Washington Department of FISH and WILDLIFE

# State of Washington
# DEPARTMENT OF FISH AND WILDLIFE

Mailing Address: 600 Capitol Way N, Olympia, Washington 98501-1091 - (360) 902-2200

## ENVIRONMENTAL CHECKLIST
(WAC 197-11-960)

**A. BACKGROUND**

1. **Name of proposed project, if applicable:** Lake Tahuya Access Development

2. **Name of Applicant:** Washington Department of Fish and Wildlife (WDFW)

3. **Address and phone number of applicant and contact person:**

Washington Dept of Fish and Wildlife
Capital Programs & Engineering Division
600 Capitol Way North
Olympia, WA 98501-1091

Contact Person: W. Lauren Stalmaster
Fish and Wildlife Biologist
Telephone Number: (360) 902-8422
Fax Number: (360) 902-8367
E-Mail: stalmwls@dfw.wa.gov

4. **Date checklist prepared:** February 27, 2007

5. **Agency requesting checklist:** Washington Department of Fish and Wildlife

6. **Proposed timing or schedule (including phasing, if applicable):** Earliest construction would be June 2007. The total time to complete the project will take approximately 6-8 weeks.

7. **Do you have any plans for future additions, expansion, or further activity related to or connected with this proposal? If yes, explain.** Not at this time.

8. **List any environmental information you know about that has been prepared, or will be prepared, directly related to this proposal:** A wetland biological and delineation report is required by Kitsap County as part of the shoreline substantial development permit application.

9. **Do you know whether applications are pending for governmental approvals of other proposals directly affecting the property covered by your proposal? If yes, explain.** None known.

10. **List any government approvals or permits that will be needed for your proposal, if known.** The following approvals, all with Kitsap County, will be required: shoreline substantial development permit, on-site sewage disposal permit, stormwater and erosion control plans, concurrency test, road approach permit, and site development activity permit.

**11. Give brief, complete description of your proposal, including the proposed uses and the size of the project and site. There are several questions later in this checklist that ask you to describe certain aspects of your proposal. You do not need to repeat those answers on this page.**

The proposal is to install a public access facility at Lake Tahuya, which currently has only private access to the water. The project involves installing a graveled hand-launch-only boat access, fencing on north and south property lines, installation of a vault toilet, eleven parking spaces, road access, and a gate. One parking space and the vault toilet will provide safe, accessible facilities built to the standards of the Americans with Disabilities Act (ADA).

The actions for the Lake Tahuya Access Development include:

1. Clear, grade and pave a road access and parking (including one ADA parking space).
2. Install a gravel trail and hand-only boat launch.
3. Encourage hand-launch-only of boats by blocking vehicle access to the water with placement of rock barriers at the trailhead.
4. Install informational signage.
5. Install fencing on north and south property lines.
6. Install a vault toilet that is ADA compliant.
7. Install a gate at the entrance road.
8. Replant cleared portions and enhance the wetland buffer with native vegetation.

**12. Location of the proposal. Give sufficient information for a person to understand the precise location of your proposed project, including street address, if any, and section, township, and range, if known. If a proposal would occur over a range of area, provide the range or boundaries of the site(s). Provide a legal description, site plan, vicinity map, and topographic map, if reasonably available. While you should submit any plans required by the agency, you are not required to duplicate maps or detailed plans submitted with any permit applications related to this checklist.**

The project is located on the northeast side of Lake Tahuya at Gold Creek Road West. The legal description is NW ¼ Section 17, Township 24 North, Range 01 West, W.M., Kitsap County, Washington. For further detail regarding the project proposal and location see attached map and plans.

## B. ENVIRONMENTAL ELEMENTS

### 1. Earth

**a. General description of the site (underline one): flat, rolling, hilly, steep slopes, mountainous, other -** the property consists of a one-acre sized lot that gently slopes down from the road to the lake edge.

**b. What is the steepest slope on the site (approximate percent slope)?** The steepest slope is along the lake edge and is at approximately 12% grade.

**c. What general types of soils are found on the site (for example, clay, sand, gravel, peat, muck)? If you know the classification of the agricultural soils, specify them and note any prime farmland.**

The Natural Resources Conservation Service (NRCS) has mapped the site as Grove very gravelly sandy loam, 0 to 3 percent slopes (map unit 11) and as Urban land-Alderwood complex, 0 to 8 percent slopes (map unit 63). Much of the soils on the site are moderately drained with a top layer of twigs, needles and other organic materials. Wetland soils on the site generally are a very dark gray to black gravelly sandy loam.

**d. Are there surface indications or history of unstable soils in the immediate vicinity? If so, describe.** No.

**e. Describe the purpose, type and approximate quantities of any filling or grading proposed. Indicate source of fill.**

The purpose of the proposed work is to develop a boat access site. The parking lot will be graded and surfaced with crushed rock. The trail to the lake edge will need to have fill added and material excavated to maintain a 12% grade. Excavation will be needed for installation of a stormwater detention pond and a vault toilet. The launch structure will consist of an 8-foot wide gravel launch trail with geo-web erosion protection. The source material will be existing native fill from grading on site and gravel from an approved gravel pit.

| Area Calculations | Square Feet |
|---|---|
| Parcel size | 41,817 |
| Property Above Ordinary High Water Mark | 28,412 |
| Parking and entrance road | 9060 |
| Gravel path and launch ramp | 830 |

**f. Could erosion occur as a result of clearing, construction or use? If so generally describe.**

Erosion is not likely but may occur during the clearing and construction of the launch trail, parking lot and entrance road.

**g. About what percent of the site will be covered with impervious surfaces after project construction (for example, asphalt or buildings)?**

Approximately 34% of the site will be covered including

- 9680 $ft^2$ of pavement for parking and entrance road
- 80 $ft^2$ for the vault toilet structures

**h. Proposed measures to reduce or control erosion, or other impacts to the earth, if any:**

Any potential erosion will be prevented by applying erosion and sedimentation control and best management practices according to standards in the *Kitsap County Stormwater Design Manual*. Implementation of Best Management Practices (BMPs) will include, but not limited to, a silt fence and hay bales along the wetland and at staging areas located in the parking lot.

**2. Air**

**a. What type of emissions to the air would result from the proposal (i.e., dust automobile, odors, industrial wood smoke) during construction and when the project is completed? If**

**any, generally describe and give approximate quantities if known.**

Vehicle exhaust and dust from construction is expected. No long-term change in emissions is expected from the completed project.

b. **Are there any off-site sources of emissions or odor that may affect your proposal? If so, generally describe.** No.

c. **Proposed measures to reduce or control emissions or other impacts to air, if any:** None.

