STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

APPROVED
RESERVOIR
DRAFT REPORT OF EXAMINATION

TO CONSTRUCT A RESERVOIR AND STORE FOR BENEFICIAL USE
WATERS OF THE STATE OF WASHINGTON

PRIORITY DATE	APPLICATION NUMBER	PERMIT NUMBER	CERTIFICATE NUMBER
July 24, 2007	R1-28508A		

NAME
Audrey Moreland

ADDRESS (STREET)	(CITY)	(STATE)	(ZIP CODE)
5716 Deer Harbor Rd.	Deer Harbor	WA	98243-0102

SOURCE FOR RESERVOIR SUPPLY	TRIBUTARY OF (IF SURFACE WATERS)
Unnamed stream and direct precipitation	Deer Harbor
NUMBER OF ACRE FEET STORED WHEN RESERVOIR IS FULL	USE(S) TO BE MADE OF IMPOUNDED WATER
0.54	Irrigation, Fire suppression

LOCATION OF IMPOUNDING STRUCTURES

APPROXIMATE LOCATION OF IMPOUNDMENT STRUCTURE

1,000 feet South and 1,862 feet West of the northeast corner of Section 18

Within Township 36 North, Range 2 West, W. M. in San Juan County, Washington.

LOCATED WITHIN (SMALLEST LEGAL SUBDIVISIONS)
NW1/4 NE1/4

Latitude 48.613715	Longitude 122.99622

SECTION	TOWNSHIP N.	RANGE, (E. OR W.) W.M.	W.R.I.A.	COUNTY
18	36	2W	2	San Juan

LEGAL SUBDIVISION OF LAND IN WHICH THE SUBMERGED AREA IS TO BE LOCATED
Attachment 2 provides the legal description of the Moreland property.

LEGAL DESCRIPTION OF PROPERTY ON WHICH WATER IS TO BE USED

Attachment 1 shows the location of the authorized place of use.

Attachment 2 provides the legal description of the property on which water is to be used.

CONSTRUCTION DETAILS OF IMPOUNDMENT STRUCTURE

Note: NOPL means Normal Operating Pool Level

HEIGHT OF DAM (FEET)	LENGTH ON TOP (FEET)	WIDTH ON TOP (FEET)
2+/-	80+/-	8

SLOPE OF FRONT OR WATER SIDE (Number of feet horizontal to one foot vertical):	SLOPE OF BACKSIDE (Number of feet horizontal to to one foot vertical):
1:10	1:25
HEIGHT OF DAM ABOVE WATER LINE AT NOPL (FEET)	
1	

TYPE OF CONSTRUCTION OF DAM AND CONSTRUCTION MATERIALS

Earth fill, composed of local fill material

LOCATION AND APPROXIMATE DIMENSIONS OF SPILLWAYS

Discharge (when it occurs) – 4’ wide, 8’ long overflow spillway on center of dam

# OF ACRES SUBMERGED WHEN RESERVOIR IS FILLED TO NOPL	MAXIMUM DEPTH (FEET) AT NOPL	AVERAGE DEPTH (FT)
0.13+/-	9+/-	4+/-

DESCRIPTION OF PROPOSED WORKS

The Moreland reservoir will be approximately 135 feet long by 60 feet wide. It will be fed primarily from an intermittent stream coming from the northeast of the pond and from direct precipitation. Overflow will exit the pond (on the west side) through an overflow spillway into an unnamed stream that flows to the southwest across the Moreland property.

DEVELOPMENT SCHEDULE

BEGIN PROJECT BY THIS DATE	COMPLETE PROJECT BY THIS DATE	WATER PUT TO FULL USE BY THIS DATE
July 15, 2011	September 15, 2015	December 30, 2020

PROVISIONS

1. Proof of Appropriation

Audrey Moreland shall file the notice of Proof of Appropriation of water (under which the certificate of water right is issued) when the reservoir has been constructed and the full quantity of water required for the project has been stored. The certificate will reflect the extent of the project perfected within the limitations and provisions of the permit.

