Joint Permit Application

This is a joint application, and must be sent to both agencies, who administer separate permit programs. Alternative forms of permit applications may be acceptable; contact the Corps and DSL for more information.

Date Stamp

U.S. Army Corps of Engineers Portland District	Oregon Department of State Lands
Corps Action ID Number	DSL Number

(1) TYPE OF PERMIT(S) IF KNOWN (check all that apply)

☐ Individual
☐ Other:_____

Corps: ☐ Nationwide No.: _____ ☐ Regional General _____
DSL: ☐ DSL Waiver ☐ DSL General ☐ DSL No State Permit Required

(2) APPLICANT AND LANDOWNER CONTACT INFORMATION

	Applicant	Property Owner (if different)	Authorized Agent (if applicable) ☐ Consultant ☐ Contractor
Name (Required) Business Name Mailing Address 1 Mailing Address 2 City, State, Zip	Tenmile Lake Association P. O. Box 600 Lakeside, OR 97449	City of Lakeside 915 North Lake Rd Lakeside, OR 97449	
Business Phone Cell Phone Fax Email	 541-297-1663 tenmilelakes@gmail.com	541-759-3011 N/A Cityhall@cityoflakeside.org	

(3) PROJECT INFORMATION

A. Provide the project location.

Project Name	Latitude & Longitude*
Tenmile Creek Beaver Habitat Restoration Project	#1 43*34'20.17 -124*10'55515w #2 43*24'20.70" -124*10'54.41"w

Project Address / Location	City (nearest)	County
	Lakeside	Coos

Township	Range	Section	Quarter / Quarter	Tax Lot
23s	12w	18	Cb	5200

Brief Directions to the Site:
In Lakeside, follow 8th South to Park Ave. Turn right and follow to WWTP. Please see attached directions.

B. What types of waterbodies or wetlands are present in your project area? (Check all that apply.)

☑ River / Stream ☐ Non-Tidal Wetland ☐ Lake / Reservoir / Pond
☐ Estuary or Tidal Wetland ☐ Other ☐ Pacific Ocean

Waterbody or Wetland Name**	River Mile	6th Field HUC Name	6th Field HUC (12 digits)
Tenmile Creek		Lakeside Frontal	1710030404

* In decimal format (e.g., 44.9399, -123.0283)

** If there is no official name for the wetland or waterbody, create a unique name (such as “Wetland 1” or “Tributary A”).

C. Indicate the project category. (Check all that apply.)		
☐ Commercial Development	☐ Industrial Development	☐ Residential Development
☐ Institutional Development	☐ Agricultural	☐ Recreational
☐ Transportation	☑ Restoration	☐ Bridge
☐ Dredging	☐ Utility lines	☐ Survey or Sampling
☐ In- or Over-Water Structure	☐ Maintenance	☐ Other:

(4) PROJECT DESCRIPTION

A. Summarize the overall project including work in areas both in and outside of waters or wetlands.
The Project is a Beaver habitat project that will benefit native fisheries, water quality and quantity in an urbanized stream reach of Tenmile Creek, Coos County Oregon.
Project Goal is to enhancement habitat to assist beavers to create a beaver complex that will reconnect the stream with impacted adjacent wetlands which will improve native fish rearing, water quality, and raise ground water elevations. Specifically this Project will install 2, channel wide *Post Lines with Willow Weaves* in the Tenmile Creek, adjacent to the City of Lakeside’s Wastewater Treatment Plant. Large 8’-9’ limbed Douglas Fir branches will be placed 2’ apart across the stream channel. At each of the two sites, during the instream work period, 13 branches will be placed vertically 2 feet apart, across the channel by hand utilizing a T-post pounder/Sledge hammer. Branches will be pounded or cut to be six feet at bank height. Willows collected off site will be weaved horizontally through the posts at a height of 3-5ft Please see attached diagrams. In addition, approximately a 150 yard section of both streambanks currently actively eroding and infested with Reed Canary grass will be planted with native willows. Please see attached photographs.

Designs will follow approved designs identified in The Beaver Restoration Guidebook, Working with Beavers to Restore Stream, Wetlands, and Floodplains. (USFS 2015). No trapping and transporting of Beaver is proposed in this project.

Impacts will only occur in the channel when placing Native Fir branches. Project volunteers will access sites through WWTP field and by small boat. Willow planting will follow established protocols and will be planted from the low water to the top of the banks.

B. Describe work within waters and wetlands.
Below the High Water mark, two Post lines of Douglas Fir branches will be pounded into the stream bottom sediments by hand approximately 2ft by hand utilizing a T-Post pounder to approximately 6ft bank height. 13 large Douglas Fir branches will be placed 2ft apart across the 27ft channel at each of the sites. This Post lines will be located approximately 30 yards apart. The low water channel width at each site is approximately 27’ and is adjacent to meadows on each side of Tenmile Creek managed for the WWTP summer irrigation. The width between the tops of the banks is approximately 50’.

Willow spikes ranging from 2ft -6ft in length will be pushed into the ground by hand at a height of 6ft bank-height. Approximately 2,000 willow spikes will be planted on both sides of Tenmile Creek in a reach approximately 150 yards in length.

Note: There is not Federal or State funding involved in this project.

C. Construction Methods. Describe how the removal and/or fill activities will be accomplished to minimize impacts to waters and wetlands.
All instream work, Post lines, will occur during the approved instream work window of July 1 through September 15.
Native Douglas fir branches were chosen to not impact water quality. Post lines will be placed by hand tools and no impacts to streambanks or adjacent meadows will occur. Volunteers will access site by foot.
Project elements of Post lines and willow plants are designed to improve water quality and wetlands.
Willows will be collected off site and planted by hand during the winter months.
Access to sites will be through managed pastures adjacent to WWTP and by small boat.

(4) PROJECT DESCRIPTION (continued)

D. Describe source of fill material and disposal locations if known

Very large Douglas Fir branches will be collected from a private property and prepared off site.
Willow spikes will be collected off site.

E. Construction timeline.

What is the estimated project start date? August 2019

What is the estimated project completion date? August 2019

Is any of the work underway or already complete? If yes, please describe. ☐ **Yes** ☑ **No**

F. Removal Volumes and Dimensions (if more than 7 impact sites, include a summary table as an attachment)

Wetland / Waterbody Name *	Removal Dimensions					Duration of Impact**	Material***
	Length (ft.)	Width (ft.)	Depth (ft.)	Area (sq.ft. or ac.)	Volume (c.y.)		

G. Total Removal Volumes and Dimensions

Removal Impacts to Waters	Length (ft.)	Area (sq. ft or ac.)	Volume (c.y.)
Total Removal to Wetlands			
Total Removal Below Ordinary High Water			
Total Removal Below Highest Measured Tide			
Total Removal Below High Tide Line			
Total Removal Below Mean High Water Tidal Elevation			

H. Fill Volumes and Dimensions (if more than 7 impact sites, include a summary table as an attachment)

Wetland / Waterbody Name*	Fill Dimensions					Duration of Impact**	Material***
	Length (ft.)	Width (ft.)	Depth (ft.)	Area (sq. ft. or ac.)	Volume (c.y.)		
Tenmile Creek sites	54	.5	2	54	2.0	Permanent	26 Douglas Fir Branches

(4) PROJECT DESCRIPTION (CONTINUED)

I. Total Fill Volumes and Dimensions

Fill Impacts to Waters	Length (ft.)	Area (sq. ft or ac.)	Volume (c.y.)
Total Fill to Wetlands			
Total Fill Below Ordinary High Water	80	80	2.0
Total Fill Below Highest Measured Tide			
Total Fill Below High Tide Line			
Total Fill Below Mean High Water Tidal Elevation			

*If there is no official name for the wetland or waterbody, create a unique name (such as “Wetland 1” or “Tributary A”).
**Indicate the days, months or years the fill or removal will remain. Enter “permanent” if applicable. For DSL, permanent removal or fill is defined as being in place for 24 months or longer.
*** Example: soil, gravel, wood, concrete, pilings, rock etc.

(5) PROJECT PURPOSE AND NEED

Provide a statement of the purpose and need for the overall project.

Historically, the Tenmile Lakes Basin has been an excellent producer of Coho salmon and may have been the largest producer on the coast of Oregon. Commercial seine and gillnet records compiled by ODFW suggest runs-up to 125,000 Coho returned per year to the system. Currently, Tenmile Lakes is considered to have the highest potential for Coho habitat on the coast. Exotic species, channelized streams, and habitat complexity are limiting factors negatively impacting Tenmile Coho and native fish species. The project site is a critical area for Coho smolts out migrating. From where it is has been channelized from the outlet of South Lake to below the WWTP we expect native juveniles run a gauntlet predatory nonnative fish species. Riparian areas have been altered and native willows have been removed.

This project will enhance stream habitat conditions to assist Beaver recolonization of this area from the Lakes. Reestablishing a beaver complex just below the Lakes outlet will:

- Create pool habitat (upstream and downstream)
- Improve floodplain connectivity
- Expand riparian vegetation
- Increase stream sinuosity
- Create multi-threaded channels
- Reduce bank erosion
- Establish beaver colonies

The project will result with beavers utilizing these two structures to build a complex that will improve natural processes benefiting Coho salmon and other fish and wildlife species by creating beneficial pool and wetland habitat in this Tenmile Creek stream reach.

(6) DESCRIPTION OF RESOURCES IN PROJECT AREA

A. Describe the existing physical and biological characteristics of each wetland or waterbody. Reference the wetland and waters delineation report if one is available. Include the list of items provided in the instructions.

Tenmile Creek is a low gradient stream originating from South Tenmile Lake that flows approximately 4 miles west from South Tenmile Lake and can be categorized into three reaches. The first reach flows through the urban City of Lakeside, the second reach flows past rural housing and in the final reach, Tenmile Creek flows through the Oregon Dunes National Recreational Area where it enters the Pacific Ocean. Native fish now utilize Tenmile Creek for Adult and juvenile migration.

