs/Sapling:
Type: Deciduous
Dominant Species: Poison oak, Oregon grape
Secondary Species: Native and invasive rose.

% Total Cover: ○ <10% ● 10%-50% ○ 50%-90 ○ >90%
% Invasive Cover: ● <10% ○ 10%-50% ○ 50%-90 ○ >90%
% Native Cover: ○ <10% ● 10%-50% ○ 50%-90 ○ >90%

Comments: Madrone present. A few sapling Ponderosa pine, holly, sweet cherry, plum and both native and invasive hawthorne. Invasive rose appears to be spreading.

Herbaceous:
Dominant Species: Invasive blackberry, native grasses and forbs
Secondary Species: Orchard grass, tall fescue, false brome

% Total Cover: ○ <10% ○ 10%-50% ● 50%-90 ○ >90%
% Invasive Cover: ○ <10% ● 10%-50% ○ 50%-90 ○ >90%
% Native Cover: ○ <10% ● 10%-50% ○ 50%-90 ○ >90%

Comments: Moderate-high level of Himalayan plus low level of evergreen blackberry. Low amounts of non-native grasses, some false brome (heavier on south portion.) Ivy just getting started.

Site #: WC 8A

Corvallis Natural Features Inventory
Vegetation Subpolygon

Habitat Site: West Hills Rd West; first survey 09/16/2002 **Size:** AA: 1.05 ac
Site #: W-8B **Subpolygon** A (Area AA) **Map:** GrandOaks Area AA

Rare, Threatened, or Endangered (RTE) Species

ORNHIC Plant Community: ●None Noted ○Listed Community Noted
ORNHIC Database: ●No Record ○Documented Record
RTE Species Observed: None RTE Potential Habitat: 5b, 5c, 5d
RTE Species Comment:

Other Factors

General Health/Condition: Appears to be wet oak prairie/woodland remnant. Well established herbaceous and shrub understory. Invasives starting to dominate understory, especially in southern half.

Unique Features: Intermittent stream drains area from south to north; ephemeral wetland across north end of area. Contains remnant oak prairie species- camas, columbine.

Restoration Potential

Recommended Actions: Remove (in priority order) invasive blackberry, false brome, rose, hawthorne, holly and ivy. Girdle/top Doug fir on south side. Consider thinning oak

Current Efforts: Young oak stand is already naturally self thinning, but this is leading to spindly, columnar growth in remaining oaks.

COMMENTS Observed varied thrush, scrub jay, and flicker (on snags SW side); deer sign. Heavy patch of Scot's broom across Timber Ridge Drive in landscaped area to north of HPSV represents high risk of spread into Area AA- should remove/control. Invasives much worse along southern and cleared margins. Escaped landscape plants along western margin: bamboo, vinca mino, butterfly bush- remove. Large cottonwood volunteer on north edge along sidewalk- remove?

Site #: WC BA

Grand Oaks Plant List

Scientific Name	Common Name	Growth habit	Introduced or Native	Priority for "I" Removal
Achillea millefolium	yarrow	forb	N	
Adenocaulon bicolor	pathfinder	forb	N	
Allium sp	onion, chive	forb	I	no
Aquilegia formosa	columbine	forb	N	
Camas quamash	common camas	forb	N	
Cardamine nutallii	spring beauty	forb	N	
Cardamine oligosperma	little western bittercress	forb	N	
Cirsium arvense	Canada thistle	forb	I	moderate
Cirsium vulgare	bull thistle	forb	I	low
Claytonia siberica	miner's lettuce	forb	N	
Daucus carrota	Queen Anne's lace	forb	I	low
Dichelostemma congestum	ookow	forb	N	
Epilobium (ciliatum ?)	willowherb	forb	N	
Erythronium oreganum	fawn lily	forb	N	
Fragaria sp.	domestic strawberry	forb	I	no
Fragaria virginana	Virgina strawberry	forb	N	
Galium triflorum	bedstraw	forb	N	
Geranium dissectum	cut leaf geranium	forb	I	no
Geranium robertianum	Robert's geranium	forb	I	moderate
Geum macrophyllum	largeleaf avens	forb	N	
Hedera helix	English ivy	forb	I	High
Hedera hibernica	Atlantic ivy	forb	I	High
Heracleum maximum	common cow parsnip	forb	N	
Hypericum calycinum	Aaron's beard	forb	I	moderate
Hypericum perforatum	St. John's wort	forb	I	low
Hypochaeris radicata	rough cat's ear	forb	I	low
Jacobaea vulgaris	stinking willie	forb	I	low
Lactuca murialis	wall lettuce	forb	I	low
Lactuca sp	wall lettuce	forb	I	low
Lapsana communis	nipplewort	forb	I	low
Leucanthemum vulgare	ox eye daisy	forb	I	low
Lonicera ciliosa	orange honeysuckle	forb	N	
Lonicera hispidula	hairy honeysuckle	forb	N	
Marah oreganus	coastal manroot	forb	N	
Myosotis discolor	changing forget-me-not	forb	I	no

