

Tribal Unit-45 (Riverside Lumber Co) Environmental Assessment and Redevelopment Options



Nez Perce Tribe Water Resources Division
May 7, 2014

Brownfields Tribal Response Program

- ◆ Brownfields Definition: *"A former industrial or commercial site where future use is affected by real or perceived environmental contamination"*
- ◆ Cleaning up communities and advancing sustainable development
- ◆ Providing meaningful opportunities for public participation

CERCLA/Superfund Liability

- ◆ Joint and Several Liability for contamination
- ◆ Polluter Pays!
- ◆ Innocent Landowner Provisions
- ◆ Law requires prospective purchasers, adjacent property owners to conduct “All Appropriate Inquiry (AAI)” before purchasing property. You buy it, you own it!
- ◆ EPA can seek cost recovery for \$ spent to cleanup property
- ◆ AAI usually satisfied by conducting a Phase I Environmental Site Assessment (ESA)

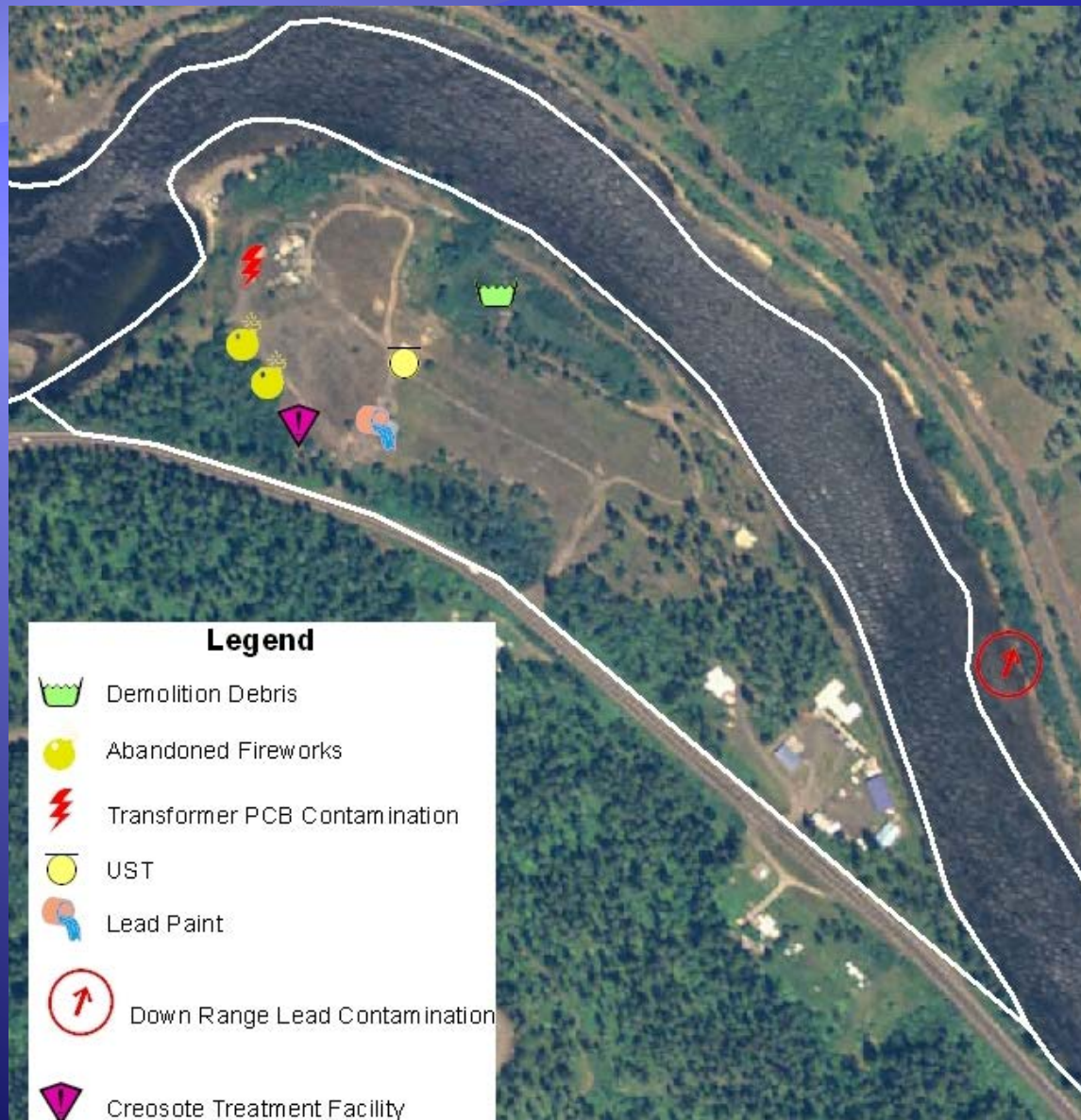
Riverside Lumber Co, 1973



Site History and Current Use

- ◆ Richardson/Riverside Sawmill (1943-1982)
- ◆ Orofino Gun Club trap range (1985-1995)
- ◆ Asphalt batch plant (1987-1991)
- ◆ White Eagle Gift Shop (1993-2003)
- ◆ Fireworks stands (1987-present)
- ◆ Fisheries office (present)
- ◆ Teweeppuu community center (present)

Phase I ESA and TBA



Progress to Date

- ◆ Conducted a Phase I Environmental Site Assessment (ESA) to identify potential concerns
- ◆ EPA funded a Targeted Brownfields Assessment (TBA) in 2009
- ◆ Conducted soil sampling under Transformer House for PCBs
- ◆ Conducted soil vapor survey around creosote treatment area
- ◆ Conducted Geophysics to search for UST
- ◆ Drilled and sampled 4 monitoring wells

Fireworks Area: Penta and Perchlorate in soil and groundwater



Trap Range Results

- ◆ Lead shot present across the River
- ◆ Poor access on steep rocky hillside
- ◆ Shot is chemically corroded-possibly contaminating river?
- ◆ Not assessed-remediation options are limited by rugged site conditions