ODFW biologists do not consider the creek a significant rearing area for anadromous fish, although it does support some trout and warm water species that move out of the lake. The principal uses of the creek are by adult Coho salmon, winter steelhead, and sea-run cutthroat trout migrating from the ocean to spawning grounds upstream from the lakes and by juveniles of these species migrating from upstream rearing areas to the ocean (Paul Reimers, Reese Bender, ODFW biologists, pers. com. November, 1990).

In the first reach, where the project is proposed, Tenmile Creek has been historically channelized and residential houses and businesses line its streambanks. It the 1970s, the City of Lakeside built a WWTP at the end of Park Ave. on the Creek. Currently, the WWTP is permitted to discharge up 250,000 gallons of treated wastewater into Creek when flows are higher than 7.8ft msl. This reach and project sites are invested with nonnative fish and aquatic plant species. Water quality is poor and in the summer, DO levels negatively impacted by these invasive plants have resulted in “Fish Kills” in this reach.

Streambanks at the project site have had willows removed and WWTP pastures created for summer time irrigation with wastewater. The City of Lakeside also has a WWTP irrigation pipe that is buried under the creek for pasture irrigation.

The bottom of the stream channel is approximately 27ft wide with streambanks that are 12-14ft in height. Stream substrates consist of sand and mud.

The created meadows are identified as wetlands within the City of Lakeside Local Wetland Inventory. Please see attached LWI Summary and data sheets.

B. Describe the existing navigation, fishing and recreational use of the waterbody or wetland.

Limited navigation or recreation exists at this project site. The majority of boating in Tenmile Creek occurs below the Railroad bridge, which is a barrier to most boats,

Limited fishing occurs at this site. This portion of Tenmile Creek is not open during the many Bass Tournaments Tenmile Lakes hosts. This portion of Tenmile Creek is closed also to Coho fishing. Limited fishing for winter steelhead occurs at project site.

Recreational use is limited at summer low flows and dangerous blockages. It is not recommended for recreational boating during the summer months.

The adjacent wetlands, is managed by the City of Lakeside WWTP for summer wastewater irrigation.
When Tenmile Creek flows are above 7ft msl, the City of Lakeside has a WWTP permit that allows for 250,000 gallons of treated water to be released in the creek per day.

(7) PROJECT SPECIFIC CRITERIA AND ALTERNATIVES ANALYSIS

Describe project-specific criteria necessary to achieve the project purpose. Describe alternative sites and project designs that were considered to avoid or minimize impacts to the waterbody or wetland.*[*]

In general, several alternative designs, number of sites, and locations were evaluated.

- Alternative #1: Do nothing. This alternative was determined to be unacceptable.
- Alternative #2: Utilizing Large Wooding Debris in this reach was determined to potentially cause flooding and obstacles to navigation. Tenmile Creek is not large wood limited.
- Alternative #3: Beaver Analogue Dams. The post weir design was chosen as the best alternative.

Project Designs are based on proved designs implemented to improve beaver habitat in impacted stream reaches. Criteria that considered included:

FISH PASSAGE:

With the 2ft distance between the Posts, as well as their 6ft height and the willow weave placed in the middle of the Posts, these two sites will not create a fish passage barrier in Tenmile Creek. Fish will be able to pass the structure at all flow levels. Native salmonids utilize Tenmile Creek for Adult and juvenile migrations when creek water levels are above the 6ftmsl high design.

FISH HABITAT:

Currently native salmonid utilize Tenmile Creek for Adult migration and juvenile out migration. The project site is invested with nonnative plant species and nonnative fish. Tenmile Creek has observed summer fish kills and has low DO values. The nonnative waterweed Egeria is present in high densities.

A beaver complex will dramatically improve water quality and native fish habitat in this reach of Tenmile Creek.

WATER RIGHTS:

This design will not hold water thus will not require a water right.

FLOODING of ADJACIENT PROPERTIES:

This area of Lakeside and the WWTP flood when Lake levels reach over 14ftmsl. In the 1980s, the local drainage district and the City of Lakeside dug a drainage ditch to relieve flooding at a level of 10ft msl. The first project site is location 100 yards downstream of this drainageway and any Creek levels over 10ft msl will continue to flow through this existing ditch. Post Line is designed that will pass flows above 6ft msl. Having the project sites below the WWTP will reduce the potential of flooding resulting from this project and not result in impacts to the WWTP discharge or the WWTP stream gage.

NAVIGATION:

Tenmile Creek is not considered navigable in this reach by the Department of State Lands.

Limited recreational users utilize this area during the winter for winter steelhead fishing and during winter flows; this project will not impact any navigation. There are not existing homes with docks that need to access the lakes from below the WWTP so upstream navigation is nonexistent. During the spring and summer, limited number of kayakers passes through this area, although during summer low water, no motors and paddle boats are recommended through this reach due to the dangers of large downed trees and blockages in the creek.

Two Warning signs will be placed, 1 a 100 yds above and 1 directly in front of the two Post lines. The City of Lakeside and volunteers are creating a portage area on the WWTP side of the creek for summer paddlers.

[*] Not required by the Corps for a complete application, but is necessary for individual permits before a permit decision can be rendered.

(8) ADDITIONAL INFORMATION

Are there state or federally listed species on the project site?	☑ Yes	☐ No	☐ Unknown
Is the project site within designated or proposed critical habitat?	☑ Yes	☐ No	☐ Unknown
Is the project site within a national Wild and Scenic River ?	☐ Yes	☑ No	☐ Unknown
Is the project site within a State Scenic Waterway?	☐ Yes	☑ No	☐ Unknown
Is the project site within the 100-year floodplain?	☑ Yes	☐ No	☐ Unknown

If yes to any of the above, explain in Block 4 and describe measures to minimize adverse effects to these resources in Block 5.

Is the project site within the Territorial Sea Plan (TSP) Area?	☐ Yes	☑ No	☐ Unknown

If yes, attach TSP review as a separate document for DSL.

Is the project site within a designated Marine Reserve?	☐ Yes	☑ No	☐ Unknown

If yes, certain additional DSL restrictions will apply.

Will the overall project involve ground disturbance of one acre or more?	☐ Yes	☑ No	☐ Unknown

If yes, you may need a 1200-C permit from the Oregon Department of Environmental Quality (DEQ).

Is the fill or dredged material a carrier of contaminants from on-site or off- site spills?	☐ Yes	☑ No	☐ Unknown
Has the fill or dredged material been physically and/or chemically tested?	☐ Yes	☑ No	☐ Unknown

If yes, explain in Block 4 and provide references to any physical/chemical testing report(s).

Has a cultural resource (archaeological) survey been performed on the project area?	☐ Yes	☑ No	☐ Unknown

If yes, provide a copy of the survey with this application to the Corps only. Do not describe any resources in this document.

Will the project result in new impervious surfaces or the redevelopment of existing surfaces? Yes ☐ No X

If yes, the Applicant must submit a post-construction stormwater management plan to DEQ's 401 WQC program for review and approval, see http://www.deq.state.or.us/wq/sec401cert/docs/stormwaterGuidelines.pdf

Identify any other federal agency that is funding, authorizing or implementing the project.

Agency Name	Contact Name	Phone Number	Most Recent Date of Contact

List other certificates or approvals/denials required or received from other federal, state or local agencies for work described in this application. For example, certain activities that require a Corps permit also require 401 Water Quality Certification (WQC) from Oregon Department of Environmental Quality (DEQ). For DEQ, please note that all projects that qualify for a Nationwide 401 WQC will be invoiced a fee. Projects that do not qualify for the Nationwide certification will be invoiced based on project complexity. See http://www.oregon.gov/deq/wq/wqpermits/Pages/Section-401-Fees.aspx

Agency	Certificate/ approval / denial description	Date Applied

Other DSL and/or Corps Actions Associated with this Site (Check all that apply.)

☐ Work proposed on or over lands owned by or leased from the Corps (may require authorization pursuant to 33 USC 408).

☐ State owned waterway DSL Waterway Lease #

☐ Other Corps or DSL Permits Corps # DSL #

☐ Violation for Unauthorized Activity Corps # DSL #

☐ Wetland and Waters Delineation Corps # DSL #

Submit the entire delineation report to the Corps; submit only the concurrence letter (if complete) and approved maps to DSL. If not previously submitted to DSL, send under a separate cover letter

(9) IMPACTS, RESTORATION/REHABILITATION, AND COMPENSATORY MITIGATION

A. Describe unavoidable environmental impacts that are likely to result from the proposed project. Include permanent, temporary, direct, and indirect impacts.

Installation of the Post lines will have only temporary impacts to water quality. This is expected to result in less than 10% increase to turbidity, due to very limited flow or nonexistence flow during project implementation.

This project is a fisheries habitat improvement project. Project sponsors are not proposing any mitigation.

B. For temporary removal or fill or disturbance of vegetation in waterbodies, wetlands or riparian (i.e., streamside) areas, discuss how the site will be restored after construction to include the timeline for restoration.

This project will not disturb or result in soil disturbance or erosion. Project sites will be accessed by foot and small boat. Hand tools will be utilized to place posts. Only native materials will be utilized.
Willow planting is designed to restore riparian conditions in this disturbed area.
No equipment or material staging will be required to implement this project.

Compensatory Mitigation

C. Proposed mitigation approach. Check all that apply:

☐ Permittee-responsible Onsite Mitigation

☐ Permittee-responsible Offsite mitigation

☐ Mitigation Bank or in-lieu fee program

☐ Payment to Provide (not approved for use with Corps permits)

D. Provide a brief description of mitigation approach and the rationale for choosing that approach. If you believe mitigation should not be required, explain why.

This project is a fisheries habitat improvement project. Project sponsors are not proposing any mitigation.

Mitigation Bank / In-Lieu Fee Information:

Name of mitigation bank or in-lieu fee project:

Type of credits to be purchased:

If you are proposing permittee-responsible mitigation, have you prepared a compensatory mitigation plan?

☐ Yes. Submit the plan with this application and complete the remainder of this section.

☐ No. A mitigation plan will need to be submitted (for DSL, this plan is required for a complete application).

