

Application for a State Waste Discharge Permit to Discharge Domestic Wastewater to Ground Water by Land Treatment or Application

This application is for a state waste discharge permit as required by Chapter 90.48 RCW and Chapter 173-216 WAC. Permit applications provide Ecology with information on pollutants in the waste stream, materials that may enter the waste stream, the flow characteristics of the discharge, and site characteristics at the point of discharge.

Ecology may request additional information to clarify the conditions of this discharge. The applicant should reference information previously submitted to Ecology that applies to this application in the appropriate section.

SECTION A. GENERAL INFORMATION

1. Applicant Name: Loon Lake Sewer District No. 4
2. Facility Name: Wastewater Treatment Plant
(if different from applicant)
3. Applicant Address: PO Box 98
Street
Loon Lake, WA 99148
City/State Zip
4. Facility Location Address: 3963 Christensen Road
(if different from above) Street
Loon Lake, WA 99148
City/State Zip
5. Latitude/longitude of the processing facility as decimal degrees (NAD83/WGS84):
48.072 / 117.626
6. Latitude/longitude of sprayfield/infiltration site discharge location (approximate center) as decimal degrees (NAD83/WGS84):
40.061 / 117.625
7. Person to contact who is familiar with the information contained in this application:

Brooke Lyons
Name

District Manager
Title

509 233 8132
Telephone Number

509 233 3029
Fax Number

llsd4bl@gmail.com
Email

FOR ECOLOGY USE ONLY

Check One

New/Renewal ☐ Modification ☐

Date Application Received _____

Application/Permit No. _____

Date Application Accepted _____

Date Fee Paid _____

8. Check One:

☒ **Permit Renewal** (including renewal of temporary permits)

Does this application request a greater amount of wastewater discharge, a greater amount of pollutant discharge, or a discharge of different pollutants than specified in the last permit application for this facility? ☐ YES ☒ NO

For permit renewals, the current permit is an attachment, by reference, to this application.

☐ **Permit Modification**

☐ **Existing Unpermitted Discharge**

☐ **Proposed Discharge**

Anticipated date of discharge:

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of a fine and/or imprisonment for knowing violations.

Chuck Schilling
Signature*

5-18-2022 Commissioner
Date Title

Chuck Schilling
Printed Name

*Applications must be signed by either a principal executive officer or a ranking elected official. If these titles do not apply to your organization, the person who makes budget decisions for this facility must sign the application. For state facilities, this is typically a program manager.

The application signatory may delegate signature authority for submittals required by the permit, such as monthly reports, to a suitable employee. You can delegate this authority to a qualified individual or to a position, which you expect to fill with a qualified individual. If you wish to delegate signature authority, please complete the following:

Brooke Lyons
Signature of delegated employee

05/18/2022 District Manager
Date Title or function at the facility

Brooke Lyons
Printed name



Discharge Monitoring Report (DMR) Signature Authorization Form

Permittee Name: Loon Lake Sewer District 4 NPDES/State Permit No.: ST0008019

Facility Name: Loon Lake Sewer District 4 Date: 6/19/2019

Name of person described in paragraph 1, 2, or 3: <u>Chuck Schilling</u>	Title: <u>Commissioner</u>
Signature of person described in paragraph 1, 2, or 3: <u>Chuck Schilling</u>	Date: <u>06/19/2019</u>

THE PERMITTEE MUST NOTIFY ECOLOGY OF ANY CHANGE IN THIS INFORMATION DURING THE LIFE OF THE PERMIT

Name and/or Title of person responsible for signing DMRs: <u>Class 1 Operator</u>	Phone: <u>(509) 233 8132</u>
Mailing Name: <u>Loon Lake Sewer District No. 4</u>	
Mailing Address: <u>P.O. Box 98</u>	City: <u>Loon Lake</u> State: <u>WA</u> Zip Code: <u>99148</u>

Name and/or Title of person responsible for signing DMRs:	Phone: ()
Mailing Name:	
Mailing Address:	City: State: Zip Code:

Name and/or Title of person responsible for signing DMRs:	Phone: ()
Mailing Name:	
Mailing Address:	City: State: Zip Code:

Name and/or Title of person responsible for signing DMRs:	Phone: ()
Mailing Name:	
Mailing Address:	City: State: Zip Code:

Return To: The Department of Ecology
Eastern Regional Office
Permit Administrator
4601 N. Monroe
Spokane WA 99205-1295

SECTION B. TREATMENT PLANT INFORMATION

1. Identify all industries, commercial facilities or communities discharging to this publicly owned treatment works (POTW) by name, type of industry, address, telephone number and contact name. Attach extra sheet(s) if needed and label as attachment B1.

	INDUSTRY #1	INDUSTRY #2
NAME:	Deer Lake Sewer System (Stevens County PUD No. 1)	N/A
INDUSTRY:	Domestic Sewer System	
ADDRESS:	3955 Thrud Avenue, Loon Lake, WA 99148	
TELEPHONE:	509 233 2534	
CONTACT NAME:	Darrel Hawes	
INDUSTRIAL PRODUCT(S):	N/A	

2. POTW design and operation manuals available for this treatment facility:

Type of Manual	Date	Is there a copy at the POTW?
<input checked="" type="checkbox"/> Engineering Report	8/1998	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
<input checked="" type="checkbox"/> Operation and Maintenance Manual	2/2019	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
<input checked="" type="checkbox"/> Crop Management Plan	1/2020	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
<input checked="" type="checkbox"/> Sprayfield Management Plan	1/2020	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO

3. POTW Design Data:

a. Average Influent Flow for Maximum Month (MGD):	0.254
b. Influent BOD Load (lbs/day):	600
c. Influent SS Load (lbs/day):	200
d. Began Operation (year):	1986
e. Last Major Upgrade (year):	1998
f. Planned Upgrades (year):	2050
g. Design Population:	2300
h. Actual Population:	1668
i. Sprayfield loading - attach copy of the irrigation schedule if schedule if available	13,000 PPD TN

4. Are there plans to modify this facility within the next five years? If so, briefly describe what and when.

NO

5. Attach a simple schematic drawing of the POTW. (Label as attachment B.5. Attachments should be 11 x 17" or smaller). The schematic should show all treatment processes (from B.6 below), flow direction and flow quantities in million gallons per day (MGD) or gallons per day (GPD).
6. Identify the type and number of unit processes at this facility.

Treatment	Unit Process	Number of Units
Lift stations	In collection system	807
	At head of plant	1 + 1 standby
Preliminary treatment	Manually operated bar screens	
	Mechanically operated bar screens	
	Grit removal	
	Pre-aeration	
	Comminutors/grinders	
	Other (specify)	
Primary Treatment	Primary Sedimentation Tank/Clarifiers	
	Septic tanks	804
	Other (specify)	
Secondary Treatment	Oxidation Ditch	
	Package Plant - Activated Sludge	
	Package Plant - Physical/Chemical	
	Aerated Lagoon	1
	Non-aerated Lagoon/Facultative Lagoon	
	Rotating Biological Contact	
	Secondary Clarifiers	
	Trickling Filter	
	Polishing Ponds	
	Other (specify)	
Additional Treatment	Coagulation	
	Filtration	
	Storage (Lined Lagoon)	3
	Storage (Unlined Lagoon)	
	Other (specify)	
Land Treatment or Application	Drainfield	
	Rapid Infiltration/Infiltration Lagoon	
	Constructed Wetland	
	Sprinkler Irrigation	1
	Flood Irrigation	
	Ridge and Furrow Irrigation	
	Subsurface Irrigation	
	Other (specify)	
Disinfection	Chlorination	
	Ultraviolet	
	Other	

SECTION C. WASTEWATER INFORMATION

1. The average influent flow to the plant for the maximum month for at least the last 12 months: 148,091 gallons/day
2. The maximum daily flow applied to the land treatment/application site for the last 12 months: 609,586 gallons/day 5.36 inches/acre/month
3. Describe how the influent and effluent flow are measured? Magnetic Flow Meters
4. Attach flow records for at least the last 12 months. (*Label as attachment C.4.*)
5. Describe the collection method for the samples analyzed below (*i.e.*, grab, 24-hour composite). Applicants must collect grab samples (not composites) for analysis of pH, temperature, cyanide, total phenols, residual chlorine, oil and grease, fecal coliform (including *E. coli*), and Enterococci (previously known as fecal streptococcus at § 122.26 (d)(2)(iii)(A)(3)), or volatile organics.

Samples are collected per table in Section S2.A of the State Waste Discharge Permit, Influent samples are collected with a 24-hour composite sampler and effluent samples are collected as grab samples.

6. Provide measurement values or range of measurements for treated wastewater prior to land treatment/application for the parameters with an "X" in the left column of the table below. If you obtain the application from the Internet, contact Ecology's regional office to see if testing for a subset of these parameters is permissible. All analyses (except pH) must be conducted by a laboratory registered or accredited by Ecology (WAC 173-216-125). If this is an application for permit renewal, provide data for the last year for parameters that are routinely measured. For parameters measured only for this application, place the values under "Maximum." Report the values with units as specified in the parameter name or in the detection level.

The Permittee must use the specified analytical methods, detection limits (DLs) and quantitation levels (QLs) in the following table unless Ecology approves an alternate method or the method used produces measurable results in the sample and EPA has listed it as an EPA approved method in 40 CFR Part 136. If the Permittee uses an alternative method as allowed above, it must report the test method, DL, and QL on the discharge monitoring report or in the required report.

X	Parameter	Measurement Values			Number of Analyses	Analytical Method Std. Methods 19 th , 20 th edition or EPA	Detection Limit/Quantitation Level
		Minimum	Maximum	Average			
	BOD (5 day)	2.70	47.7	14.52	5	SM 5210 B	/2 mg/l
	COD					SM 5220 D	/10 mg/l
	Total suspended solids	7.0	324	90.4	5	SM 2540 D	/5 mg/l
	Total dissolved solids					SM 2540 C	
	Conductivity (micromhos/cm)	474	554	503.6	5	SM 2510 B	
	Ammonia-N as N	.0652	3.47	1.77	2	SM 4500-NH ₃ H	/0.3 mg/L
	pH					SM 4500-H	0.1 standard units
	Total Residual Chlorine					SM4500-Cl G	50/ µg/L L
	Fecal coliform (organisms/100 mL)	<1.8	33	9.63	13	SM 9221 E or 9222 D	
	Total coliform (organisms/100 mL)					SM 9221 B or 9222 B	
	Dissolved oxygen					SM 4500-O C/G	
	Nitrate + nitrite-N as N	<0.1	<0.1	<0.1	2	SM 4500-NO ₃ F	100 µg/L
	Total kjeldahl N as N	2.43	13.8	6.94	5	SM 4500-N _{org} C/E/FG	300 µg/l
	Ortho-phosphate-P as P					SM 4500-P E/F	10 µg/l
	Total-phosphorous-P as P					SM 4500-P E/P/F	10 µg/l
	Total Oil & grease					EPA 1664A	1.4/5 mg/l
	NWTPH - Dx					Ecology NWTPH Dx	250/250 µg/l
	NWTPH - Gx					Ecology NWTPH Gx	250/250 µg/l
	Calcium					EPA 200.7	10 µg/l
	Chloride					SM 4500-Cl C	0.15 µg/l
	Fluoride					SM 4500-F E	.025/0.1 mg/l
	Magnesium					EPA 200.7	10/50 µg/l
	Potassium					EPA 200.7	700/ µg/l
	Sodium					EPA 200.7	29/ µg/l
	Sulfate					SM 4500-SO ₄ C/D	/200 µg/l
	Alkalinity mg/L as CaCO ₃					SM 2320 B	/5 mg/L as CaCO ₃

X	Parameter	Measurement Values			Number of Analyses	Analytical Method Std. Methods 19 th , 20 th edition or EPA	Detection Limit/Quantitation Level
		Minimum	Maximum	Average			
	Arsenic(total)					EPA 200.8	0.1/0.5 µg/l
	Barium (total)					EPA 200.8	0.5/2 µg/l
	Cadmium (total)					EPA 200.8	.05/.25 µg/l
	Chromium (total)					EPA 200.8	0.2/1 µg/l
	Copper (total)					EPA 200.8	0.4/2 µg/l
	Iron (total)					EPA 200.7	12.5/50 µg/l
	Lead (total)					EPA 200.8	0.1/0.5 µg/l
	Manganese (total)					EPA 200.8	0.1/0.5 µg/l
	Mercury (total) pg/L					EPA 1631E	0.2/.5 pg/l
	Molybdenum(total)					EPA 200.8	0.1/0.5 µg/l
	Nickel(total)					EPA 200.8	0.1/0.5 µg/l
	Selenium (total)					EPA 200.8	1/1 µg/l
	Silver (total)					EPA 200.8	.04/.2 µg/l
	Zinc (total)					EPA 200.8	0.5/2.5 µg/l

Detection Level (DL) or detection limit means the minimum concentration of an analyte (substance) that can be measured and reported with a 99% confidence that the analyte concentration is greater than zero as determined by the procedure given in 40 CFR part 136, Appendix B.

Quantitation Level (QL) also known as Minimum Level of Quantitation (ML) – The lowest level at which the entire analytical system must give a recognizable signal and acceptable calibration point for the analyte. It is equivalent to the concentration of the lowest calibration standard, assuming that the lab has used all method-specified sample weights, volumes, and cleanup procedures. The QL is calculated by multiplying the MDL by 3.18 and rounding the result to the number nearest to $(1, 2, \text{ or } 5) \times 10^n$, where n is an integer. (64 FR 30417).

ALSO GIVEN AS:

The smallest detectable concentration of analyte greater than the Detection Limit (DL) where the accuracy (precision & bias) achieves the objectives of the intended purpose. (Report of the Federal Advisory Committee on Detection and Quantitation Approaches and Uses in Clean Water Act Programs Submitted to the US Environmental Protection Agency December 2007).

7. Has the effluent been analyzed for any other parameters than those identified in question C.6, or are there other pollutants that you know of or believe to be present?
☐ YES ☒ NO

If yes, specify the pollutants and their concentration if known (*attach laboratory analyses if available and label as Attachment C.6*). (*Note: Ecology may require additional testing.*)

SECTION D. GROUNDWATER INFORMATION

Provide available data measurements or range of measurements from monitoring wells or supply wells in the area of discharge. Provide the analytical method and detection limit, if known. Provide the location of each well on the map required in E.3 below. Attach well logs when available (*label as Attachment D*). Copy this page as necessary for each well (*label as Attachment D*). Provide the latitude and longitude in decimal format.

Ecology Well Tag ID # AHJ398

Well ID # MW-2 (*example MW-1*)

(*example AAB123*)

Latitude: 48.071

Longitude: 117.625

Well Elevation (to the nearest 0.01 feet) 2434.61 Check the appropriate box; the elevation measurement is relative to: the NAVD88 standard ☐ mean sea level ☒

Parameter	Units	Range of Measurements	Number of Analyses	Analytical Method	Detection Limit
BOD (5 day)	mg/L				
COD	mg/L				
Total organic carbon	mg/L				
Dissolved Fixed Solids	mg/L				
Total dissolved solids	mg/L	68-158	4	SM2540C	5
pH	Standard units				
Conductivity	(micromhos/cm)				
Alkalinity	mg/L as CaCO ₃				
Total hardness	mg/L				
Fecal coliform	organisms/100mL				
Total coliform	organisms/100mL	<1.8-7.8	4	SM 9221B	1.8
Dissolved oxygen	mg/L				
Ammonia-N as N	mg/L				
Nitrate + nitrite-N, as N	mg/L	1.11-1.39	4	EPA 300.0	0.2
Total kjeldahl N as N	mg/L				
Ortho-phosphate-P as P	mg/L				
Total-phosphorus-P as P	mg/L				
Total Oil & Grease	mg/L				
Total petroleum hydrocarbon	<input type="checkbox"/> mg/L <input type="checkbox"/> µg/l				
Calcium	<input type="checkbox"/> mg/L <input type="checkbox"/> µg/l				
Chloride	<input type="checkbox"/> mg/L <input type="checkbox"/> µg/l				
Fluoride	<input type="checkbox"/> mg/L <input type="checkbox"/> µg/l				
Magnesium	<input type="checkbox"/> mg/L <input type="checkbox"/> µg/l				
Potassium	<input type="checkbox"/> mg/L <input type="checkbox"/> µg/l				
Sodium	<input type="checkbox"/> mg/L <input type="checkbox"/> µg/l				
Sulfate	<input type="checkbox"/> mg/L <input type="checkbox"/> µg/l				
Barium	<input type="checkbox"/> mg/L <input type="checkbox"/> µg/l				
Cadmium	<input type="checkbox"/> mg/L <input type="checkbox"/> µg/l				
Chromium	<input type="checkbox"/> mg/L <input type="checkbox"/> µg/l				
Copper	<input type="checkbox"/> mg/L <input type="checkbox"/> µg/l				
Iron	<input type="checkbox"/> mg/L <input type="checkbox"/> µg/l				
Lead	<input type="checkbox"/> mg/L <input type="checkbox"/> µg/l				
Manganese	<input type="checkbox"/> mg/L <input type="checkbox"/> µg/l				
Mercury	<input type="checkbox"/> mg/L <input type="checkbox"/> µg/l				
Selenium	<input type="checkbox"/> mg/L <input type="checkbox"/> µg/l				
Silver	<input type="checkbox"/> mg/L <input type="checkbox"/> µg/l				
Zinc	<input type="checkbox"/> mg/L <input type="checkbox"/> µg/l				
Depth to water level (to the nearest .01 feet)		82.42-83.17	4	N/A	N/A

Ecology Well Tag ID # AHJ396
(exampleAAB123)

Well ID # MW-4 (example MW-1)

Latitude: 48.071

Longitude: 117.625

Well Elevation (to the nearest 0.01 feet) 2435.84 Check the appropriate box; the elevation measurement is relative to: the NAVD88 standard ☐ mean sea level ☒

Parameter	Units	Range of Measurements	Number of Analyses	Analytical Method	Detection Limit
BOD (5 day)	mg/L				
COD	mg/L				
Total organic carbon	mg/L				
Dissolved Fixed Solids	mg/L				
Total dissolved solids	mg/L	91.0-125	4	SM2540C	5
pH	Standard units				
Conductivity	(micromhos/cm)				
Alkalinity	mg/L as CaCO ₃				
Total hardness	mg/L				
Fecal coliform	organisms/100mL				
Total coliform	organisms/100mL	<1.8	4	SM9221B	1.8
Dissolved oxygen	mg/L				
Ammonia-N as N	mg/L				
Nitrate + nitrite-N, as N	mg/L	0.655-0.978	4	EPA 300.0	0.2
Total kjeldahl N as N	mg/L				
Ortho-phosphate-P as P	mg/L				
Total-phosphorus-P as P	mg/L				
Total Oil & Grease	mg/L				
Total petroleum hydrocarbon	<input type="checkbox"/> mg/L <input type="checkbox"/> µg/l				
Calcium	<input type="checkbox"/> mg/L <input type="checkbox"/> µg/l				
Chloride	<input type="checkbox"/> mg/L <input type="checkbox"/> µg/l				
Fluoride	<input type="checkbox"/> mg/L <input type="checkbox"/> µg/l				
Magnesium	<input type="checkbox"/> mg/L <input type="checkbox"/> µg/l				
Potassium	<input type="checkbox"/> mg/L <input type="checkbox"/> µg/l				
Sodium	<input type="checkbox"/> mg/L <input type="checkbox"/> µg/l				
Sulfate	<input type="checkbox"/> mg/L <input type="checkbox"/> µg/l				
Barium	<input type="checkbox"/> mg/L <input type="checkbox"/> µg/l				
Cadmium	<input type="checkbox"/> mg/L <input type="checkbox"/> µg/l				
Chromium	<input type="checkbox"/> mg/L <input type="checkbox"/> µg/l				
Copper	<input type="checkbox"/> mg/L <input type="checkbox"/> µg/l				
Iron	<input type="checkbox"/> mg/L <input type="checkbox"/> µg/l				
Lead	<input type="checkbox"/> mg/L <input type="checkbox"/> µg/l				
Manganese	<input type="checkbox"/> mg/L <input type="checkbox"/> µg/l				
Mercury	<input type="checkbox"/> mg/L <input type="checkbox"/> µg/l				
Selenium	<input type="checkbox"/> mg/L <input type="checkbox"/> µg/l				
Silver	<input type="checkbox"/> mg/L <input type="checkbox"/> µg/l				
Zinc	<input type="checkbox"/> mg/L <input type="checkbox"/> µg/l				
Depth to water level (to the nearest .01 feet)		78.5-84.17	4	N/A	N/A

