



STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

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September 26, 2016

Mr. Ted Yi
YCH Enterprise Corporation
600 128th Avenue NE
Bellevue, WA 98005

Re: No Further Action at the following Site:

- **Site Name:** Duvall Market
- **Property Address:** 15802 Main Street Northeast, Duvall, WA 98019
- **Facility/Site No.:** 7646431
- **VCP Project No.:** NW2972
- **Cleanup Site ID No.:** 499

Dear Mr. Yi:

The Washington State Department of Ecology (Ecology) received your request for an opinion on your independent cleanup of the Duvall Market facility (Site). This letter provides our opinion. We are providing this opinion under the authority of the Model Toxics Control Act (MTCA), Chapter 70.105D RCW.

Issue Presented and Opinion

Is further remedial action necessary to clean up contamination at the Site?

NO. Ecology has determined that no further remedial action is necessary to clean up contamination at the Site.

This opinion is based on an analysis of whether the remedial action meets the substantive requirements of MTCA, Chapter 70.105D RCW, and its implementing regulations, Chapter 173-340 WAC (collectively "substantive requirements of MTCA"). The analysis is provided below.

Description of the Site



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This opinion applies only to the Site described below. The Site is defined by the nature and extent of contamination associated with the following release:

- Total gasoline range petroleum hydrocarbons (TPH-G) and benzene into soil.

Enclosure A includes a detailed description and diagrams of the Site, as currently known to Ecology.

Please note that a parcel of real property can be affected by multiple sites. At this time, we have no information that the parcels associated with this Site are affected by other sites.

Basis for the Opinion

This opinion is based on the information contained in the following documents:

1. Coho Environmental, *Memorandum: Duvall Property Terrestrial Ecological Evaluation*, August 31, 2016.
2. Kane Environmental Inc., *Remedial Investigation (RI) Addendum Report*, July 28, 2016.
3. Kane Environmental Inc., *Remedial Investigation Report*, April 11, 2016.
4. State of Washington Department of Ecology, *Opinion Pursuant to WAC 173-340-515(5) on Proposed Remedial Action for the Following Hazardous Waste Site: Duvall Market*; December 23, 2015.
5. Kane Environmental Inc., *Response to Washington Department of Ecology Letter (September 23, 2015)*, October 13, 2015.
6. State of Washington Department of Ecology, *Opinion Pursuant to WAC 173-340-515(5) on Proposed Remedial Action for the Following Hazardous Waste Site: Duvall Market*; September 23, 2015.
7. Kane Environmental Inc., *Work Plan Addendum to April 2015 Phase II Environmental Assessment*; July 30, 2015.
8. State of Washington Department of Ecology, *Further Action at a Property Associated with a Site: Duvall Market*; June 9, 2015.
9. Kane Environmental Inc., *Limited Phase II Environmental Site Assessment*, April

7, 2015.

10. WT Services Company, *Independent Cleanup Action, 15802 Main Street, Duvall, WA*, September 24, 2002.

The reports listed above will be kept in the Central Files of the Northwest Regional Office of Ecology (NWRO) for review by appointment only. You can make an appointment by calling the NWRO resource contact at (425) 649-7235 or sending an email to: nwro_public_request@ecy.wa.gov.

Analysis of the Cleanup

Ecology has concluded that **no further remedial action** is necessary to clean up contamination at the Site. That conclusion is based on the following analysis:

1. Characterization of the Site.

Ecology has determined Site characterization is sufficient to establish cleanup standards and select a cleanup action. The Site is described above and in **Enclosure A**.

Site characterization sampling events were conducted beginning in 2002, during the underground storage tank removal; and in 2015 and 2016 in an effort to delineate the extent of the remaining contamination and evaluate if impacts to ground water were present. The most recent soil sampling event conducted at the Site shows that remaining TPH-G soil contamination is below the MTCA cleanup levels established for the Site. Two ground water sampling events show that soil impacts have not affected ground water.