Mitigation Location Information (Fill out only if permittee-responsible mitigation is proposed)

Mitigation Site Name/Legal Description	Mitigation Site Address	Tax Lot #
County	City	Latitude & Longitude (in DD.DDDD format)

Township	Range	Section	Quarter/Quarter

(10) ADJACENT PROPERTY OWNERS FOR PROJECT AND MITIGATION SITE

☐ **Pre-printed mailing labels of adjacent property owners attached**	**Project Site Adjacent Property Owners**	**Mitigation Site Adjacent Property Owners**

Contact Name
Address 1
Address 2
City, ST ZIP Code

Contact Name
Address 1
Address 2
City, ST ZIP Code

Contact Name
Address 1
Address 2
City, ST ZIP Code

(11) CITY/COUNTY PLANNING DEPARTMENT LAND USE AFFIDAVIT (TO BE COMPLETED BY LOCAL PLANNING OFFICIAL)

I have reviewed the project described in this application and have determined that:

- ☐ This project is not regulated by the comprehensive plan and land use regulations
- ☐ This project is consistent with the comprehensive plan and land use regulations
- ☐ This project is consistent with the comprehensive plan and land use regulations with the following:
  - ☐ Conditional Use Approval
  - ☐ Development Permit
  - ☐ Other Permit (explain in comment section below)
- ☐ This project is not currently consistent with the comprehensive plan and land use regulations. To be consistent requires:
  - ☐ Plan Amendment
  - ☐ Zone Change
  - ☐ Other Approval or Review (explain in comment section below)

An application or variance request has ☐ has not ☐ been filed for approvals required above

Local planning official name (print)	Title	City / County

Signature	Date

Comments:

(12) COASTAL ZONE CERTIFICATION

If the proposed activity described in your permit application is within the Oregon coastal zone, the following certification is required before your application can be processed. The signed statement will be forwarded to the Oregon Department of Land Conservation and Development (DLCD) for its concurrence or objection. For additional information on the Oregon Coastal Zone Management Program and consistency reviews of federally permitted projects, contact DLCD at 635 Capitol Street NE, Suite 150, Salem, Oregon 97301 or call 503-373-0050 or click here.

CERTIFICATION STATEMENT

I certify that, to the best of my knowledge and belief, the proposed activity described in this application complies with the approved Oregon Coastal Zone Management Program and will be completed in a manner consistent with the program.

Print /Type Applicant Name	Title

Applicant Signature	Date

(13) SIGNATURES

Application is hereby made for the activities described herein. I certify that I am familiar with the information contained in the application, and, to the best of my knowledge and belief, this information is true, complete and accurate. I further certify that I possess the authority to undertake the proposed activities. By signing this application I consent to allow Corps or DSL staff to enter into the above-described property to inspect the project location and to determine compliance with an authorization, if granted. I hereby authorize the person identified in the authorized agent block below to act in my behalf as my agent in the processing of this application and to furnish supplemental information in support of this permit application. I understand that the granting of other permits by local, county, state or federal agencies does not release me from the requirement of obtaining the permits requested before commencing the project. I understand that payment of the required state processing fee does not guarantee permit issuance.

To be considered complete, the fee must accompany the application to DSL. The fee is not required for submittal of an application to the Corps.

Fee Amount Enclosed	$

Applicant Signature (required) Must match name in Block 2	
Print Name Allen Whitney	Title TLA President
Signature	Date

Authorized Agent Signature	
Print Name Andrew Carlstrom	Title City Manager
Signature	Date

Landowner Signature(s)*	
Landowner of the Project Site (if different from applicant)	
Print Name	Title
Signature	Date
Landowner of the Mitigation Site (if different from applicant)	
Print Name	Title
Signature	Date

Department of State Lands, Property Manager (to be completed by DSL)

If the project is located on state-owned submerged and submersible lands, DSL staff will obtain a signature from the Land Management Division of DSL. A signature by DSL for activities proposed on state-owned submerged/submersible lands only grants the applicant consent to apply for a removal-fill permit. A signature for activities on state-owned submerged and submersible lands grants no other authority, express or implied and a separate proprietary authorization may be required.

Print Name	Title
Signature	Date

* Not required by the Corps.

(14) ATTACHMENTS

- [x] Drawings
  - [x] Location map with roads identified
  - [x] U.S.G.S topographic map
  - [x] Tax lot map
  - [x] Site plan(s)
  - [x] Cross section drawing(s)
  - [x] Recent aerial photo
  - [x] Project photos
  - [ ] Erosion and Pollution Control Plan(s), if applicable
  - [ ] DSL/Corps Wetland Concurrence letter and map, if approved and applicable
- [ ] Pre-printed labels for adjacent property owners (Required if more than 5)
- [ ] **Incumbency Certificate** if applicant is a partnership or corporation
- [ ] Restoration plan or rehabilitation plan for temporary impacts
- [ ] Mitigation plan
- [x] Wetland functional assessment and/or stream functional assessment
- [ ] Alternatives analysis
- [ ] Biological assessment (if requested by Corps project manager during pre-application coordination.)
- [ ] Stormwater management plan (may be required by the Corps or DEQ)
- [ ] Other:
  - [ ]
  - [ ]

Send Completed form to:

U.S. Army Corps of Engineers
ATTN: CENWP-OD-GP
PO Box 2946
Portland, OR 97208-2946
Phone: 503-808-4373
portlandpermits@usace.army.mil

Counties:
Baker, Clackamas, Clatsop, Columbia, Gilliam, Grant, Hood River, Lincoln, Malheur, Morrow, Multnomah, Polk, Sherman, Tillamook, Umatilla, Union, Wallowa, Wasco, Washington, Wheeler, Yamhill

OR

U.S. Army Corps of Engineers
ATTN: CENWP-OD-GE
211 E. 7th AVE, Suite 105
Eugene, OR 97401-2722
Phone: 541-465-6868
portlandpermits@usace.army.mil

Counties:
Benton, Coos, Crook, Curry, Deschutes, Douglas, Jackson, Jefferson, Josephine, Harney, Klamath, Lake, Lane, Linn, Marion

Send Completed form to:

DSL - West of the Cascades:

Department of State Lands
775 Summer Street NE, Suite 100
Salem, OR 97301-1279
Phone: 503-986-5200

OR

DSL - East of the Cascades:

Department of State Lands
1645 NE Forbes Road, Suite 112
Bend, Oregon 97701
Phone: 541-388-6112

Send all Fees to:
Department of State Lands
775 Summer Street NE, Suite 100
Salem, OR 97301-1279
Pay by Credit Card by Calling 503-986-5200
Or go Online: https://apps.oregon.gov/dsl/EPS/

Tenmile Lakes Watershed

From: "John Reiss" <jwreiss@yahoo.com>
Date: Wednesday, December 12, 2018 10:23 AM
To: "Mike Mader" <tlbp@presys.com>
Subject: Re: Directions to proposed site Primary and Secondary Sites

MapQuest directions have been sent to you by John.
Message: **Directions from TLBP Office to Proposed site (Primary and Secondary sites)**

To view your map, click on the link below or copy and paste it into your browser: http://mapq.st/2QXnQeC

From: **204 N 8th St Lakeside, OR 97449-9604**
To: **202 Park Ave Lakeside, OR 97449-9760**

2 MIN | 0.564 MILES

CURRENT TRAFFIC: LIGHT

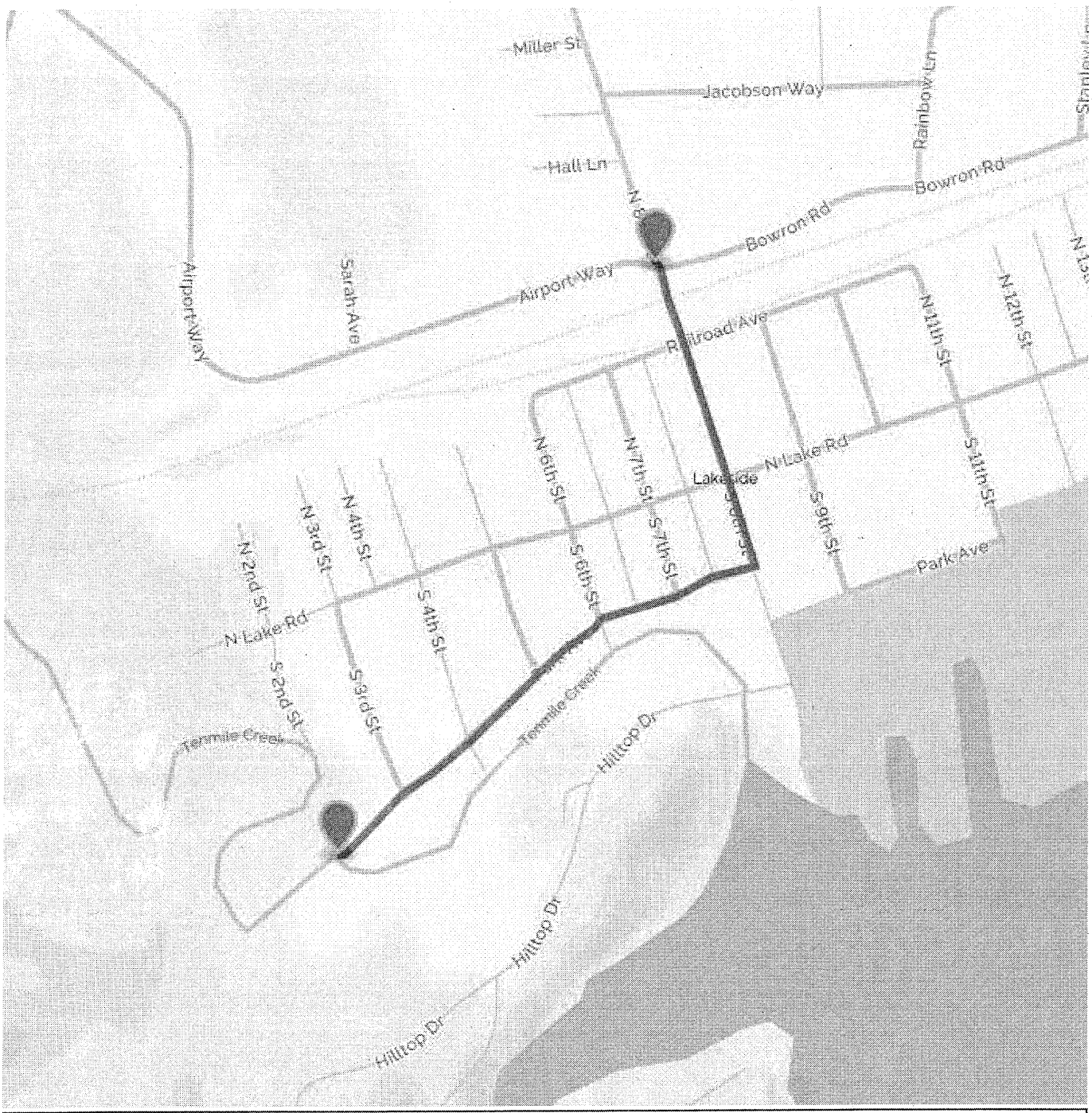
Start out going south on N 8th St toward Airport Way. 0.22 miles

