
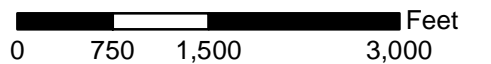

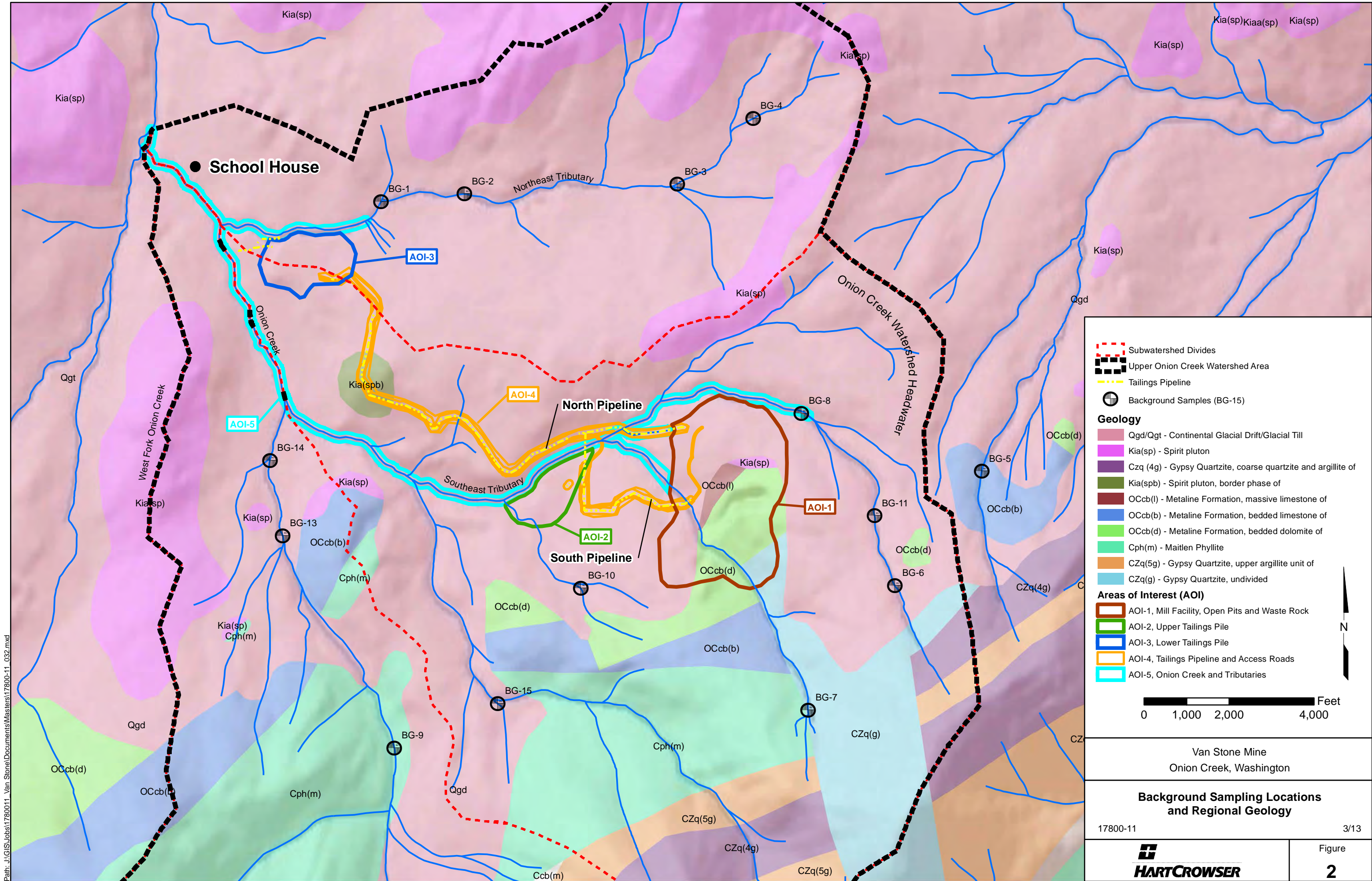
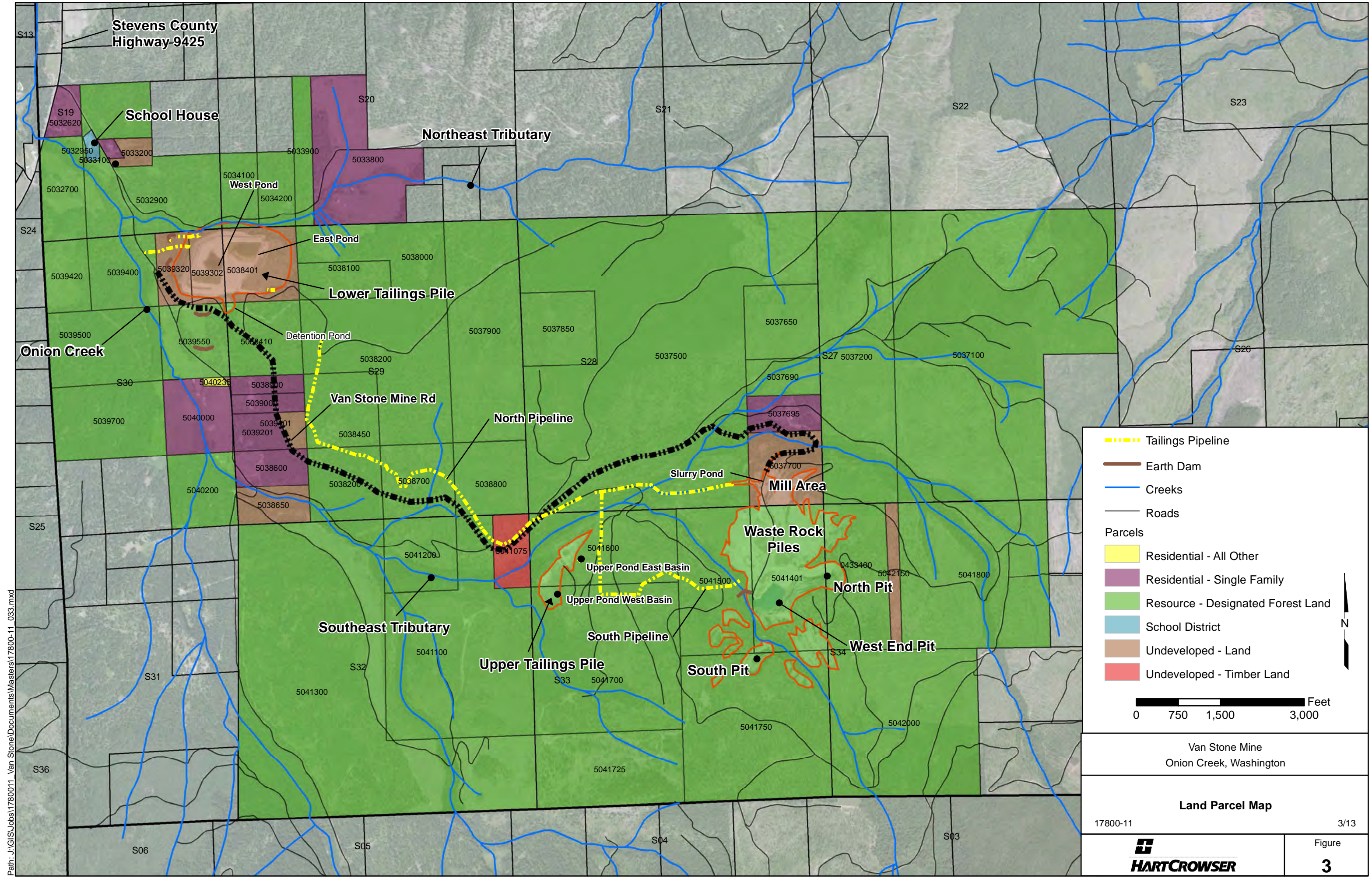


