



# United States Department of the Interior

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## Memorandum

To: Chief, Division of Conservation Planning, Region 1, Portland, Oregon  
(Attn: L. Hill)

From: *JW* State Supervisor/Deputy State Supervisor, Oregon Fish and Wildlife Office  
Portland, Oregon

Subject: Intra-Service Section 7 Formal Consultation for Issuance of an Endangered Species Act Section 10(a)(1)(B) Permit for the Proposed Habitat Conservation Plan for Westlake Ranch LLC and Randy and Tasha Curs (Applicants), Clatsop County, Oregon (Log# 1-7-05-F-0345)

*Monty Sanderson*

## INTRODUCTION

This document transmits our biological opinion, in accordance with section 7 of the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 *et seq.*)(Act), based on our review of the Low-Effect Habitat Conservation Plan (HCP) for Westlake Ranch LLC and Randy and Tasha Curs, (Applicants) and its effects on the federally listed as threatened Oregon silverspot butterfly (*Speyeria zerene hippolyta*), (OSB). The proposed action is the issuance of an incidental take permit pursuant to section 10(a)(1)(B) of the Act, authorizing "take" of the OSB. The HCP addresses a proposed 165 acre, 74 lot housing development project identified as Westlake Ranch LLC, and the development of one adjacent homesite on acreage owned by Randy and Tasha Curs located in Clatsop County, Oregon.

This biological opinion is based on information provided in the Westlake Ranch LLC Oregon Silverspot Butterfly Habitat Conservation Plan, dated November 2, 2004, violet survey results (Lesh *et al.* 2003), meetings, site visits, and other information compiled on the subject project during discussions with the Applicants or their representatives. Consultation under Section 7 of the Act was initiated on January 27, 2005, by the Chief, Division of Conservation Planning, Portland, Oregon. A complete administrative record of this consultation is on file at this office.



## Consultation History

In March 2003 the Applicants' representatives contacted the Service to reinstate the preparation of an HCP for the development of the subject property. Previous agreements regarding the development of the property had been drafted following the owners purchase of the Westlake Ranch property in December 2001, but were not finalized. Between March 2003 and July 2004 approximately 15 meetings were held between the Service and Applicants' representatives to develop the details of the HCP. These meetings included discussions on how the property might be developed while minimizing and mitigating impacts to the OSB.

Draft versions of the HCP document with comments were exchanged between the Applicants' representatives and the Service between September 2003 and August 2004. The final version of the Westlake Ranch LLC Oregon Silverspot Butterfly Habitat Conservation Plan and Permit Application Form was completed and submitted to the Oregon Fish and Wildlife Office (OFWO) on August 27, 2004. The completed permit application was sent to the Regional Office (RO) in Portland, Oregon and the Notice of Availability was published in the Federal Register on January 12, 2005 (70 FR 82183). A request from the RO initiating intra-Service section 7 consultation was received in the OFWO on January 27, 2005.

## BIOLOGICAL OPINION

### I. DESCRIPTION OF THE PROPOSED ACTION

The proposed action is the issuance of an incidental take permit under section 10(a)(1)(B) of the Act. The permit would authorize the incidental take of the threatened OSB, associated with the construction of a 75 lot residential development, on approximately 165 acres, located five miles north of the city of Gearhart, in Clatsop County, Oregon (Township 7 N, Range 10 W, Sections 15 and 16) (See Figure 1). The Applicants submitted an HCP and permit application requesting a permit for the duration of 50 years.

Westlake Ranch LLC proposes to develop approximately 74 lots on 160 acres. A proposed mitigation area will set aside 6.5 acres of butterfly habitat which will be managed to maintain plant species important to the OSB. Randy and Tasha Curs propose to develop one 5 acre homesite adjacent to their existing home and the Westlake property. These properties are located within an area identified in the OSB Revised Recovery Plan (USFWS 2001) as the Clatsop Plains Habitat Conservation Area.

### II. STATUS OF THE SPECIES

#### *Listing Status*

The OSB was listed as threatened with critical habitat in 1980 (USFWS 1980; 45 FR 44935). A recovery plan was completed in 1982 and a revised recovery plan was completed in 2001

(USFWS 1982, USFWS 2001). The species recovery priority number is 3, indicating a high degree of threat and high recovery potential (USFWS 2001; 48 FR 43098).

### *Species Description*

The OSB, a true fritillary of the family Nymphalidae, is one of eight species and 36 subspecies of the genus *Speyeria* found in the Pacific Northwest (USFWS 2001). The OSB is one of five subspecies in the *bremnerii* group which differs from other subspecies in its coloration, dark reddish brown disc color and clear yellow submarginal band, and small size, with a mean forewing length of 27 mm. Caterpillar development rate is very slow in comparison to the other subspecies. The species is named for the metallic silver spots located on the ventral hindwing.