Turn right onto Park Ave. 0.35 miles

Park Ave is just past N Lake Rd
If you reach Hilltop Dr you've gone a little too far

202 PARK AVE is on the right. 0.00 miles

Your destination is just past S 3rd St
Your destination is at the end of Park Ave




THIS MAP WAS PREPARED FOR ASSESSMENT PURPOSE ONLY
NW1/4 SW1/4 SEC.18 T23S R12W W.M.
COOS COUNTY
1" = 100'
SEE MAP 23S 12W 18BC
23S 12W 18CB
LAKESIDE
Project Sites
FOREST BOUNDARY
SEE MAP 23S 13W 13D
TIONAL
W.1/4 COR
1/16 COR.
SOUTH SECOND
SOUTH THIRD ST.
SOUTH FOURTH ST.
SOUTH FIFTH ST.
SOUTH 6TH ST.
NORTH LAKE AVE.
LAKESIDE
(PARK AVE.)
S. FOURTH ST.
TEMMILE
LINE
TRANSMISSION
COOS BAY
REEDSPORT
POWER
STREET
CREEK
LAKESIDE CO. RD
16' RD EASEMENT
VOL. 220-645
SEE MAP 23S 12W 18CA
SEE MAP 23S 12W 18C
13-06
CANCELLED NO.
5802
5803
5804
5805
800
2000
2200
5800
5801
5300
5400
5900
6200U2A1
6200U1
6200U2
6201
6400
PAR. PLAT 1992-31
1. S41°07'09"E 80'
2. S41°07'09"E 23'
3. S41°07'09"E 40'
4. S41°07'09"E 80'
5. N48°51'58"E 25'
6. N48°51'58"E 25'
8-28-2014
23S 12W 18CB
LAKESIDE

Tenmile Creek Beaver Habitat Enhancement
Aerial Photograph

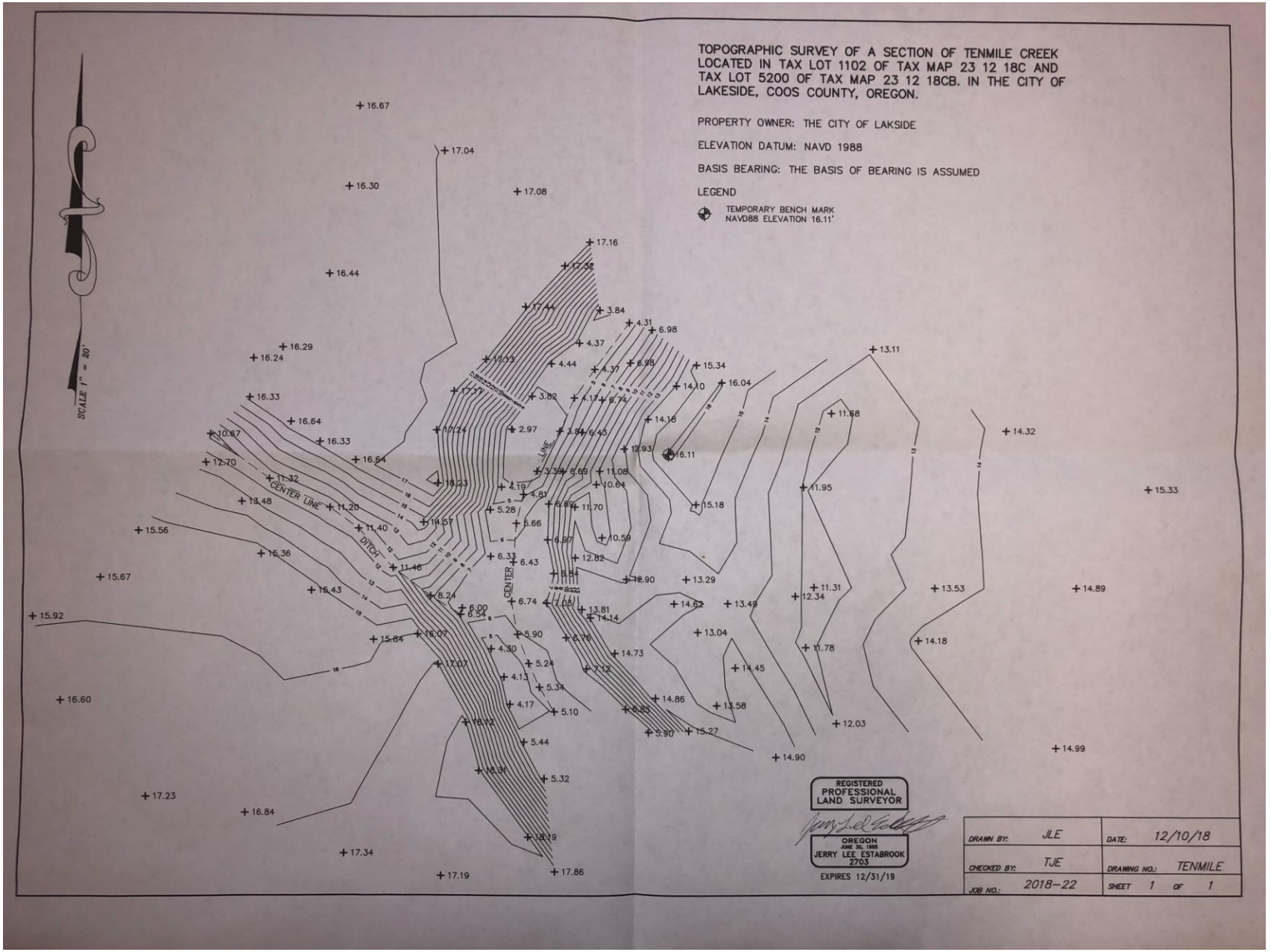
Tenmile Creek Beaver Habitat Enhancement Project
Site Photographs

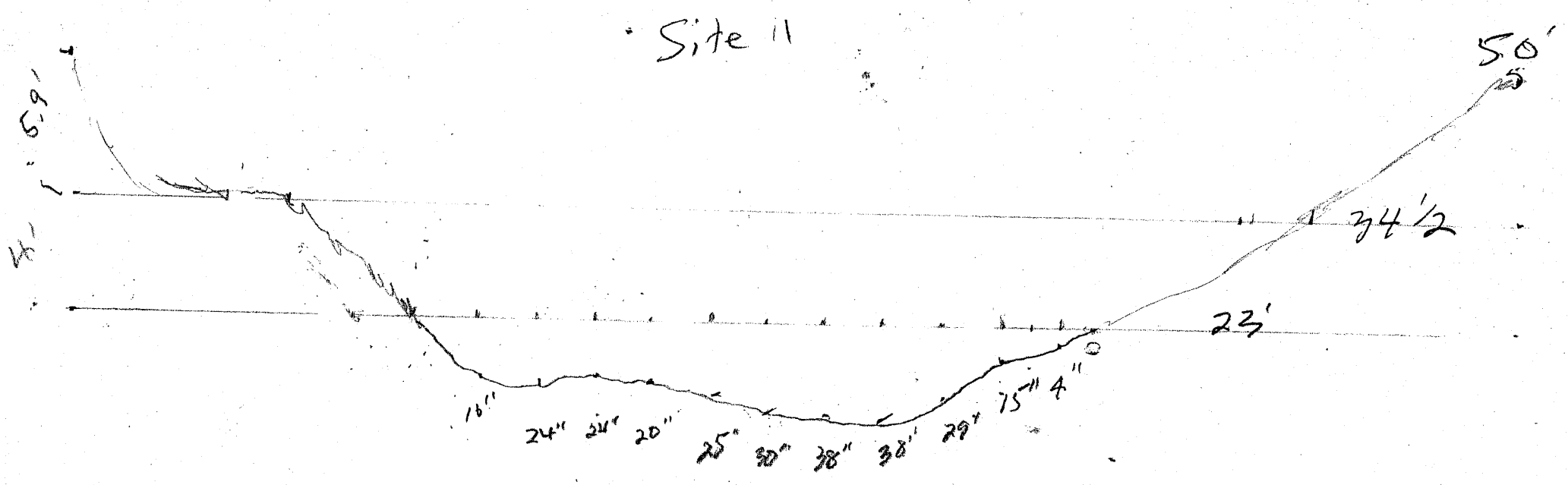
September 2018 photograph of proposed two sites.