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<ul style="list-style-type: none"> - - - - - Tailings Pipeline ◆ Monitoring Well ◆ Weather Station ▲ Equinox Waste Discharge Monitoring Station (SW8) ● Well Locations (WL-20) (from Ecology database) — Earth Dam — Creeks — Roads 	
	
<p>Van Stone Mine Onion Creek, Washington</p>	
<p>Van Stone Mine Study Area</p>	
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<p>Figure 1</p>	



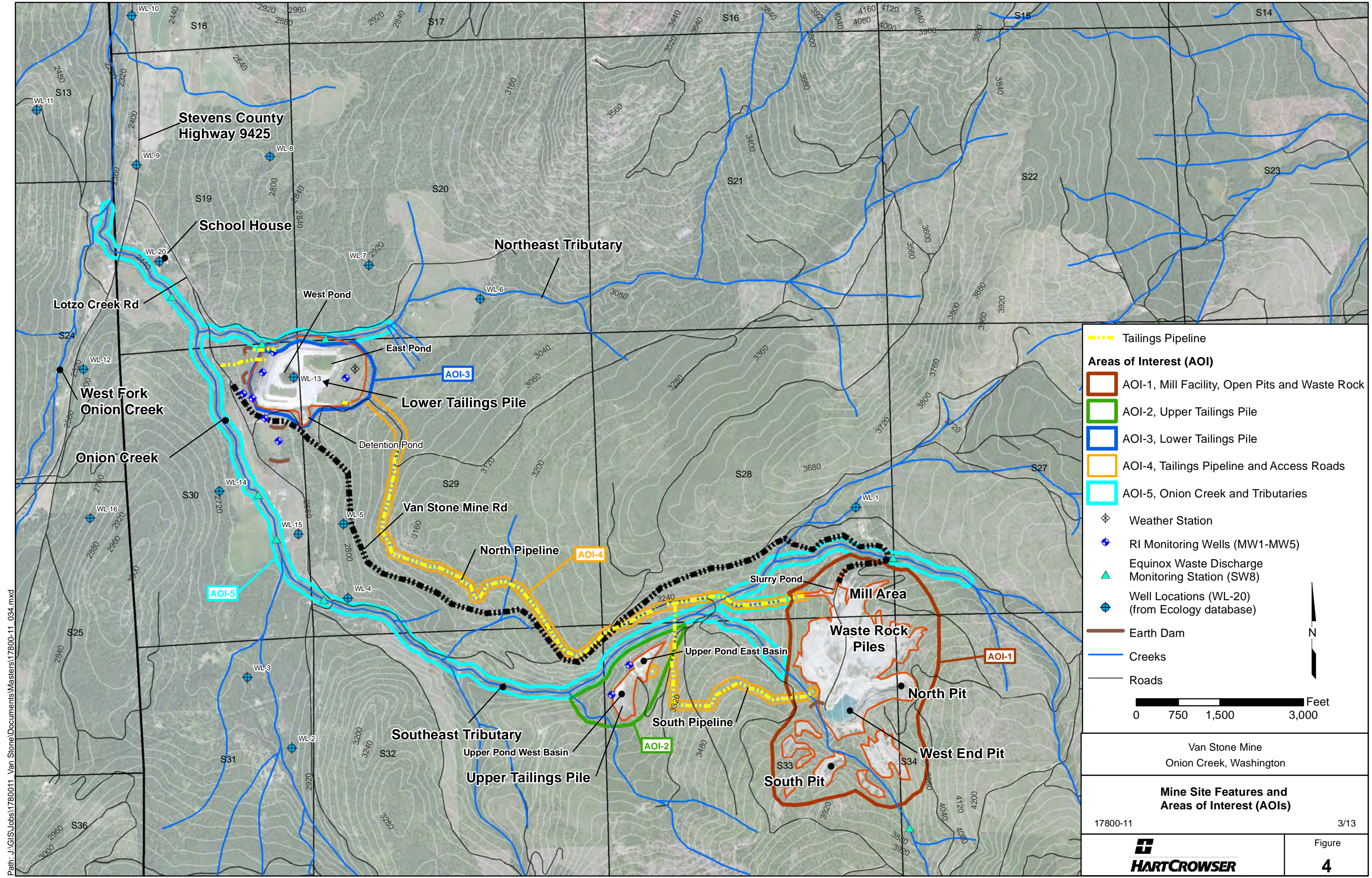
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	Tailings Pipeline
	Earth Dam
	Creeks
	Roads
Parcels	
	Residential - All Other
	Residential - Single Family
	Resource - Designated Forest Land
	School District
	Undeveloped - Land
	Undeveloped - Timber Land
 N	
 0 750 1,500 3,000 Feet	