### *Habitat Affinities*

The OSB occupies four types of grassland habitats, marine terrace, coastal headland "salt spray" meadows, stabilized dunes and montane grasslands. To support OSB each habitat area must provide the caterpillar host plant, early blue violets (*Viola adunca*), and adult butterfly nectar sources. Violet density influences the number and location of OSB eggs laid, with areas of higher violet densities used most frequently for ovipositing. Nectar plants most frequently used by the adult OSB are Canada goldenrod (*Solidago canadensis*), dune goldenrod (*Solidago spathulata*) California aster (*Aster chilensis*), pearly everlasting (*Anaphalis margaritacea*), dune thistle (*Cirsium edule*), and yarrow (*Achillea millefolium*).

Both early blue violet abundance and butterfly native nectar sources have declined at all OSB habitat areas due in large to competition from non-native vegetation. Habitat disturbance regimes, which maintain an early seral habitat stage, have been altered dramatically over the past 150 years, increasing the rate of grassland succession to shrub or forest. Non-native plants have played a role in stabilizing the previously dynamic coastal ecosystem.

### *Life History*

The life cycle of this butterfly begins when the adult female deposits eggs during late August and September. Eggs are laid within or adjacent to areas which contain early blue violets. The larvae hatch in approximately 16 days, and the newly hatched larvae wander a short distance to find a suitable place for diapause (suspension of growth for overwintering). In late spring and early summer, the larvae emerge to feed on the violet leaves. The larvae feed and grow for two months (six instar or development stages) then seek shelter to pupate. After two weeks or longer, the butterfly emerges as an adult (eclosion) from its cocoon, July to September, with males emerging a few weeks prior to females. Eclosion of adult butterflies on the Clatsop Plains occurs as early as late June for the males, and mid-July to early August for females. The adult silverspot butterflies leave the windy meadow for shelter in an adjacent forest. There, the butterfly will feed on nectar-producing flowers (composites) and find a mate. Mating usually takes place in relatively sheltered areas. The gravid (mated, egg-bearing) female returns to the meadow to lay eggs in August and September. A female may lay 200-300 eggs.

Detailed accounts of the taxonomy, ecology, reproductive characteristics, range, distribution, habitat requirements, and habitat management of the OSB are found in Hammond (1986;1987;1988a,b,c; 1989; 1990a,b 1991a,b; 1992a; 1993), Hammond et al. (1982; 1984a; 1985a,b; 1991), McCorkle et al. (1980 1988), Arnold (1988), Bergen (1985), McIver et al. (1991), Morlan (1987), Pickering and Macdonald (1994), Pickering et al. (1993), Pickering et al. (1992), Singleton (1989), Vander Schaaf (1983 1984), Washington Department of Wildlife (1993), and the Oregon Silverspot Butterfly Revised Recovery Plan (USFWS 2001).

### *Status and Distribution*

Historically, the OSB was distributed along the Washington and Oregon coasts from Westport in Grays Harbor County, Washington, south to Heceta Head in Lane County, Oregon and was closely associated with the distribution of early blue violet. In addition, there is a population north of Crescent City in Del Norte County, California.

At least 20 separate locations were known to support OSB in the past. OSB populations are currently thought occur at only six sites. OSBs are likely now extirpated from Long Beach Peninsula in Washington. Two populations are in Lane County, Oregon (Rock Creek and Bray Point), two are in Tillamook County, Oregon (Cascade Head and Mount Hebo), and one is in Del Norte County, California (Lake Earl). The population status at a sixth site in Clatsop County, Oregon (Clatsop Plains) has declined in recent surveys with only one OSB documented in 1998 (VanBuskirk 1998).

For 15 years, 1990-2004, The Nature Conservancy has used standardized butterfly survey methods (Pollard 1977) at four of the Oregon central coast OSB sites, to monitor the populations. (See Appendix A). The survey results produce an Index of Abundance value which provides a relative population measure year by year. In 1993 all four central Oregon coast populations declined dramatically, likely due to unfavorable weather conditions that year. In 2004, another detrimental weather year, all central coast sites have index values significantly below their 15 year mean. Despite two small scale augmentation efforts at Cascade Head, and one at Bray Point and Rock Creek the populations levels remain very low and have not rebounded following the 1993 decline (Pickering 2005).

The Clatsop Plains population has been at particular risk to extirpation for the last several years. Much of the decline over the last two decades may be attributable to the cumulative effects of changes in the species' habitat, combined with a series of poor weather years and problems associated with low population numbers and fragmentation of remaining habitat.

Surveys methods utilized on the Clatsop Plains differ from the standardized methods used at the Oregon central coast sites. The Clatsop Plains encompasses a large area of mostly privately owned grasslands, previously used for grazing cattle and other agricultural purposes. This area is currently being urbanized into residential developments and golf courses. Within this patchwork of developed and undeveloped lands, and grazed and fallow pastures, OSB habitat persists, but is highly fragmented, degraded from invasive non-native species, and is difficult to access due to

landownership issues. These factors have limited the scope and methodology of OSB surveys. An alternate survey method, the "stop and scan" method (VanBuskirk 1993) has been used which targets areas known to have violet concentrations, in historically OSB occupied sites. Observers survey during the OSB flight period during suitable weather. These surveys may document OSB presence, however, they do not provide population estimates or conclusive results of OSB absence (extirpation) unless utilized over a number of years. A small remnant butterfly population may go undetected for some time. For example, another Oregon butterfly, the Fender's blue butterfly, described in 1931, was thought to be extinct for 50 years when it was rediscovered in 1989. While the intent of the "stop and scan" method was to target areas more likely to have OSB and spend more time in those areas, the amount of survey observer hours has decreased significantly in subsequent years, from 114 hours in 1998 (VanBuskirk 1998) to 39 observer hours in 2004 (Patterson 2004), possibly not enough survey hours to detect a small remnant OSB population within a large area. The last confirmed sighting of an OSB on the Clatsop Plains was in 1998, with one confirmed and two potential OSB observation (VanBuskirk 1998). Despite subsequent annual surveys, no OSBs have been confirmed on the Clatsop Plains since that time (Patterson 2004).