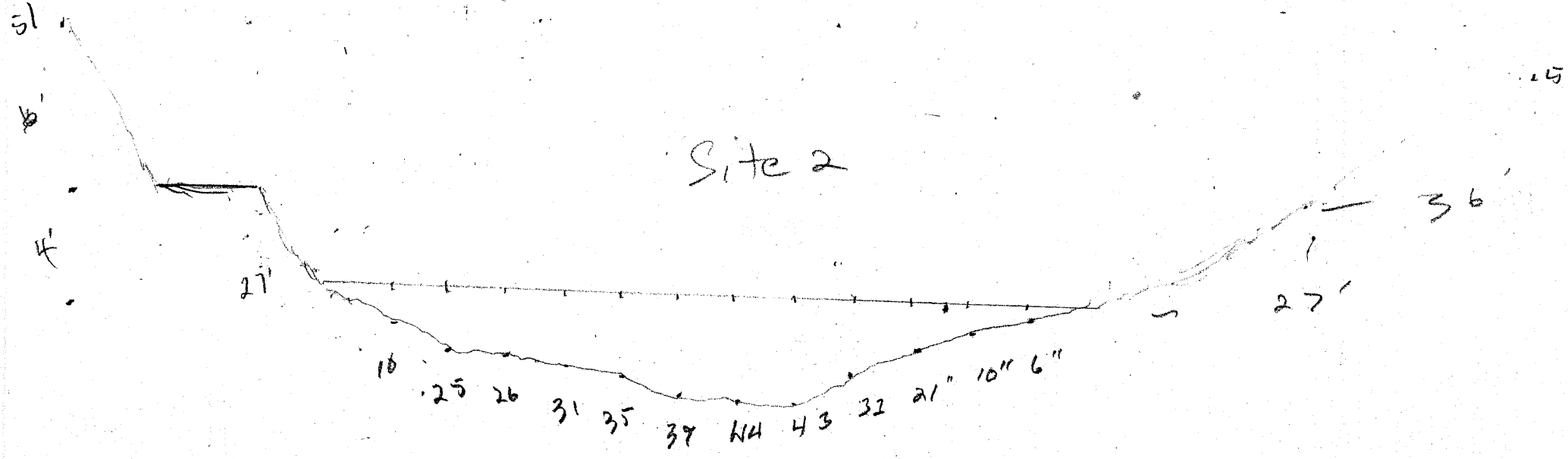
September 2018 photograph of Tenmile Creek. Photograph taken from WWTP irrigation pasture on east side of Creek.
Sandy bank areas are proposed for willow plantings. Background is west bank of Creek and another WWTP irrigation pasture.

September 2018 photograph of Tenmile Creek. This area is invested with nonnative aquatic plants, nonnative fish and have summer DO levels that result in fish die offs.

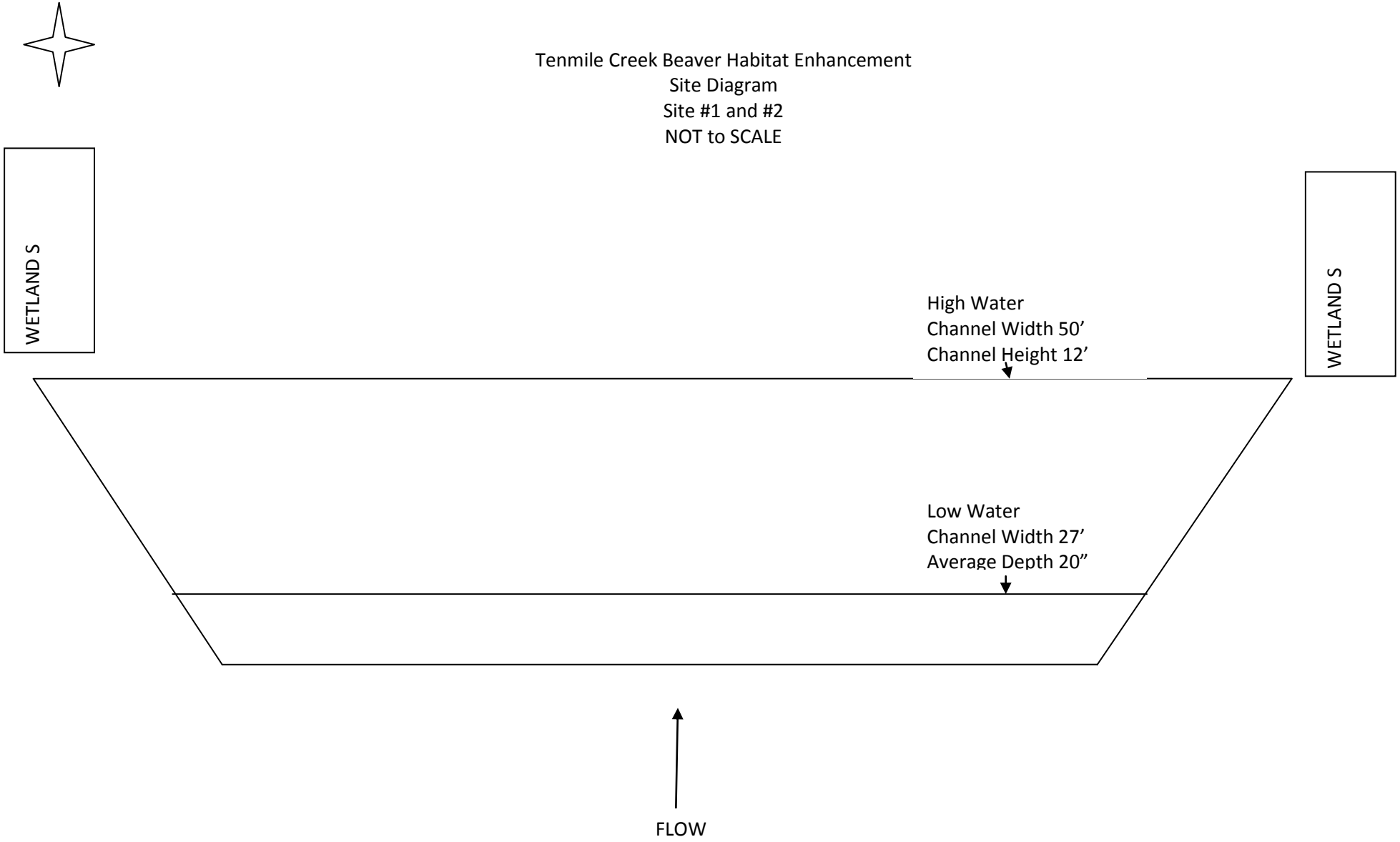
Tenmile Creek Beaver Habitat Project
Stream Elevation survey



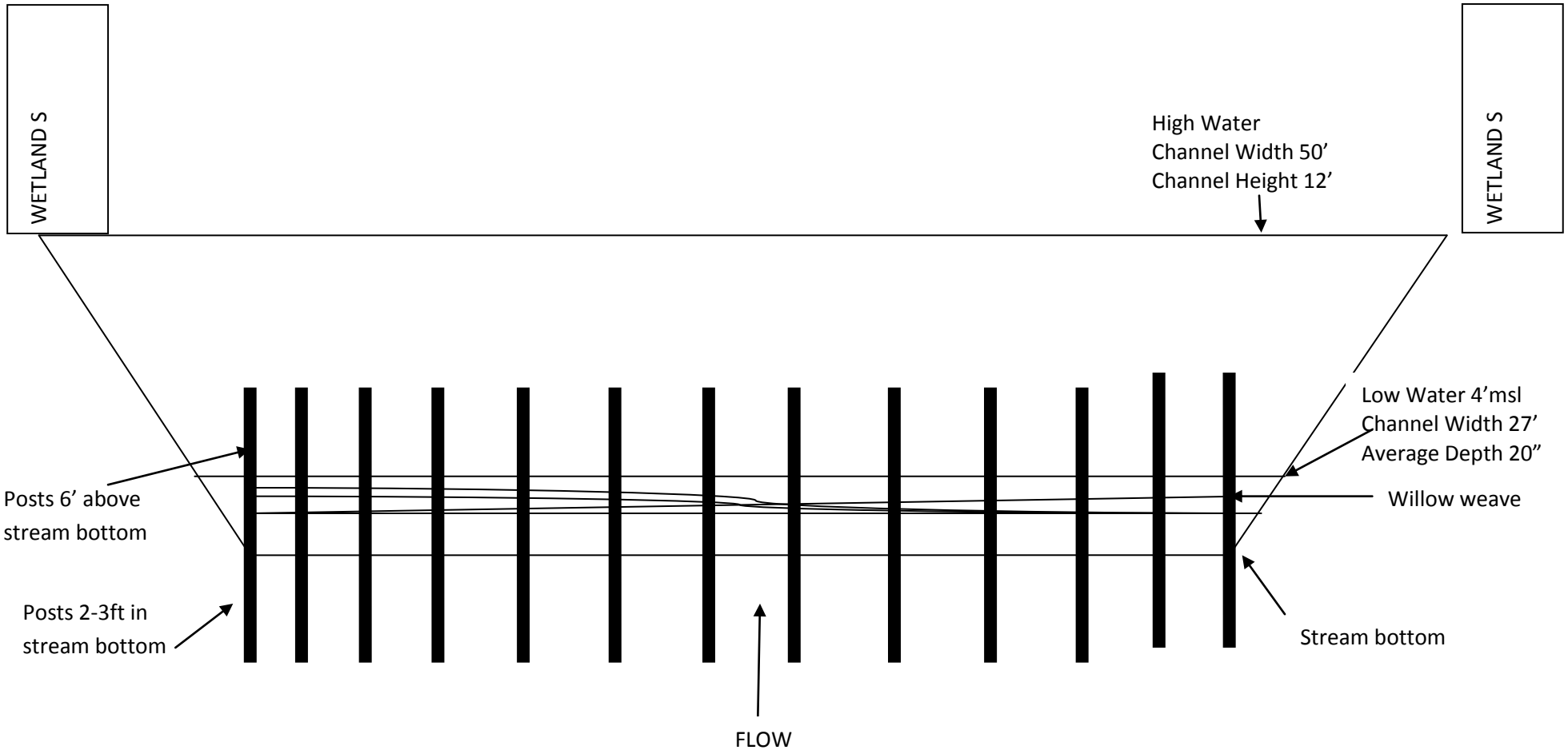

Site 1
5.9'
4'
50'
34½
23'
16"
24"
24"
20"
25"
30"
38"
38"
29"
75"
4"


Site 2
5'
4'
27'
36'
27'
10
25
26
31
35
37
44
43
32
21"
10"
6"