Van Stone Mine Onion Creek, Washington	
Land Parcel Map	
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 HARTCROWSER	Figure 3



Legend

- Tailings Pipeline
- Areas of Interest (AOI)**
 - AOI-1, Mill Facility, Open Pits and Waste Rock
 - AOI-2, Upper Tailings Pile
 - AOI-3, Lower Tailings Pile
 - AOI-4, Tailings Pipeline and Access Roads
 - AOI-5, Onion Creek and Tributaries
- Weather Station
- RI Monitoring Wells (MW1-MW5)
- Equinox Waste Discharge Monitoring Station (SW8)
- Well Locations (WL-20) (from Ecology database)
- Earth Dam
- Creeks
- Roads

0 750 1,500 3,000 Feet

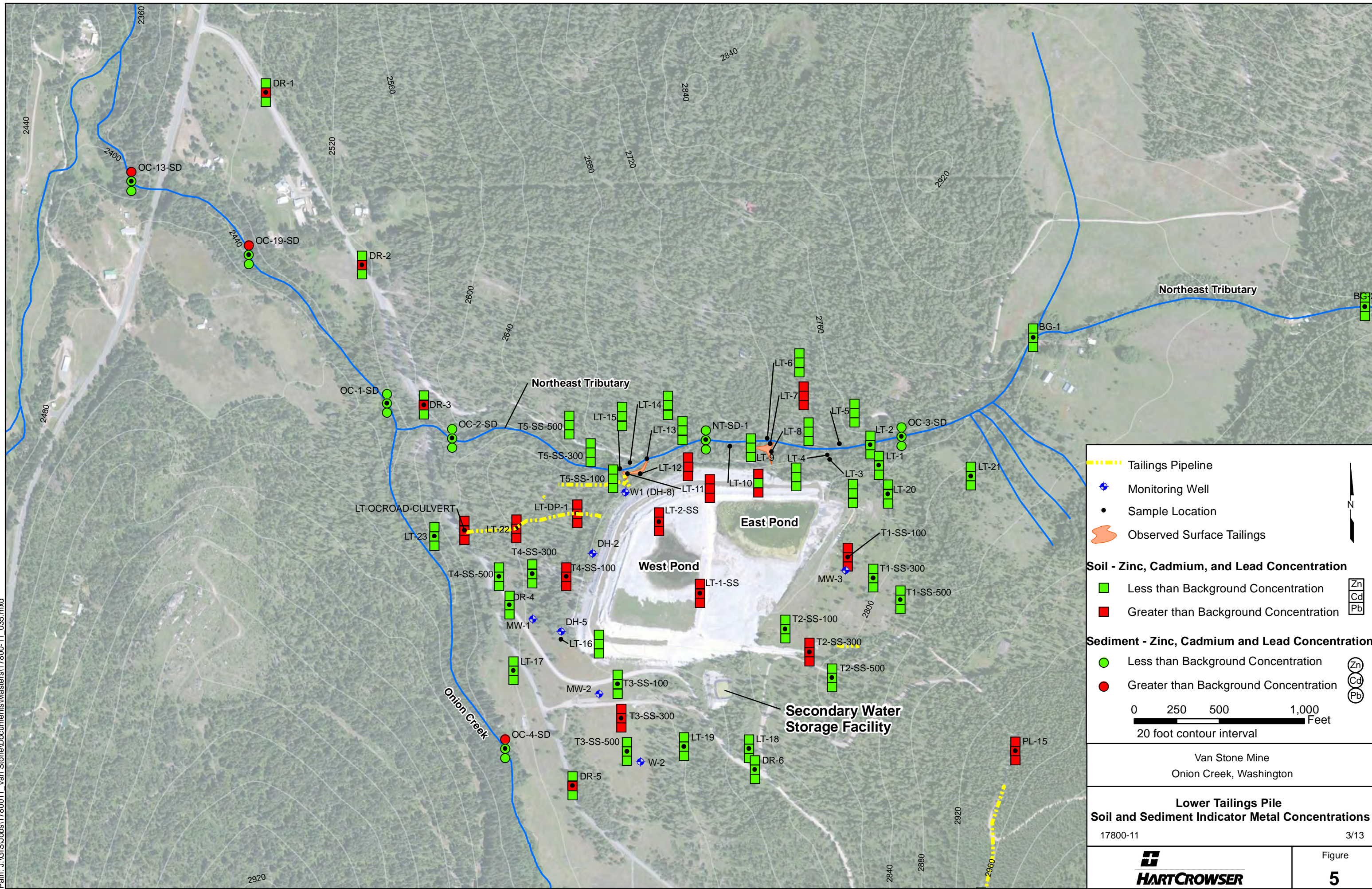
Van Stone Mine
Onion Creek, Washington

Mine Site Features and Areas of Interest (AOIs)

