



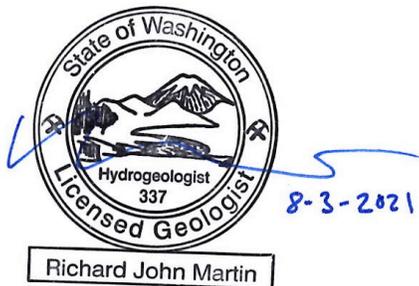
**Richard Martin Groundwater LLC**

**REVISED CRITICAL AQUIFER RECHARGE AREA  
REPORT FOR THE PROPOSED OSLO BAY  
APARTMENT PROJECT  
POULSBO, WASHINGTON**

PREPARED FOR: Edward Rose and Sons

Project Number RMG-090 – August 3, 2021

Richard Martin Groundwater LLC



Richard J. Martin, LG, LHG  
Principal Hydrogeologist

## **REVISED CRITICAL AQUIFER RECHARGE AREA REPORT**

### **Oslo Bay Apartments Project**

### **Poulsbo, Washington**

#### **INTRODUCTION**

Richard Martin Groundwater (RMGW) prepared this Revised Critical Aquifer Recharge Area (CARA) report at the request of the Edward Rose and Sons (the “User”), for the property located north of the intersection of State Highways 305 and 307, also identified as Kitsap County parcel numbers 102601-4-028-2003, 112601-3-003-2003, 102601-4-022-2009, 112601-3-021-2001, 112601-3-040-2008, 112601-3-006-2000 and 112601-3-008-2008, in the City of Poulsbo, Washington (the “Property”). The objective of this report is to satisfy City of Poulsbo reporting requirements pertaining to new developments in Critical Aquifer Recharge Areas (CARAs) designated in the City code Chapter 16.20, Section 500 Critical Aquifer Recharge Areas.

This revised report addresses comments by City of Poulsbo on our February 26, 2021, report. This revised report supersedes our previous versions of the CARA report for the project.

#### **PROPERTY LOCATION AND DESCRIPTION**

The Property is located north of the intersection of State Highways 305 and 307, and is comprised of Kitsap County tax parcel numbers 102601-4-028-2003, 112601-3-003-2003, 102601-4-022-2009, 112601-3-021-2001, 112601-3-040-2008, 112601-3-006-2000 and 112601-3-008-2008 in Poulsbo, Washington. The Property is an irregularly shaped lot with an approximate area of 63.8 acres consisting of mostly undeveloped forested land, and includes 6.2 acres of offsite access area. The Property is bounded to the southwest by State Highway 305, to the southeast by State Highway 307, and to the northwest and northeast by undeveloped forested land and several small residential properties. Vetter Road NE runs through the western half of the Property. A site location map is provided as Figure 1.

The history of the Property has been documented in a Phase I Environmental Site Assessment (ESA) performed by EnviroSound Consulting, Inc., dated November 30, 2010.

The Property has historically been used for residential purposes and has been logged. No other activities were identified in the ESA.

A recent aerial photograph from the Kitsap County Parcel Viewer website of the Property is shown in Figure 2.

#### Proposed Development

The proposed project will consist of 468 multi-family residential units including 244 one-bedroom, 208 two-bedroom, and 16 three-bedroom units on three levels within the thirteen buildings (Figure 3). A

variety of common areas and resident amenities are located throughout the site and within the Community Center. The project also includes the construction of private roads, parking lots, pedestrian pathways, utilities, landscaping and stormwater management systems.

The project will also develop a public road system with an associated 10-foot wide shared use path from SR305 to Viking Ave NW (Appendix N - Civil Plans). The site will access from Viking Avenue and from SR305 onto a relocated Vetter Road NW. The entire project area including offsite parcels required for public road access to Viking Avenue and existing Vetter right-of-way is 63.8 acres. The Oslo Bay Apartments site encompasses 57.6 acres of which approximately 6.89 acres of commercially-zoned area are reserved for a future senior center to be proposed under separate land use and development applications. Approximately 35.5 acres will be disturbed for project construction

### Development Utilities

#### *Water*

Water will be provided by the City of Poulsbo. No water mains are present on site. A 12-inch main is located in Viking Ave NW and a 8-inch main is located north of the site within Vetter Road fronting the Kitsap Transit site.

#### *Sanitary Sewer*

Sanitary Sewer Service will be provided by the City of Poulsbo. No sanitary sewer mains are present onsite. An 8-inch sewer main is located along the southwest side of SR305.

#### *Stormwater*

No existing stormwater facilities are located on site. Stormwater quantity control and quality enhancement will be provided in compliance with City of Poulsbo and Washington State Department of Ecology requirements. The stormwater management approach is provided is the Drainage Report prepared by KPFF and dated August 2021, and identified two drainage basins for the site. Stormwater runoff from newly constructed impervious surfaces will be managed on-site and has been designed to maintain existing basin hydrology and flows to the wetland and the creeks through a combination of detention and discharge to the wetlands, and a small infiltration system.

The Drainage Report provides the following water quality treatment approach for stormwater:

*“Treatment for each of the basins will occur using a proprietary manufactured wetland vault system, e.g., Oldcastle Biopod vault and Fortera Bioclean vaults downstream of the detention pond. These systems are approved by the Department of Ecology for enhanced treatment.*

*The majority of runoff from on-site roads and Vetter Road will be routed through a separate stormwater conveyance system from the West Basin prior to discharging to the West Pond. Vetter Road does not meet Ecology Manual standards for a High-Use Site (2014 SWMMWW, Vol 1 – Appendix G, page 168)*

*and therefore is not required to meet enhanced treatment. Vetter Road runoff is routed through a StormFilter water quality system prior to discharging to the West Pond.*

*For the small portion of Vetter Road-SR 305 connection pavement that is not collected and conveyed connecting to the West Basin Pond, water quality treatment will occur through an underground infiltration system.”*

### Topography

The site slopes to the south (generally less than 6 percent slopes). The site slopes from an elevation of approximately 220 feet in the northwest corner of the property to an elevation of approximately 30 feet in the southern portion of the site where it abuts Dogfish Creek. The slopes in the southern portion of the property become steeper (approximately 40%), as they slope down to Dogfish Creek.

### Surface Water and Drainage

Two streams have been identified on the proposed project site. The main stem of Dogfish Creek flows approximately east-to-west along the southeastern boundary of the site. An unnamed stream associated with a wetland flows north-to-south along a portion of the western boundary. Both creeks discharge to Liberty Bay approximately 0.25 miles from the site.

Two wetland areas have been identified and delineated on the proposed Oslo Bay Apartments project site. Wetland A lies on slopes above Dogfish Creek in the southeastern portion of the site. Wetland B is a stream-associated (unnamed stream) forested system that lies within the northwest portion of the project site.

### Previous Studies

As noted above, a Phase I ESA was prepared and no recognized environmental conditions (REC) were identified and no additional investigation was recommended. A geotechnical report, which includes 28 shallow test pit explorations and 7 drilled borings ranging in depth from approximately 20 to 40 feet below ground surface, was prepared by EnviroSound Consulting, Inc. (2020) for the Property.

## **CRITICAL AQUIFER RECHARGE AREAS REPORTING**

The City of Poulsbo contains areas characterized as environmentally sensitive or critical, including CARAs. Land use and development may be restricted within environmentally critical areas. Critical areas within the City of Poulsbo can be viewed through the Kitsap County online parcel viewer tool:

<https://psearch.kitsapgov.com/psearch/>

The maps indicate that the Property lies within a CARA as shown on Figure 4. The pink/red shading indicates a Category 1 CARA.

### Critical Aquifer Recharge Areas

The City of Poulsbo developed Critical Areas for the City, including Aquifer Recharge Areas as required by the State of Washington. A CARA identifies areas that provide recharge to underlying drinking water aquifers and protection of both groundwater quantity and quality is critical in these areas.

The Property is located within a CARA; therefore, a geologic and hydrogeologic assessment is required, in accordance with the City of Poulsbo code. The purpose of the hydrogeologic assessment is to evaluate the actual presence of geologic conditions giving rise to the CARA; evaluate the safety and appropriateness of proposed activities; and recommend appropriate construction practices, monitoring programs and other mitigation measures required to protect groundwater.

As noted above the Property is located within a Category 1 CARA, which Kitsap County describes as:

Category I critical aquifer recharge areas are those areas where the potential for certain land use activities to adversely affect groundwater is high. Category I critical aquifer recharge areas include:

1. Areas inside the five-year time of travel zone for Group A water system wells, calculated in accordance with the Washington State Well Head Protection Program.
2. Areas inside the ten-year time of travel zones in wellhead protection areas when the well draws its water from an aquifer that is at or above sea level and which are not separated from the underlying aquifers by an impermeable layer that provides adequate protections from contamination to the aquifer(s) below.
3. Areas identified as significant recharge areas due to special circumstances or identified in accordance with WAC 365-190-080 WAC 365-190-100(4) as aquifer areas of significant potable water supply with susceptibility to groundwater contamination, including but not limited to the following:
  - a. Hansville Significant Recharge Area. The Hansville aquifer is a significant potable water supply that is highly susceptible to the introduction of pollutants. Additional information regarding this aquifer is available from the Kitsap Public Utility District.
  - b. Seabeck Significant Recharge Area. The Seabeck aquifer is a significant potable water supply that is being developed for use in central and north Kitsap County. Additional information regarding this aquifer is available from the Kitsap Public Utility District.
  - c. Island Lake Significant Recharge Area. The Island Lake aquifer is a significant potable water supply for the Silverdale area. Additional information regarding this aquifer is available from the Silverdale Water District.
  - d. Gorst Significant Recharge Area. Aquifers in the Gorst basin are highly susceptible to the introduction of pollutants and provide significant potable water supplies for the City of Bremerton.

e. Poulsbo Significant Recharge Area. The Poulsbo aquifer is highly susceptible to the introduction of pollutants and provides a significant potable water supply for the Kitsap Public Utility District and City of Poulsbo.