2. Authority to Access Project

Department of Ecology personnel, upon presentation of proper credentials, shall have access at reasonable times, to the project location, and to inspect at reasonable times, records of water use, diversions, measuring devices, and associated distribution systems for compliance with water law.

3. Dam Safety

Dam owners are required to evaluate the safety of their dam and all appurtenant works and to make modifications, as become necessary, to reasonably secure safety to life and property. For current requirements, please contact:

Doug Johnson
Dam Safety Office Leader
Department of Ecology Dam Safety Office
PO Box 47600, Olympia, WA 98504-7600
(360) 407-6623
djsd461@ecy.wa.gov

4. Compliance With Other Legal Requirements

Nothing in this authorization shall be construed as excusing the right holder from compliance with any other federal, state, or local statutes, ordinances, or regulations that may be applicable to this project.

FINDINGS OF FACT AND ORDER

Upon reviewing the investigator's report, I find all facts relevant and material to the subject application have been thoroughly investigated. Furthermore, I concur with the investigator that water is available from the source in question, the purpose of use is beneficial, there will be no impairment of existing rights, and there will be no detriment to the public interest.

Therefore, I ORDER approval of Application No. R1-28508, subject to existing rights and the provisions listed above.

You have a right to appeal this action to the Pollution Control Hearing Board (PCHB) within 30 days of the date of receipt of this document. The appeal process is governed by Chapter 43.21B RCW and Chapter 371-08 WAC. "Date of receipt" is defined in RCW 43.21B.001(2).

To appeal, you must do the following within 30 days of the date of receipt of this document:

- File your appeal and a copy of this document with the PCHB (see addresses below). Filing means actual receipt by the PCHB during regular business hours.
- Serve a copy of your appeal and this document on Ecology in paper form - by mail or in person. (See addresses below.) Email is not accepted.

You must also comply with other applicable requirements in Chapter 43.21B RCW and Chapter 371-08 WAC.

Street Addresses	Mailing Addresses
Department of Ecology Attn: Appeals Processing Desk 300 Desmond Drive SE Lacey, WA 98503 Pollution Control Hearings Board 1111 Israel Road SW Suite 301 Tumwater, WA 98501	Department of Ecology Attn: Appeals Processing Desk PO Box 47608 Olympia, WA 98504-7608 Pollution Control Hearings Board PO Box 40903 Olympia, WA 98504-0903

Please also send a copy of your appeal to:

Jacqueline Klug
Department of Ecology
Northwest Regional Office
3190 160th Avenue SE
Bellevue WA 98008

For additional information visit the Environmental Hearings Office Website: http://www.eho.wa.gov . To find laws and agency rules visit the Washington State Legislature Website: http://www1.leg.wa.gov/CodeReviser .

Signed at Bellevue, Washington, this _____ day of _____, 2010.

_____

Jacqueline Klug
Section Manager
Northwest Regional Office
Water Resources Program

INVESTIGATOR'S REPORT

BACKGROUND

On July 24, 2007, Audrey Moreland applied for a reservoir water right for a pond she plans to build on her Orcas Island property. The pond will be constructed according to engineering plans I received during the field examination. The pond will be used to capture and store water for irrigation of a garden and fruit trees. A separate water right application (S1-28506) was received for the irrigation from the pond. The pond and the irrigation application are being processed concurrently.

The water source is an intermittent unnamed stream beginning in a pond at the top of the hill to the east and draining north, then southwest, then south to cross the Moreland property. The creek passes through two wetlands (upstream of Moreland's property) on the National Wetlands Inventory before draining into Deer Harbor.

Legal Requirements for Application Processing

Chapter 90.03 RCW authorizes the appropriation of public water for beneficial use and describes the process for obtaining reservoir water rights. Laws governing the permitting process are contained in RCW 90.03.250 through 90.03.370.

The following legal requirements must be met prior to processing a water right application:

- Public Notice
  Public notice of the application was published in *The Islands' Sounder* on August 15 and 22, 2007. There were no protests during the statutory 30-day protest period.
- State Environmental Policy Act (SEPA)
  The subject water right application is categorically exempt under SEPA WAC 197-11-305 and WAC 197-11-800(1)(b)(v) minor construction/excavation.