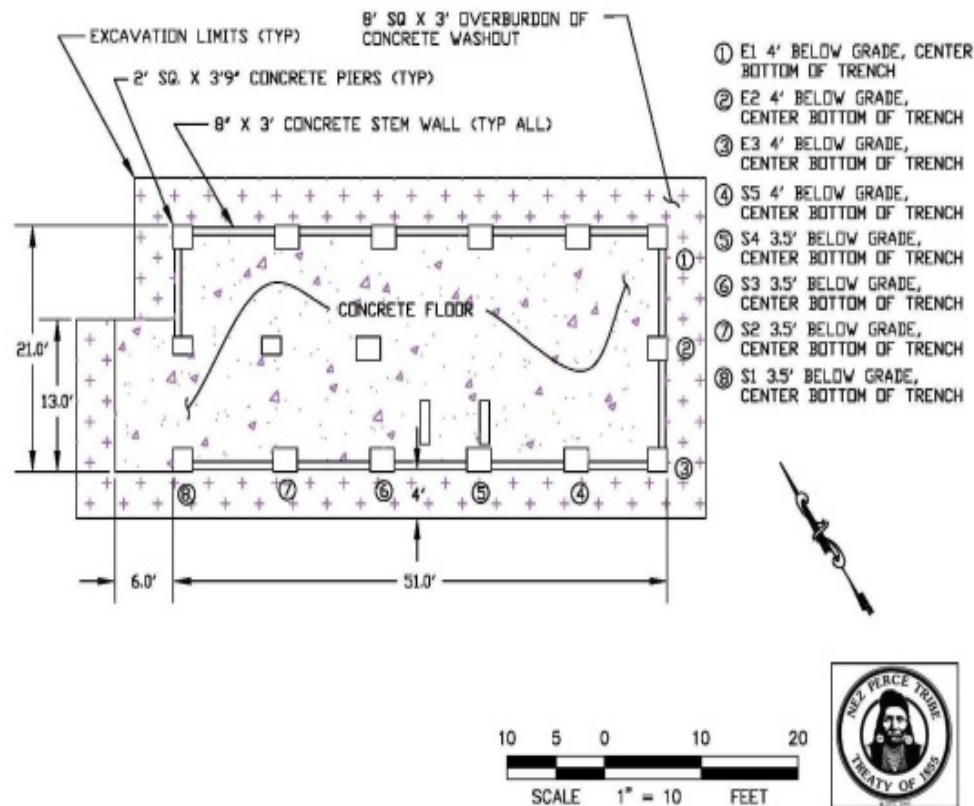


Creosote Treatment Area 2013



Creosote Sample Locations

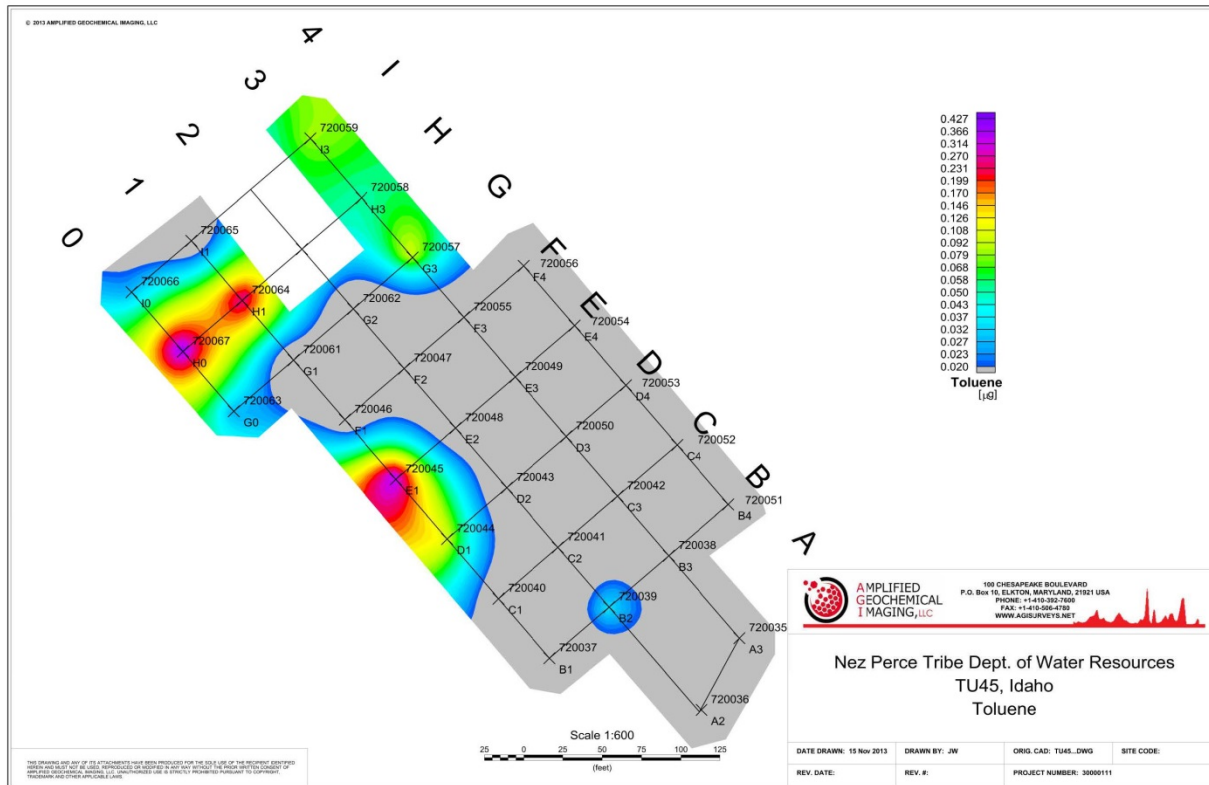
TU 45 CREOSOTE INVESTIGATION CONDUCTED 08/06/13
REMAINING FOOTPRINT AND SAMPLING LOCATIONS



Creosote Soil Chemical Exceedences

Parameter	IDTL (mg/kg)	E1	E2	E3	S1	S2	S3	S4	S5	4' - 8 ft	8' - 12 ft	12' - 15 ft
2,4-Dimethylphenol	0.038	0.0945	0.001	0.106	0.001	0.001	0.001	0.001	0.001			
2-Methylnaphthalene	3.310	0.344	0.451	1.11	0.001	0.0719	0.188	0.0579	0.0882	0.14	1.5	530
3+4-Methylphenol	0.141	0.128	0.0728	0.155	0.001	0.0727	0.0773	0.001	0.001			
Acenaphthene	52.264	0.232	0.13	0.315	0.001	0.17	0.231	0.368	0.109	0.31	8.9	370
2-Methylnaphthalene	3.310	0.344	0.451	1.11	0.001	0.0719	0.188	0.0579	0.0882	0.14	1.5	530
3+4-Methylphenol	0.141	0.128	0.0728	0.155	0.001	0.0727	0.0773	0.001	0.001			
Acenaphthene	52.264	0.232	0.13	0.315	0.001	0.17	0.231	0.368	0.109	0.31	8.9	370
Chrysene	33.366	20.1	19.4	17.3	0.114	35.9	25.2	19.6	8.75			
Dibenz[a,h]anthracene	0.042	4.5	3.5	2.99	0.001	7.95	3.93	3.36	1.16			
Indeno[1,2,3-cd]pyrene	0.422	9.34	7.74	6.54	0.0713	15.1	7.93	6.87	2.42	6	0.5	6.9
Naphthalene	1.144	0.765	0.981	1.77	0.001	0.001	0.214	0.001	0.165	0.26	0.64	770
Phenanthrene	79.042	1.25	1.77	2.78	0.001	0.5	1.17	0.531	0.29	1.8	32	890

