



APPLICATION TO DISCHARGE MUNICIPAL WASTEWATER TO GROUND WATER

RECEIVED

AUG 10 2011

DEPARTMENT OF ECOLOGY
EASTERN REGIONAL OFFICE

This application is for a wastewater discharge permit as required by Chapter 90.48 RCW and Chapter 173-216 WAC. It is designed to provide the Department of 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.

Information previously submitted to Ecology that applies to this application should be referenced in the appropriate section. Ecology may request additional information to clarify the conditions of this discharge.

SECTION A. GENERAL INFORMATION

1. Applicant Name: Warden Hutterian Brethren
2. Facility Name: Headquarters Lagoon Wastewater System
(if different from applicant)
3. Applicant Address: 1054 W. Harder Rd
Street
Warden, WA 99857
City/State Zip
4. Facility Location Address:
(if different from 3. above) Street
City/State Zip
5. Latitude/longitude of the treatment facility:
47° 03' 35" N 118° 56' 20" W
6. UBI No.
7. Latitude/longitude of land application area (center):
° ' " N ° ' " W
8. Contact person:

Paul Wollman
Name

Operator
Title

(509) 349-8405
Telephone Number

(509) 349-8866
Fax Number

pkwollman@gmail.com
Email

FOR OFFICE USE ONLY

Check One

New/Renewal ☒

Modification ☐

Date Application Received

8-10-11

Application/Permit No.

ST-0045509

Date Application Accepted

3-30-12

Date Fee Paid

8-30-11

9. 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: September 2011

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.

Paul Wollman 8-9-2011 System Manager
Signature* Date Title

Paul Wollman
Printed Name

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

To receive this document in an alternate format, contact the Water Quality Program at (360) 407-6401 (Voice) or 711 or 1-800-833-6388 (TTY).

SECTION B. TREATMENT PLANT INFORMATION

1. Identify all industries, large commercial facilities or other 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:	Warden Hutterian Brethren	
INDUSTRY:	Agriculture, Maintenance & Woodworking	
ADDRESS:	1054 W Harde Rd. Warden WA	
TELEPHONE:	509-349-8405	
CONTACT NAME:	Paul Wollman	

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

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

3. Plant Design Data:

a. Average Influent Flow for Maximum Month (MGD):	0.010,890
b. Influent BOD Load (lbs/day):	
c. Influent SS Load (lbs/day):	
d. Began Operation (year):	2011
e. Last Major Upgrade (year):	N/A
f. Planned Upgrades (year):	N/A
g. Design Population:	145
h. Sprayfield loading - attach copy of the irrigation schedule if schedule if available	N/A

4. Are there plans to modify this facility? If so, briefly describe what and when.

Not at this time: New Facility

5. Attach a simple schematic drawing of 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	None
	At head of plant	
Preliminary treatment	Manually operated bar screens	None
	Mechanically operated bar screens	None
	Grit removal	6,000 g septic tank
	Pre-aeration	None
	Comminutors/grinders	None
	Other (<i>specify</i>)	
Primary Treatment	Primary Sedimentation Tank/Clarifiers	
	Septic tanks	6,000 g
	Other (<i>specify</i>)	
Secondary Treatment	Oxidation Ditch	
	Package Plant - Activated Sludge	
	Package Plant - Physical/Chemical	
	Aerated Lagoon	
	Non-aerated Lagoon/Facultative Lagoon	Two cells
	Rotating Biological Contact	
	Secondary Clarifiers	
	Trickling Filter	
	Polishing Ponds	
	Other (<i>specify</i>)	
Additional Treatment	Coagulation	
	Filtration	
	Storage (Lined Lagoon)	Two cells - double lined with leak detection
	Storage (Unlined Lagoon)	
	Other (<i>specify</i>)	Evaporative
Land Treatment or Application	Drainfield	
	Rapid Infiltration/Infiltration Lagoon	
	Constructed Wetland	
	Sprinkler Irrigation	
	Flood Irrigation	
	Ridge and Furrow Irrigation	
	Subsurface Irrigation	
	Other (<i>specify</i>)	
Disinfection	Chlorination	
	Ultraviolet	
	Other	

SECTION C. WASTEWATER INFORMATION

1. Average influent flow for the maximum month: gallons/day
Maximum daily flow applied to the land: gallons/day

2. How are influent and effluent flow measured?

New facility. Data to be collected and recorded by new flow meter station on influent line.

3. Attach flow records for the last year. (*Label as attachment C.3.*)

4. Provide measurements or range of measurements for treated wastewater prior to land application for the parameters with an "X" in the left column. Use the analytical methods given in the table unless an alternate method is approved by Ecology. All analyses (except pH) must be conducted by a laboratory registered or accredited by the Department of 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 values under "Maximum."

X	Parameter	Concentration Measured		Number of Analyses	Analytical Method Std. Methods 19th edition	Detection Limit
		Minimum	Maximum Average			
	BOD (5 day)				5210	2 mg/l
	COD				5220 B, C, or D	5 mg/l
	Total Suspended Solids				2540D	1 mg/l
	Total Dissolved Solids				2540 C	
	Conductivity				2510 A	
	Ammonia-N				4500-NH ₃ C	20 µg/l
	pH				4500-H	0.1 units
	Total Residual Chlorine				4500-Cl E	1 mg/l
	Fecal Coliform				9222 D	
	Total Coliform				9221 B or 9222 B	
	Dissolved Oxygen				4500-O C or 4500-O G	

