



Coos County Land Use Permit Application

SUBMIT TO COOS COUNTY PLANNING DEPT. AT 60 E. SECOND STREET OR MAIL
TO: COOS COUNTY PLANNING 250 N. BAXTER, COQUILLE OR 97423. EMAIL
PLANNING@CO.COOS.OR.US PHONE: 541-396-7770

~~195~~
195

DR-22-047

FILE NUMBER: ACU-22-015

Date Received: 4/20/22 Receipt #: 231921 Received by: MB

This application shall be filled out electronically. If you need assistance please contact staff.

If the fee is not included the application will not be processed.
(If payment is received on line a file number is required prior to submittal)

LAND INFORMATION

A. Land Owner(s) Susan & Vahe Arakelian

Mailing address: 24775 SW Gage Rd., Wilsonville, OR 97070

Phone: 503-638-1006 Email: bahaaautobody@live.com

| Township: | Range: | Section: | ¼ Section: | 1/16 Section: | Tax lots: |
|------------|------------|-----------|------------|---------------|-------------|
| <u>23S</u> | <u>13W</u> | <u>34</u> | <u>D</u> | <u>D</u> | <u>2000</u> |
| Select | Select | Select | Select | Select | |

Tax Account Number(s): 66310 Zone: Select Zone Rural Residential-2 (RR-2)
Tax Account Number(s) _____ Please Select _____

B. Applicant(s) same as above

Mailing address: _____
Phone: _____

C. Consultant or Agent: N/A

Mailing Address _____
Phone #: _____ Email: _____

Type of Application Requested

- | | | |
|--|---|---|
| <input type="checkbox"/> Comp Plan Amendment | <input checked="" type="checkbox"/> Administrative Conditional Use Review - ACU | <input type="checkbox"/> Land Division - P, SUB or PUD |
| <input type="checkbox"/> Text Amendment | <input type="checkbox"/> Hearings Body Conditional Use Review - HBCU | <input type="checkbox"/> Family/Medical Hardship Dwelling |
| <input type="checkbox"/> Map - Rezone | <input type="checkbox"/> Variance - V | <input type="checkbox"/> Home Occupation/Cottage Industry |

Special Districts and Services

Water Service Type: On-Site (Well or Spring) Sewage Disposal Type: On-Site Septic
School District: North Bend Fire District: Select Fire District

Please include the supplement application with request. If you need assistance with the application or supplemental application please contact staff. Staff is not able to provide legal advice. If you need help with findings please contact a land use attorney or consultant.

Any property information may be obtained from a tax statement or can be found on the County Assessor's webpage at the following links: [Map Information](#) Or [Account Information](#)

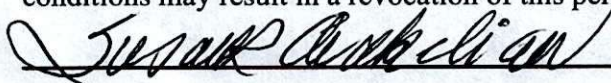
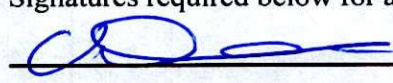
D. ATTACHED WRITTEN STATEMENT. With all land use applications, the "burden of proof" is on the applicant. It is important that you provide information that clearly describes the nature of the request and indicates how the proposal complies with all of the applicable criteria within the Coos County Zoning and Land Development Ordinance (CCZLDO). You must address each of the Ordinance criteria on a point-by-point basis in order for this application to be deemed complete. A planner will explain which sections of the Ordinance pertain to your specific request. The information described below is required at the time you submit your application. The processing of your application does not begin until the application is determined to be complete. An incomplete application will postpone the decision, or may result in denial of the request. Please mark the items below to ensure your submittal is complete.

Application Check List: Please make off all steps as you complete them.

- I. A written statement of intent, attached to this application, with necessary supporting evidence which fully and factually describes the following:
 - 1. A complete explanation of how the request complies with the applicable provisions and criteria in the Zoning Ordinance. A planner will explain which sections of the Ordinance pertain to your specific request. You must address each of the Ordinance criteria on a point-by-point basis in order for this application to be deemed complete.
 - 2. A description of the property in question, including, but not limited to the following: size, vegetation, crops grown, access, existing buildings, topography, etc.
 - 3. A complete description of the request, including any new structures proposed.
 - 4. If applicable, documentation from sewer and water district showing availability for connection.
- II. A plot plan (map) of the property. Please indicate the following on your plot plan:
 - 1. Location of all existing and proposed buildings and structures
 - 2. Existing County Road, public right-of-way or other means of legal access
 - 3. Location of any existing septic systems and designated repair areas
 - 4. Limits of 100-year floodplain elevation (if applicable)
 - 5. Vegetation on the property
 - 6. Location of any outstanding physical features
 - 7. Location and description (paved, gravel, etc.) of vehicular access to the dwelling location
- III. A copy of the current deed, including the legal description, of the subject property. Copies may be obtained at the Coos County Clerk's Office.

I certify that this application and its related documents are accurate to the best of my knowledge. I am aware that there is an appeal period following the date of the Planning Director's decision on this land use action. I understand that the signature on this application authorizes representatives of the Coos County Planning Department to enter upon the subject property to gather information pertinent to this request. If the application is signed by an agent, the owner's written authorization must be attached.

If this application is refereed directly to a hearings officer or hearings body I understand that I am obligated to pay the additional fees incurred as part of the conditions of approval. I understand that I/we are not acting on the county's behalf and any fee that is a result of complying with any conditions of approval is the applicants/property owner responsibility. I understand that conditions of approval are required to be complied with at all time and an violation of such conditions may result in a revocation of this permit. Signatures required below for application processing.

 _____  _____

ACCESS INFORMATION

The Coos County Road Department will be reviewing your proposal for safe access, driveway, road, and parking standards. There is a fee for this service. If you have questions about these services please contact the Road Department at 541-396-7660.

Property Address: 68975 Circle Loop, North Bend, OR 97459

Type of Access: Public Road Name of Access: Circle Loop

Is this property in the Urban Growth Boundary? No

Is a new road created as part of this request? No

Required parking spaces are based on the use of the property. If this is for a residential use two spaces are required. Any other use will require a separate parking plan submitted that is required to have the following items:

- Current utilities and proposed utilities;
- Roadmaster may require drawings and specs from the Oregon Standards Specification Manual (OSSC) (current edition).
- The location and design of bicycle and pedestrian facilities shall be indicated on the site plan if this is a parking plan;
- Location of existing and proposed access point(s) on both sides of the road where applicable;
- Pedestrian access and circulation will be required if applicable. Internal pedestrian circulation shall be provided in new commercial, office, and multi-family residential developments through the clustering of buildings, construction of walkways, landscaping, accessways, or similar techniques;
- All plans (industrial and commercial) shall clearly show how the internal pedestrian and bicycle facilities of the site connect with external existing or planned facilities or systems;
- Distances to neighboring constructed access points, median openings (where applicable), traffic signals (where applicable), intersections, and other transportation features on both sides of the property;
- Number and direction of lanes to be constructed on the road plus striping plans;
- All planned transportation features (such as sidewalks, bikeways, auxiliary lanes, signals, etc.); and
- Parking and internal circulation plans including walkways and bikeways, in UGB's and UUC's.

Additional requirements that may apply depending on size of proposed development.

- Traffic Study completed by a registered traffic engineer.
- Access Analysis completed by a registered traffic engineer
- Sight Distance Certification from a registered traffic engineer.

Regulations regarding roads, driveways, access and parking standards can be found in Coos County Zoning and Land Development Ordinance (CCZLDO) Article 7.

By signing the application I am authorizing Coos County Roadmaster or designee to enter the property to determine compliance with Access, Parking, driveway and Road Standards. Inspections should be made by calling the Road Department at 541-396-7660

Coos County Road Department Use Only

Roadmaster or designee: _____

Driveway Parking Access Bonded Date: Receipt # _____

File Number: DR-21-

ADDRESS OF DRIVEWAY #1 CLOSEST TO YOUR NEW DRIVEWAY: _____

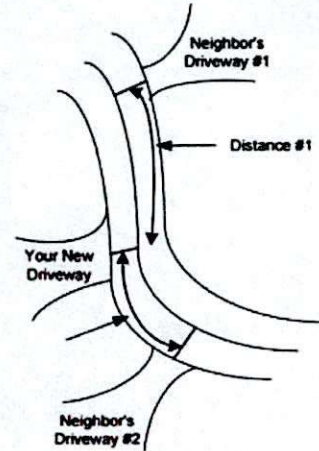
DISTANCE FROM DRIVEWAY #1 TO YOUR NEW DRIVEWAY: _____

Is this driveway on the same side of the road as your Driveway: Select

ADDRESS OF DRIVEWAY #2 CLOSEST TO YOUR NEW DRIVEWAY: _____

DISTANCE FROM DRIVEWAY #2 TO YOUR NEW DRIVEWAY: _____

Is this driveway on the same side of the road as your Driveway: Select



The distance information is important from your new driveway to the closest driveways on either side of you (doesn't matter which side of the road) and what the addresses are to those two driveways. This information is important to include in the formula used to calculate the correct address.

Staff from the County Road Department will place the stake and once the driveway stake has been placed, it must not be moved. If your stake is removed or damaged you may purchase replacements.

Additional Notes or directions:

This application is not required.

SANITATION INFORMATION

If this is a request for a recreational, commercial, industrial, vacation rental, manufactured home park, mass or small gathering Coos Health and Wellness, Environmental Health Staff will be reviewing the proposal to ensure the use meets environmental health standards for sanitation and water requirements to serve the facility. If the proposal indicates that you are using a community water system a review may be required. A fee is charged for this service and shall be submitted with the application \$83.00. If you have questions about regulations regarding environmental health services please call 541-266-6720. This form is required to be signed off for any type of subdivision, recreational, commercial, industrial, vacation rental, manufactured home park, mass or small gathering.

Water Service Type: On-site Well

Sewage Disposal Type: On-site septic

Please check if this request is for industrial, commercial, recreational or home base business use and complete the following questions:

- How many employees/vendors/patrons, total, will be on site?
- Will food be offered as part of the an on-site business?
- Will overnight accommodations be offered as part of an on-site business?
- What will be the hours of operation of the business?

Please check if the request is for a land division.

Coos County Environmental Health Use Only:

Staff Reviewing Application: _____

Staff Signature: _____

- This application is found to be in compliance and will require no additional inspections
- This application is found to be in compliance but will require future inspections
- This application will require inspection prior to determining initial compliance. The applicant shall contact Coos Health and Wellness, Environmental Heath Division to make an appointment.

Additional Comments:

Vahe & Susan Arakelian

24775 SW Gage Rd

Wilsonville Oregon, 97070

Work: 503-638-1006, Cell: 503-490-1160

bahaautobody@live.com

Coos County Planning

60 E Second Street

Coquille Oregon, 97423

541-396-7770

Attn: Planning Department

Subject: Letter of Intent

Dear Coos County,

We are writing this Letter of Intent in regard to permitting a new manufactured home on our property at 68975 Circle Loop, North Bend , Oregon 97459.

We bought the property in October 2020, since our purchase we have worked extremely hard at cleaning the property and preparing it for our new 2022 manufactured home that is up to code and energy efficient. We love the area, neighborhood, the new neighbors we have met over the time of owning and working on our new property, plus we have family on Saunders Lake.

We want to make North Bend our permanent residence, we retire this year and plan to enjoy life on the coast.

Our Circle Loop property has been an earlier home stead for many families over the last sixty plus years and we are wanting to make it now our home.

The property currently has an old single wide mobile home that is three bedroom and one bathroom, it is not livable. We will be removing this home as soon as our new home arrives. The new home is a 2-bedroom, two bath doublewide.

We have had the property correctly prepared with the gravel pad, and setbacks. The property does have existing electricity, well and septic that we have had serviced and ready for new home.

Attached to this letter please find the following:

- Land use permit application
- Statutory Warranty Deed
- Reconnaissance-Level Geologic Hazzard Assessment
- Property Taxes
- Site Map

We are a very honest, diligent family and will be a great part of the community, and we are excited to make North Bend our home.

