

# VAN STONE MINE CLEANUP OPTIONS



## Comments accepted

May 22 – June 22, 2017

## Public meeting

June 14, 2017, 7–9 p.m.

Onion Creek School District  
2006 Lotze Creek Road, Colville

## Submit comments

Brendan Dowling, site manager  
4601 North Monroe Street  
Spokane, WA 99205  
brendan.dowling@ecy.wa.gov  
Online form: [http://  
cs.ecology.commentinput.com/?  
id=8ZZft](http://cs.ecology.commentinput.com/?id=8ZZft)

Questions: (509) 329-3611

## Document review locations

[https://fortress.wa.gov/ecy/  
gsp/Sitepage.aspx?csid=461](https://fortress.wa.gov/ecy/gsp/Sitepage.aspx?csid=461)

Onion Creek School District  
2006 Lotze Creek Road  
Colville, WA 99114  
(509) 732-4240

Onion Creek General Store  
2191 Onion Creek Road  
Colville, WA 99114  
(509) 732-6648

Ecology Eastern Regional Office  
4601 North Monroe Street  
Spokane, WA 99205  
Please call (509) 329-3415 for an  
appointment.

## Public input invited on draft Feasibility Study

You are invited to review and comment on the draft Feasibility Study for the Van Stone Mine. The site is located 24 miles northeast of Colville off Van Stone Road in Stevens County, Washington. The study summarizes past investigations of lead and zinc mining-related contamination at the site and emergency cleanup actions already completed. Then the authors evaluate final cleanup options under consideration.

**We are holding a public meeting** at the Onion Creek School District, 2006 Lotze Creek Road, in Colville on June 14, 7 to 9 p.m. Ecology staff will explain the cleanup options, answer your questions, and accept written comments at the meeting.

## Contaminated areas to be cleaned up

The site is divided into the following contaminated areas (see site map, page 4):

- The former Mill area, two open pits, and waste rock piles, which includes West End Pit Lake and the Pit Lake Dam (AOI-1)
- Upper and lower tailings piles (AOI-2 and AOI-3, respectively)
- Tailings pipelines and access roads (AOI-4)
- Onion Creek and its tributaries (AOI-5)

Specific contaminants vary by area, but in general, soil is contaminated with antimony, arsenic, cadmium, lead, mercury, and zinc.

Surface water discharging into Onion Creek tributaries from tailings piles also have levels of contaminants requiring cleanup. None of the cleanup options under consideration include surface water treatment; however, by addressing the tailings piles, we stop contaminants from reaching surface waters.



## Take precautions if you are near the site

Due to the instability of certain portions of the tailings piles and possible health risks, please:

- Don't go on or near the tailings piles or the mill site. This includes hiking, bicycling, ATV use, horseback riding, or other recreational activities.
- Take measures to minimize dust inside and outside your home if you live near the site.
- For more actions you can take to reduce potential exposure to contaminated soil, see our Dirt Alert website: [www.ecy.wa.gov/programs/tcp/sites\\_brochure/dirt\\_alert/2011/healthy-actions.html](http://www.ecy.wa.gov/programs/tcp/sites_brochure/dirt_alert/2011/healthy-actions.html)

## WHY CLEANUP MATTERS

Accidental spills of dangerous materials and past business practices have contaminated land and water throughout the state. The Washington State Department of Ecology Toxics Cleanup Program works to remedy these situations, which range from cleaning up contamination from leaking underground storage tanks, to large, complex projects requiring engineered solutions.

**Facility Site ID No. 1554858**

**Cleanup Site ID No. 461**

Several companies were involved with mining activities at the site over the years, and other companies and individuals have purchased portions of the property. Potentially liable persons have included American Smelting and Refining Company (ASARCO), Callahan Mining Corp., Sundown Holdings, Ltd., Equinox Resources Inc., and Vaagen Brothers Lumber, Inc. (Vaagen).

