INITIAL INVESTIGATION FIELD REPORT

WASHINGTON STATE DEPARTMENT OF ECOLOGY

☐ **Check this box if you have attached any documents to this form (using the paperclip icon on the left).**

ERTS #(s):	695524
Parcel #(s):	370314199330
County:	Whatcom
FSID #:	21444552
CSID #:	15182
UST #:	

SITE INFORMATION

Site Name (Name over door):	Site Address (including City, State and Zip):	Phone / Email
Plantation Rifle Range	5102 Samish Way Bellingham, WA	
Site Contact, Title, Business: Christ Thomsen (Whatcom County Parks & Recreation)	Site Contact Address (including City, State and Zip):	Phone (360) 778-5850 Email cthomsen@co.whatcom.wa.us
Site Owner, Title, Business: Bertch Timberlands, LLC	Site Owner Address (including City, State and Zip): PO Box 0172 Redmond, WA 98073	Phone Email
Site Owner Contact, Title, Business:	Site Owner Contact Address (including City, State and Zip):	Phone Email
Previous Site Owner(s):	Additional Info (for any Site Information Item): Whatcom County Parks & Recreation operates the rifle range.	
Alternate Site Name(s):	Site visit and sampling conducted by Mindy Collins and Chris Teske (HWTR).	

Latitude (Decimal Degrees):	48.693301
Longitude (Decimal Degrees):	-122.394839

INSPECTION INFORMATION

☑ Please check this box if there is relevant inspection information, such as data or photos, in an existing site report for this site.

Inspection Conducted? Yes ☒ No ☐	Date/Time:	Entry Notice: Announced ☐	Unannounced ☒
Photographs taken? Yes ☒	No ☐	Note: Attach photographs or upload to PIMS	
Samples collected? Yes ☒	No ☐	Note: Attach record with media, location, depth, etc.	

RECOMMENDATION

No Further Action (Check appropriate box below):		**LIST on Confirmed and Suspected Contaminated Sites List**: ☒
Release or threatened release does not pose a threat	☐	
No release or threatened release	☐	
Refer to program/agency (Name: _____)	☐	
Independent Cleanup Action Completed (contamination removed)	☐	

COMPLAINT (Brief Summary of ERTS Complaint):

Ecology received an anonymous complaint about flooding at Plantation Rifle Range that may be transporting lead and other heavy metals from spent ammunition into a nearby creek. The complainant provided photos with lead shot in standing water. At the time of the complaint, weather included heavy rains which caused standing water on the range.

CURRENT SITE STATUS (Brief Summary of why Site is recommended for Listing or NFA):

Surface water sampling indicates lead concentrations in the unnamed creek adjacent to the rifle range exceed water quality standards. Further action is required to investigate off site heavy metal impacts resulting from activities at the rifle range. Recommendation: List on CSCSL.

Investigator: Krystal Rodriguez Date Submitted: 3/12/2020

OBSERVATIONS ☑ **Please check this box if you included information on the Supplemental Page at end of report.**

Description (If site visit made, please be sure to include the following: site observations, site features and cover, chronology of events, sources/past practices likely responsible for contamination, presence of water supply wells and other potential exposure pathways, etc.):

In response to an anonymous complaint, Mindy Collins and Chris Teske (HWTR) conducted an unannounced site visit to collect water samples at Plantation Rifle Range. At the time of the visit, there was no standing water on the range.

HWTR staff collected two water samples from a creek that runs on the south side of the high power rifle range. The creek runs through three small freshwater ponds that total 0.59 acres of wetland habitat. Samples locations were 50 and 150 yards downstream from the range (Figure 1).

Lab results conclude the water samples have concentrations of lead at 2.3 µg/L and 2.7 µg/L with a 10.3 mg/L hardness value for creek water (Table 1).