The Property lies with the Poulsbo Significant Recharge area and is within the five-year time of travel zone of a City of Poulsbo water supply well as shown on Figure 6.

#### CARA Hydrogeologic Assessment Elements

The City of Poulsbo requires a hydrogeologic assessment for proposed development in a CARA, which includes the following elements:

- (1) Surficial soil type and geologic setting;
- (2) Location and identification of wells within one thousand (1,000) feet of the site;
- (3) Location and identification of surface water bodies and springs within one thousand (1,000) feet of the site with recharge potential;
- (4) Description of underlying aquifers and aquitards, including water level, gradients and flow direction;
- (5) Available surface water and groundwater quality data;
- (6) Effects of the proposed development on water quality;
- (7) Sampling schedules required to assure water quality;
- (8) Discussion of the effects of the proposed development on the groundwater resource;
- (9) Recommendations on appropriate BMPs (best management practices) or mitigation to assure no significant degradation of groundwater quality; and
- (10) Other information as required by the Kitsap County Health District.
- (11) The assessment shall also address the types of pesticides, herbicides and fertilizers that can safely be used for the care of landscaping proposed by the applicant.

These elements are discussed below, although not in the order noted.

#### Surficial Soil and Geologic Setting

Geotechnical explorations performed for the project indicate the presence of Glacial Till overlain by 1 to 2 feet of forest duff. The upper 3 to 5 feet of the till is tan to reddish-brown in color indicated the Till is weathered. Below weathered Till is gray Till, which is unweathered. Welch et al (2014) describe the till as, "...a dense mixture of sand and gravel in a clay matrix", and note that there are water-bearing lenses within the Till. The thickness of the Till is uncertain, although water well logs for nearby water supply

wells indicate the Till could be over 200 feet thick. A United States Geological Survey report for the Kitsap Peninsula (Welch et al., 2014), also indicates that the Till could be over 180 feet thick near the site.

In general, the Till overlies Advance Outwash, which consists of sand and gravel with varying amounts of silt. Several water supply well logs, particularly to the east of the Property did not encounter the Advance Outwash or it was thin and not considered feasible for water supply.

Where the Advance Outwash sand was not observed according to the water supply well logs, the Till is underlain by blue clay with varying amounts of sand and silt. This unit is locally known as the Lawton Clay. The thickness of the Lawton Clay is not known below the Property although water supply well logs to the east of the Property indicate a thickness of approximately 200 feet.

Below the Lawton Clay is an older outwash/fluvial deposit consisting of sand and gravel, and is the main aquifer in the area (known as the sea level aquifer). The thickness of this deposit is not known based on well logs near the site, however Welch (2014) indicates the thickness could range from 6 to 100 feet from regional mapping of the aquifer.

#### Groundwater Conditions

Groundwater flow in the Puget Sound region is generally controlled by the complex distribution of fine- and coarse-grained deposits, local topography, areas where precipitation provides recharge to aquifers, and areas where groundwater discharges. Groundwater recharge typically occurs in the upland areas with groundwater movement from these areas predominantly downward toward discharge areas, which are typically major surface water bodies. The water table or piezometric surface often mimics topography.

The direction of groundwater movement is also controlled in part by the ability of the soil to transmit water, which is called the hydraulic conductivity of the soil (also referred to as soil permeability).

Groundwater was observed in only the deepest exploration (boring B-5 – see Geotechnical Report for details) performed on the Property at a depth of approximately 40 feet below ground surface. The exploration may have reached the top of the Advance Outwash aquifer underlying the Till or possibly the groundwater is perched within a sandy lense of soil within the Till. A review of water well logs in the area indicates that the depth to groundwater is generally greater than 50 feet below ground surface. A United States Geological Survey report for the Kitsap Peninsula (Welch et al., 2014) indicates the regional groundwater flow is likely to the south/southwest towards Liberty Bay and is greater than 50 feet below ground surface (bgs).

It is likely that some perched groundwater may be present above the Till during the wet season, particularly given the presence of wetlands on and adjacent to the Property. The relationship between shallow perched groundwater and surface hydrology is not known, although it is likely that the perched groundwater provides some baseflow to the wetlands and streams.

Locally, the Advance Outwash is used as a water supply. Based on the presence of the overlying Till and static groundwater levels indicated on several water supply wells, the Advance Outwash is confined near the Property (the Till is acting as an aquitard).

As noted, above an older sand and gravel deposit below the Lawton Clay (sea level aquifer) is the primary aquifer in the area. Welch (2014) indicates a groundwater elevation in the sea level aquifer is approximately 50 feet near the site, which based on the average site topography is approximately 100 feet below ground surface. Several of the water supply well logs indicate the wells are screened within this aquifer and pump water from the aquifer. The sea level aquifer is confined by the Lawton Clay (acting as an aquitard). In one water supply well log to the east of the Property, artesian conditions were observed (i.e. the groundwater level is above ground surface).

#### Wells Within 1,000 Feet of Property

A review of the Ecology Well Logs database indicates that there are no wells on the Property. A number of the surrounding properties appear to have water supply wells for potable water supply. Figure 5 shows the location of water supply wells identified from the Ecology database. There are likely additional wells associated with other properties, as a number of well logs did not have a specific address to identify the location. It is also likely some of the wells are Class B water supply systems and serve more than one property. Appendix B provides a list of water supply wells located within approximately 1,000 feet of the property from the Ecology database.

Most of the private water supply wells are greater than 200 feet deep, with the exception of 2 wells that are approximately 50 feet deep.

The City of Poulsbo uses groundwater for water supply, and includes the following water supply wells:

- Big Valley Well 1 – 395 feet deep
- Big Valley Well 2 – 537 feet deep
- Lincoln Road Well #1 – 320 feet deep
- Lincoln Road Well #2 – 265.5 feet deep
- Westside Well – 650 feet deep

The Big Valley Well 2 is located directly east of the Property and the Big Valley Well 1 is located approximately 4,000 feet north of the site. The Westside Well is located approximately 6,000 feet north/northwest of the Property. The approximate location of these Big Valley wells can be seen on Figure 6, as identified by the wellhead protection time-of-travel zones.

#### Surface Water Bodies Within 1,000 Feet of Property

As noted above, Dogfish Creek runs through the southern portion of the Property (Figure 5), and is bordered by wetlands. An unnamed creek runs along the western portion of the Property (Figure 5),

and is also bordered by wetlands. There are no other surface water bodies within 1,000 feet of the Property.

#### Historic Water Quality Data

There is no historic surface water or groundwater quality data available for the Property.

#### Effects of the proposed development on water quality

Based on the proposed use of the Property and the findings of the Phase I ESA, there are no anticipated effects of either surface water or groundwater quality. Stormwater runoff will be treated prior to discharge or infiltration as described above.

#### Sampling schedules required to assure water quality

Because of the proposed use of the Property and the depth to groundwater at the site, no surface water or groundwater monitoring is anticipated.

#### Discussion of the effects of the proposed development on the groundwater resource

Because of the water balance neutral approach to stormwater management, the proposed development will not have any withdrawal effects on nearby wells and surface water features. Potable water will come from a public water supply (City of Poulsbo water system). Sewage will be discharged to a City of Poulsbo sewer line. Stormwater runoff from newly created impervious surfaces will be managed using a treatment train consisting of wetponds and proprietary manufactured wetland systems (BioPod Underground vaults) downstream of detention ponds, prior to stormwater discharge. Because of the proposed stormwater management approach, impacts to surface water quantity and quality are unlikely to occur. Ecological Land Services prepared a Critical Areas Report that reviewed the hydrology of the wetlands and Dogfish Creek, and with a water balance neutral approach to stormwater management, there would be no net change to the hydrology of the surface water system.

Due to the relatively impervious nature of the underlying soil (Till and Lawton Clay), the site currently does not contribute measurable recharge to the underlying aquifers approximately 40 to 250 feet below ground surface. Because of the water balance neutral approach to stormwater management, development of the site is unlikely to result in impacts to groundwater quantity.

Because the aquifers below the site are confined by the Till and Lawton Clay aquitards, there is no anticipated risk to groundwater quality from site development.

BMPs will be used to reduce the risk of impacting soil and groundwater by potentially hazardous material spills that could occur on site. If a spill were to occur and impact site soils, contingency actions may include, 1) immediate removal of impacted soil and disposal at a facility designed to handle the types and concentrations of contaminants observed as a result of the spill, and 2) an environmental investigation to evaluate the extent of contamination and the potential for impacting groundwater beneath the site. The specific contingency actions will be based on the volume of the spill and the

potential contaminants in the spill, and should be recommended by a licensed engineer or hydrogeologist with experience in soil and groundwater contamination. Because of the use of BMPs impacts to groundwater quality are unlikely to occur.

Additional BMPs are described in the following sections.

#### Best Management Practices (BMPs)

Although contamination is not anticipated on the Property, soil management during grading and construction activities should be performed to confirm the lack of soil contamination on site.

The following BMPs are based on our understanding of the preliminary development and grading plans. These BMPs may be adjusted as part of the final design, as needed.

#### *Soil Handling Procedures*

Any excavated or exposed on-site soils, exhibiting odors and/or visual evidence of contamination discovered during construction will be properly stockpiled on-site to determine if it can be reused on-site or will require off-site disposal.

Soil with concentrations that exceed their respective Method A Cleanup Levels or the State of Washington Department of Ecology (Ecology) Category IV reuse criteria will be transported to an off-site disposal facility that is permitted to accept this material, in accordance with Chapter WAC 173-350 (Solid Waste Handling Standard) and local regulations. If required, the soil will be sampled and analyzed prior to off-site disposal. Laboratory tests for characterization of a waste stream typically include all or a subset of the following list. The actual testing will be determined by the destination facility's permit requirements.