Ecology Well Tag ID # AHJ395Well ID # MW-5 (example MW-1)

(example AAB123)

Latitude: 48.075Longitude: 117.625Well Elevation (to the nearest 0.01 feet) 2450.32 Check the appropriate box; the elevation measurement is relative to: the NAVD88 standard ☐ mean sea level ☒

Parameter	Units	Range of Measurements	Number of Analyses	Analytical Method	Detection Limit
BOD (5 day)	mg/L				
COD	mg/L				
Total organic carbon	mg/L				
Dissolved Fixed Solids	mg/L				
Total dissolved solids	mg/L	160-199	4	SM2540C	5
pH	Standard units				
Conductivity	(micromhos/cm)				
Alkalinity	mg/L as CaCO ₃				
Total hardness	mg/L				
Fecal coliform	organisms/100mL				
Total coliform	organisms/100mL	<1.8-2.00	4	SM9221B	1.8
Dissolved oxygen	mg/L				
Ammonia-N as N	mg/L				
Nitrate + nitrite-N, as N	mg/L	0.615-0.665	4	EPA 300.0	0.2
Total kjeldahl N as N	mg/L				
Ortho-phosphate-P as P	mg/L				
Total-phosphorus-P as P	mg/L				
Total Oil & Grease	mg/L				
Total petroleum hydrocarbon	<input type="checkbox"/> mg/L <input type="checkbox"/> µg/l				
Calcium	<input type="checkbox"/> mg/L <input type="checkbox"/> µg/l				
Chloride	<input type="checkbox"/> mg/L <input type="checkbox"/> µg/l				
Fluoride	<input type="checkbox"/> mg/L <input type="checkbox"/> µg/l				
Magnesium	<input type="checkbox"/> mg/L <input type="checkbox"/> µg/l				
Potassium	<input type="checkbox"/> mg/L <input type="checkbox"/> µg/l				
Sodium	<input type="checkbox"/> mg/L <input type="checkbox"/> µg/l				
Sulfate	<input type="checkbox"/> mg/L <input type="checkbox"/> µg/l				
Barium	<input type="checkbox"/> mg/L <input type="checkbox"/> µg/l				
Cadmium	<input type="checkbox"/> mg/L <input type="checkbox"/> µg/l				
Chromium	<input type="checkbox"/> mg/L <input type="checkbox"/> µg/l				
Copper	<input type="checkbox"/> mg/L <input type="checkbox"/> µg/l				
Iron	<input type="checkbox"/> mg/L <input type="checkbox"/> µg/l				
Lead	<input type="checkbox"/> mg/L <input type="checkbox"/> µg/l				
Manganese	<input type="checkbox"/> mg/L <input type="checkbox"/> µg/l				
Mercury	<input type="checkbox"/> mg/L <input type="checkbox"/> µg/l				
Selenium	<input type="checkbox"/> mg/L <input type="checkbox"/> µg/l				
Silver	<input type="checkbox"/> mg/L <input type="checkbox"/> µg/l				
Zinc	<input type="checkbox"/> mg/L <input type="checkbox"/> µg/l				
Depth to water level (to the nearest .01 feet)		100.09-100.75	4	N/A	N/A

Ecology Well Tag ID # BBH697
(exampleAAB123)

Well ID # MW-6 (example MW-1)

Latitude: 48.068

Longitude: 117.62

Well Elevation (to the nearest 0.01 feet) 2439.0 Check the appropriate box; the elevation measurement is relative to: the NAVD88 standard ☐ mean sea level ☒

Parameter	Units	Range of Measurements	Number of Analyses	Analytical Method	Detection Limit
BOD (5 day)	mg/L				
COD	mg/L				
Total organic carbon	mg/L				
Dissolved Fixed Solids	mg/L				
Total dissolved solids	mg/L	167-540	4	SM2540C	5
pH	Standard units				
Conductivity	(micromhos/cm)				
Alkalinity	mg/L as CaCO ₃				
Total hardness	mg/L				
Fecal coliform	organisms/100mL				
Total coliform	organisms/100mL	<1.8	4	SM9221 B	1.8
Dissolved oxygen	mg/L				
Ammonia-N as N	mg/L				
Nitrate + nitrite-N, as N	mg/L	ND – 0.512	4	EPA 300.0	0.2
Total kjeldahl N as N	mg/L				
Ortho-phosphate-P as P	mg/L				
Total-phosphorus-P as P	mg/L				
Total Oil & Grease	mg/L				
Total petroleum hydrocarbon	<input type="checkbox"/> mg/L <input type="checkbox"/> µg/l				
Calcium	<input type="checkbox"/> mg/L <input type="checkbox"/> µg/l				
Chloride	<input type="checkbox"/> mg/L <input type="checkbox"/> µg/l				
Fluoride	<input type="checkbox"/> mg/L <input type="checkbox"/> µg/l				
Magnesium	<input type="checkbox"/> mg/L <input type="checkbox"/> µg/l				
Potassium	<input type="checkbox"/> mg/L <input type="checkbox"/> µg/l				
Sodium	<input type="checkbox"/> mg/L <input type="checkbox"/> µg/l				
Sulfate	<input type="checkbox"/> mg/L <input type="checkbox"/> µg/l				
Barium	<input type="checkbox"/> mg/L <input type="checkbox"/> µg/l				
Cadmium	<input type="checkbox"/> mg/L <input type="checkbox"/> µg/l				
Chromium	<input type="checkbox"/> mg/L <input type="checkbox"/> µg/l				
Copper	<input type="checkbox"/> mg/L <input type="checkbox"/> µg/l				
Iron	<input type="checkbox"/> mg/L <input type="checkbox"/> µg/l				
Lead	<input type="checkbox"/> mg/L <input type="checkbox"/> µg/l				
Manganese	<input type="checkbox"/> mg/L <input type="checkbox"/> µg/l				
Mercury	<input type="checkbox"/> mg/L <input type="checkbox"/> µg/l				
Selenium	<input type="checkbox"/> mg/L <input type="checkbox"/> µg/l				
Silver	<input type="checkbox"/> mg/L <input type="checkbox"/> µg/l				
Zinc	<input type="checkbox"/> mg/L <input type="checkbox"/> µg/l				
Depth to water level (to the nearest .01 feet)		86.25-86.75	4	N/A	N/A

SECTION E. SITE ASSESSMENT

Note: The Department of Ecology Water Resources Section can be consulted for identifying wells within one mile of your site. The local library and local city or county planning offices may be helpful in providing the information required in this section.

1. Give the legal description of the land treatment/application site(s) by section/township/range and latitude/longitude (approximate center of the site; NAD83/WGS84 reference datum). Indicate the owner for each site. Give the acreage of each land treatment/application site(s). Attach a copy of the contract(s) authorizing use of(s) used land for treatment/application. *(Label as attachment E.1)*

70 acres located approximately one half mile North of Loon Lake junction on Highway 395 in the west ½ of Section 27, Township 20 North, Range 41 East Willamette Meridian

2. If this is a new discharge, list all environmental control permits or approvals needed for this project; for example, SEPA review, engineering reports, hydrogeologic reports, , biosolids permits, or air emissions permits.

N/A

3. Attach an original United States Geological Survey (USGS) 7.5 minute topographic map or aerial photograph that shows the POTW and the land treatment/application site(s).
USGS topographical maps are available from the Department of Natural Resources (360-902-1234), Metsker Maps (206-588-5222), and some local bookstores and internet sites.
Show the following on this map: *(Label as attachment E.3.)*
 - a. Location and name of internal and adjacent streets.
 - b. Surface water drainage systems within ¼ mile of the site.
 - c. All wells within 1 mile of the site.
 - d. Wastewater discharge points.
 - e. Land uses and zoning adjacent to the wastewater application site.
 - f. Ground water gradient.
4. Describe the soils on the site using information from local soil survey reports. **Soils information is available from your county conservation district or from information contained in the sites hydrogeologic report.**
(Label as attachment E.4.)
5. Describe the local geology and hydrogeology within one mile of the site. Include any ground water quality data. **The local library, the sites hydrogeologic report, or soil conservation service may have this information.**
(Label as attachment E.5.)

6. List the names and addresses of contractors or consultants who provided information, and cite sources of information by title and author.

Allison Esvelt, P.E., Esvelt Environmental Engineering, LLC

United States Geological Services, National Map, Geographical Coordinate System (WGS84), April 2022.

Washington State Department of Health, Office of Drinking Water, Source Water Assessment Program (SWAP) Maps, December 2009.

Stevens County Comprehensive Plan, Future Land Use Maps, March 2014.

Stevens County Comprehensive Plan, Loon Lake LAMIRD, January 2015.

National Resources Conservation Service, National Cooperative Soil Survey, Soil Map – Stevens County, Washington, April 2022.

Washington State Department of Ecology, GIS Technical Services, Colville Water Resources Inventory Area Map, March 2009.

Budinger & Associates, Monitor Well 6 log, June 2019.

SECTION F. SLUDGE/BIOSOLIDS MANAGEMENT AND DISPOSAL

1. If your wastewater treatment is by lagoon:

Has the depth of the sludge been measured in the last five years?

☒ YES ☐ NO (If yes, include the measurements and a map that shows the approximate measurement sites)

Will sludge be removed from the lagoon(s) in the next five years? If so, describe the sludge, stabilization, utilization, and disposal methods. Attach extra sheets as necessary.

Biolsolids were dredged from lagoons 1 and 2 in year 2017 and land applied on a nearby permitted land application site via contract with Fire Mountain Farms. Only 74.69 tons of sludge had accumulated in and were removed from the two lagoons.

2. If your wastewater treatment is by methods other than lagoon:

Do you have a Sludge Management Plan? ☐ YES ☐ NO

Is the Plan approved by:

☐ Local health district? Date approved:

☐ Department of Ecology? Date approved:

3. Does your facility have a biosolids permit issued by Ecology? If so, please provide the permit's number and expiration date.

Biosolids Permit number	General Permit	Permit expiration Date	9/2020
-------------------------	----------------	------------------------	--------

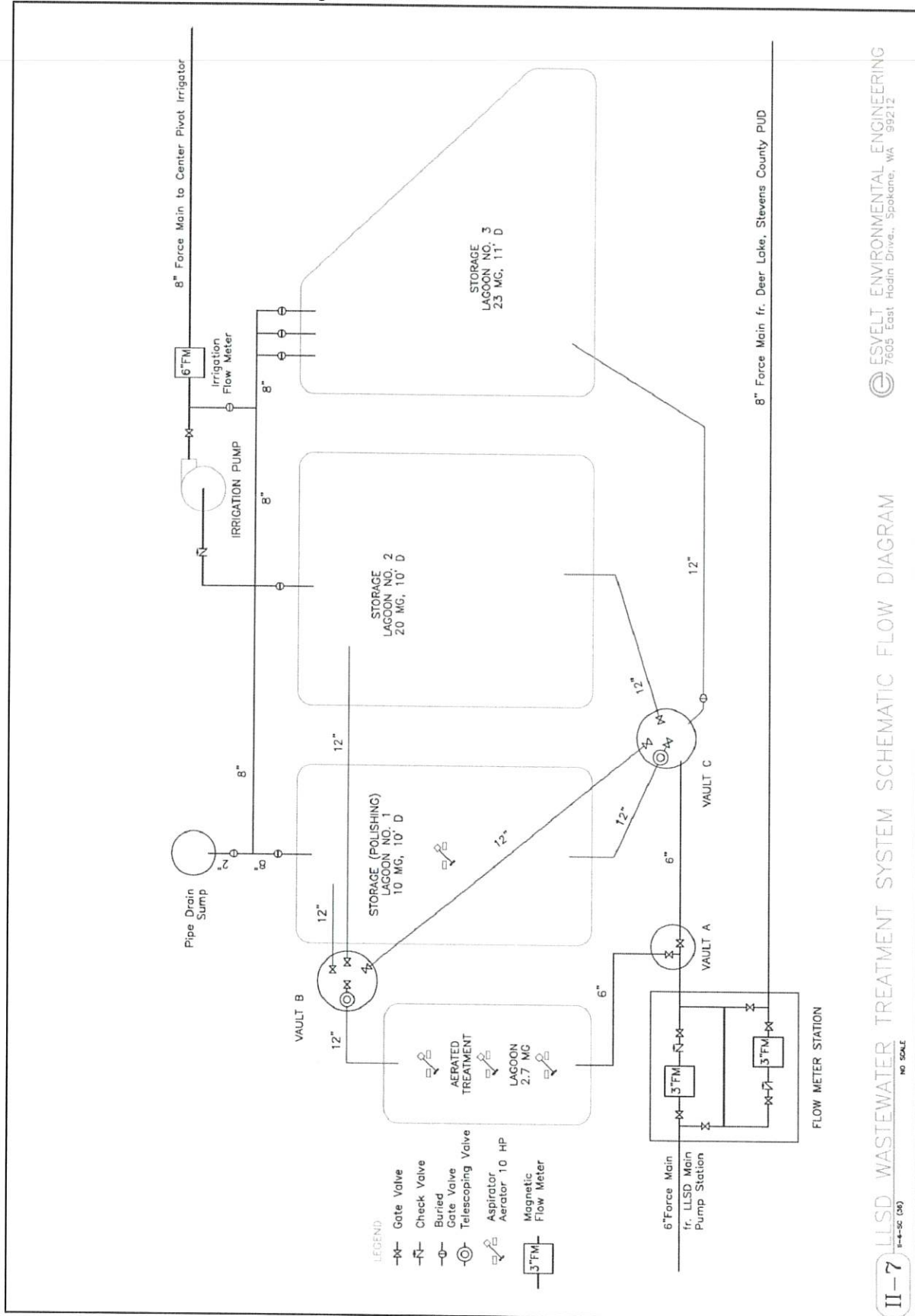
Summary of Attachments That May be Required for This Application:

(Please check attachments that are included)

- | | | |
|-------------------------------------|-----|---|
| <input checked="" type="checkbox"/> | | B.5 Schematic drawing of POTW |
| <input checked="" type="checkbox"/> | | C.4 Flow records |
| <input type="checkbox"/> | C.6 | Additional effluent analysis |
| <input type="checkbox"/> | D. | Additional ground water data |
| <input type="checkbox"/> | E.1 | Copies of contracts authorizing use of land for treatment |
| <input checked="" type="checkbox"/> | | E.3 USGS topographic map |
| <input checked="" type="checkbox"/> | | E.4 Soil information |
| <input checked="" type="checkbox"/> | | E.5 Local geology and hydrogeology |

If you need this document in a format for the visually impaired, call the Water Quality Program at 360-407-6600. Persons with hearing loss can call 711 for Washington Relay Service. Persons with a speech disability can call 877-833-6341.

Attachment B.5 – Schematic Diagram of POTW



LLSD #4 METERSTATION/FLOW READING RECORDS
MONTH/YEAR: January 2021

Day	Date	Meter Station Loon Lake Reading	Daily Flow Loon Lake	Monthly Flow Loon Lake		Meter Station Deer Lake Reading	Daily Flow Deer Lake	Monthly Flow Deer Lake
Thurs	31	2,977,246				7,667,367		
Fri	1	3,031,496	54,250	54,250		7,713,668	46,301	46,301
Sat	2	3,085,746	54,250	108,500		7,759,969	46,301	92,602
Sun	3	3,139,996	54,250	162,750		7,806,270	46,301	138,903
Mon	4	3,194,249	54,253	217,003		7,852,572	46,302	185,205
Tues	5	3,257,443	63,194	280,197		7,900,999	48,427	233,632
Wed	6	3,297,649	40,206	320,403		7,943,507	42,508	276,140
Thurs	7	3,344,515	46,866	367,269		7,986,095	42,588	318,728
Fri	8	3,383,917	39,402	406,671		8,023,847	37,752	356,480
Sat	9	3,426,093	42,176	448,847		8,063,656	39,809	396,289
Sun	10	3,468,269	42,176	491,023		8,103,465	39,809	436,098
Mon	11	3,510,447	42,178	533,201		8,143,275	39,810	475,908
Tues	12	3,552,138	41,691	574,892		8,180,642	37,367	513,275
Wed	13	3,633,027	80,889	655,781		8,261,399	80,757	594,032
Thurs	14	3,698,679	65,652	721,433		8,317,292	55,893	649,925
Fri	15	3,752,146	53,467	774,900		8,380,058	62,766	712,691
Sat	16	3,800,702	48,556	823,456		8,427,981	47,923	760,614
Sun	17	3,849,252	48,550	872,006		8,475,904	47,923	808,537
Mon	18	3,897,802	48,550	920,556		8,523,827	47,923	856,460
Tues	19	3,946,370	48,550	969,106		8,571,751	47,924	904,384
Wed	20	3,987,352	40,982	1,010,088		8,614,807	43,056	947,440
Thurs	21	4,029,253	41,901	1,051,989		8,652,808	38,001	985,441
Fri	22	4,068,013	38,760	1,090,749		8,690,789	37,981	1,023,422
Sat	23	4,110,652	42,639	1,133,388		8,730,542	39,753	1,063,175
Sun	24	4,153,291	42,639	1,176,027		8,770,295	39,753	1,102,928
Mon	25	4,195,930	42,639	1,218,666		8,810,049	39,754	1,142,682
Tues	26	4,233,303	37,373	1,256,039		8,843,763	33,714	1,176,396
Wed	27	4,272,945	39,642	1,295,681		8,878,859	35,096	1,211,492
Thurs	28	4,310,746	37,801	1,333,482		8,915,567	36,708	1,248,200
Fri	29	4,350,256	39,510	1,372,992		8,948,409	32,842	1,281,042
Sat	30	4,391,641	41,385	1,414,377		8,986,440	38,031	1,319,073
Sun	31	4,433,026	41,385	1,455,762		9,024,471	38,031	1,357,104
			1,455,762	1,455,762			1,357,104	1,357,104
			L.L. %	51.8%			D.L. %	48.2%
			LOON LAKE AVERAGE GPD:	46,960			DEER LAKE AVERAGE GPD:	43,778
METER STATION			COMMENTS:					
TOTAL:			LOON LK / DEER LK. AVERAGE GPD: 90,738					
			gpm 63.01					

LLSD #4 METERSTATION/FLOW READING RECORDS
MONTH/YEAR: Feb 2021

[illegible]