The Cleanup Levels and Risk Calculation (CLARC) spreadsheet indicates a Model Toxics Control Act (MTCA) cleanup level for lead in surface water as 2.5 µg/L based on Clean Water Act standards that are protective of aquatic life in freshwater systems. Using an equation in WAC 173-201A-240 to adjust for hardness, the cleanup standard decreases to 1.1 µg/L and the surface water samples exceed MTCA cleanup standards.

Documents reviewed:

Edge Analytical lab reports dated January 24 and February 18, 2020

HWTR Quality Assurance Project Plan for Sample of Opportunity

CONTAMINANT GROUP	CONTAMINANT	*SOIL*	*GROUNDWATER*	*SURFACE WATER*	*AIR*	*SEDIMENT*	DESCRIPTION
Non-Halogenated Organics	Phenolic Compounds						Compounds containing phenols (Examples: phenol; 4-methylphenol; 2-methylphenol)
	Non-Halogenated Solvents						Organic solvents, typically volatile or semi-volatile, not containing any halogens. To determine if a product has halogens, search HSDB (http://toxnet.nlm.nih.gov/cgi-bin/sis/htmlgen?HSDB) and look at the Chemical/Physical Properties, and Molecular Formula. If there is not a Cl, I, Br, F in the formula, it's not halogenated. (Examples: acetone, benzene, toluene, xylenes, methyl ethyl ketone, ethyl acetate, methanol, ethanol, isopropranol, formic acid, acetic acid, stoddard solvent, Naptha). *Use this when TEX contaminants are present independently of gasoline.*
	Polynuclear Aromatic Hydrocarbons (PAH)						Hydrocarbons composed of two or more benzene rings.
	Tributyltin						The main active ingredients in biocides used to control a broad spectrum of organisms. Found in antifouling marine paint, antifungal action in textiles and industrial water systems. (Examples: Tributyltin; monobutyltin; dibutyltin)
	Methyl tertiary-butyl ether						MTBE is a volatile oxygen-containing organic compound that was formerly used as a gasoline additive to promote complete combustion and help reduce air pollution.
	Benzene						Benzene
	Other Non-Halogenated Organics						TEX
	Petroleum Diesel						Petroleum Diesel
	Petroleum Gasoline						Petroleum Gasoline
	Petroleum Other						Oil-range organics
Halogenated Organics (see notes at bottom)	PBDE						Polybrominated di-phenyl ether
	Other Halogenated Organics						Other organic compounds with halogens (chlorine, fluorine, bromine, iodine). search HSDB (http://toxnet.nlm.nih.gov/cgi-bin/sis/htmlgen?HSDB) and look at the Chemical/Physical Properties, and Molecular Formula. If there is a Cl, I, Br, F in the formula, it is halogenated. (Examples: Hexachlorobutadiene; hexachlorobenzene; pentachlorophenol)
	Halogenated solvents						PCE, chloroform, EDB, EDC, MTBE
	Polychlorinated Biphenyls (PCB)						Any of a family of industrial compounds produced by chlorination of biphenyl, noted primarily as an environmental pollutant that accumulates in animal tissue with resultant pathogenic and teratogenic effects
	Dioxin/dibenzofuran compounds (see notes at bottom)						A family of more than 70 compounds of chlorinated dioxins or furans. (Examples: Dioxin; Furan; Dioxin TEQ; PCDD; PCDF; TCDD; TCDF; OCDD; OCDF). *Do not use for 'dibenzofuran', which is a non-chlorinated compound that is detected using the semivolatile organics analysis 8270*
Metals	Metals - Other						Cr, Se, Ag, Ba, Cd
	Lead			C			Lead
	Mercury						Mercury
	Arsenic						Arsenic
Pesticides	Non-halogenated pesticides						Pesticides without halogens (Examples: parathion, malathion, diazinon, phosmet, carbaryl (sevin), fenoxycarb, aldicarb)
	Halogenated pesticides						Pesticides with halogens (Examples: DDT; DDE; Chlordane; Heptachlor; alpha-beta and delta BHC; Aldrin; Endosulfan, dieldrin, endrin)