Soil Vapor Results-Toluene



Monitor Well Drilling December 2013



Groundwater and Soil Sampling



TRIBAL UNIT 45 MONITOR WELL LOCATION

Legend

● MW

0 100 200 400



Feet

1 in = 200 feet

1:2,400

Original Scale

Map Purpose:

To graphically depict the 4 monitor wells drilled on the TU45 site, the found UST and EM Conductivity Zone

CREATED BY: WATER RESOURCES DIVISION, NPT
DRAWN BY: J.GOODSON
DATED: 012314
COORDINATE SYSTEM: NAD_83_UTM11N
GCS: N.AMERICAN_1983_TRANSVERSE_MERCATOR
DECLARATION: NONE SUPPLIED
DATUM: N.AMERICA_1983



Location Map
NTS



Source: Esri, DigitalGlobe, GeoEye, I-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

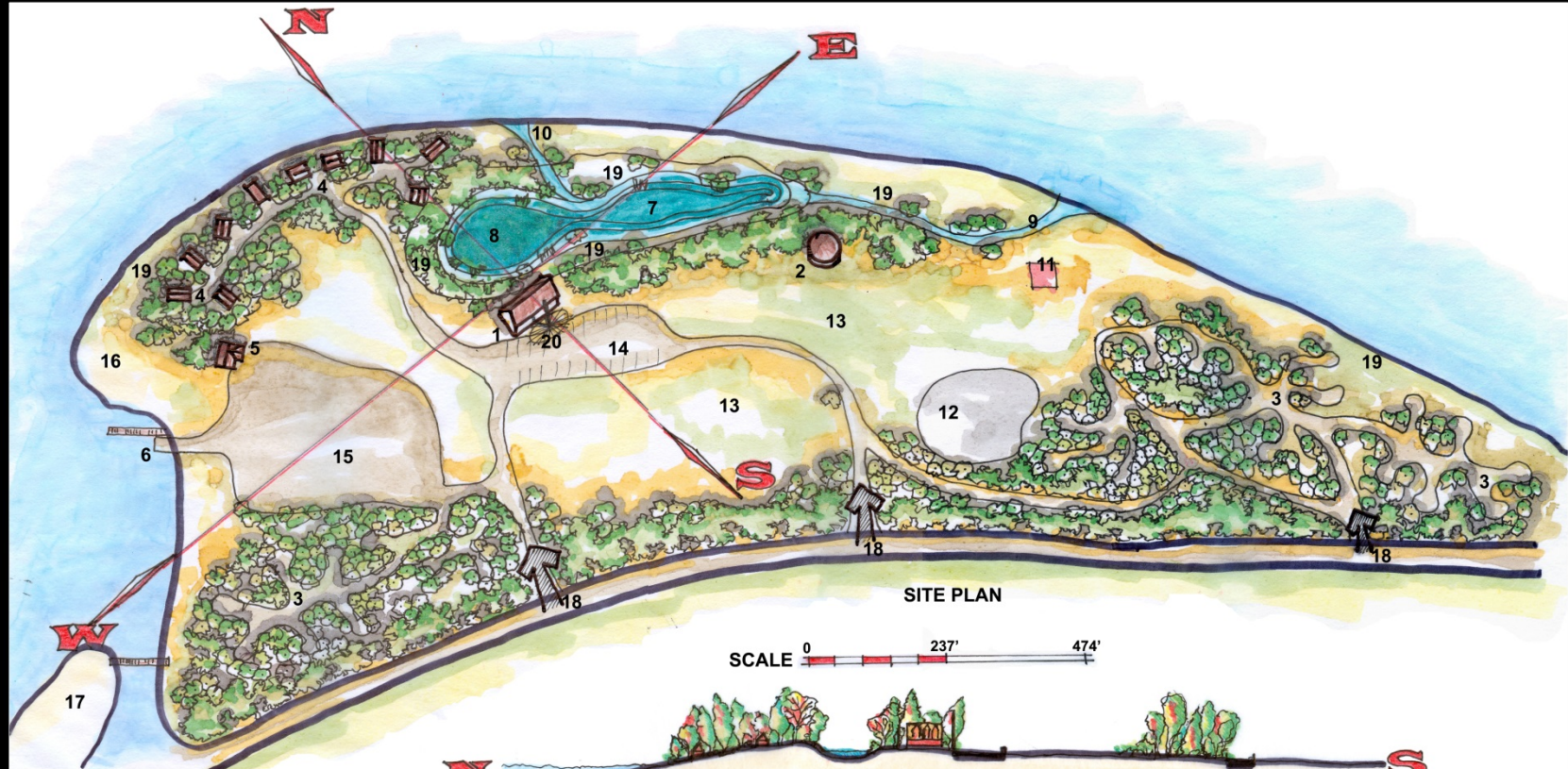
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Monitor Well Sample Results