LLSD #4 METERSTATION/FLOW READING RECORDS
MONTH/YEAR: March 2021

Day	Date	Meter Station Loon Lake Reading	Daily Flow Loon Lake	Monthly Flow Loon Lake		Meter Station Deer Lake Reading	Daily Flow Deer Lake	Monthly Flow Deer Lake
	31	5,597,121				10,022,452		
Mon	1	5,637,257	40,136	40,136		57,215	34,860	34,860
Tue	2	5,674,018	36,761	76,897		90,038	32,823	67,683
Wed	3	5,711,793	37,775	114,672		123,306	33,268	100,951
Thu	4	5,746,531	34,738	149,410		155,555	32,249	133,200
Fri	5	5,786,834	40,303	189,713		186,755	31,200	164,400
Sat	6	5,826,126	39,292	229,005		222,838	36,083	200,483
Sun	7	5,865,418	39,292	268,297		258,921	36,083	236,566
Mon	8	5,904,711	39,293	307,590		295,004	36,083	272,649
Tue	9	5,940,887	36,176	343,766		326,367	31,363	304,012
Wed	10	5,981,003	40,116	383,882		359,185	32,818	336,830
Thu	11	6,020,680	39,677	423,559		394,061	34,876	371,706
Fri	12	6,056,799	36,119	459,678		426,299	32,238	403,944
Sat	13	6,094,116	37,317	496,995		463,195	36,896	440,840
Sun	14	6,131,433	37,317	534,312		500,091	36,896	477,736
Mon	15	6,168,750	37,317	571,629		536,989	36,898	514,634
Tue	16	6,207,622	38,872	610,501		572,855	35,866	550,500
Wed	17	6,244,724	37,102	647,603		608,367	35,512	586,012
Thu	18	6,287,797	43,073	690,676		642,030	33,663	619,675
Fri	19	6,327,876	40,079	730,755		672,708	30,678	650,353
Sat	20	6,368,525	40,649	771,404		709,966	37,258	687,611
Sun	21	6,409,174	40,649	812,053		747,224	37,258	724,869
Mon	22	6,449,823	40,649	852,702		784,484	37,260	762,129
Tue	23	6,487,727	37,904	890,606		819,011	34,527	796,656
Wed	24	6,524,836	37,109	927,715		851,202	32,191	828,847
Thu	25	6,563,317	38,481	966,196		885,349	34,147	862,994
Fri	26	6,600,285	36,968	1,003,164		922,966	37,617	900,611
Sat	27	6,640,666	40,381	1,043,545		965,854	42,888	943,499
Sun	28	6,681,047	40,381	1,083,926		1,008,742	42,888	986,387
Mon	29	6,721,430	40,383	1,124,309		1,051,630	42,888	1,029,275
Tue	30	6,759,690	38,260	1,162,569		1,091,038	39,408	1,068,683
Wed	31	6,795,177	35,487	1,198,056		1,129,041	38,003	1,106,686
			1,198,056	1,198,056			1,106,686	1,106,686
			L.L. %	52.0%			D.L. %	48.0%
			LOON LAKE AVERAGE GPD:	38,647			DEER LAKE AVERAGE GPD:	35,700
METER STATION			COMMENTS:					
TOTAL: 2,304,742			LOON LK / DEER LK. AVERAGE GPD: 74,347					
			gpm 51.63					

LLSD #4 METERSTATION/FLOW READING RECORDS
MONTH/YEAR: April 2021

Day	Date	Meter Station Loon Lake Reading	Daily Flow Loon Lake	Monthly Flow Loon Lake		Meter Station Deer Lake Reading	Daily Flow Deer Lake	Monthly Flow Deer Lake
	31	6,795,177				1,129,041		
thurs	1	6,831,770	36,593	36,593		1,166,500	37,459	37,459
Fri	2	6,866,283	34,513	71,106		1,203,635	37,135	74,594
Sat	3	6,904,689	38,406	109,512		1,246,521	42,886	117,480
Sun	4	6,943,095	38,406	147,918		1,289,407	42,886	160,366
Mon	5	6,981,503	38,408	186,326		1,332,295	42,888	203,254
Tues	6	7,020,442	38,939	225,265		1,370,255	37,960	241,214
Wed	7	7,061,936	41,494	266,759		1,409,399	39,144	280,358
Thurs	8	7,101,653	39,717	306,476		1,452,121	42,722	323,080
Fri	9	7,139,491	37,838	344,314		1,492,899	40,778	363,858
Sat	10	7,183,479	43,988	388,302		1,537,051	44,152	408,010
Sun	11	7,227,467	43,988	432,290		1,581,203	44,152	452,162
Mon	12	7,271,457	43,990	476,280		1,625,355	44,152	496,314
Tues	13	7,307,062	35,605	511,885		1,659,885	34,530	530,844
Wed	14	7,344,731	37,669	549,554		1,699,197	39,312	570,156
thurs	15	7,381,809	37,078	586,632		1,739,054	39,857	610,013
Fri	16	7,421,745	39,936	626,568		1,772,646	33,592	643,605
Sat	17	7,468,464	46,719	673,287		1,814,306	41,660	685,265
Sun	18	7,516,182	47,718	721,005		1,855,966	41,660	726,925
Mon	19	7,561,904	45,722	766,727		1,897,626	41,660	768,585
Tues	20	7,599,900	37,996	804,723		1,931,872	34,246	802,831
Wed	21	7,636,165	36,265	840,988		1,965,360	33,488	836,319
Thurs	22	7,675,365	39,200	880,188		1,997,883	32,523	868,842
Fri	23	7,714,269	38,904	919,092		2,032,024	34,141	902,983
Sat	24	7,758,592	44,323	963,415		2,073,302	41,278	944,261
Sun	25	7,802,915	44,323	1,007,738		2,114,580	41,278	985,539
Mon	26	7,847,239	44,324	1,052,062		2,154,860	40,280	1,025,819
Tues	27	7,887,641	40,402	1,092,464		2,187,464	32,604	1,058,423
Wed	28	7,924,861	37,220	1,129,684		2,219,188	31,724	1,090,147
thurs	29	7,962,832	37,971	1,167,655		2,254,627	35,439	1,125,586
Fri	30	8,006,054	43,222	1,210,877		2,286,829	32,202	1,157,788
			1,210,877	1,210,877			1,157,788	1,157,788
			L.L. %	51.1%			D.L. %	48.9%
			LOON LAKE AVERAGE GPD:	40,363			DEER LAKE AVERAGE GPD:	38,593
METER STATION			COMMENTS:					
TOTAL: 2,368,665			LOON LK / DEER LK. AVERAGE GPD: 78,956					
			gpm 54.83					

LLSD #4 METERSTATION/FLOW READING RECORDS
MONTH/YEAR: May 2021

Day	Date	Meter Station Loon Lake Reading	Daily Flow Loon Lake	Monthly Flow Loon Lake		Meter Station Deer Lake Reading	Daily Flow Deer Lake	Monthly Flow Deer Lake
	30	8,006,054				2,286,829		
Sat	1	8,054,473	48,419	48,419		2,328,835	42,006	42,006
Sun	2	8,102,892	48,419	96,838		2,370,841	42,006	84,012
Mon	3	8,151,313	48,421	145,259		2,412,848	42,007	126,019
Tue	4	8,190,429	39,116	184,375		2,451,924	39,076	165,095
Wed	5	8,228,174	37,745	222,120		2,487,311	35,387	200,482
Thu	6	8,269,513	41,339	263,459		2,527,981	40,670	241,152
Fri	7	8,311,046	41,533	304,992		2,568,906	40,925	282,077
Sat	8	8,357,183	46,137	351,129		2,614,845	45,939	328,016
Sun	9	8,403,320	46,137	397,266		2,660,784	45,939	373,955
Mon	10	8,449,458	46,138	443,404		2,706,724	45,940	419,895
Tue	11	8,489,775	40,317	483,721		2,744,346	37,622	457,517
Wed	12	8,533,714	43,939	527,660		2,782,063	37,717	495,234
Thu	13	8,578,247	44,533	572,193		2,820,123	38,060	533,294
Fri	14	8,622,120	43,873	616,066		2,858,310	38,187	571,481
Sat	15	8,678,687	56,567	672,633		2,911,558	53,248	624,729
Sun	16	8,735,251	56,564	729,197		2,964,806	53,248	677,977
Mon	17	8,791,821	56,570	785,767		3,018,056	53,250	731,227
Tue	18	8,840,536	48,715	834,482		3,087,383	69,327	800,554
Wed	19	8,887,397	46,861	881,343		3,099,360	11,977	812,531
Thu	20	8,931,828	44,431	925,774		3,140,696	41,336	853,867
Fri	21	8,971,723	39,895	965,669		3,180,745	40,049	893,916
Sat	22	9,018,722	46,999	1,012,668		3,230,565	49,820	943,736
Sun	23	9,065,722	47,000	1,059,668		3,280,385	49,820	993,556
Mon	24	9,112,722	47,000	1,106,668		3,330,207	49,822	1,043,378
Tue	25	9,152,475	39,753	1,146,421		3,372,036	41,829	1,085,207
Wed	26	9,194,564	42,089	1,188,510		3,413,406	41,370	1,126,577
Thu	27	9,236,929	42,365	1,230,875		3,454,705	41,299	1,167,876
Fri	28	9,279,421	42,492	1,273,367		3,495,433	40,728	1,208,604
Sat	29	9,349,796	70,375	1,343,742		3,570,742	75,309	1,283,913
Sun	30	9,420,171	70,375	1,414,117		3,646,051	75,309	1,359,222
Mon	31	9,490,546	70,375	1,484,492		3,721,360	75,309	1,434,531
			1,484,492	1,484,492			1,434,531	1,434,531
			L.L. %	50.9%			D.L. %	49.1%
		LOON LAKE AVERAGE GPD:		47,887		DEER LAKE AVERAGE GPD:		46,275
METER STATION			COMMENTS:					
TOTAL: 2,919,023			LOON LK / DEER LK. AVERAGE GPD: 94,162					
			gpm 65.39					

LLSD #4 METERSTATION/FLOW READING RECORDS
MONTH/YEAR: June 2021

Day	Date	Meter Station Loon Lake Reading	Daily Flow Loon Lake	Monthly Flow Loon Lake		Meter Station Deer Lake Reading	Daily Flow Deer Lake	Monthly Flow Deer Lake
Mon	31	9,490,546				3,721,360	#VALUE!	
Tues	1	9,560,923	70,377	70,377		3,796,670	75,310	75,310
Wed	2	9,614,688	53,765	124,142		3,841,557	44,887	120,197
thurs	3	9,667,720	53,032	177,174		3,889,302	47,745	167,942
Fri	4	9,715,974	48,254	225,428		3,933,465	44,163	212,105
Sat	5	9,774,321	58,347	283,775		3,984,998	51,533	263,638
Sun	6	9,832,668	58,347	342,122		4,036,531	51,533	315,171
mon	7	9,891,015	58,347	400,469		4,088,064	51,533	366,704
tues	8	9,940,179	49,164	449,633		4,127,351	39,287	405,991
wed	9	9,988,948	48,769	498,402		4,165,785	38,434	444,425
thurs	10	35,022	46,074	542,476		4,207,373	41,588	486,013
fri	11	86,711	51,689	594,165		4,256,124	48,751	534,764
sat	12	147,278	60,567	654,732		4,309,508	53,384	588,148
sun	13	207,842	60,564	715,296		4,362,892	53,384	641,532
mon	14	268,412	60,570	775,866		4,416,276	53,384	694,916
tues	15	323,870	55,458	831,324		4,460,200	43,924	738,840
wed	16	377,101	53,231	884,555		4,499,420	39,220	778,060
thurs	17	439,725	62,624	947,179		4,542,342	42,922	820,982
fri	18	509,060	69,335	1,016,514		4,593,407	51,065	872,047
sat	19	576,538	67,478	1,083,992		4,655,675	62,268	934,315
sun	20	644,016	67,478	1,151,470		4,717,940	62,265	996,580
mon	21	711,495	67,479	1,218,949		4,780,210	62,270	1,058,850
tues	22	773,854	62,359	1,281,308		4,840,456	60,246	1,119,096
wed	23	828,594	54,740	1,336,048		4,895,420	54,964	1,174,060
thurs	24	881,560	52,966	1,389,014		4,943,164	47,744	1,221,804
fri	25	942,924	61,364	1,450,378		4,995,980	52,816	1,274,620
sat	26	1,016,872	73,948	1,524,326		5,066,155	70,175	1,344,795
sun	27	1,090,820	73,948	1,598,274		5,136,330	70,175	1,414,970
mon	28	1,164,769	73,949	1,672,223		5,206,505	70,175	1,485,145
tues	29	1,235,310	70,541	1,742,764		5,266,186	59,681	1,544,826
wed	30	1,301,868	66,558	1,809,322		5,323,575	57,389	1,602,215
TOTALS			1,811,322	1,811,322			1,602,215	1,602,215
			L.L. %	53.1%			D.L. %	46.9%
		LOON LAKE AVERAGE GPD:		60,377		DEER LAKE AVERAGE GPD:		53,407
METER STATION			COMMENTS:					
TOTAL: 3,413,537			LOON LK / DEER LK. AVERAGE GPD: 113,785					
			gpm 79.02					

LLSD #4 METERSTATION/FLOW READING RECORDS
MONTH/YEAR: July 2021

Day	Date	Meter Station	Daily Flow	Monthly Flow		Meter Station	Daily Flow	Monthly Flow
		Loon Lake Reading	Loon Lake	Loon Lake		Deer Lake Reading	Deer Lake	Deer Lake
wed	30	1,301,868				5,323,575	#VALUE!	
thu	1	1,364,105	62,237	62,237		5,375,236	51,661	51,661
fri	2	1,436,506	72,401	134,638		5,440,431	65,195	116,856
sat	3	1,550,119	113,613	248,251		5,553,833	113,402	230,258
sun	4	1,663,732	113,613	361,864		5,667,235	113,402	343,660
mon	5	1,777,345	113,613	475,477		5,780,640	113,405	457,065
tue	6	1,890,961	113,616	589,093		5,894,039	113,399	570,464
wed	7	1,965,425	74,464	663,557		5,967,922	73,883	644,347
thu	8	2,040,372	74,947	738,504		6,034,131	66,209	710,556
fri	9	2,112,968	72,596	811,100		6,095,277	61,146	771,702
sat	10	2,193,736	80,768	891,868		6,162,096	66,819	838,521
sun	11	2,274,504	80,768	972,636		6,228,915	66,819	905,340
mon	12	2,355,274	80,770	1,053,406		6,295,735	66,820	972,160
tue	13	2,423,287	68,013	1,121,419		6,353,750	58,015	1,030,175
wed	14	2,483,600	60,313	1,181,732		6,415,292	61,542	1,091,717
thu	15	2,539,561	55,961	1,237,693		6,471,290	55,998	1,147,715
fri	16	2,612,782	73,221	1,310,914		6,532,021	60,731	1,208,446
sat	17	2,690,946	78,164	1,389,078		6,602,603	70,582	1,279,028
sun	18	2,769,110	78,164	1,467,242		6,673,185	70,582	1,349,610
mon	19	2,847,274	78,164	1,545,406		6,743,766	70,581	1,420,191
tue	20	2,918,173	70,899	1,616,305		6,804,046	60,280	1,480,471
wed	21	2,983,683	65,510	1,681,815		6,859,825	55,779	1,536,250
thu	22	3,053,149	69,466	1,751,281		6,913,630	53,805	1,590,055
fri	23	3,124,551	71,402	1,822,683		6,968,562	54,932	1,644,987
sat	24	3,213,544	88,993	1,911,676		7,042,160	73,598	1,718,585
sun	25	3,302,537	88,993	2,000,669		7,115,758	73,598	1,792,183
mon	26	3,391,531	88,994	2,089,663		7,189,296	73,538	1,865,721
tue	27	3,448,105	56,574	2,146,237		7,232,900	43,604	1,909,325
wed	28	3,518,357	70,252	2,216,489		7,286,906	54,006	1,963,331
thu	29	3,591,691	73,334	2,289,823		7,342,678	55,772	2,019,103
fri	30	3,666,758	75,067	2,364,890		7,394,970	52,292	2,071,395
sat	31	3,753,234	86,476	2,451,366		7,463,025	68,055	2,139,450
	TOTALS		2,451,366	2,451,366			2,139,450	2,139,450
			L.L. %	53.4%			D.L. %	46.6%
		LOON LAKE AVERAGE GPD:		79,076		DEER LAKE AVERAGE GPD:		69,015
METER STATION		COMMENTS:						
TOTAL: 4,590,816		LOON LK / DEER LK. AVERAGE GPD: 148,091						
		gpm 102.84						

LLSD #4 METERSTATION/FLOW READING RECORDS
MONTH/YEAR: August 2021

Day	Date	Meter Station Loon Lake Reading	Daily Flow Loon Lake	Monthly Flow Loon Lake		Meter Station Deer Lake Reading	Daily Flow Deer Lake	Monthly Flow Deer Lake
Sat	31	3,753,234				7,463,025		
Sun	1	3,839,710	86,476	86,476		7,531,080	68,055	68,055
Mon	2	3,926,187	86,477	172,953		7,599,136	68,056	136,111
Tue	3	3,977,079	50,892	223,845		7,663,507	64,371	200,482
Wed	4	4,045,283	68,204	292,049		7,722,680	59,173	259,655
Thu	5	4,112,819	67,536	359,585		7,779,472	56,792	316,447
Fri	6	4,182,603	69,784	429,369		7,833,295	53,823	370,270
Sat	7	4,257,786	75,183	504,552		7,903,551	70,256	440,526
Sun	8	4,332,969	75,183	579,735		7,973,807	70,256	510,782
Mon	9	4,408,152	75,183	654,918		8,044,064	70,257	581,039
Tue	10	4,478,564	70,412	725,330		8,104,166	60,102	641,141
Wed	11	4,545,159	66,595	791,925		8,161,247	57,081	698,222
Thu	12	4,606,522	61,363	853,288		8,220,215	58,968	757,190
Fri	13	4,674,393	67,871	921,159		8,284,948	64,733	821,923
Sat	14	4,746,343	71,950	993,109		8,348,469	63,521	885,444
Sun	15	4,818,293	71,950	1,065,059		8,411,990	63,521	948,965
Mon	16	4,890,243	71,950	1,137,009		8,475,513	63,523	1,012,488
Tue	17	4,946,869	56,626	1,193,635		8,521,305	45,792	1,058,280
Wed	18	4,993,090	46,221	1,239,856		8,566,049	44,744	1,103,024
Thu	19	5,038,708	45,618	1,285,474		8,611,382	45,333	1,148,357
Fri	20	5,090,415	51,707	1,337,181		8,659,965	48,583	1,196,940
Sat	21	5,150,431	60,016	1,397,197		8,713,660	53,695	1,250,635
Sun	22	5,210,447	60,016	1,457,213		8,767,355	53,695	1,304,330
Mon	23	5,270,463	60,016	1,517,229		8,821,050	53,695	1,358,025
Tue	24	5,326,316	55,853	1,573,082		8,863,306	42,256	1,400,281
Wed	25	5,377,942	51,626	1,624,708		8,906,641	43,335	1,443,616
Thu	26	5,427,451	49,509	1,674,217		8,948,747	42,106	1,485,722
Fri	27	5,479,119	51,668	1,725,885		8,993,139	44,392	1,530,114
Sat	28	5,544,530	65,411	1,791,296		9,047,197	54,058	1,584,172
Sun	29	5,609,941	65,411	1,856,707		9,101,255	54,058	1,638,230
Mon	30	5,675,352	65,411	1,922,118		9,155,313	54,058	1,692,288
Tue	31	5,734,074	58,722	1,980,840		9,199,476	44,163	1,736,451
	TOTALS		1,980,840	1,980,840			1,736,451	1,736,451
			L.L. %	86447.0%			D.L. %	46.7%
		LOON LAKE AVERAGE GPD:		63,898		DEER LAKE AVERAGE GPD:		56,015
METER STATION			COMMENTS:					
TOTAL: 3,717,291			LOON LK / DEER LK. AVERAGE GPD:			119,913		
			gpm			83.27		