Little is known about the status of the Del Norte County, California (Lake Earl) OSB population. In 1998, California Department of Fish and Game estimated that there were 62 OSBs on California state-owned land. A 2003 habitat and OSB survey found significant alterations in violet and OSB distribution, likely in response to changes in lake management levels. Higher lake levels which benefit the Tidewater Goby (an endangered fish) appear to be altering the distribution and number of violets and OSBs. The maximum number of OSBs seen in a week in 2003 were 81 OSB observed over 8 transects (Wear 2004).

### *Threats*

Range-wide the greatest threat to the OSB populations include the factors that contribute to the loss of the quality and quantity of suitable habitat. The quality of OSB habitat has been degraded from native grasslands to non-native dominated grasslands or thickets of woody shrubs and trees. The introduction and spread of exotic vegetation, such as Scot's broom, European beachgrass, and a variety of tall exotic grasses have stabilized the dynamic processes of the coastal environment necessary to maintain the native plant community composition and structure (Lesh and Rudd 2003). The quantity of OSB habitat is threatened by habitat degradation and urban and commercial development. Development in and through native grasslands results in ground disturbing activities which destroy or alter the native vegetation community and fragment remaining habitat patches (USFWS 2001). Habitat fragmentation continues to threaten OSB by isolating populations, inhibiting recruitment and increasing the likelihood of genetic problems such as inbreeding depression (Pickering 2005). Highway 101, which cuts through OSB habitat in some areas, has contributed to OSB habitat fragmentation and may directly impact butterflies from road kills.

Climatic fluctuations are another threat to OSB populations, especially cold, wet springs and summers. Heavy mortality of eggs and larvae can occur as a result. While viable populations

will generally rebound provided good conditions, a small population size is particularly vulnerable to loss and extinction from otherwise natural mortality factors (Hellmann 2002).

On the Clatsop Plains the greatest threats to OSB are those that have contributed to the loss, degradation, and fragmentation of the OSB's habitat. In some areas of the Clatsop Plains, the vegetation has been mapped, managed and monitored (mostly on Camp Rilea) for over 10 years (Hammond 1995, Mitchell 1998, Pickering 1994, VanBuskirk 1997). Suitable OSB habitat persists in patches but is dominated by thatch producing non-native grasses and Scot's broom which inhibits the growth and reproduction of native plant species. Because the majority of potentially suitable OSB habitat is in private ownership (approximately 80% of an estimated 400 acres), and is not secured or managed to benefit the butterfly, threats to OSB from habitat loss and fragmentation persist from residential and golf course development (Pickering pers. comm. 2005).

### *Conservation Needs*

The OSB Recovery Working Group, composed of representatives from non-profit conservation organizations, state and Federal agencies, and academic and zoological institutions, works together to implement OSB recovery tasks. The revised recovery plan for the OSB describes actions that would lead to the recovery and delisting of the subspecies and would prevent its extinction (USFWS 2001). The recovery strategy includes protection of habitat to maintain existing populations, augmentation of declining populations, and management of protected habitat. The plan identifies six conservation areas. Conditions that must be met to delist the species include two viable populations (200 to 500 butterflies for 10 years) in protected habitat at the Coastal Mountains Habitat Conservation Area, Cascade Head Conservation Area, Central Coast Habitat Conservation Area, and Del Norte Conservation Area, with one viable population at the Long Beach Peninsula Habitat Conservation Area and Clatsop Plains Habitat Conservation Area.

Within the Long Beach Peninsula Habitat Conservation Area, habitat improvement efforts of the Washington Department of Fish and Wildlife is on-going. Research to increase violet densities and decrease non-native plant invasions is also on-going. Reintroduction is being considered when the habitat quality is determined to be suitable to support an OSB population.

The Oregon Military Department's (OMD), Camp Rilea, is within the Clatsop Plains Habitat Conservation Area. Camp Rilea has an OSB Management Plan (Mitchell 2001). The Camp's plan incorporates a number of individual actions which involve the management of 68 acres of meadow habitat which contain early blue violet.

Also within the Clatsop Plains Habitat Conservation Area, planning efforts are near completion which will identify areas of available suitable OSB habitat across ownership boundaries. The information acquired through this effort will focus conservation actions in specific areas to provide the most effective conservation benefit. Securing habitat through land acquisition and improving habitat quality through increases in landowner participation in conservation

agreements, conservation easements, and Safe Harbor Agreements is on-going. Secured suitable habitat in which an augmentation or reintroduction may be implemented is a conservation need.