INVESTIGATION

In considering this application, my investigation included, but was not limited to, research and/or review of:

- Information supplied with the water right application
- Aerial photos from the San Juan County Tax Assessors Web site
- The USGS Shaw Island 7.5 minute topographic map
- Orr, L.A., Bauer, H.H. and Wayenberg, J.A. 2002, Estimates of Ground-Water Recharge from Precipitation to Glacial-Deposit and Bedrock Aquifers on Lopez, San Juan, Orcas, and Shaw Islands, San Juan County, Washington, U.S. Geological Survey Water-Resources Investigations Report 02-4114, 114 pages.
- Russell, R.H. ed., 1975, Geology and Water Resources of the San Juan Islands, San Juan County, Washington, Washington Department of Ecology Water Supply Bulletin No 46, 171 pages.
- A database search for water rights on the same source of supply
- Water well reports for Orcas Island
- Notes and GPS data from my site visit on September 1, 2010

Geographic Setting of the Project

The Moreland property encompasses approximately 1.5 acres of land located on the southwestern quadrant of the western half of Orcas Island about one-half mile south-southeast of the town of Deer Harbor (Attachment 1). Hills to the east and north are heavily forested and rounded due to glaciations, and the valleys have been cleared as pasture. Poorly drained swamps and/or peat-bogs may be found in the depressions carved out of the solid rock by the glaciers. Elevations range from sea level to less than 200 feet above sea level. A network of wetlands and surface water ponds occur in the valley to the northeast of the property.

Mean annual precipitation in the area is from 28 to less than 30 inches per year. Recharge to the ground water system on Orcas Island occurs from percolation of precipitation. Recharge in the valley to the northeast of the Moreland property is less than 5 inches per year (USGS, 2002). Once infiltrated, ground water on the island generally flows radially from the center of the island towards the coastline.

The bedrock geology in the vicinity of the Moreland property consists of the Turtleback terrane, a Paleozoic arc-plutonic and volcanic unit. Water Supply Bulletin No. 46 mapped the Turtleback Complex consisting of gabbro, diorite, and quartz diorite with minor pyroxenite and serpentine.

Site Visit

On September 1, 2010, I visited the Moreland property. I looked at the creek, the proposed point of diversion, and the area to be irrigated. Audrey Moreland provided me a copy of the engineering plans for the pond and I observed the area where the pond will be constructed.

Database Search of Other Water Rights on the Same Source of Supply

A Water Rights Tracking System (WRTS) search and a Geographical Information System (GIS) search were conducted to determine if other water rights exist within the same hydrologic drainage basin of the planned point of diversion for the pond. A total of twelve water right documents were found of which three are water right certificates and nine are claims (locations shown in Figure 1 and attributes in Table 1below). Claims are designated with a CL at the end of the claim number. A water right claim is a statement of the beneficial use of water that occurred prior to the adoption of the water right codes and is not authorized by a state-issued permit or certificate. The Department of Ecology cannot verify the validity of these claims, as water right claims can only be confirmed in an adjudication by the Washington State Superior Court. Many claims represent use under the ground water exemption (RCW 90.44.050) for single domestic use.