LLSD #4 METERSTATION/FLOW READING RECORDS
MONTH/YEAR: September 2021

Day	Date	Meter Station Loon Lake Reading	Daily Flow Loon Lake	Monthly Flow Loon Lake		Meter Station Deer Lake Reading	Daily Flow Deer Lake	Monthly Flow Deer Lake
tues	31	5,734,074				9,199,476	#VALUE!	
wed	1	5,786,672	52,598	52,598		9,243,541	44,065	44,065
thurs	2	5,846,640	59,968	112,566		9,284,612	41,071	85,136
fri	3	5,884,637	37,997	150,563		9,327,092	42,480	127,616
sat	4	5,959,313	74,676	225,239		9,407,389	80,297	207,913
sun	5	6,033,989	74,676	299,915		9,487,686	80,297	288,210
mon	6	6,108,665	74,676	374,591		9,567,983	80,297	368,507
tue	7	6,183,344	74,679	449,270		9,648,281	80,298	448,805
wed	8	6,236,381	53,037	502,307		9,702,287	54,006	502,811
thu	9	6,285,660	49,279	551,586		9,747,744	45,457	548,268
fri	10	6,333,993	48,333	599,919		9,791,755	44,011	592,279
sat	11	6,384,643	50,650	650,569		9,834,511	42,756	635,035
sun	12	6,435,293	50,650	701,219		9,877,267	42,756	677,791
mon	13	6,485,944	50,651	751,870		9,920,024	42,757	720,548
tue	14	6,532,567	46,623	798,493		9,953,475	33,451	753,999
wed	15	6,572,047	39,480	837,973		9,986,877	33,402	787,401
thu	16	6,613,540	41,493	879,466		18,701	31,814	819,215
fri	17	6,650,924	37,384	916,850		50,824	32,123	851,338
sat	18	6,694,349	43,425	960,275		93,076	42,252	893,590
sun	19	6,737,774	43,425	1,003,700		135,328	42,252	935,842
mon	20	6,781,199	43,425	1,047,125		177,581	42,253	978,095
tue	21	6,826,270	45,071	1,092,196		217,823	40,242	1,018,337
wed	22	6,865,146	38,876	1,131,072		256,601	38,778	1,057,115
thu	23	6,905,517	40,371	1,171,443		292,670	36,069	1,093,184
fri	24	6,946,421	40,904	1,212,347		331,139	38,469	1,131,653
sat	25	6,997,928	51,507	1,263,854		379,171	48,032	1,179,685
sun	26	7,049,435	51,507	1,315,361		427,203	48,032	1,227,717
mon	27	7,100,942	51,507	1,366,868		475,236	48,033	1,275,750
tue	28	7,142,409	41,467	1,408,335		516,511	41,275	1,317,025
wed	29	7,183,794	41,385	1,449,720		556,011	39,500	1,356,525
thu	30	7,221,789	37,995	1,487,715		594,661	38,650	1,395,175
fri								
	TOTALS		1,487,715	1,487,715			1,395,175	1,395,175
			L.L. %	51.6%			D.L. %	48.4%
		LOON LAKE AVERAGE GPD:		49,591		DEER LAKE AVERAGE GPD:		46,506
METER STATION			COMMENTS:					
TOTAL: 2,882,890			LOON LK / DEER LK. AVERAGE GPD:			96,096		
			gpm			66.73		

LLSD #4 METERSTATION/FLOW READING RECORDS
MONTH/YEAR: October 2021

Day	Date	Meter Station Loon Lake Reading	Daily Flow Loon Lake	Monthly Flow Loon Lake		Meter Station Deer Lake Reading	Daily Flow Deer Lake	Monthly Flow Deer Lake
Thurs	30	7,221,789				594,661	#VALUE!	
Fri	1	7,261,276	39,487	39,487		632,425	37,764	37,764
Sat	2	7,306,012	44,736	84,223		675,992	43,567	81,331
Sun	3	7,350,748	44,736	128,959		719,559	43,567	124,898
Mon	4	7,395,484	44,736	173,695		763,126	43,567	168,465
Tue	5	7,437,236	41,752	215,447		801,672	38,546	207,011
Wed	6	7,476,425	39,189	254,636		838,299	36,627	243,638
Thu	7	7,513,102	36,677	291,313		873,565	35,266	278,904
Fri	8	7,551,676	38,574	329,887		905,979	32,414	311,318
Sat	9	7,593,591	41,915	371,802		946,117	40,138	351,456
Sun	10	7,635,506	41,915	413,717		986,255	40,138	391,594
Mon	11	7,677,422	41,916	455,633		1,026,395	40,140	431,734
Tue	12	7,711,777	34,355	489,988		1,059,879	33,484	465,218
Wed	13	7,747,031	35,254	525,242		1,093,704	33,825	499,043
Thu	14	7,779,024	31,993	557,235		1,130,588	36,884	535,927
Fri	15	7,815,354	36,330	593,565		1,163,296	32,708	568,635
Sat	16	7,853,386	38,032	631,597		1,200,810	37,514	606,149
Sun	17	7,891,418	38,032	669,629		1,238,324	37,514	643,663
Mon	18	7,929,452	38,034	707,663		1,275,838	37,514	681,177
Tue	19	7,967,080	37,628	745,291		1,307,809	31,971	713,148
Wed	20	8,003,583	36,503	781,794		1,340,966	33,157	746,305
Thu	21	8,042,277	38,694	820,488		1,374,381	33,415	779,720
Fri	22	8,074,401	32,124	852,612		1,406,407	32,026	811,746
Sat	23	8,115,569	41,168	893,780		1,443,069	36,662	848,408
Sun	24	8,156,737	41,168	934,948		1,479,731	36,662	885,070
Mon	25	8,197,907	41,170	976,118		1,516,393	36,662	921,732
Tue	26	8,236,957	39,050	1,015,168		1,548,695	32,302	954,034
Wed	27	8,268,188	31,231	1,046,399		1,579,053	30,358	984,392
Thu	28	8,303,866	35,678	1,082,077		1,609,459	30,406	1,014,798
Fri	29	8,340,582	36,716	1,118,793		1,640,668	31,209	1,046,007
Sat	30	8,382,504	41,922	1,160,715		1,673,669	33,001	1,079,008
Sun	31	8,424,426	41,922	1,202,637		1,706,780	33,111	1,112,119
	TOTALS		1,202,637	1,202,637			1,112,119	1,112,119
			L.L. %	52.0%			D.L. %	48.0%
		LOON LAKE AVERAGE GPD:		38,795		DEER LAKE AVERAGE GPD:		35,875
METER STATION			COMMENTS:					
			LOON LK / DEER LK. AVERAGE GPD:					
TOTAL: 2,314,756			74,670					
			gpm 51.85					

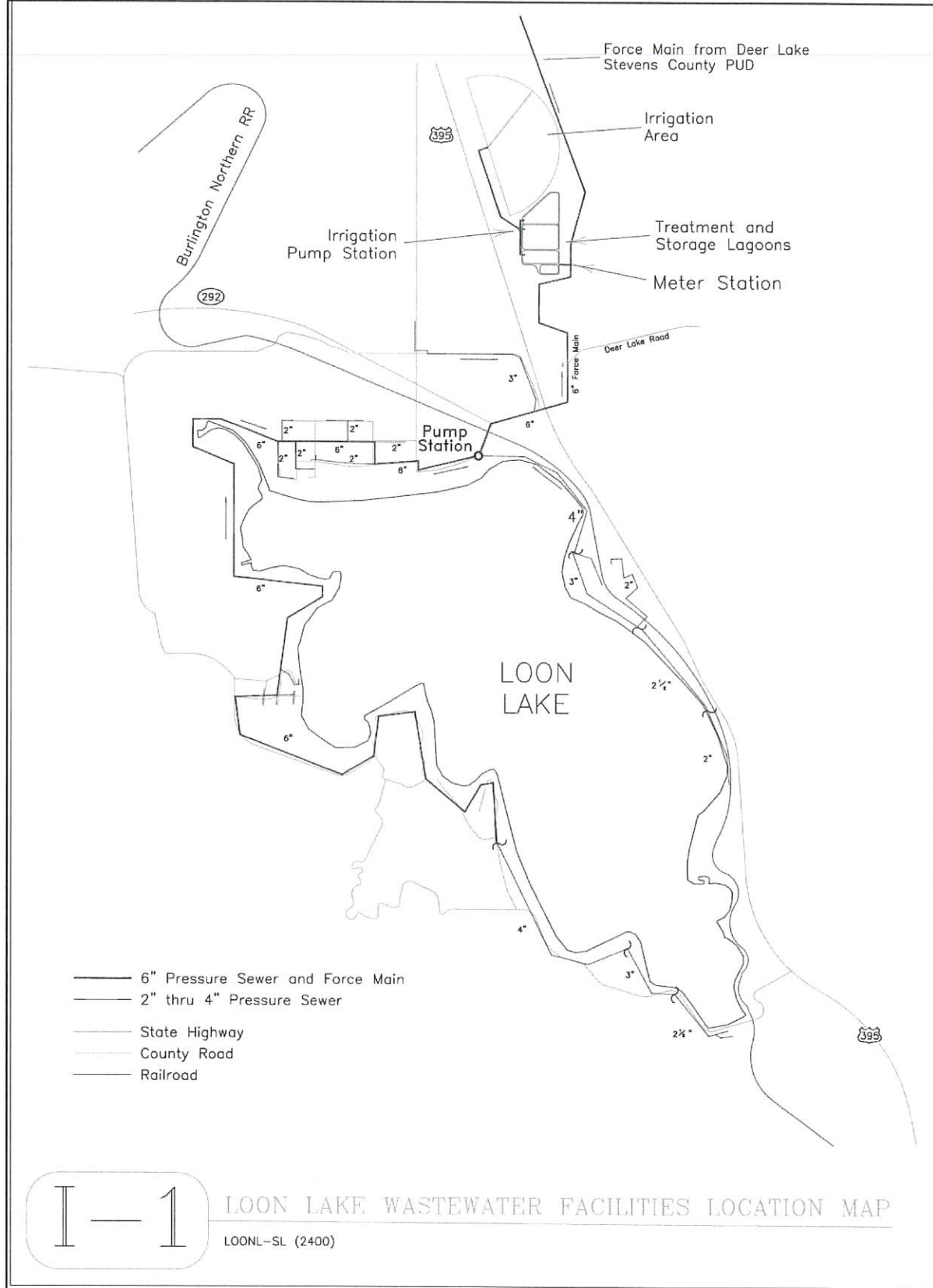
LLSD #4 METERSTATION/FLOW READING RECORDS
MONTH/YEAR: November 2021

Day	Date	Meter Station Loon Lake Reading	Daily Flow Loon Lake	Monthly Flow Loon Lake		Meter Station Deer Lake Reading	Daily Flow Deer Lake	Monthly Flow Deer Lake
	#####	8,424,426				1,706,780	#VALUE!	
Mon	1	8,466,350	41,924	41,924		1,739,671	32,891	32,891
Tues	2	8,508,334	41,984	83,908		1,775,123	35,452	68,343
Wed	3	8,545,454	37,120	121,028		1,804,955	29,832	98,175
Thurs	4	8,588,923	43,469	164,497		1,836,464	31,509	129,684
Fri	5	8,628,350	39,427	203,924		1,866,044	29,580	159,264
Sat	6	8,668,305	39,955	243,879		1,899,292	33,248	192,512
Sun	7	8,708,300	39,995	283,874		1,932,540	33,248	225,760
Mon	8	8,748,217	39,917	323,791		1,965,788	33,248	259,008
Tues	9	8,788,580	40,363	364,154		1,995,360	29,572	288,580
Wed	10	8,824,910	36,330	400,484		2,025,543	30,183	318,763
Thurs	11	8,859,634	34,724	435,208		2,055,140	29,597	348,360
Fri	12	8,894,358	34,724	469,932		2,084,737	29,597	377,957
Sat	13	8,932,293	37,935	507,867		2,118,789	34,052	412,009
Sun	14	8,970,228	37,935	545,802		2,152,841	34,052	446,061
Mon	15	9,008,165	37,937	583,739		2,186,894	34,053	480,114
Tues	16	9,041,959	33,794	617,533		2,209,735	22,841	502,955
Wed	17	9,081,630	39,671	657,204		2,246,547	36,812	539,767
Thurs	18	9,117,619	35,989	693,193		2,274,800	28,253	568,020
Fri	19	9,153,305	35,686	728,879		2,303,828	29,028	597,048
Sat	20	9,190,193	36,888	765,767		2,337,184	33,356	630,404
Sun	21	9,227,081	36,888	802,655		2,370,540	33,356	663,760
Mon	22	9,263,971	36,890	839,545		2,403,897	33,357	697,117
Tues	23	9,297,855	33,884	873,429		2,432,510	28,613	725,730
Wed	24	9,333,597	35,742	909,171		2,461,972	29,462	755,192
Thurs	25	9,375,366	41,769	950,940		2,498,896	36,924	792,116
Fri	26	9,417,135	41,769	992,709		2,535,820	36,924	829,040
Sat	27	9,458,904	41,769	1,034,478		2,572,744	36,924	865,964
Sun	28	9,500,673	41,769	1,076,247		2,609,668	36,924	902,888
Mon	29	9,542,424	41,751	1,117,998		2,646,592	36,924	939,812
Tues	30	9,577,646	35,222	1,153,220		2,671,870	25,278	965,090
	TOTALS		1,153,220	1,153,220			965,090	965,090
			L.L. %	54.4%			D.L. %	45.6%
		LOON LAKE AVERAGE GPD:		38,441		DEER LAKE AVERAGE GPD:		32,170
METER STATION			COMMENTS:					
TOTAL: 2,118,310			LOON LK / DEER LK. AVERAGE GPD: 70,610					
			gpm 49.03					

LLSD #4 METERSTATION/FLOW READING RECORDS
MONTH/YEAR December 2021

Day	Date	Meter Station Loon Lake Reading	Daily Flow Loon Lake	Monthly Flow Loon Lake		Meter Station Deer Lake Reading	Daily Flow Deer Lake	Monthly Flow Deer Lake
	#####	9,577,646				2,671,870	#VALUE!	
Wed	1	9,619,854	42,208	42,208		2,700,247	28,377	28,377
Thu	2	9,656,436	36,582	78,790		2,729,475	29,228	57,605
Fri	3	9,691,087	34,651	113,441		2,756,095	26,620	84,225
Sat	4	9,731,491	40,404	153,845		2,788,626	32,531	116,756
Sun	5	9,771,895	40,404	194,249		2,821,157	32,531	149,287
Mon	6	9,812,299	40,404	234,653		2,853,689	32,532	181,819
Tue	7	9,850,726	38,427	273,080		2,884,089	30,400	212,219
Wed	8	9,885,728	35,002	308,082		2,919,803	35,714	247,933
Thu	9	9,922,151	36,423	344,505		2,952,855	33,052	280,985
Fri	10	9,958,117	35,966	380,471		2,981,281	28,426	309,411
Sat	11	9,994,571	36,454	416,925		3,013,906	32,625	342,036
Sun	12	10,031,025	36,454	453,379		3,046,531	32,625	374,661
Mon	13	67,479	36,454	489,833		3,079,218	32,687	407,348
Tue	14	104,219	36,740	526,573		3,108,894	29,676	437,024
Wed	15	142,932	38,713	565,286		3,139,298	30,404	467,428
Thu	16	176,798	33,866	599,152		3,169,753	30,455	497,883
Fri	17	212,595	35,797	634,949		3,199,160	29,407	527,290
Sat	18	249,204	36,609	671,558		3,234,053	34,893	562,183
Sun	19	285,813	36,609	708,167		3,268,946	34,893	597,076
Mon	20	322,422	36,609	744,776		3,303,840	34,894	631,970
Tue	21	359,151	36,729	781,505		3,337,341	33,501	665,471
Wed	22	401,747	42,596	824,101		3,377,101	39,760	705,231
Thu	23	442,405	40,658	864,759		3,412,069	34,968	740,199
Fri	24	483,063	40,658	905,417		3,447,037	34,968	775,167
Sat	25	523,721	40,658	946,075		3,482,005	34,968	810,135
Sun	26	564,379	40,658	986,733		3,516,973	34,968	845,103
Mon	27	605,040	40,661	1,027,394		3,551,943	34,970	880,073
Tue	28	654,600	49,560	1,076,954		3,597,052	45,109	925,182
Wed	29	703,594	48,994	1,125,948		3,641,577	44,525	969,707
Thu	30	750,513	46,919	1,172,867		3,693,775	52,198	1,021,905
Fri	31	788,914	38,401	1,211,268		3,742,732	48,957	1,070,862
	TOTALS		1,172,867	1,172,867			1,070,862	1,070,862
			L.L. %	52.3%			D.L. %	47.7%
		LOON LAKE AVERAGE GPD:		39,073		DEER LAKE AVERAGE GPD:		34,544
METER STATION		COMMENTS:						
TOTAL: 2,243,729		LOON LK / DEER LK. AVERAGE GPD: 73,617						
		gpm 51.12						

Attachment E.3.1 – Location Map



Attachment E.3.2- USGS Topographic Map



U.S. DEPARTMENT OF THE INTERIOR
U.S. GEOLOGICAL SURVEY



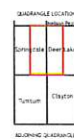
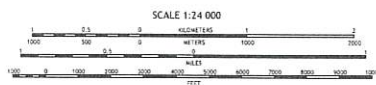
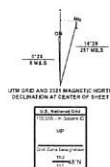
7.5-MINUTE TOPO 1 QUADRANGLE
Custom Extent
7.5-MINUTE TOPO



Produced by the United States Geological Survey
North American Datum of 1983 (NAD83)
World Geodetic System of 1984 (WGS84) Projection and
1:50,000-meter grid/Universal Transverse Mercator, Zone 118011T
Data is provided by The National Map (1983) is the best available as the basis of map
generation, and includes data derived from a variety of sources: Elevation,
Hydrography, Geographic Names, Boundaries, Transportation, Structures, Land Cover,
and Other Information. Refer to associated Product Description Data Collection (PDF)
metadata for additional source data information.

This map is not a legal document. Users may be generated for this map to use
Private landowners, government agencies, and the public. Users are responsible
before driving on private land. Topographic data may have been collected from the data
were collected and some data may no longer represent actual surface conditions.