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HARTCROWSER Figure 4

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--- Tailings Pipeline
◆ Monitoring Well
● Sample Location
█ Observed Surface Tailings

Soil - Zinc, Cadmium, and Lead Concentration

█ Less than Background Concentration
█ Greater than Background Concentration

Sediment - Zinc, Cadmium and Lead Concentration

● Less than Background Concentration
● Greater than Background Concentration

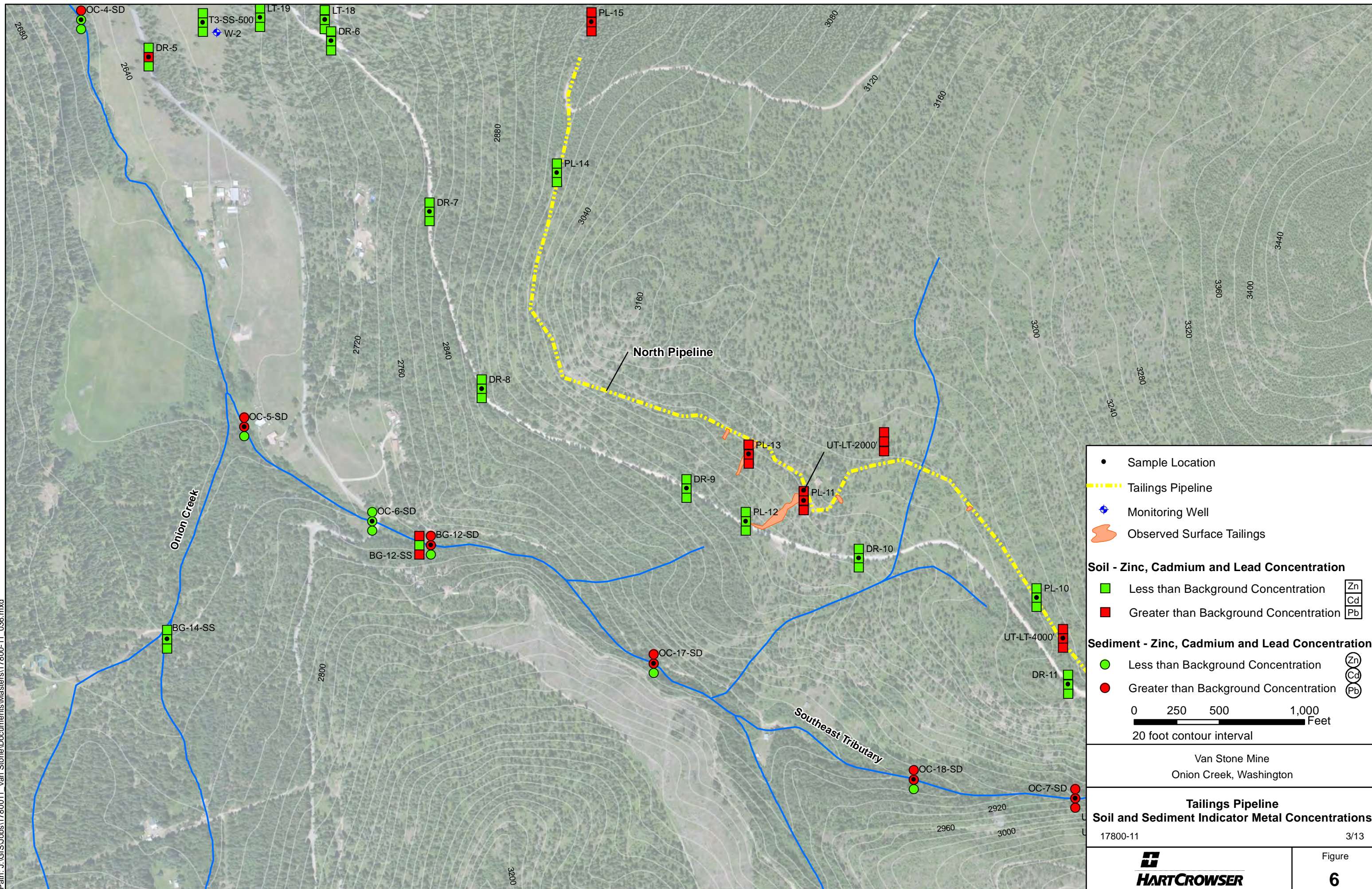
0 250 500 1,000
 Feet
 20 foot contour interval

Van Stone Mine
Orion Creek, Washington

**Lower Tailings Pile
Soil and Sediment Indicator Metal Concentrations**

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Figure
5



• Sample Location
 - - - - - Tailings Pipeline
 + Monitoring Well
 Observed Surface Tailings