2. Establishment of cleanup standards.

Ecology has determined the cleanup levels and points of compliance you established for the Site meet the substantive requirements of MTCA.

a. Cleanup levels.

The cleanup level selected for soil is the Method B direct contact total petroleum hydrocarbons cleanup level of 1,500 milligrams per kilogram (mg/kg) per Ecology's *Model Remedies for Sites with Petroleum Contaminated Soils* dated September 2016 (Model Remedy guidance). Eligibility criteria for the use of this cleanup level established in the Model Remedy guidance is met at this Site as described below:

1. Geographic area – the Site is within Washington State.
2. Affected media – the only media impacted by the contamination is soil. Installation and sampling of monitoring wells KMW-1, KMW-2 and KMW-3 indicated that no contamination is present in ground water at the Site.
3. Contaminant Types – Site characterization has shown that petroleum hydrocarbons, specifically TPH-G and benzene are the only contaminants present.
4. Emergency/Interim Actions- emergency or interim actions have not been required at the Site.
5. Terrestrial Ecological Evaluation (TEE) – The Site did not qualify for an exclusion of the TEE but is eligible to complete a simplified TEE. The reported area of contiguous undeveloped land on or within 500 feet of the Site is 0.5 acres. However, Ecology believes this is an underestimation of the contiguous undeveloped area, which is closer to 1.5 acres, as it needs to include an additional area of approximately 1.0 acre of undeveloped low-quality habitat to the east of the selected habitat zone. This underestimate still allows completion of the simplified TEE, thus meeting the TEE criteria for a Model Remedy.

b. Points of compliance.

The point of compliance for soil is the standard point of compliance which is throughout the Site.

Because no ground water impacts were identified, the point of compliance for ground water does not apply for this Site.

3. Selection of cleanup action.

Ecology has determined the cleanup action you selected for the Site meets the substantive requirements of MTCA.

The cleanup action selected for the Site is excavation of contaminated soil. This cleanup action is proposed as Model Remedy 4 as described in the Model Remedy guidance. Model Remedy 4 applies for situations where Method B direct contact TPH has been selected as the cleanup level and removal of the contaminated soil is sufficient to meet

the 1,500 mg/kg Method B direct contact cleanup level for TPH established in the Model remedy guidance.

4. Cleanup.

Ecology has determined the cleanup you performed meets the cleanup standards established for the Site and the requirements for Model Remedy 4.

Listing of the Site

Based on this opinion, Ecology will remove the Site from our Confirmed and Suspected Contaminated Sites List and Leaking Underground Storage Tank List.

Limitations of the Opinion

1. Opinion does not settle liability with the state.

Liable persons are strictly liable, jointly and severally, for all remedial action costs and for all natural resource damages resulting from the release or releases of hazardous substances at the Site. This opinion **does not**:

- Resolve or alter a person's liability to the state.
- Protect liable persons from contribution claims by third parties.

To settle liability with the state and obtain protection from contribution claims, a person must enter into a consent decree with Ecology under RCW 70.105D.040(4).

2. Opinion does not constitute a determination of substantial equivalence.

To recover remedial action costs from other liable persons under MTCA, one must demonstrate that the action is the substantial equivalent of an Ecology-conducted or Ecology-supervised action. This opinion does not determine whether the action you performed is substantially equivalent. Courts make that determination. *See* RCW 70.105D.080 and WAC 173-340-545.

3. State is immune from liability.

The state, Ecology, and its officers and employees are immune from all liability, and no cause of action of any nature may arise from any act or omission in providing this opinion. *See* RCW 70.105D.030(1)(i).

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Termination of Agreement

Thank you for cleaning up the Site under the Voluntary Cleanup Program (VCP). This opinion terminates the VCP Agreement governing this project (#NW2972).

For more information about the VCP and the cleanup process, please visit our web site: www.ecy.wa.gov/programs/tcp/vcp/vcpmain.htm. If you have any questions about this opinion or the termination of the Agreement, please contact me at 425-649-7058 or taca461@ecy.wa.gov.