- Diesel Range Organics (DRO) and Gasoline Range Organics (GRO) by Ecology Test Method NWTPH-Dx
- Volatile organic compounds (VOCs), by EPA Method 8260;
- Semi-volatile organic compounds (SVOCs), by EPA Method 8270;
- RCRA Metals, by EPA Method 6010B; and
- Toxicity Characteristic Leaching Procedure (TCLP) VOCs, SVOCs, metals and pesticides and herbicides (if needed).

Soil stockpile sampling frequencies and methods (e.g., grab versus composite sampling) will conform to the destination facility's requirements and to Table 6.9 (Typical Number of Samples Needed to Adequately Characterize Stockpiled Soil) of the Ecology Guidance for Remediation of Contaminated Sites, dated September 2011.

#### *Load Out, Transport, and Off-Site Disposal*

Excavated soil with concentrations that exceed Method A Cleanup Levels or the Ecology Category IV reuse criteria will be handled, transported, and disposed in accordance with applicable local, state, and

federal regulations. Proposed disposal facilities will be reviewed before any materials leave the site to verify that the facility has the proper permits and to review their requirements. The excavation contractor will provide the appropriate permits, certifications, and written commitments from disposal facilities to accept the material throughout the development activities. Commitment letters will be supplied on the disposal facility's letterhead, and will include the site as the originating location, the specific analytical data provided to and reviewed by the facility, a statement that the facility is in compliance with its permit, any restrictions on delivery schedules or other conditions that may cause rejection of transported materials, and the accepted daily quantities of soil that may be disposed.

#### *Import Soil Criteria*

Importation of clean fill to the Property is not anticipated; however, if clean fill is imported to the Property, it will come from an approved gravel pit. If the fill comes from an uncontrolled source, it will be sampled and tested at a frequency of one sample per 1,000 cubic yards to confirm that import soil meets the Ecology Category I reuse criteria.

#### *Sediment and Erosion Control*

A Sediment and Erosion Control Plan will be implemented during the proposed development. This plan will include, but not be limited to, the following erosion control best management practices:

- Installation of silt fence along the downward side of work zones;
- Retention of vegetation (if feasible);
- Stockpile management;
- Installation of storm drain inlet protection;
- Perform site preparation and earthwork during summer to avoid working during periods of prolonged precipitation; and
- Build construction entrance/exit using 4" to 8" crushed rock (clean) to prevent off-site soil tracking.

Development of the stormwater pollution prevention plan (SWPPP) will assess the type and quantity of pollutants likely to discharge to stormwater and the allowable non-stormwater discharges from the facility to select best management practices (BMPs) and control measures capable of minimizing discharge of contaminated stormwater. This work will be performed in recognition of the following principles:

- Preventing stormwater from coming into contact with polluting materials is generally more effective, and less costly than trying to remove pollutants from stormwater;
- Using control measures in combination is more effective than using control measures in isolation for minimizing pollutants in a facility's stormwater discharge; and

The following is a list of the BMPs that may implemented at the facility as needed during construction:

- Train existing maintenance employees in the BMPs identified in the SWPPP

- Incorporate SWPPP training into new employee orientation
- Unloading of materials, chemicals, and products will be confined to areas
- Materials, chemicals and products will be moved inside or to a covered storage area the same day it is received at the facility
- Unless essential for use and approved by the maintenance manager, material will not mixed prior to use unless recommended by the manufacturer
- Unless essential for use and approved by the maintenance manager, material will not be transferred to containers other than those supplied by the manufacturer
- Approved mixing or transfer of material will be performed inside or under a covered (hard roofed) area
- Dumpster(s) will be placed in a curbed area and lids will remain closed when not in use
- Spills will be prompted cleanup up using dry cleanup methods
- Drip pans will be placed under vehicles waiting for service
- Drip pans will be inspected regularly and emptied as needed

Locations where significant spills and leaks could potentially occur at the site and that could contribute pollutants to stormwater is limited to parking areas.

Material and equipment necessary for spill cleanup will be located on site. The equipment in each spill kit will include the following:

- Broom
- Dust pan
- Mop bucket
- Gloves
- Goggles
- Dust masks
- Kitty litter
- Labeled bags
- Absorbent socks
- Plastic and metal containers

The procedures for preventing and responding to spills and leaks are evaluated annually and updated as necessary and appropriate

#### *Deleterious Substances or Hazardous Materials Identification*

At this time, no deleterious substances or hazardous materials are anticipated to be treated, produced, recycled, or disposed of on-site.

### *Deleterious Substances or Hazardous Materials Storage*

On-site equipment:

- Material Safety Data Sheets (MSDS) for the cleaning supplies used to maintain the facility will be maintained on Property.

### *Protection Standards During Construction*

The following protection standards will be implemented if construction vehicles will be refueling on-site and/or hazardous materials will be stored, dispensed, used or handled during construction activities:

- Meet monitoring and construction standards specified in the Kitsap County Code and applicable City of Poulsbo code;
- Designate a person on-site with the appropriate knowledge to be responsible for supervising activities dealing with hazardous materials and training to take mitigating actions necessary in the event of a fire or spill;
- Provide adequate secondary containment for hazardous material storage, dispensing, refueling, and handling areas;
- Hazardous materials shall not be accessible to the public while unsupervised (locked storage sheds, locked fencing, locked fuel tanks etc.);
- Construction vehicles and stationary equipment leaking hazardous materials need to be removed and repaired immediately;
- Transfer of flammable and combustible liquid from tanks to fluid reservoirs of construction vehicles and stationary equipment have to be in compliance with the Clallam County Fire Code;
- Maintain procedures and on-site materials adequate to ensure the immediate containment or cleanup of any hazardous material release.

### *Spill Plan*

- On-site equipment: To avoid equipment failure, on-site fuel-containing equipment will be regularly inspected, repaired, and/or replaced if needed.
- Appropriate spill equipment will be readily available and accessible, and appropriate for construction activities, including but not limited to containment booms and absorbent pads.

### Residential and Commercial Use of Pesticides and Nutrients

Application of household pesticides, herbicides, and fertilizers will not exceed times and rates specified on the packaging. Pesticides and herbicides will be managed and applied by properly licensed personnel, and use of all pesticides will be approved by the affected water utility.

## **CONCLUSIONS AND RECOMMENDATIONS**

Based on the findings of this Hydrogeologic Assessment, the following conclusions and recommendations are presented:

### Conclusions

Soil at the site consists primarily of Glacial Till to a depth of at least 40 feet below ground surface. Glacial Till is a low permeability soil deposit and does not readily transmit water.

Grading and soil handling activities are planned for the project, and will be performed in accordance to the BMPs listed in this report.

Two shallow water supply wells, approximately 50 feet below ground surface, were identified within 1,000 feet of the site and are screened in either a sandy zone within the Glacial Till or in the Advance Outwash shallow aquifer. The associated depth to water in these shallow wells is approximately 50 feet below ground surface.

The depth to the water for the the sea level aquifer, which is the main water supply aquifer in the area likely averages approximately 100 feet below ground surface at the site. Groundwater flow is likely to the south. Both private and public water supply wells are located within 1,000 feet of the site. Most of the wells are screened greater than 200 feet below ground surface below the shallow Glacial Till and underlying Lawton Clay, both of which are low permeability soil deposits and do not readily transmit water thus limiting recharge to the underlying aquifers.

Existing data indicates that groundwater is unlikely to have been impacted as a result of historic Property operations.

The stormwater management approach is designed to be water balance neutral and maintain existing hydrology and drainage on-site to pre-developed conditions.

Because of the low permeability Glacial Till surficial cap and the low permeability Lawton Clay overlying the main aquifer in the area, and the water balance neutral approach to stormwater management, the proposed development is unlikely to affect the quality or quantity of recharge to the underlying aquifer.

### Recommendations

The Phase I ESA did not identify any potential environmental issues at the Property.

Best management practices should be used during development of the Property to reduce the potential for impacts to soil and groundwater.

## **LIMITATIONS**

The opinions, conclusions, and recommendations provided in this letter are based on our understanding of subsurface conditions at the Property, our understanding of the proposed development, and readily available site information.

The analyses and conclusions presented in this report were prepared in accordance with generally accepted professional hydrogeologic principles and practice in this area at this time. Appendix A provides qualifications for the preparer of this report. No other warranty, either express or implied, is made. The scope of services did not include any environmental assessment or evaluation regarding the presence or absence of wetlands or hazardous or toxic material in the soil, surface water, groundwater, or air, on or below or around the site.

This report was prepared solely for the use of Edward Rose and Sons, Axis Land Consulting, and Cobalt Geosciences for the proposed development of the Property.

## REFERENCES

Ecological Land Services, 2021, "Critical Areas Report", prepared for Edward Rose Millennial Development LLC, dated February 24, 2021.