Soil - Zinc, Cadmium and Lead Concentration

■ Less than Background Concentration
■ Greater than Background Concentration

Sediment - Zinc, Cadmium and Lead Concentration

● Less than Background Concentration
● Greater than Background Concentration

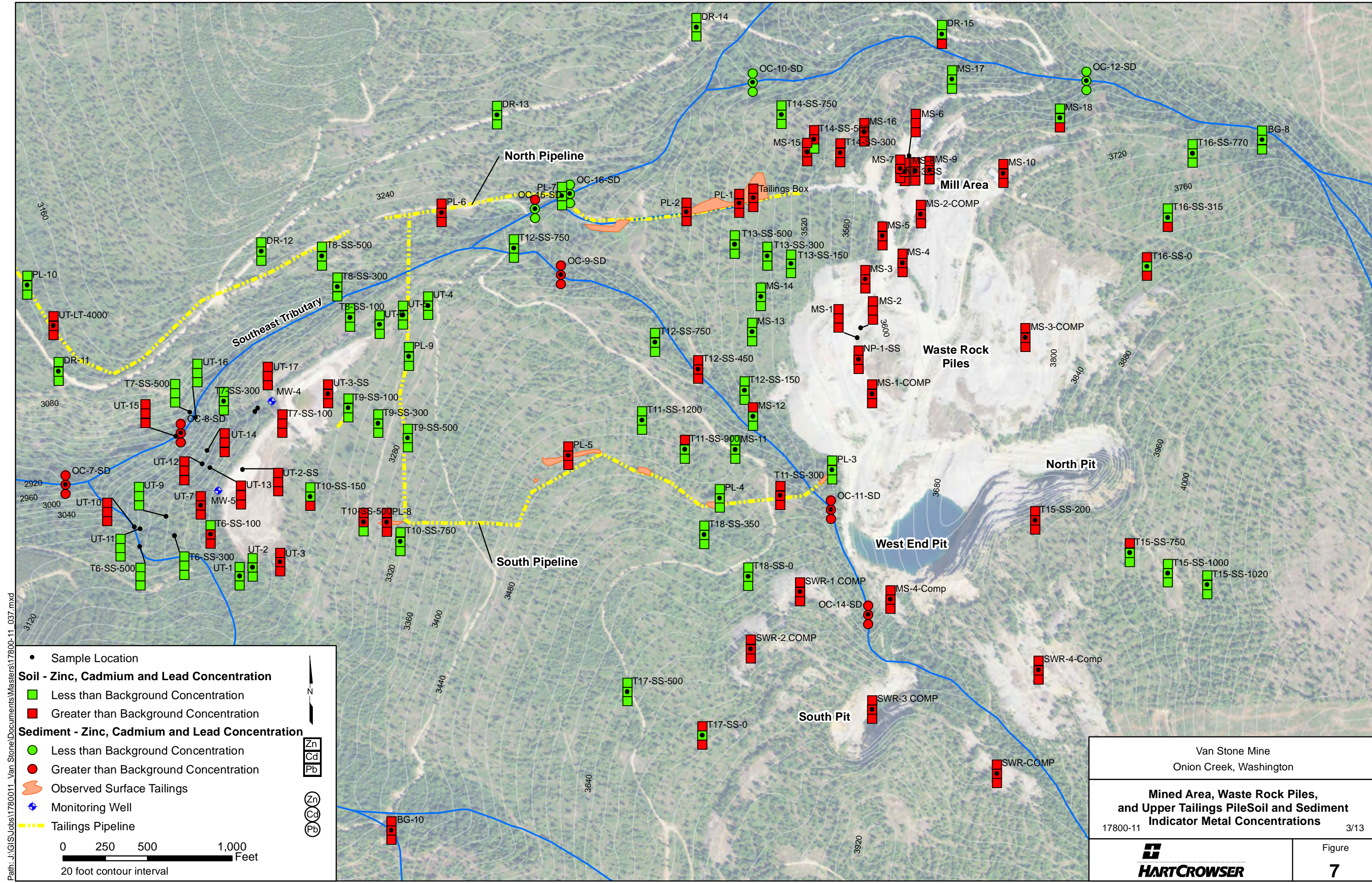
0 250 500 1,000 Feet
 20 foot contour interval