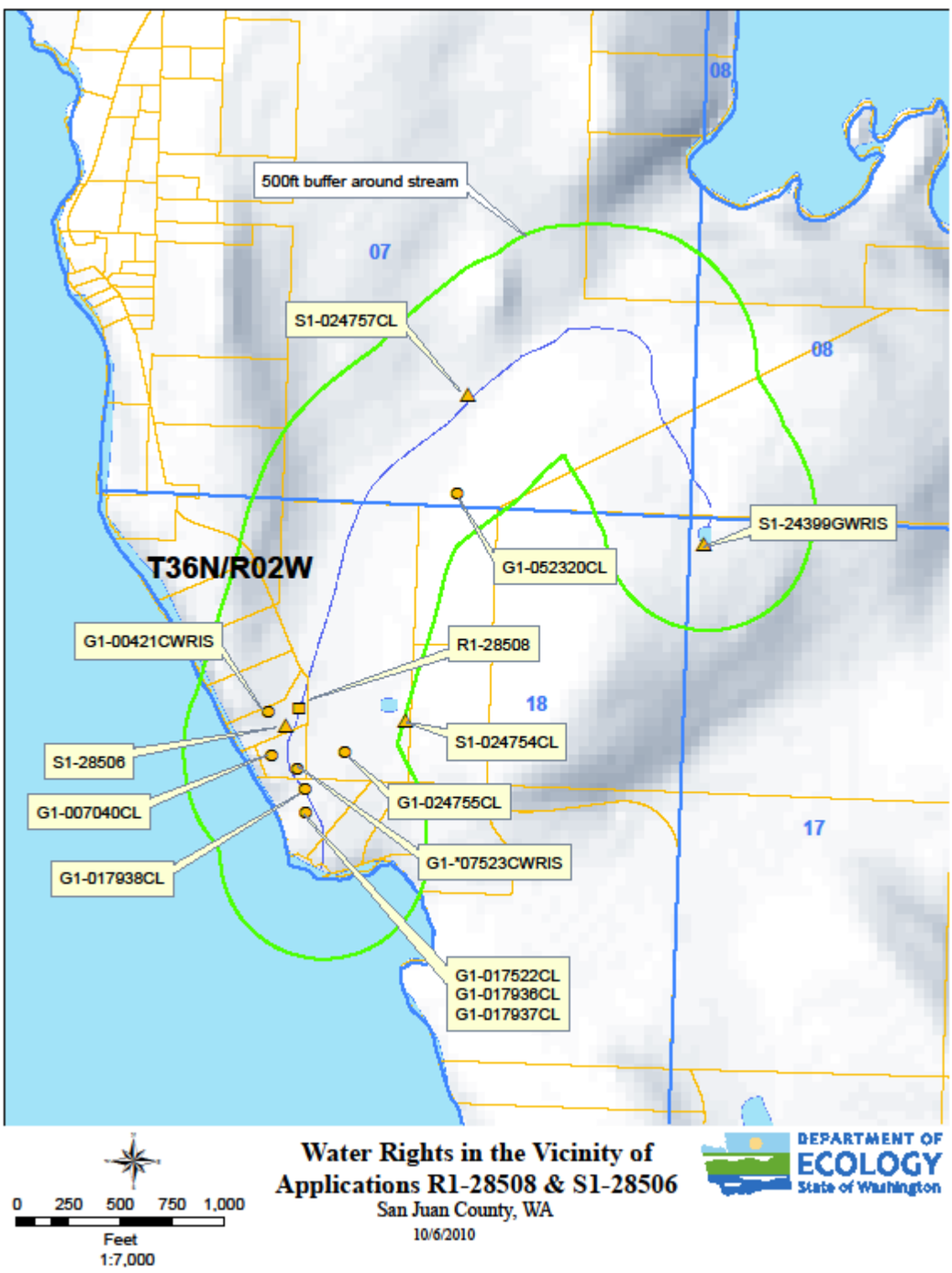


Figure 1 Water rights in same hydrologic drainage basin as applicant's pond

Table 1	Existing Water Rights in the drainage basin of Reservoir Application R1-28508					
Certificate #	**Priority Date**	**Name**	**Qi**	**Qa (afy)**	**Purpose of Use**	**Location**
G1-00421C	06/24/1965	Marjorie Ann Howland	5 gpm	2.0	DS	NW¼ NE¼ S. 18
G1-*07523C	03/10/1965	E. F. Coffman	5 gpm	1.0	DS	NW¼ NE¼ S. 18
S1-24399C	10/31/1983	Four Winds Inc.	0.022 cfs	3.16	DM, IR, ST	NW¼ NW¼ S. 17
Claim #						
G1-007040CL	1959	Charlette B. Brechemin	4 gpm	1.0	DS	NW¼ NE¼ S. 18
G1-017522CL	July 1959	Henry C. Isaacson	10 gpm	2.0	DS	SW¼ NE¼ S. 18
G1-017936CL	April 1964	Martha L. Isaacson	5 gpm	1.0	DS	SW¼ NE¼ S. 18
G1-017937CL	1930	Martha L. Isaacson	5 gpm	1.0	DS	SW¼ NE¼ S. 18
G1-017938CL	July 1967	Martha L. Isaacson	5 gpm	1.0	DS	SW¼ NE¼ S. 18
G1-024755CL	1920	Norton M. Clapp	2 gpm	3.2	DG	NW¼ NE¼ S. 18
G1-052320CL	1930	Norton M. Clapp	3 gpm	4.8	DG	SE¼ SE¼ S. 07
S1-024754CL	1930	Norton M. Clapp	1 gpm	1.0	IR	NW¼ NE¼ S. 18
S1-024757CL	1957	Norton M. Clapp	4 gpm	3.2	IR	SE¼ SE¼ S. 07