Sincerely,



Tamara Cardona, PhD
NWRO Toxics Cleanup Program

TC:nm

Enclosure (1): A – Description and Diagram of the Site

cc: David Rankin, Kane Environmental, Inc.
Sonia Fernandez, VCP Coordinator, Ecology
Matt Alexander (without enclosures), VCP Financial Manager, Ecology

Enclosure A
Site Description and Diagrams

Site Description

This section provides Ecology's understanding and interpretation of Site conditions, and is the basis for the opinions expressed in the body of the letter.

Site: The Site is defined as total gasoline range petroleum hydrocarbons (TPH-G) and benzene in soil located at 15820 Main Street Northeast in Duvall, Washington (Property). The Property, which corresponds to King County tax parcel numbers 2130700470, 2130700460, and 2130700445, is a total of 0.5 acres in size.

Area and Property Description: The Property is occupied by a single split-level 6,744-square foot building constructed in 1974 on the north half of the Property in a mixed land use zone. The Property is bounded by NE Virginia Street to the north; Main Street to the west; an alley to the east, and NE Stewart Street to the south. Businesses nearby include an antique mall to the north, a closed drive-through car wash to the northeast, a tavern to the west, and a Shell-branded convenience store/gasoline station to the southwest. There is also vacant land to the northwest and single family residences to the west.

Property History and Current Use: It is unclear when the Property was initially developed. Evidence of fueling activities in the southwest corner of the Property reportedly appeared in 1930. In a 1970 aerial photograph, the Property appeared to be vacant. The current retail structure on the Property, the Duvall Market, was constructed in 1974.

Sources of Contamination: The source of contamination on the Property is two former gasoline underground storage tanks (USTs) that reportedly last operated in 1976. The USTs had storage capacities of approximately 675 and 4,000 gallons. They were both decommissioned and removed from the Property in 2002. Soil samples collected at the time of the UST removal contained TPH-G and benzene at concentrations exceeding Method A cleanup levels.

Physiographic Setting: The Site is located at an elevation of approximately 70 to 75 feet above mean sea level. It is located in the Puget Sound Basin, east of the Puget Sound Lowland Physiographic Province and in the Cascade Mountain foothills.

Surface/Storm Water System: The surface water body closest to the Site is the Snoqualmie River approximately 500 feet to the west. Storm water runoff in the area is captured in municipal storm drains and transported to the nearest surface water drainage.

Ecological Setting: The surface of the Property is covered by pavement and a building. Small landscaped or green areas are present on the Property and on nearby commercial and residential Properties. An approximate 1.5 acre area of undeveloped land adjacent to the Snoqualmie River that includes the Snoqualmie Valley Trail is located within 500 feet to the west of the Site. This area has been evaluated for its habitat quality per MTCA Table 749-1 and has been rated as intermediate.

Geology: The Site is underlain by alluvial deposits consisting of silty sand with gravel to depths of up to 60 feet below ground surface (bgs), the maximum depth explored.

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Ground Water: Ground water was encountered under confined, artesian conditions at depths between 45 and 55 feet bgs. Ground water in monitoring wells screened in the confined water-zone was observed to flow at the ground surface. Based on ground water elevations measured in the three wells, ground water in the confined water-bearing zone flows to the west-southwest towards the Snoqualmie River.

Water Supply: Drinking water is supplied to the Property by the City of Duvall which purchases water from Seattle Public Utilities. Seattle Public Utilities obtains water from the Cedar and Tolt River watersheds. According to Ecology's well log database, several water supply wells are within a mile radius of the Site. All of the wells are screened at depths below 100 feet bgs.