The Coastal Mountains Habitat Conservation Area (Mt. Hebo) supports the largest OSB population. The conservation area is on the Siuslaw National Forest (SNF). The SNF has a management plan and has been actively managing the habitat for many years (USFS 2003). Continued efforts to maintain meadow habitat from tree encroachment and invasive species is an on-going conservation need.

The Cascade Head Conservation Area is owned and managed by The Nature Conservancy (TNC). TNC has conducted habitat management experiments to determine how best to encourage increases in early blue violet and nectar plant abundance. Despite habitat management efforts and two small scale augmentations, OSB numbers remain low. However much has been learned through TNC's experiments with different habitat treatments. Continued research and monitoring is the primary conservation need. Additional augmentation efforts may be warranted.

The Central Coast Habitat Conservation Area is located between Rock Creek and Big Creek on the SNF. This area contains the only designated critical habitat area for the species. The SNF has actively managed and monitored the OSB population and habitat. Efforts to halt the spread of non-native grasses which suppress violet growth is an on-going conservation need.

The Del Norte Conservation Area has the largest unmanaged population of OSB. A 2003 habitat and OSB survey found significant alterations in violet and OSB distribution, likely in response to changes in lake management levels (Wear 2004). Conservation needs within this area include research on the effects of lake inundation upon OSB habitat.

### **III. ENVIRONMENTAL BASELINE**

Regulations implementing the Act (50 CFR 402.02) define the environmental baseline as the past and present impacts of all Federal, State, or private actions and other human activities in the action area. Also included in the environmental baseline are the anticipated impacts of all proposed Federal projects in the action area that have undergone section 7 consultation and the impacts of State and private actions that are contemporaneous with the consultation in progress.

According to 50 CFR 402.02 pursuant to section 7 of the Act, the "action area" means all areas to be affected directly or indirectly by the Federal action and not merely the immediate area involved in the action. Subsequent analyses of the environmental baseline, effects of the action, and levels of incidental take are based upon the action area. For the purposes of this BO, occupied habitat is defined as all areas containing early blue violets, near where OSB' have been documented during surveying efforts. For this project we have defined the action area as the 165 acre proposed development site, which includes the Proposed HCP Development Area and the 6.5 acre Mitigation Area.

### *Project site*

OSB habitat on the Clatsop Plains is comprised of a linear, approximately 1/2 mile-wide and 5 mile long system of stabilized dune/grassland remnants running parallel, north to south, to the Neacoxie Creek (See attached map, Figure 1.). The project site is located centrally within the Clatsop Plains OSB Conservation Area. The Westlake LLC, Proposed Development Area is located on the northern two thirds of a 274-acre parcel previously known as the Reed Ranch. The Proposed Mitigation Area is located in the center of the Reed Ranch. The property has been identified as one of the largest expanses of continuous coastal prairie on the Clatsop Plains (Lesh *et al.* 2003). The Curs 10 acre property is nearly encircled by the adjacent Westlake Ranch property, which borders it to the north, and east, with Neacoxie Creek west of the Curs property. Westlake LLC transferred 2.6 acres to the Curs who will construct one additional residential home on their property. The Curs property had been surveyed for OSB habitat in the past, resulting in a Conservation Agreement between the Curs and the Service (USFWS 1997) with the protection of 1.5 acres of high quality habitat.

The plant community is a mix of native and non-native grasses with patches of Scot's broom thickets. Large patches of remnant native prairie, some of which contain early blue violets, persists (Lesh *et al.* 2003). A violet survey conducted in May 2003 mapped the distribution of violets on the Westlake property. Violets were located 12 times with 1 to 20 plants per location, mostly along the Neacoxie Creek on the western portion of the property (Lesh *et al.* 2003). A large patch of dune goldenrod, an important nectar source for OSB, was found on the southern portion of the Westlake Ranch property. The last confirmed OSB on the Clatsop Plains in 1998 was found on the adjacent northwest property to the Westlake Ranch. OSB are strong flyers moving many kilometers in a day. Past observations include OSB movement across the Westlake Ranch south to north and from Sunset Lake west toward the Surf Pines neighbourhood (VanBuskirk 1993).

Westlake LLC proposes to build 74 homes on approximately 160 acres on the northern part of the property. Violet survey results indicate that 8 proposed lots overlap with the violet locations. Six of the overlapping areas had between 1-10 violets per point with the seventh and eighth occurrence overlapping with 11-20 plants. Based on the violet survey results of 2003, the potential loss of these violets from home construction ranges between 17-80 violets. An additional 24-60 violets which occur along Neacoxie Creek outside the building lot boundaries may also be impacted from future landowner landscaping activities, since many landowners in the area mow to the edge of Neacoxie Creek. Loss of contiguous habitat along Neacoxie Creek is approximately a mile segment (or approximately 6 acres) of the OSB flight corridor connecting the Camp Rilea OSB (northern) to the Del Rey Beach (southern) portion of the Clatsop Plains OSB population.