CONTAMINANT GROUP	CONTAMINANT	SOIL	GROUNDWATER	SURFACE WATER	AIR	SEDIMENT	DESCRIPTION
Other Contaminants	Radioactive Wastes						Wastes that emit more than background levels of radiation.
	Conventional Contaminants, Organic						Unspecified organic matter that imposes an oxygen demand during its decomposition (Example: Total Organic Carbon)
	Conventional Contaminants, Inorganic						Non-metallic inorganic substances or indicator parameters that may indicate the existence of contamination if present at unusual levels (Examples: Sulfides, ammonia)
	Asbestos						All forms of Asbestos. Asbestos fibers have been used in products such as building materials, friction products and heat-resistant materials.
	Other Deleterious Substances						Other contaminants or substances that cause subtle or unexpected harm to sediments (Examples: Wood debris; garbage (e.g., dumped in sediments))
	Benthic Failures						Failures of the benthic analysis standards from the Sediment Management Standards.
	Bioassay Failures						For sediments, a failure to meet bioassay criteria from the Sediment Management Standards. For soils, a failure to meet TEE bioassay criteria for plant, animal or soil biota toxicity.
Reactive Wastes	Unexploded Ordinance						Weapons that failed to detonate or discarded shells containing volatile material.
	Other Reactive Wastes						Other Reactive Wastes (Examples: phosphorous, lithium metal, sodium metal)
	Corrosive Wastes						Corrosive wastes are acidic or alkaline (basic) wastes that can readily corrode or dissolve materials they come into contact with. Wastes that are highly corrosive as defined by the Dangerous Waste Regulation (WAC 173-303-090(6)). (Examples: Hydrochloric acid; sulfuric acid; caustic soda)

(fill in contaminant matrix above with appropriate status choice from the key below the table)

Status choices for contaminants	
Contaminant Status	**Definition**
B— Below Cleanup Levels (Confirmed)	The contaminant was tested and found to be below cleanup levels. (Generally, we would not enter each and every contaminant that was tested; for example if an SVOC analysis was done we would not enter each SVOC with a status of "below". We would use this for contaminants that were believed likely to be present but were found to be below standards when tested
S— Suspected	The contaminant is suspected to be present; based on some knowledge about the history of the site, knowledge of regional contaminants, or based on other contaminants known to be present
C— Confirmed Above Cleanup Levels	The contaminant is confirmed to be present above any cleanup level. For example—above MTCA method A, B, or C; above Sediment Quality Standards; or above a presumed site-specific cleanup level (such as human health criteria for a sediment contaminant).
RA— Remediated - Above	The contaminant was remediated, but remains on site above the cleanup standards (for example—capped area).
RB— Remediated - Below	The contaminant was remediated, and no area of the site contains this contaminant above cleanup standards (for example— complete removal of contaminated soils).

Halogenated chemicals and solvents: Any chemical compound with chloro, bromo, iodo or fluoro is halogenated; those with eight or fewer carbons are generally solvents (e.g. halogenated methane, ethane, propane, butane, pentane, hexane, heptane or octane) and may also be used for or registered as pesticides or fumigants. Most are dangerous wastes, either listed or categorical. Organic compounds with more carbons are almost always halogenated pesticides or a contaminant or derivative. Referral to the HSDB is recommended if you are unfamiliar with a chemical name or compound, as it contains useful information about synonyms, uses, trade names, waste codes, and other regulatory information about most toxic or potentially toxic chemicals.

Dibenzodioxins and dibenzofurans are normalized to a combined equivalent toxicity based on 2,3,7,8-tetrachloro-p-dibenzodioxin as set out in WAC 173-340-708(8)(d) and in the Evaluating the Toxicity and Assessing the Carcinogenic Risk of Environmental Mixtures using Toxicity Equivalency Factors Focus Sheet (https://fortress.wa.gov/ecy/clarc/FocusSheets/tef.pdf). Results may be reported as individual compounds and isomers (usually lab results), or as a toxic equivalency value (reports).