DS=Single Domestic, DG & DM=Multiple Domestic, IR=Irrigation, ST=Stock Watering, afy = acre-feet per year

A query of Ecology's Well Log database showed 27 well logs on file within a half mile radius of the pond location. Most of the wells in this section are completed in bedrock. Most of the wells are used for permit-exempt purposes as allowed under RCW 90.44.050.

DETERMINATIONS

In accordance with RCW 90.03.290, determinations must be made on the following four criteria in order for an application for water rights to be approved:

- Water must be available
- There must be no impairment of existing rights
- The water use must be beneficial
- The water use must not be detrimental to the public interest

Water Availability

Legal Availability
There are currently no regulatory closures or legal restrictions affecting water availability on the Moreland source of supply.

Physical Availability
Recharge of the Moreland Pond will occur by means of flow from the intermittent stream and by direct precipitation. The pond will likely completely fill each rainy season and then slowly diminish during the dry season.

Impairment

The surface water certificate, S1-24399C, and surface water claim, S1-024757CL, are located upstream of the proposed Moreland pond on the same intermittent stream. Therefore it is impossible for the Moreland pond to impair these water rights. There are no surface water rights downstream of the Moreland property. The only water rights that are downstream of the Moreland pond location are five ground water claims and one ground water certificate, G1-*07523C. None of these will be impaired by the Moreland pond since they are ground water that may possibly be enhanced by infiltration of water into the ground from the pond. Likewise, there will be no impairment to ground water right G1-00421C which is on property to the north adjacent to the Moreland property.

Steve Boessow, Department of Fish and Wildlife, has no objection to this application because there are no fish listed on the stream and the pond and irrigation will not likely add significantly to the existing impacts of development and landscape changes. The property is right on the Sound and the creek is small and dry much of the time.

Beneficial Use

Storage of water for irrigation and fire suppression are considered to be beneficial under RCW 90.54.020(1). The storage volume of water requested is reasonable for the proposed new reservoir size and the purposes of use.

Public Interest

No potential for detriment to the public interest could be identified during the investigation of this application.

FINDINGS

As a result of my investigation and determinations, I find the following:

- Water is both physically and legally available.
- There will be no impairment of existing rights.
- The use will be beneficial and the approved storage volume is reasonable.
- There will be no detriment to the public interest.

RECOMMENDATION

Based on the above investigation, determinations, and findings, I recommend the subject application be approved, within the limitations listed below, and subject to the provisions on page 2.

Storage Volume

The amount of water recommended (0.54 acre-feet) is the maximum volumetric storage limit.

Purposes of Use

Irrigation, Fire suppression

Location of Impoundment Structure

NW¼ NE¼ within Section 18, Township 36 North, Range 2 West, W.M.

Place of Use

As described and shown in Attachments 1 and 2.