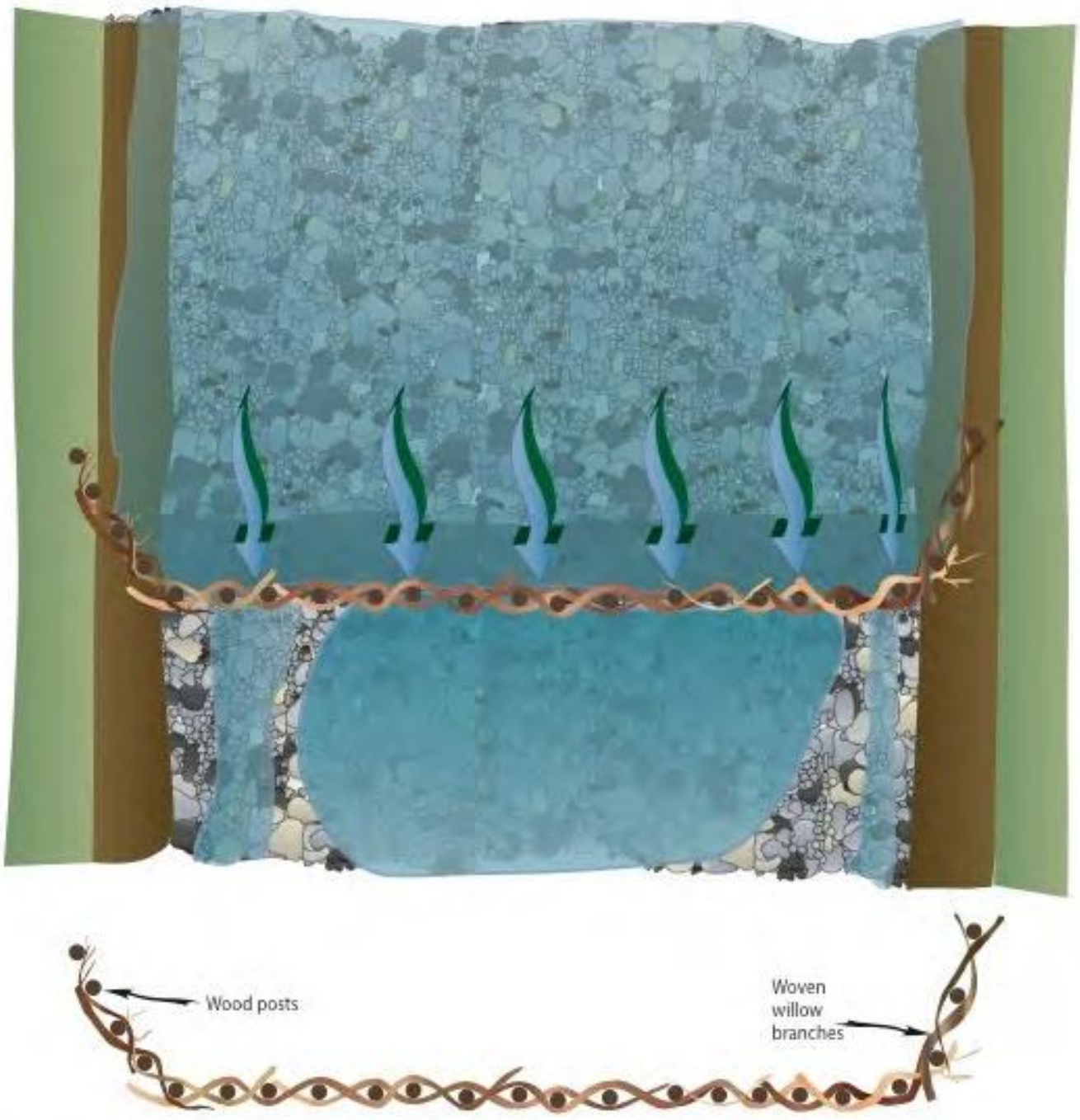
Tenmile Creek Beaver Habitat Enhancement
Site Diagram
Site #1 and #2
NOT to SCALE



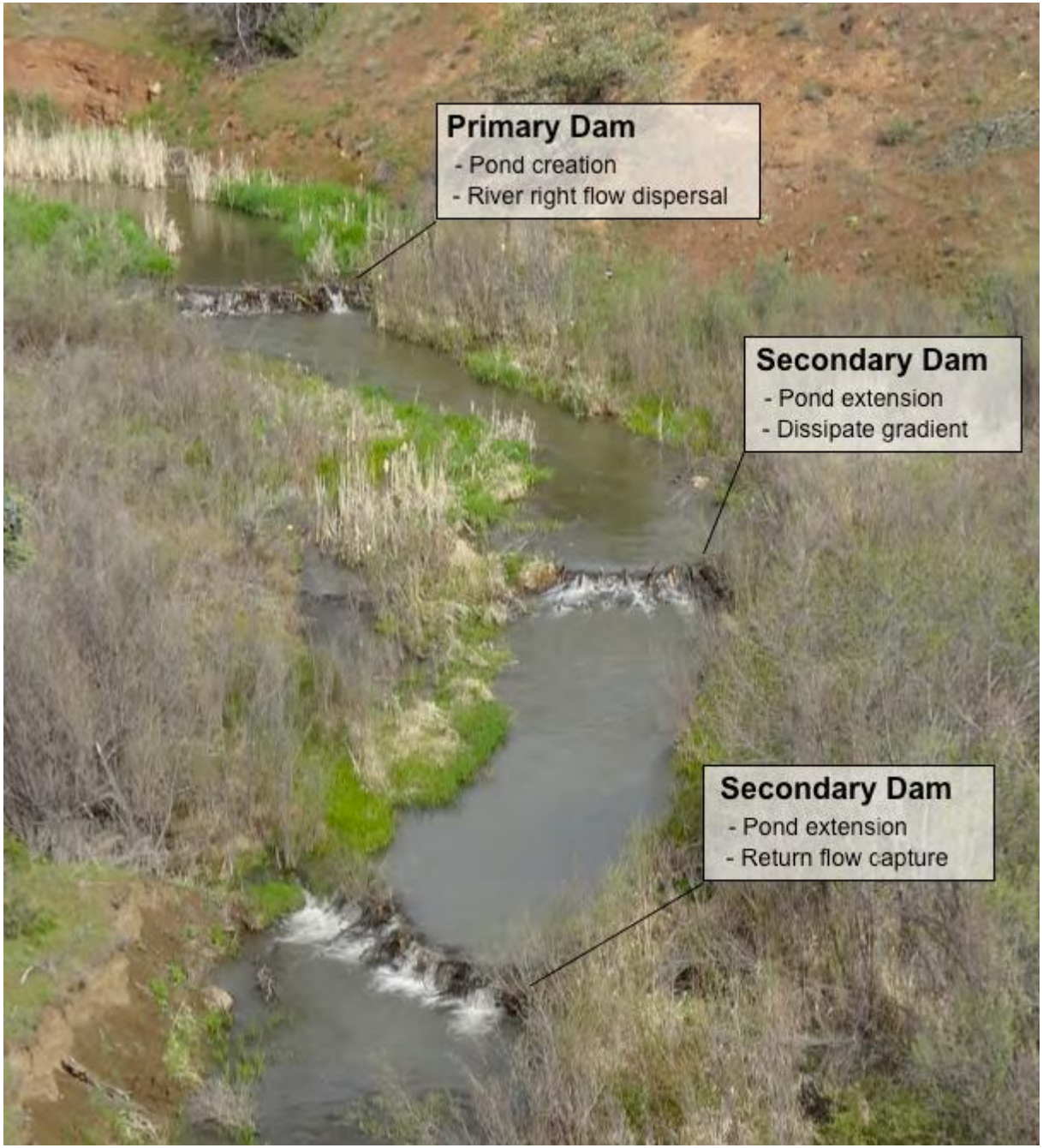
Tenmile Creek Beaver Habitat Enhancement
Site Diagram
Site #1 and #2
NOT to SCALE



Project Example Diagram



Example Photograph of installing Posts.



Example Photograph of Beaver Dam complex in Eastern Oregon.

CITY OF LAKESIDE LOCAL WETLANDS INVENTORY
WETLAND SUMMARY SHEET

WETLAND: Tenmile Creek Wetlands **UNIT:** TC-1

(TC-1 East = within UGB, TC-1 West = outside UGB but within offsite study area boundary)

Drainage Basin: Tenmile Creek **Plot Numbers:** 5, 6, 7, 8, 45, 46, OF-16 (by boat)

Approx. Acreage: Total 54.51. TC-1 East = 31.74 (20.77 PSS, 5.97 PEM, 5.00 POW/PAB); TC-1 West = 22.77 (0.61 PFO, 11.52 PSS, 6.62 PEM, 4.02 POW/PAB).

Location: West of sewage treatment plant (STP) on Park Avenue and south of railroad tracks, extends to the west outside of the UGB to the railroad bridge.

Tax Lots: TC-1 East: **23 12 18BC:** 1400-3200, 3400, 3401, 3402, 3500, 3501, 7500; **18CB:** 3100, 3200, 3405, 3701, 3702, 3800, 3900, 3901, 4000-4200, 4301, 4300-4800, 4801, 4900, 5000, 5001, 5002, 5003, 5100, 5200; 5500-5700, 6000, 6100, 6800-7000; **18C:** 800, 801, 900, 1000, 1100, 1102.

TC-1 West: **23 13 13D:** 100, 200, 300, 402, 500. **Field Dates:** 11/20/98, 3/3-4/99

T23S R12W Section: 18NW&SW (outside UGB = T23S R13W Section 13SE)

General Description: Very large complex of scrub-shrub and emergent wetlands along Tenmile Creek. Sampled onsite west of the residential area near 2nd Street north of North Lake Avenue and west of 3rd Street south of North Lake Avenue, and along Park Avenue. Conducted an offsite survey along Tenmile Creek (from mouth to railroad bridge) by boat on 3/3/99. The creek was out of its banks and the traversing was hazardous (many thanks to Bob Harr for his daring volunteering). A new channel has been cut through the prominent oxbow just west of the STP (See DSL Permit No. 3985, 1985). Two areas north and south of the creek near the STP are used for irrigation of treated wastewater. The majority of the wetlands are scrub-shrub. Part of the unit west of the UGB is grazed.