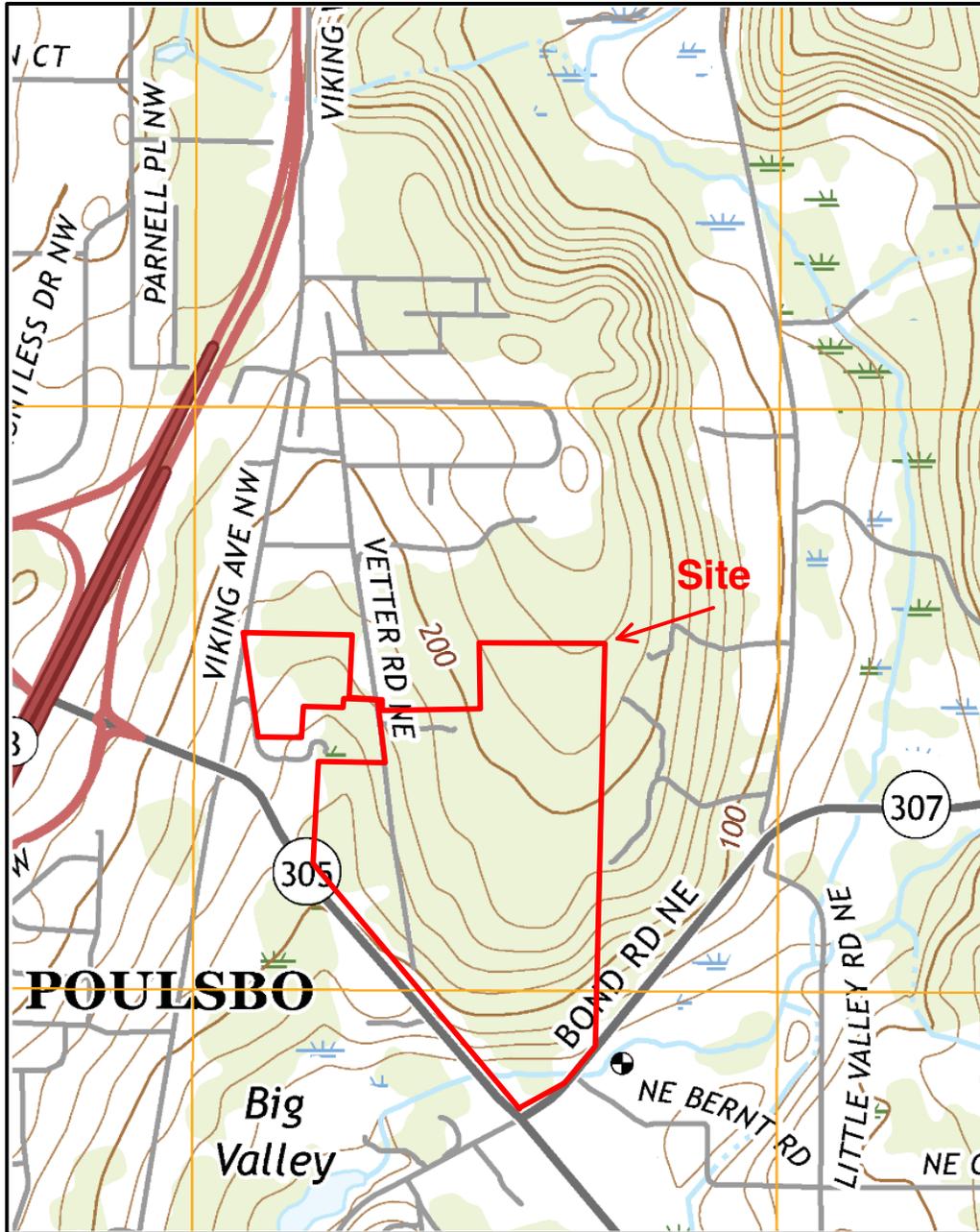
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EnviroSound Consulting, 2010, "Phase I Environmental Site Assessment – Edward Rose Master Plan", Prepared for Edward Rose and Sons.

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Washington State Department of Ecology, 2014, Stormwater Management Manual for Western Washington, Publication No. 12-10-030.

Welch, W.B., L.M. Frans, and T.D. Olsen, 2014, *Hydrogeologic Framework, Groundwater Movement, and Water Budget of the Kitsap Peninsula, West-Central Washington*, United States Geological Survey Scientific Investigations Report 2014-5106.



Base map adapted from USGS  
 Lofall, Washington  
 7.5 minute quadrangle (2017)