In 2005, ASARCO filed for reorganization under the United States Bankruptcy Code. Ecology filed a claim related to cleaning up Van Stone Mine as part of the ASARCO bankruptcy proceedings. Under the settlement, we received \$3.5 million that we have used to investigate the site and complete emergency cleanup actions. Some of this settlement remains to fund cleanup. We have an agreement with Vaagen that allows us to access the site to investigate contamination.

## Cleanup options

1. *No action* – This option doesn't comply with the state's cleanup law and was only included for comparison purposes but is not a choice we will consider.
2. *Institutional controls* – This option includes installing a security fence to limit public access, posting warning signs, and controlling future site activities with land use restrictions, covenants to warn potential owners about remaining contamination, and public education.
3. *In-place containment without cover system* – Waste rock and tailings piles with unstable slopes would be regraded to match natural site contours and replanted to reduce erosion.
4. *In-place containment with cover system* – This option is the same as Option 3, but a cover system would be installed over the top of the tailings piles. Dispersed tailings and other dangerous waste would also be excavated and placed with the nearest tailings pile before installing covers. The cover system would be multiple layers listed in order from the ground surface down: one-foot top soil with vegetation, two-feet of material borrowed from elsewhere on the site (waste rock is likely), geonet drainage textile, 12-ounce non-woven geotextile, 60-mil high density polyethylene geomembrane, 12-ounce non-woven geotextile, regraded tailings/waste rock/soil.
5. *Centralized tailings repository* – All tailings and dangerous waste would be consolidated at the lower tailings pile, graded, and capped with the cover system described in Option 4.
6. *Off-site disposal* – Tailings and some waste rock would be excavated and hauled for disposal to the landfill in Arlington, Oregon, which is the closest disposal site capable of accepting this type of waste. Disturbed areas would be regraded and replanted.



## Special accommodations

To request Americans with Disabilities Act accommodation, or printed materials in a format for the visually impaired, call Ecology at (509) 329-3546 or visit [www.ecy.wa.gov/accessibility.html](http://www.ecy.wa.gov/accessibility.html). Persons with impaired hearing may call Washington Relay Service at 711. Persons with speech disability may call TTY at (877) 833-6341.

## Language assistance

Para asistencia en Español:  
(360) 407-6097 or  
[preguntas@ecy.wa.gov](mailto:preguntas@ecy.wa.gov)

한국어에서 지원에 대 한:  
(425) 649-7166

Liên hệ bằng tiếng Việt, xin liên  
lạc: (360) 407-6948

若需中文翻譯: (360) 407-6956

The following cleanup actions will be included in all the cleanup options (except Option 1):

- Installing a buttress and emergency spillway at North Pit Lake to stabilize the earthen dam there and avoid a breach that would cause water and sediment to reach the southwest fork of Onion Creek and perhaps flood downstream property and homes.
- Grading waste rock areas to match site contours and replanting these areas.

## Mining history

The Van Stone Mine operated on and off from 1938 to 1993 as an underground and then open-pit lead and zinc mine. To support open-pit operations, ASARCO constructed a flotation mill to process the ore mined on-site. Blasted rock not classified as ore was placed into waste rock dumps around the open pit operations.

As the ore was processed through the flotation mill, lead and zinc concentrates were produced and shipped off-site. Milling process material not classified as concentrates (tailings) was transported as a slurry through pipelines to one of the two tailings piles. Water used to transport tailings was most likely poured off and allowed to flow into nearby drainages connected to Onion Creek.

The upper tailings pile was used until a berm failure in 1961 resulted in a release of water and tailings into a tributary to Onion Creek. The lower tailings pile replaced it until the mine closed. In 1992, Equinox placed a polyvinyl chloride (PVC) liner on top of the lower tailings pile and constructed a seepage collection pond out of tailings next to the facility. Tailings were then placed on top of the PVC liner during a brief restart of mining operations. A PVC geomembrane was also installed on top of the upper tailings pile for emergency tailings storage.