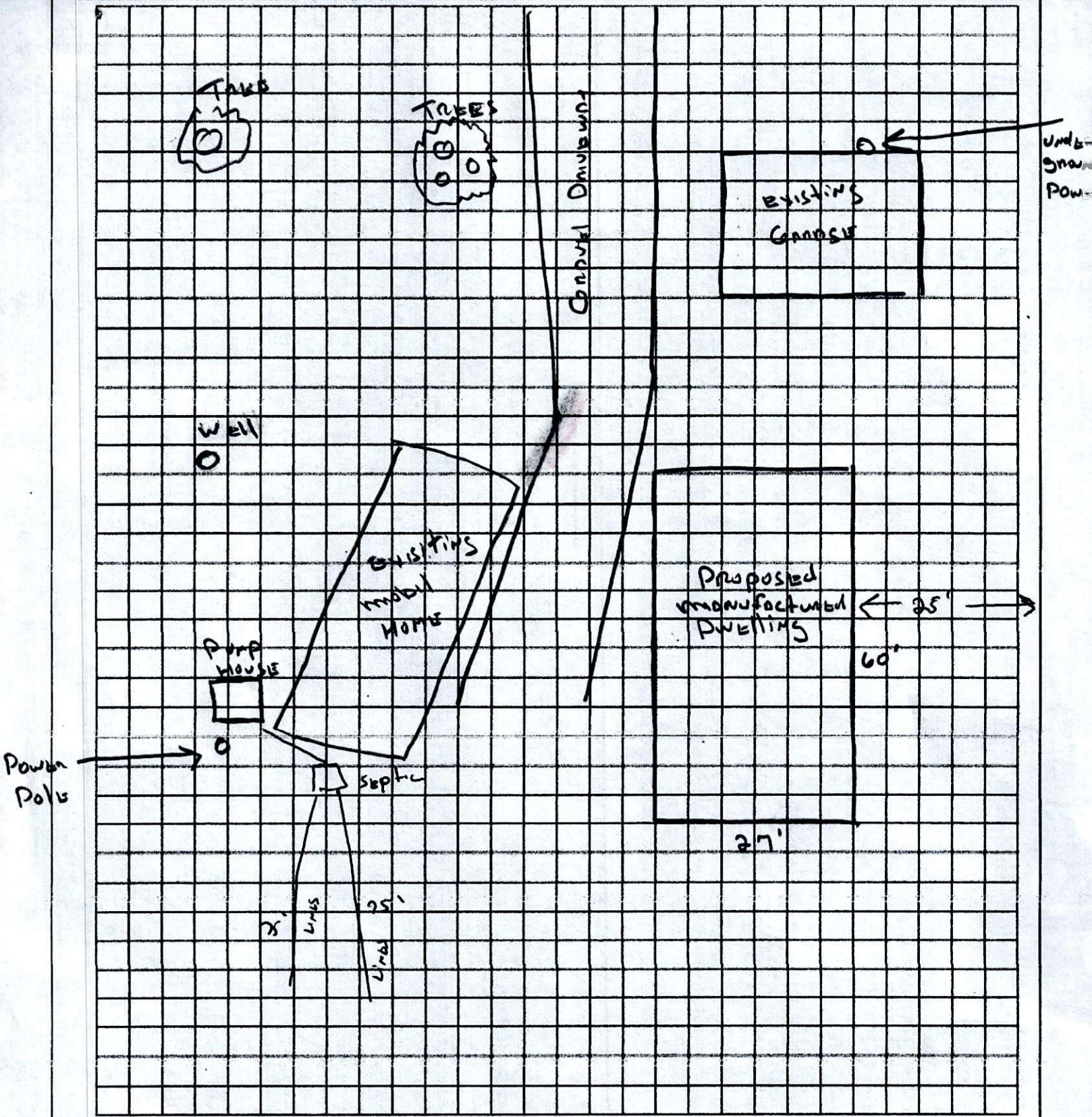
Please except this Letter of Intent and know we are responsible family and will do whatever is needed to receive the permit for our new home.

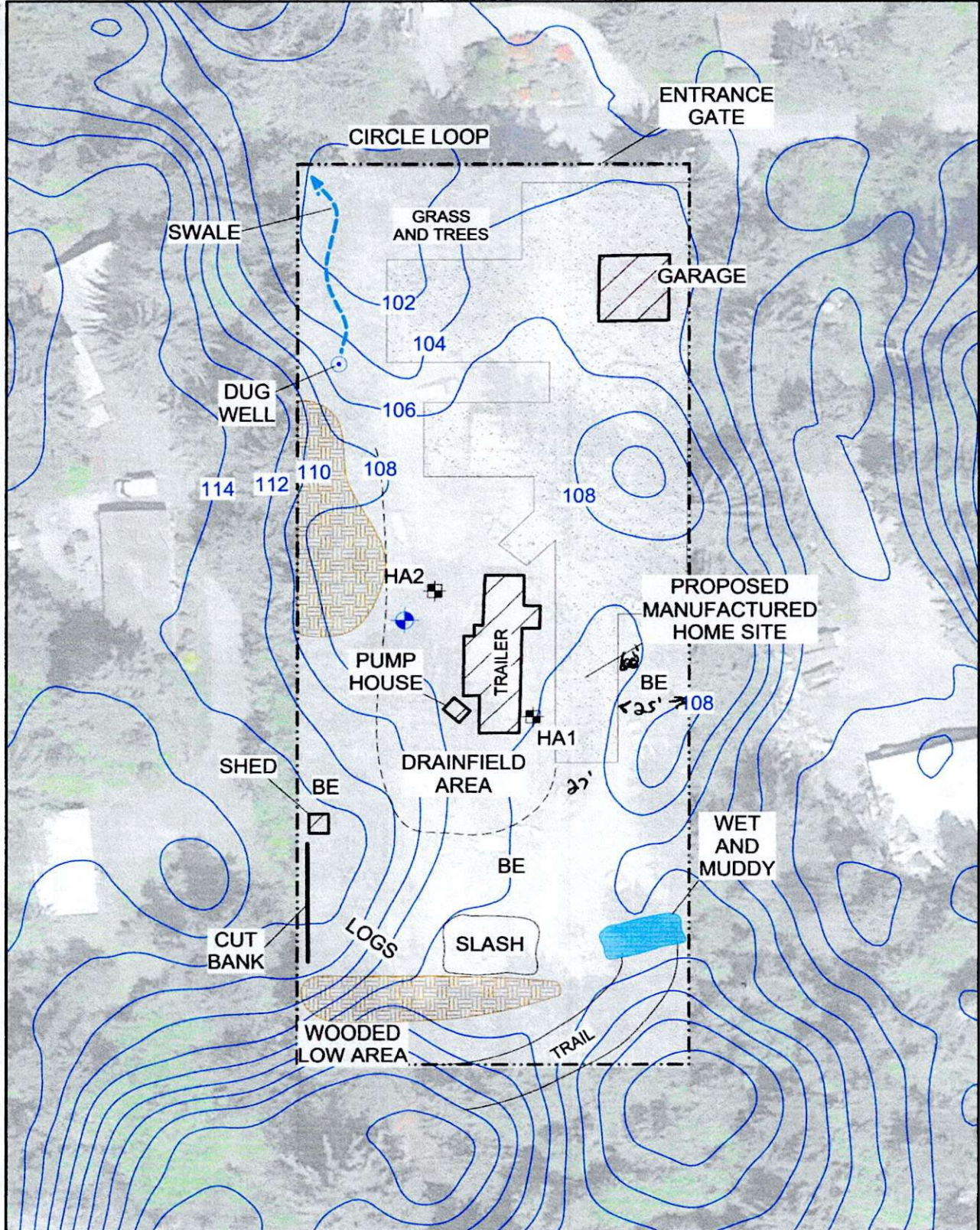
Sincerely,



Vahe & Susan Arakelian

North Bend, OR 97459





| LEGEND: | |
|---------|---|
| | SUBJECT BUILDINGS |
| | SUBJECT PROPERTY BOUNDARIES |
| | GRAVELED AREAS |
| | FILL |
| | DRILLED WELL |
| | BARE EARTH |
| | ESTIMATED SURFACE ELEVATION CONTOUR (MODELED USING DOGAMI LIDAR DATA) CONTOUR INTERVAL = 2 FEET LIDAR |
| | ENW TEMPORARY SHALLOW SOIL BORING LOCATION |

NOTES:

1. BASE MAP DEVELOPED FROM AN AERIAL PHOTOGRAPH MAP DATED 2022 AND ENW FIELD NOTES.
2. ALL BUILDING, STREET, AND FEATURE LOCATIONS ARE APPROXIMATE.
3. SYMBOLS REPRESENT LOCATION AND DO NOT ALWAYS REPRESENT EXACT SHAPE, SIZE, OR ORIENTATION.

APPROXIMATE SCALE

EVREN NORTHWEST
ENVIRONMENTAL & NATURAL RESOURCE CONSULTANTS

PO BOX 14488, PORTLAND, OREGON 97203
P: (503)462-5561, E: ENW@EVREN-NW.COM

FIGURE 4
SITE PLAN
RESIDENTIAL PROPERTY
68975 CIRCLE LOOP
NORTH BEND, OREGON

RECORDING REQUESTED BY:



300 Anderson Ave
Coos Bay, OR 97420

GRANTOR'S NAME:

GRANTEE'S NAME:

The Arakelian Family Revocable Trust dated September 30, 2003

AFTER RECORDING RETURN TO:

Order No.: 360620032322-LS
Vahe Arakelian and Susan Arakelian, Trustees of The Arakelian
Family Revocable Trust dated September 30, 2003
24775 SW Gage Road
Wilsonville, OR 97070

SEND TAX STATEMENTS TO:

The Arakelian Family Revocable Trust dated September 30, 2003
24775 SW Gage Road
Wilsonville, OR 97070

APN: 66310
Map: 23S 13W 34DD 02000 00
68975 Circle Loop, North Bend, OR 97459

Coos County, Oregon 2020-09961

\$96.00 Pgs=3 10/06/2020 02:39 PM

eRecorded by: TICOR TITLE COOS BAY

Debbie Heller, CCC, Coos County Clerk

SPACE ABOVE THIS LINE FOR RECORDER'S USE

STATUTORY WARRANTY DEED

David L. Hudson, Jr., Grantor, conveys and warrants to Vahe Arakelian and Susan Arakelian, Trustees of The Arakelian Family Revocable Trust dated September 30, 2003, Grantee, the following described real property, free and clear of encumbrances except as specifically set forth below, situated in the County of Coos, State of Oregon:

A parcel of land in the SE 1/4 of the SE 1/4 of Section 34, Township 23 South, Range 13 West of the Willamette Meridian, Coos County, Oregon; described as follows:

Beginning at the Southwest corner of Lot 21, Plat of Southwood, running thence Southerly and parallel with the Westerly line of Lot 21, Plat of Southwood, a distance of 370 feet to the true point of beginning of the Tract to be described; thence East parallel to and 370 feet South of the South line of the Plat of Southwood a distance of 150 feet; thence Southerly and parallel with the Easterly line of Lot 21, Plat of Southwood, a distance of 428.91 feet, to the South line of Township 23 South, Range 13 West of the Willamette Meridian, Coos County, Oregon; thence Westerly along said Township line and North 86° 42' 20" West, 150.25 feet; thence Northerly parallel with the Westerly line of Lot 21, Plat of Southwood, a distance of 420.27 feet, to the place of beginning.

THE TRUE AND ACTUAL CONSIDERATION FOR THIS CONVEYANCE IS THREE HUNDRED TWENTY-FIVE THOUSAND AND NO/100 DOLLARS (\$325,000.00). (See ORS 93.030).

Subject to:

SEE EXHIBIT "A" ATTACHED HERETO AND MADE A PART HEREOF

BEFORE SIGNING OR ACCEPTING THIS INSTRUMENT, THE PERSON TRANSFERRING FEE TITLE SHOULD INQUIRE ABOUT THE PERSON'S RIGHTS, IF ANY, UNDER ORS 195.300, 195.301 AND 195.305 TO 195.336 AND SECTIONS 5 TO 11, CHAPTER 424, OREGON LAWS 2007, SECTIONS 2 TO 9 AND 17, CHAPTER 855, OREGON LAWS 2009, AND SECTIONS 2 TO 7, CHAPTER 8, OREGON LAWS 2010. THIS INSTRUMENT DOES NOT ALLOW USE OF THE PROPERTY DESCRIBED IN THIS INSTRUMENT IN VIOLATION OF APPLICABLE LAND USE LAWS AND REGULATIONS. BEFORE SIGNING OR ACCEPTING THIS INSTRUMENT, THE PERSON ACQUIRING FEE TITLE TO THE PROPERTY SHOULD CHECK WITH THE APPROPRIATE CITY OR COUNTY PLANNING DEPARTMENT TO VERIFY THAT THE UNIT OF LAND BEING TRANSFERRED IS A LAWFULLY ESTABLISHED LOT OR PARCEL, AS DEFINED IN ORS 92.010 OR 215.010, TO VERIFY THE APPROVED USES OF THE LOT OR PARCEL, TO DETERMINE ANY LIMITS ON LAWSUITS AGAINST FARMING OR FOREST PRACTICES, AS DEFINED IN ORS 30.930, AND TO INQUIRE ABOUT THE RIGHTS OF NEIGHBORING PROPERTY OWNERS, IF ANY, UNDER ORS 195.300, 195.301 AND 195.305 TO 195.336 AND SECTIONS 5 TO 11, CHAPTER 424, OREGON LAWS 2007, SECTIONS 2 TO 9 AND 17, CHAPTER 855, OREGON LAWS 2009, AND SECTIONS 2 TO 7, CHAPTER 8, OREGON LAWS 2010.