3. **WATER**

a. **Surface**

1) **Is there any surface water body on or in the immediate vicinity of the site (including year-round and seasonal streams, saltwater, lakes ponds or wetlands)? If yes, describe type and provide names. If appropriate, state what stream or river it flows into.**

Yes, the project site is located at the northeast side of Lake Tahuya. Two category III wetlands that fringe the shoreline edge of the lake were identified on the property.

2) **Will the project require any work over, in, or adjacent to (within 200 feet) the described waters? If yes, please describe and attach available plans.**

Lake Tahuya is a 150-acre sized lake and is considered a shoreline of the state. Almost all of this project will occur within 200 feet of Lake Tahuya. A shoreline substantial development permit from Kitsap County is required for the proposed project. The proposed water access will consists of an 8-foot wide by 90-foot length gravel trail that will lead to the wetland edge for an effective hand-only-boat-launch.

3) **Estimate the amount of fill and dredge material that would be placed in or removed from surface water or wetlands and indicate the area of the site that would be affected. Indicate the source of fill material.**

No fill or dredge materials will be placed or removed from surface water or wetlands.

4) **Will the proposal require surface water withdrawals or diversions? Give general description, purpose, and approximate quantities if known.** No.

5) **Does the proposal lie within a 100-year floodplain? If so, note location on the site plan.**

No.

6) **Does the proposal involve any discharges of waste material to surface waters? If so, describe the type of waste and anticipated volume of discharge.** No.

b. **Ground**

1) **Will ground water be withdrawn, or will water be discharged to ground water? Give general description purpose, and approximate quantities, if known.** No.

2) **Describe waste material that will be discharged into the ground from septic tanks**

**or other sources, if any. Describe the general size of the system, the number of such systems, the number of houses to be served (if applicable), or the number of animals or humans the system(s) are expected to serve.**

No waste material will be discharged. The vault toilet will include a completely sealed self-contained holding tank. No running water will be available at the site.

c. **Water Runoff (including storm water):**

1) **Describe the source of runoff (including storm water) and method of collection and disposal, if any (including quantities, if known). Where will this water flow? Will this water flow into other waters? If so, describe.**

Storm water will be infiltrated through a stormwater detention pond (see attached plan for details).

2) **Could waste materials enter ground or surface waters? If so, generally describe.** Preventative measures will be implemented to reduce any likely introduction of stormwater waste.

d. **Proposed measures to reduce or control surface, ground and runoff water impacts, if any:**

An oil spill control and stormwater detention pond will be installed (see attached plan for details).

4. **PLANTS**

a. **Check or underline types of vegetation found on the site:**

__x__ **deciduous tree: alder, maple, aspen, other** – pacific willow

__x__ **evergreen tree: fir, cedar, pine, other** – western hemlock

__x__ **shrubs**

__x__ **grass**

___ **pasture**

___ **crop or grain**

__x__ **wet soil plants: cattail, buttercup, bulrush, skunk cabbage, other** Douglas-spirea

__x__ **water plants: waterlily, eelgrass, milfoil, other** bladderwort

__x__ **other types of vegetation**

Present on the site are two lake fringe wetlands, which are dominated by red-osier dogwood, red alder, pacific ninebark, Douglas spirea, salmonberry, lady fern, deer fern, common cattail and slough sedge.

b. **What kind and amount of vegetation will be removed or altered?**

Less than an acre of vegetation will be altered. Vegetation present at the site includes western red

cedar, western hemlock, red alder, pacific ninebark. Douglas spirea, salmonberry, lady fern, deer fern, common cattail and slough sedge.

The original project has been modified to minimize removal of larger conifer trees. For example, one truck and trailer parking space was eliminated to retain three trees that have a diameter of 24" or greater. Along the south and north property boundaries much of the vegetation will be left undisturbed and at the east property line along Gold Creek Road trees with a diameter of 8" or greater will be limbed only (see sheet 2 of attached plans). In addition, no trees with a diameter of 24" or greater will be removed from the wetland or wetland buffer. Minimal disturbance to a portion of wetland buffer is proposed. Some grading activities would occur within wetland buffer areas. Wetland buffers will be enhanced with plantings of native vegetation (see sheet 5 of attached plans). Mitigation in the form of plantings would occur at a 2:1 ratio to offset any wetland buffer impacts.

**c. List threatened and endangered species [of plants] known to be on or near the site.**

Areas around Lake Tahuya are listed as a Priority Plant Community per the Washington Natural Heritage Program; however, no listed threatened or endangered plants were found on site.

**d. Proposed landscaping, use of native plants, or other measures to preserve or enhance vegetation on the site, if any:**

A re-vegetation plan is detailed in the attached plans (sheet 5 of 6).

**5. ANIMALS**

**a. Underline any birds or animals, which have been observed on or near the site or are known to be on or near the site:**

**Birds: hawk, heron, eagle, songbirds, other:** osprey and waterfowl

**Mammals: deer, bear, elk, beaver, other:**

**Fish: bass, salmon, trout, herring, shellfish, other:** coho, steelhead, and cutthroat salmonids

**b. List any threatened or endangered species known to be on or near the site.**

Bald Eagle – Federally Threatened
Puget Sound Chinook Salmon – Federally Threatened
Puget Sound/ Strait of Juan de Fuca Coho – Species of concern
Puget Sound/Strait of Juan de Fuca Chum – No federal status
Puget Sound Steelhead – Proposed Threatened
Pink Salmon – Odd Year – No federal status

**c. Is the site part of a migration route? If so, explain.**

Yes, the lake may provide rest over spots for migrating waterfowl.

**d. Proposed measures to preserve and enhance wildlife, if any:** Conservation measures to enhance wildlife habitat will be implemented with retention of larger conifers and the wetland buffer enhancement plan detailed in the attached plans (sheet 5 of 6).

**6. ENERGY AND NATURAL RESOURCES**

**a. What kinds of energy (electric, natural gas, oil, wood stove, solar) will be used to meet the completed project's energy needs? Describe whether it will be used for heating,**

**manufacturing, etc.** N/A.

b. **Would your project affect the potential use of solar energy by adjacent properties? If so, generally describe.** No.

c. **What kinds of energy conservation features are included in the plans of this proposal? List other proposed measures to reduce or control energy impacts, if any:** None.

7. **ENVIRONMENTAL HEALTH**

a. **Are there any environmental health hazards, including exposure to toxic chemicals, risk of fire and explosion, spill or hazardous waste that could occur as a result of this proposal.** No.

1) **Describe special emergency services that might be required.** None required.

2) **Proposed measures to reduce or control environmental health hazards, if any:** N/A.

b. **Noise**

1) **What types of noise exist in the area which may affect your project (for example: traffic, equipment, operation, other)?** None.