After final shutdown, mine buildings, access roads, waste rock, process tailings, and exposed mining faces remained. Since then, the PVC geomembranes have degraded from sun exposure.

## Next steps

We will consider all input received during the public comment period and revise the Feasibility Study if needed. If substantial changes are made to the draft as a result of public comments, Ecology will hold another comment period.

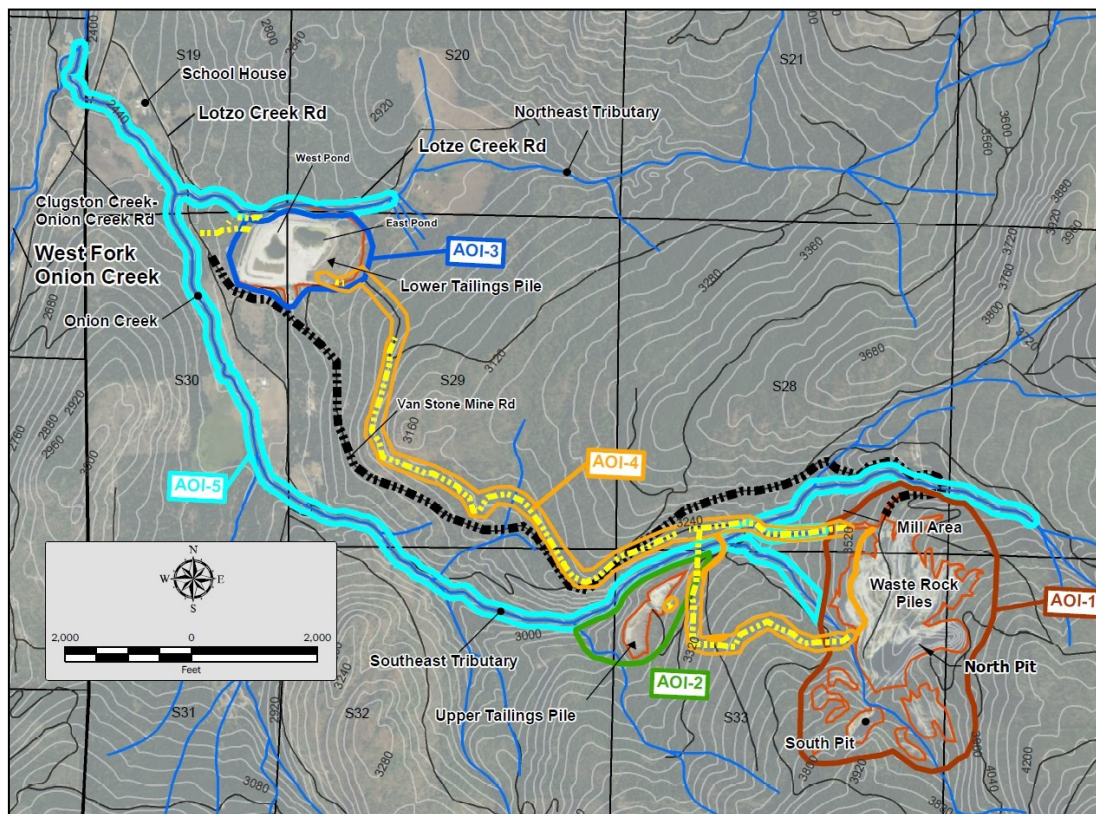
After the Feasibility Study is final, we will draft a cleanup action plan and present it for public review and comment.





Toxics Cleanup Program, Eastern Region  
4601 North Monroe Street  
Spokane, WA 99205

## Ecology seeks feedback on Van Stone Mine cleanup



**Public comment  
period and  
meeting for draft  
Feasibility Study**

*Submit comments  
May 22 – June 22,  
2017*

*Public meeting at  
Onion Creek  
School District  
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**Figure left:** Map of  
cleanup areas at Van  
Stone Mine, 24 miles  
northeast of Colville  
off Van Stone Road  
in Stevens County,  
Washington.