Chemical	MW1	MW2	MW2 (duplicate)	MW3	MW4	Water WELL	Units	Action Level
Diesel	<0.63	<0.63	<0.63	<0.63	<0.63	ND	mg/L	NL
Gasoline	<0.25	<0.25	<0.25	<0.25	<0.25	ND	mg/L	NL
Lube Oil	<0.63	<0.63	<0.63	<0.63	<0.63	ND	mg/L	NL
Perchlorate	5.21	16.9	16.9	16.4	2.04	0.516	ug/L	15.0
PCB (total)	ND	ND	ND	ND	ND	ND	ug/L	NL
Acenaphthene	ND	ND	ND	ND	5.35	ND	ug/L	625.7
bis(2-Ethylhexyl)phthalate	ND	ND	ND	ND	0.55	ND	ug/L	6.0
Butylbenzylphthalate	0.56	0.56	ND	ND	ND	ND	ug/L	2085.7
Carbazole	ND	ND	ND	ND	2.16	ND	ug/L	NL
Dibenzofuran	ND	ND	ND	ND	14.3	ND	ug/L	41.7
Fluoranthene	ND	ND	ND	ND	0.61	ND	ug/L	417.1
Methyl ethyl ketone (MEK)	ND	ND	ND	5.06	2.63	ND	ug/L	6257.1

Redevelopment Ideas

- ◆ Recreational-convenience store, tackle shop, cabin rentals, boat ramp
- ◆ Assisted Living Facility-8 units, 3000 sq ft
- ◆ Enhance Teweeppuu Community Center
- ◆ Maintain Orofino Fisheries Offices

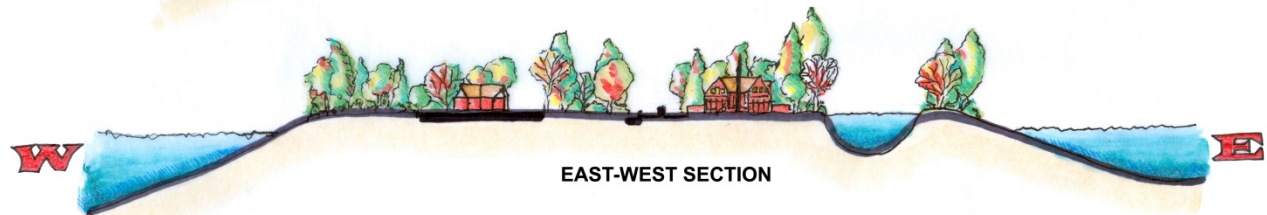


SITE PLAN

SCALE 0 237' 474'



NORTH-SOUTH SECTION



EAST-WEST SECTION

1. Four Directions Lodge
2. Amphitheater
3. Campsite Areas
4. Cabins
5. Bait & Tackle Shop
6. Boat ramp
7. Pond (former Mill Pond)
8. Wetlands conjunct pond
9. Inlet creek to pond
10. Outlet creek from pond
11. Reclaimed/upgraded basketball court
12. Children's playground
13. Open/athletic fields - ceremonial grounds - market/events areas - overflow parking
14. Lodge parking
15. Truck, boat & trailer parking
16. Sand family swimming beach
17. Island with dock/bridge
18. Highway entrances
19. Interpretive nature trails
20. Sun Plaza in front of lodge

Vision concepts for reclamation of approx. 36 acre
brownfield site, formerly known as the Riverside-Richardson Sawmill
located east of Orofino ID

Redevelopment Challenges

- ◆ Source of clean drinking water
- ◆ Sewage disposal on gravel bar
- ◆ Winter ice/reduced river access



Questions?

