Appendix H

Hazardous, Toxic and Radioactive Waste

Puyallup River Basin

Flood Risk Management Feasibility Study

Department of the Army
Seattle District, US Army Corps of Engineers

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PUYALLUP RIVER GENERAL INVESTIGATION FEASIBILITY STUDY HAZARDOUS, TOXIC, AND RADIOACTIVE WASTE PRELIMINARY ASSESSMENT

Executive Summary

March 2016

The Puyallup River Basin, located in Pierce and King Counties, drains approximately 1,000 square miles of western-central Washington and originates on the glaciers of Mount Rainier in the Cascade mountain range and flows in a northwesterly direction to Commencement Bay on Puget Sound. Elevations vary from sea level at Tacoma to an elevation of 14,408 feet at the summit of Mount Rainier. The upper portion of the Basin is characterized by steep, mountainous terrain while the lower portion is characterized by broad floodplains and low gradient stream. Pursuant to Section 102(2)(C) of the National Environmental Policy Act (NEPA) of 1969, as amended, the U.S. Army Corps of Engineers is preparing an Integrated Feasibility Report/Environmental Impact Statement (FR/EIS) for proposed flood risk management in the Puyallup River Basin. Pierce County, Washington is the non-Federal sponsor for the feasibility study. The Preliminary Hazardous Toxic, and Radioactive Waste (HTRW) Assessment is being conducted in accordance with the pertinent procedures and limitations of the ASTM international (ASTM) Standards E 1527 – 13 and ER 1165-2-132, *Hazardous, Toxic, and Radioactive Waste Guidance for Civil Works Projects.*

HTRW concerns are present and vary widely in concentration and type across the study basin and within the project area. Design engineers should continue to coordinate with the NWS Environmental Engineering and Technology Section to determine what areas of the study area are suitable for further alternative consideration. Most of the upstream areas in undeveloped and agricultural regions within the study area are suitable for further consideration. The industrial, urban, and residential areas should be considered more carefully than other sites during alternatives identification.

This preliminary assessment process is limited to identifying known and suspected HTRW issues that may impact project decisions. The tentatively selected plan (TSP) is Alternative 2 and described in the Feasibility Report-Environmental Impact Statement. After levee alignment is finalized, this HTRW Assessment will be updated to assure all identified properties are avoided or remediated prior to project construction.

This assessment is intended to reduce, but not eliminate, uncertainty regarding the existence of current and potential HTRW sites in connection with a property within reasonable limits of time and cost.

PUYALLUP RIVER BASIN GENERAL INVESTIGATION FEASIBILITY STUDY
HAZARDOUS, TOXIC, AND RADIOACTIVE WASTE
PRELIMINARY PHASE I SITE ASSESSMENT

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1.0 Introduction

1.1 Involved Parties

The Corps is the lead Federal agency for the Puyallup River Basin GI Feasibility Report. The non-Federal, cost-sharing sponsor is Pierce County, Washington (County). As the non-Federal sponsor, the County contributes 50 percent of the total feasibility study costs in the form of cash or in-kind contributions; a feasibility cost sharing agreement was executed in September 2010.

Project stakeholders include those who have executed an Inter-Local Agreement with Pierce County to financially support the County's non-Federal sponsor cost share including: City of Tacoma, City of Sumner, City of Puyallup, City of Orting, City of Pacific, City of Fife, Town of South Prairie, and the Puyallup Tribe of Indians. Additionally, other stakeholders include Federal, state and local agencies, other Federally-recognized tribes and the general public.

1.2 Authority

The Puyallup River Basin Flood Risk Management Feasibility Study is being carried out under the Corps' General Investigation (GI) Program. This study is authorized under Section 209 of the Flood Control Act (FCA) of 1962 (PL 87-874) and Study Resolution, Docket 2645, Committee on Transportation and Infrastructure, U.S. House of Representatives, dated 21, June 2000. The study resolution states:

> *"That the Secretary of the Army is requested to review the report of the Chief of Engineers on the Upper Puyallup River, Washington, dated 1936, as referenced in the Flood Control Act of 1936 (P.L. 74-738), the Puget Sound and Adjacent Waters Study, authorized by Section 209 of the Rivers and Harbors Act of 1962 (P.L. 87-874) and other pertinent reports to determine whether modifications to the recommendations contained therein are advisable, with references toward providing improvements in the interest of water resource and watershed issues affecting Lake Tapps and the White River Watershed downstream of Mud Mountain Dam, Washington."*

The referenced 1936 report included the entire Puyallup watershed, including the Puyallup River and tributaries such as the White River and Carbon River.