2) **What types and levels of noise would be created by or associated with the project on a short-term or long-term basis (for example: traffic, construction, operation, other)? Indicate what hours noise would come from the site.**

Short-term: Increased levels of noise during construction activities are expected from this project.

Long-term: Minimal increase in daytime noise levels may occur due to increased recreation activity at the site.

3) **Proposed measures to reduce or control noise impacts, if any:** Construction activities will be restricted to normal operating hours, with increased noise levels expected between 8am to 5pm. Vegetative buffers will be retained on the north, south and east property lines, as well as along the wetland buffer area, all of which will help reduce noise impacts (see attached site plans for details).

8. **LAND AND SHORELINE USE**

a. **What is the current use of the site and adjacent properties?** The current use is for passive recreational use. The surrounding properties consist of single family residence development.

b. **Has the site been used for agriculture? If so describe?** Not for agricultural use.

c. **Describe any structures on the site.** There are no structures at the proposed site.

d. **Will any structures be demolished? If so what?** No.

e. **What is the current zoning classification of the site?** Kitsap County zoning is *Rural Residential*.

f. **What is the current comprehensive plan designation of the site?**
The property is *Rural Residential* according to the Kitsap County Comprehensive Plan.

g. **If applicable, what is the current shoreline master program designation of the site?**

The Kitsap County Shoreline Master Program designates this shoreline site as *Rural*.

h. **Has any part of the site been classified as an "environmentally sensitive" area? If so, specify.**

Yes, Lake Tahuya has been identified as a wetland and wildlife habitat area in the WDFW PHS database and by the Kitsap County critical areas ordinance.

i. **Approximately how many people would reside or work in the completed project?** None.

j. **Approximately how many people would the completed project displace?** None.

k. **Proposed measures to avoid or reduce displacement impacts, if any:** None.

l. **Proposed measures to ensure the proposal is compatible with existing and projected land uses and plans, if any:**

The proposal is compatible with existing land use plans since public access to the shoreline and recreation are encouraged uses within the shoreline designation *Rural*.

9. **HOUSING**

a. **Approximately how many units would be provided, if any? Indicate whether high, middle, or low-income housing.** None.

b. **Approximately how many units, if any, would be eliminated? Indicate whether high, middle, or low-income housing.** None.

c. **Proposed measures to reduce or control housing impacts, if any:** None.

10. **AESTHETICS**

a. **What is the tallest height of any proposed structure(s), not including antennas; what is the principal exterior building material(s) proposed?** The concrete vault toilet will be contained in a structure that is 10 feet tall.

b. **What views in the immediate vicinity would be altered or obstructed?** None.

c. **Proposed measures to reduce or control aesthetic impacts, if any:** Vegetative buffers will be retained on the north, south and east property lines, as well as along the wetland buffer area, all of which will help reduce aesthetic impacts (see attached site plans for details).

11. **LIGHT AND GLARE**

a. **What type of light or glare will the proposal produce? What time of day would it mainly occur?** None.

b. **Could light or glare from the finished project be a safety hazard or interfere with views?** No.

c. **What existing off-site sources of light or glare may affect your proposal?** None.

d. **Proposed measures to reduce or control light and glare impacts, if any:** None.

12. **RECREATION**

a. **What designated and informal recreational opportunities are in the immediate vicinity?**

Swimming, fishing, and boating occur at Lake Tahuya; however, no public access is currently available.

b. **Would the proposed project displace any existing recreational uses? If so, describe.**

No, the project would encourage recreational use by providing the public access to the lake.

c. **Proposed measures to reduce or control impacts on recreation, including recreational opportunities to be provided by the project or applicant, if any:** This project will enhance recreational opportunities especially for anglers for warm water fish and for the general public who currently have no water access to Lake Tahuya.

13. **HISTORIC AND CULTURAL PRESERVATION**

a. **Are there any places or objects listed on, or proposed for, national, state, or local preservation registers known to be on or next to the site? If so, generally describe.** None known. The State Department of Archaeology and Historic Preservation office has been notified of the proposal.

b. **Generally describe any landmarks or evidence of historic, archaeological, scientific, or cultural importance known to be on or next to the site.** A cultural resources survey and report for the site will be prepared if required by the State Department of Archaeology and Historic Preservation.

c. **Proposed measures to reduce or control impacts, if any:** Minimal clearing and grading will occur along the immediate shoreline (see attached site plans for details).

14. **TRANSPORTATION**

a. **Identify public streets and highways serving the site, and describe proposed access to the existing street system. Show on site plans, if any.**
An existing county road serves this site. Road access to this site is from Gold Creek Road West. A road approach permit is required from Kitsap County.

b. **Is site currently served by public transit? If no, what is the approximate distance to the nearest transit stop?**
No, the nearest public transit site is located approximately 8 miles away in Belfair, Mason County.

c. **How many parking spaces would the completed project have? How many would the project eliminate?**
The completed project will add one ADA parking spaces and 10 parking spaces. It would not eliminate any parking spaces.

d. **Will the proposal require any new roads or streets, or improvements to existing roads or streets, not including driveways? If so, generally describe (indicate whether public or private).**
No, only a driveway access will be added.

e. **Will the project use (or occur in the immediate vicinity of) water, rail, or air transportation? If so, generally describe.** No.

f. **How many vehicular trips per day would be generated by the completed project? If known, indicate when peak volumes would occur.**
Based on vehicles entering and exiting the access parking area there will be a slight increase in average daily trips along Gold Creek Road West.

g. **Proposed measures to reduce or control transportation impacts, if any:**
Conditions required for the road approach permit will address any transportation impacts.

**15. PUBLIC SERVICES**

a. **Would the project result in an increased need for public services (for example: fire protection, police protection, health care, schools, other)? If so generally describe.** None expected.

b. **Proposed measures to reduce or control direct impacts on public services, if any:** View of site from Gold Creek Rd. West will be enhanced by limbing trees to 15 feet above ground (see attached site plan for details).

**16. UTILITIES**

a. **Underline utilities currently available at the site: Electricity, Natural Gas, Water, Refuse Service, Telephone, Sanitary Sewer, Septic System, Other.**
No utilities are currently available at the site.