 Approximate Property Boundary



Approximate  
 Scale in Feet

### Site Vicinity Map



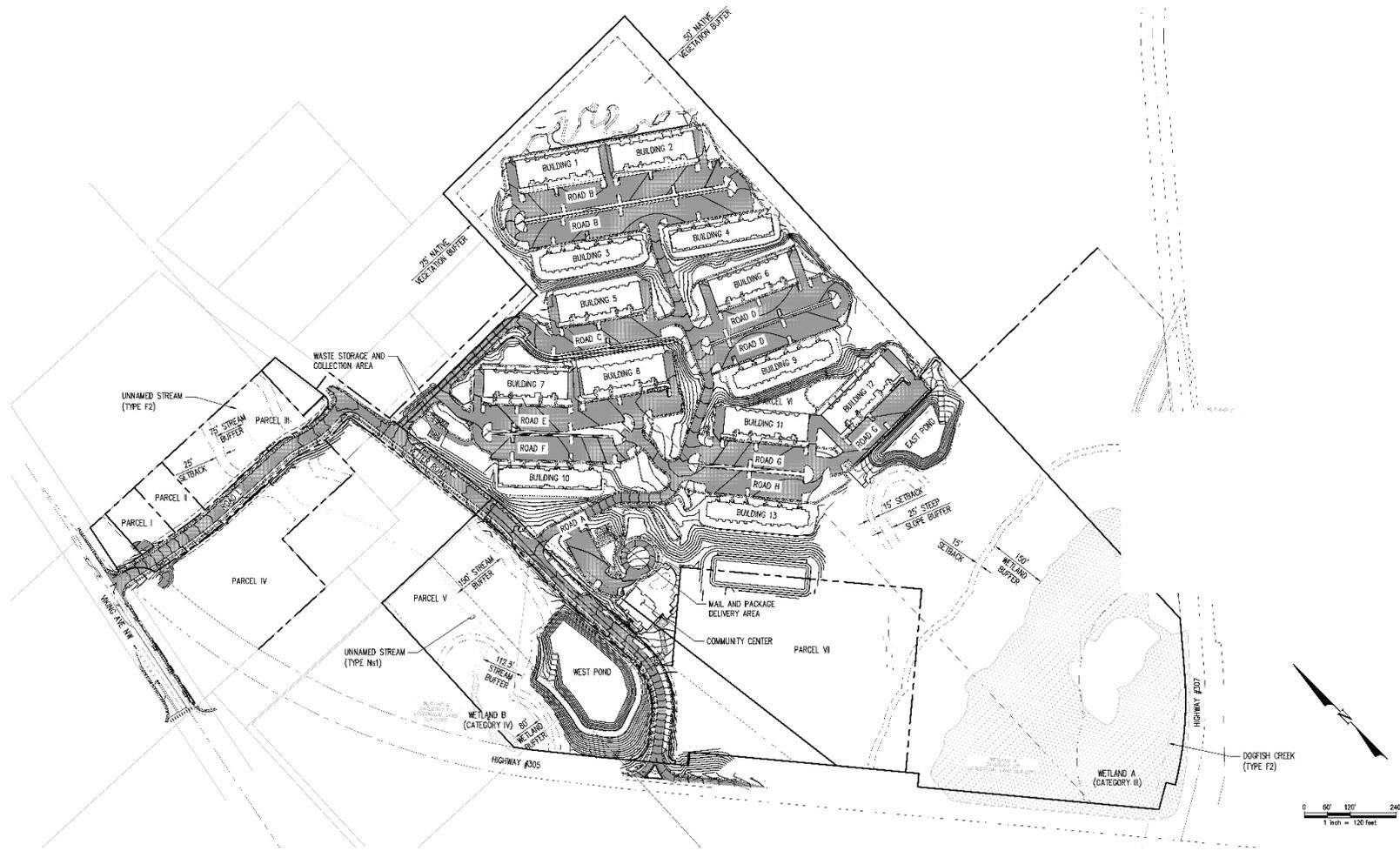
Richard Martin  
 Groundwater LLC

Oslo Bay Apartments - Rose and Sons  
 Poulsbo, Washington

March 16, 2020

**Figure 1**





**Site Plan**

Oslo Bay Apartments - Rose and Sons  
 Poulsbo, Washington

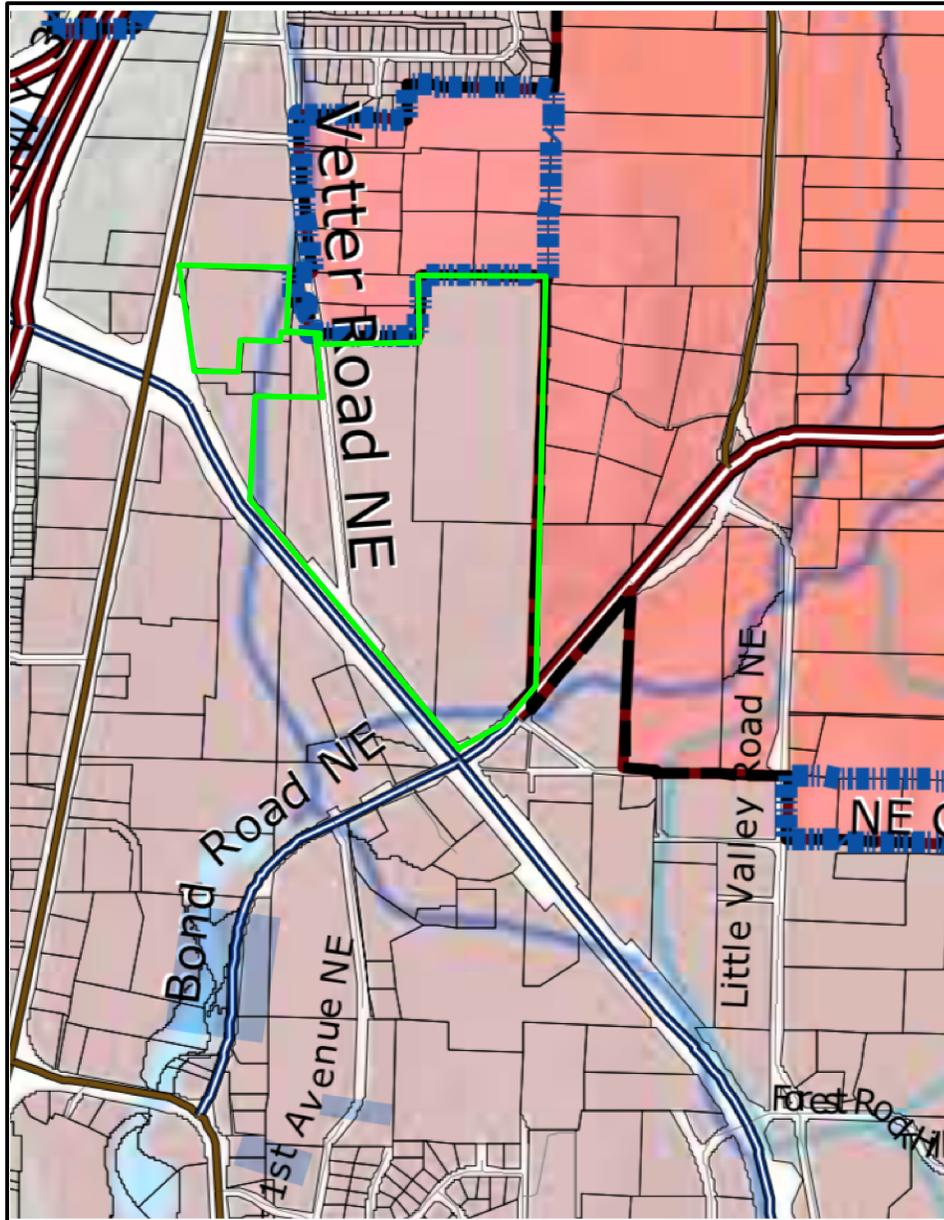
August 3, 2021

**Figure 3**

**Figure 3**



Richard Martin  
 Groundwater LLC



Base map adapted from Kitsap  
County Critical Aquifer Recharge  
Areas Map



Property boundaries



Category I Critical Aquifer  
Recharge Areas



Not to scale

### Critical Aquifer Recharge Areas

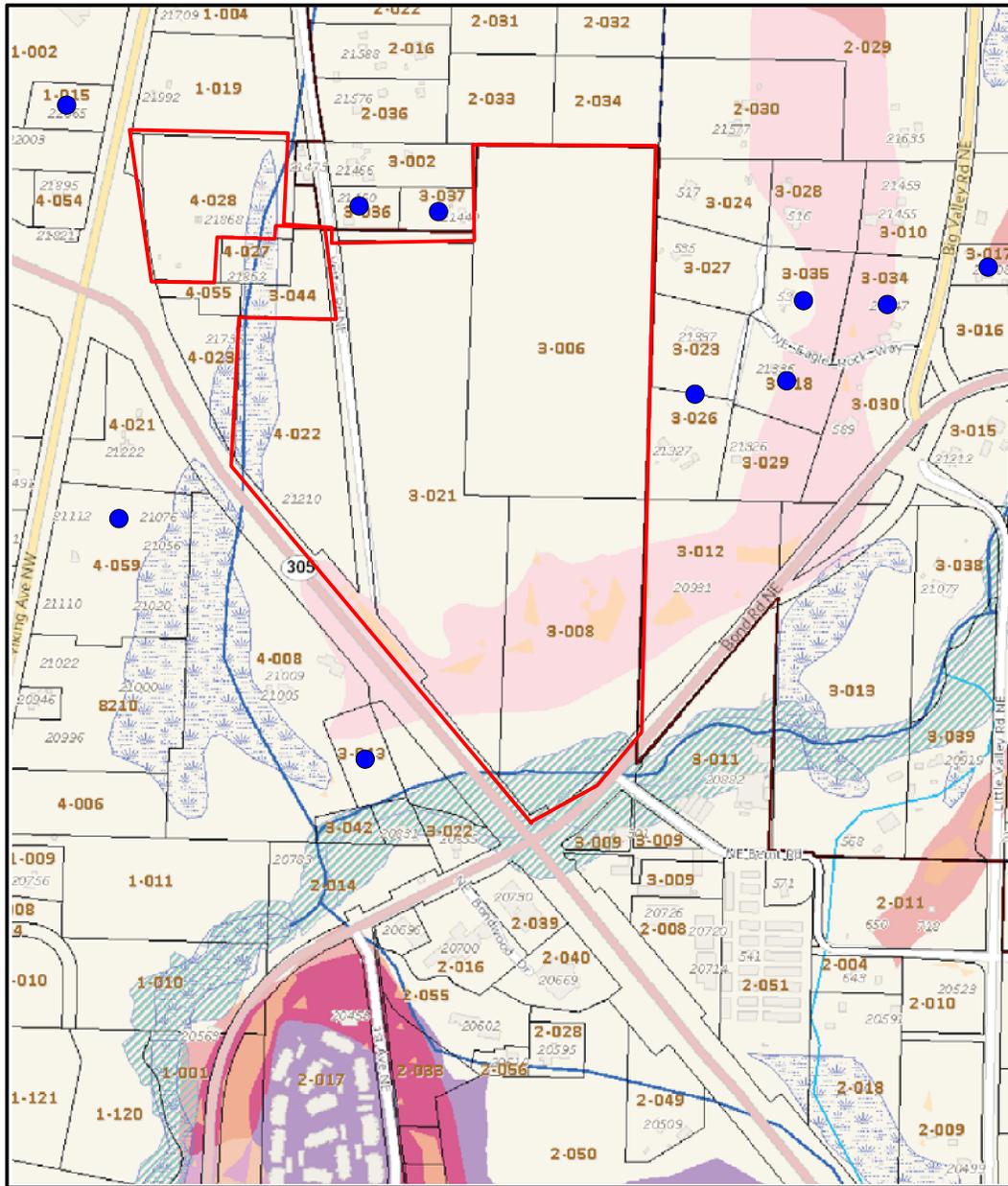


Richard Martin  
Groundwater LLC

Oslo Bay Apartments - Rose and Sons  
Poulsbo, Washington

March 16, 2020

**Figure 4**



Adapted from Kitsap County GIS Website



### Water Supply Well and Surface Water Location Map

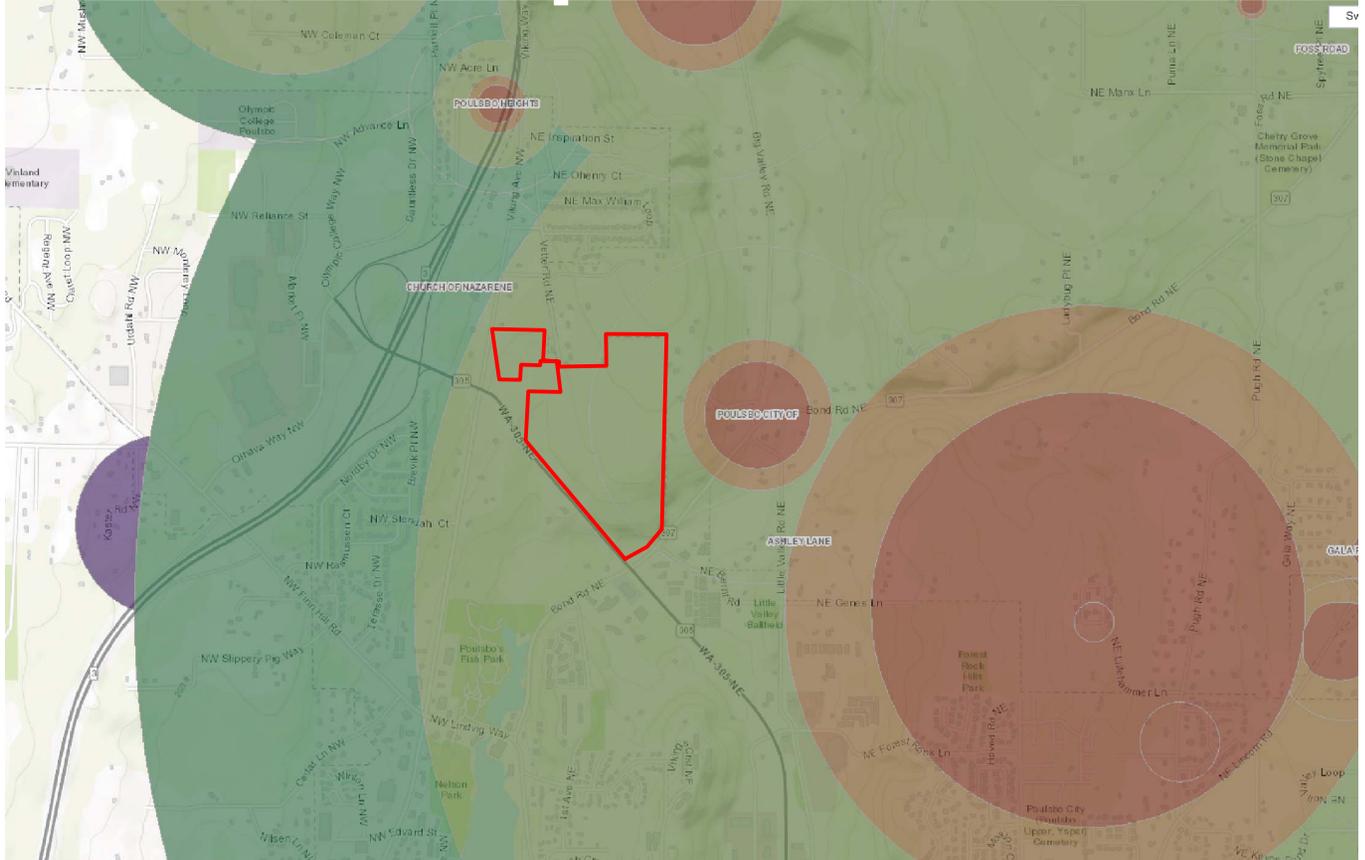


Richard Martin  
Groundwater LLC

Oslo Bay Apartments - Rose and Sons  
Poulsbo, Washington

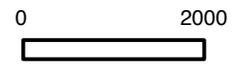
April 24, 2020

**Figure 5**



- Group A - 1 Year TOT
- Group A - 2 Year TOT
- Group A - 5 Year TOT
- Group A - 10 Year TOT
- Group A - Designated TOT
- Group B - Designated TOT