1.3 Guidance and Policy

Corps policy providing guidance for consideration of issues and problems associated with hazardous, toxic, and radioactive wastes (HTRW), as defined in this regulation, which may be located within project boundaries or may affect or be affected by Corps Civil Works projects is contained in ER 1165-2-132, *Hazardous, Toxic, and Radioactive Waste Guidance for Civil Works Projects*, which defines HTRW as "…any material listed as a 'hazardous substance' under the Comprehensive Environmental Response, Compensation, Liability Act (CERCLA)". ASTM International (ASTM) Standard E 1527-13 *Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process* provides a comprehensive guide for conducting an HTRW Assessment. An assessment identifies known or suspected releases of

hazardous substances (recognized environmental conditions) based on records review, site visit, and interviews.

As details of TSP Alternative 2 are finalized, this report shall be updated with details of how HTRW considerations will impact the alternative project plans. Information to be used in the HTRW assessment of each aspect of Alternative 2 will be garnered from a visual site inspection of the potential project sites and nearby property and interviews with current owners or managers and historical property owners if known, review of historic aerial photography and historical maps.

1.4 Scope of Work

This preliminary HTRW Assessment documents known and suspected HTRW sites discovered through a search and review of all reasonably attainable federal, state, and local government information and records. The HTRW Assessment will be finalized after alternatives are further developed. The investigation of each property per alternative proposed will involve analysis of historical media including historical aerial photographs and maps, a review of historical records, interviews, and visual site inspections of the properties. The complete investigation serves to identify any recognized environmental condition, as defined in ASTM Standard E 1527-13.

1.5 Significant Assumptions

This report identifies known and suspected environmental concerns, both past and present based on availability of information at the time of the assessment. It is possible that unreported disposal of waste or illegal activities impairing the environmental status of the properties may have occurred which could not be identified.

1.6 Limitations and Exceptions

Given the large areal extent of the study area boundaries, the scope of inquiry was limited to investigating HTRW potential within the project boundaries. No additional buffers were applied beyond those used in the base flood inundation map used as the starting point for defining the study area for this assessment (see Section 2.2). Methodology was limited to a review of reasonably attainable state and federal databases of known and suspected contaminated sites within the study boundary. Source databases and resulting locations were selected and evaluated following the principles outlined in ASTM E 1527 – 13. The assessment did not include site inspections, analysis of aerial photographs, or a review of specific property records.

1.7 Special Terms and Conditions

No special terms or conditions with respect to ER 1165-2-132 and ASTM E 1527-13 standards were made.

1.8 User Reliance

In accordance with ASTM E 1527-13 Section 7.5.2.1 “Reliance,” the environmental professional is not required to independently verify the information provided by various sources but may rely on the information unless there is actual knowledge that certain information is incorrect or unless it is obvious that certain information is incorrect based on other information obtained during the

course of the investigation or otherwise actually known to the investigators conducting the assessment. At the present time there is no indication that the information provided by the database search is incorrect.

2.0 Site Description

2.1 Location and Legal Description

The study area is located in Pierce County and parts of King County Washington. The study area is comprised of the floodplains of the major populated tributaries within the Puyallup River Basin (Figure 1).