FOR ECOLOGY II REVIEWER USE ONLY (For Listing Sites):

How did the Site come to be known: ☐ **Site Discovery (received a report):** _____ (Date Report Received)
☑ **ERTS Complaint**
☐ **Other (please explain):** _____

Does an Early Notice Letter need to be sent: ☒ Yes ☐ No
If *No*, please explain why: _____

NAICS Code (if known): _____
Otherwise, briefly explain how property is/was used (i.e., gas station, dry cleaner, paint shop, vacant land, etc.):
_____

Site Unit(s) to be created (Unit Type): ☒ Upland (includes VCP & LUST) ☐ Sediment
If multiple Units needed, please explain why: _____

Cleanup Process Type (for the Unit): ☑ No Process ☐ Independent Action
☐ Voluntary Cleanup Program ☐ Ecology-supervised or conducted
☐ Federal-supervised or conducted

Site Status: ☒ Awaiting Cleanup ☐ Construction Complete – Performance Monitoring
☐ Cleanup Started ☐ Cleanup Complete – Active O&M/Monitoring
☐ No Further Action Required

Model Remedy Used? ☐
If yes, was this a transformer spill? ☐

Site Manager (Default: _____): _____

Specific confirmed contaminants include:

_____ in Soil

_____ in Groundwater

Lead in Other (specify matrix: Surface Water)

Facility/Site ID No. (if known):
21444552
Cleanup Site ID No. (if known):
15182

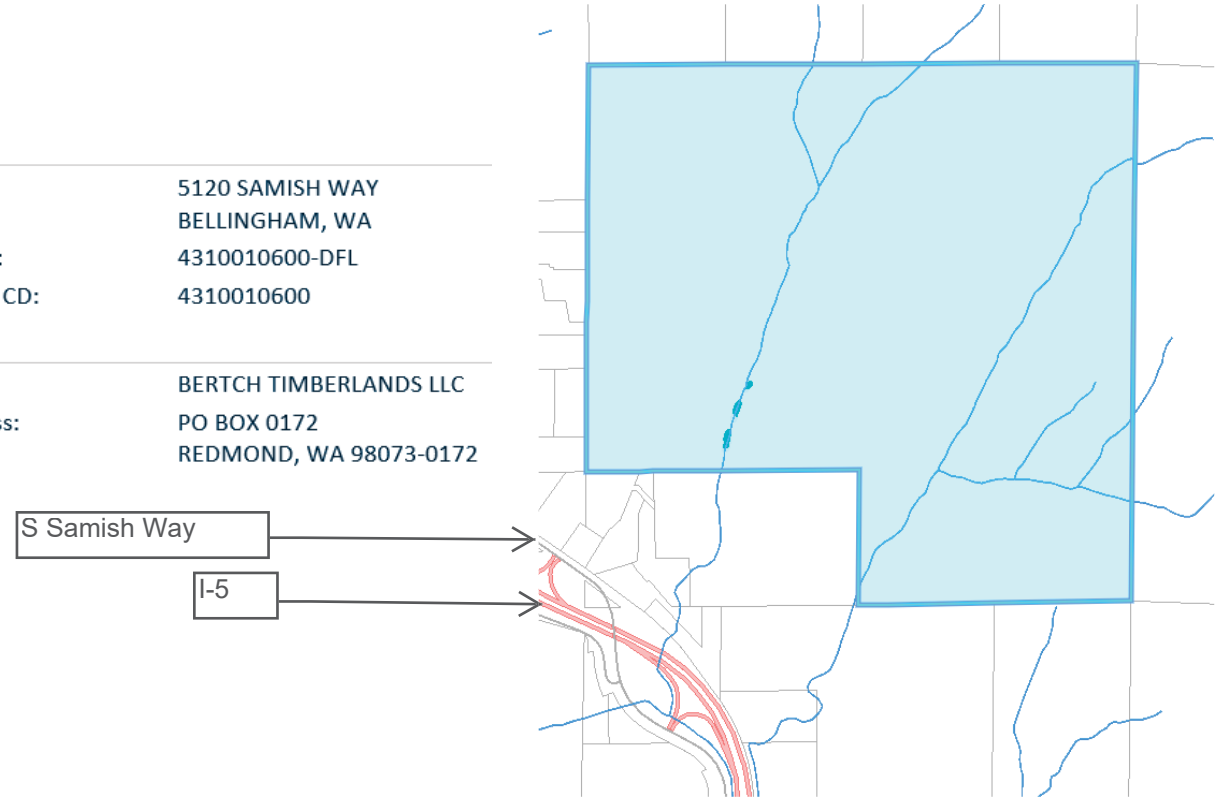
COUNTY ASSESSOR INFO: Please attach to this report a copy of the tax parcel/ownership information for each parcel associated with the site, as well as a parcel map illustrating the parcel boundary and location.