Van Stone Mine
Onion Creek, Washington

**Tailings Pipeline
Soil and Sediment Indicator Metal Concentrations**

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Figure
6



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• Sample Location

Soil - Zinc, Cadmium and Lead Concentration

- Less than Background Concentration
- Greater than Background Concentration

Sediment - Zinc, Cadmium and Lead Concentration

- Less than Background Concentration
- Greater than Background Concentration

- Observed Surface Tailings
- Monitoring Well
- Tailings Pipeline

Zn
Cd
Pb

Zn
Cd
Pb

0 250 500 1,000
Feet

20 foot contour interval

Van Stone Mine
Onion Creek, Washington

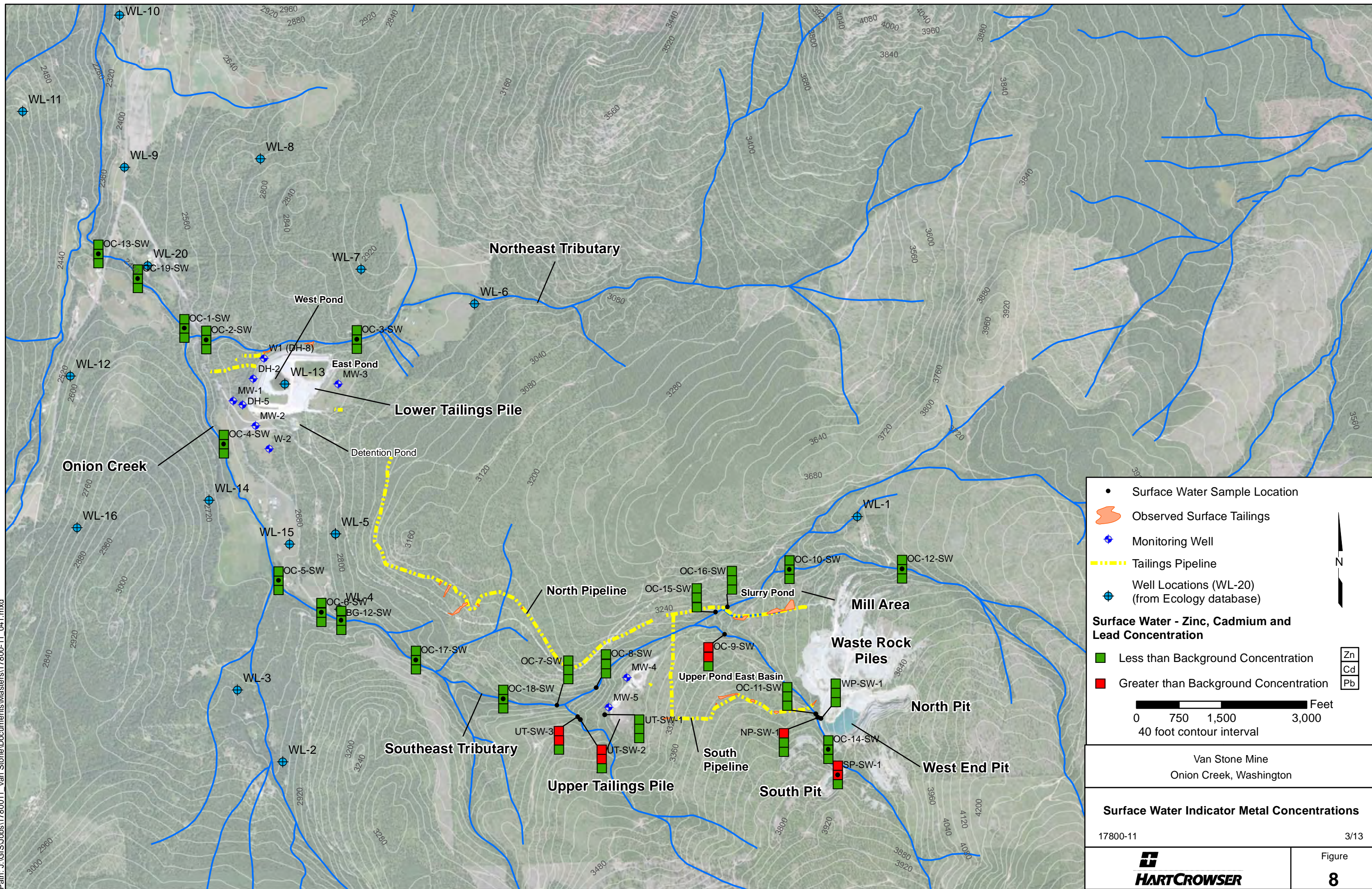
**Mined Area, Waste Rock Piles,
and Upper Tailings Pile Soil and Sediment
Indicator Metal Concentrations**

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HARTCROWSER

Figure
7

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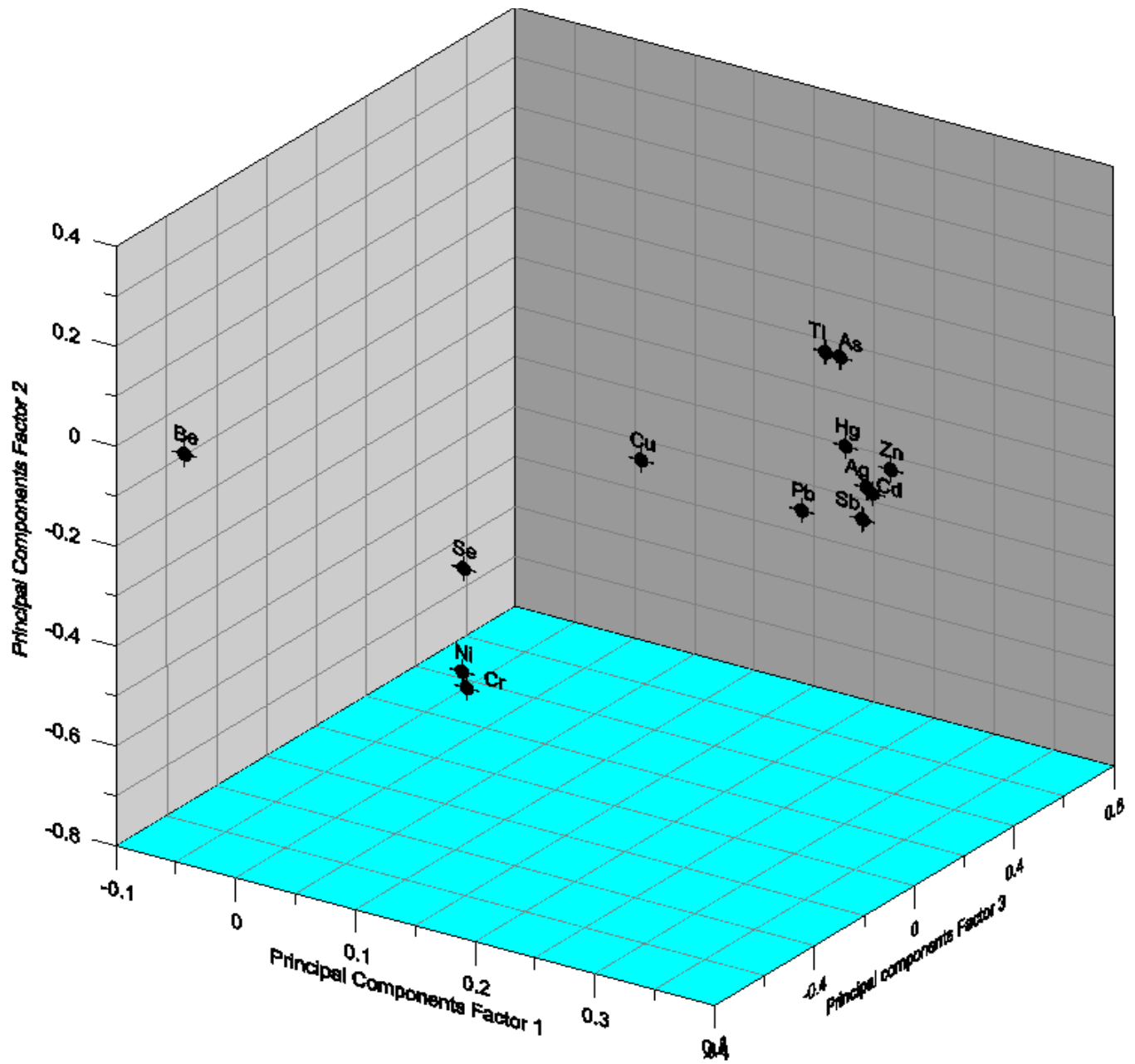
Van Stone Mine
Onion Creek, Washington