Report by: _____ _____

Jerry L. Liszak, LG, LHG Date

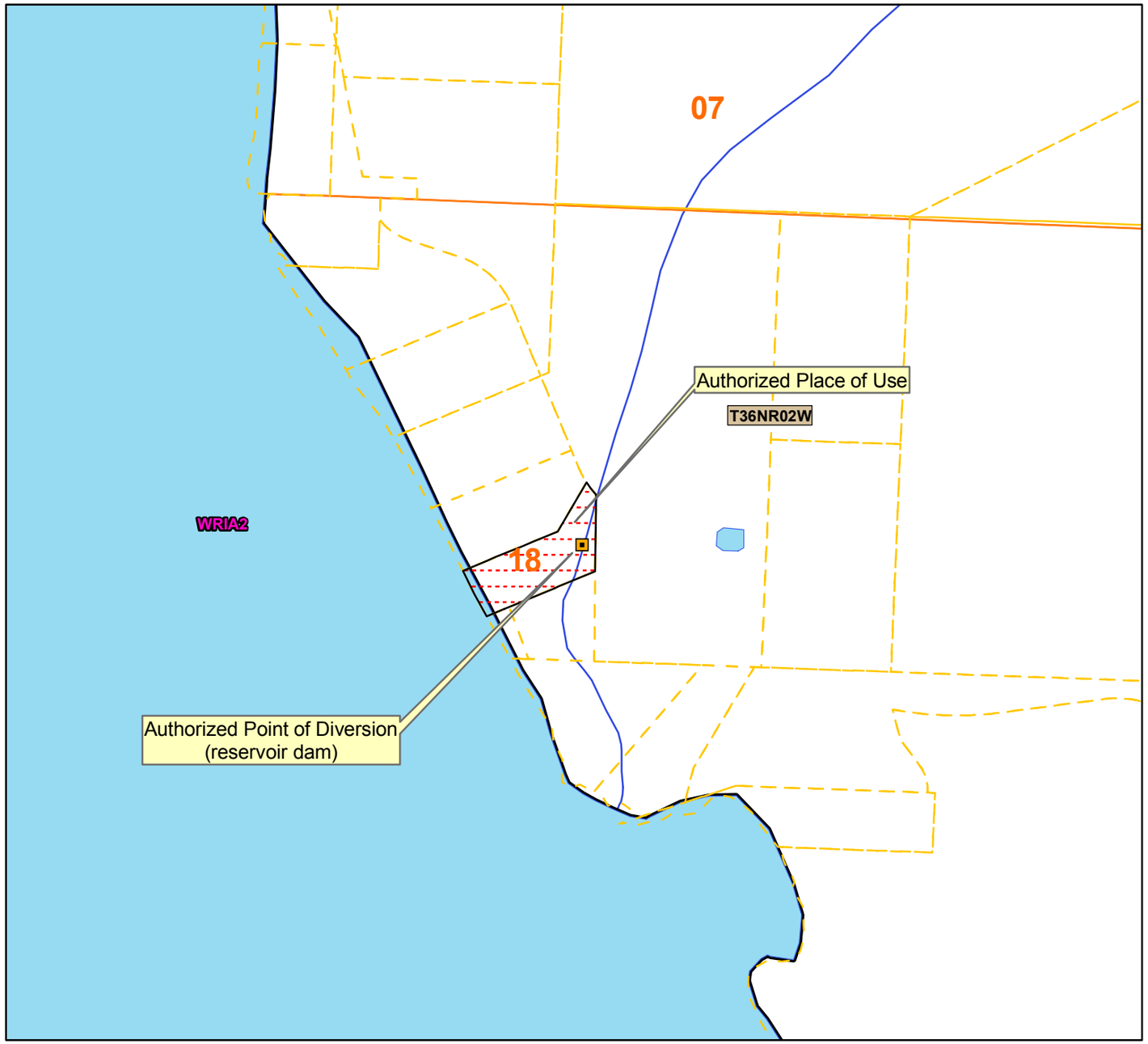
_____

Licensed Geologist/Hydrogeologist No. 834

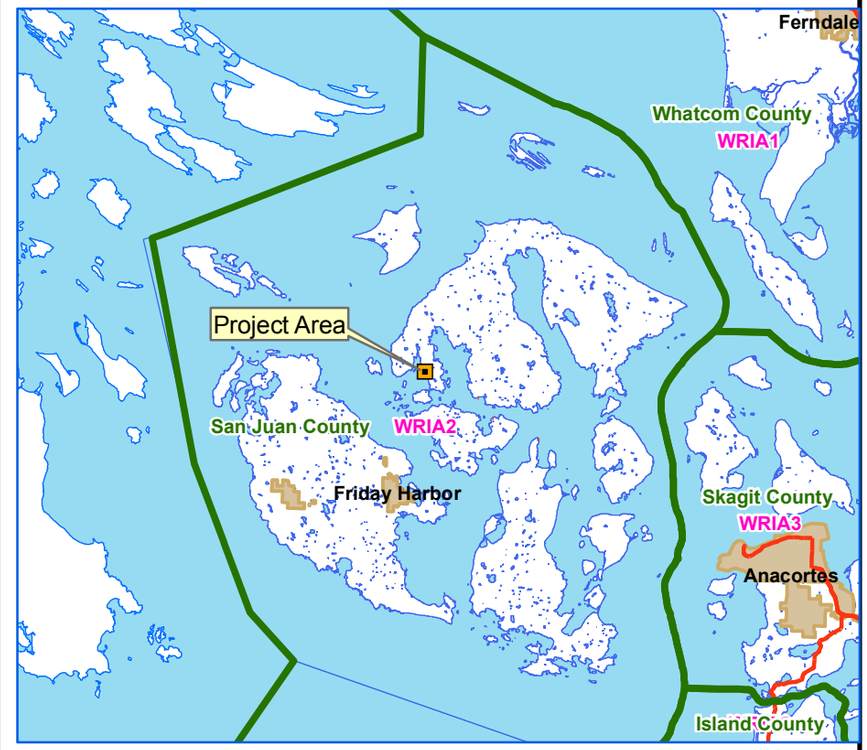
If you need this publication in an alternate format, please call the Water Resources Program at (425) 649-7000. Persons with hearing loss can call 711 for Washington Relay Service. Persons with a speech disability can call 877-833-6341.

Audrey Moreland
Water Right Number R1-28508
Sec.18, T 36N, R 02W W.M.
WRIA 2 - San Juan County

DEPARTMENT OF ECOLOGY
State of Washington



250 125 0 250 500 750
Feet



5 2.5 0 5 10
Miles

Legend

- County
- WRIA
- Highways
- Townships
- cities
- Sections
- Reservoir Dam
- Authorized Place of Use

Place of use and point(s) of diversion/withdrawal are as defined on the cover sheet under the headings, 'LOCATION OF DIVERSION/WITHDRAWAL' and 'LEGAL DESCRIPTION OF PROPERTY ON WHICH WATER IS TO BE USED.'

Attachment 1

Attachment 2 Legal Description for Moreland

PARCEL "A"

A part of Government Lot 2, Section 18, Township 36N, Range 2 West, W.M., Described as follows:

Beginning at the iron pipe in the east line of the County Road at a point which is 1,067 feet South and 2,109 feet West of the Section corner common to Sections 7, 8, 17 and 18 of the said Township and Range running thence North 64.38'10" East, 125 feet to a concrete monument; thence