Release and Extent of Soil and Ground Water Contamination: Soil contamination was the result of a release from two gasoline USTs installed on the Property prior to the 1970's. Contamination of soil with TPH-G and benzene was encountered in 2002 at the time the tanks were removed at concentrations above MTCA Method A cleanup levels. A soil sample (729-01) collected in the excavation at a depth of 5 feet bgs near the southern edge of the Property and south of the former UST location had concentrations as high as 1,700 milligrams per kilogram (mg/kg) of TPH-G, 2.4 mg/kg of benzene, 12 mg/kg of toluene, 9 mg/kg of ethylbenzene and 31 mg/kg of xylenes. Following removal of the USTs, an estimated 236 tons of soil were removed and disposed off-Site. However, after the soil confirmation samples were analyzed, it was determined that contamination remained in the southwest corner of the excavation at a depth of 3 feet bgs (sampling location 808-03) at concentrations of 400 mg/kg for TPH-G and 0.08 mg/kg for benzene, both above their respective MTCA Method A cleanup levels.

In preparation for reconstruction on Main Street in 2008, the City of Duvall conducted a geotechnical design study for the new pavement and utilities. Test pits are reported to have been excavated to depths of 4 feet in the utility alignment and soil samples collected at depths of 2 and 4 feet bgs in each of the test pits. The samples were analyzed for petroleum contaminants specifically TPH-G, TPH in the diesel range and benzene, ethylbenzene, toluene and xylenes (BTEX). No contamination above MTCA cleanup levels was reported in the test pits closest to the former excavation area, which were at least 20 feet from the southern and western boundaries of the former excavation; thus suggesting extent of contamination is limited to the southwest corner of the Property and beneath Main Street.

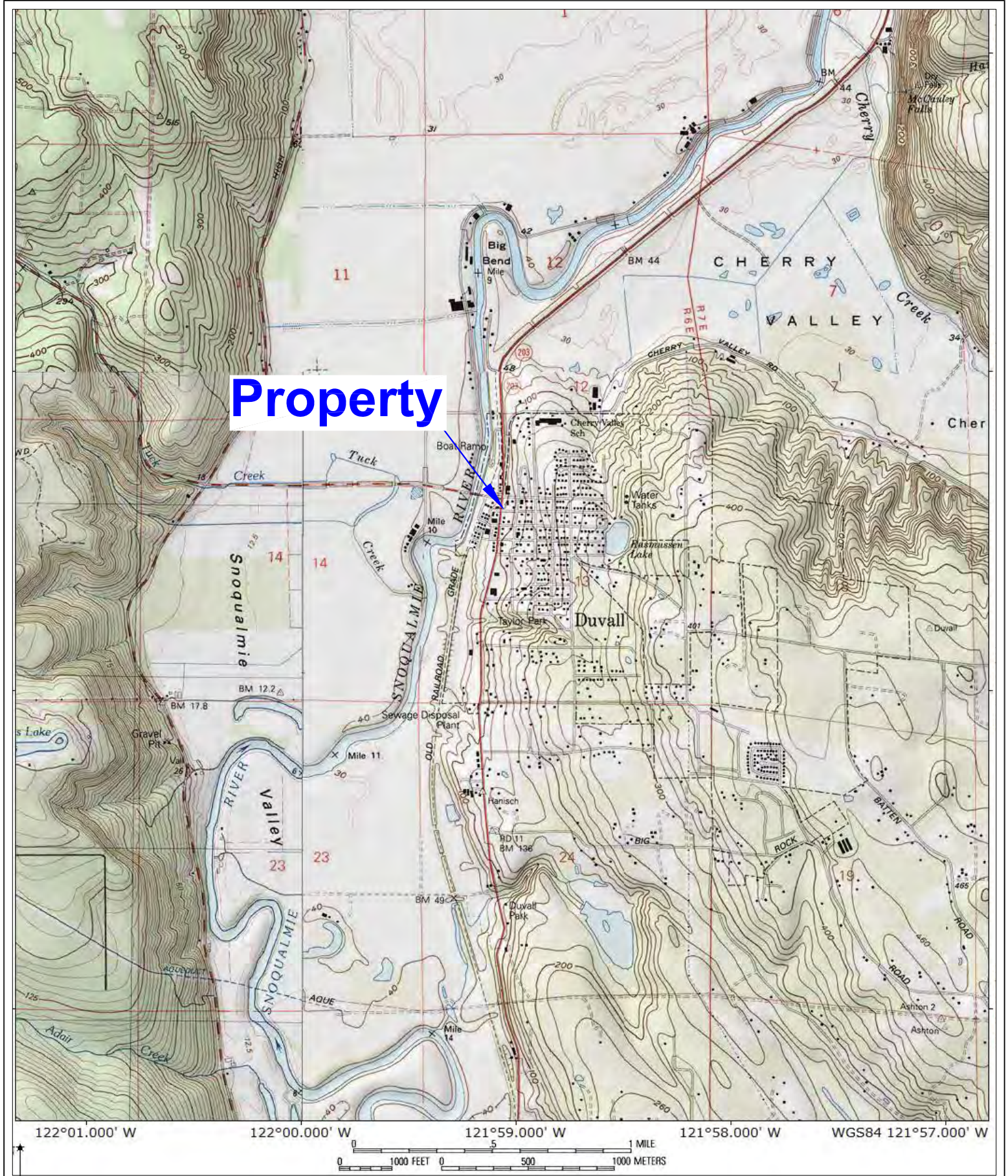
In 2015, a Limited Phase II Environmental Site Assessment was completed. Three soil borings were installed within the City of Duvall right-of-way adjacent to the Property. Borings were advanced using hollow stem augers, one south and two west of the former excavation area. The borings were completed to maximum depths of 14 to 16.5 feet bgs or until drill rig refusal occurred in boulders or dense glacial till. No indicators of gasoline contamination were observed and no ground water was encountered. Results from the boring closest to the western edge of the excavation (B-1) indicated that TPH-G contamination in soil above the MTCA Method A