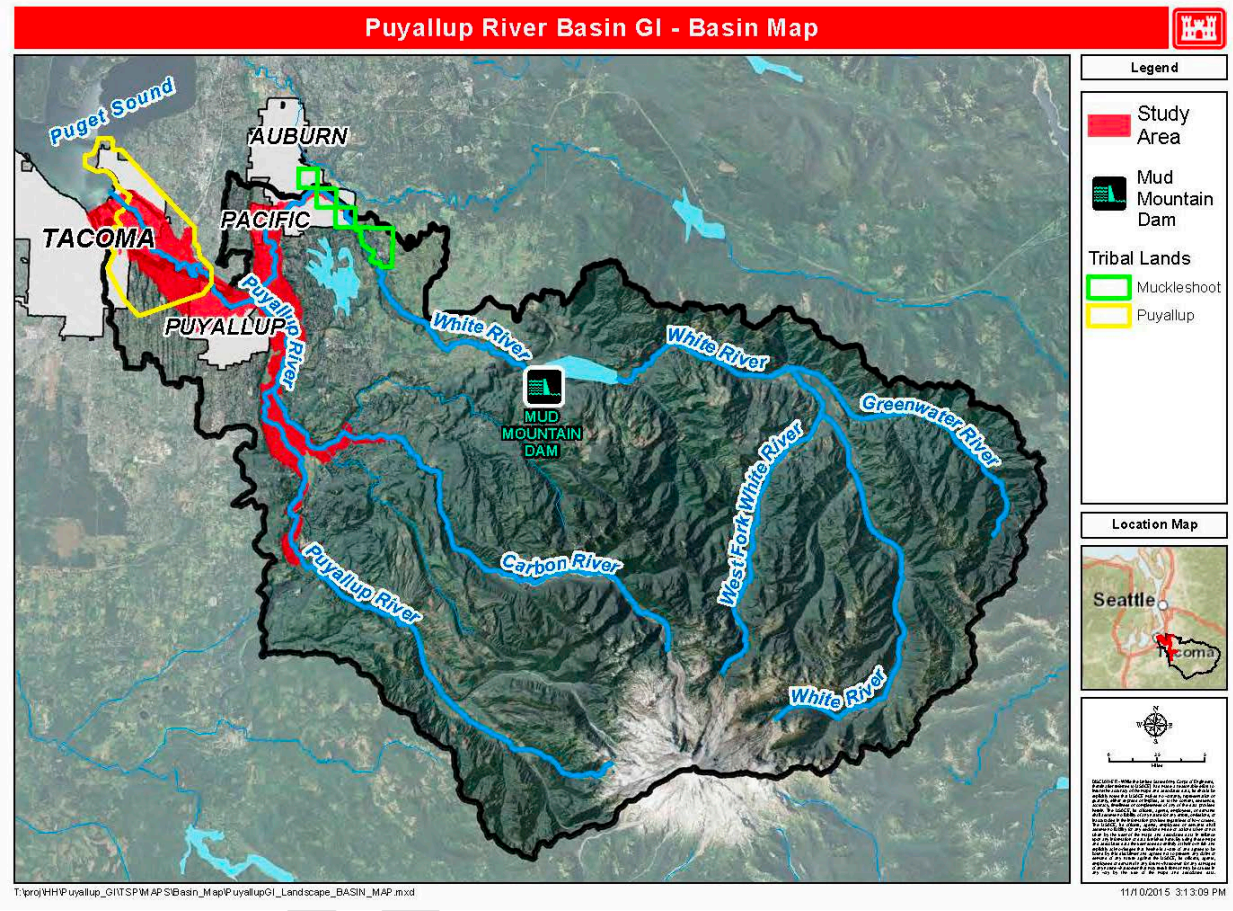

Figure 1 Puyallup River Basin General Investigation Study Area.

2.2 Site and Vicinity General Characteristics

The Puyallup River Basin drains approximately 1,000 square miles of western-central Washington and originates on the glaciers of Mount Rainier in the Cascade mountain range and flows in a northwesterly direction to Commencement Bay on Puget Sound. Elevations vary from sea level at Tacoma to an elevation of 14,408 feet at the summit of Mount Rainier. The upper portion of the Basin is characterized by steep, mountainous terrain while the lower portion is characterized by broad floodplains and low gradient stream channels.

2.3 Uses of the Property

Within the Study area, land use changes from high density industrial and commercial activity near Commencement Bay and lower Puyallup River, to predominantly single-family home areas mixed with commercial and light industrial areas around Puyallup, to rural agricultural areas with residential developments in the upper reaches of the Puyallup River and Carbon River. North along the White River the land use starts as commercial and industrial zoning in Sumner and transitions to agricultural and residential in Pacific and Auburn. The upper stretch of the White River between Auburn and Mud Mountain Dam is the most undeveloped portion of the study area. A detailed description of current use of any property with known or suspected HTRW concerns will be acquired during the site investigation of each alternative and documented in the final HTRW Assessment.

2.4 Descriptions of the Structures, Roads, Other Improvements on the Site

Detailed descriptions of structures, roads, and other improvements to properties with HTRW concerns per alternative proposed will be documented in the final HTRW Assessment.