Surface Water Indicator Metal Concentrations

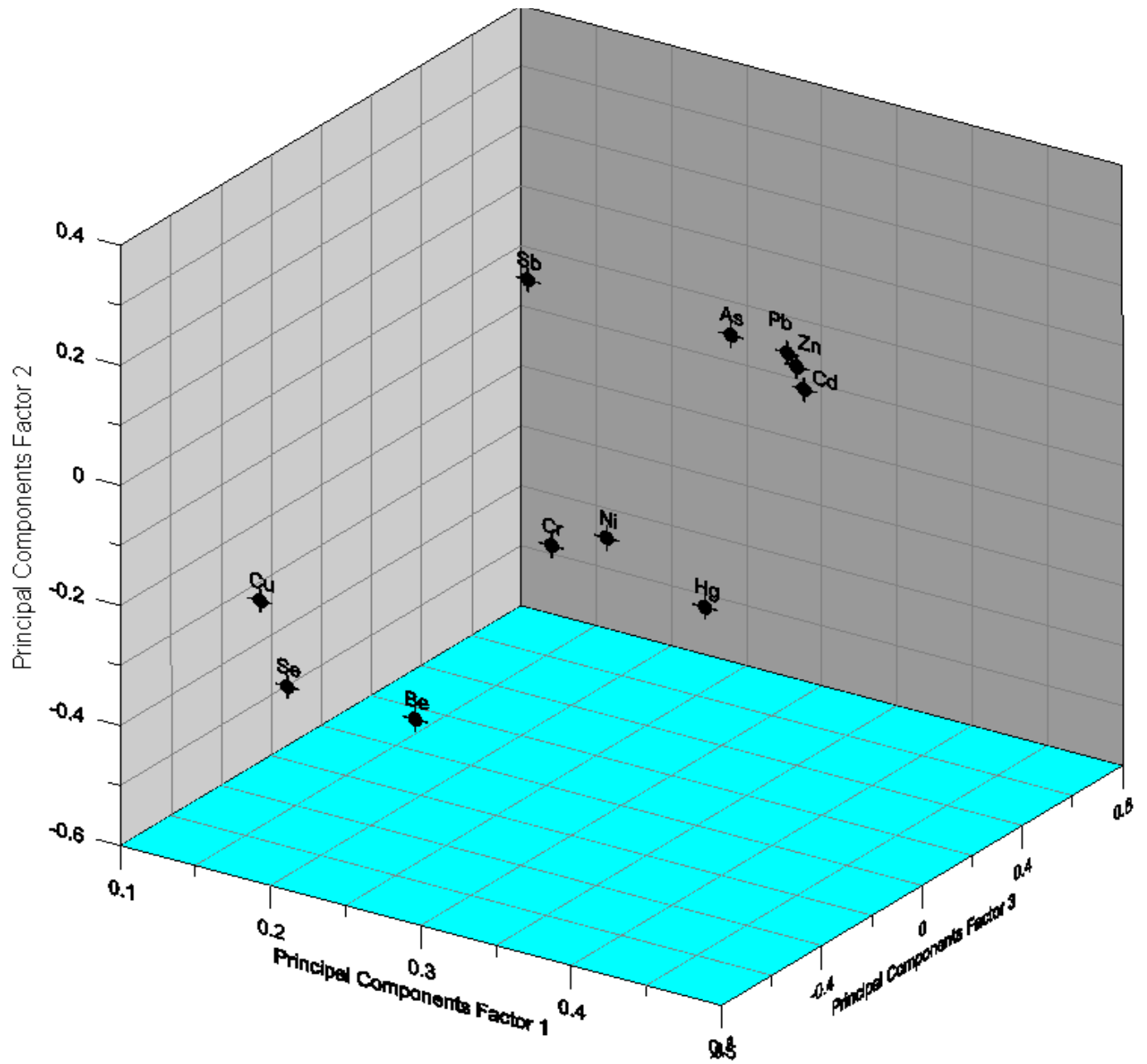
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Figure
8



Van Stone Mine Onion Creek, Washington	
Factor Loading Plots for Soil	
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	Figure 9