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Coos Bay, OR 97420

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GRANTEE'S NAME:

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APN: 66310

Map: 23S 13W 34DD 02000 00

68975 Circle Loop, North Bend, OR 97459

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SEE EXHIBIT "A" ATTACHED HERETO AND MADE A PART HEREOF

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IN WITNESS WHEREOF, the undersigned have executed this document on the date(s) set forth below.

Dated: 9/30/2020

David L. Hudson, Jr.
David L. Hudson, Jr.
Hudson

State of OREGON
County of COOS

This instrument was acknowledged before me on September 30, 2020 by David L. Hudson, Jr.

B. Kraft
Notary Public - State of Oregon

My Commission Expires: 3.18.2024



EXHIBIT "A"
Exceptions

Subject to:

1. Property taxes in an undetermined amount, which are a lien but not yet payable, including any assessments collected with taxes to be levied for the fiscal year 2020-2021.
2. Easement(s) for the purpose(s) shown below and rights incidental thereto as reserved in a document:

Reserved by: Lois M. Aungier and Robert B. Aungier and Dorothy Jarvis and Hugh S. Jarvis
Recording Date: July 3, 1967
Recording No: 67-7-19452
3. Easement(s) for the purpose(s) shown below and rights incidental thereto as set forth in a document:

Entitled: Bargain and Sale Deed
In favor of: Thomas E. Deal
Recording Date: July 21, 1967
Recording No: 67-07-20008
4. Easement(s) for the purpose(s) shown below and rights incidental thereto, as granted in a document:

Granted to: General Telephone Company of the Northwest, Inc.
Recording Date: September 29, 1969
Recording No: 69-9-42469
5. Agreement Easement Agreement, including the terms and provisions thereof

Executed by: Richard S. Randall
Recording Date: May 8, 1970
Recording No.: 70-5-48290
6. Agreement Easement for road purposes, including the terms and provisions thereof

Executed by: Davis L. Hudson and Richmond G. Chaney and Winnie Ruth Chaney, husband and wife
Recording Date: September 8, 1989
Recording No.: 89-09-0409
7. Easement(s) for the purpose(s) shown below and rights incidental thereto, as granted in a document:

Granted to: Sue M. Joy-Sturgeon
Recording Date: October 12, 1995
Recording No: 95-10-0421
8. Easement(s) for the purpose(s) shown below and rights incidental thereto, as granted in a document:

Granted to: Central Lincoln People's Utility District
Recording Date: December 20, 1974
Recording No: 74-12-108058



Technical Memorandum

Reconnaissance-Level Geologic Hazard Assessment

68975 Circle Loop
North Bend, Oregon 97459

April 11, 2022

Prepared for:

Vahe Arakelian
Baja Auto Body
24775 SW Gage Rd
Wilsonville, Oregon 97070

Prepared by:



PO Box 14488
Portland, Oregon 97293
T. 503-452-5561 E. ENW@EVREN-NW.com

Project No. 1635-22001-01

Technical Memorandum

Reconnaissance-Level Geologic Hazard Assessment

68975 Circle Loop
North Bend, Oregon 97459

Prepared for:

Vahe Arakelian
Baja Auto Body
24775 SW Gage Rd
Wilsonville, Oregon 97070



EXP. 2/1/2023

By:

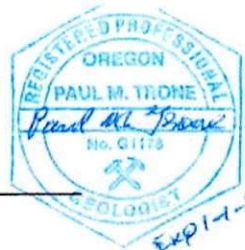


1021

Lynn D. Green, C.E.G., Principal Engineering Geologist

Paul M. Trone

Paul M. Trone, R.G., Principal Geologist



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Appendices

- A Site Photographs**
- B Ground Water Well Logs and Geotechnical Hole Reports**

Technical Memorandum

Reconnaissance-Level Geologic Hazard Assessment

**68975 Circle Loop
North Bend, Oregon**

1.0 INTRODUCTION

This report presents the results of a reconnaissance-level geologic hazard assessment conducted by EVREN Northwest, Inc. (ENW) for a residential property in Coos County, Oregon. The property is located at 68975 Circle Loop, approximately seven miles north of the City of North Bend, Oregon. The County designation for the property is Tax Lot 2000, T23S R13W 34DD (see Figures 1 and 2). Findings and recommendations contained in this report are specific to the subject property.

1.1 Purpose

The purpose of the investigation was to identify the potential geologic hazards and related issues, if any, associated with the subject property. Specifically, the investigation is designed to comply with those County zoning and land use permit requirements pertinent to the property owners' request to locate a manufactured, single-family home on the east central portion of the property. The County zone designation for the property is Rural Residential-2 (RR-2). The investigation was initiated at the request of the property owner.

1.2 Scope

The scope of this investigation consisted of a background review, field investigation, analysis of findings, and development of recommendations. The background review included resources in the office library including maps and publications on regional topography, general geology, engineering geology, geologic hazards, and soils. Relevant on-line information reviewed included aerial and satellite photography, Oregon Department of Geology and Mineral Industries (DOGAMI) Statewide Landslide Information Database for Oregon (SLIDO) and published geologic reports and maps of the project area. Background information provided by the client consisted of a plot plan showing the footprint of the proposed manufactured home. Information sources are cited in the report and referenced at the end of the report. The field investigation consisted of visual observation of landforms and surface features on and adjacent to the subject property and the examination of subsurface materials exposed in outcrops on and near the property and collected from two hand auger borings completed on the subject property.

1.3 Site Description

The subject property consists of a 1.46-acre trapezoidal shaped lot that is approximately 150-feet wide and 425-feet long. It is in the southeast-quarter of the southeast-quarter of Section 34, Township 23 south, Range 13 west of the Willamette Meridian in Coos County, Oregon (Figure 3). The lot is bordered on the east, west, and north (across Circle Loop) by similar size residential

lots and on the south by forest land. Access to the site from Circle Loop is via a gated graveled driveway. The boundaries between the subject property and the adjacent properties to the east, west, and south were not clearly marked during ENW's March 22, 2022, site visit; however, were estimated based on County tax lot maps and aerial photograph of the project area (Figures 2 and 3). There are four structures on the property (Figure 4), including a 30' by 30' garage in the in the northeast corner of the lot, a mobile home with an attached (wood frame) room near the center of the lot, and a small pump house and empty storage shed southwest of the trailer. Much of the natural vegetation has been cleared from the subject property; however, the extreme southern portion of the lot is still forested, and several large evergreen trees remain in the northern portion of the lot and one near the southwest corner of the trailer. A large area south of the garage and east of the trailer has been cleared, graded, and covered with compacted gravel. The manufactured home will be located on the portion of the gravel pad east of the trailer. Domestic water for the property will be obtained from an 86-foot-deep well that was drilled in 2015 and is located west of the trailer. Domestic waste will be treated and disposed of on site by a septic tank and drainfield system located south of the trailer (See Figure 4 and site photographs in Appendix A). Electricity is provided to the property by Pacific Power.

2.0 SITE SETTING

2.1 Geomorphology/Topography

The project area is located along the boundary between two major coastal landforms. To the west is an aerially extensive, north-northeast to south-southwest trending, sand dune complex that includes areas of active and stabilized sand dunes. The eastern edge of this dune complex abuts, and is encroaching on, the western margin of an elevated, marine terrace landform (Beaulieu and Hughes, 1975).¹

Most of the subject property is flat to gently sloping. There is a natural break in slope along a generally east to west line approximately 50- to 75-feet north of the southern property boundary, with the southern end of the site being 5- to 10-feet lower in elevation than the remainder of the property. The area east of the subject property is slightly lower in elevation and the property to the west is slightly higher as shown by the estimated elevation contours on the site plan in Figure 4.² It appears that the natural topography of at least portions of the site have been modified by development activity. There is evidence of soil removal (cut slopes) along the southwestern and east-central property boundaries, and placement of soil and slash debris fill along the slope break mentioned above and along the west-central property boundary. No detailed survey of the site was available; however, based on the U.S. Geological Survey 7.5' topographic quadrangle map of the project area (Lakeside, OR Quadrangle) and contours derived from a LIDAR map² (Figure 4), the elevation of the site is between 100- and 114-feet above mean sea level (amsl).

¹ Beaulieu, J.D., and Hughes, P.W., 1975, Environmental geology of western Coos and Douglas Counties, Oregon: Oregon Dept. of Geology and Mineral Industries, Bulletin 87, 148 p.

² Surface contours were modeled using State DOGAMI LIDAR data and should be treated as estimated. Topographic surveying was not performed as part of this scope of work.

2.2 Hydrology

The Pacific Ocean is located on the western edge of the dune complex, approximately 6,100-feet west of the subject property. The southern end of Maud Lake, a freshwater lake, is approximately 500 feet to the north. Saunders Lake, a larger freshwater lake, is located east of Maud Lake and northeast of the site. A small unnamed lake is located approximately 600-feet to the northwest, and Butterfield Lake is approximately 1,400 feet to the south. No perennial surface water features were observed on or adjacent to the subject property. However, large puddles and very wet surface soils were observed on the northern portion of a trail leading to the southern portion of the property. It appeared that heavy equipment had recently been working in that area. A dry, northerly draining, stormwater swale was observed along the northern portion of the western property boundary (See Figure 4 and photographs in Appendix A).

2.3 Geology

Regional: Beaulieu and Hughes (1975) map the western portion of the coastal strip in the project area as being underlain by geologically Recent active (unstable dune sand [su]), stabilized dune sands (ss), and deflation plain and beach sand (sdpb). The eastern portion of the coastal strip is shown as being underlain by elevated Quaternary marine terrace deposits (Qmt). The dune deposits consist of "unconsolidated fine- to medium-grained sand..." and are reportedly up to 200-feet thick. The terrace deposits are described as consisting of "unconsolidated to semi-consolidated flat-lying and elevated marine deposits of sand, silt, clay, and gravel ...," and reportedly range in thickness from a few feet to over 50 feet. Bedrock geologic units of Tertiary Age typically underlie these surficial units. The bedrock unit in the project area is identified by Beaulieu and Hughes as undifferentiated Coaledo Formation, which they describe as being primarily sandstone.

Site: The surface geology of the subject property is mapped by Beaulieu and Hughes as Qmt. However, in their geologic map explanation the authors state that areas mapped as Qmt that are situated near the coastline can be covered by stable dune sand. Soil observed in recent excavation cuts on the property and soil samples collected from two hand auger borings completed by ENW (HA1 and HA2 on Figure 4) ranged from loose to somewhat dense, fine-sandy silt near the surface to very loose fine to medium sand at three to four feet below the surface (See Appendix B). This information suggests that stabilized dune sands (ss) with a well-developed soil horizon underly at least a portion of the property.

Well construction reports (well logs) for the site-well (COOS 56101; Tax Lot [TL] 2000) and three wells reported to be located on adjacent or nearby properties to the northeast (COOS 52212; TL 1500), north (COOS 54415; TL 1600), and west (COOS 466; TL 1900) are included in Appendix B. These are copies of logs on file in the Oregon Water Resources Department (OWRD) well log data base (GRID database). These wells range in depth from 86- to 118-feet. The logs for the three wells located on adjacent or nearby properties report encountering brown sandy clay (to depths ranging between 25- and 56-feet below ground surface [bgs]) that is underlain by brown sand. Two of these wells report encountering blue clay (likely weathered bedrock) at 116-feet (COOS 54415; TL 1600) and 118-feet (COOS 52212; TL 1500) bgs. The log for the site well COOS 56101 has a much more detailed lithologic log. The log reports that fine brown sand is the dominant type of sediment encountered throughout the 86-foot depth of the well. However, the log also reports encountering a layer of clay with peat from 2- to 5-feet bgs (see comment in

Section 3.1.2), a layer of orange-brown cemented sand from 23- to 26-feet bgs, and multiple 3- to 7-foot-thick layers of sandy clay between 26-feet bgs and the bottom of the well (86' bgs).

Based on field observations and well log information the subject property is underlain by approximately 120-feet of Quaternary alluvium, i.e., stabilized dune sand (ss) and Qmt. Unconsolidated fine to medium sand typical of dune or beach sand (ss), is the dominant sediment type; however, layers or lenses of finer textured (silt and clay dominated) sediment and cemented sand are likely present. These layers may be former surface soils that were buried by shifting dune sand or elevated marine terrace deposits (Qmt) that have been buried by the development of the dune complex.

2.4 Hydrogeology/Ground Water

The unconsolidated to semi-consolidated sand that makes up the dune complex soils allows for the infiltration and storage of a significant percentage of the more than sixty inches of precipitation that falls in the project area annually. As a result, the dunes contain significant volumes of ground water. The ground water is recharged primarily by incident precipitation, and discharges to surface water features (lakes, streams, and the Pacific Ocean) on and adjacent to the dune complex. Well logs for water supply wells located in the project area indicate that ground water is present locally, and that it is used for domestic purposes. A copy of well log COOS 56101 for the subject property well and copies of well logs for three wells (COOS 466, COOS 52212, and COOS 54415) reported to be on properties adjacent to or near the subject property are in Appendix B. The static water levels reported in these four wells at the times of their construction range between 43- and 56-feet bgs. ENW measured the static water level in the site well at 52.7-feet bgs on March 22, 2022.