TOT = time of travel



Approximate Scale in Feet

Adapted from Washington State  
Department of Health Source Water  
Assessment Program Mapping Application

Approximate Site  
Boundaries

### Wellhead Protection Area Map

Oslo Bay Apartments - Rose and Sons  
Poulosbo, Washington

March 16, 2020

**Figure 6**

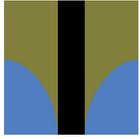
**Figure 6**



Richard Martin  
Groundwater LLC

**APPENDIX A**

Qualifications of Preparer



# Richard Martin Groundwater LLC

## Richard J. Martin, LHG

### EDUCATION

Graduate Studies, Hydrogeology, Wright State University  
BS, Geology, Wright State University, 1989

### REGISTRATION

Licensed Hydrogeologist: WA, 337, 2002

### PROFESSIONAL SUMMARY

With over 28 years of experience as a hydrogeologist, Richard has been involved with all aspects of hydrogeologic studies, including evaluation of groundwater resources, design and implementation of aquifer testing, delineation of wellhead protection zones, assessment of groundwater/surface water interactions, evaluation of soil and groundwater remedial systems, and determination of historical contaminant plume movement. He also provides hydrogeologic support for geotechnical projects including development of construction dewatering plans, evaluation of groundwater seepage for slope stability problems, evaluation of soil infiltration capacity for stormwater control design, and estimation of groundwater inflows to tunnels and excavations.

### PROJECT EXPERIENCE

***Atterberry Landing Manufactured Home Park, Critical Aquifer Recharge Report, Clallam County, WA.*** Richard prepared a hydrogeologic assessment to satisfy Clallam County reporting requirements pertaining to new developments in Critical Aquifer Recharge Areas. The proposed development includes installing asphalt roadway, storm, water, sewer and power utilities for a total of 66 lots intended for manufactured homes. The property lies within a critical aquifer recharge area and within two wellhead protection zones. With his review of water supply well logs in the area combined with site geotechnical explorations, Richard demonstrated that the shallow aquifer is separated from the property by at least 60 feet of low permeability till and/or clay soils. With the use of a stormwater management system to collect and treat runoff from the newly created impervious surfaces and planned connections to public sewer and water supply, Richard concluded the proposed development is unlikely to affect the quality or quantity of recharge to the underlying aquifer.

***Riddlell Road Mixed Use Project, Critical Aquifer Recharge Area Report, Bremerton, WA.*** Richard prepared a hydrogeologic assessment to satisfy City of Bremerton reporting requirements pertaining to new developments in Critical Aquifer Recharge Areas designated in the City regulations. The proposed mixed-use project includes approximately 69 residential units and 4 commercial buildings with parking between and around the buildings. Stormwater runoff from these new impervious surfaces will be directed to proposed infiltration trenches and a stormwater infiltration pond. Existing data indicates that groundwater is unlikely to have been impacted as a result of historic Property operations. Based on Richard's review of the site hydrogeology, the proposed development is unlikely to affect the quality or quantity of recharge to the underlying aquifer.

***MV Transportation, Critical Aquifer Recharge Area Report, Redmond, WA.*** Richard prepared a hydrogeologic assessment report to satisfy City of Redmond reporting requirements pertaining to new developments in Critical Aquifer Recharge Areas designated in the City Community Development Guide and associated City ordinances. The project includes the construction of one-story warehouse type

maintenance and storage building for buses of multiple sizes with a maintenance building of approximately 11,780 square feet with six maintenance stalls, rooms for tire storage, parts storage, liquid storage, restrooms and associated office spaces on the mezzanine level. The project also includes an above ground fueling station with a 10,000-gallon diesel fuel double-walled tank and an above ground 2,000-gallon propane tank. Richard's review indicated that groundwater is unlikely to have been impacted as a result of historic property operations, and the proposed development is unlikely to affect the quality or quantity of recharge to the underlying aquifer.

***Review of Critical Aquifer Recharge Areas Ordinance, Snohomish County, WA.*** Richard was Project Hydrogeologist to assist the Snohomish County Planning Department in reviewing proposed Critical Aquifer Recharge Areas (CARAs) ordinance for the county. CARAs are geographic areas that are primary sources of recharge to aquifers that provide potable drinking water supplies. The ordinance is designed to protect CARAs by managing development and land use activities in those areas. Richard reviewed numerous consultant reports that provided the basis for developing the ordinance to determine if they met the definition of Best Available Science. He attended several Planning Commission and public comment meetings to respond to technical groundwater questions at the meetings, prepared written responses to public questions and comments about the proposed ordinance, and prepared a brief report summarizing his opinions and recommendations.

***Freer Consulting Company, Watts Brothers Frozen Food (WBFF) Facility Groundwater Evaluation, Patterson, WA.*** Richard was project hydrogeologist for this groundwater evaluation in support of the land application permit for the facility. The WBFF is an existing vegetable processing facility with a wastewater treatment system that land applies screened effluent. Richard developed and implemented a groundwater exploration program to characterize shallow groundwater below the site because of concerns of potential contamination from nitrogen in the effluent. His evaluation demonstrated the limited extent of shallow groundwater overlying basalt and that it is unlikely that shallow groundwater would transport nitrogen to deeper basalt water supply wells located upgradient of the site.

***Seattle Public Utilities, Greenwood Groundwater Study, Seattle, WA.*** Richard was Project Hydrogeologist for a study of soil and groundwater conditions in the Greenwood area of Seattle, Washington. A portion of the Greenwood area is underlain by peat and soft soils, and as a result of loading of these soils and declines in groundwater levels, ground settlement has occurred, which has damaged buildings and infrastructure in the area. Richard evaluated the groundwater conditions and determined that both short-term and long-term declines in water levels from drainage of the area, groundwater losses to the storm drain system, reduced infiltration, and construction dewatering have contributed to the settlement. Richard provided recommendations to help limit future settlement including limitations on drawdown as a result of dewatering during future development, and completing a groundwater monitoring program to establish baseline conditions by which future declines can be identified. As part of the overall evaluation of the hydrogeologic system, Richard completed a preliminary evaluation of the relationship of groundwater input to Piper's Creek from the Greenwood area.

***Anchorage Fish Hatchery, Anchorage, AK.*** Richard was Project Hydrogeologist to evaluate the effects of proposed groundwater pumping at the Anchorage Fish Hatchery site on local groundwater resources. The project is part of an ongoing study being conducted for expansion of the hatchery, and provides a basis for future groundwater resource planning and support for securing a water right. Richard constructed a three-dimensional groundwater flow model of the Anchorage area to evaluate the impact of the hatchery wells on existing groundwater users in the area. His groundwater modeling results indicate that up to 3,000 gpm is available at the hatchery site from the deep aquifer and pumping will have localized drawdown effects on groundwater levels but relatively small basin-wide drawdown effects.

Richard's analysis indicates the proposed pumping rates appear to be sustainable for the long term (up to 50 years) if the assumed current groundwater conditions remain unchanged. Richard also used the groundwater model to evaluate the potential for mobilization of contaminants toward the hatchery wells and the potential for salt water intrusion as a result of the additional pumping at the hatchery.

***City of Seattle Water Department, Groundwater Study, Seattle, WA.*** Richard evaluated groundwater resources at the Highline Well Field as part of an aquifer storage and recovery (ASR) program. This project was one of the first ASR programs of its kind in the country. Richard completed computer simulations of groundwater flow using MODFLOW to assess impacts of artificial recharge on the aquifer during the winter months using excess surface water resources. The model was used to optimize pumping scenarios during summer peak period use to maximize capacity. His modeling indicated that the ASR program may not be able to increase production at the well field, however could maintain previously declining aquifer water levels at pre-production levels. Richard also delineated wellhead protection areas using particle-tracking methods for 1-, 5-, and 10-year travel times for the well field.

**APPENDIX B**

Water Well Logs from Ecology Database

## Well Construction and Licensing Search Tools

### MAP SEARCH RESULTS

[← Back](#) [🔍 New Search](#)

- **Search Criteria Used:** Left Coordinate: [1109354](#), Right Coordinate: [1115157](#), Top Coordinate: [893212](#), Bottom Coordinate: [887692](#), Well Log Type: [Water Well Logs Only](#)
- There are **38** Well Reports that match your search criteria.