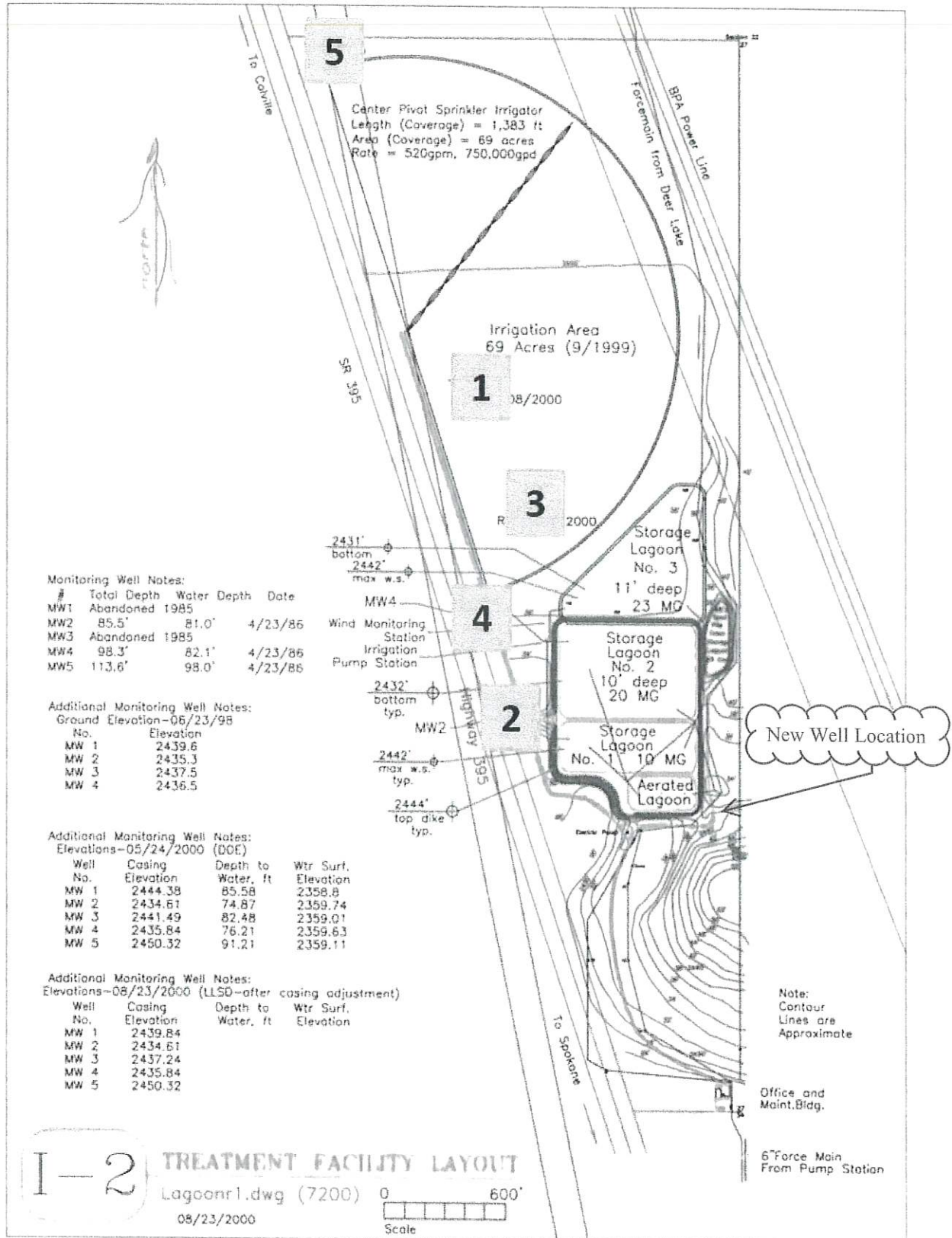
Learn About The National Map: <https://nationalmap.gov>



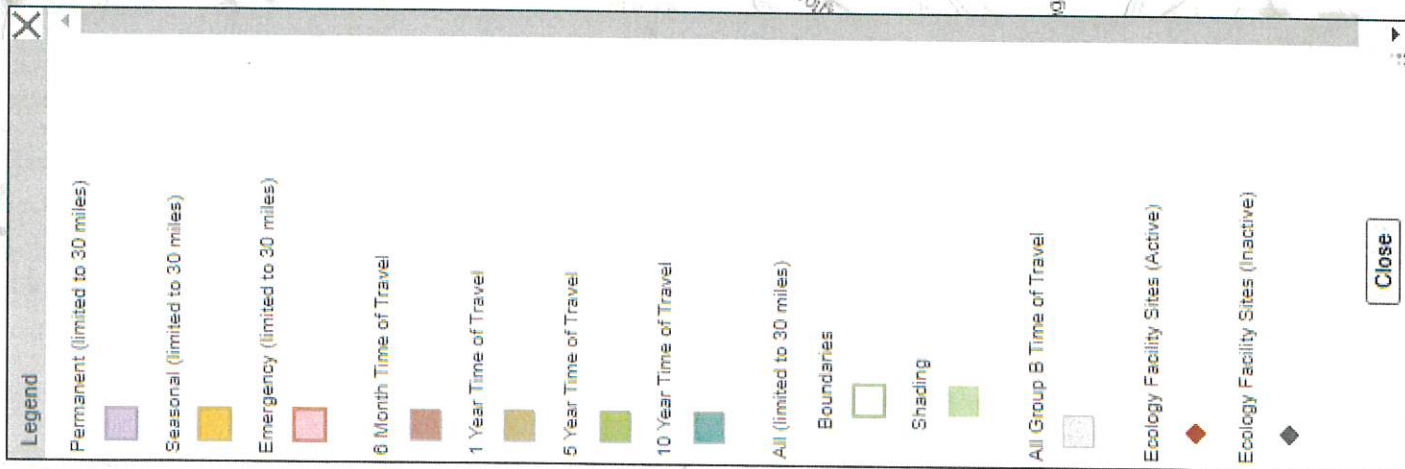
ROAD CLASSIFICATION

Expressway	Local Connector
Secondary Road	Local Road
Ramp	4WD
Interstate Road	US Route
	State Route

7.5-MINUTE TOPO 1, WA
2022



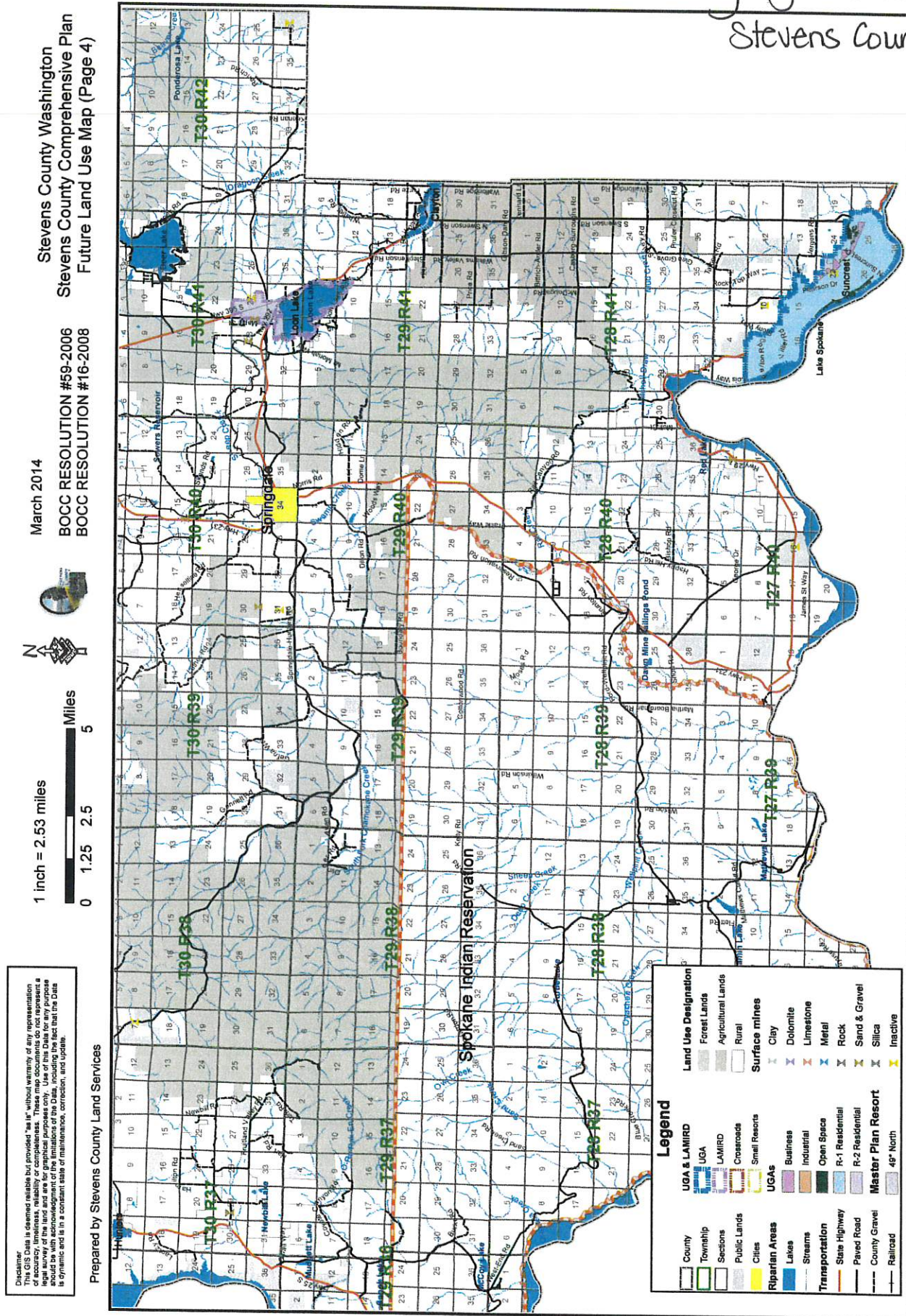
► Switch Base:



[illegible]

Ecology Home | Report a Problem | Data Disclaimer | Privacy Policy
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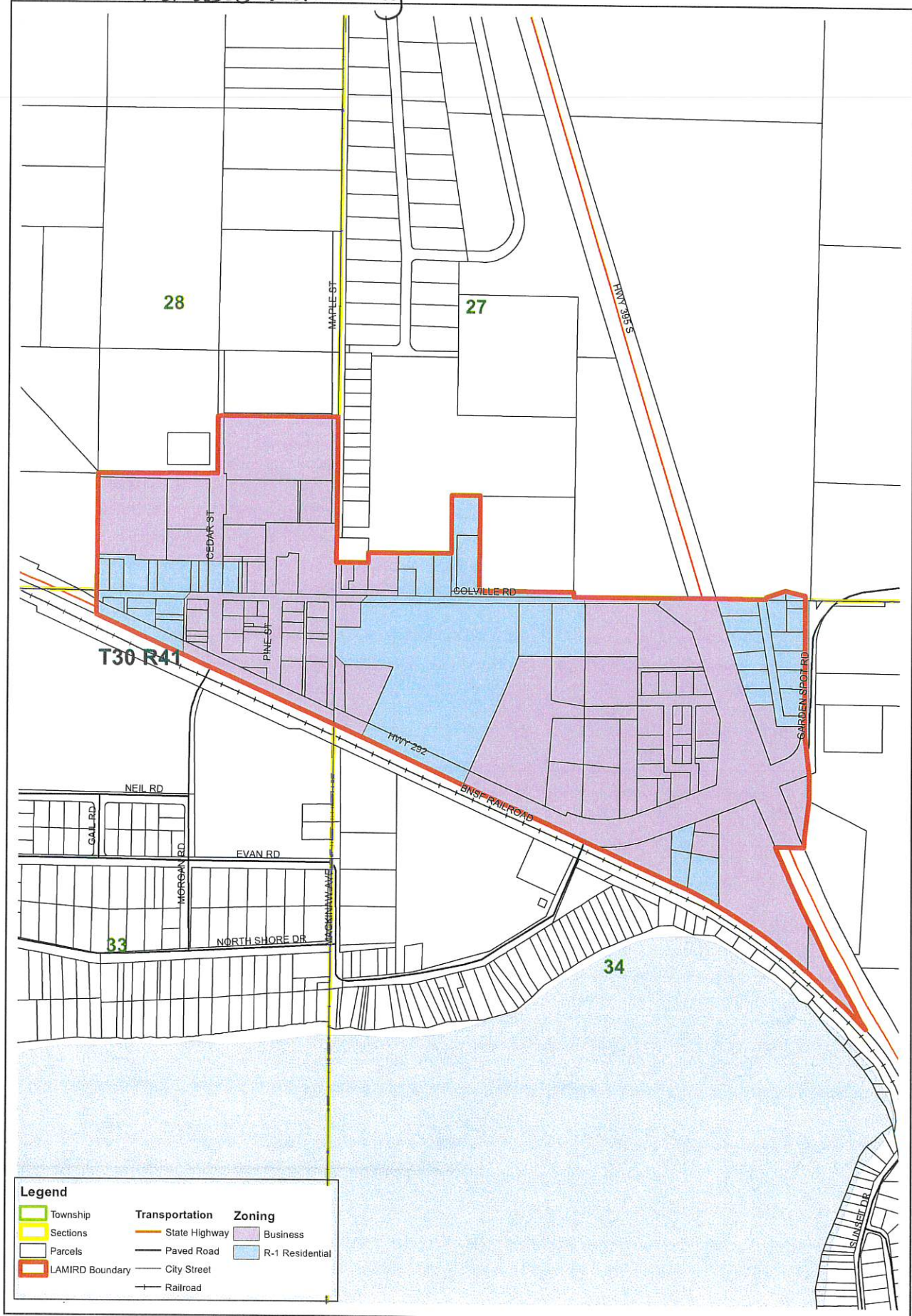
Attachment E.3.5 - Land Uses and Zoning Adjacent to Site- Stevens County



Attachment E.3.b. Land Uses and Zoning

STEVENS COUNTY COMPREHENSIVE PLAN
LOON LAKE LAMIRD

BOCC Ordinance 2015-01
Exhibit "C"
Effective January 20, 2015



Disclaimer:
This GIS Data is deemed reliable but provided "as is" without warranty of any representation of accuracy, timeliness, reliability or completeness. These map documents do not represent a legal survey of the land and are for graphical purposes only. Use of this Data for any purpose should be with acknowledgment of the limitations of the Data, including the fact that the Data is dynamic and is in a constant state of maintenance, correction, and update.

Prepared by
Stevens County Planning
on 1/20/2015

1 inch = 500 feet

















































Attachment E.4- Soil Description

Soil Map—Stevens County, Washington
(Loon Lake Sewer District No. 4)



MAP LEGEND

Area of Interest (AOI)		Area of Interest (AOI)		Spill Area
Soils		Soil Map Unit Polygons		Stony Spot
		Soil Map Unit Lines		Very Stony Spot
		Soil Map Unit Points		Wet Spot
Special Point Features		Blowout		Other
		Borrow Pit		Special Line Features
		Clay Spot		Streams and Canals
		Closed Depression		Water Features
		Gravel Pit		Streams and Canals
		Gravelly Spot		Transportation
		Landfill		Rails
		Lava Flow		Interstate Highways
		Marsh or swamp		US Routes
		Mine or Quarry		Major Roads
		Miscellaneous Water		Local Roads
		Perennial Water		Background
		Rock Outcrop		Aerial Photography
		Saline Spot		
		Sandy Spot		
		Severely Eroded Spot		
		Sinkhole		
		Slide or Slip		
		Sodic Spot		

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Stevens County, Washington
Survey Area Data: Version 19, Aug 23, 2021

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

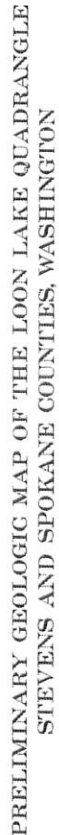
Date(s) aerial images were photographed: Jun 5, 2015—Sep 19, 2016

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
35	Bonner silt loam, 0 to 10 percent slopes	713.7	70.6%
90	Hardesty silt loam	0.5	0.0%
159	Moscow ashy silt loam, 0 to 25 percent slopes	4.9	0.5%
160	Moscow ashy silt loam, 25 to 40 percent slopes	154.4	15.3%
161	Moscow ashy silt loam, 40 to 65 percent slopes	135.1	13.4%
209	Skamid loam, 0 to 25 percent slopes	1.9	0.2%
Totals for Area of Interest		1,010.4	100.0%

For sale by Department of Natural Resources, Olympia, Washington





WATER WELL REPORT FOR AN EXISTING WELL

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CURRENT USE: <input type="checkbox"/> Domestic <input type="checkbox"/> Industrial <input type="checkbox"/> Municipal <input type="checkbox"/> DeWater <input type="checkbox"/> Irrigation <input type="checkbox"/> Test Well <input checked="" type="checkbox"/> Other <u>MONITORING</u>	Unique Ecology Well ID Tag No. <u>AHJ-398</u>																
DIMENSIONS: Diameter of well <u>2"</u> inches Depth of completed well <u>95.5</u> ft if known	Water Right? If yes, attach copy <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <u>MW#2</u>																
CONSTRUCTION DETAILS Liner Installed <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Unknown TYPE: <input type="checkbox"/> PVC <input type="checkbox"/> Steel <input type="checkbox"/> Concrete Liner <input type="checkbox"/> Other <input type="checkbox"/> Unknown	Property Owner Name <u>LOON LAKE SEWER DIST #4</u>																
Perforations: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Unknown	Well Street Address <u>3963 CHRISTENSEN Rd, P.O. Box 98</u>																
SIZE of perfs <u> </u> in. by <u> </u> in and no. of perfs <u> </u> from <u> </u> ft. to <u> </u> ft.	City <u>LOON LAKE</u> County <u>STEVENS</u>																
Screens: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown Mfr's Name <u>NA</u>	Tax Parcel No. <u> </u>																
TYPE: <input type="checkbox"/> Stainless Steel <input checked="" type="checkbox"/> PVC <input type="checkbox"/> Other	LOCATION An accurate location of your well is very important. The Township, Range, Section and 1/4, 1/4 can be found on your legal description or through your county assessor's office.																
Diam <u>2"</u> Slot Size <u>#10 or #20</u> from <u>85.5</u> ft. to <u>95.5</u> ft.	Sec <u>27</u> Twn <u>30N</u> R <u>41</u> <u>EWM</u> circle or one WWM																
Gravel/Filter packed: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Unknown	<table border="1"><tr><td>D</td><td>C</td><td>B</td><td>A</td></tr><tr><td>E</td><td>F</td><td>G</td><td>H</td></tr><tr><td>M</td><td>L</td><td>K</td><td>J</td></tr><tr><td>N</td><td>P</td><td>Q</td><td>R</td></tr></table> <p>This square represents one section of land, which is approx 640 acres. Within this section, circle the letter that best represents the location of the well within this section.</p>	D	C	B	A	E	F	G	H	M	L	K	J	N	P	Q	R
D	C	B	A														
E	F	G	H														
M	L	K	J														
N	P	Q	R														
Materials placed from <u>FORMATION</u> ft. to <u> </u> ft.																	
Surface Seal: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown If known, to what depth <u>18</u> ft																	
Materials used if known: <input checked="" type="checkbox"/> Bentonite <input checked="" type="checkbox"/> Cement																	
PUMP: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Mfr's Name <u> </u>																	
Type: <u> </u> H.P. <u> </u>																	
WATER LEVELS: Land-surface elevation above mean sea level <u>2436.7</u> ft																	
Static level <u>2358.0</u> ft. below top of casing Date measured <u>7/6/84</u>																	
Artesian pressure <u> </u> lbs per square inch Date measured <u> </u>																	
Well head has cap? <input type="checkbox"/> Yes <input type="checkbox"/> No Shut off valve? <input type="checkbox"/> Yes <input type="checkbox"/> No																	
WELL TESTS: Drawdown is amount water level is lowered below static level.																	
Was a pump test made? <input type="checkbox"/> Yes <input type="checkbox"/> No If yes, attach copy <input checked="" type="checkbox"/> Unknown																	
Yield <u> </u> gal/min with <u> </u> ft drawdown after <u> </u> hrs																	
	Latitude/Longitude NOTE: Section, Township, Range still REQUIRED Lat Deg <u>48</u> Lat Min/Sec <u>4'15"</u> Long Deg <u>117</u> Long Min/Sec <u>37'30"</u> <input type="checkbox"/> GPS <input type="checkbox"/> Survey <input checked="" type="checkbox"/> Topographic Map <input type="checkbox"/> Computer Generated Additional Information, if available: <input checked="" type="checkbox"/> Location marked on topographic map (please attach) <input type="checkbox"/> Location marked on air photo (please attach)																

CERTIFICATION: The information reported above is true to the best of my knowledge and belief.

☐ Driller ☒ Engineer ☐ Property Owner ☐ Other

Name STEVE BURCHETT

Signature Steve Burchett

Driller License No. 2107

Date Signed 1-6-03

Drilling Company UNKNOWN

Address of person completing this form: BUDINGER & ASSOC.