Van Stone Mine
Onion Creek, Washington

Factor Loading Plots for Sediment

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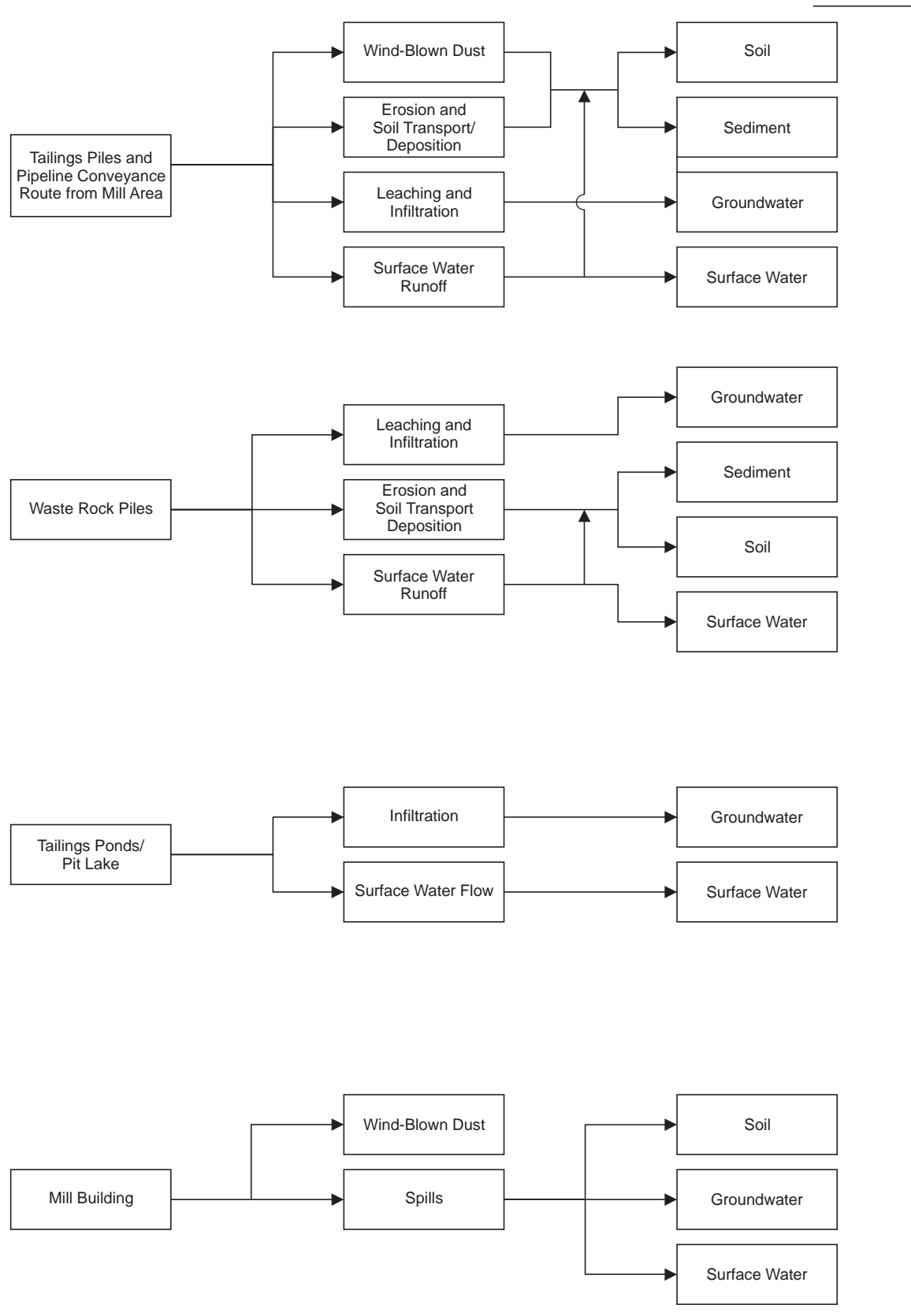
Figure

10

Sources

Release Mechanisms

Impacted Media



Impacted Media	Exposure Route	Unrestricted Adult and Child Resident	Unrestricted Quantified Pathways	Tresspasser	Terrestrial Plant, Soil Biota	Aquatic Biota	Terrestrial Wildlife
Air	Inhalation				●	●	●
	Dermal Contact						
	Ingestion						
Soil ¹	Inhalation	●		●			
	Dermal Contact	●		●	●	●	●
	Ingestion	●	○	●	●	●	●
Groundwater	Inhalation	●		●			
	Dermal Contact	●		●	●	●	●
	Ingestion	●	○	●	●	●	●
Surface Water	Inhalation	●		●			
	Dermal Contact	●		●	●	●	●
	Ingestion	●	○	●	●	●	●
Sediment	Inhalation	●		●			
	Dermal Contact	●		●	●	●	●
	Ingestion	●	○	●	●	●	●
Biota ²	Inhalation						
	Dermal Contact						
	Ingestion	●		●	●	●	

Legend

- Complete Pathway
- ◐ Incomplete Pathway
- Exposure Pathway and Medium Quantified in the HHRA

¹ Note that Stain Soils is included under soil. Stained Soil have limited aerial extent but represent a complete pathway for ingestion and dermal contact under Terrestrial Plants and Soil Biota.

² Biota (e.g., homegrown vegetables, insects, fish, plants) may be considered a secondary source that accumulate constituents of concern from impacted soil, sediment, surface water, and groundwater and may be consumed by humans or ecological receptors. Independent of being a secondary source, terrestrial and aquatic biota are also receptors. Fish ingestion biota are the only medium and route quantified in the HHRA, based on the highest use of a surface water body, determined in accordance with WAL 173-201A (Ecology 2003).

Van Stone Mine Onion Creek, Washington	
Conceptual Site Model	
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	Figure 11