

NPDES Permit No. IL0080265

Notice No. KKD:23112801

Public Notice Beginning Date: December 18, 2023

Public Notice Ending Date: January 17, 2024

National Pollutant Discharge Elimination System (NPDES)
Permit Program

PUBLIC NOTICE/FACT SHEET
of
Draft New NPDES Permit to Discharge into Waters of the United States

Public Notice/Fact Sheet Issued By:

Illinois EPA
Division of Water Pollution Control
Permit Section
1021 North Grand Avenue East
Post Office Box 19276
Springfield, Illinois 62794-9276
217/782-0610

Name and Address of Permittee:

Phillip Petersen
10046 East Pineridge Drive
Effingham, Illinois, 62401

Name and Address of Facility:

Phillip Petersen Private Sewage Disposal System
10046 East Pineridge Drive
Effingham, Illinois, 62401
(Effingham County)

The Illinois Environmental Protection Agency (IEPA) has made a tentative determination to issue a NPDES Permit to discharge into the waters of the United States and has prepared a draft Permit and associated fact sheet for the above named Permittee. The Public Notice period will begin and end on the dates indicated in the heading of this Public Notice/Fact Sheet. All comments on the draft Permit and requests for hearing must be received by the IEPA by U.S. Mail, carrier mail or hand delivered by the Public Notice Ending Date. Interested persons are invited to submit written comments on the draft Permit to the IEPA at the above address. Commentors shall provide his or her name and address and the nature of the issues proposed to be raised and the evidence proposed to be presented with regards to those issues. Commentors may include a request for public hearing. Persons submitting comments and/or requests for public hearing shall also send a copy of such comments or requests to the Permit applicant. The NPDES Permit and notice numbers must appear on each comment page.

The application, engineer's review notes including load limit calculations, Public Notice/Fact Sheet, draft Permit, comments received, and other documents are available for inspection and may be copied at the IEPA between 9:30 a.m. and 3:30 p.m. Monday through Friday when scheduled by the interested person.

If written comments or requests indicate a significant degree of public interest in the draft Permit, the permitting authority may, at its discretion, hold a public hearing. Public notice will be given 45 days before any public hearing. Response to comments will be provided when the final Permit is issued. For further information, please call Kaushal Desai at 217/782-0610.

The following water quality and effluent standards and limitations were applied to the discharge:

Title 35: Environmental Protection, Subtitle C: Water Pollution, Chapter I: Pollution Control Board and the Clean Water Act were applied in determining the applicable standards, limitations and conditions contained in the draft Permit.

The applicant is engaged in treating less than 1500 gpd of domestic wastewater from a private residence. The plant achieves treatment by a flow through process. Continuous aeration is provided by a linear air pump via three Teflon diffusers. Settling is accomplished in a cone shaped clarifier set in the middle of the aeration compartment. The electrical controls and air pump are housed in a single polyethylene enclosure referred to as an Operations/Control Center. The electrical controls signal alarms for low air pressure and high water level in the plant. Wastewater enters the pretreatment tank and flows by hydraulic displacement from the pretreatment tank into the aeration compartment of the treatment unit. Wastewater flows by hydraulic displacement from the aeration chamber through a hole in the base of the cone-shaped clarifier, where final settling takes place. The hydraulic roll created by the aeration system helps to draw settled solids out of the base of the clarifier and back into the aeration chamber. Treated wastewater exits the plant by hydraulic displacement through a tee structure located in the center of the clarifier.

The length of the Permit is approximately 5 years.

The main discharge number is 001. The seven day once in ten year low flow (7Q10) of the receiving stream, Lake Sara is 0 cfs.

Pursuant to the waiver provisions authorized by 40 CFR § 123.24, this draft permit is within the class, type, and size for which the Regional Administrator, Region V, has waived his right to review, object, or comment on this draft permit action.

Application is made for the new discharge which is located in Effingham County, Illinois. The following information identifies the discharge point, receiving stream and stream classifications:

<u>Discharge Number</u>	<u>Receiving Stream</u>	<u>Latitude</u>	<u>Longitude</u>	<u>Stream Classification</u>	<u>Integrity Rating</u>
001	Lake Sara	39° 07' 54" North	88° 36' 43" West	General Use	Not Rated

To assist you further in identifying the location of the discharge(s) please see the map on page 4 of the Public Notice/Fact Sheet.

The stream segment, waterbody segment RCE, receiving the discharge from outfall 001 is listed on the 2020/2022 Illinois Integrated Water Quality Report and Section 303(d) List as impaired for aesthetic quality with a potential cause given as total phosphorus, fish consumption with a potential cause given as mercury, and public and food processing water supply use with a potential cause given as manganese. Aquatic life use is fully supported.