Location

Address:	5120 SAMISH WAY BELLINGHAM, WA
Neighborhood:	4310010600-DFL
Neighborhood CD:	4310010600

Owner

Name:	BERTCH TIMBERLANDS LLC
Mailing Address:	PO BOX 0172 REDMOND, WA 98073-0172



Additional or Supplemental Information from Observations Page

Figure 1: Sampling locations at Plantation Rifle Range

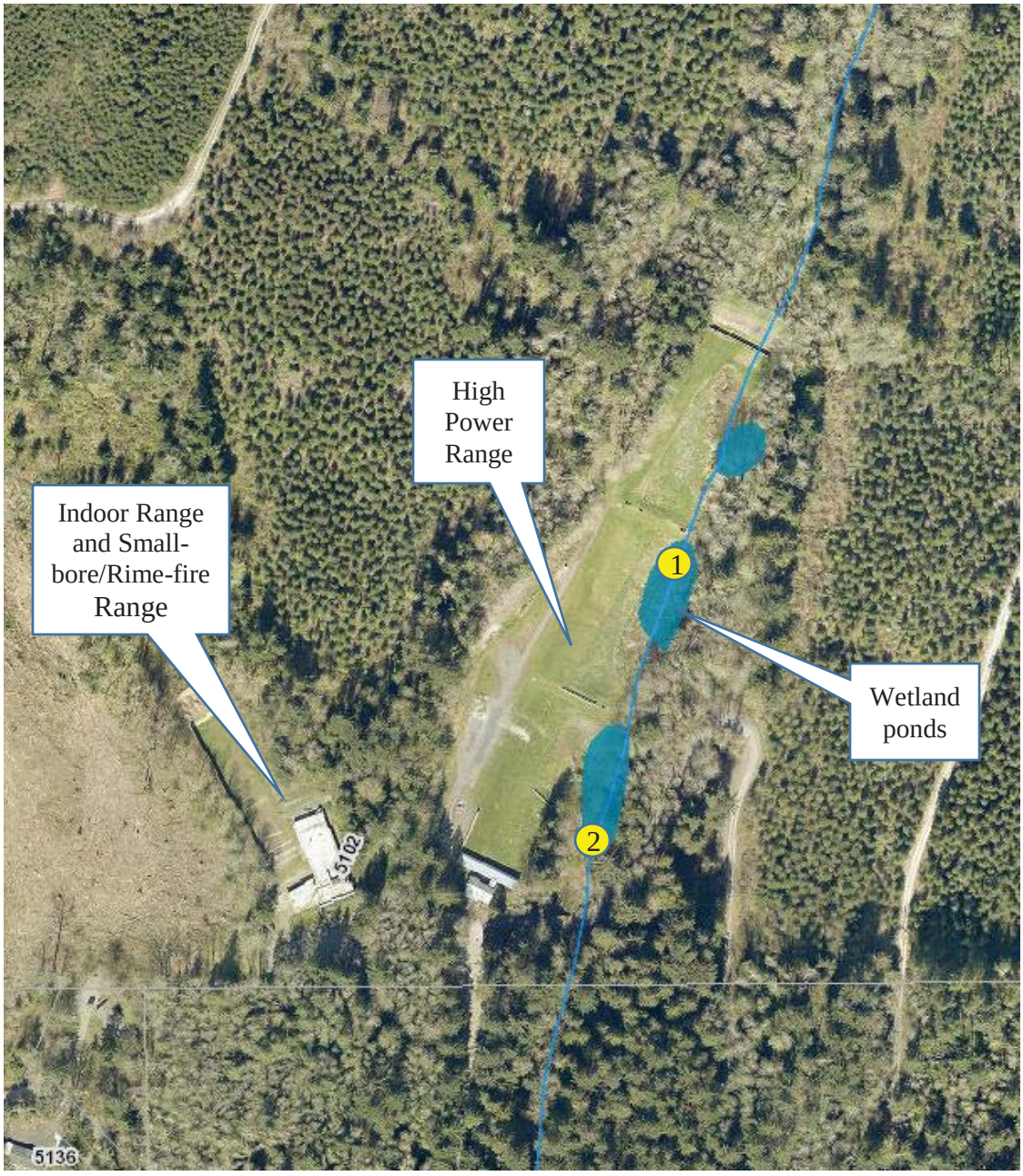


Table 1: Edge Analytical lab results

Sample Description: 20200109 Plant 1 150 yds Stream
Lab Number: 2551 Sample Comment:

CAS ID#	Parameter	Result	PQL	MDL	Units
7440-38-2	ARSENIC	0.0024	0.0005	2.18E-05	mg/L
7440-39-3	BARIUM	0.0181	0.001	1.49E-05	mg/L
7440-43-9	CADMIUM	0.00004 J	0.00025	1.13E-05	mg/L
7440-47-3	CHROMIUM	0.0007 J	0.001	2.03E-05	mg/L
7440-50-8	COPPER	0.0020	0.002	2.76E-05	mg/L
7439-92-1	LEAD	0.0023	0.001	6.66E-06	mg/L
