

BNSF Railway Skykomish Cleanup



Town of Skykomish

Comments accepted

November 21 – December 22, 2022

Submit comments

Online at:

www.bit.ly/Ecology-BNSFSkykomish-Comments

Or by mail to:

Tanner Bushnell, Site Manager
WA Department of Ecology
PO Box 330316
Shoreline, WA 98133-9716
425-691-0571

Tanner.Bushnell@ecy.wa.gov

Document review locations

www.bit.ly/Ecology-BNSFSkykomish

Skykomish Library

100 5th Street N
Skykomish, WA 98288

For other document review assistance, please contact:

Ian Fawley, Outreach Planner
Ian.Fawley@ecy.wa.gov
425-324-5901

Site info

Facility Site ID: 2104
Cleanup Site ID: 34

Legal agreement ready for public review

The Department of Ecology (Ecology) invites you to review an amendment to the legal agreement (Consent Decree) between Ecology and BNSF Railway for the cleanup in the town of Skykomish.

A major feature of the Skykomish Cleanup Project is a barrier wall and treatment system along the railyard called the Hydraulic Control and Containment (HCC) System. Ecology approved a Pilot Study in January 2019 to evaluate the HCC System's passive treatment operation (allowing the carbon media to passively treat groundwater without the active pumps).

The amendment to the legal agreement and the enclosed Cleanup Action Plan allows for additional evaluation of the passive operation of the HCC System. If the results continue to demonstrate that cleanup levels have been met, the passive HCC System operation may continue permanently upon approval from Ecology.

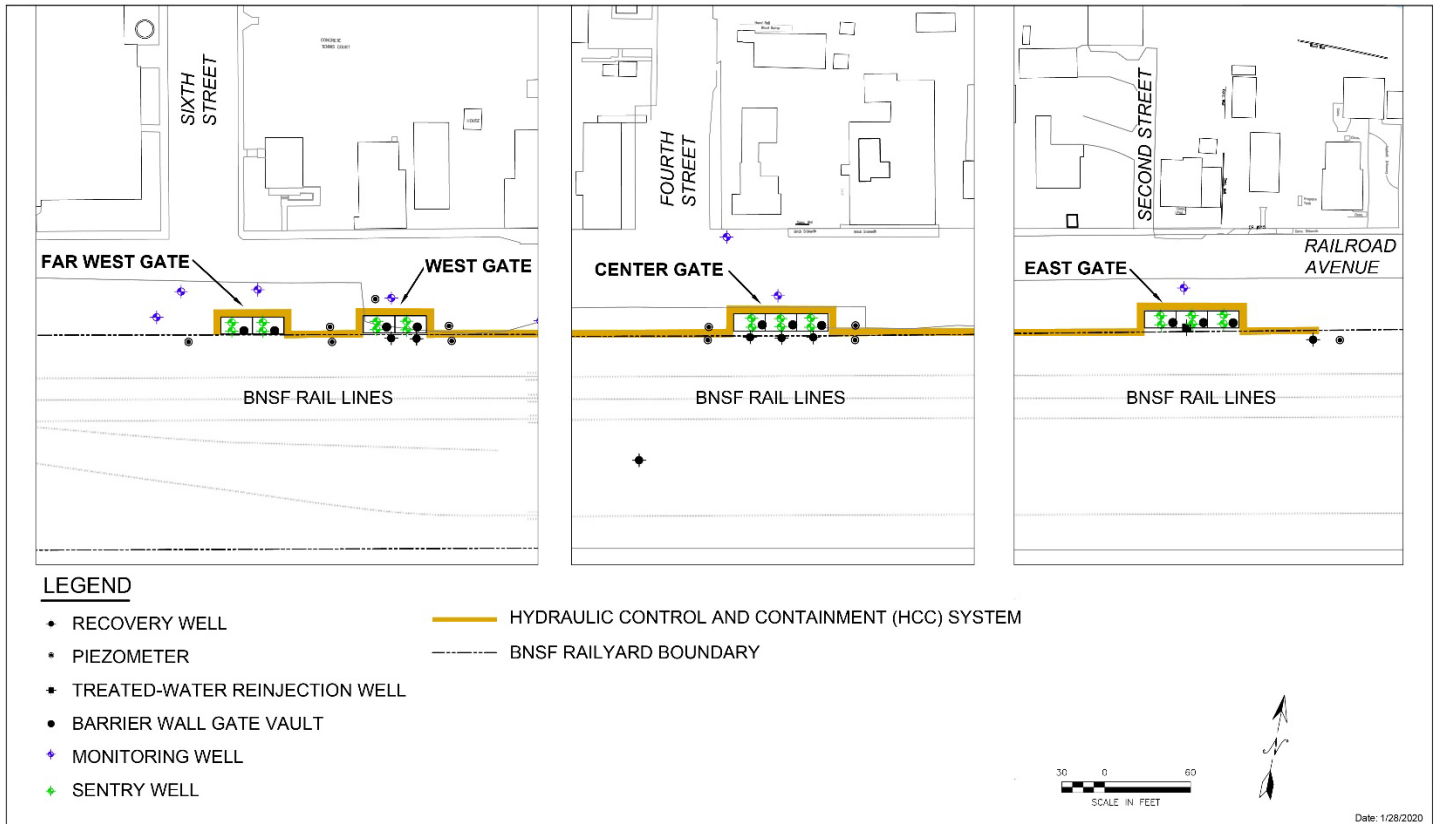
Online public meeting (registration required)