The Curs propose to build one additional residential home on their property, avoiding the 1.5 acres area of OSB habitat identified in the October 20, 1997, Conservation Agreement (CA) with the Service. The Curs will continue to implement the terms of the CA for the 50-year duration of the HCP. The residential construction of one home on their property will not impact violet

habitat.

### *Mitigation Area*

The HCP proposes the protection in perpetuity of approximately 6.5 acres of habitat on a portion of the Westlake LLC development. Within the Proposed Mitigation Area is a large patch, approximately one acre, of dune goldenrod, an important OSB nectar source. A patch of early blue violets, 11-20 plants, and two smaller patches, 1-10 plants, also occur within the mitigation area. The 6.5 acres will be recorded as a Conservation Easement to be held by a third party. Use of the Proposed Mitigation Area will be limited to activities intended to improve OSB habitat. Specific habitat management actions and funding for these management activities will be referenced in the Conservation Easement. Within six months of the issuance of the Westlake Incidental Take Permit (ITP), Westlake representatives or the conservation easement holder will complete and implement a Service approved annual mowing plan. Westlake will consider implementing additional measures (weed control or plantings) in the common areas of the Proposed Development Area but will not be required to fund or implement additional measures. Within six months after issuance of the ITP, Westlake representatives will install and maintain markers around the mitigation area to make it readily identifiable.

## **IV. EFFECTS OF THE ACTION**

Effects of the action refer to the direct and indirect effects of an action on the species, together with the effects of other activities that are interrelated and interdependent with that action that will be added to the environmental baseline. Interrelated actions are those that are part of a larger action and depend on the larger action for their justification. Interdependent actions are those that have no independent utility apart from the action under consideration. Indirect effects are those that are caused by the proposed action, are later in time, and are still reasonably certain to occur.

### *Direct and Indirect Effects*

Project construction will permanently remove 17-80 violet plants in 7 patches within 8 proposed residential lots. An additional 24-60 violet plants within 5 patches, located outside the residential lot boundaries along Neacoxie Creek may also be removed. Ground disturbing activities associated with project construction, such as grading and excavation, or mowing and landscaping activities would kill any OSB eggs, larvae and pupae associated with the violet plants.

Based on research done with captive-reared OSB larvae, at least 2 average sized violets plants (55 leaves per plant), located within 20 cm of each other, may sustain one larvae through development (Mary Jo Anderson, Oregon Zoo, pers. comm. 2005). Based on the survival rates of captive reared larvae, it is unlikely that more than one adult butterfly would be supported through development within each of the twelve small patches of violets. Three of the twelve patches are located away from the Neacoxie flight corridor, within a large area of degraded

habitat. Female butterflies are not likely to lay their eggs in isolated patches within areas of low violet densities (USFWS 1998). Therefore the three violet patches located away from the Neacoxie Creek flight corridor are unlikely to support the butterfly larvae. The nine violet patches along Neacoxie Creek that will be impacted by the proposed development have the potential to support 9 butterfly larvae, one per patch, through larval development.

Annual mowing within the 6.5 acre proposed Mitigation Area may also impact butterfly larvae. The 13-40 violets within 3 patches have the potential to support 3 butterfly larvae, one per patch, through larval development.

Construction impacts will increase habitat fragmentation between suitable OSB habitat patches along the OSB flight corridor along Neacoxie Creek. An adult female OSB could be indirectly affected by the loss of violet plants, causing her to travel longer distances in seeking suitable egg-laying habitat elsewhere. OSBs are vulnerable to predation while in flight.

The direct effects of the loss of violets may be offset by the protection of violets within the 6.5 acre Mitigation Area which will be managed to promote violet persistence over time. The goldenrod patch within the Mitigation Area may minimize the need for longer flights in search of nectar. Because the habitat is fragmented into small patches, surrounded by invasive non-native plant species, violets and nectar plants would not be likely to persist over-time, if not for the implementation of the habitat management actions in the proposed Mitigation Area.

The Mitigation Area is located centrally within the Clatsop Plains Conservation Area. This location, which contains both breeding and nectaring habitat may in the long term contribute to the recovery of the OSB species by providing a secure link between the northern and southern habitat areas. The protection and maintenance of the Mitigation Area meets the objectives of a number of OSB Recovery Tasks including the protection of Clatsop Plains Habitat, development and implementation of habitat management plans, increases or maintenance of violet and nectar plants, and control of exotic brush (USFWS 2001). The Mitigation Area, managed into perpetuity for the benefit of the OSB may contribute to sustaining and the recovery of OSB within the Clatsop Plains Conservation Area.

## **V. CUMULATIVE EFFECTS**

Cumulative effects include the future State, Tribal, local, or private actions that are reasonably certain to occur in the action area considered in this biological opinion. Future Federal actions that are unrelated to the proposed action are not considered in this section because they require separate consultation pursuant to section 7 of the Act. We are unaware of any future non-Federal actions within the action area that may affect the OSB.