A dug-well or cistern (well/cistern) that is approximately 4-feet in diameter and 22.5-feet deep is located approximately 90-feet south of the northwest corner of the subject property. The purpose of this feature was not determined; however, it is situated in a shallow swale or ditch that appears to drain toward the north. ENW measured the water level in the well/cistern at 11-feet bgs on March 22, 2022, suggesting the presence of a shallow perched ground water table beneath at least a portion of the property. It should be noted that no ground water or soil profile characteristics indicative of seasonally high water-table conditions were observed in the six-foot deep hand auger borings HA1 and HA2 completed by ENW. Additionally, the 22.5-foot depth of the well/cistern is similar to the depth of 23-feet reported for the cemented sand zone (a possible perching horizon) described on the log for the site well (see well and auger boring logs in Appendix B).

3.0 POTENTIAL GEOLOGIC HAZARDS

3.1 Aseismic Hazards

3.1.1 Mass Wasting

Mass wasting includes all forms of down slope movement of soil and rock material under the influence of gravity. It includes everything from barely perceptible soil creep to catastrophic mud flows and landslides. Steep slopes, weak soil and rock strength, and the various effects of water on soil and rock are the primary controlling factors for mass wasting. Also, earthquakes often serve as triggers for mass wasting events.

Elevated marine terrace deposits (Qmt) and dune sands (ss) with vegetative cover and a well-developed organic soil horizon are generally not subject to significant mass wasting unless they are in an area of steep slopes or are subject to shoreline or streambank erosion. Most of the subject property is relatively flat to gently sloping and not prone to mass wasting. Sloughing of the steep cut-bank along the middle portion of the west property boundary was observed, and bowed tree trunks (possibly indicative of soil creep) were noted on naturally sloping ground on the undeveloped southern end of the site and on the slope between the subject property and the lower lot to the east (Tax Lot 2100). No historically active landslides were mapped within the immediate area (within ½ mile) of the subject site (Figures 5a and 5b). The State has indicated that the landslide hazard in the area of the site is low to moderate (Figure 5c).

3.1.2 Compressible Soils

No highly compressible soils (peat or bog deposits) were observed by ENW in site outcrops or in samples collected from the two auger borings. It should be noted that HA2 was completed a few feet northeast of the on-site water well and did not encounter the clay-with-peat layer reported as being present at 2- to 5-foot bgs on well log COOS 56101 for that well. Definitive determination of the presence or absence of compressible soils at depth beneath the proposed building site would require subsurface testing beyond the scope of this investigation.

3.1.3 Storm Water

The four-foot-thick organic soil horizon with a sandy-silt surface layer that is present beneath the subject property limits the potential for the rapid infiltration of incident precipitation into the subsurface. This, combined with the relatively flat nature of the site and seasonally heavy rainfall, increases the potential for surface water ponding and stormwater run-off. As mentioned in Section 2.2, ENW observed what appeared to be a stormwater swale along the northern portion of the site's western boundary. In addition, standing water and saturated surface soil were observed along the upper (northern) section of the trail leading to the south end of the property. Standing water was also observed in other areas of the site where recent heavy equipment use had disturbed and compacted surface soils. The approximate locations of the swale and areas of standing water / muddy soils observed during the site visit are shown on Figure 4.

3.1.4 Flooding

Given the elevation and topographic setting of the subject property, the potential for aerially extensive flooding appears to be minimal. A Flood Insurance Rate Map from Federal Emergency Management Agency is attached (Figure 6), showing the entire subject property is outside of the 100-year flood plain (1% annual chance flood). The predicted elevations of more frequent flood events (annual, 10-year, etc.) in the project area were not established as part of this assessment.

3.1.5 High Ground Water Table

Based on well log information the regional water table is more than 40-feet bgs beneath the subject property. Based on the results of hand auger borings HA1 and HA2 completed by ENW, the seasonally high perched water table is expected to be greater than 5-feet bgs.

3.1.6 Sea Level Rise

According to National Research Council projections³, a change in sea level ranging from -4 cm (-2 in) to +23 cm (9 in) is projected by the year 2030 along the northern coast of California (north of Cape Mendocino), Oregon, and Washington. Similar projections along the same section of coastline range from -3 cm (-1 in) to +48 cm (19 in) by the year 2050, and +10 cm (4 in) to +143 cm (56 in) by the year 2100. Because the subject property is more than 80-feet amsl, even a rise in sea level that was significantly higher than those predicted will not adversely affect the subject property.

3.1.6 Wind Erosion and Deposition

The potential for significant wind erosion on the subject property is limited to areas where excavation or other development related activities have or could expose the unconsolidated fine to medium sands present at depth. Dune encroachment is common on properties adjacent to active (no vegetation cover) sand dunes. Large active dunes are located approximately 1,000-feet west of the subject property, but accurate prediction of the amount of future dune expansion in the project area is beyond the scope of this investigation.

3.2 Seismic Hazards

3.2.1 Earthquakes

Beaulieu and Hughes (1975) state that geologic evidence for earthquake activity in western Coos and Douglas Counties is ambiguous and historical data are limited; however, the possibility of future faulting of undefined magnitude remains. In the past three decades, geologists have determined that the Northwest is subject to infrequent, but immensely powerful (magnitude 9+ on the Richter Scale) subduction zone earthquakes on the offshore Cascadia Subduction Zone (CSZ) fault system⁴. Geologists believe that the most recent subduction zone earthquake in the Northwest occurred in January of 1700, and that very CSZ earthquakes can be expected to occur on a 300- to 500-year recurring basis. Smaller, but still significant, subduction related earthquakes are likely to occur on a much more frequent basis.

3.2.1 Liquefaction

Liquefaction is a phenomenon in which the strength and stiffness of a soil is reduced by earthquake shaking or other rapid loading. No deep soil exploration or testing was completed by ENW for this project. However, deposits of saturated loose sandy to silty soils are believed to underlie the project area, and these types of soils are subject to the effects of liquefaction triggered by earthquake activity.

³ National Academy of Sciences, National Academy of Engineering, Institute of Medicine, and National Research Council, 2012, *Sea-Level Rise for the Coasts of California, Oregon, and Washington: Past, Present, and Future, Report in Brief*, <http://dels.nas.edu/resources/static-assets/materials-based-on-reports/reports-in-brief/sea-level-rise-brief-final.pdf>

⁴ Priest, G.A., 1995, *Explanation of Mapping Methods and Use of the Tsunami Hazard Maps of the Oregon Coast*: State of Oregon Department of Geology and Mineral Industries Open-File Report O-95-67, 20 p, figures, tables, and appendices.

3.2.1 Slope Failure or Lateral Spread

The effect of a major subduction zone earthquake on slope stability in the project area is difficult to predict. No historically active landslides were mapped within the immediate area (within ½ mile) of the subject site (Figures 5a and 5b), and the State has indicated that the landslide susceptibility of the subject property is low to moderate (Figure 5c).

3.2.2 Amplification of Ground Shaking

The subject site is within the area of the state where peak ground accelerations of 55% of gravity can inflict considerable damage in specially designed structures and great damage in ordinary structures during an earthquake occurring once in every 1,000 years⁵. Amplification of ground shaking induced by a CSZ earthquake is anticipated to be severe along the southern Oregon Coast and at the subject site and surrounding area (Figure 7).

3.3 Tsunamis

Tsunamis are seismically generated sea waves that typically cause catastrophic flooding when they strike coastal areas. Major earthquakes that occur anywhere in the Pacific Basin have the potential to generate a tsunami that could impact the project area. However, the greatest threat is from an earthquake occurring along the CSZ, located just offshore of the Pacific Northwest coastline. The magnitude of the earthquake and its resultant tsunami are primarily driven by the amount and geometry of the slip that takes place when the North American Plate snaps westward over the Juan de Fuca Plate during a CSZ event.

DOGAMI's tsunami inundation map⁶ (Figure 8) displays the output of its computer models representing five (5) selected tsunami scenarios (S, M, L, XL and XXL), all of which include the earthquake-produced subsidence and the tsunami-amplifying effects of the splay fault, which roughly parallels the CSZ. These models predict that the subject area is just outside the projected area of tsunami hazard.

4.0 WETLANDS

Based on information provided by Coos County and the US Fish and Wildlife Service, there are no inventoried wetlands on or near the subject property (Figure 9).

5.0 RECOMENDATIONS

Based on the work completed for this assessment and the findings discussed above, ENW makes the following recommendations:

- The foundation for the manufactured home should be designed and constructed in a manner suitable for the soil and subsurface conditions described in this report.
- Within the existing site constraints (the current placement of the gravel pad and buried utilities for the manufactured home), the maximum setback possible should be maintained

⁵ Madin, I. P. and Mabey, M. A., 1996, Earthquake Hazard Maps for Oregon: Geological Map Series GMS-100, issued by the State of Oregon Department of Geology and Mineral Industries.

⁶ DOGAMI, 2012. Local Source (Cascadia Subduction Zone) Tsunami Inundation Map. Tsunami Inundation Map Coos-16.

between the manufactured home and the eastern boundary of the subject property. In the event the owner of T.L. 2100 should steepen the existing slope on the western portion of his/her property, the potential for mass wasting to affect the subject property could increase. The elevation difference between the subject property and T.L. 2100 is approximately eight vertical feet over a lateral distance of 40 feet (from property line to low point on T.L. 2100). Assuming an angle of repose for loose sand (conservative) of 34 degrees and a potential 8-foot-high cut bank at the property line, a setback of 15 feet from the east side of the manufactured home site to the property line is recommended.

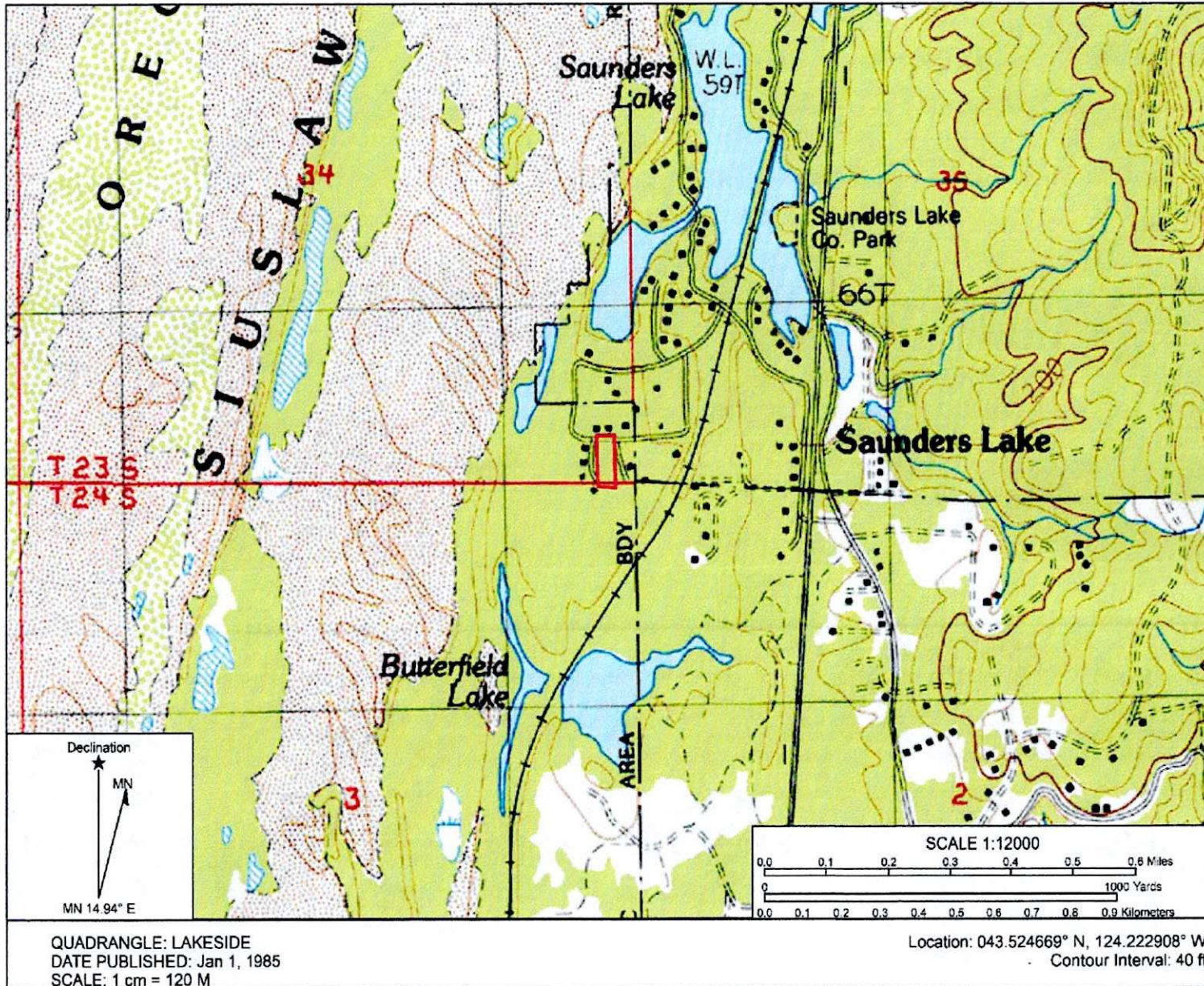
- The sewage treatment and disposal system constructed onsite should comply with all appropriate State and County rules and regulations.
- The lid covering the cistern/well can be easily removed, and a deep uncovered hole would pose a significant risk of injury or death. The cistern/well should be properly decommissioned if not in use, or a more secure and lockable covering should be installed.
- The cap and sanitary seal covering the drilled water well have been off for an undetermined amount of time, leaving the well accessible to rodents, insects, other animals, and vandals. The well should be redeveloped, and the water quality should be assessed before the well is returned to service, and a new cap/sanitary surface seal should be installed.
- Areas of the site where placement of non-engineered fill has occurred should not be used as building sites or for other purposes requiring stable soil conditions.
- Cut slopes steeper than 30-degrees should be stabilized with retaining walls or similar engineered structures to prevent sloughing.
- Areas of exposed soil should be stabilized with vegetation or other means.
- Stormwater run-off from impermeable surfaces should be managed in accordance with Coos County stormwater management regulations, and in such a way as to prevent surface ponding, flooding of crawl spaces, inundation of effluent disposal drainfields, and excessive erosion or sedimentation. Excessive stormwater run-off, blocked or broken drain lines, culverts or ditches, and saturated soils are frequently the most significant contributing factors to severe erosion, localized flooding, and foundation settlement.
- We recommend quantifying the severity of ground motions at the site and/or designing any structures to prevent collapse during a worst-case scenario to minimize injury and/or loss of life to the structure's occupants.