Ecology will host an online meeting using the Zoom meeting application to provide information and answer questions. Ecology's meeting will immediately follow the Skykomish Town Council meeting scheduled to end at 6 pm.

Monday, November 28, 2022

- **6:00 p.m.:** Presentation
- **6:30 p.m.:** Questions and answers, as needed

To register and join, visit www.bit.ly/Ecology-BNSFSkykomish. After entering an email address, participants will receive a unique Zoom link to join the meeting.



Hydraulic Control and Containment (HCC) System

The barrier wall and treatment system along the railyard is a major feature of the Skykomish Cleanup Project. It’s called the Hydraulic Control and Containment (HCC) System.

In the early part of the Cleanup Project, investigations confirmed that the source of petroleum contamination in the Town was the railyard. It was agreed that excavation and disposal of the soils beneath the railyard would be very long and costly, and would interrupt railway operations. The parties opted instead to construct the HCC barrier wall along the north side of the railyard to capture and remove as much impacted groundwater as possible, and contain the impacts to the railyard.

The HCC System consists of a barrier wall and groundwater extraction and treatment system. The objective of this system is to ensure groundwater meets the appropriate remediation level as it leaves the railyard. The 1,183 foot barrier wall and interception trench are located along the north side of the railyard. There are four flow-through treatment gates within the barrier wall, which contain oil-water separators and a mixture of activated carbon and pea gravel filters. There are nine groundwater extraction wells connected to a water treatment system.

The “active” part of the HCC System involves pumping groundwater to the treatment system. Petroleum-impacted water is then treated by the treatment system, and clean water is discharged to the Town’s storm water system, which drains into the Skykomish River.

HCC System “passive/active” features

A “passive” feature is incorporated in the HCC System as well. This utilizes the barrier wall and the four carbon/pea gravel filled flow-through gates to treat groundwater flowing from the railyard. (See figure on page 4 and pictures to the right.) The “passive” barrier wall was installed as a redundant backup to the “active” extraction system, in case of mechanical failures and maintenance. Operational data collected since 2009 demonstrate that the HCC System is successfully meeting cleanup objectives.

The HCC System was installed in 2008, and the active groundwater pumping-system operated from 2009 to 2019. In 2018, BNSF proposed operating it with the passive system components only, plus the light non-aqueous phase liquid (LNAPL or petroleum products that float on top of groundwater) skimmers. Prior to the HCC System installation, isolated areas of LNAPL were observed across the railyard. Operation of the HCC System was successful at concentrating areas of LNAPL to the system’s collection trench, oil-water separators, and extraction wells. Proposed “passive” operation of the HCC System included the operation of skimmers to collect LNAPL from the extraction wells and oil-water separators at the gates. Over the years of HCC System operation, LNAPL has diminished to trace amounts in the recovery wells and oil-water separators such that active skimming and pumping from recovery wells may no longer be necessary in the future. Dissolved phase petroleum is removed from groundwater leaving the BNSF property by the activated carbon filters installed in the barrier wall gates. The HCC System was designed to provide the flexibility to allow incremental shutdown of portions of the system as remediation progresses. Passive operation provides an opportunity to meet cleanup standards, while reducing the operational environmental footprint.