## **VI. CONCLUSION**

After reviewing the current status of the OSB, the environmental baseline for the action area, the effects of the proposed action and the cumulative effects, it is our biological opinion that the

action as proposed, is not likely to jeopardize the continued existence of the OSB. We reach this conclusion because the effects of the proposed action are limited to a small area of degraded OSB breeding and dispersal habitat. If this habitat was excluded from development and left unmanaged, it would likely not persist due to invasive species encroachment and even if this small amount of habitat was restored it is not large enough to contribute significantly to supporting an OSB population.

### INCIDENTAL TAKE STATEMENT

Section 9 of the Act and Federal regulation pursuant to section 4(d) of the Act prohibit the take of endangered and threatened species, respectively, without special exemption. Take is defined as to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, collect, or attempt to engage in any such conduct. Harm is further defined to include significant habitat modification or degradation that results in death or injury to listed species by significantly impairing essential behavioral patterns, including breeding, feeding, or sheltering. Incidental take is defined as take that is incidental to, and not the purpose of, the carrying out of an otherwise lawful activity. Under the terms of section 7(b)(4) and 7(o)(2) of the Act, taking that is incidental to and not intended as part of the agency action is not considered a prohibited taking under the Act provided that such taking is in compliance with the Incidental Take Statement.

The proposed Westlake LLC Ranch OSB HCP, its associated documents, and this biological opinion identify anticipated impacts to the affected species (OSB) likely to result from the proposed taking and the measures that are necessary and appropriate to minimize those impacts. All conservation measures described in the proposed HCP, together with the terms and conditions described in any associated Implementing Agreement and any section 10(a)(1)(B) permit issued with respect to the proposed HCP, are hereby incorporated by reference as reasonable and prudent measures and terms and conditions within this Incidental Take Statement pursuant to 50 CFR 402.14(i). Such terms and conditions are non-discretionary and must be undertaken for the exemptions under section 10(a)(1)(B) and section 7(o)(2) of the Act to apply. If the applicant fails to adhere to these terms and conditions, the protective coverage of the section 10(a)(1)(B) permit and section 7(o)(2) may lapse. The amount of extent of incidental take anticipated under the proposed Westlake Ranch LLC OSB HCP, associated reporting requirements, and provisions for disposal of dead or injured animals are described in the section 10(a)(1)(B) permit.

### AMOUNT OR EXTENT OF TAKE

We anticipate the incidental take of OSB at the project site, from residential development of the site and implementation of the HCP. A small number of larvae, pupae or adult butterflies may be taken when the violet plants are removed, (17-80 plants within residential lots, 24-60 plants outside of residential lots along Neacoxie Creek and 13-40 plants within the proposed Mitigation Area), totaling 54-180 violet plants within 12 patches. While there is the potential for take of twelve butterflies, (survivalship of one butterfly per patch) that level is unlikely to occur due to the distribution of violets in small isolated patches, some of which are located outside the OSB

flight corridor. Therefore it is more likely that nine or less butterflies will be incidentally taken during construction, landscaping or mowing activities, where nine violet patches occur along the flight corridor along Neacoxie Creek and within the proposed Mitigation Area in close proximity to other violet patches.

Though difficult to quantify, incidental take of OSB may occur in the form of harm as defined in 50 CFR Part 17.3, due to the permanent loss of approximately 1.0 miles (or 6 acres) of dispersal habitat along a known flight corridor, and increased habitat fragmentation. Adult OSB will be forced to travel longer distances past the residential development to find mates, violets for egg-laying or nectar plants. Longer OSB flight increases the risk of predation, (birds and a dragonfly have been observed feeding on OSB), and may stress the energy limits of individual OSBs. Based on the status of the population and the importance of this OSB flight corridor, it is anticipated that a small number of OSB may be harmed in this manner. Past survey records (Hammond 1988) indicate that OSB were distributed North (7 percent), South (63 percent) and (12 percent) were on or near the Westlake property, with movement along the Neacoxie Creek corridor. Based on studies conducted at Camp Rilea in the 1980's to 1990's which equated Clatsop Plains OSB habitat acreage with OSB population numbers as 1 to 2 butterflies per acre (Paul Hammond, OSU, pers. comm. 2005), the loss of 6 acres of dispersal habitat, and the current population status which is thought to be very low, it is unlikely that more than **six OSB** would be harmed in this manner.

#### EFFECT OF THE TAKE

In the accompanying biological opinion, we determined that this level of anticipated take is not likely to result in jeopardy to the OSB.

#### REASONABLE AND PRUDENT MEASURES

No reasonable and prudent measures beyond the conservation measures described in the HCP have been identified to further minimize incidental take of OSB.

#### TERMS AND CONDITIONS

No additional terms and conditions are necessary because no additional Reasonable and Prudent Measures have been identified.

#### CONSERVATION RECOMMENDATIONS

Section 7(a)(1) of the Act directs Federal agencies to utilize their authorities to further the purposes of the Act by carrying out conservation programs for the benefit of endangered and threatened species. Conservation recommendations are discretionary agency activities to minimize or avoid adverse effects of a proposed action on listed species or critical habitat, help implement recovery plans, or to develop information. We have not identified any additional

conservation recommendations that should be implemented in association with the HCP or permit issuance.