3.0 Records Review

3.1 Standard Environmental Records

An initial HTRW screening was conducted in 2011 within the 500-year predicted inundation map (covering 340 km^2). This included the presence and character of contamination on lands, including structures and submerged lands in the study area, or external HTRW contamination which could impact, or be impacted by, the area contained within the Puyallup Flood Management GI. The initial screening identified 1,928 federal and state-level records associated with the presence or potential presence of HTRW. In May 2014, a more refined search was conducted that found 30 facilities identified with reported toxic releases, and 90 facilities were identified with reported hazardous waste activities. The majority of identified sites are Hazardous Waste Generators, which are regulated by EPA under RCRA to ensure these wastes are managed in way that protect human health and the environment. All facilities located downstream of the Interstate 5 bridge are in the Environmental Protection Agency's Superfund Site Commencement Bay Nearshore/Tideflats (WAD980726368).

The following two databases were researched for suspected or known HTRW sites. RCRAInfo is EPA's national program management and inventory system about hazardous waste handlers, as specified by the Resource and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984.

The Washington Department of Ecology database includes records for multiple types of HTRW sites including State Cleanup Sites, Underground Storage Tanks (UST), Leaking USTs (LUSTs), and hazardous waste generators.

Section 3.2 identifies property records found with known releases of hazardous substances within the project area.

3.2 Records Search Results for TSP Alternative 2

Alternative 2: Levee Modification

Federal Authorized Levees (RM 0.7 to RM 2.9)

There are 18 identified properties located adjacent to the federal authorized levees. Most are hazardous waste generators, which are not of concern to project as long as they are compliant and do not have any releases. There are four "State Cleanup Sites" near the Federal Authorized Levees, however the nature of the site or contaminants of the site will not pose a problem to this alternative. Three of the state sites are being remediated under the Voluntary Cleanup Program and one requires no further action. Based on records available none of the properties identified are of concern to the project.

The Federal Authorized Levees are located within the vicinity of the Commencement Bay Nearshore/Tideflats Superfund Site that primarily includes waterway sediments. The impacted waterways do not interact with the location of the Federal Authorized Levees. Remediation of waterway sediments within the superfund site is occurring; sediments continue to be monitored and work is ongoing at upland cleanup sites across the tideflats.

North Levee Road Setback (RM 2.7 to RM 8.1)

There are 34 properties located within or adjacent to the North Levee Road setback. Most are hazardous waste generators, three LUST that have been cleaned up, one is a former landfill, and one is on the state cleanup site list. Only one property, the Choi property (shown on Figure 2), is a State listed cleanup site and is within the levee setback boundaries. The Choi property is approximately 10 acres in size and is approximately 100 feet north of the Puyallup River. During the mid-1970s, the site was filled with materials consisting primarily of wood debris that was mixed with Asarco slag. The depth of the fill was approximately 12 feet below ground surface. In May 1993, a limited investigation collected shallow soil samples and found elevated levels of arsenic and petroleum hydrocarbons. Concentrations of arsenic, lead, and petroleum hydrocarbons exceeded the Model Toxics Control Act Method A (residential) cleanup levels. Whether contaminated groundwater exists is unknown so there is no information to determine if the contaminants have or could migrate off-site.

River Road Levee Floodwall (RM 2.9 to RM 7.2) and Lower Puyallup River Extension Levee (or floodwall) (RM 7.2 to RM 8.6)

There are seven properties located adjacent to the River Road levee floodwall footprint. Of the seven properties identified only one property is of concern to the project area.

USG Interiors Inc. property consists of 1.58 acres and is located on the south side of the Puyallup River (Figure 2). Results from a 2011 Remedial Investigation Report show arsenic concentrations in site soil and groundwater exceed Model Toxics Control Act (MTCA) cleanup levels. This arsenic originated from fill derived from industrial waste from the USG mineral fiber insulation manufacturing plant in Tacoma. The Tacoma plant used ASARCO slag as a manufacturing feedstock. Groundwater from the site discharges into the Puyallup River. Sediments in the Puyallup River adjacent to the site contain arsenic exceeding ecological screening criteria based on 2009 and 2010 sampling results.