3820 E BROADWAY

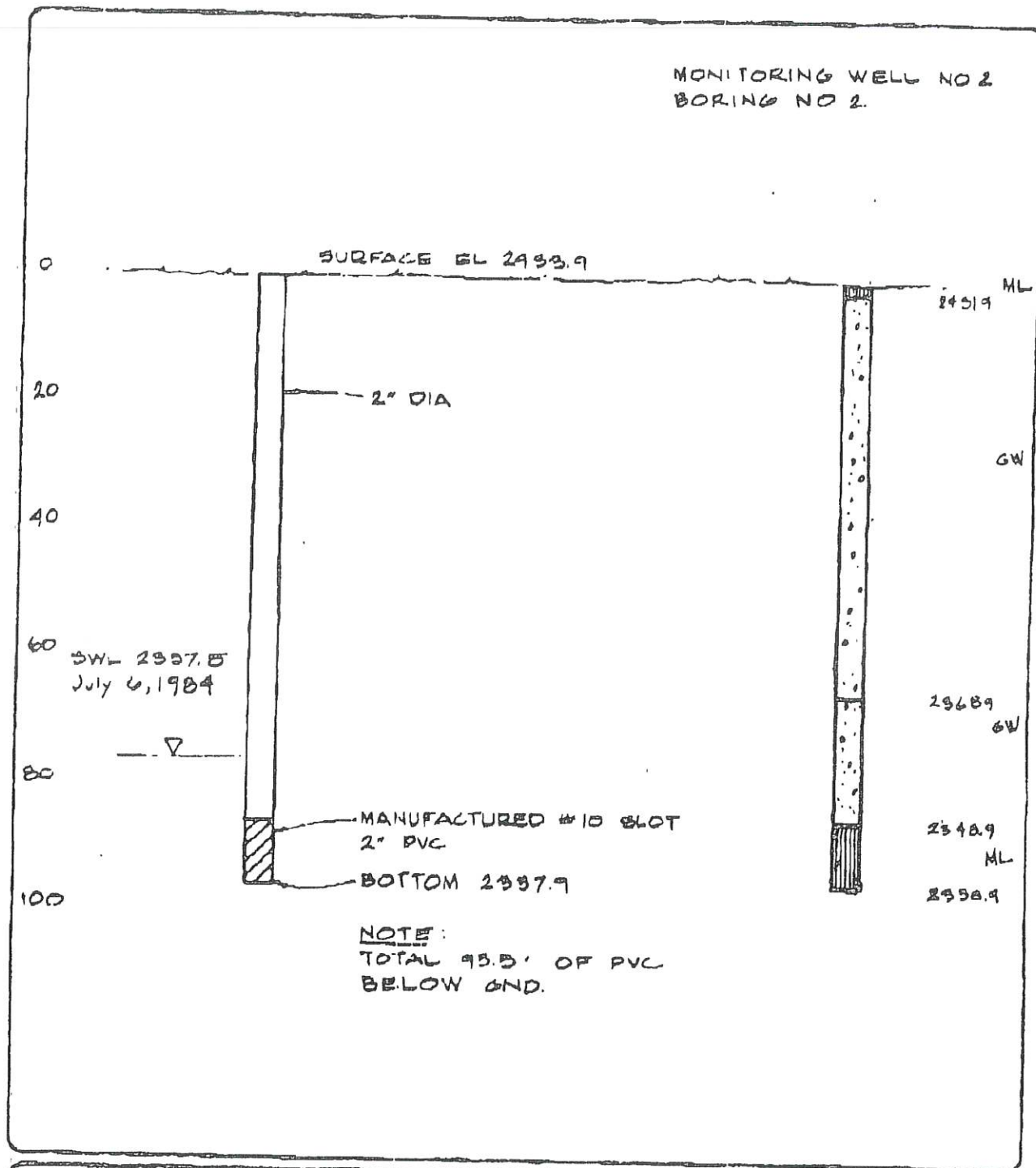
City, State, Zip SPokane WA 99202

Original - Ecology

Ecology is an Equal Opportunity Employer.

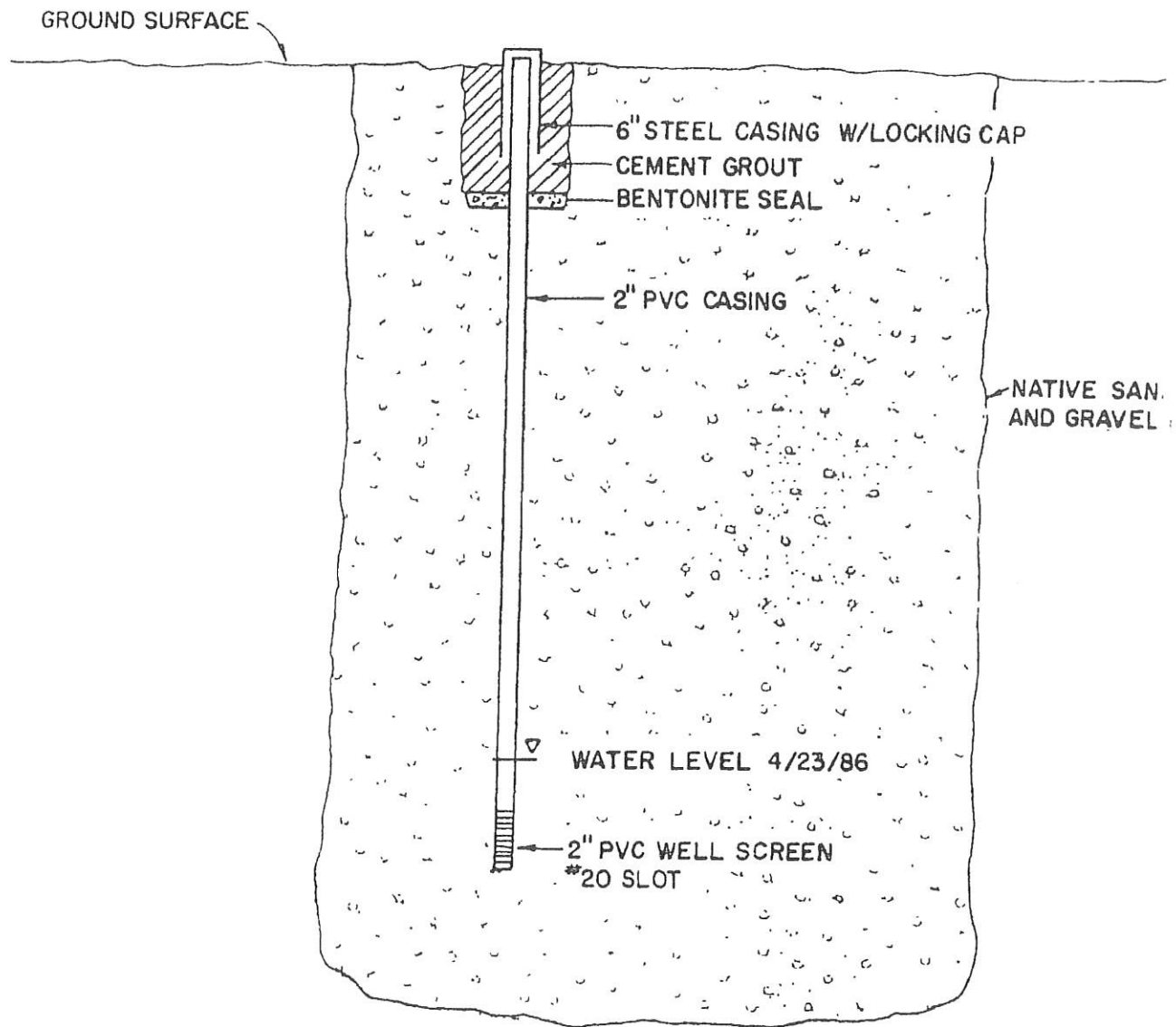
Attachment D - well logs


The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.



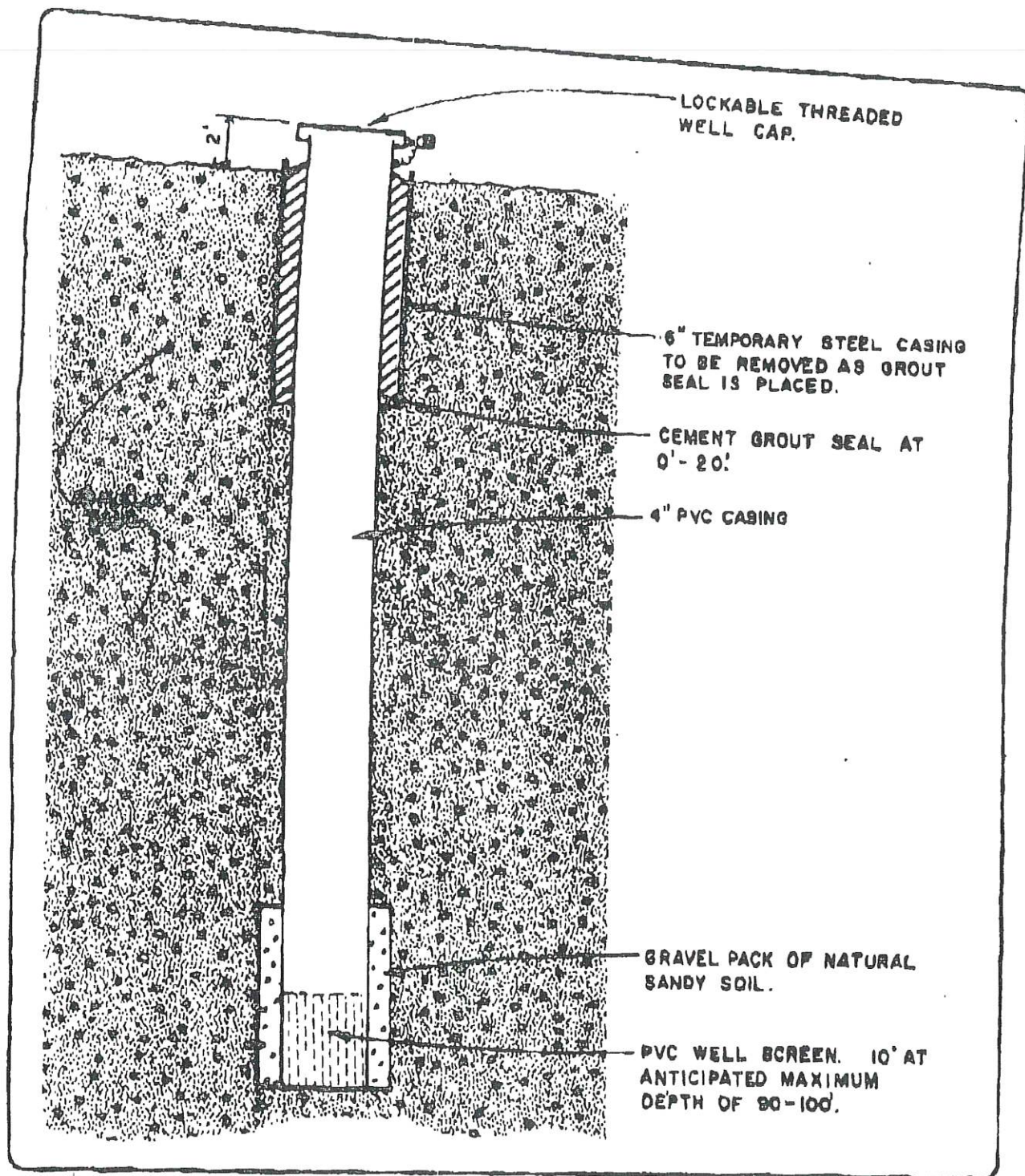
DESIGN BY		CHECKED BY		MONITORING WELL NO 2	APPROVED	CENTURY WEST ENGINEERING CORPORATION
SURVEY BY	T3	SCALE	NTS	LOON LAKE PHILABAUH PROPERTY	DATE	
DRAWN BY	CG	DWG NO.	3099.002		July 1984	

NAME:
FASCO 8007

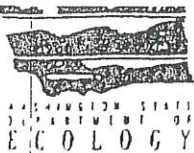


DESIGN BY	MCA	CHECKED BY	MCA	LOON LAKE MONITORING WELL MW 2 30099.002.01	APPROVED	
SURVEY BY		SCALE	V: 1" = 20'		DATE	
DRAWN BY	DSP	DWG NO			4-86	

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.



DESIGN BY	MCA	CHECKED BY	MCA	LOON LAKE SEWERAGE SYSTEM - TYPICAL MONITORING WELL	APPROVED	CENTURY WEST ENGINEERING Corporation
SURVEY BY		SCALE	N.T.S.		MCA	
DRAWN BY		DWG. NO	3099.00202		DATE	
					4-11-84	



WATER WELL REPORT FOR AN EXISTING WELL

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CURRENT USE: <input type="checkbox"/> Domestic <input type="checkbox"/> Industrial <input type="checkbox"/> Municipal <input type="checkbox"/> DeWater <input type="checkbox"/> Irrigation <input type="checkbox"/> Test Well <input checked="" type="checkbox"/> Other <u>MONITORING</u>	Unique Ecology Well ID Tag No. <u>AHJ-396</u>																
DIMENSIONS: Diameter of well <u>2</u> inches Depth of completed well <u>98.3</u> ft if known.	Water Right? If yes, attach copy <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No MW # <u>4</u>																
CONSTRUCTION DETAILS Liner Installed <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Unknown TYPE: <input type="checkbox"/> PVC <input type="checkbox"/> Steel <input type="checkbox"/> Concrete Liner <input type="checkbox"/> Other <input type="checkbox"/> Unknown	Property Owner Name <u>LOON LAKE SEWER DIST. #4</u>																
Perforations: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Unknown	Well Street Address <u>3963 CHRISTENSEN Rd P.O. Box 90</u>																
SIZE of perfs <u> </u> in by <u> </u> in. and no. of perfs <u> </u> from <u> </u> ft. to <u> </u> ft.	City <u>LOON LAKE</u> County <u>STEVENS</u>																
Screens: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown Mfr's Name <u> </u>	Tax Parcel No. <u> </u>																
TYPE: <input type="checkbox"/> Stainless Steel <input checked="" type="checkbox"/> PVC <input type="checkbox"/> Other	LOCATION An accurate location of your well is very important. The Township, Range, Section and 1/4, 1/4 can be found on your legal description or through your county assessor's office.																
Diam. <u>2</u> Slot Size <u>OLD or 0.75</u> from <u>88.3</u> ft. to <u>98.3</u> ft.	Sec <u>27</u> Twn <u>30N</u> R <u>41</u> <u>EWM</u> circle or one WWM																
Gravel/Filter packed: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Unknown	<table border="1"><tr><td>D</td><td>C</td><td>B</td><td>A</td></tr><tr><td>E</td><td>F</td><td>G</td><td>H</td></tr><tr><td>M</td><td>L</td><td>K</td><td>J</td></tr><tr><td>N</td><td>P</td><td>Q</td><td>R</td></tr></table>	D	C	B	A	E	F	G	H	M	L	K	J	N	P	Q	R
D	C	B	A														
E	F	G	H														
M	L	K	J														
N	P	Q	R														
Materials placed from <u>NATURAL FORMATION</u> ft. to <u> </u> ft.	This square represents one section of land, which is approx 640 acres. Within this section, circle the letter that best represents the location of the well within this section.																
Surface Seal: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown If known, to what depth <u>20</u> ft																	
Materials used if known: <input checked="" type="checkbox"/> Bentonite <input checked="" type="checkbox"/> Cement																	
PUMP: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Mfr's Name <u> </u>																	
Type <u> </u> H.P. <u> </u>																	
WATER LEVELS: Land-surface elevation above mean sea level <u>2436.5</u> ft.																	
Static level <u>82.1</u> ft below top of casing Date measured <u>7-6-84</u>																	
Artesian pressure <u> </u> lbs per square inch Date measured <u> </u>																	
Well head has cap? <input type="checkbox"/> Yes <input type="checkbox"/> No Shut off valve? <input type="checkbox"/> Yes <input type="checkbox"/> No																	
WELL TESTS: Drawdown is amount water level is lowered below static level.																	
Was a pump test made? <input type="checkbox"/> Yes <input type="checkbox"/> No If yes, attach copy <input checked="" type="checkbox"/> Unknown																	
Yield <u> </u> gal/min with <u> </u> ft drawdown after <u> </u> hrs																	
	Latitude/Longitude NOTE: Section, Township, Range still REQUIRED Lat Deg <u>48</u> Lat Min/Sec <u>4'15"</u> Long Deg <u>117</u> Long Min/Sec <u>37'30"</u> <input type="checkbox"/> GPS <input type="checkbox"/> Survey <input checked="" type="checkbox"/> Topographic Map <input type="checkbox"/> Computer Generated Additional Information, if available: <input checked="" type="checkbox"/> Location marked on topographic map (please attach) <input type="checkbox"/> Location marked on air photo (please attach)																

CERTIFICATION: The information reported above is true to the best of my knowledge and belief.

☐ Driller ☒ Engineer ☐ Property Owner ☐ Other

Name STEVE BURCHETT

Signature Steve Burchett

Driller License No 2107

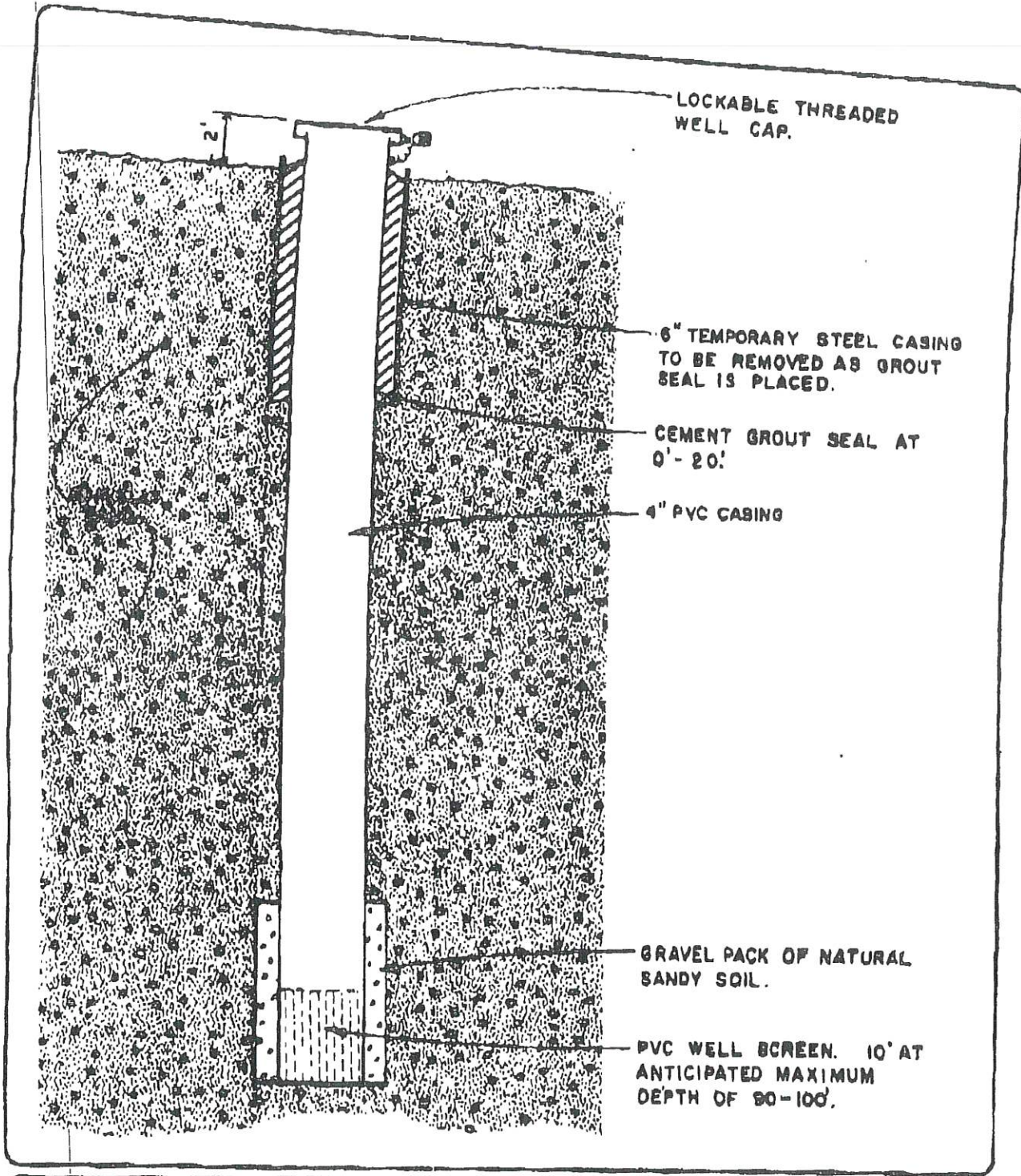
Date Signed 1-6-03


Drilling Company UNKNOWN

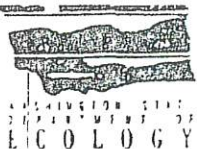
Address of person completing this form: BUDINGER & ASSOCIATES

3820 E BROADWAY

City, State, Zip SPOKANE WA 99202



DESIGN BY	MCA	CHECKED BY	MCA	LOON LAKE SEWERAGE SYSTEM - TYPICAL MONITORING WELL	APPROVED	
SURVEY BY		SCALE	N.T.S.		MCA	
DRAWN BY		DWG. NO.	3099.00202		DATE 4-11-84	