X	Parameter	Concentration Measured			Number of Analyses	Analytical Method Std. Methods 19th edition	Detection Limit
		Minimum	Maximum	Average			
	Nitrate + Nitrite-N					4500-NO ₃ E	0.5 mg/l
	Total Kjeldahl N					4500-N _{org}	20 µg/l
	Ortho-phosphate-P					4500-P E or 4500-P F	1 µg/l
	Total-phosphate-P					4500-P B.4.	1 µg/l
	Total Oil & Grease					5520 C	0.2 mg/l
	Calcium					3500-Ca B	3 µg/l
	Chloride					4500-Cl C	0.15 µg/l
	Fluoride					4500-F D	0.1 mg/l
	Magnesium					3500-Mg B	0.5 µg/l
	Potassium					3500-K B	5 µg/l
	Sodium					3500-Na B	2 µg/l
	Sulfate					4500-SO ₄ E	1 mg/l
	Barium (total)					3500-Ba B	30 µg/l
	Cadmium (total)					3500-Cd B	5 µg/l
	Chromium (total)					3500-Cr B	50 µg/l
	Copper (total)					3500-Cu B	20 µg/l
	Iron (total)					EPA 236.1	1 µg/l
	Lead (total)					3500-Pb B	100 µg/l
	Manganese (total)						
	Mercury					3500-Hg B	0.2 µg/l
	Selenium (total)					3500-Se C	2 µg/l
	Silver (total)					3500-Ag B	10 µg/l
	Zinc (total)					3500-Zn B	5 µg/l

5. Describe the collection method for the samples analyzed above (*i.e.*, grab, 24-hour composite).

No sampling at this time.

6. Has the effluent been analyzed for any other parameters than those identified in question C.4, 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). (*Note: Ecology may require additional testing.*)

SECTION D. GROUNDWATER INFORMATION

Provide 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 and well I.D. # when available. (*Label as attachment D.*) Copy this page as necessary for each well.

Well ID # No Groundwater Monitoring Wells

Parameter	Concentration or Range Measured	Analytical Method	Detection Limit
BOD (5 day)			
COD			
Total Suspended Solids			
Total Organic Carbon			
Total Dissolved Solids			
Conductivity			
Total Hardness			
Ammonia-N			
pH			
Total Residual Chlorine			
Fecal Coliform			
Total Coliform			
Dissolved Oxygen			
Nitrate + Nitrite-N			
Total Kjeldahl N			
Ortho-phosphate-P			
Total-phosphate-P			
Total Oil & Grease			
Calcium			
Chloride			
Fluoride			
Magnesium			
Potassium			
Sodium			
Sulfate			
Barium (total)			
Cadmium (total)			
Chromium (total)			
Copper (total)			
Iron (total)			
Lead (total)			
Manganese (total)			
Mercury			
Selenium (total)			
Silver (total)			
Zinc (total)			
Water Level			

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 site(s) by section/township/range and latitude/longitude. Indicate owner for each site. Give the acreage of each land treatment site(s). Attach a copy of the contract(s) authorizing use of land for treatment. (*Label as attachment E.1*)

N/A

2. If this is a new discharge, list all environmental control permits or approvals needed for this project; for example, SEPA review, septic tank permits, sludge application permits, or air emissions permits.

SEPA checklist.

3. Attach an original United States Geological Survey (USGS) 7.5 minute topographic map. 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 soils on the site using information from local soil survey reports. Soils information is available from your county conservation district.
(*Label as attachment E.4.*)
5. Describe the local geology and hydrogeology within one mile of the site. **The local library 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.

SECTION F. SLUDGE 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 (include measurement) New Facility

Will sludge be removed in the next five years? If so, describe sludge generation, stabilization, utilization, and disposal. Attach extra sheets as necessary.

Septic tank will be checked annually and pumped when depth exceeds 30% of tank depth. Sludge accumulation in lagoons will be checked annually, and removed when average sludge depth exceeds one foot. Anticipated time, over five years.

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:

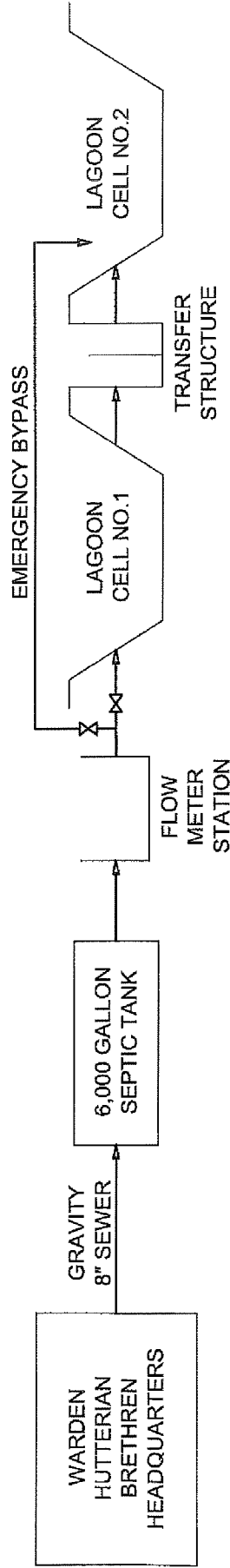
☐ Local health district? Date approved:

☐ Department of Ecology? Date approved:

Summary of Attachments That May be Required for This Application:

(Please check attachments that are included)

- ☐ B.5 Schematic drawing of POTW
- ☐ C.3 Flow records
- ☐ C.6 Additional effluent analysis
- ☐ D. Additional ground water data
- ☐ E.1 Copies of contracts authorizing use of land for treatment
- ☐ E.3 USGS topographic map
- ☐ E.4 Soil information
- ☐ E.5 Local geology and hydrogeology



FLOW DIAGRAM



WARDEN HUTTERIAN BRETHREN
HEADQUARTERS SANITARY SEWAGE WASTEWATER FACILITY

AUGUST 2011

LAST UPDATE: 08/2010
 PROJECT DATE: 08/2011
 FILE: P-10-009_C101X