White River New Levee (RM 1.7 to RM 6.2) and Property Acquisition (RM 4.6 to RM 5.0)

There are 14 properties within or adjacent to the White River new levee footprint and property acquisition area. Most are hazardous waste generators, which are not of concern, however, there is one property on the state cleanup site list.

A 1985 King County Abandoned Landfill Study describes the Pacific Park area as a "King County refuse dump in the City of Pacific" located on approximately 72 acres on both sides of the White River (Figure 2). The landfill was closed around 1961. In 1966, the City of Pacific was granted permission to use about 21 acres of the abandoned site for park purposes. The landfill was used as a burning dump and received agricultural, municipal, and household wastes from the surrounding areas. A preliminary assessment by King County Solid Waste department indicated that there are no records that hazardous wastes were deposited at this facility, however, its use as a municipal waste landfill make it suspect for HTRW until additional assessment is completed.

MMD Operational Changes

These are operational changes and do not involve earthmoving activities.

HWY 410 Floodwall and Levee (Rm 10.7 to RM 11.8)

There were two identified properties located adjacent to the floodwall and levee. One is a landfill that was closed in 1976 and still produces methane gas and the other is a hazardous waste generator. Based on records available none of the properties identified are of concern to the project.

Jones Levee Improvement (RM 21.3 to RM 22.5) and Flow Deflector

There are two properties adjacent to the Jones levee project that were identified in the records search. Based on records available none of the properties identified are of concern to the project.

Lower Carbon River Levee Improvement (RM 0.0 to RM 4.0) and Property Acquisition

There are ten properties adjacent to or in the property acquisition area. Based on records available none of the properties identified are of concern to the project.