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CURRENT USE: <input type="checkbox"/> Domestic <input type="checkbox"/> Industrial <input type="checkbox"/> Municipal <input type="checkbox"/> DeWater <input type="checkbox"/> Irrigation <input type="checkbox"/> Test Well <input checked="" type="checkbox"/> Other <u>MONITORING</u>		Unique Ecology Well ID Tag No <u>A HJ-395</u>																	
DIMENSIONS: Diameter of well <u>2</u> inches Depth of completed well <u>113.6</u> ft. if known		Water Right? If yes, attach copy <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <u>MW#5</u>																	
CONSTRUCTION DETAILS Liner Installed <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Unknown TYPE: <input type="checkbox"/> PVC <input type="checkbox"/> Steel <input type="checkbox"/> Concrete Liner <input type="checkbox"/> Other <input type="checkbox"/> Unknown		Property Owner Name <u>LOOK LAKE SEWER DIST #4</u>																	
Perforations: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Unknown SIZE of perfs <u>1/2</u> in by <u>1/2</u> in. and no of perfs <u>10</u> from <u>93.6</u> ft. to <u>113.6</u> ft.		Well Street Address <u>3963 Christensen Rd P.O. Box 98</u>																	
Screens: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown Mfr's Name _____ TYPE: <input type="checkbox"/> Stainless Steel <input checked="" type="checkbox"/> PVC <input type="checkbox"/> Other Diam. <u>2"</u> Slot Size <u>#10 or #20</u> from <u>93.6</u> ft. to <u>113.6</u> ft.		City <u>LOOK LAKE</u> County <u>STEVENS</u>																	
Gravel/Filter packed: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Unknown Materials placed from <u>NATURAL FORMATION</u> ft to _____ ft.		Tax Parcel No. _____																	
Surface Seal: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown If known, to what depth <u>20</u> ft. Materials used if known: <input checked="" type="checkbox"/> Bentonite <input checked="" type="checkbox"/> Cement		LOCATION An accurate location of your well is very important. The Township, Range, Section and 1/4, 1/4 can be found on your legal description or through your county assessor's office.																	
PUMP: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Mfr's Name _____ Type: _____ H.P. _____		Sec <u>27</u> Twn <u>30N</u> R <u>41E</u> <u>EW</u> circle or one WWM																	
WATER LEVELS: Land-surface elevation above mean sea level <u>2448</u> ft. Static level <u>98.0</u> ft. below top of casing Date measured <u>7-6-84</u> Artesian pressure _____ lbs per square inch Date measured _____ Well head has cap? <input type="checkbox"/> Yes <input type="checkbox"/> No Shut off valve? <input type="checkbox"/> Yes <input type="checkbox"/> No		<table border="1"> <tr><td>D</td><td>C</td><td>B</td><td>A</td></tr> <tr><td>E</td><td>F</td><td>G</td><td>H</td></tr> <tr><td>M</td><td>L</td><td>K</td><td>J</td></tr> <tr><td>N</td><td>P</td><td>Q</td><td>R</td></tr> </table> <p>This square represents one section of land, which is approx 640 acres. Within this section, circle the letter that best represents the location of the well within this section.</p>		D	C	B	A	E	F	G	H	M	L	K	J	N	P	Q	R
D	C	B	A																
E	F	G	H																
M	L	K	J																
N	P	Q	R																
WELL TESTS: Drawdown is amount water level is lowered below static level. Was a pump test made? <input type="checkbox"/> Yes <input type="checkbox"/> No If yes, attach copy <input checked="" type="checkbox"/> Unknown Yield _____ gal/min with _____ ft drawdown after _____ hrs		Latitude/Longitude NOTE: Section, Township, Range still REQUIRED Lat Deg <u>48</u> Lat Min/Sec <u>4'30"</u> Long Deg <u>117</u> Long Min/Sec <u>37'30"</u> <input type="checkbox"/> GPS <input type="checkbox"/> Survey <input checked="" type="checkbox"/> Topographic Map <input type="checkbox"/> Computer Generated																	
Additional Information, if available: <input checked="" type="checkbox"/> Location marked on topographic map (please attach) <input type="checkbox"/> Location marked on air photo (please attach)																			

CERTIFICATION: The information reported above is true to the best of my knowledge and belief.

☐ Driller ☒ Engineer ☐ Property Owner ☐ Other

Name STEVE BURCHETT

Signature Steve Burchett

Driller License No. 2107

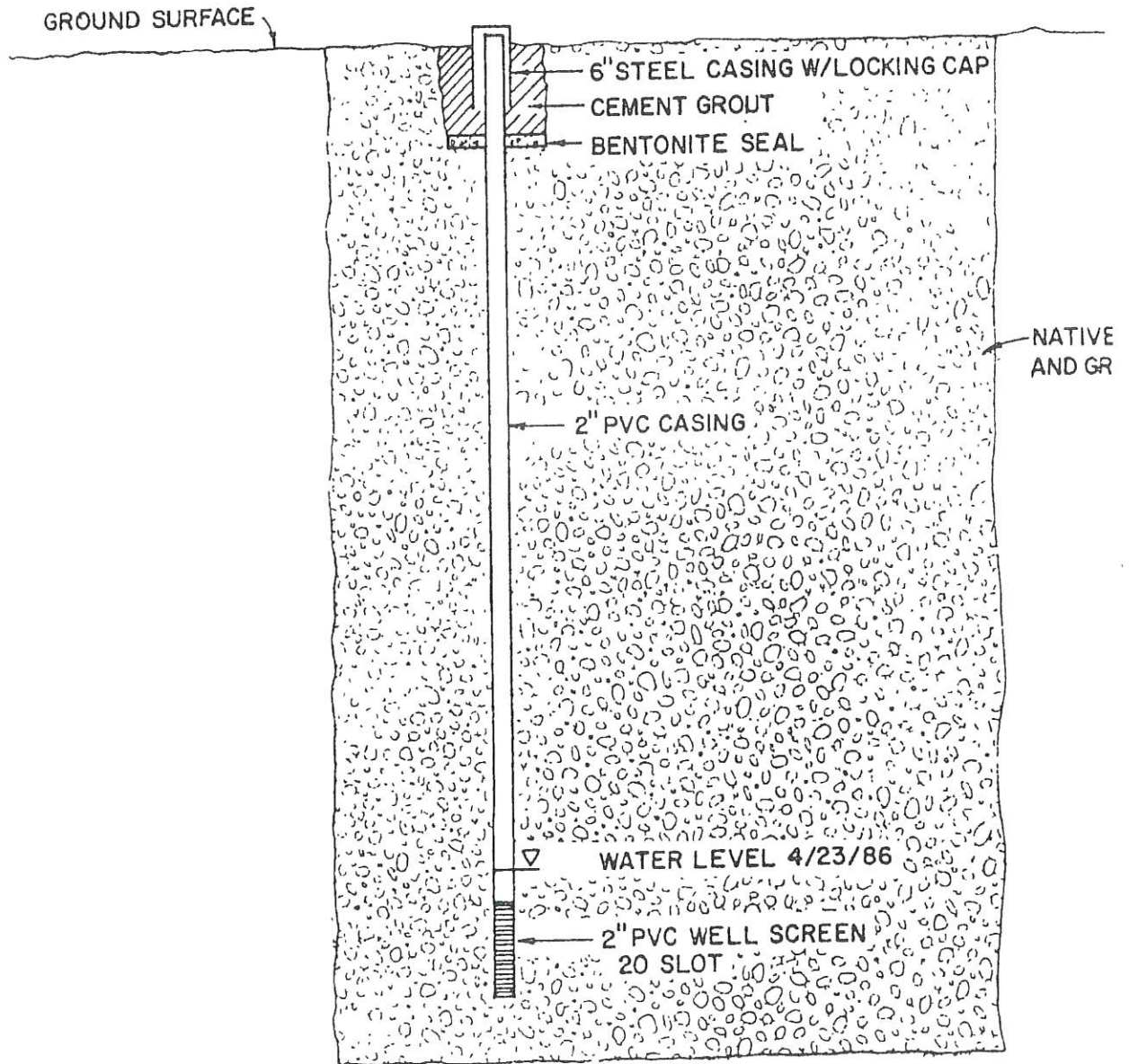
Date Signed 1-6-03


Drilling Company UNKNOWN

Address of person completing this form: BUDINGER & ASSOCIATES

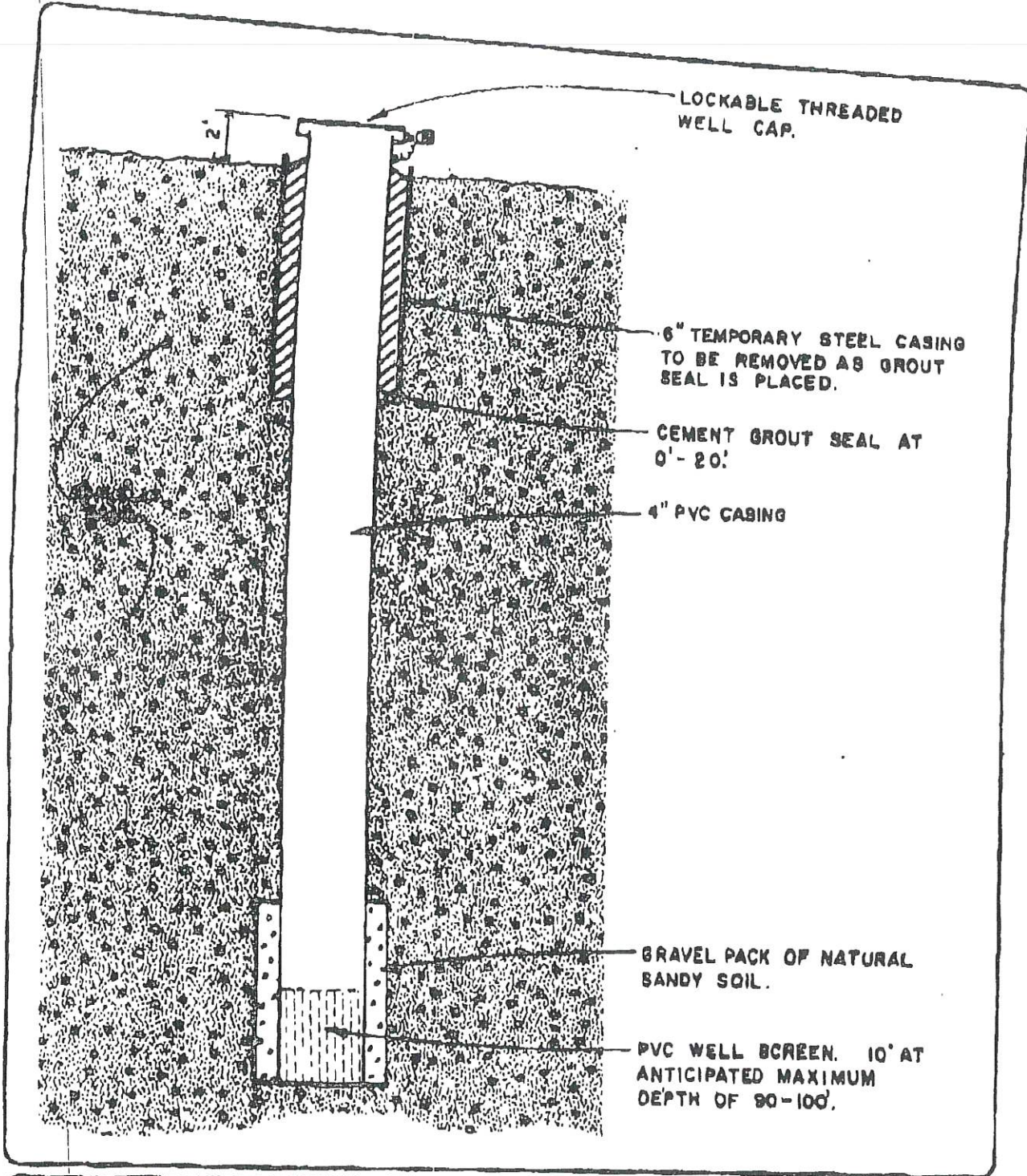
3820 E BROADWAY

City, State, Zip SPOKANE WA 99202



DESIGN BY	MCA	CHECKED BY	MCA	LOON LAKE MONITORING WELL MW 5 30099.002.01	APPROVED	
SURVEY BY		SCALE	V: 1" = 20'		DATE	
DRAWN BY	DSP	DWG NO.			4-86	

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.



DESIGN BY	MCA	CHECKED BY	MCA	LOON LAKE SEWERAGE SYSTEM - TYPICAL MONITORING WELL	APPROVED	CENTURY WEST ENGINEERING Corporation
SURVEY BY		SCALE	N.T.S.		MCA	
DRAWN BY		DATE	4-11-84		DATE	
		PROJ. NO.	3099.00202			

Resource Protection Well Report

Submit one well report per well installed. See page two for instructions.

Type of Work:

☒ Construction

☐ Decommission *Original NOI No.*

Ecology Well ID Tag No. BBH697

Site Well Name MV6

Consulting Firm Budinger & Associates

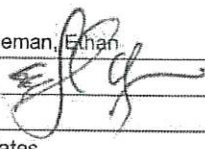
Was a variance approved for this well/boring? ☐ Yes ☐ No

If yes, what was the variance for? _____

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported are true to my best knowledge and belief.

☒ Driller ☐ Trainee ☐ Engineer

Name (Print Last, First Name) Hageman, Ethan

Driller/Engineer/Trainee Signature 

License No. 2968

Company Name Budinger & Associates

If trainee box is checked, sponsor's license number: _____

Sponsor's signature _____

Notice of Intent No. RE17630

Type of Well:

☒ Resource Protection Well

☐ Remediation Well

☐ Geotechnical Soil Boring

☐ Environmental Boring

☐ Injection Point

☐ Grounding Well

☐ Ground Source Heat Pump

☐ Other _____

☐ Soil- ☐ Vapor- ☐ Water-sampling

Property Owner Loon Lake Sewer District

Well Street Address SE corner of lagoons

City Loon Lake

County Stevens

Tax Parcel No. _____

Location (see instructions):

WWM ☐ or EWM ☒

NE $\frac{1}{4}$ - $\frac{1}{4}$ SW $\frac{1}{4}$, Section 27 Town 30N Range 41

Latitude (Example: 47.12345) 48.0675625°

Longitude (Example: -120.1234) -117.6197508°

(WGS 84 Coordinate System)

Borehole diameter 6 inches Casing diameter _____ inches

Static water level 83.77 ft below top of casing Date 7/1/19

☒ Above-ground completion with bollards ☐ Flush monument

☒ Stick-up of top of well casing 1.76 ft above ground surface

Start Date 6/27/19

Completed Date 7/1/19

Construction Design	Well Data	Driller's Log
	Riser: 2" sched 40 pvc to 72'	0-91' Sand with Gravel
	Screen: 2" sched 40 pvc (0.010" slot) from 72' to 97' with end cap	91-95' Silt
	Seal: Bentonite to 67'	95-99' Clay
	Filter pack: #10/20 silica sand from 67' to 99'	

MONITOR WELL 6

Date of Boring: 6-27-19

Driller: Budinger & Assoc., Inc.