[📄 Download all 38 images](#) | [📄 Download all 38 data records](#) | [🖨 Print this page](#) | [🔗 Help](#)

Displaying 1 - 38 of **38** well report results    Sort results by [Well Owner Name](#) ▼

1. **BARNES** - { [View PDF](#) }  
Public Land Survey: [NW, NE, S-15, T-26-N, R-01-E](#), Tax Parcel Number: [\(blank\)](#)  
County: [Kitsap](#), Well Address: [\(blank\)](#)  
Well Report ID: [61408](#), Well Tag ID: [\(blank\)](#), Notice of Intent Number: [\(blank\)](#)  
Well Diameter: [6 in.](#), Well Depth: [60 ft.](#)  
Well Type: [Water](#)  
Well Completion Date: [\(blank\)](#), Well Report Received Date: [\(blank\)](#)
2. **BILL MCCOLLUM** - { [View PDF](#) }  
Public Land Survey: [SE, NE, S-10, T-26-N, R-01-E](#), Tax Parcel Number: [\(blank\)](#)  
County: [Kitsap](#), Well Address: [21644 VETTER RD](#)  
Well Report ID: [72865](#), Well Tag ID: [ABP801](#), Notice of Intent Number: [W052686](#)  
Well Diameter: [6 in.](#), Well Depth: [194 ft.](#)  
Well Type: [Water](#)  
Well Completion Date: [02-08-1995](#), Well Report Received Date: [03-01-1995](#)
3. **BOB GONINAN** - { [View PDF](#) }  
Public Land Survey: [NE, SW, S-11, T-26-N, R-01-E](#), Tax Parcel Number: [\(blank\)](#)  
County: [Kitsap](#), Well Address: [BIG VALLEY RD](#)  
Well Report ID: [61794](#), Well Tag ID: [\(blank\)](#), Notice of Intent Number: [\(blank\)](#)  
Well Diameter: [6 in.](#), Well Depth: [287 ft.](#)  
Well Type: [Water](#)  
Well Completion Date: [06-03-1986](#), Well Report Received Date: [\(blank\)](#)
4. **CHRISTOPHER BRAUND** - { [View PDF](#) }  
Public Land Survey: [NE, NE, S-15, T-26-N, R-01-E](#), Tax Parcel Number: [152601-1-051-2004](#)  
County: [Kitsap](#), Well Address: [772 NW CEDAR LN, POULSBO 98370](#)  
Well Report ID: [644901](#), Well Tag ID: [BAT967](#), Notice of Intent Number: [W263398](#)  
Well Diameter: [6 in.](#), Well Depth: [16 ft.](#)  
Well Type: [Water](#)  
Well Completion Date: [02-03-2010](#), Well Report Received Date: [04-12-2010](#)
5. **D.H.S., INC.** - { [View PDF](#) }  
Public Land Survey: [NW, NE, S-15, T-26-N, R-01-E](#), Tax Parcel Number: [\(blank\)](#)  
County: [Kitsap](#), Well Address: [\(blank\)](#)  
Well Report ID: [62757](#), Well Tag ID: [\(blank\)](#), Notice of Intent Number: [074817](#)  
Well Diameter: [0 in.](#), Well Depth: [0 ft.](#)  
Well Type: [Water](#)  
Well Completion Date: [\(blank\)](#), Well Report Received Date: [01-24-1992](#)
6. **DARRELL BASKINS** - { [View PDF](#) }  
Public Land Survey: [SE, SW, S-11, T-26-N, R-01-E](#), Tax Parcel Number: [\(blank\)](#)  
County: [Kitsap](#), Well Address: [LITTLE VALLEY RD NE](#)  
Well Report ID: [73701](#), Well Tag ID: [ACR325](#), Notice of Intent Number: [W093079](#)  
Well Diameter: [6 in.](#), Well Depth: [374 ft.](#)  
Well Type: [Water](#)  
Well Completion Date: [10-09-1997](#), Well Report Received Date: [10-23-1997](#)
7. **DICK MONTGOMERY** - { [View PDF](#) }  
Public Land Survey: [NE, SW, S-11, T-26-N, R-01-E](#), Tax Parcel Number: [\(blank\)](#)  
County: [Kitsap](#), Well Address: [21408 BIG VALLEY RD](#)  
Well Report ID: [63433](#), Well Tag ID: [\(blank\)](#), Notice of Intent Number: [070753](#)  
Well Diameter: [6 in.](#), Well Depth: [235 ft.](#)  
Well Type: [Water](#)  
Well Completion Date: [10-04-1989](#), Well Report Received Date: [\(blank\)](#)
8. **DICK WAITE** - { [View PDF](#) }  
Public Land Survey: [SE, NE, S-10, T-26-N, R-01-E](#), Tax Parcel Number: [\(blank\)](#)  
County: [Kitsap](#), Well Address: [\(blank\)](#)  
Well Report ID: [63453](#), Well Tag ID: [\(blank\)](#), Notice of Intent Number: [\(blank\)](#)  
Well Diameter: [6 in.](#), Well Depth: [114 ft.](#)  
Well Type: [Water](#)  
Well Completion Date: [12-12-1986](#), Well Report Received Date: [02-05-1987](#)
9. **DONALD BRICK** - { [View PDF](#) }  
Public Land Survey: [NE, SW, S-11, T-26-N, R-01-E](#), Tax Parcel Number: [\(blank\)](#)  
County: [Kitsap](#), Well Address: [21345 BIG VALLEY RD](#)  
Well Report ID: [73720](#), Well Tag ID: [ACR384](#), Notice of Intent Number: [W099678](#)  
Well Diameter: [6 in.](#), Well Depth: [383 ft.](#)  
Well Type: [Water](#)  
Well Completion Date: [09-08-1998](#), Well Report Received Date: [10-09-1998](#)
10. **FRANK TOTH** - { [View PDF](#) }  
Public Land Survey: [NE, SW, S-11, T-26-N, R-01-E](#), Tax Parcel Number: [11260130342006](#)  
County: [Kitsap](#), Well Address: [21347 BIG VALLEY, POULSBO 98370](#)  
Well Report ID: [460458](#), Well Tag ID: [ALP060](#), Notice of Intent Number: [W208543](#)  
Well Diameter: [6 in.](#), Well Depth: [483 ft.](#)  
Well Type: [Water](#)  
Well Completion Date: [11-03-2006](#), Well Report Received Date: [11-17-2006](#)
11. **GEORGE & LINDA GARTEN** - { [View PDF](#) }

- Public Land Survey: **SW, NE, S-11, T-26-N, R-01-E**, Tax Parcel Number: (blank)  
County: **Kitsap**, Well Address: **BIG VALLEY RD NE, POULSBO, 98370**  
Well Report ID: **371480**, Well Tag ID: **AGS202**, Notice of Intent Number: **W071821**  
Well Diameter: **6 in.**, Well Depth: **103 ft.**  
Well Type: **Water**  
Well Completion Date: **04-19-2002**, Well Report Received Date: **11-14-2003**
12. **GORDON HAIRES** - { [View PDE](#) }  
Public Land Survey: **SW, NW, S-11, T-26-N, R-01-E**, Tax Parcel Number: (blank)  
County: **Kitsap**, Well Address: (blank)  
Well Report ID: **64841**, Well Tag ID: (blank), Notice of Intent Number: (blank)  
Well Diameter: **6 in.**, Well Depth: **93 ft.**  
Well Type: **Water**  
Well Completion Date: (blank), Well Report Received Date: (blank)
13. **HARLEY UNRUH** - { [View PDE](#) }  
Public Land Survey: **SE, NE, S-10, T-26-N, R-01-E**, Tax Parcel Number: **102601-1-005-2006**  
County: **Kitsap**, Well Address: **22172 VIKING WY NW, POULSBO 98390**  
Well Report ID: **589985**, Well Tag ID: **AES373**, Notice of Intent Number: **W215654**  
Well Diameter: **6 in.**, Well Depth: **120 ft. 2 in.**  
Well Type: **Water**  
Well Completion Date: **02-03-2006**, Well Report Received Date: **06-23-2009**
14. **JACK COX** - { [View PDE](#) }  
Public Land Survey: **NE, SW, S-11, T-26-N, R-01-E**, Tax Parcel Number: (blank)  
County: **Kitsap**, Well Address: **BIG VALLEY RD**  
Well Report ID: **72905**, Well Tag ID: **ABP920**, Notice of Intent Number: **W053923**  
Well Diameter: **6 in.**, Well Depth: **99 ft.**  
Well Type: **Water**  
Well Completion Date: **05-11-1995**, Well Report Received Date: **06-02-1995**
15. **James Morgensen** - { [View PDE](#) }  
Public Land Survey: **SE, SE, S-10, T-26-N, R-01-E**, Tax Parcel Number: **10260140082007**  
County: **Kitsap**, Well Address: **21005 Hwy 305 NE, Poulsbo 98370**  
Well Report ID: **825802**, Well Tag ID: (blank), Notice of Intent Number: **WE15216**  
Well Diameter: **6 in.**, Well Depth: **67 ft.**  
Well Type: **Water**  
Well Completion Date: **10-08-2012**, Well Report Received Date: **11-01-2012**
16. **JIM GRIEG** - { [View PDE](#) }  
Public Land Survey: **NE, SE, S-10, T-26-N, R-01-E**, Tax Parcel Number: (blank)  
County: **Kitsap**, Well Address: (blank)  
Well Report ID: **65945**, Well Tag ID: (blank), Notice of Intent Number: **014831**  
Well Diameter: **6 in.**, Well Depth: **126 ft.**  
Well Type: **Water**  
Well Completion Date: (blank), Well Report Received Date: (blank)
17. **JIM SHIELDS** - { [View PDE](#) }  
Public Land Survey: **NW, SW, S-11, T-26-N, R-01-E**, Tax Parcel Number: (blank)  
County: **Kitsap**, Well Address: (blank)  
Well Report ID: **278397**, Well Tag ID: (blank), Notice of Intent Number: (blank)  
Well Diameter: **6 in.**, Well Depth: **352 ft.**  
Well Type: **Water**  
Well Completion Date: (blank), Well Report Received Date: (blank)
18. **JOHN ELIASON** - { [View PDE](#) }  
Public Land Survey: **NW, SE, S-11, T-26-N, R-01-E**, Tax Parcel Number: (blank)  
County: **Kitsap**, Well Address: (blank)  
Well Report ID: **278915**, Well Tag ID: **AAC156**, Notice of Intent Number: (blank)  
Well Diameter: **6 in.**, Well Depth: **265 ft.**  
Well Type: **Water**  
Well Completion Date: (blank), Well Report Received Date: (blank)
19. **JOHN HAHTO** - { [View PDE](#) }  
Public Land Survey: **NW, NE, S-15, T-26-N, R-01-E**, Tax Parcel Number: (blank)  
County: **Kitsap**, Well Address: (blank)  
Well Report ID: **66310**, Well Tag ID: (blank), Notice of Intent Number: (blank)  
Well Diameter: **6 in.**, Well Depth: **35 ft.**  
Well Type: **Water**  
Well Completion Date: **04-17-1974**, Well Report Received Date: (blank)
20. **JOHN HANSEN** - { [View PDE](#) }  
Public Land Survey: **NE, SW, S-11, T-26-N, R-01-E**, Tax Parcel Number: (blank)  
County: **Kitsap**, Well Address: **21309 BIG VALLEY RD., POULSBO**  
Well Report ID: **278410**, Well Tag ID: **AAA564**, Notice of Intent Number: (blank)  
Well Diameter: **6 in.**, Well Depth: **302 ft.**  
Well Type: **Water**  
Well Completion Date: **07-01-1991**, Well Report Received Date: **09-09-1991**
21. **JOHN JOHNSTONE** - { [View PDE](#) }  
Public Land Survey: **NE, SW, S-11, T-26-N, R-01-E**, Tax Parcel Number: (blank)  
County: **Kitsap**, Well Address: (blank)  
Well Report ID: **66352**, Well Tag ID: (blank), Notice of Intent Number: (blank)  
Well Diameter: **6 in.**, Well Depth: **230 ft.**  
Well Type: **Water**  
Well Completion Date: **08-23-1982**, Well Report Received Date: (blank)
22. **JOHN MC COLLUM** - { [View PDE](#) }  
Public Land Survey: **SE, SW, S-11, T-26-N, R-01-E**, Tax Parcel Number: (blank)  
County: **Kitsap**, Well Address: (blank)  
Well Report ID: **66394**, Well Tag ID: (blank), Notice of Intent Number: (blank)  
Well Diameter: **6 in.**, Well Depth: **245 ft.**  
Well Type: **Water**  
Well Completion Date: **10-04-1978**, Well Report Received Date: (blank)
23. **JUDSON HENRY** - { [View PDE](#) }  
Public Land Survey: **SW, SW, S-11, T-26-N, R-01-E**, Tax Parcel Number: **11260140092005**  
County: **Kitsap**, Well Address: **20732 LITTLE VALLEY RD, POULSBO**  
Well Report ID: **256267**, Well Tag ID: **ATF258**, Notice of Intent Number: **W093215**  
Well Diameter: **6 in.**, Well Depth: **442 ft.**  
Well Type: **Water**  
Well Completion Date: **08-28-2000**, Well Report Received Date: **10-11-2000**
24. **JUNE ANDREWS** - { [View PDE](#) }  
Public Land Survey: **NE, NW, S-14, T-26-N, R-01-E**, Tax Parcel Number: (blank)  
County: **Kitsap**, Well Address: (blank)  
Well Report ID: **66603**, Well Tag ID: (blank), Notice of Intent Number: (blank)