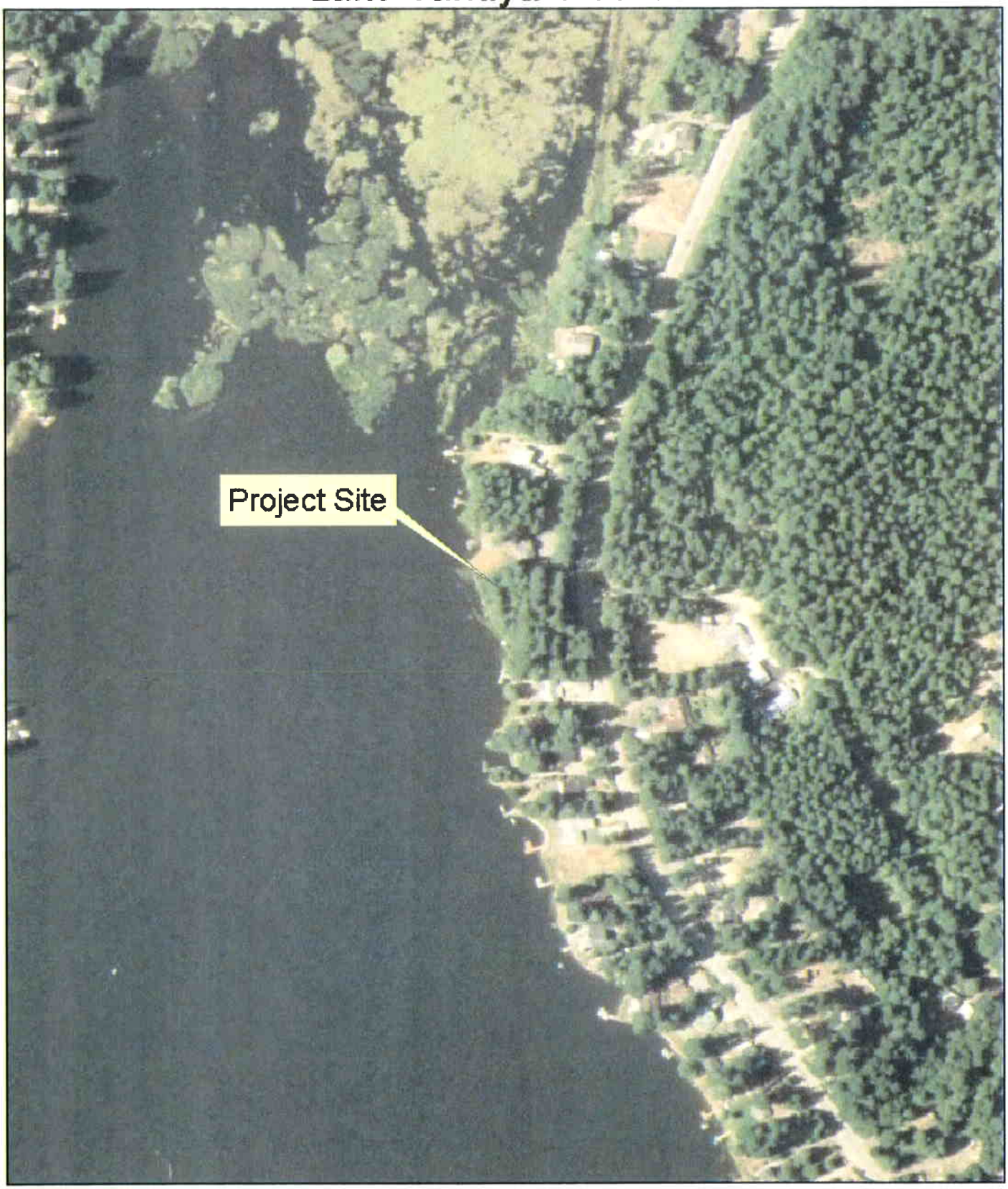
b. **Describe the utilities that are proposed for the project, the utility providing the service, and the general construction activities on the site or in the immediate vicinity, which might be needed.**
A permit application to install a vault toilet will be submitted to Kitsap County Health District.

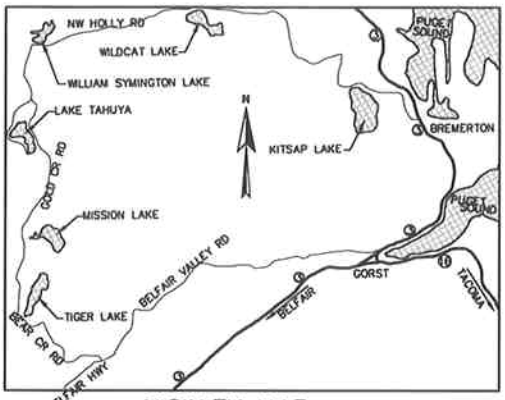
**C. SIGNATURE**

**The above answers are true and complete to the best of my knowledge. I understand that the lead agency is relying on them to make its decision.**