7.0 LIMITATIONS

The scope of this Technical Memorandum is limited to observations made during on-site work; interviews with knowledgeable sources; and review of readily available published and unpublished reports and literature. As a result, these conclusions are based on information supplied by others as well as interpretations by qualified parties.

Limited subsurface exploration has been performed in conjunction with this assessment, and detailed mapping has not been completed. Figures and findings presented herein are based on limited site reconnaissance. Conclusion and recommendation presented in this assessment were prepared in accordance with generally accepted professional geologic engineering principals and practice. We make no warranty, either express or implied.

We have performed our services for this project in accordance with our agreement and understanding with the Client. This document and the information contained herein have been prepared solely for the use of the Client. We have performed this study under a limited scope of services per our agreement. It is possible, despite the use of reasonable care and interpretation that we may have failed to identify the presence of geological hazards other than those specifically mentioned in this assessment. We assume no responsibility for conditions that we did not specifically evaluate, or conditions that were not generally recognized at the time this report was prepared.



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Drawn By: CLR
Approved By: LDG

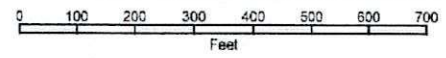
Residential Property
68975 Circle Loop,
North Bend, Oregon

Site Vicinity Map

Project No.
1635-22001
Figure No.
1



Name: Satellite Image
Date: 03/24/22



Location: 043° 31' 29.4841\" N, 124° 13' 18.1154\" W

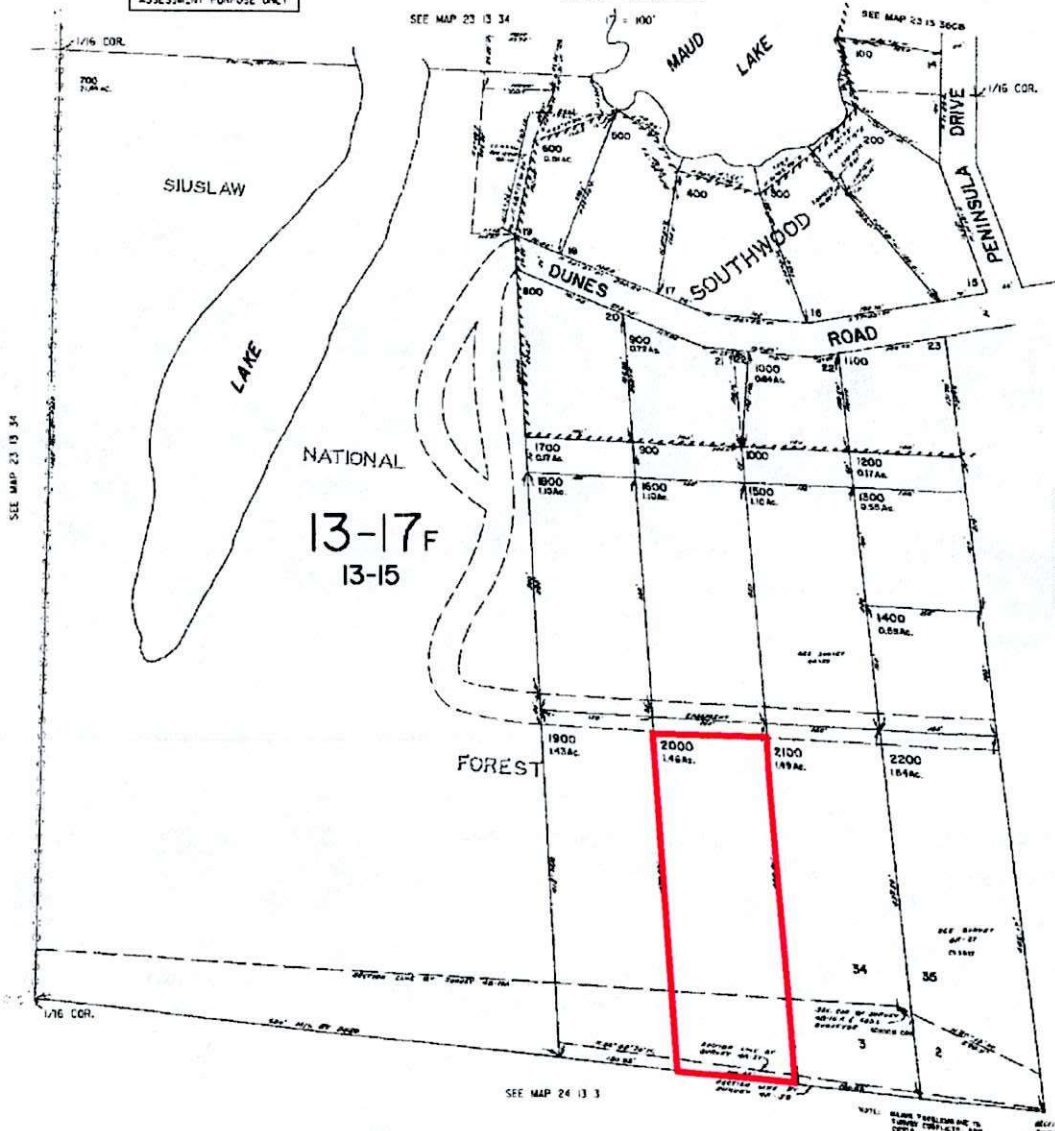
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|--|---|---|---|---|
| | <p>Date Drawn: 3/24/2022 CAD File Name: 1635-22001-01_fig2aerial Drawn By: CLR Approved By: LDG</p> | <p>Residential Property 68975 Circle Loop, North Bend, Oregon</p> | <p>Aerial Photo Map 2022</p> | <p>Project No. 1635-22001 Figure No. 2</p> |
|--|---|---|---|---|

THIS MAP WAS PREPARED FOR ASSESSMENT PURPOSE ONLY

SE1/4 SE1/4 SEC. 34 T.23S. R.13W. W.M.
COOS COUNTY

23 13 34DD

CANCELLED
T01



SEE MAP 23 13 35CC

WATER

23 13 34DD

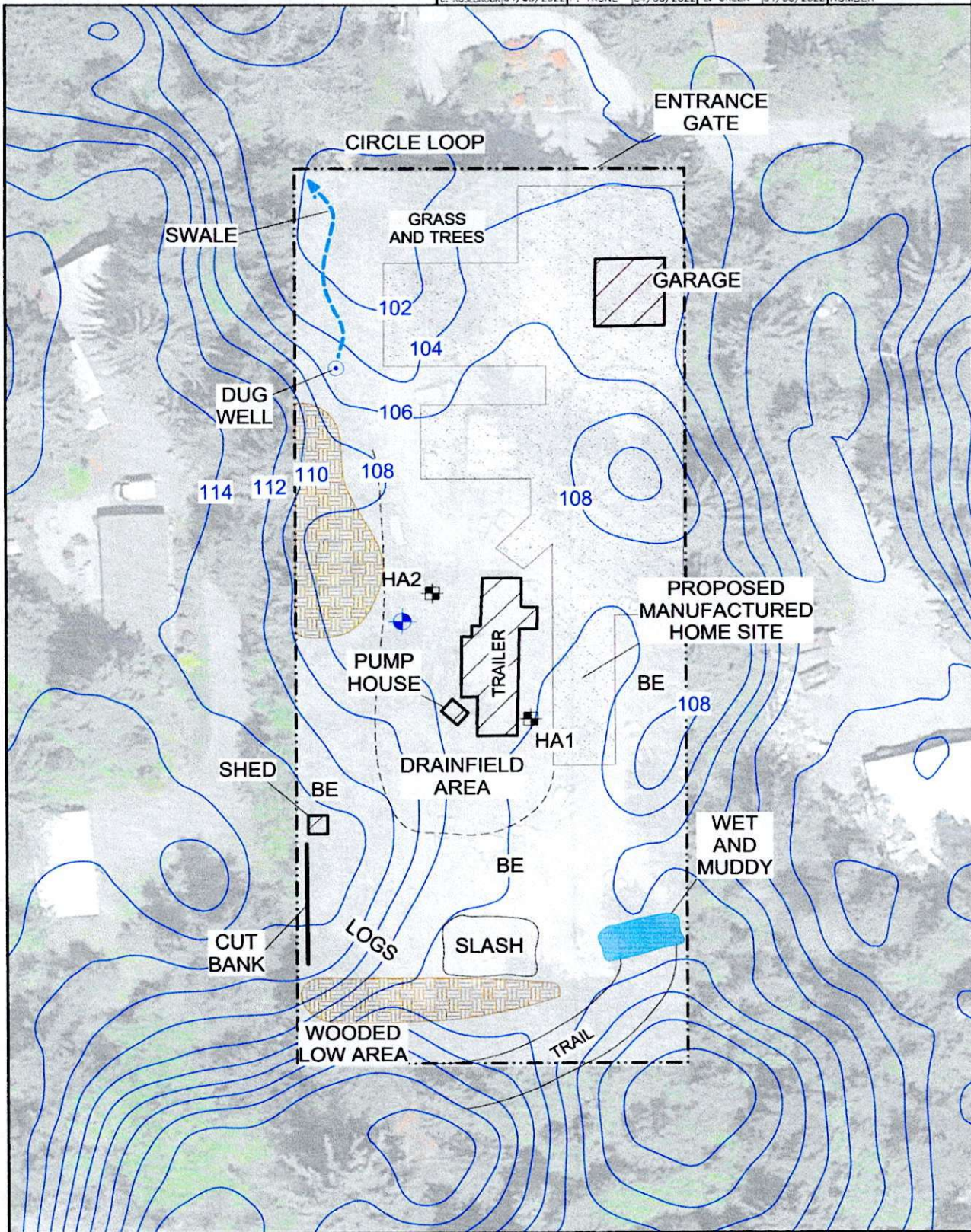


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Approved By: LDG

Residential Property
68975 Circle Loop,
North Bend, Oregon

Tax Lot Map

Project No.
1635-22001
Figure No.
3



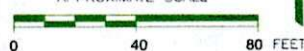
LEGEND:

| | | | |
|--|--|----|---|
| | SUBJECT BUILDINGS | | DRILLED WELL |
| | SUBJECT PROPERTY BOUNDARIES | BE | BARE EARTH |
| | GRAVELED AREAS | | ESTIMATED SURFACE ELEVATION CONTOUR (MODELED USING DOGAMI LIDAR DATA) CONTOUR INTERVAL = 2 FEET LIDAR |
| | FILL | | |
| | ENW TEMPORARY SHALLOW SOIL BORING LOCATION | | |

NOTES:

1. BASE MAP DEVELOPED FROM AN AERIAL PHOTOGRAPHY MAP DATED 2022 AND ENW FIELD NOTES.
2. ALL BUILDING, STREET, AND FEATURE LOCATIONS ARE APPROXIMATE.
3. SYMBOLS REPRESENT LOCATION AND DO NOT ALWAYS REPRESENT EXACT SHAPE, SIZE, OR ORIENTATION.