7782-49-2	SELENIUM	0.0005 J	0.001	2.66E-05	mg/L
7440-22-4	SILVER	0.0001 J	0.0002	1.17E-05	mg/L
7440-66-6	ZINC	0.0051	0.0025	0.00055	mg/L
7439-97-6	MERCURY	ND	0.0002	5.30E-05	mg/L
E-10195	TOTAL ORGANIC CARBON	1.80	0.15	0.076	mg/L

Sample Description: 20200109 Plant 2 50 yds Stream
Lab Number: 2552 Sample Comment:

CAS ID#	Parameter	Result	PQL	MDL	Units
7440-38-2	ARSENIC	0.0019	0.0005	2.18E-05	mg/L
7440-39-3	BARIUM	0.0134	0.001	1.49E-05	mg/L
7440-43-9	CADMIUM	0.00002 J	0.00025	1.13E-05	mg/L
7440-47-3	CHROMIUM	0.0001 J	0.001	2.03E-05	mg/L
7440-50-8	COPPER	0.0012 J	0.002	2.76E-05	mg/L
7439-92-1	LEAD	0.0027	0.001	6.66E-06	mg/L
7782-49-2	SELENIUM	0.0008 J	0.001	2.66E-05	mg/L
7440-22-4	SILVER	0.00007 J	0.0002	1.17E-05	mg/L
7440-66-6	ZINC	0.0025	0.0025	0.00055	mg/L
7439-97-6	MERCURY	ND	0.0002	5.30E-05	mg/L