**SIGNATURE:** W. Lauren Stilmacher **DATE SUBMITTED:** 27 February 2007

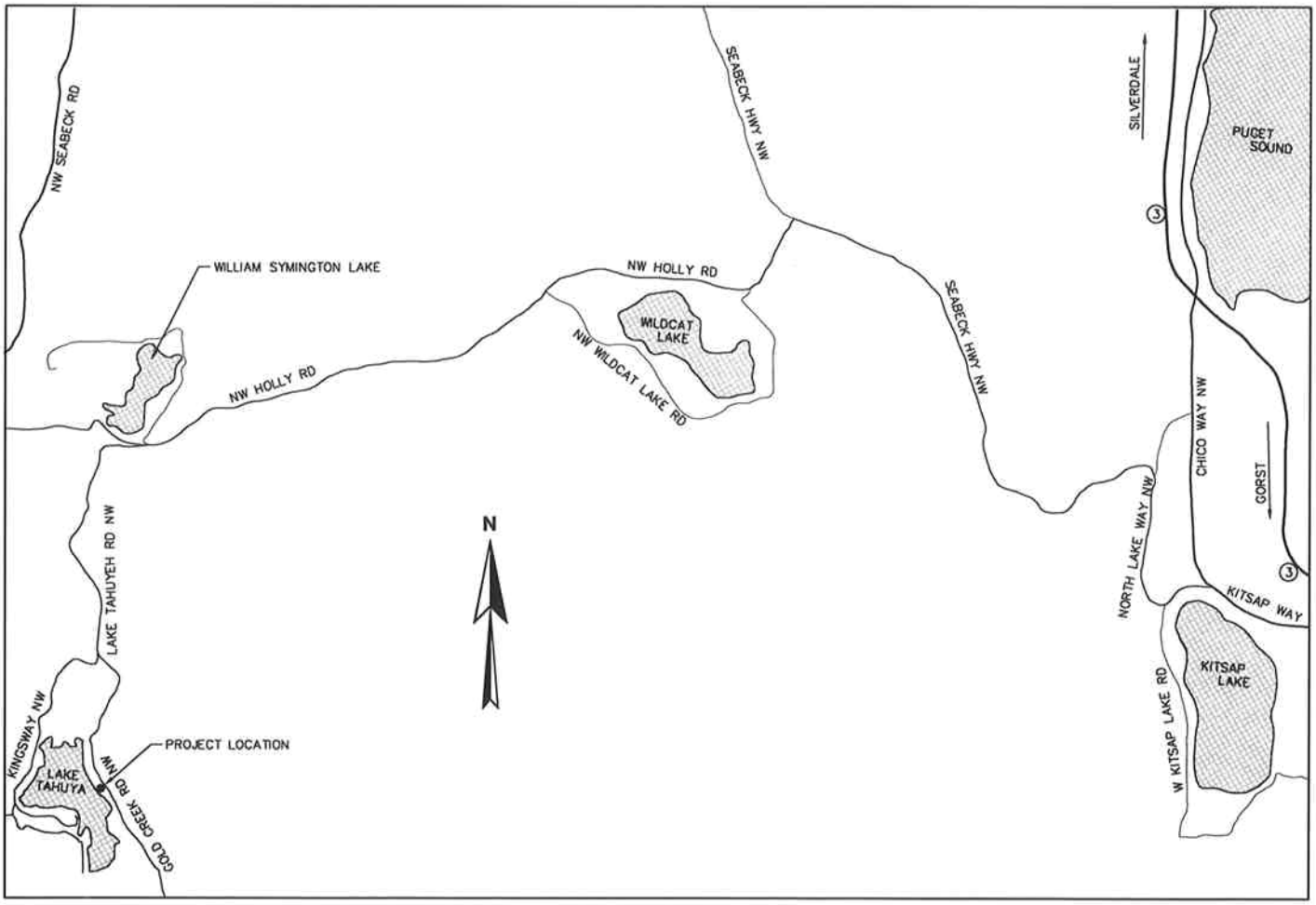
# Lake Tahuya Access





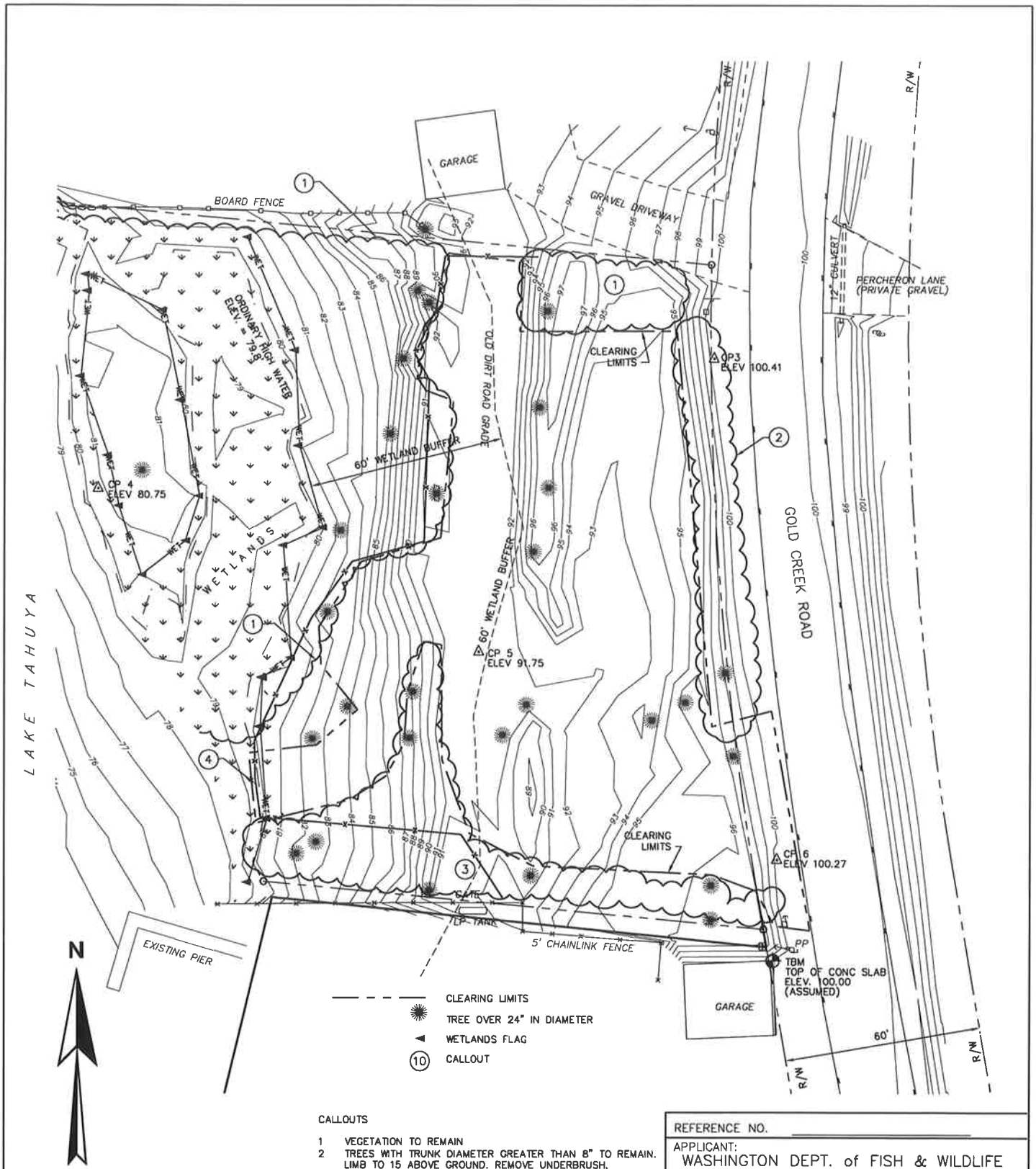

VICINITY MAP
SCALE: NONE

DIRECTIONS:
FROM OLD BELFAIR HWY
LEFT ONTO NE BEAR CR. DEWATTO RD.
RIGHT ONTO NE BEAR CR. RD.
NE BEAR CR. RD BECOMES GOLD CR. RD.
PROPERTY IS SOUTH OF THE INTERSECTION
OF GOLD CR. RD. AND PERCHERON LN. NW.