APPROXIMATE SCALE




PO BOX 14488, PORTLAND, OREGON 97293
P. (503)462-5561, E. ENW@EVREN-NW.COM


FIGURE 4




SITE PLAN

RESIDENTIAL PROPERTY
88975 CIRCLE LOOP
NORTH BEND, OREGON

Landslide Inventory (areas and points; various sources)

Scarp


Head Scarp


Deposits
 Talus-Colluvium
 Fan
 Landslide

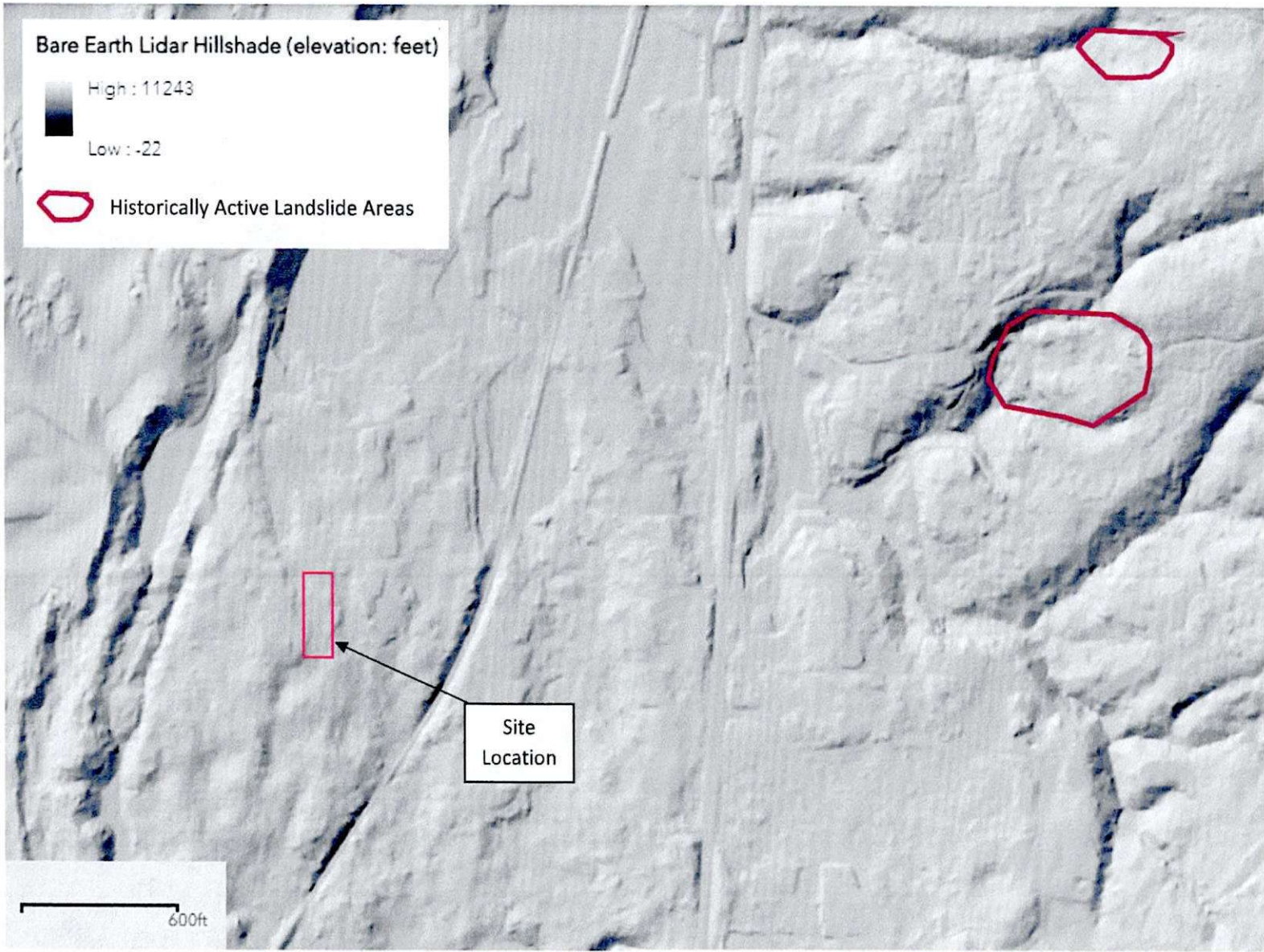


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 Drawn By: CLR
 Approved By: LDG

Residential Property
 68975 Circle Loop,
 North Bend, Oregon

**Historically Active
 Landslide Map**

Project No.
 1635-22001
 Figure No.
5a

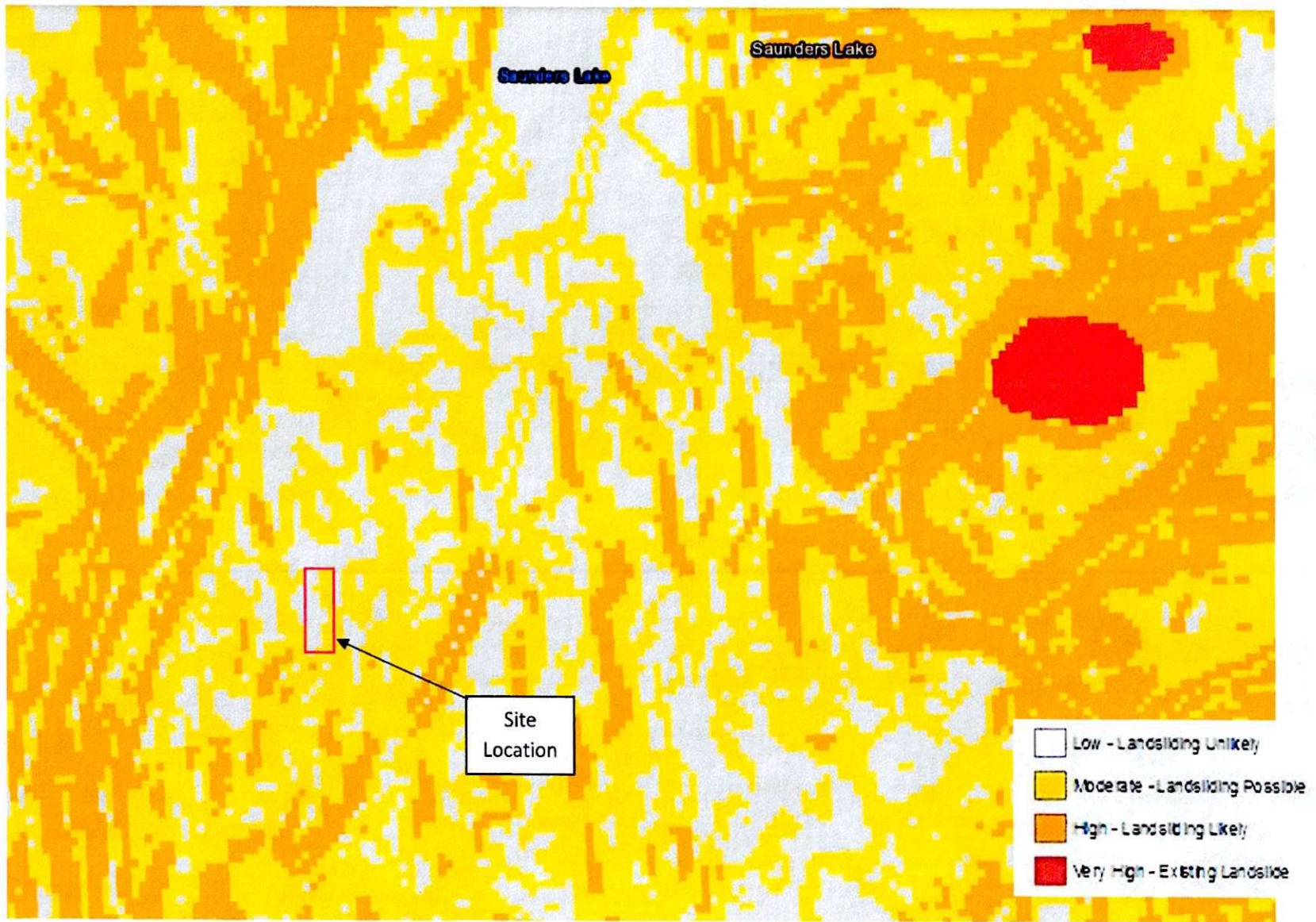


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 Approved By: LDG

Residential Property
 68975 Circle Loop,
 North Bend, Oregon

LIDAR Map

Project No.
 1635-22001
 Figure No.
5b

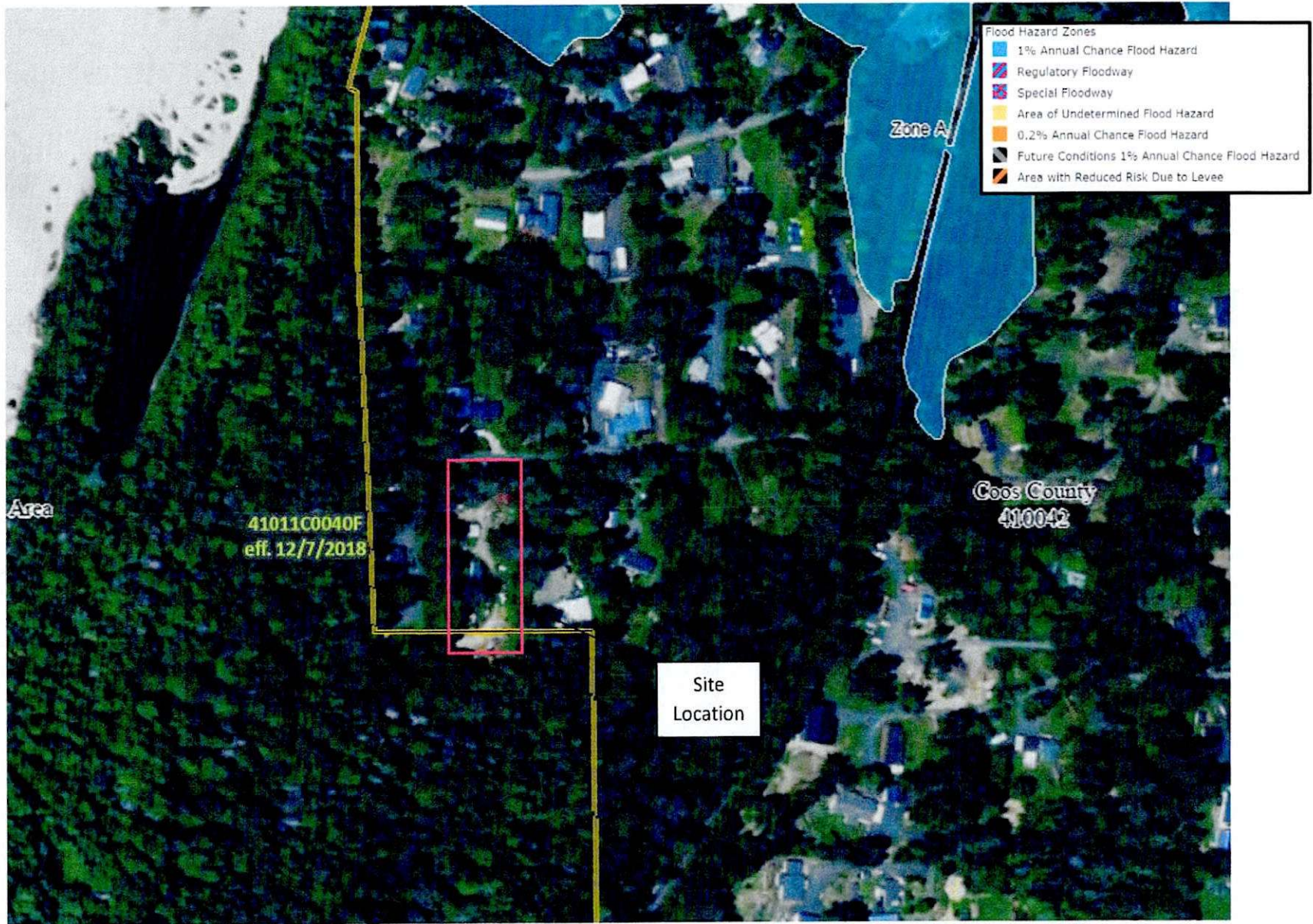


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 Drawn By: CLR
 Approved By: LDG

Residential Property
 68975 Circle Loop,
 North Bend, Oregon

Landslide Susceptibility Map

Project No.
 1635-22001
 Figure No.
 5c



Date Drawn: 3/24/2022
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 Drawn By: CLR
 Approved By: LDG