- Well Diameter: 6 in. , Well Depth: 323 ft.  
Well Type: Water  
Well Completion Date: 10-21-1986, Well Report Received Date: (blank)
25. **KEVIN SCHWARZ** - { [View PDF](#) }  
Public Land Survey: NE, SW, S-11, T-26-N, R-01-E, Tax Parcel Number: 112601-3-030-2000  
County: Kitsap, Well Address: BIG VALLEY RD, POULSBO  
Well Report ID: 392296, Well Tag ID: AKR083, Notice of Intent Number: W178606  
Well Diameter: 6 in. , Well Depth: 343 ft.  
Well Type: Water  
Well Completion Date: 10-05-2004, Well Report Received Date: 11-15-2004
26. **MIKE & CHRIS BRINTON** - { [View PDF](#) }  
Public Land Survey: NW, SE, S-11, T-26-N, R-01-E, Tax Parcel Number: (blank)  
County: Kitsap, Well Address: (blank)  
Well Report ID: 67944, Well Tag ID: (blank), Notice of Intent Number: (blank)  
Well Diameter: 6 in. , Well Depth: 95 ft.  
Well Type: Water  
Well Completion Date: 05-31-1983, Well Report Received Date: (blank)
27. **MIKE RICE** - { [View PDF](#) }  
Public Land Survey: SW, NE, S-11, T-26-N, R-01-E, Tax Parcel Number: (blank)  
County: Kitsap, Well Address: (blank)  
Well Report ID: 68079, Well Tag ID: (blank), Notice of Intent Number: (blank)  
Well Diameter: 6 in. , Well Depth: 130 ft.  
Well Type: Water  
Well Completion Date: 11-07-1981, Well Report Received Date: 12-01-1981
28. **MRS. ROBERT SHEATS** - { [View PDF](#) }  
Public Land Survey: SE, NE, S-10, T-26-N, R-01-E, Tax Parcel Number: (blank)  
County: Kitsap, Well Address: 21992 VIKING WY NW, POULSBO, 98370  
Well Report ID: 68668, Well Tag ID: (blank), Notice of Intent Number: W016777  
Well Diameter: 6 in. , Well Depth: 195 ft.  
Well Type: Water  
Well Completion Date: 02-16-1994, Well Report Received Date: 03-03-1994
29. **NICK ANDERSON** - { [View PDF](#) }  
Public Land Survey: NW, SE, S-11, T-26-N, R-01-E, Tax Parcel Number: (blank)  
County: Kitsap, Well Address: (blank)  
Well Report ID: 68778, Well Tag ID: (blank), Notice of Intent Number: (blank)  
Well Diameter: 6 in. , Well Depth: 35 ft.  
Well Type: Water  
Well Completion Date: 04-26-1978, Well Report Received Date: (blank)
30. **PAUL MICHAUD** - { [View PDF](#) }  
Public Land Survey: SW, NW, S-11, T-26-N, R-01-E, Tax Parcel Number: (blank)  
County: Kitsap, Well Address: (blank)  
Well Report ID: 69104, Well Tag ID: (blank), Notice of Intent Number: (blank)  
Well Diameter: 6 in. , Well Depth: 108 ft.  
Well Type: Water  
Well Completion Date: 06-30-1976, Well Report Received Date: (blank)
31. **PROTECH SYSTEMS, CHRIS DULAS** - { [View PDF](#) }  
Public Land Survey: SE, NE, S-10, T-26-N, R-01-E, Tax Parcel Number: (blank)  
County: Kitsap, Well Address: 21709 VETTER RD., NE, POULSBO  
Well Report ID: 69362, Well Tag ID: AAA563, Notice of Intent Number: (blank)  
Well Diameter: 6 in. , Well Depth: 209 ft.  
Well Type: Water  
Well Completion Date: 09-13-1988, Well Report Received Date: (blank)
32. **RICHARD FREDRICKSON** - { [View PDF](#) }  
Public Land Survey: SW, NE, S-11, T-26-N, R-01-E, Tax Parcel Number: (blank)  
County: Kitsap, Well Address: 22016 BIG VALLEY RD, POULSBO, 98370  
Well Report ID: 73004, Well Tag ID: ABV957, Notice of Intent Number: W099858  
Well Diameter: 6 in. , Well Depth: 210 ft.  
Well Type: Water  
Well Completion Date: 11-06-1997, Well Report Received Date: 01-09-1998
33. **RICHARD RILE** - { [View PDF](#) }  
Public Land Survey: SW, SW, S-11, T-26-N, R-01-E, Tax Parcel Number: (blank)  
County: Kitsap, Well Address: (blank)  
Well Report ID: 278696, Well Tag ID: (blank), Notice of Intent Number: (blank)  
Well Diameter: 6 in. , Well Depth: 100 ft.  
Well Type: Water  
Well Completion Date: (blank), Well Report Received Date: (blank)
34. **STEVE KASNER** - { [View PDF](#) }  
Public Land Survey: SE, SE, S-10, T-26-N, R-01-E, Tax Parcel Number: (blank)  
County: Kitsap, Well Address: (blank)  
Well Report ID: 70780, Well Tag ID: (blank), Notice of Intent Number: 006765  
Well Diameter: 0 in. , Well Depth: 0 ft.  
Well Type: Water  
Well Completion Date: (blank), Well Report Received Date: 03-09-1989
35. **STEVE SALTER / PIERRE SCHAR** - { [View PDF](#) }  
Public Land Survey: NW, SE, S-11, T-26-N, R-01-E, Tax Parcel Number: (blank)  
County: Kitsap, Well Address: (blank)  
Well Report ID: 70817, Well Tag ID: (blank), Notice of Intent Number: (blank)  
Well Diameter: 6 in. , Well Depth: 270 ft.  
Well Type: Water  
Well Completion Date: 08-31-1979, Well Report Received Date: (blank)
36. **T.C. CATANIA** - { [View PDF](#) }  
Public Land Survey: NE, SE, S-10, T-26-N, R-01-E, Tax Parcel Number: (blank)  
County: Kitsap, Well Address: HWY 305 AND HWY 3  
Well Report ID: 70934, Well Tag ID: (blank), Notice of Intent Number: 070752  
Well Diameter: 6 in. , Well Depth: 49 ft.  
Well Type: Water  
Well Completion Date: 10-04-1989, Well Report Received Date: (blank)
37. **TRUMAN SYLLING** - { [View PDF](#) }  
Public Land Survey: SE, NE, S-10, T-26-N, R-01-E, Tax Parcel Number: (blank)  
County: Kitsap, Well Address: (blank)  
Well Report ID: 71305, Well Tag ID: (blank), Notice of Intent Number: (blank)  
Well Diameter: 6 in. , Well Depth: 60 ft.  
Well Type: Water  
Well Completion Date: 05-11-1982, Well Report Received Date: (blank)

38. **TRUNNEL** - { [View PDF](#) }  
Public Land Survey: **NW, SE, S-11, T-26-N, R-01-E**, Tax Parcel Number: **(blank)**  
County: **Kitsap**, Well Address: **(blank)**  
Well Report ID: **71307**, Well Tag ID: **(blank)**, Notice of Intent Number: **(blank)**  
Well Diameter: **6 in.**, Well Depth: **43 ft.**  
Well Type: **Water**  
Well Completion Date: **11-13-1986**, Well Report Received Date: **02-17-1987**

**Total Result Pages: 1**