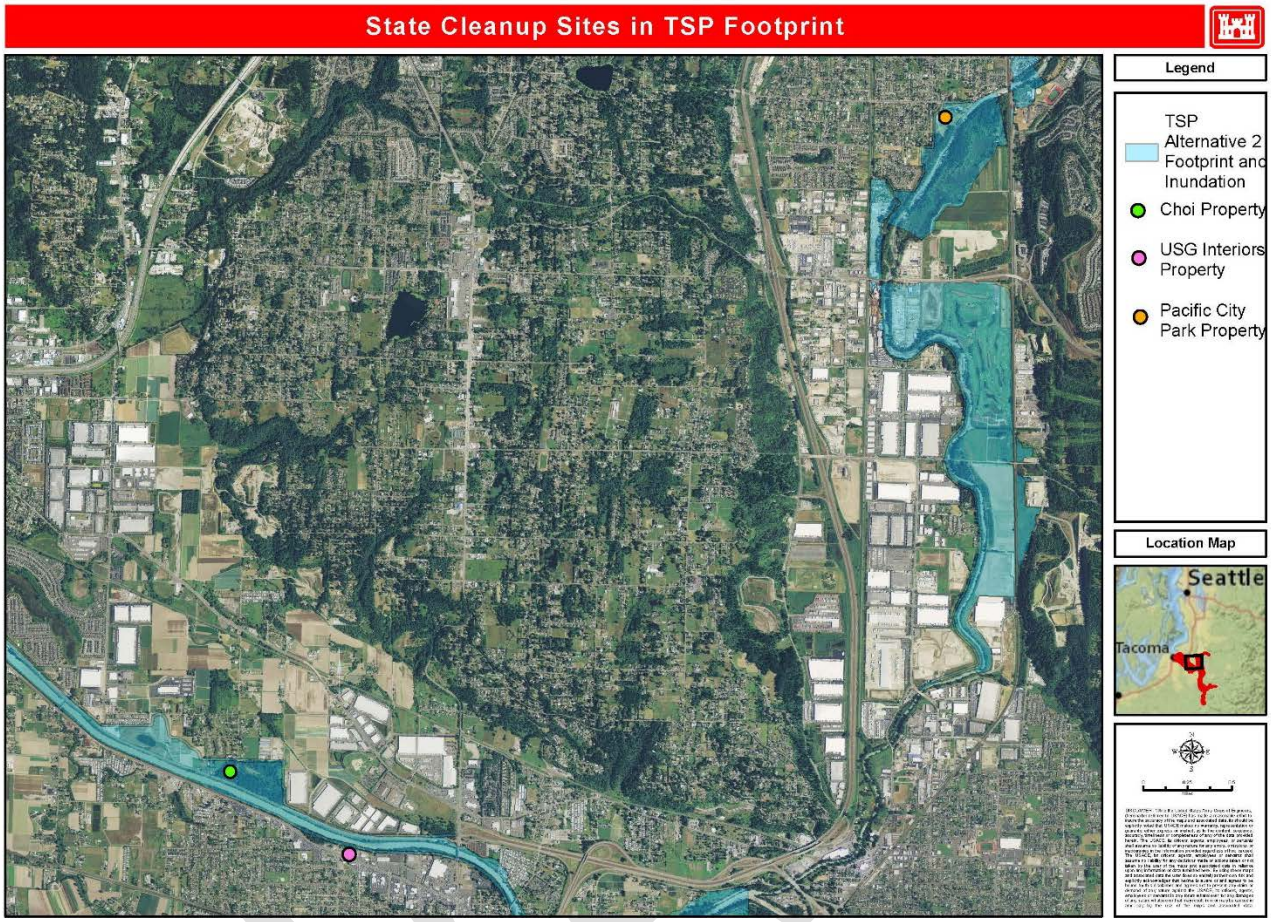

Figure 2 Location of HTRW Sites of Concern

3.3 User Provided Information

There is no user supplied information in this preliminary HTRW Assessment. Involved parties, will provide the following information (3.2.1 thru 3.2.6) after properties are identified per levee alignment. This user provided information will assist in each site investigation and be presented in the final HTRW Assessment.

Title Records
To be provided after properties are identified per alternative proposed. .

Environmental Liens or Activity and Use Limitations
To be provided after properties are identified per alternative proposed.

Specialized Knowledge
To be provided after properties are identified per alternative proposed.

Commonly Known or Reasonably Ascertainable Information
To be provided after properties are identified per alternative proposed.

Valuation Reduction for Environmental Issues
To be provided after properties are identified per alternative proposed.

Owner, Property Manager, and Occupant Information
To be provided after properties are identified per alternative proposed.

3.4 Historical Records

Historic Photographs
After alternatives are drafted and properties identified, historic photographs including aerial photographs of properties of interest will be obtained and analyzed to assess historical property uses. The results will be presented in the final HTRW Assessment

Historic maps
After alternatives are drafted and properties identified, historic maps of properties of interest will be obtained and analyzed to assess historical property uses. These maps are to include historical United States Geological Survey (USGS) 7.5 minute maps. The results will be presented in the final HTRW Assessment.

3.5 Additional Environmental Record Sources

There are no additional environmental record sources included in this preliminary HTRW Assessment. Additional environmental records sources that can enhance and supplement the standard environmental record sources and meet the requirements of section 8.2.2 of the ASTM standards will be included in the final HTRW Assessment.

4.0 Site Reconnaissance

Site reconnaissance was not performed for this preliminary HTRW Assessment. The HTRW assessor will perform a site reconnaissance as part of the site investigation of each property per alternatives proposed. Site reconnaissance will be conducted per section 9 of ASTM E 1527 – 13.

4.1 Methodology and Limiting Conditions

Methodology and limiting condition for each alternative will be discussed in the final HTRW Assessment.

4.2 General Site Setting

General site settings will be acquired through site reconnaissance during each site investigation and presented in the Final HTRW Assessment.

4.3 Interior and Exterior Observations

Interior and exterior observations will be acquired during site reconnaissance and presented in the Final HTRW Assessment.

4.4 Interviews

Interviews were not conducted during this preliminary HTRW Assessment. Interviews per ASTM E 1527 – 13 standards will be conducted after properties are identified per alternative proposed. All interviews will be documented and summarized in the final HTRW Assessment.

5.0 Findings and Conclusion

This assessment identified three properties with known or suspected HTRW concerns within the study area: the Choi property, USG Interiors, Inc., and the Pacific City Landfill. The lower Puyallup River area is mostly industrial and includes areas within the Commencement Bay Nearshore/Tide flats Superfund Site (12 square miles). There are no known or suspected HTRW sites in the Carbon, Middle and Upper Puyallup River areas. The land uses of the Carbon and upper Puyallup River also decrease the potential for HTRW to exist. As the project progresses and particularly if project footprints change, additional HTRW assessment should be conducted. Once the final alternative is chosen, the preliminary assessment will be finalized as per guidance.