Onsite NWI Classification: TC-1 East 65% PSS, 19% PEM, 16% POW/PAB. TC-1 West 2% PFO, 51% PSS, 29% PEM, 18% POW/PAB. Overall 1% PFO, 59% PSS, 23% PEM, 17% POW/PAB.

Creek is mapped as R2UBH and R2ABH, with wetland areas of PEMC and PSSC.

Flooding regime: A and C; Special Modifier: none

(A temporary B saturated C seasonal F semi-permanently H permanent K artificial)

Mapped Soils; Onsite Soils: 28 Heceta fine sand (hydric); 10YR 5/3 fine sand with 10YR 3/1 mottles and organic streaking near the surface. Also 10YR 3/2 sand with mottles and organic streaking.

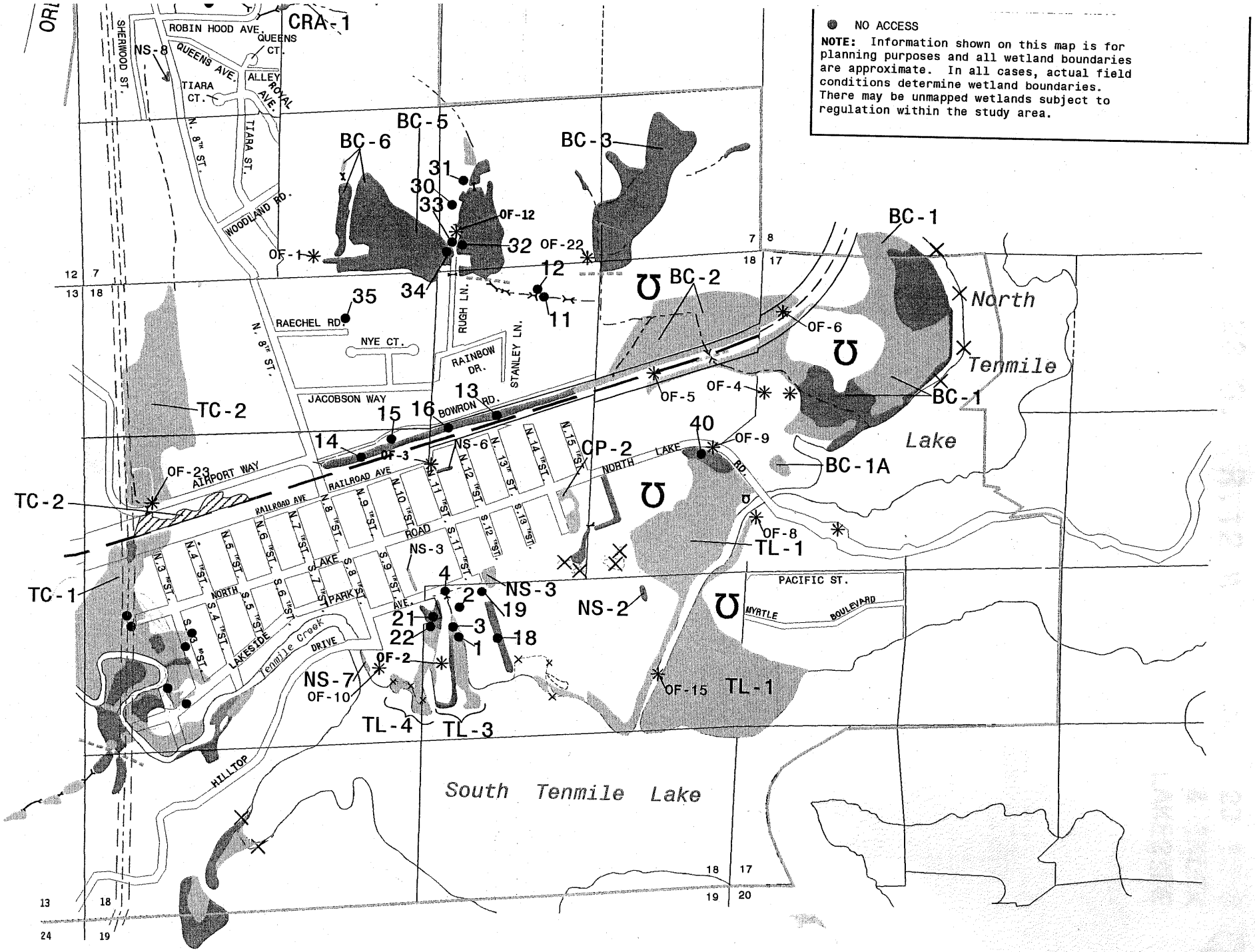
Hydrologic Source: Much of the hydrology of this area is driven by the Tenmile Creek (and Tenmile Lake) water level.

Dominant Vegetation:	**Shrubs**	**Herbs/Emergents**
Trees	Douglas spirea	slough sedge
red alder	Hooker willow	reed canarygrass

Other vegetation includes western crabapple, salmonberry, Himalayan blackberry, red elderberry, etc.

Boundary Information: Most of the wetland in the north and west is surrounded by steep slopes; the boundary is more gradual on the east edge, where residential development has encroached into wetland areas. The south boundary is confined by marine and residential development within the UGB, and is a gradual slope in the agricultural area outside the UGB. Upland vegetation includes shore pine, Pacific rhododendron, hairy manzanita, bluegrass, spotted cats-ear, and facultative vegetation.

Wetland Functions and Significance: Provides diverse wildlife habitat and has intact fish habitat, water quality, and hydrologic control functions. Provides recreational opportunities. Significant due


NO ACCESS
NOTE: Information shown on this map is for planning purposes and all wetland boundaries are approximate. In all cases, actual field conditions determine wetland boundaries. There may be unmapped wetlands subject to regulation within the study area.
CRA-1
ROBIN HOOD AVE.
QUEENS CT.
QUEENS AVE.
ALLEY
ROYAL AVE.
TIARA CT.
SHERWOOD ST.
N. 8TH ST.
TIARA ST.
WOODLAND RD.
NS-8
BC-5
BC-6
BC-3
BC-1
BC-2
31
30
33
OF-12
32
OF-22
OF-1
34
12
11
35
RAECHEL RD
NYE CT.
RUGH LN.
STANLEY LN.
RAINBOW DR.
JACOBSON WAY
13
BOWRON RD.
15
16
14
OF-3
NS-6
CP-2
OF-6
OF-5
OF-4
North
Tenmile
Lake
BC-1
40
OF-9
BC-1A
LAKE RD
NORTH
TC-2
OF-23
AIRPORT WAY
RAILROAD AVE
N. 8TH ST.
N. 9TH ST.
N. 10TH ST.
N. 11TH ST.
N. 12TH ST.
N. 13TH ST.
N. 14TH ST.
N. 15TH ST.
S. 13TH ST.
S. 12TH ST.
S. 11TH ST.
S. 9TH ST.
S. 8TH ST.
S. 7TH ST.
S. 6TH ST.
S. 5TH ST.
S. 4TH ST.
N. 7TH ST.
N. 6TH ST.
N. 5TH ST.
N. 4TH ST.
N. 3RD ST.
OF-8
TL-1
NS-3
4
2
19
21
3
22
1
18
PARK AVE.
LAKE
NORTH
LAKESIDE DRIVE
Tenmile Creek
TC-1
NS-2
PACIFIC ST.
MYRTLE
BOULEVARD
OF-2
NS-7
OF-10
OF-15
TL-1
TL-4
TL-3
HILLTOP
South Tenmile Lake
12
7
13
18
7
8
18
17
18
17
19
20
13
18
24
19

SOILS SERIES AND SUBGROUP DESCRIPTION FOR HYDRIC SOILS IN THE TENMILE CREEK AREA

Brallier Peat (7)
Dysic isomesic, typic tropohemists
Mean annual soil temperature is 8°C or higher, but lower than 15°C (59°F)
Typical histosols with continued warm

Nehalem Silt Loam (40)
Fine silty, mixed, isomesic, fluventic humitropepts
Particle size fine, and silty, mixed particle size, soil pH < 5.0; mean annual soil temperature is 8°C or higher, but lower than 15°C (59°F)
Flooded inceptisol with organic matter

Nestucca Silt Loam (41)
Fine silty, mixed, acid, isomesic, aeric, tropaquepts
Particle size fine, silty, mixed particle size, soil pH < 5.0; mean annual soil temperature is 8°C or higher, but lower than 15°C (59°P)
Inceptisols (young soils) aerated in upper part of soil profile

Willanch Fine Sandy Loam (62)
Coarse, loamy, mixed, nonacid, isomesic, aerie tropaquepts
Particle size coarse and loamy, mixed particle size, soil pH > 5.0; mean annual soil temperature 8°C or higher, but lower than 15°C (59°F)
Continued warm inceptisol

Yaquina Loamy Fine Sand (64)
Sandy, mixed, mesic aquic haplorthods
Sandy, mixed particle size .
reducing moisture regime
Spodosol with minimum horizon

RESIDENT, TRANSIENT AND INTRODUCED FISH SPECIES
IN THE TENMILE LAKES SYSTEM, COOS COUNTY, OREGON
RESIDENT

Western brook lamprey *(Lam petra richardsoni)*
Cutthroat trout *(Salmo clarki clarki)*
Surf smelt *(Hypomesus pretiosus)*
Three-spine stickleback *(Gasterosteus aculeatus)*
Coastrange sculpin *(Cottus aleuticus))*
Prickly sculpin *(Cottus asper)*
Reticulate sculpin *(Cottus perplexus)*
Pacific staghorn sculpin *(Leptocottus annatus)*
Shiner perch *(Cymatogaster aggregata)*

TRANSIENT
Pacific lamprey *(Lampetra ayresi)*
River lamprey *(Larnpetra tridentatus)*
Green sturgeon *(Acipenser medirostris)*
Coho salmon *(Oncorhynchus kisutch)*
Winter steelhead *(Salrno gairdneri)*
Eulachon (candlefish) *(Thaleichthys pacificus)*

INTRODUCED
Brown bullhead *(lctalurns nebulosus)*
Hybrid striped bass *(Roccus saxatilis and R. chrysops)*
Largemouth bass *(Micropterns salmoides)*
Black crappie *(Pomoxis nigromaculatus)*
Bluegill sunfish *(Lepomis* m~crochirns)
Rainbow trout *(Salmo gairdneri)*