### **REINITIATION NOTICE**

This concludes formal consultation on the proposed action outlined in the request. As provided in 50 CFR Part 402.16, reinitiation of formal consultation is required where discretionary Federal agency involvement or control over the action has been retained (or is authorized by law) and if: (1) the amount or extent of incidental take is exceeded; (2) new information reveals effects of the agency action that may affect listed species or critical habitat in a manner or to an extent not considered in this opinion; (3) the agency action is subsequently modified in a manner that causes an effect to the listed species or critical habitat that was not considered in this opinion; or (4) a species not covered by the HCP is listed or critical habitat is designated that may be affected by the proposed action. In instances where the amount or extent of incidental take is exceeded, and operations causing such take must cease pending reinitiation.

**LITERATURE CITED**

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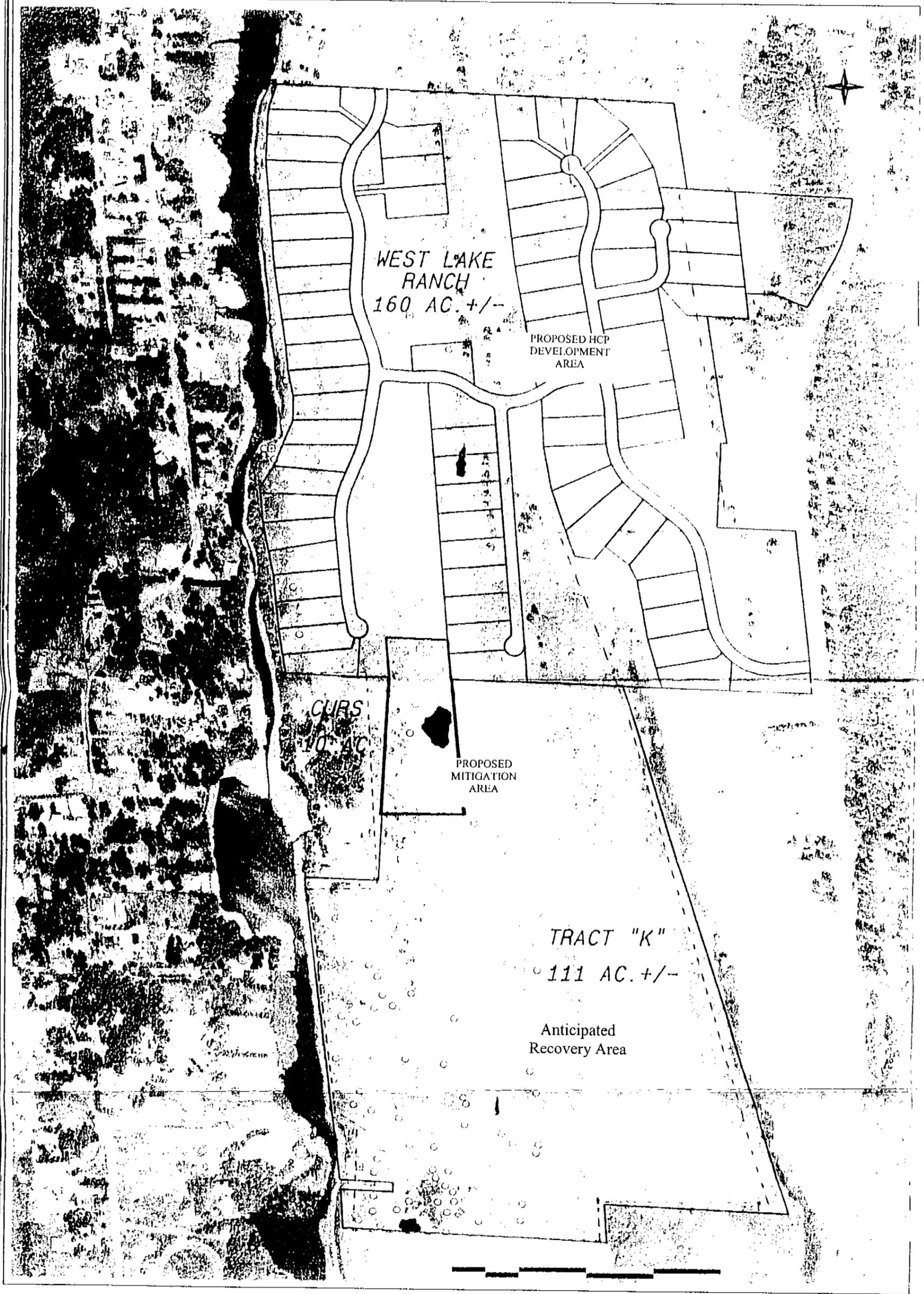
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## Appendix A