Diagrams of the Site

In 2016, three additional soil borings completed as monitoring wells were installed on the southwest corner of the Property to depths of 50 to 60 feet bgs. The three borings were completed as monitoring wells KMW-1, KMW-2, and KMW-3. Soil contamination with TPH-G exceeding the MTCA Method A cleanup level but below the Method B direct contact soil cleanup level was present in KMW-1 at depths of 6 and 7.5 feet bgs. Soil samples from KMW-2 were collected at depths of 21 and 50.5 feet bgs and indicated no soil contamination present. KMW-3 was sampled at depths of 8, 12.5 and 40.25 feet bgs with no soil contamination found.

An additional soil sample (KHP-1) was collected in July 2016 in a boring advanced to confirm the status of the contamination identified in 2002 at sampling location 729-01 at a depth of 5 feet bgs. The boring was drilled within 5 feet of the location 729-01 and sampled at a depth of 5 feet bgs. No detectable concentrations of TPH-G or benzene were found in the soil sample.

Artesian ground water conditions were present in all three Site monitoring wells in which ground water was first encountered at depths between 45 and 55 feet bgs. Ground water was sampled in the three wells in February 2016 and July 2016. The samples were analyzed for TPH-G and BTEX; no contamination was detected in either round.

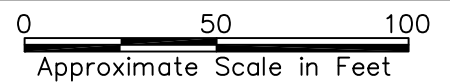


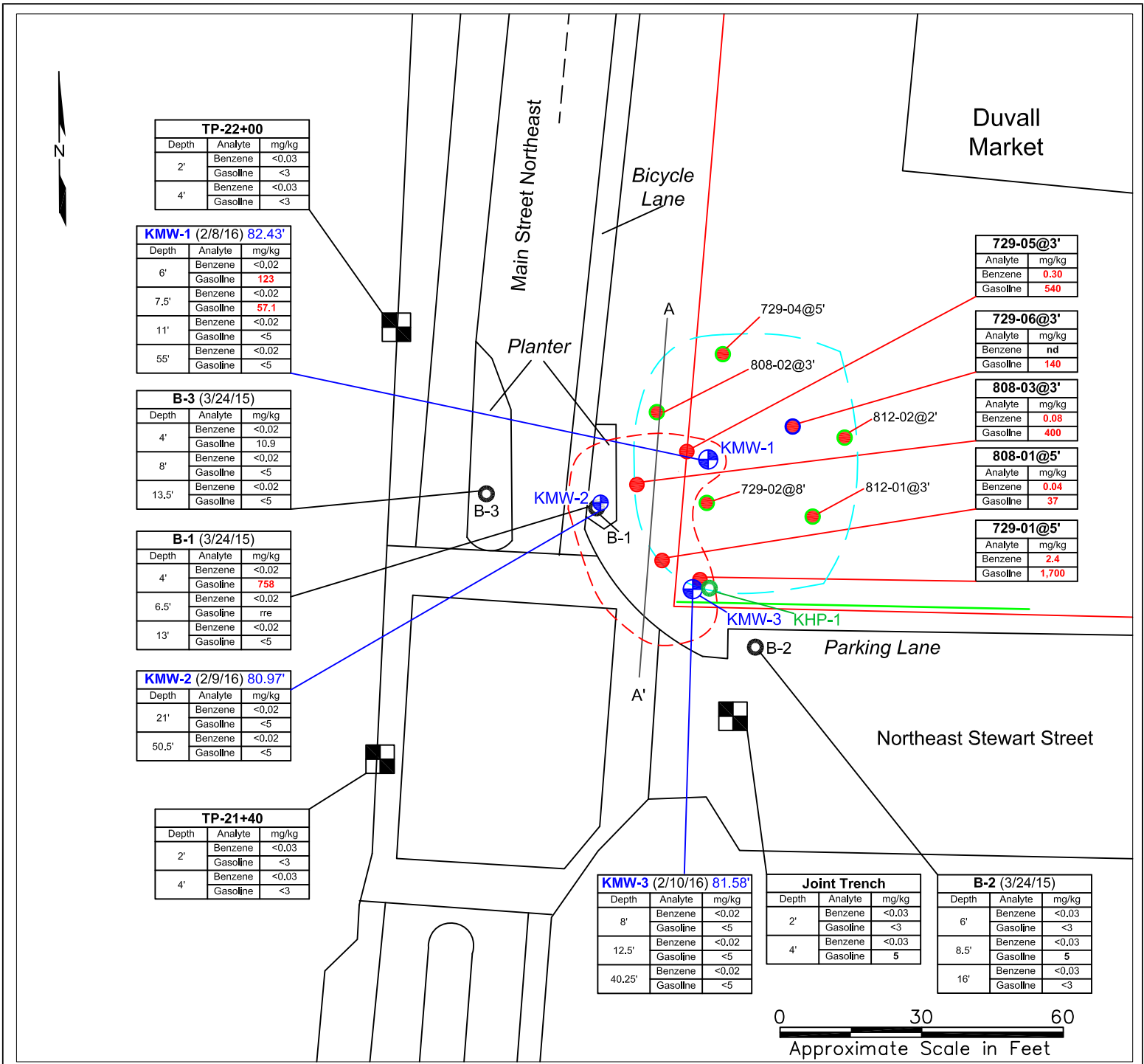
Property



LEGEND

- Approximate location of property line
- - - Approximate Extent of Remedial Excavation (WT Services, 2002)





LEGEND

- Approximate Location of Property Line
- Approximate Locations of 2015 Hollow Stem Auger Borings
- Approximate Locations of Groundwater Monitoring Wells (Static Groundwater Elevations from 2/29/16 Appear in Data Tables)
- Approximate Locations of 2002 WT Services Sample Collection with Soil with MTCA Method A Exceedances Left In Place
- Green Indicates no MTCA Exceedances
- Blue Indicates Subsequent Over-excavation of Contaminated Soil
- Approximate Locations of 2008 HWA Soil Sample Collection
- Approximate Boundary of 2002 WT Services Excavation
- Approximate Boundary of Zone of Contaminated Soil
- Approximate Location of Buried Drainage Pipe
- Approximate Location of 2016 Temporary Boring

A—A' Path of Cross Section Displayed in Figure 4

Soil Data Appearing in Red Exceed the MTCA Method A Soil Cleanup Level for Unrestricted Land Uses