VICINITY MAP
SCALE: 1" = APPROX. 1/2 MILE

| | | |
|---|---|---|
| PURPOSE: ACCESS DEVELOPEMENT | WASHINGTON DEPT. of FISH & WILDLIFE<br>600 CAPITOL WAY N.<br>OLYMPIA, WA 98501-1091 | PROPOSED: PARKING AREA, VAULT TOILET AND GRAVEL LAUNCH RAMP |
| DATUM: ASSUMED<br>ADJACENT PROPETY OWNER:<br>1.<br>2<br>ENG. PROJECT NO. KP:A677:06-1 | REFERENCE NO. 06-43982<br>SITE: LAKE TAHUYA<br>ADDRESS: GOLD CREEK ROAD NW<br>BREMERTON, WA 98312 | IN: LAKE TAHUYA<br>NEAR: BREMERTON<br>COUNTY OF: KITSAP STATE: WA<br>PORTION OF: T24N R1W SEC 17<br>DATE: 02/23/2007 SHEET 1 OF 6 |




CALLOUTS

1 VEGETATION TO REMAIN
2 TREES WITH TRUNK DIAMETER GREATER THAN 8" TO REMAIN. LIMB TO 15 ABOVE GROUND. REMOVE UNDERBRUSH.
3 VEGETATION TO REMAIN, SEE PLANTING PLAN, SHEET 5
4 SILT FENCE

0 40 80

SCALE: 1"= 40'

ENG. PROJECT NO. KP:A677:06-1

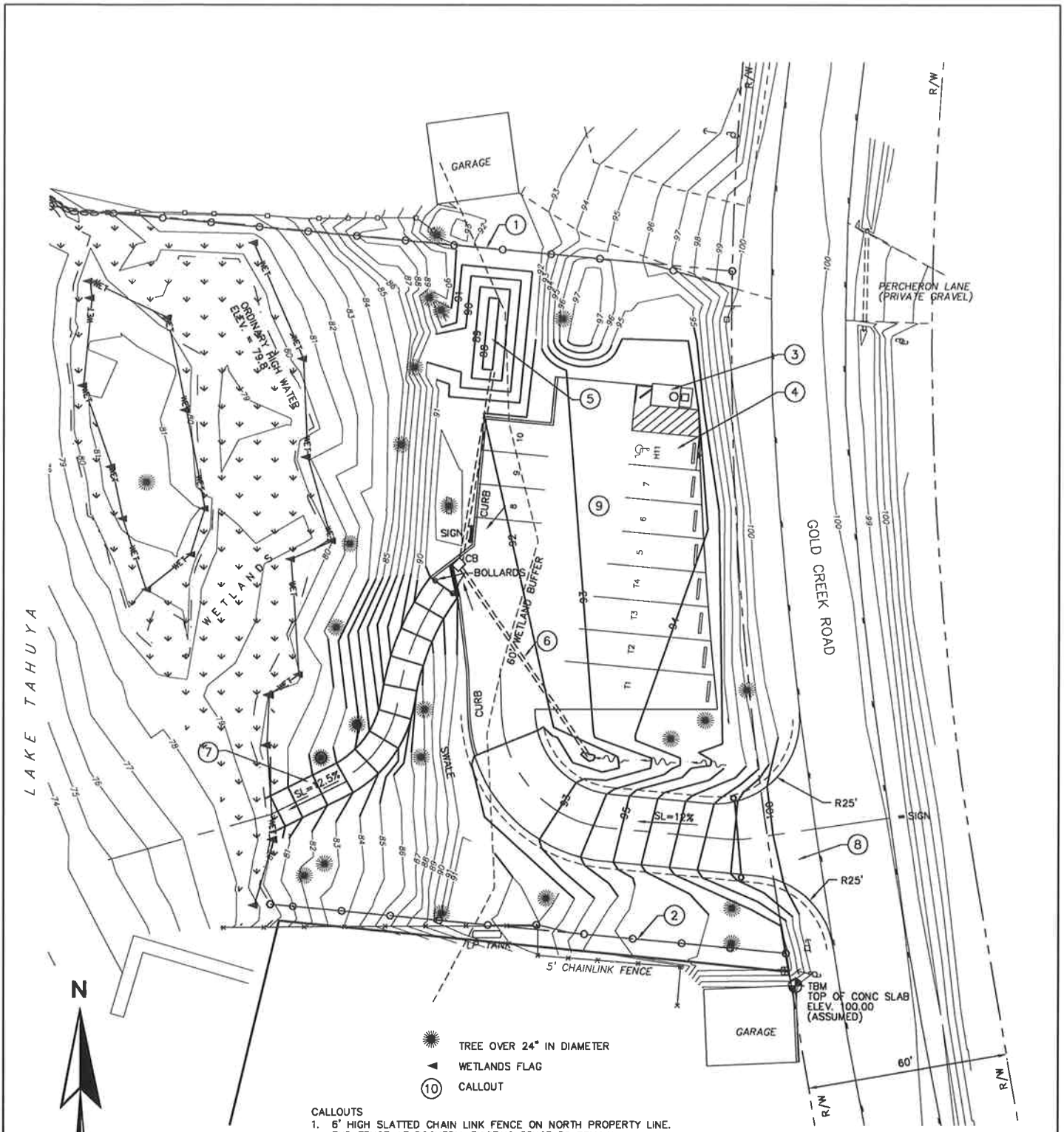
REFERENCE NO. _____

APPLICANT:
WASHINGTON DEPT. of FISH & WILDLIFE

# LAKE TAHUYA ACCESS
## EXISTING SITE PLAN AND CLEARING LIMITS

AT: BREMERTON , WASHINGTON

DATE: 02/23/2007 SHEET 2 OF 6




CALLOUTS

1. 6' HIGH SLATTED CHAIN LINK FENCE ON NORTH PROPERTY LINE. END FENCE AT ROCKERY. EXISTING FENCE TO REMAIN.
2. 6' HIGH SLATTED CHAIN LINK FENCE ON SOUTH PROPERTY LINE. JOG FENCE AT LP TANK. EXISTING FENCE TO REMAIN.
3. CONCRETE VAULT TOILET. PAVE TO DOORWAY.
4. HANDICAP PARKING STALL. MAX SLOPE 2% INSTALL STRIPE, WHEELSTOP AND SIGN.
5. RETENTIOIN POND WITH 3H:1V SIDE SLOPES BOTTOM ELEV. = 88.0'. LEVEL SPREADER OVERFLOW AT ELEV. 90.00. SEE PLANTING PLAN, SHEET 5
6. STORMWATER SYSTEM: ADS-N12 CULVERT. SLOPE=1.0% TYPE I CATCH BASIN WITH OIL SPILL CONTROL ELBOW.
7. 8' WIDE GRAVEL LAUNCH RAMP WITH GEO-WEB EROSION PROTECTION. SEE TYPICAL SECTION
8. 20' WIDE ASPHALT ENTRANCE WITH 25' RADIUS FILLET. SEAL AT COUTY ROAD. SEE ROAD PROFILE. INSTALL GATE.
9. ASPHALT PARKING. SLOPE TO CATCH BASIN. STRIPE.