The discharge(s) from the facility is proposed to be monitored and limited at all times as follows:

Discharge Number(s) and Name(s): 001 STP Outfall

The effluent of the above discharge(s) shall be monitored and limited at all times as follows:

Parameter	LOAD LIMITS lbs/day DAF (DMF)			CONCENTRATION LIMITS mg/L			Regulation
	Yearly Average	Weekly Average	Daily Maximum	Yearly Average	Weekly Average	Daily Maximum	
BOD ₅				10		20	35 IAC 304.120 40 CFR 133.102
Suspended Solids				12		24	35 IAC 304.120 40 CFR 133.102
pH	Shall be in the range of 6 to 9 Standard Units						35 IAC 304.125
Fecal Coliform	Daily maximum shall not exceed 400 per 100 mL						35 IAC 304.121
Chlorine Residual						0.038	35 IAC 302.208

This draft Permit also contains the following requirements as special conditions:

1. Reopening of this Permit to include different final effluent limitations.
2. Submission of the operational data in a specified form and at a required frequency at any time during the effective term of this Permit.
3. More frequent monitoring requirement without Public Notice.
4. Effluent sampling point location.
5. Reopening of this Permit to include revised effluent limitations based on a Total Maximum Daily Load (TMDL) or other water quality study.
6. Transfer or termination of permit coverage.
7. Permittee shall comply with all conditions of the permit and other applicable laws, regulations or ordinances.
8. Information on construction, operation and maintenance.
9. Proof of ongoing maintenance agreement.
10. Use of approved chlorine tablets.
11. Discharge of hazardous pollutants, toxic wastes and wastes that causes a violation of an applicable water quality standard not authorized.
12. Operation and maintenance manual and all applicable records must be available. Sampling ports must be accessible.
13. No violation of water quality.
14. Soil Design Groups II through XI, and Soil Groups 7G, 7J, 7L, 8E, and 8I within Design Group XII.

Antidegradation Assessment for the Phillip Petersen Private Sewage Disposal System
NPDES Permit No. IL0080265 Effingham County

Phillip Petersen ("Applicant") has applied for a permit to install a surface discharge septic treatment system at a new residence to be constructed at 10046 East Pineridge Drive, Effingham, Illinois. The proposed septic system will treat exclusively domestic wastewater

and will be intermittent in nature, of which discharge is dictated by water use in the dwelling or by batch treatment of effluent. Due to soil inadequacies at the site location, a surface discharging system is needed. Permits for the design and installation of the treatment system are also required from the Illinois Department of Public Health or their authorized agent.

Identification and Characterization of the Affected Water Body

The treatment system will discharge to Lake Sara. Lake Sara, Waterbody Segment IL_RCE, is a General Use Water with 0 cfs of flow during 7Q10 low-flow conditions. Lake Sara is not listed as a biologically significant stream in the 2008 Illinois Department of Natural Resources Publication Integrating Multiple Taxa in a Biological Stream Rating System or given an integrity rating in that document. Lake Sara is listed on the 2020/2022 Illinois Integrated Water Quality Report and Section 303(d) List as impaired for aesthetic quality with a potential cause given as total phosphorus, fish consumption with a potential cause given as mercury, and public and food processing water supply use with a potential cause given as manganese. Aquatic life use is fully supported. Lake Sara is not subject to enhanced dissolved oxygen standards.

Identification of Proposed Pollutant Load Increases or Potential Impacts on Uses

The treatment system will be capable of meeting and will receive effluent limits of 10/12 mg/L for both BOD and total suspended solids (TSS) on a yearly average basis. Fecal coliform bacteria may not exceed 400 colony forming units (CFU) in the effluent. BOD, TSS, ammonia, and phosphorus may increase in the receiving waterbody because of the discharge.

Fate and Effect of Parameters Proposed for Increased Loading.

The BOD and ammonia discharged by the system will decay into simpler and harmless byproducts by naturally occurring organisms in the receiving water. Some of the nitrogen originating in the ammonia remains in the waterbody in the form of nitrates or organic nitrogen. The nutrients discharged are absorbed by aquatic or riparian terrestrial plants or remain in the stream. Due to disinfection by the system, fecal coliform bacteria standards will be met in the effluent. Lake Sara is impaired for phosphorus with a wasteload allocation as part of the Little Wabash River Watershed. The most effective BMP for managing loads from septic systems is regular maintenance. Additional BMP Recommendations include replacing failed systems with systems that comply with new requirements.

