

## **WILDLIFE HABITAT INVENTORY THE VILLAGE AT OAK CREEK**

### **Introduction**

The City of Corvallis requested a Wildlife Habitat Inventory for the proposed Village at Oak Creek, “indicating if there are any significant habitats on this site.” The City acknowledged that they do not have a definition or reference defining what is meant by “significant” wildlife habitat. However, at a minimum, this report must address threatened and endangered species.

The report will describe the plant communities (i.e., habitats) on the site and the value of them for wildlife. Significance is a value judgment based on societal and personal values. Some commonly accepted concepts in ecology are that plant species diversity and structural (or vertical) diversity is positively correlated with animal species diversity. On a landscape level, a corollary is that a mosaic (horizontal diversity) of plant communities is positively correlated to wildlife diversity. Biologists believe that biodiversity leads to long-term environmental stability and is “good”. Following that line of reasoning one may define any parcel that is diverse in terms of species, communities with horizontal and vertical diversity, communities with diversity in terms of age of plant communities as significant.

Another consideration often used for determining significance is whether a plant community represents a relic of a declining community type. This line of reasoning suggests that a plant community that is representative of an historic (pre-Euro American development) community and is now declining or rare in representation is significant. Here, significance is attached to a *community* rather than a particular *species*.

Some people believe that any habitat should be considered to be significant if it has potential for leading to the decline of a population of either plants or animals. Changes in wildlife populations occur both naturally and by human impacts. Many people have a favorite animal or plant and feel that impacts to their favorite species is significant. Predicting impacts to species that are not listed as rare or endangered is often difficult in anything but a general manner. Impact to habitat of one species often creates or enhances habitat for another. Natural succession in plant communities creates significant impacts to wildlife populations. Whether wildlife habitat is significant depends in part on management objectives.

Location and size of a particular habitat type in a watershed is important to many people. For example, forested riparian habitats are considered important for their contribution to water quality, wildlife habitat, and connectivity (corridor effect) to other habitats. Larger undeveloped areas are assumed to be better or more “significant” than small areas because they can support animals with larger home ranges or greater numbers of wildlife. However, it is difficult to quantify large and small as the area of critical habitat varies among species.

Other issues that are difficult for assessing significance involve scale, context, and whether ecological processes that support a particular habitat type can or will be maintained if surrounding habitat changes. While preserving biodiversity on a global or regional scale is

considered important or “significant”, does it demand that diverse habitat within a compact urban setting be classified as “significant” and deserving of perpetual protection? If a relic plant community was once dependent on fire does it continue to have significance if fire can no longer safely be used to maintain it?

Lacking specific guidance from the City of Corvallis, the following criteria will be used to determine whether a plant community is significant at the proposed Village at Oak Creek:

- Presence of a threatened, rare, or endangered species
- A rare and relatively undisturbed relic plant community
- Habitat that is significant to the watershed (e.g., forested riparian)
- Habitats that are protected by state and/or federal law (e.g., wetlands)
- Connectivity to other habitats
- In absence of other qualities, size of habitat will be considered (i.e., >10 acres has a high value, 5-10 acres, moderate value, and less than 5 acres a low value).

### **Descriptions of Wildlife Habitat**

Describing existing wildlife habitat will begin with a general description of plant communities followed by brief descriptions of 9 different units. A generalized map of the 9 units is shown in Figure 1, attached. Numbers within the units shown in Figure 1 are listed in the text, below.

In general, all the plant communities on the site are disturbed. There are fields, forest, Oak Creek, and riparian forest on the subject property. Fields were formerly farmed and grazed. Most of the largest field in the northern portion of the site was plowed several years ago and the plow furrows are still intact. There are abandoned nut orchards. A forested area includes an abandoned arboretum of trees that are not native to the Willamette Valley. Nut orchards, non-native forest, and fields represent disturbances to historic plant communities. There is a grove of Oregon white oaks in the northeastern corner of the site. Here, disturbance is represented by invasion of non-native Himalayan blackberry.