0 40 80

SCALE: 1"= 40'

ENG. PROJECT NO. KP:A677:06-1

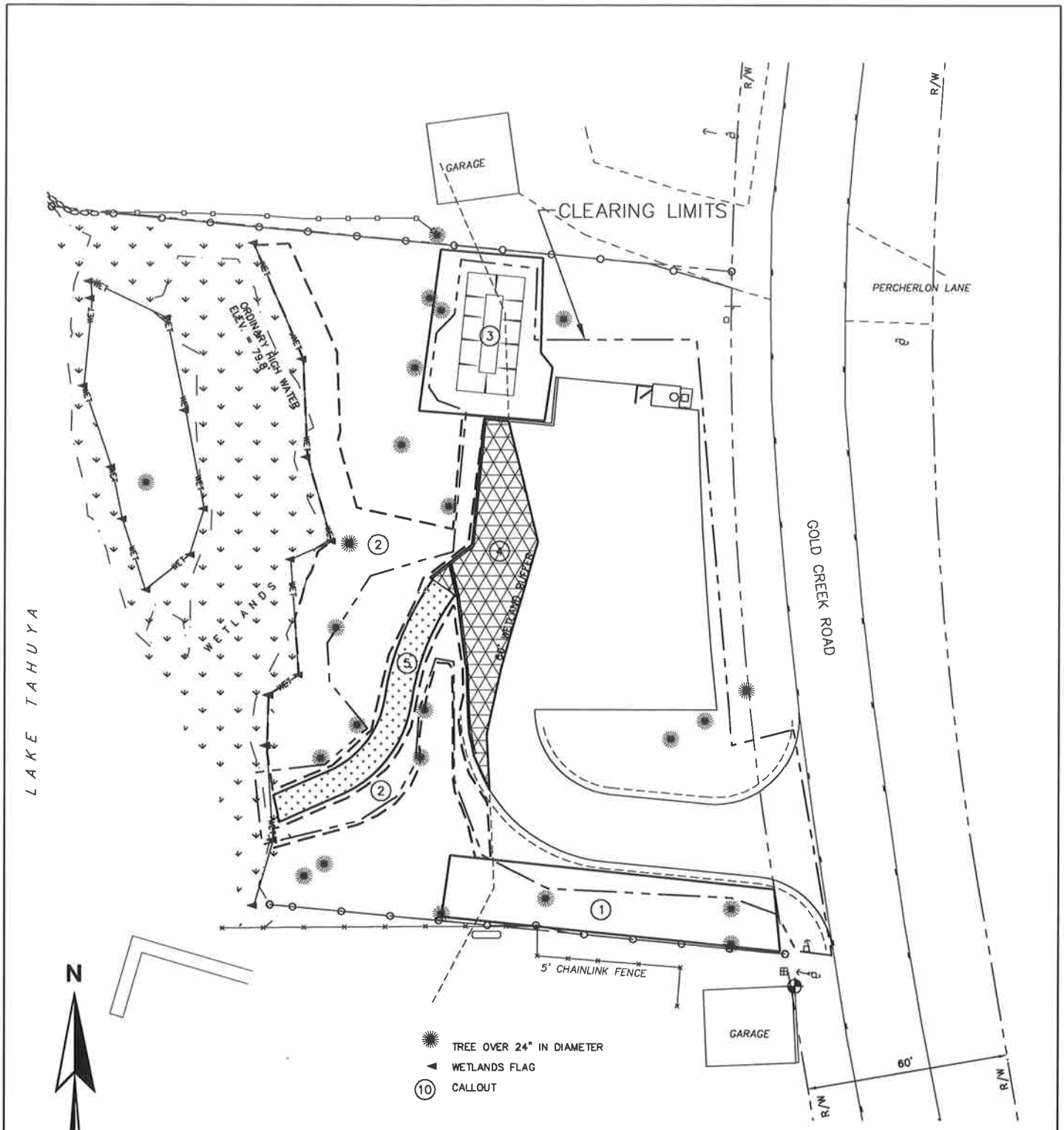
REFERENCE NO. _____

APPLICANT:
WASHINGTON DEPT. of FISH & WILDLIFE

# LAKE TAHUYA ACCESS
## SITE PLAN

AT: BREMERTON , WASHINGTON

DATE: 02/23/2007 SHEET 3 OF 6




CALLOUTS

1. 1805 S.F. – EXISTING TREES TO REMAIN. SEE PLANT SCHEDULE SHEET 6
2. 5275 S.F. – PLANT WETLAND BUFFER PER SCHEDULE SHEET 6.
3. 1421 S.F. – PLANT STORMWATER TREATMENT POND PER SCHEDULE SHEET 6.
4. AREA OF IMPERVIOUS SURFACE WITHIN BUFFER.
5. GEO-WEB AND GRAVEL RAMP

0 40 80

SCALE: 1"= 40'

ENG. PROJECT NO. KP:A677:06-1

REFERENCE NO. _____

APPLICANT: WASHINGTON DEPT. of FISH & WILDLIFE

# LAKE TAHUYA ACCESS
## SITE VEGETATION PLAN

AT: BREMERTON, WASHINGTON

DATE: 02/23/2007 SHEET 4 OF 6

① **Area 1 Property Line Buffer**

| Species | Characteristic | Number of plants |
|---|---|---|
| Western Red Cedar (*Thuja plicata*) | Evergreen Tree | 10 |
| Evergreen Huckleberry (*Vaccinium ovatum*) | Evergreen Shrub | 17 |
| Vine Maple (*Acer circinatum*) | Woody Shrub | 20 |

② **Area 2---Wetland Buffer Enhancement**

| Species | Characteristic | Number of plants |
|---|---|---|
| Cascade Oregongrape (*Berberis nervosa*); FACU) | Low woody evergreen plant | 7 |
| Douglas (Black) Hawthorn (*Crataegus douglasii*; FAC) | Thorny small tree | 4 |
| Vine Maple (*Acer Circinatum*; FAC-) | Woody shrub | 5 |
| Black Twin-berry (*Lonicera involucrata*, FAC+) | Hardy shrub | 4 |
| Osoberry (*Oemleria cerasiformis*; FACU) | Shade Tolerant shrub | 4 |
| Pacific Willow (*Salix lasiandra*) | | 10 |
| Bent Grass (*Agrostis stolonifera*; FAC) | Seed to prevent erosion | Pounds 0.311 |
| Lady-fern (*Athyrium filix-femina*; FAC) | Herbaceous | 7 |
| Sword fern (*Polystichum munitum;* FACU) | Herbaceous | 7 |
| Small Fruited Bulrush (*Scirpus microcarpus*) | Hydrophillic | 1 lb per 2000 sf |