The TMDL states:

“Good housekeeping measures relating to septic systems are listed below (Goo, 2004; CWP, 2004):

- Inspect system annually and pump system every 3 to 5 years, depending on the tank size and number of residents per household.
- Refrain from trampling the ground or using heavy equipment above a septic system (to prevent collapse of pipes).
- Prevent septic system overflow by conserving water, not diverting storm drains or basement pumps into septic systems, and not disposing of trash through drains or toilets.

Education is a crucial component of reducing pollution from septic systems. Many owners are not familiar with USEPA recommendations concerning maintenance schedules. Education can occur through public meetings, mass mailings, and radio and television advertisements. The USEPA recommends that septic tanks be pumped every 3 to 5 years depending on the tank size and number of residents in the household. Annual inspections, in addition to regular maintenance, ensure that systems are functioning properly. An inspection program would help identify those systems that are currently connected to tile drain systems. All tanks discharging to tile drainage systems should be disconnected immediately.”

The effluent will discharge to a riprap bed on a grass hillside over 30 feet from the water's edge near Lake Sara.

Purpose and Anticipated Benefits of the Proposed Activity

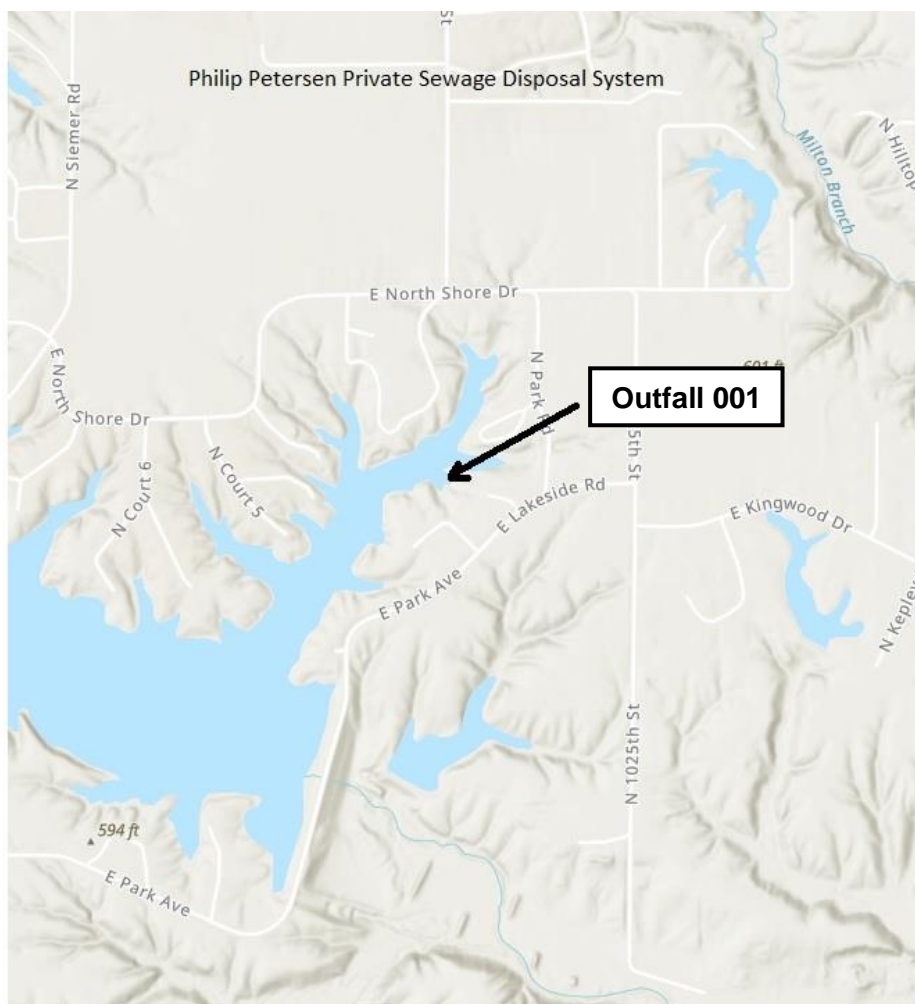
Residences located in areas distant from sewage collection systems and which are located where soils have insufficient percolation to support subsurface soil-based wastewater systems, often have no other choice but to rely on surface discharging individual sewage treatment systems. These systems, when subject to the restrictions mandated by the permit, allow for safe and effective disposal of sewage, thereby benefitting residents of rural areas and small towns that lack sewer systems.

Assessments of Alternatives for Less Increase in Loading or Minimal Environmental Degradation

Due to poor soils and lack of availability of a sewage collection system, it was determined to be technically infeasible to install a subsurface seepage system. The applicant has provided as much opportunity as practicable for the effluent to be absorbed into the ground. This minimizes the amount of effluent reaching the receiving water and also affords the reduction of effluent constituents before the stream or ditch receives the effluent.