Installation of HCC treatment gate system, 2008

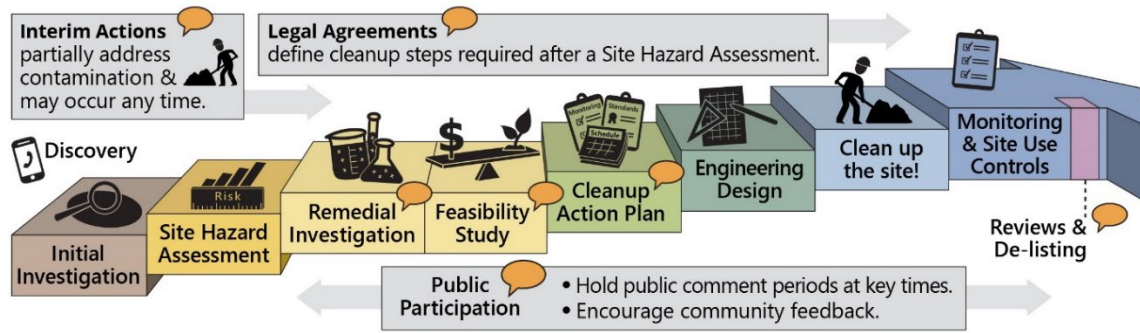


HCC System construction on Railroad Avenue, 2008

HCC System Pilot Study

Ecology approved an HCC System Passive Operation Pilot Study (Pilot Study) in January 2019. The Pilot Study was extended from 12-months to 24-months to gather more data. The purpose of the Pilot Study was to evaluate the HCC System’s ability to meet the cleanup objectives through passive operation (allowing the carbon media to treat groundwater). During the passive Pilot Study the groundwater pumps were turned on for approximately 4 hours every 2 months, to ensure ease of restart. Data available to date indicates passive operation of the barrier wall has met Site cleanup standards.

The legal agreement amendment allows for Ecology to approve changes in the operation of the HCC System based on data from this Pilot Study and future pilot studies. If sufficient data is collected indicating passive operation of the HCC System meets cleanup standards, the active groundwater pumps may be turned off permanently.



Washington's formal cleanup process

What happens next?

- **November 21 – December 22, 2022:** Public comment period for legal agreement amendment.
- **November 28, 2022:** Ecology hosts an online public meeting starting at 6 p.m.
- **Early 2023:** Ecology finalizes the legal agreement amendment after addressing public comments received.

Background

The Town of Skykomish has a rich history associated with railroads. A big part of that history was the Town being home to railway maintenance and fueling facilities since the 1890s. Until 1974, the Great Northern Railway (a predecessor company to BNSF Railway Co.) operated the facility. Activities there resulted in petroleum contamination extending underground from the railyard, beneath the town, and into the South Fork of the Skykomish River.

Many years of study, characterization, and visioning since the 1990s went into building a cleanup plan for the town. Major cleanup efforts happened between 2006 and 2017. The cleanup featured innovative and cutting-edge technologies:

- 21 homes and structures were temporarily moved so that underlying soil and groundwater could be excavated and replaced throughout town.
- The Skykomish River bank and part of Maloney Creek were excavated and replaced with clean soil.
- Some areas were treated biologically (bio-remediation) and with air-sparging technologies.
- Hot-water flushing was used under the historic Skykomish School.
- A barrier wall and treatment system were constructed along the north side of the railyard that runs along Railroad Avenue in Skykomish. The wall was designed to prevent the spread of any petroleum contamination back under the town.



Historic Skykomish Railyard



Temporarily moving the Skykomish Hotel, 2009

The cleanup in Skykomish was very disruptive for residents to endure. However, the community came together and worked with Ecology and BNSF Railway to get it accomplished.

Toxics Cleanup Program
913 Squalicum Way, Unit 101
Bellingham, WA 98225

BNSF Railway Skykomish Cleanup

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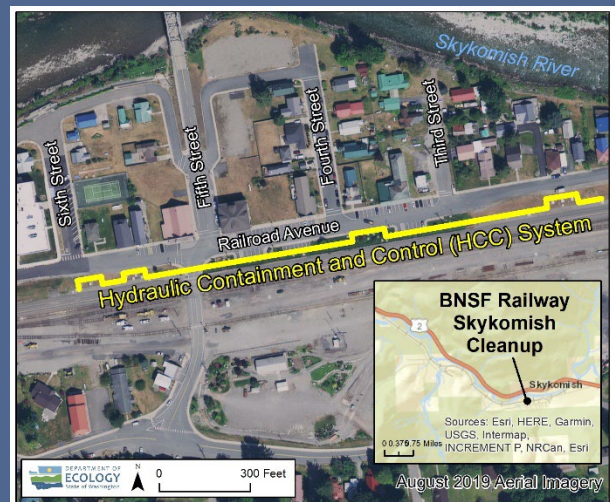
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ADA accessibility

To request an ADA accommodation, contact Ecology by phone at 425-324-5901 or email at ian.fawley@ecy.wa.gov, or visit ecology.wa.gov/Accessibility. For Relay Service or TTY call 711 or 877-833-6341.



HCC System along Railroad Avenue in Skykomish, WA