Nemophila parviflora	smallflower nemophila	forb	N	
Osmorhiza chilensis	sweet cicily	forb	N	
Phoradendron serotinum	oak mistletoe	forb	N	
Plantago lanceolata	lance leaf plantain	forb	I	no
Polypodium glycyrrhiza	licorice fern	forb	N	
Polystichum munitum	sword fern	forb	N	
Prunella vulgaris	self heal	forb	N	
Pteridium aquilinum	bracken fern	forb	N	
Ranunculus sp.	buttercup	forb	N	
Rumex cripsus	curly dock	forb	I	no
Sanicula crassicaulis	Pacific blacksnakeroot	forb	N	
Satureja douglasii	yerba buena	forb	N	
Senecio sylvaticus	woodland groundsel	forb	I	low
Sonchus asper	prickly sow thistle	forb	I	low
Taraxacum officinale	common dandelion	forb	I	no
Tellima grandiflora	large fringecup	forb	N	
Trifiolium repens	clover	forb	I	
Typha latifolia	broad leaf cat tail	forb	N	
Veronica sp.	speedwell	forb	N	
Vicia sp.	vetch	forb	I	no
Vicia sp. (arvense?)	vetch	forb	I	no
Vinca minor	common periwinkle	forb	I	low
Viola sp.	violet	forb	N	
Brachypodium sylvaticum	false brome	graminiod	I	High
Dactylis glomerata	orchard grass	graminiod	I	low
Festuca romerii (?)	Romer's fescue	graminiod	N	
Holcus lanatus	velvet grass	graminiod	I	low
Juncus ensifolius	sword leaf rush	graminiod	N	
Juncus sp. (effusus ?)	rush	graminiod	N	
Schedonorus arundinaceus	tall fescue	graminiod	I	moderate
Unknown (Agrostis ?)		graminiod	I	low
Acer circinatum	vine maple	shrub	N	
Amelanchier alnifolia	Saskatoon serviceberry	shrub	N	
Buddleja davidii	butterfly bush	shrub	I	moderate
Corylus cornuta	beaked hazel	shrub	N	
Cystus scoparius	Scot's broom	shrub	I	moderate
Forsythia sp.	Forsythia	shrub	I	no
Gaultheria shallon	salal	shrub	N	
Mahonia aquifolium	tall Oregon grape	shrub	N	
Oemleria cerasiformis	Oso berry	shrub	N	
Prunus laurocerasus (?)	laurel cherry	shrub	I	moderate

Rhododendron sp.	rhododendron hybrid	shrub	I	no
Ribes sp.	currant	shrub	N	
Rosa gymnocarpa	rose	shrub	N	
Rosa sp.	rose	shrub	I	moderate
Rubus armeniacus	Himalayan blackberry	shrub	I	moderate
Rubus lacinatus	everygreen blackberry	shrub	I	moderate
Rubus ursinatus	trailing blackberry	shrub	N	
Salix sp.	willow	shrub	N	
Symphoricarpos albus	common snowberry	shrub	N	
Symphoricarpos mollis	snowberry	shrub	N	
Toxicodendron diversilobum	poison oak	shrub	N	
Vaccinium ovatum	evergreen huckleberry	shrub	N	
	Bamboo	shrub	I	moderate
Abies grandis	Grand fir	tree	N	
Abies sp.	Fir	tree	I	no
Acer macrophyllum	big leaf maple	tree	N	
Arbutus menzesii	Pacific madrone	tree	N	
Chamaecyparis lawsoniana	Port Orford cedar	tree		
Crataegus douglasii	black hawthorn	tree	N	
Crataegus monogyna	one seed hawthorn	tree	I	moderate
Ilex aquifolium	English holly	tree	I	moderate
Malus sp.	crab apple	tree		
Picea sp.	spruce	tree	I	no
Pinus ponderosa	valley ponderosa pine	tree	N	
Populus balsamifera v. trichocarpa	black cottonwood	tree	N	
Prunus avium	Sweet cherry	tree	I	High
Prunus cerasifera	purple leaf plum	tree	I	low
Prunus spinosa	blackthorn	tree	I	High
Pseudotsuga menzesii	Douglas fir	tree	N	
Quercus garryana	Oregon white oak	tree	N	
Rhamnus purshiana	Cascara buckthorn	tree	N	
Sequoiadendron giganteum	giant sequoia	tree	I	no
Thuja plicata	western red cedar	tree	N	