③ **Area 3 - Stormwater Treatment Pond**

| Species | Characteristic | Number of plants |
|---|---|---|
| Slough Sedge (*Carex obnupta*; OBL) | Grows in mats | 10 |
| Bent Grass (*Agrostis stolonifera*; FAC) | Seed to prevent erosion | POUNDS 0.7105 |
| Lady-fern (*Athyrium filix-femina*; FAC) | Herbaceous | 20 |
| Sword fern (*Polystichum munitum;* FACU) | Herbaceous | 10 |

**Seed Mix--Or similar mix, depending on availability**

| Species | Pounds of Mixture (per density 1 pound/2000 sf) |
|---|---|
| Tufted Hairgrass (*Deschampsia cespitosa*) | Seed to prevent erosion |
| | |

AREA CALCULATIONS:

| | |
|---|---|
| PROPERTY ABOVE ORDINARY HIGH WATER | 28,412 SF (0.65 ACRES) |
| IMPERVIOUS AREA FOR PARKING AND ENTRANCE ROAD | 9060 SF |
| AREA FOR GRAVEL LAUNCH RAMP/PATH | 830 SF |

BUFFER IMPACTS:

| | |
|---|---|
| LAUNCH RAMP IN BUFFER | 690 SF |
| PARKING IN BUFFER | 1380 SF |
| DETENTION POND IN BUFFER | 430 SF |
| TOTAL BUFFER IMPACT | 2500 SF |

MITIGATION:

| | |
|---|---|
| BUFFER ENHANCEMENT | 5275 SF |

REFERENCE NO. _____

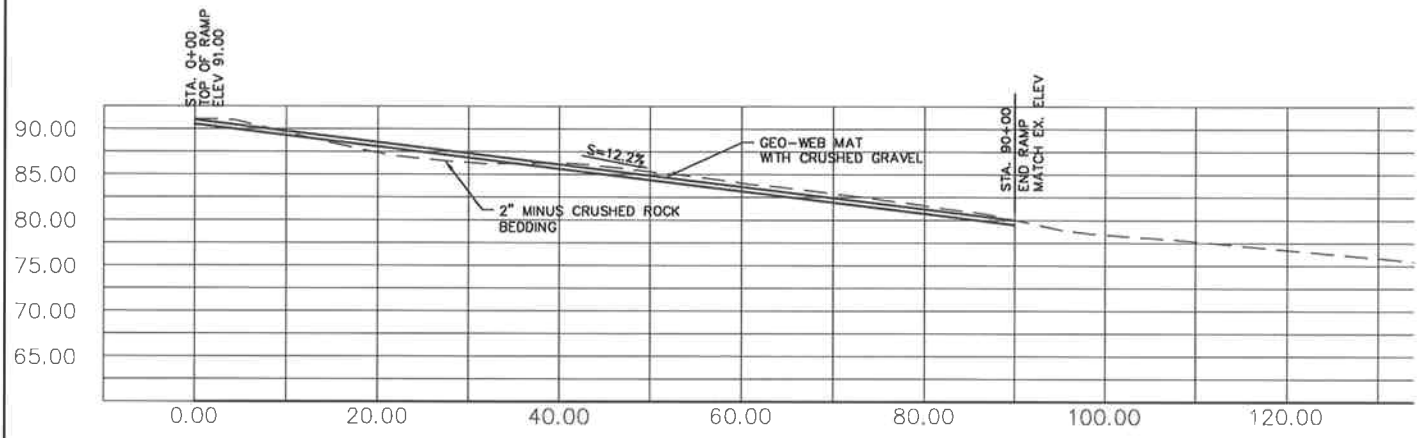
APPLICANT:
WASHINGTON DEPT. of FISH & WILDLIFE

LAKE TAHUYA ACCESS
AREAS AND
PLANTING SCHEDULE

AT: BREMERTON , WASHINGTON

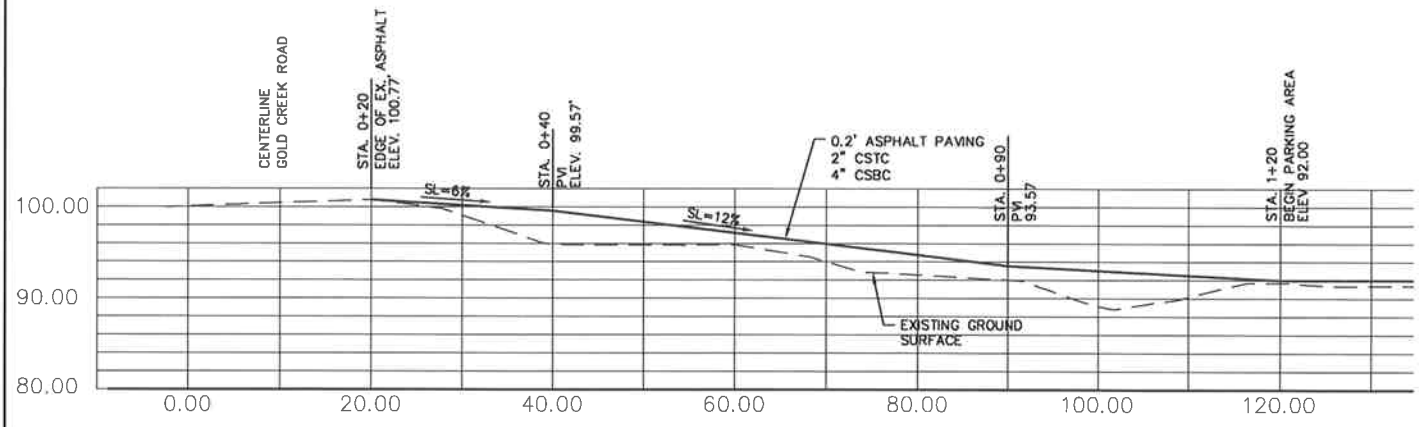
DATE: 02/23/2007 SHEET 5 OF 6

ENG. PROJECT NO. KP:A677:06-1




## RAMP PROFILE

SCALE: 1" = 20'




## ENTRANCE PROFILE

SCALE: 1" = 20'

0 20 40

SCALE: 1"= 20'

ENG. PROJECT NO. KP:A677:06-1

REFERENCE NO. _____

APPLICANT:
WASHINGTON DEPT. of FISH & WILDLIFE

LAKE TAHUYA ACCESS

PROFILES

AT: BREMERTON , WASHINGTON

DATE: 02/23/2007 SHEET 6 OF 6