South 2521'50" East, 150 feet to an iron pipe; thence 64.38'10" West 125 feet to an iron pipe in the East line of the County Road and on in the same direction 70 feet, more or less, to the line of ordinary high tide; thence with said line Northwesterly to a point which is South 64.38'10" West form the point of beginning; thence North 64.38'10" East, 70 feet, more or less, to the point of beginning.

EXCEPTING THEREFROM County Road No. 16 (Formerly WA Bratton Road) as consented to the establishment and wavier of all claims and damages by Quit Claim Deed, recorded June 8, 1900 in Volume 16 of Deeds at page 41, records of San Juan County.

Situate in San Juan County Washington.

PARCEL "B"

That portion of Government Lot 2, of Section 18, Township 36 North, Range 2 West, W.M., described as follows:

Tate Certain Tract 6B as shown, described, located and monumented by that certain Record of Survey recorded November 19, 1999 in Book 16 of Surveys at Page 56 under Auditor's File No. 19991117024 in the office of the Auditor of San Juan County, Washington.

EXCEPTING THEREFROM that portion conveyed to the County of San Juan, State of Washington, for use of the public forever, as a public road and highway by Quit Claim Deed, recorded August 13, 2001, Auditor's File no. 20010813019, records of San Juan County, Washington.

Situate in San Juan County Washington.