Type of Drill: Geoprobe 8150LS Sonic Drill

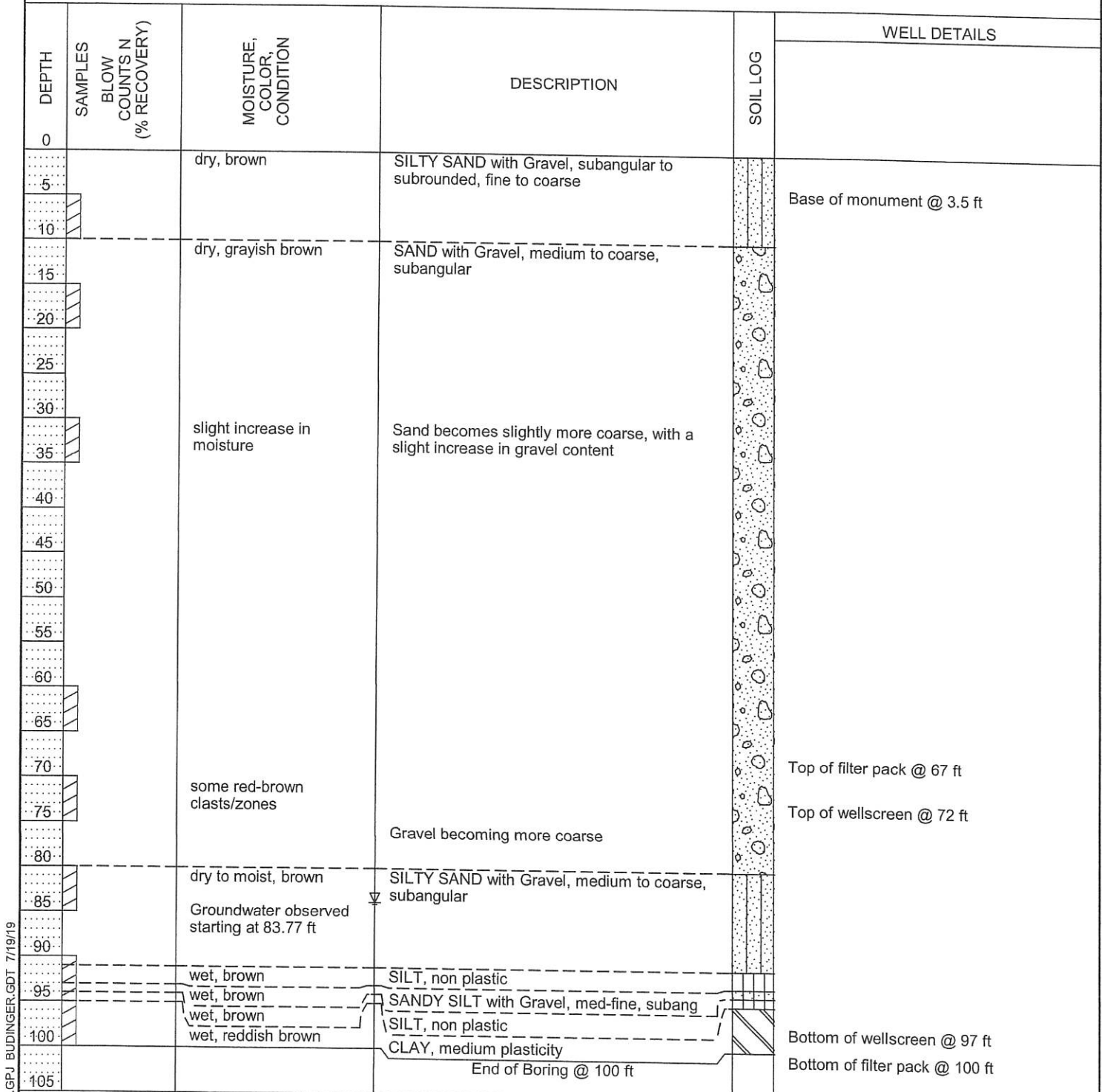
Location: MONITOR WELL 6

Surface: grass and weeds

Elevation: 2439 ft

Logged by: E. Hageman

Size of hole: SDT60 Sonic 6-inch OD
Dual Tube 4x60 core with
Auto-hammer



MONITOR WELL 6, 041.GPJ BUDINGER.GDT 7/19/19



**Budinger
& Associates**

3820 E. Broadway Ave.
Spokane, WA 99202

WELL LOG

FIGURE 4-1

Project: LOON LAKE SEWER DISTRICT NO. 4

Location: LOON LAKE, WASHINGTON

Number: X19041

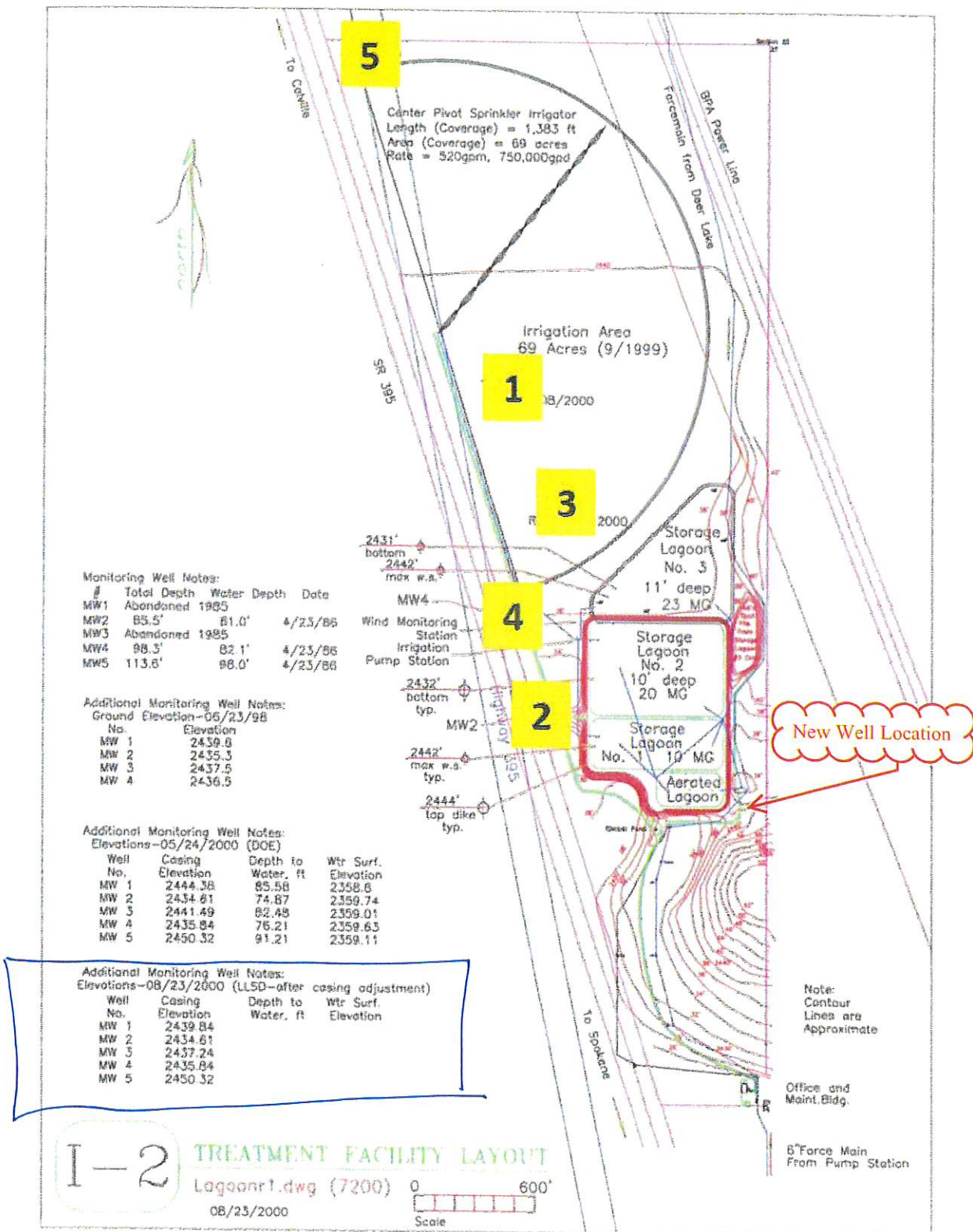
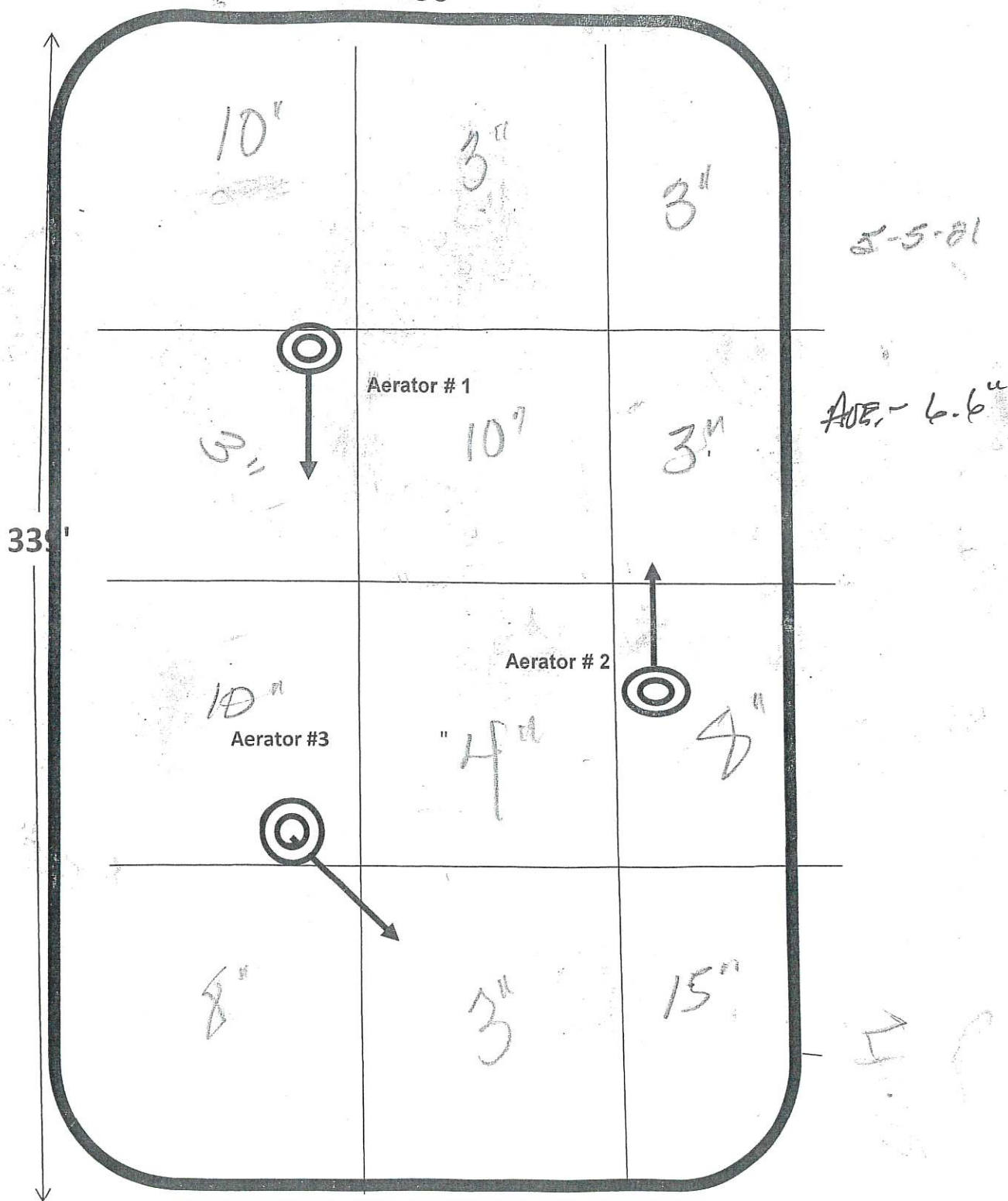


Figure 3: Treatment Facilities and Groundwater Monitoring Wells

May 21'

5/2021

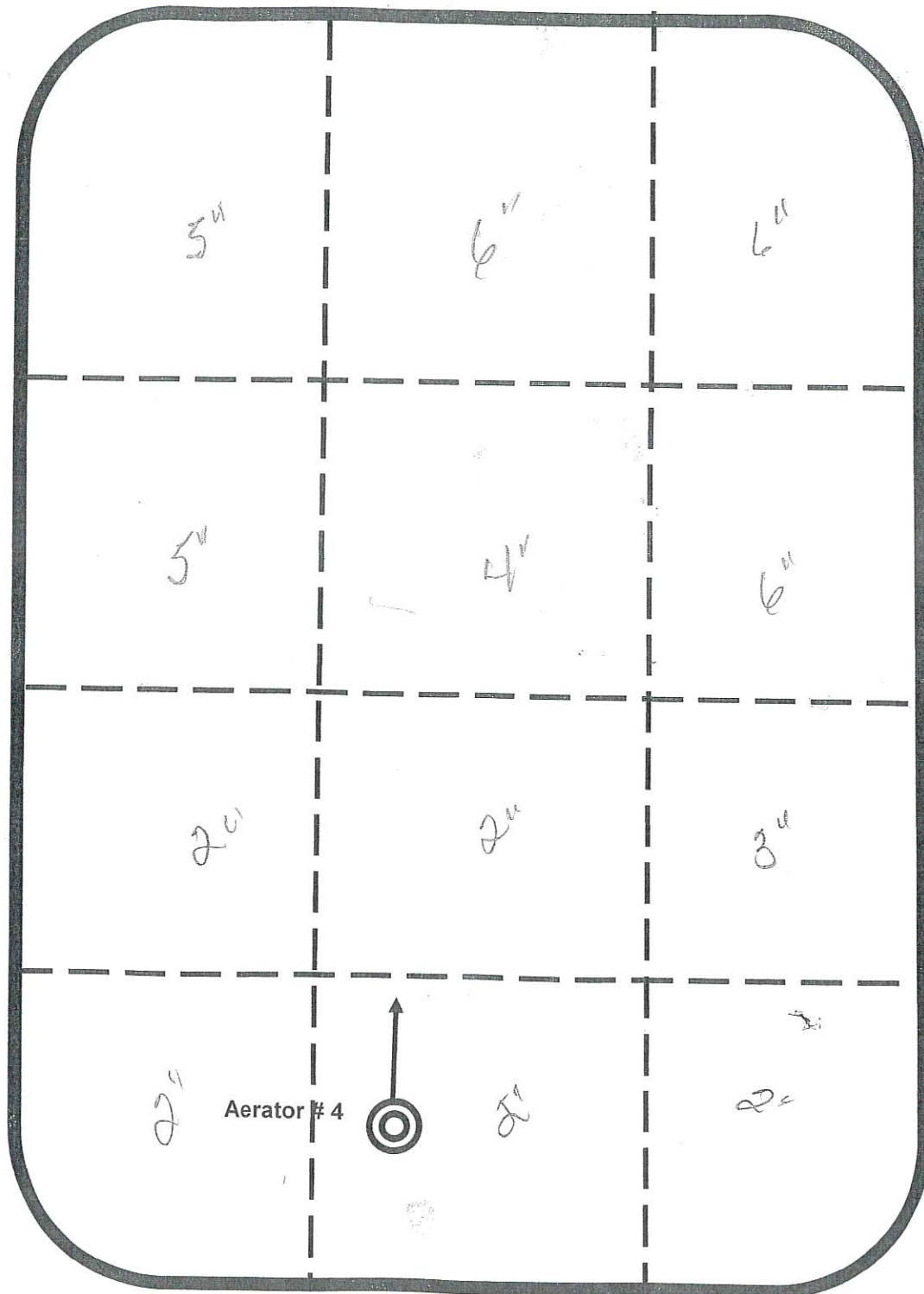
Aerated Lagoon #1
156'



May 21st

Lagoon # 2

240'



5-10-21

Ave
3.25'

5'

6'

6'

5'

4'

6'

2'

2'

3'

2'

Aerator # 4



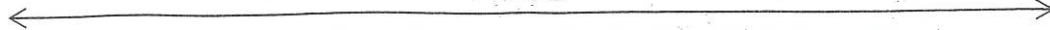
2'

2'

May 21

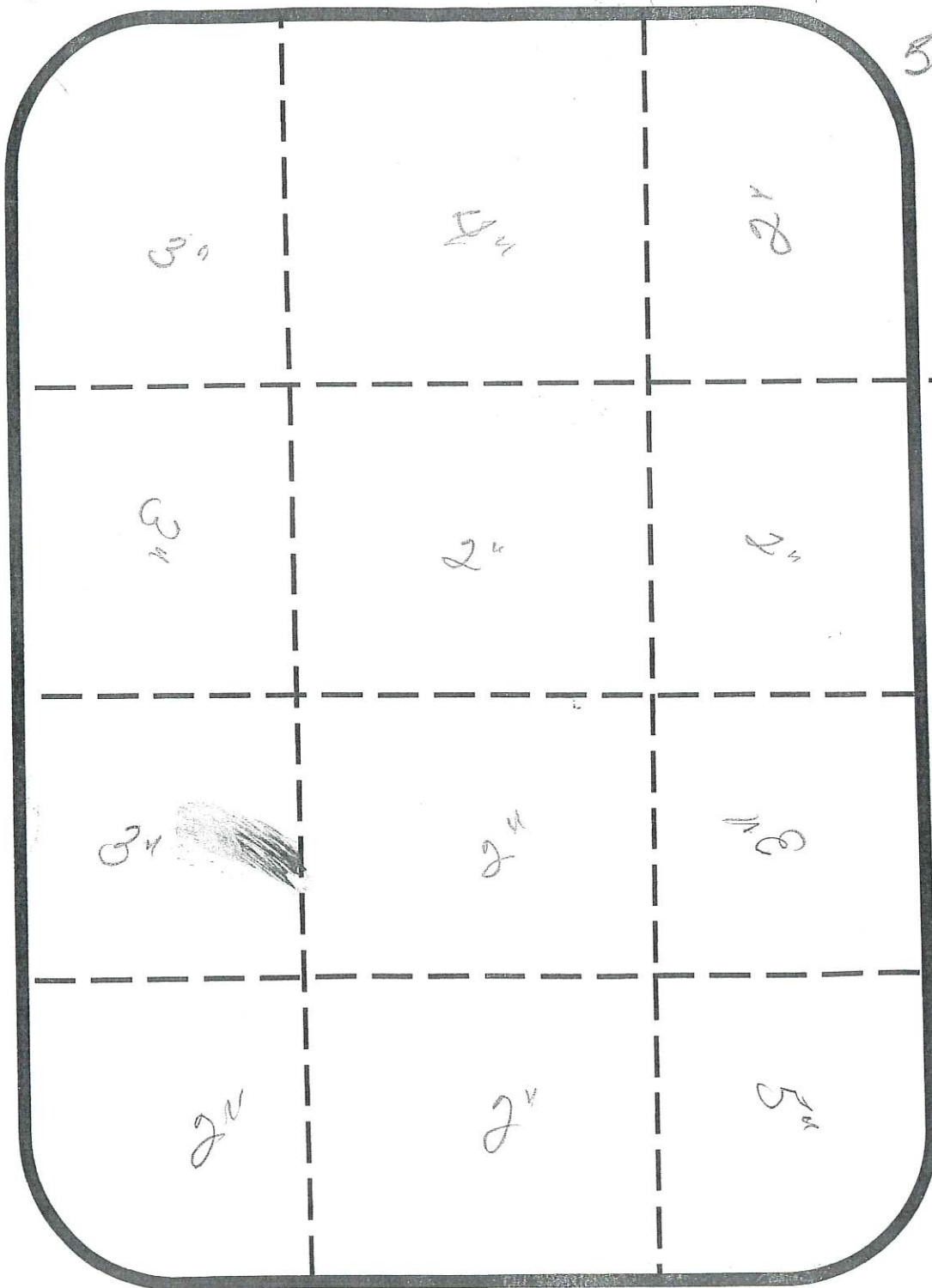
Lagoon # 3

Σ 456'



5-10-21

Aug 2.22

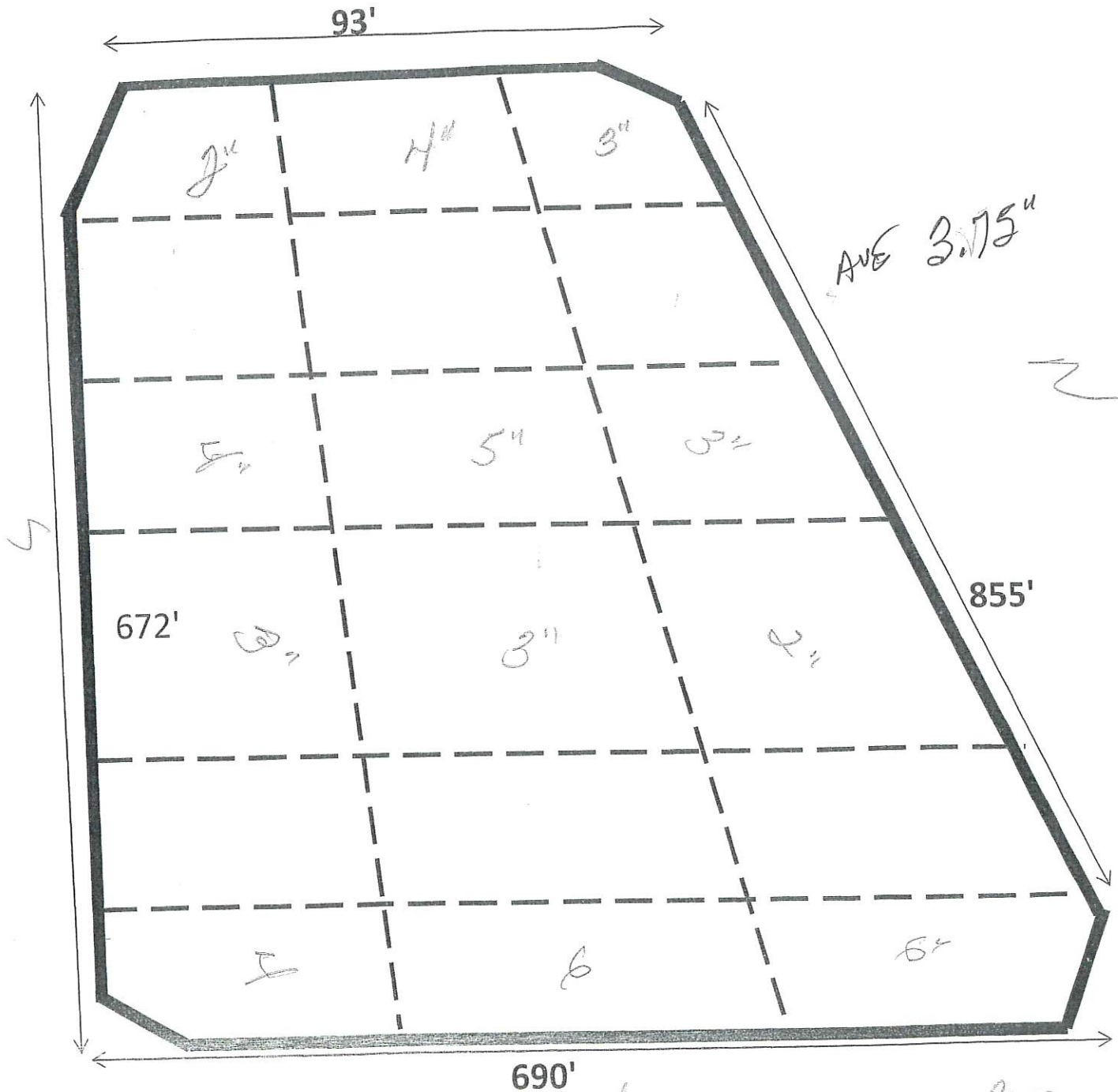


101

Mag 21'

Lagoon #4

5-10-21



The accumulation in this lagoon could be from the plant run-off that was done the previous year - It had a different color to it, compared to the regular sludge color - I don't consider it an issue at all.

From: [Loon Lake Sewer District #4 #4](#)
To: [Peterschmidt, Lucy \(ECY\)](#)
Cc: [Joy, Shara-Li \(ECY\)](#); [O'Neill, Andrew \(ECY\)](#); [Jenkins, Art \(ECY\)](#); [Allison Esvelt](#)
Subject: Waste Discharge Permit Renewal - Loon Lake Sewer #4
Date: Thursday, May 19, 2022 2:01:06 PM
Attachments: [LLSD4 SWD Permit Renewal Application 5-18-22.pdf](#)

THIS EMAIL ORIGINATED FROM OUTSIDE THE WASHINGTON STATE EMAIL SYSTEM - Take caution not to open attachments or links unless you know the sender AND were expecting the attachment or the link

Good afternoon! I have attached the signed renewal Application for State Waste Discharge Permit Number ST0008019 for Loon Lake Sewer District No. 4 as required for submission by July 31, 2022.

In addition to this electronic submission, I will be sending you the original document this afternoon via regular mail. Please let me know if you have any questions or if you need anything further regarding our permit renewal application. Thanks so much!

Sincerely,

Brooke Lyons
District Manager
Loon Lake Sewer District #4