<b>Oregon silverspot butterfly Index of Abundance values for the central coast sites, 1990-2004, (TNC 2004). Number in ( ) reflects number of augmented emerged adult butterfly.</b>					
<b>Year</b>	<b>Mt. Hebo</b>	<b>Cascade Head</b>	<b>Bray Point</b>	<b>Rock Creek</b>	<b>TOTALS</b>
1990	1100	1138	169	142	2549
1991	2888	790	280	113	4071
1992	2628	1295	265	242	4430
1993	1041	184	81	35	1341
1994	2200	284	81	65	2630
1995	3413	302	53	374	4142
1996	2507	302	146	356	3311
1997	2664	164	101	332	3261
1998	2743	57	46	257	3103
1999	4983	132	2	149	5266
2000	2111	160 (107)	9	108	2388
2001	1402	118	0	192	1712
2002	2272	34	2	139	2447
2003	2625	206 (161)	3	136	2971
2004	588	36	2 (5)	131 (47)	757
15 Year MEAN	2344	347	82	184	2958



Figure 1: 2003 Reed Ranch *Viola adunca* Survey



Point Violet Density

- > 20 plants/point
- ◆ 11-20 plants/point
- 1-10 plants/point

Area Violet Density

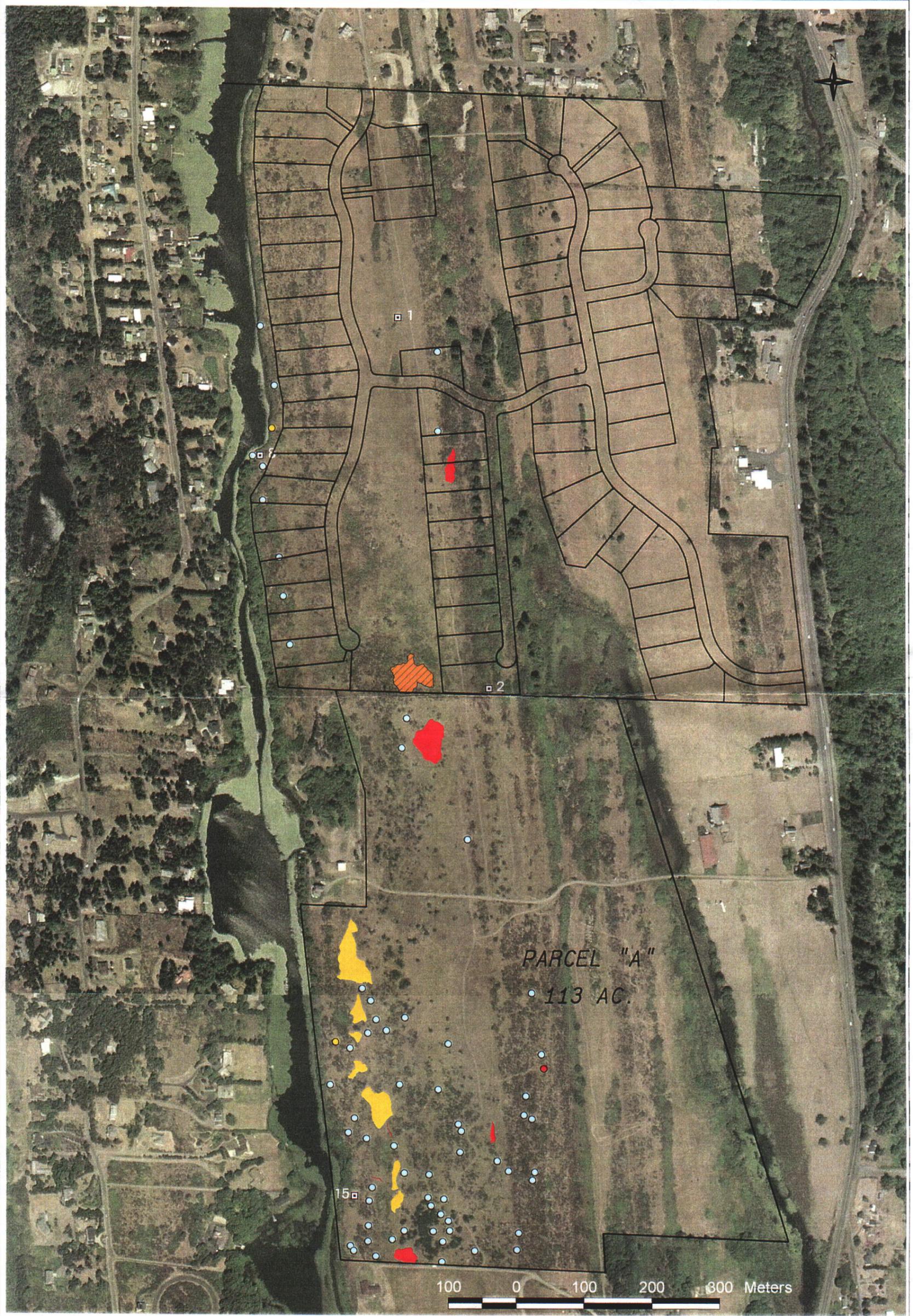
- > 20 plants/area □
- 11-20 plants/area

- Survey Boundary
- Surveyor Control Points
- Goldenrod Patch

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Figure 1: 2003 Reed Ranch *Viola adunca* Survey



**Point Violet Density**

- > 20 plants per point
- 11-20 plants per point
- 1- 10 plants per point

**Area Violet Density**

- > 20 plants per area
- 11-20 plants per area

□ Surveyor Control Points

▨ Goldenrod Patch

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