Summary Comments of the Illinois Department of Natural Resources, Regional Planning Commissions, Zoning Boards or Other Entities

IDNR will have the opportunity to review the public notice and fact sheet containing this assessment. Any comments by IDNR or other entities received prior to the end of the public notice period will be reviewed after the public notice period and appropriate responses will be made at that time.



NPDES Permit No. IL0080265

Illinois Environmental Protection Agency

Division of Water Pollution Control

1021 North Grand Avenue East

Post Office Box 19276

Springfield, Illinois 62794-9276

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

New (NPDES) Permit

Expiration Date:

Issue Date:
Effective Date:

Name and Address of Permittee:

Phillip Petersen
10046 East Pineridge Drive
Effingham, Illinois, 62401

Facility Name and Address:

Phillip Petersen Private Sewage Disposal System
10046 East Pineridge Drive
Effingham, Illinois, 62401
(Effingham County)

Receiving Waters: Lake Sara

In compliance with the provisions of the Illinois Environmental Protection Act, Title 35 of the Ill. Adm. Code, Subtitle C, Chapter I, and the Clean Water Act (CWA), the above-named Permittee is hereby authorized to discharge at the above location to the above-named receiving stream in accordance with the Effluent Limitations, Monitoring, and Reporting requirements; Special Conditions and Standard Conditions attached herein.

Permittee is not authorized to discharge after the above expiration date. In order to receive authorization to discharge beyond the expiration date, the Permittee shall submit the proper application as required by the Illinois Environmental Protection Agency (IEPA) not later than 180 days prior to the expiration date.

Brant. D. Fleming, P.E.
Manager, Municipal Unit, Permit Section
Division of Water Pollution Control

BDF:KKD:23112801

NPDES Permit No. IL0080265
Effluent Limitations, Monitoring, and Reporting
 FINAL

Discharge Number(s) and Name(s): 001 STP Outfall

From the effective date of this Permit until the expiration date, the effluent of the above discharge(s) shall be monitored and limited at all times as follows:

Parameter	LOAD LIMITS lbs/day DAF (DMF)			CONCENTRATION LIMITS mg/L			Sample** Frequency	Sample Type
	Yearly Average	Weekly Average	Daily Maximum	Yearly Average	Weekly Average	Daily Maximum		
Flow (MGD)*								
BOD ₅				10		20		Grab
Suspended Solids				12		24		Grab
pH	Shall be in the range of 6 to 9 Standard Units							Grab
Fecal Coliform	Daily maximum shall not exceed 400 per 100 mL							Grab
Chlorine Residual***						0.038		Grab

Effluent shall be free of floating debris, visible oil, odor, plant or algal growth, color or turbidity of other than of natural origin.

*Flow is to be reported as the amount that is discharged in a day (24 hrs), expressed as the average daily discharge occurring over a calendar year. Flow may be estimated from direct visual readings, mechanical flow measurement, or water use records and may not exceed 1500 gallons per day or the permitted capacity as authorized by the Illinois Environmental Protection Agency (IEPA).

**See Special Condition 9.

***Sampling for chlorine residual is only required when chlorine is used for disinfection.

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Special Conditions

SPECIAL CONDITION 1. This Permit may be modified to include different final effluent limitations or requirements which are consistent with applicable laws and regulations. The IEPA will public notice the permit modification.

SPECIAL CONDITION 2. The IEPA may request in writing submittal of operational information in a specified form and at a required frequency at any time during the effective period of this Permit.

SPECIAL CONDITION 3. The IEPA may request more frequent monitoring by permit modification pursuant to 40 CFR § 122.63 and Without Public Notice.

SPECIAL CONDITION 4. Samples taken in compliance with the effluent monitoring requirements shall be taken at a point representative of the discharge, but prior to entry into the receiving stream.

SPECIAL CONDITION 5. This Permit may be modified to include alternative or additional final effluent limitations pursuant to an approved Total Maximum Daily Load (TMDL) Study or upon completion of an alternate Water Quality Study.

SPECIAL CONDITION 6. When a treatment system covered by this permit is sold to a New Owner or when discharges to waters of the U.S. cease because the system is removed, closed out, or because discharges are routed to a separate wastewater collection and treatment system, the permittee must submit a completed Illinois EPA Form ILG62 Notice of Termination (NOT) to the IEPA and Illinois Department of Public Health (IDPH). The new property owner must submit a US EPA Form ILG62 Simplified Notice of Intent (NOI).