Some of the disturbance on the site is due to alterations in hydrology. For example, the OSU Foundation at the corner of 35<sup>th</sup> and Western is surrounded by a 10 foot berm, disconnecting the southern agricultural wetland (southern portion of Unit 2) from historic flood plain. Fill was placed between the interior of the site and 35<sup>th</sup> Street many years ago, disturbing riparian habitat, filling floodplain and wetlands. Ditches along an interior gravel road in the northern portion of Unit 2 partially drain wetlands.

#### Unit 1—Oregon white oak

Unit 1 is dominated by mature (12 to 36 inch d.b.h) Oregon white oak with an understory of snowberry, poison oak, and Himalayan blackberry. It is a riparian community adjacent to Oak Creek, extending into non-riparian forest. In its undisturbed state it was likely a relic to two different cell types (Willamette Valley Ecoregion) listed in the *1998 Oregon Natural Heritage*

*Plan:* Oregon white oak/poison oak-snowberry/blue wild rye woodland and Oregon ash/big-leaf maple-Oregon white oak riparian forest. It is approximately 1.75 acres.

#### Unit 2-Upland Pasture

Upland pasture is located at the toe of the slope between forest and agricultural wetland, and on slightly higher ground along the northern boundary of the property. Upland pasture is dominated by many species of grass. Cattle grazed it in the fall of 2000. There is no structural diversity and it is not representative of historic prairie.

#### Unit 3-Oregon ash Riparian

Unit 3 is located in a narrow strip along the northern portion of the site. A constructed drainage ditch is located at the base of the railroad bed, adjacent to the north. Oregon ash grows along the bank of the ditch. This ditch does not appear to be a historic drainage and therefore the Oregon ash does not represent an historic riparian community. However, there is habitat connectivity to Oak Creek.

#### Unit 4-Oak/Cherry/Maple

Unit 4 is dominated by Oregon white oak, cherry, and big-leaf maple. Oaks range from 10 to 50 inches, d.b.h. A dense cover of periwinkle and Himalayan blackberry dominates the understory. This grove of mostly oaks extends onto adjacent property to the west. Large or old Oregon white oak are relatively rare compared to their numbers several hundred years ago. However, in its current condition, Unit 3 is not representative of an oak savanna, a relic plant community.

#### Unit 5-Mixed Native and Non-native Forest

Dominant trees in Unit 5 include native species such as Oregon white oak, big-leaf maple, and Douglas fir. Species that are either non-native or atypical for this site include redwood, western red cedar, and walnut. Tree size ranges from about 12 to 48 inches d.b.h. All species are common in this or other regions. There is an abandoned home site within Unit 5. Indian plum and non-native shrubs, periwinkle, and English ivy was scattered in the understory. This mix of trees and shrubs is not representative of any historic plant association because some of the species are not native to the Willamette Valley.

#### Unit 6-Nut orchard

Unit 6 is comprised of abandoned nut walnut orchards. Himalayan blackberry and one-seeded hawthorn are invading. It does not meet any of the criteria for significance used in this report.

#### Unit 7-Agricultural wetlands

Two portions are shown in Figure 1, one in the north and one in the south. The northern portion was plowed several years ago. Noxious invaders such as Queen Ann's lace, Himalayan blackberry, and thistles are invading the relatively well-drained ridges of plow furrows. Wetland

grasses, rushes, and sedges can be found in the valleys of the furrows. There is a small patch of willows near the northwestern portion of the northern area. The southern portion of Unit 2 is a pasture. Native rushes and sedges are scattered within the pasture. Cattle grazed both the northern and southern portions of Unit 2 as recently as the fall of 2000. Neither the northern nor the southern portions of Unit 2 are representative of native plant communities as described in the *1998 Oregon Natural Heritage Plan*.

Agricultural wetlands meet the criteria for jurisdictional wetland status. However, the plant communities are highly disturbed, either by grazing or plowing. Native or undisturbed plant communities do not exist in these wetlands, although many native wetland plants are scattered. There is no structural diversity. There were alterations to wetland hydrology. Wetland functions such as hydrologic control and water quality are degraded. Significant features include area (over 10 acres), water and habitat connectivity, flood plain (see Unit 8), and state/federal regulation.