Residential Property
 68975 Circle Loop,
 North Bend, Oregon

Flood Insurance Rate Map

Project No.
 1635-22001
 Figure No.
 6

Earthquake Hazard

Expected Earthquake Shaking

- Violent
- Severe
- Very Strong
- Strong
- Moderate
- Light

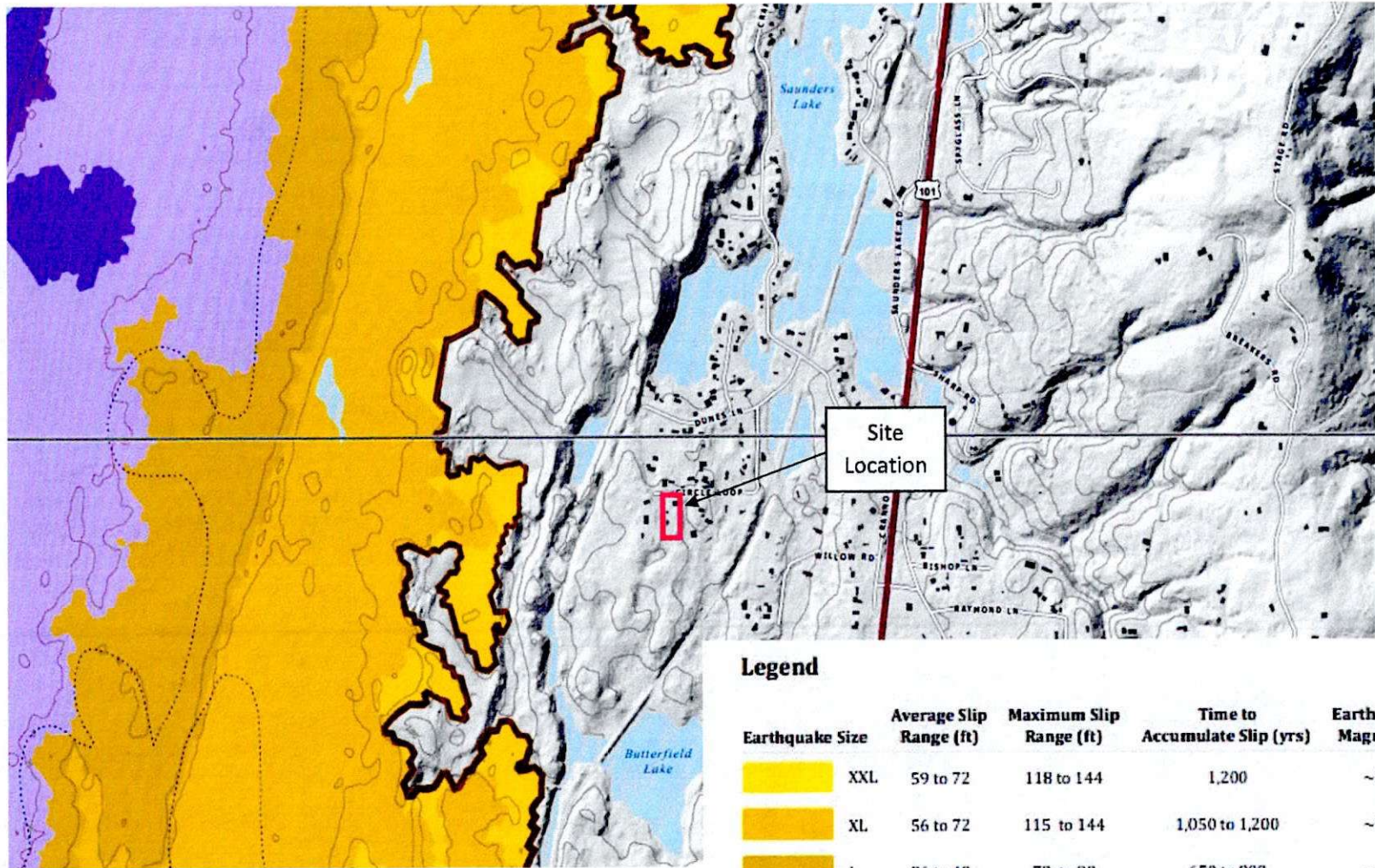


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 ShakingMap(v01)
 Drawn By: CLR
 Approved By: LDG

Residential Property
 68975 Circle Loop,
 North Bend, Oregon

**Amplification of
 Ground Shaking**

Project No.
 1635-22001
 Figure No.
 7



Legend

| Earthquake Size | Average Slip Range (ft) | Maximum Slip Range (ft) | Time to Accumulate Slip (yrs) | Earthquake Magnitude |
|------------------|-------------------------|-------------------------|-------------------------------|----------------------|
| XXL | 59 to 72 | 118 to 144 | 1,200 | ~9.1 |
| XL | 56 to 72 | 115 to 144 | 1,050 to 1,200 | ~9.1 |
| L | 36 to 49 | 72 to 98 | 650 to 800 | ~9.0 |
| M | 23 to 30 | 46 to 62 | 425 to 525 | ~8.9 |
| S | 13 to 16 | 30 to 36 | 300 | ~8.7 |
| XXL Wet/Dry Zone | | | | |

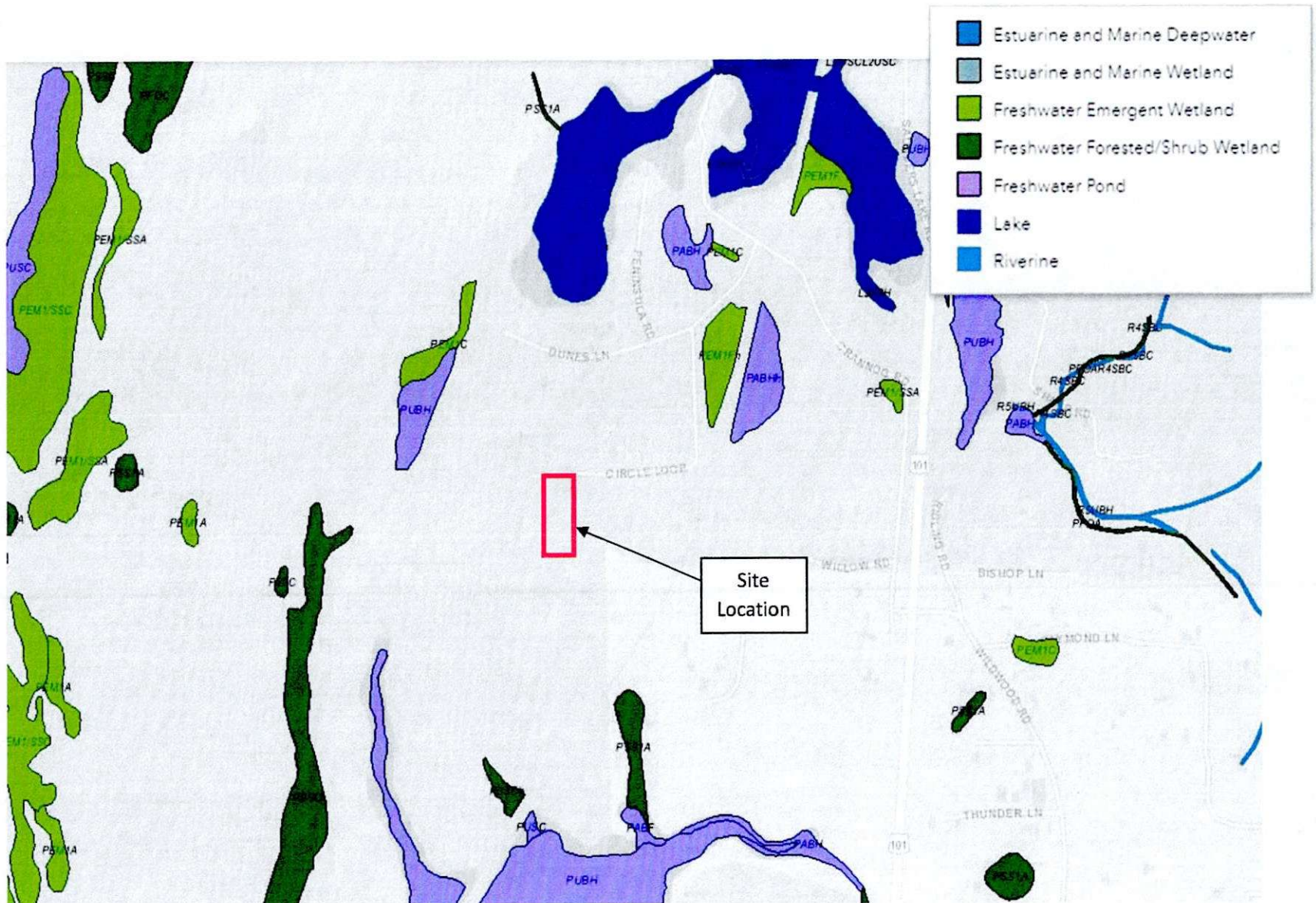


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 Approved By: LDG

Residential Property
 68975 Circle Loop,
 North Bend, Oregon

**Tsunami Inundation
 Zone Map**

Project No.
 1635-22001
 Figure No.
8



Date Drawn: 3/24/2022
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 Approved By: LDG

Residential Property
 68975 Circle Loop,
 North Bend, Oregon

Wetland Inventory Map

Project No.
 1635-22001
 Figure No.
 9



View looking north toward entrance gate and Circle Loop. Garage and parked RV (right middle).



View looking south toward existing trailer and graveled pad for manufactured home.



Proposed manufactured home site east of existing trailer.



Pumphouse (left) and shed (right) – looking south.



Residential Property
68975 Circle Loop
North Bend, Oregon

Site Photographs

Project No.
1635-22001-01

Appendix

A



Shed, cut bank (behind blue tarp covering log pile), and slash pile (middle left) – looking west



Close-up of cut bank.



Close-up view of stabilized dune sand comprising the cut bank.



Trail at south end of property – looking south-southwest. Note muddy ground and standing water in center of photo.



Residential Property
68975 Circle Loop
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Appendix

A



Trail in southern portion of site – looking east-northeast onto the subject property.



Soil and slash fill at south end of cleared portion of the site – looking north.



Soil and slash fill area along the western property boundary – looking north.



Brush-covered site of hand-dug well (or cistern) near the western edge of the subject site – looking southwest.



Residential Property
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North Bend, Oregon

Site Photographs

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Appendix

A



Close-up view of hand-dug well or cistern.



Down-well view.



View looking north from dug well or cistern along the western edge of the site. Note swale draining toward the northwest site corner.



Looking south-southeast from the dug well or cistern. Note wet soil in foreground and soil and slash fill (center right).



Residential Property
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Site Photographs

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Appendix

A



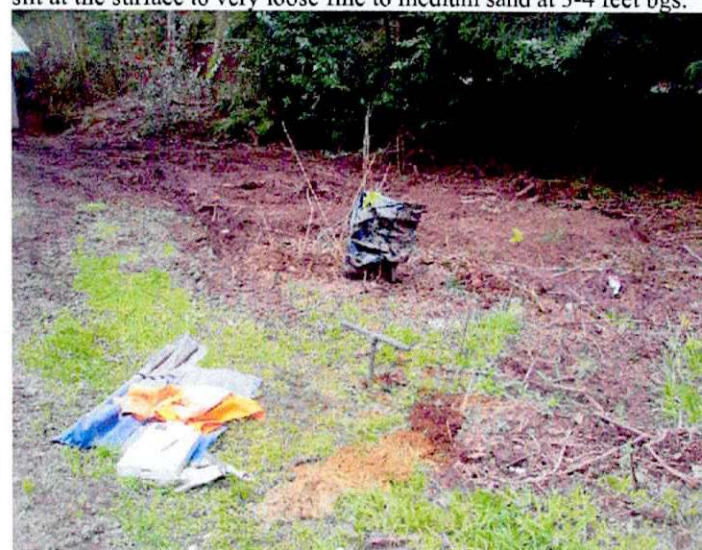
Drilled well with six-inch steel casing west of existing trailer.



Hand auger boring HA1 located on the east side near south end of the existing trailer.



HA1 soil cuttings, which were loose to somewhat dense, fine-sandy silt at the surface to very loose fine to medium sand at 3-4 feet bgs.



HA2 advanced near drilled well (background) – view southwest.



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Appendix

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HA2 soil cuttings, were similar to the materials encountered at HA1.



Looking north from the trail in the southern portion of the site at the proposed manufactured home site (center).



Looking southeast from the proposed manufactured home site toward Tax Lot 2100 (east-adjacent property).



Looking north along the west property boundary – pumphouse is center right.