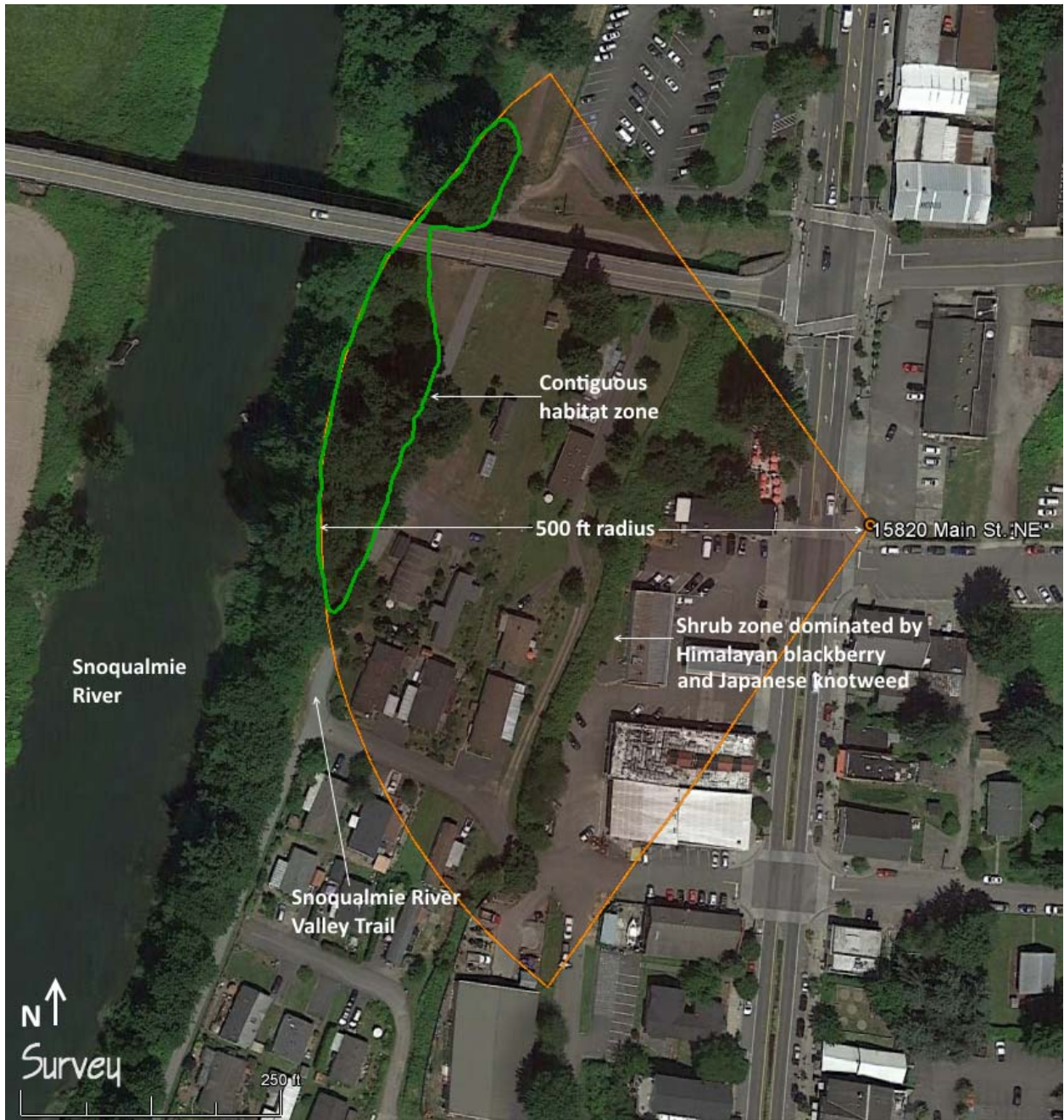


Figure 1. Nearest habitat zone to 15820 Main Street NE