#### Unit 8-Flood Plain

This habitat unit is the same as Unit 7, except it is shown as flood plain on FEMA maps. Portions of this area were excavated and are inundated in the winter. Water provides habitat for some waterfowl (i.e., mallard ducks).

#### Unit 9-Fir/Pine

Douglas fir and ponderosa pine form a narrow (1 to 2 tree wide) buffer along West Hills Road and the driveway entrance into Hansen Inn. Growing in straight lines, these trees were obviously planted. They create a visual buffer and vertical structure to the edge of an abandoned nut orchard and pasture. This buffer strip is not representative of a historic plant community as listed in the *1998 Oregon Natural Heritage Plan*.

### **Significant Wildlife Habitat**

Unit 1, Oregon white oak riparian community is significant because it is a forested riparian habitat community. Unit 1 may be the most significant habitat on the subject property because it meets two of the listed criteria—riparian habitat and connectivity. In its landscape position next to a creek it likely represents historic forested riparian habitat rather than historic oak savanna.

Wetlands, Units 2 and 8 are significant because state and federal laws protect them. However, functions and values of these units are degraded as hydrology has been altered and plant communities impacted by agricultural practices. In sum, wetland areas amount to more than 10 acres. Unit 8, although the plant community is disturbed, is also designated as flood plain.

Attaching significance to Unit 4 is marginal because, although large oaks are present, it no longer represents oak savanna, the habitat unit (extending onto adjacent property) is relatively small (<1.5 acres including adjacent property, about .5 acres on subject property) and the potential for managing it as oak savanna is questionable.

Unit 5 is a mix of native and introduced species. There are many large trees. However, the plant community does not represent an historic type as listed in the *1998 Oregon Natural Heritage Plan*. The division between Units 4 and 5 in Figure 1 is shown as a line, however, in reality it is fuzzy. Oaks in Unit 4 become interspersed with maple and introduced species in Unit 5.

There are no known threatened, rare, or endangered species on the site. Investigations for endangered plants are in progress (see attached letter). To date, none have been observed. In addition, a list of threatened, rare, and endangered plants will be requested from the Oregon Natural Heritage Program. There was insufficient time to include a search of the Oregon Natural Heritage Program database in this report.

Review of the proposed site plan indicates no proposed impacts to the significant habitat in Unit 1. Oaks in Unit 4 are marginal in terms of significance. There are no state or federal laws protecting the Unit 4 resource. Impacts are proposed to jurisdictional wetlands. The Oregon Division of State Lands and U.S. Army Corps of Engineers regulates removal/fill impacts to this significant resource.