The Illinois EPA Form ILG62 NOT is available here: <https://epa.illinois.gov/topics/forms/water-forms/wastewater-permits.html>

The Illinois EPA Form ILG62 Simplified NOI or Illinois EPA Form ILG62 NOT must be filed with IEPA and IDPH at the following addresses:

Illinois Environmental Protection Agency
Division of Water Pollution Control
Attention: Permit Section, Mail Code #15
P.O. Box 19276
Springfield, Illinois 62794-9276

Illinois Department of Public Health
Division of Environmental Health
525 West Jefferson
Springfield, Illinois 62761

SPECIAL CONDITON 7: The permittee shall comply with all conditions of this Permit, all applicable IEPA regulations, IDPH sewage code requirements and all other applicable federal, state, or local laws, regulations or ordinances. Any noncompliance constitutes a violation of the Clean Water Act and the Code of Illinois and is grounds for enforcement action, termination of coverage under this Permit, or for denial of a request for coverage under a reissued general permit.

SPECIAL CONDITION 8: Upon request, the permittee shall furnish to the IDPH or the local administrative authority any information relative to the construction, operation, or maintenance of this facility, including effluent sample tests results, within the time period specified by the IDPH or the local administrative authority.

SPECIAL CONDITION 9:

- A. The permittee shall have the individual discharging treatment system whose discharge is covered by this permit inspected at least every twelve (12) months. The inspection must be conducted by a qualified individual with sufficient training to ensure that permit requirements are met. Qualified individuals include trained and experienced wastewater treatment plant operators, licensed environmental health practitioners, Illinois Department of Public Health licensed Private Sewage Disposal System Installation Contractors, individuals holding the basic or advanced Certified Installer of Onsite Wastewater Treatment System certification, and Illinois licensed professional engineers. The Owner or Operator is responsible for assuring that this provision is fulfilled. During the inspection, a representative sample shall be collected, properly preserved, and analyzed by a certified laboratory for BOD₅, suspended solids, pH, fecal coliform, chlorine residual, and dissolved oxygen. Any nuisance, health hazard, equipment malfunction or deficiency noted on the inspection report, shall be addressed and corrective action taken within 30 days.
- B. The permittee shall submit copies of the inspection report and results of any effluent monitoring report pursuant to Special Condition 9.A to the Agency. The inspection and monitoring report shall be submitted twelve (12) months from the effective date of this permit and annually thereafter. The Permittee is required to submit electronic DMRs (NetDMRs) instead of mailing paper DMRs to the IEPA unless a waiver has been granted by the Agency. More information, including registration information for the NetDMR program, can be obtained on the IEPA website, <https://epa.illinois.gov/topics/water-quality/surface-water/netdmr.html>. Permittees that have been granted a waiver shall mail the Discharge Monitoring Reports with an original signature to the IEPA at the following address. The reports shall be submitted to the following address:

Illinois Environmental Protection Agency
Division of Water Pollution Control
1021 North Grand Avenue East
Post Office Box 19276
Springfield, Illinois 62794-9276

Attention: Compliance Assurance Section,
Discharge Monitoring Reports, Mail Code #19

- C. Upon request of either the IDPH or local administrative authority, inspection reports shall be provided to that authority. Otherwise

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Special Conditions

the system owner is responsible to maintain all such records on site or electronically, and have such records available for review by any authorized IEPA, IDPH or local/county health administrator.

SPECIAL CONDITION 10: If chlorine tablets are used for disinfection, then only those tablets approved for use in disinfection of wastewater shall be utilized.

SPECIAL CONDITION 11: This permit does not authorize discharge of any effluent which contains any hazardous pollutant, toxic waste, waste that causes a violation of an applicable water quality standard, any waste which is considered a nuisance or health hazard, stormwater, grease, oil or solvents, car wash facility, hair salon, photographic laboratory, medical facility, facility that generates automotive waste, or any substance other than domestic wastewater.

SPECIAL CONDITION 12: The operation and maintenance manual and all records including installation, inspection and sampling shall be available during an inspection of the facility. The sampling port or free fall discharge shall be readily accessible during an inspection. A Permittee associated with a food service establishment, with a grease trap, shall make the grease trap readily accessible during an inspection.

SPECIAL CONDITION 13: The effluent, alone or in combination with other sources, shall not cause or contribute to a violation of any applicable water quality standard outlined in 35 Ill. Admin. Code 302.

SPECIAL CONDITION 14: A surface discharge is prohibited from systems installed in Soil Design Groups II through XI, and Soil Groups 7G, 7J, 7L, 8E, and 8I within Design Group XII, as the groups are defined in 77 Ill. Adm. Code 905.