AMPHIBIANS FOUND IN AND ADJACENT TO
TENMILE LAKES, COOS COUNTY, OREGON

AMPHIBIANS

Salamanders
• Roughskin newt *(Taricha granulosa)* ,
• Western redback salamander *(Plethodon vehiculum)*
• Dunn's salamander *(Plethodon dunrti)**
• Ensatina *(Ensatina eschscholtzii)*
• Clouded salamander *(Aneides ferreus)*
• Olympic salamander *(Phyacotriton olympicus)**
• Pacific giant salamander *(Decamptodon ensatus)*
• Northwestern salamander *(Ambystoma gracile)*

Frogs and Toads
• Bull frog *(Rana catesbeiana)*
• Foothill yellow-legged frog *(Rana boylei)**
• Red-legged frog *(Rana aurora)*
• Tailed frog *(Ascaphus truei)**
• Pacific tree frog *(Hyla regilla)*
• Western toad *(Bufo boreas)*

REPTILES
Turtles
• Western pond turtle *(CZemmys marmorata)***

DOCUMENTED SIGHTINGS OF BIRD SPECIES IN THE TENMILE LAKES SYSTEM, COOS COUNTY, OREGON

Common loon *(Gavia immer)*	Band-tailed pigeon *(Columba flavirostris)*	~ American robin *(Turdus migratorius)*
Pied-billed grebe *(Podilymbus podiceps)*	Turkey vulture *(Cathartes aura)*	Varied thrush *(Ixoreus naevius)*
Horned grebe *(Colymbus auritus)*	Osprey *(Pandion haliaetus)*	Wrentit *(Chamaea jasciata)*
Western grebe *(Aechmophorus occidentalis)*	Bald eagle *(Haliaeetus leucocephalus)*	Cedar waxwing *(Bombycilla cedrorum)*
Double-crested cormorant *(Phalacrocorax Guritus)*	Northern harrier *(Circus cyaneus)*	European starling *(Stumus vulgaris)*
Great blue heron *(Ardea herodias)*	Cooper's hawk *(Accipiter cooperii)*	Orange-crowned warbler *(Vennivora celata)*
Great egret *(Casmerodius alb us)*	Red-tailed hawk *(Buteo Jamaicensis)*	Yellow-rumped warbler *(Dendroica coronata)*
Green-backed heron *(Butorides virescens)*	American kestrel *(Falco sparverius)*	Fox sparrow *(Passerella iliaca)*
Black-crowned night-heron *(Nycticorax nycticorax)*	Merlin *(Falco columbarius)*	Song sparrow *(Melospiza melodia)*
Whistling Swan *(Cygnus columbianus)*	~ Peregrine falcon *(Falco peregrinus)*	Golden-crowned sparrow *(Zonotrichia atricapilla)*
Canada goose *(Brama canadensis)*	Ruffed grouse *(Bonasa umbellus)*	White-crowned sparrow *(Zonotrichia Zeucophrys)*
Wood duck *(Au sponsa)*	Common barn owl *(Tyto alba)*	House sparrow *(Passer domesticuss)*
Cinnamon teal *(Anas cyanoptera)*	Great horned owl *(Bubo virginianus)*	Dark-eyed junco *(Junco hyemalis)*
Green-winged teal *(Anas crecea)*	California quail *(Callipepla californica)*	Red-winged blackbird *(Agelaius phoeniceus)*
Mallard *(Anas platyrhynchos)*	Virginia rail *(Rallus limicola)*	Western meadowlark *(Stumella neglecta)*
Northern pintail *(Anas acuta)*	Rufous-sided towhee *(Pipil0 erythrophythalmus)*	Brewer's blackbird *(Euphagus cyanocephalus)*
Blue-winged teal *(Anas discors)*	Vaux's swift *(Chaetura vauxi)*	Brown-headed cowbird *(Molothrus ater)*
Gadwall *(Anas strepera)*	Rufous hummingbird *(SelasphonlS rufus)*	Purple finch *(Carpodacus purpureus)*
American widgeon *(Mareea americana)*	Belted kingfisher *(Ceryle alcyon)*	House finch *(Carpodacus mexicanus)*
Canvasback *(Aythya valisineria)*	Hairy woodpecker *(Picoides villosus)*	•. Pine siskin *(CardueZis pinus)*
Redhead *(Aythya americana)*	Marbled murrelet *(Brachyramphus marmoraulS)*	American goldfinch *(Carduelis tristis)*
Ring-necked duck *(Aythya collaris)*	Northern flicker *(Calaptes auratus)*	
Greater scaup *(Aythya mariIa)*	Pileated woodpecker *(Dryocopus pileatus)*	
Bufflehead *(Bucep/zala albeoIa)*	Olive-sided flycatcher *(Contopus borealis)*	
Common goldeneye *(Bucephala clangula)*	Purple martin *(Progne Subis)*	
Common merganser *(Merganser merganser)*	Western flycatcher *(Empidonax difficilis)*	
Ruddy duck *(Oxyura jamaicensis)*	Western wood-pewee *(Contopus sordidulus)*	
American coot *(Fulica americana)*	Tree swallow *(Taclzycineta bicolor)*	
Seater *(Melanitta* sp.)	Violet green swallow *(Tachycineta*	

	thalassina)	
Killdeer *(Charadrius vociferus)*	Cliff swallow *(Hinmdo pyrrhonota)*	
Spotted sandpiper *(Actitis macularia)*	Barn swallow *(Hinmdo ntstica)*	
Common snipe *(Capella gallinago)*	Steller's jay *(Cyanocitta stelleri)*	
Ring-billed gull *(Larus delawarensis)*	Scrub jay *(Aphelocoma coerulescens)*	
California gull *(Larus califomicus)*	American crow *(Corvus brachyrhynchus)*	
Glaucous-winged gull *(Larus hyperboreus)*	Common raven *(Corvus cor ax)*	
Western gull *(Larus occidentaIis)*	Black-capped chickadee *(PanlS atricapillus)*	
Rock dove *(Columba livia)*	Chestnut-backed chickadee *(Pants rufescens)*	

MAMMALIAN SPECIES BELIEVED PRESENT
IN THE TENMILE LAKES SYSTEM, COOS COUNTY OREGON.

Opossum *(Didelphis virginian a*)
Pacific shrew *(Sorex pacificus)*
Trowbridge shrew *(Sorex trowbridgii)*
Dusky shrew *(sorex monticolus)*
Pacific water shrew *(sore'x bendirii)*
Vagrant shrew *(Sorex vagrans)*
Shrew-mole *(Neurotrichus gibbsii)*
Townsend's mole *(Scapanus townsendii)*
Townsend's mole *(Scapanus orarius)*
Little brown myotis *(Myotis lucifugus)*
Long-eared" myotis *(Myotis evotis)*
California myotis *(Myotis califon-dcus)*
Yuma myotis *(Myotis yumanensis)*
Pallid bat *(Antrozous pallidus)*
Long-legged myotis *(Myotis volans)*
Silver-haired bat *(Lasionycteris noctivagans)*
Big brown bat *(Eptesicus fuscus)*
Hoary bat *(Lasiurns cinereus)*
Townsend's big-earred bat *(Plecotus townsendii)*
Brush rabbit *(Sylvilagus bachmani)*
Black-tailed jack rabbit *(Lepus califomicus)*
California ground squirrel *(Spermophilus beecheyi)*
Western gray squirrel *(Tamiasciurns griseus)*
Douglas' squirrel *(Sciurns doug/asii)*
Northern flying squirrel *(Glaucomys sabrinus)*
Western pocket gopher *(Thomonys mazama)*
Western harvest mouse *(Reithrodontomys megalotis)*
Deer mouse *(Peromyscus maniculatus)*
Bushy-tailed woodrat *(Neotoma cinerea)*
White-footed vole *(Phenacomys albipes)*
Townsend's vole *(Microtus townsendii)*
Long-tailed vole *(Microtus longicaudus)*
Muskrat *(Ondatra zibethicus)*
House mouse *(Mus musculus)*
Porcupine *(Erethizon dorsatum)*
Marten *(Martes americana)*
Ermine *(Mustela erminea)* .
Long-tailed weasel *(Mustela Jrenata)*
Mink *(Mustela vison)*
Striped skunk *(Mephitis mephitis)*
Mountain beaver *(Aplodontia rufa)*
River otter *(Lutra canadensis)*

Black bear *(Ursus americanus)*
Raccoon *(Procyon lotor)*
Coyote *(Canis latrans)*
Gray fox *(Urocyon cinereoargenteus)*
Red fox *(Vulpes vulpes)*
Mountain lion/cougar *(Felis concolor)*
Bobcat *(Felis rufus)*
Roosevelt elk *(Cervus elaphus)*

Tenmile Creek Beaver Habitat Enhancement
Informational Sources

Tenmile Lakes Watershed Assessment. TLBP 2003.)

The Beaver Restoration Guidebook Working with Beaver to Restore Streams, Wetlands, and Floodplains. USFWS 2015.

A re-emphasis on the value of the beaver in natural resource conservation. Allred, M. 1980.

Riparian habitat restoration and beavers. USDA Forest Service General Technical Report RM-120:489-490. Apple, L. L. 1985.

Fish habitat restoration procedures. Watershed Restoration Technical Circular Slaney, P. and D. Zaldokas. 1997.

Tenmile Water Supply Project. CH2MHiLL 1990.

Identification of Physical Habitats Limiting the Production of Coho Salmon in Western Oregon and Washington. PNW Reeves, G. H., F. H. Everest, and T. E. Nickelson. 1989.

City of Lakeside Comprehensive Plan. City of Lakeside 2009

Using beaver dams to restore incised stream ecosystems. BioScience **64**:279-290.
Pollock, M. M., T. J. Beechie, J. M. Wheaton, C. E. Jordan, N. Bouwes, N. Weber, and C. Volk. 2014

Beaver: water resources and riparian manager. University of Wyoming, Laramie, WY. Olsen, R. and W. Hubert. 1994.