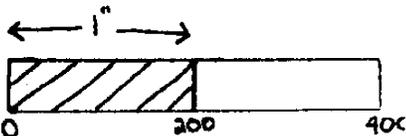
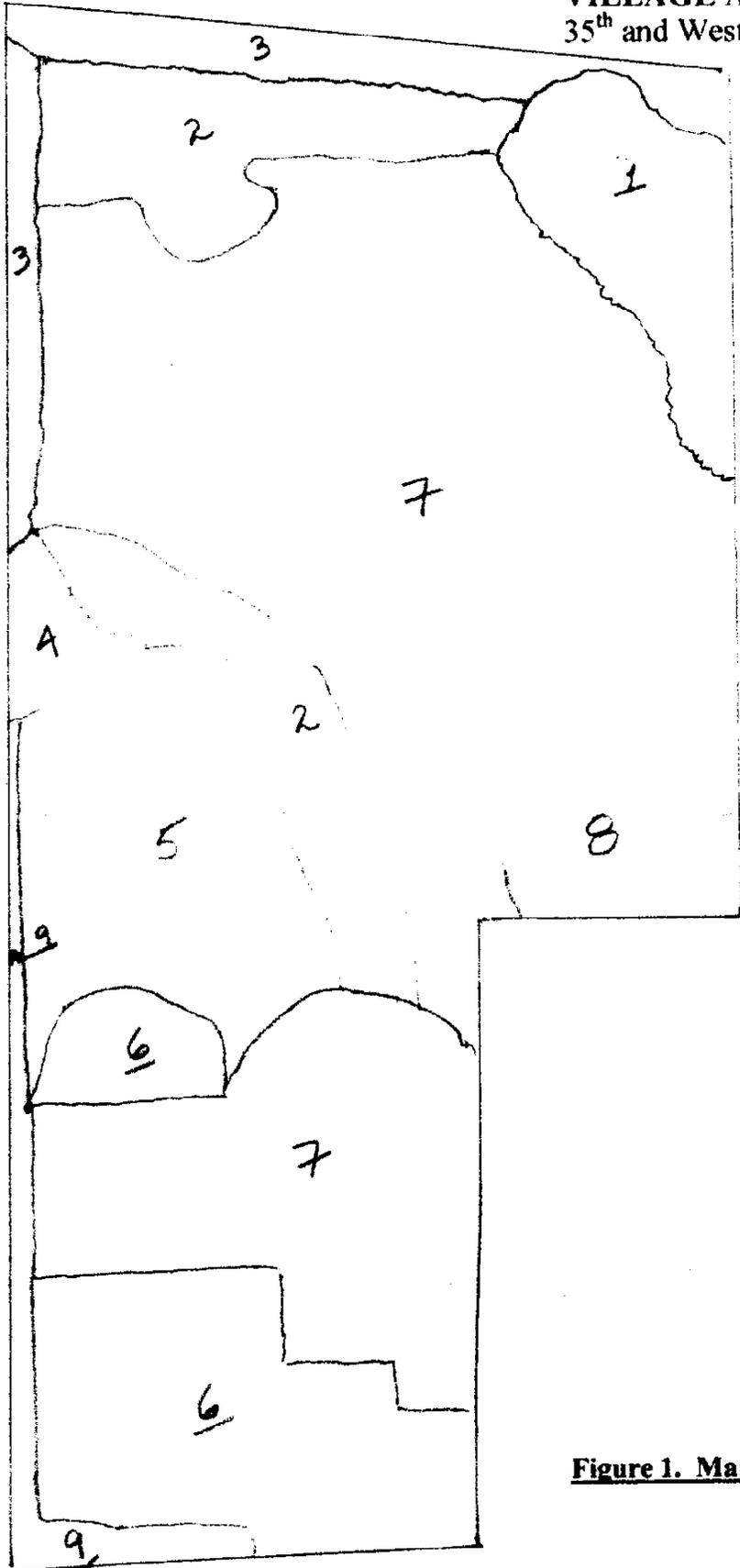
Attachments: Figure 1. Map of Plant Communities

Prepared by:

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**VILLAGE AT OAK CREEK**  
35<sup>th</sup> and Western, Corvallis, Oregon



**Figure 1. Map of Plant Communities**

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**COPY**

May 2, 2001

Tony Patinella  
Titan Investments  
4725 South Monaco St., Suite 340  
Denver, CO 80237

RE: Threatened Plant Survey, The Village at Oak Creek, Corvallis, OR

Dear Tony:

A survey for threatened or endangered plants was conducted on the Sather property, Tax Lot 300, Section 3 and Tax Lot 400 Section 4, T12S, R5W, Benton County, Oregon on May 2, 2001. Investigators were Dr. Jay Lorenz and Wendy Dembo. The primary purpose was to search for Bradshaw's lomatium (*Lomatium bradshawii*), a threatened plant of wetland prairies that flowers between April and mid-May.

Eight transects were walked, north/south, through the northern area of wetlands. Diversions from a straight-line course were taken wherever a yellow flowering plant was observed. Four transects were walked through the southern wetland, including loops through the wider or eastern portion of the southern wetland. Yellow flowering plants included several species of buttercup (*Ranunculus spp.*) and tansy mustard (*Descurania sp.*). Bradshaw's lomatium was *not* observed in any of the potential wetland habitat. This is the optimum time of year to identify Bradshaw's lomatium and based on our survey conducted today we conclude that they are not present on this site.

Sincerely,

Jay R. Lorenz, Ph.D.  
Professional Wetland Scientist

C: Dave Dodson