Residential Property
68975 Circle Loop
North Bend, Oregon

Site Photographs

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1635-22001-01

Appendix

A

APPENDIX B
GROUND WATER WELL LOGS AND GEOTECHNICAL
HOLE REPORTS

EVREN Northwest, Inc.

| | | | | | | |
|---|---------|----------------------------|------------------|----------------------|--------------------------|---------------------------|
| DRILL LOG | PROJECT | | PROJECT NO. | | BORING NO. HAI | |
| | SITE | | BEGUN 3/22/22 | COMPLETED 3/22/22 | HOLE SIZE 2" | ANGLE FROM HORIZ. |
| COORDINATES | | DEPTH GROUND WATER | DATE SL | STATIC LEVEL | FIRST WATER NA | GROUND ELEVATION |
| DRILLER Kent Mathiot | | CORE RECOVERY (%) 100 | | # SAMPLES | # CORE BOXES | DEPTH TOP OF ROCK |
| DRILL RIG Stainless-Steel Hand Auger | | LOGGED BY: Kent Mathiot | | | | DEPTH BOTTOM OF HOLE 6 |

| DEPTH | STRATA ELEVATION/DEPTH | GRAPHIC LOG | DESCRIPTION | SAMPLE DATA | | | | PID/OVM | REMARKS: NOTES ON WATER LEVELS, LOSSES, CAVING, CASING, DEPTH & DRILLING CONDITIONS. |
|-------|------------------------|-------------|--|-------------|-------------|---------------|----------------------|---------|---|
| | | | | SAMPLE NO. | SAMPLE TYPE | CORE RECOVERY | MW Const./Completion | | |
| 0 | | | Brown SANDY SILT (MH/SM), loose to med. dense, dry to moist, fine roots | | | | | | |
| 2.5 | | | Dark brown SANDY SILT / SILTY SAND (SM), loose, moist, occasional orange/red mottles and burned wood Light brown to tan SILTY SAND (SM), loose, moist - with occasional orange mottles and cemented (iron oxide) nodules (<1/4" dia.) | | | | | | |
| 5 | | | Tan SAND with SILT (SM/MH), loose, moist (dune sand) - occasional orange mottles. | | | | | | |
| 7.5 | | | End of borehole | | | | | | |
| 10 | | | | | | | | | |
| 12.5 | | | | | | | | | |
| 15 | | | | | | | | | |
| 17.5 | | | | | | | | | |

EVREN Northwest, Inc.

| | | | | | | |
|---|---------|----------------------------|------------------|----------------------|--------------------------|---------------------------|
| DRILL LOG | PROJECT | | PROJECT NO. | | BORING NO. HA2 | |
| | SITE | | BEGUN 2/28/22 | COMPLETED 2/28/22 | HOLE SIZE 2" | ANGLE FROM HORIZ. |
| COORDINATES | | DEPTH GROUND WATER | DATE SL | STATIC LEVEL | FIRST WATER NA | GROUND ELEVATION |
| DRILLER Kent Mathiot | | CORE RECOVERY (%) 100 | | # SAMPLES | # CORE BOXES | DEPTH TOP OF ROCK |
| DRILL RIG Stainless-steel hand auger | | LOGGED BY: Kent Mathiot | | | | DEPTH BOTTOM OF HOLE 6 |

| DEPTH | STRATA ELEVATION/DEPTH | GRAPHIC LOG | DESCRIPTION | SAMPLE DATA | | | | PID/OVM | REMARKS: NOTES ON WATER LEVELS, LOSSES, CAVING, CASING, DEPTH & DRILLING CONDITIONS. |
|-------|------------------------|-------------|---|-------------|-------------|---------------|----------------------|---------|---|
| | | | | SAMPLE NO. | SAMPLE TYPE | CORE RECOVERY | MW Const./Completion | | |
| 0 | | | Dark brown SANDY SILT (MH/SM), loose to med. dense, dry to moist, contains roots and rotted wood | | | | | | |
| 2.5 | | | Orange SILTY FINE SAND (SM), med. dense (slightly cemented) to loose, dry to moist | | | | | | |
| 5 | | | Light brown SILTY SAND (SM), loose, dry to moist - localized bright orange mottles, which are very distinct and crunches in auger bit | | | | | | |
| 5 | | | Tan FINE to MEDIUM SAND (SP) loose, moist | | | | | | |
| 7.5 | | | End of borehole | | | | | | |
| 10 | | | | | | | | | |
| 12.5 | | | | | | | | | |
| 15 | | | | | | | | | |
| 17.5 | | | | | | | | | |

STATE OF OREGON WATER SUPPLY WELL REPORT

(as required by ORS 537.765 & OAR 690-205-0210)

04-15-2009

WELL LABEL # L 98242

START CARD # 1006500

(1) LAND OWNER Owner Well I.D. _____

First Name DONALD Last Name HEANEY
Company
Address 68976 CIRCLE LOOP
City NORTH BEND State OR Zip 97459

(2) TYPE OF WORK [X] New Well [] Deepening [] Conversion [] Alteration (repair/recondition) [] Abandonment

(3) DRILL METHOD [] Rotary Air [X] Rotary Mud [] Cable [] Auger [] Cable Mud [] Reverse Rotary [] Other

(4) PROPOSED USE [X] Domestic [] Irrigation [] Community [] Industrial/ Commercial [] Livestock [] Dewatering [] Thermal [] Injection [] Other

(5) BORE HOLE CONSTRUCTION Special Standard [] Attach copy Depth of Completed Well 116.00 ft.

Table with columns: Dia, From, To, Material, SEAL From, To, Amt, sacks/lbs. Row 1: 10, 0, 116, Bentonite Chips, 0, 45, 32, S.

How was seal placed: Method [] A [] B [] C [] D [] E

[X] Other POURED

Backfill placed from _____ ft. to _____ ft. Material _____
Filter pack from 45 ft. to 116 ft. Material SAND Size 10/20

Explosives used: [] Yes Type _____ Amount _____

(6) CASING/LINER

Table with columns: Casing, Liner, Dia, From, To, Gauge, Stl, Plstc, Wld, Thrd. Row 1: 5, 2, 91, sdr26, [X], [X], [X], [X].

Shoe [] Inside [] Outside [] Other Location of shoe(s) _____

Temp casing [] Yes Dia _____ From _____ To _____

(7) PERFORATIONS/SCREENS

Perforations Method _____ Screens Type JOHNSON Material SS

Table with columns: Perf/S, Casing/Screen, Liner, Dia, From, To, Sern/slot width, Slot length, # of slots, Tele/pipe size. Row 1: Screen, 5, 111, 116, 012, 5.

(8) WELL TESTS: Minimum testing time is 1 hour

Table with columns: Pump, Bailer, Air, Flowing Artesian, Yield gal/min, Drawdown, Drill stem/Pump depth, Duration (hr). Row 1: 15, 116, 1.

Temperature 52 °F Lab analysis [] Yes By _____

Table with columns: From, To, Description, Amount, Units. Row 1: [], [], [], [], [].

(9) LOCATION OF WELL (legal description)

County Coos Twp 23.00 S N/S Range 13.00 W E/W WM
Sec 34 SE 1/4 of the SE 1/4 Tax Lot 1600
Tax Map Number _____ Lot _____
Lat _____ " or _____ DMS or DD
Long _____ " or _____ DMS or DD
[] Street address of well [X] Nearest address

68976 CIRCLE LOOP NORTH BEND, OR 97459

(10) STATIC WATER LEVEL

Table with columns: Date, SWL(psi), SWL(ft). Row 1: 04-03-2009, 15, 48.

WATER BEARING ZONES Depth water was first found 48

Table with columns: SWL Date, From, To, Est Flow, SWL(psi), SWL(ft). Row 1: 04-03-2009, 48, 116, 15, 48.

(11) WELL LOG

Table with columns: Material, From, To, Ground Elevation. Rows: TOP SOIL (0-2), BROWN SANDY CLAY (2-25), BROWN SAND (25-116), BLUE CLAY (116-116).

Date Started 04-01-2009 Completed 04-03-2009

(unbonded) Water Well Constructor Certification

I certify that the work I performed on the construction, deepening, alteration, or abandonment of this well is in compliance with Oregon water supply well construction standards. Materials used and information reported above are true to the best of my knowledge and belief.

License Number _____ Date _____
Electronically Filed
Signed _____

(bonded) Water Well Constructor Certification

I accept responsibility for the construction, deepening, alteration, or abandonment work performed on this well during the construction dates reported above. All work performed during this time is in compliance with Oregon water supply well construction standards. This report is true to the best of my knowledge and belief.

License Number 1381 Date 04-15-2009
Electronically Filed
Signed RONALDI BARRINGTON (E-filed)
Contact Info (optional) BARRINGTON WELL DRILLING LLC 541-269-7221

STATE OF OREGON
WATER SUPPLY WELL REPORT
(as required by ORS 537.765 & OAR 690-205-0210)

COOS 56101
2/25/2015

WELL I.D. LABEL# 116507
START CARD # 1025650
ORIGINAL LOG #

(1) LAND OWNER

Owner Well I.D. 1521
First Name DAVID Last Name HUDSON
Company
Address 70173 LAKEWOOD ROAD
City NORTH BEND State OR Zip 97459

(2) TYPE OF WORK

New Well [X] Deepening [] Conversion []
Alteration (complete 2a & 10) [] Abandonment (complete 5a) []

(2a) PRE-ALTERATION

Casing: Dia + From To Gauge Stl Plstc Wld Thrd
Material From To Amt sacks/lbs
Seal:

(3) DRILL METHOD

Rotary Air [] Rotary Mud [X] Cable [] Auger [] Cable Mud []
Reverse Rotary [] Other []

(4) PROPOSED USE

Domestic [X] Irrigation [] Community []
Industrial/ Commercial [] Livestock [] Dewatering []
Thermal [] Injection [] Other []

(5) BORE HOLE CONSTRUCTION

Special Standard [] (Attach copy)

Depth of Completed Well 84.83 ft.

Table with columns: Dia, From, To, Material, SEAL, From, To, Amt, sacks/lbs. Includes rows for Bentonite and Calculated values.

How was seal placed: Method [] A [] B [] C [] D [] E []

[X] Other POUR FROM SURFACE

Backfill placed from ft. to ft. Material

Filter pack from 63 ft. to 86 ft. Material SAND Size 20/40

Explosives used: [] Yes Type Amount

(5a) ABANDONMENT USING UNHYDRATED BENTONITE

Proposed Amount Actual Amount

(6) CASING/LINER

Table with columns: Casing, Liner, Dia, +, From, To, Gauge, Stl, Plstc, Wld, Thrd. Includes rows for 6" and 5" diameters.

Shoe [] Inside [] Outside [] Other [] Location of shoe(s)

Temp casing [] Yes Dia From To

(7) PERFORATIONS/SCREENS

Perforations Method

Screens Type Johnson V-Wire Material Stainless Steel

Table with columns: Perf/ Screen, Casing/ Screen, Dia, From, To, Scrn/slot width, Slot length, # of slots, Tel/ pipe size. Includes row for Screen Casing 5, 79.83, 84.83, .012, 5.

(8) WELL TESTS: Minimum testing time is 1 hour

Pump [X] Bailer [] Air [] Flowing Artesian []

Yield gal/min Drawdown Drill stem/Pump depth Duration (hr)

Table with columns: Yield gal/min, Drawdown, Drill stem/Pump depth, Duration (hr). Includes rows for 7.5, 8.8 yields.

Temperature 54 °F Lab analysis [X] Yes By Bandon Well & Pump Co.

Water quality concerns? [] Yes (describe below) TDS amount 53.8 ppm

Table with columns: From, To, Description, Amount, Units.

(9) LOCATION OF WELL (legal description)

County COOS Twp 23.00 S N/S Range 13.00 W E/W WM
Sec 34 SE 1/4 of the SE 1/4 Tax Lot 2000
Tax Map Number Lot
Lat " or 43.52464900 DMS or DD
Long " or -124.22306300 DMS or DD

Street address of well [] Nearest address []

68975 CIRCLE LOOP, HAUSER (NORTH BEND)

(10) STATIC WATER LEVEL

Table with columns: Date, SWL(psi), +, SWL(ft). Includes row for Completed Well 2/25/2015, 43.

Flowing Artesian? [] Dry Hole? []

WATER BEARING ZONES

Depth water was first found 45.00

SWL Date From To Est Flow SWL(psi) + SWL(ft)

Table with columns: SWL Date, From, To, Est Flow, SWL(psi), +, SWL(ft). Includes row for 2/25/2015, 45, 83, 9, 43.

(11) WELL LOG

Ground Elevation 102.00

Table with columns: Material, From, To. Includes rows for Topsoil, Clay w/peat, Sand f brown orange, etc.

Date Started 2/23/2015

Completed 2/25/2015

(unbonded) Water Well Constructor Certification

I certify that the work I performed on the construction, deepening, alteration, or abandonment of this well is in compliance with Oregon water supply well construction standards. Materials used and information reported above are true to the best of my knowledge and belief.

License Number Date

Signed

(bonded) Water Well Constructor Certification

I accept responsibility for the construction, deepening, alteration, or abandonment work performed on this well during the construction dates reported above. All work performed during this time is in compliance with Oregon water supply well construction standards. This report is true to the best of my knowledge and belief.

License Number 1493 Date 2/25/2015

Signed JAMES A MACK SR (E-filed)

Contact info (optional) BANDON WELL & PUMP COMPANY (541) 347-7867