

**Groundwater Discharge
Land Application System Permit
Fact Sheet**

SECTION 1.0 FACILITY SUMMARY

APPLICANT	Lake of Isles, LLC
PERMIT NO.	SP0002408
APPLICATION NO.	202201245
DATE APPLICATION RECEIVED	February 8, 2022
LOCATION ADDRESS	1 Clubhouse Drive, North Stonington CT
FACILITY CONTACT	Keith Gove Office Phone: 860 396 3036 Email: kgove@mptn-nsn.gov
MAILING ADDRESS	110 Pequot Trail, Mashantucket, Ct 06338
PERMIT TERM	10 Years
PERMIT TYPE	Renewal
PERMIT CATEGORY	Land Application (Reuse)
OWNERSHIP	Private
COMPLIANCE SCHEDULE	Yes
RECENT ENFORCEMENT HISTORY	None
RECEIVING WATERBODY	Groundwaters via surface infiltration Shewville Brook Watershed
DATE APPLICATION PUBLIC NOTICED/ NAME OF PAPER	January 17, 2022
DATE OF NOTICE OF SUFFICIENCY	November 28, 2022
DEEP STAFF ENGINEER	Stephen Edwards (stephen.edwards@ct.gov)

SECTION 2.0 PERMIT FEES

Application Fee:

Filing Fee	\$1,300	Date Paid: February 8, 2022
Processing Fee	\$3,675	Date Paid: May 3, 2022

Annual Fee:

	WASTEWATER CATEGORY (per 22a-430-7)	FLOW CATEGO RY	DSN	ANNUAL FEE (per 22a- 430-7 and CGS 22a- 6f)
	Sanitary Sewerage to Groundwaters	1,200,000 gpd	301	\$1,110
TOTAL				\$1,110

SECTION 3.0 PROJECT HISTORY

This permit is a state Land Application System permit (“LAS”) authorizing the discharge of highly treated reuse wastewater to be land applied, infiltrated through the soil, and discharged to groundwater.

Lake of Isles, LLC (“Permittee”) submitted Application 202201245 on February 8, 2022, to renew state LAS Permit No. SP0002408 for continued authorization to discharge treated domestic wastewater and potable water to the groundwater via land application in North Stonington Connecticut. The application was timely and complete. The DEEP issued a Notice of Sufficiency for the application on November 28, 2022.

Lake of Isles, LLC proposes to land apply up to 1,200,000 gallons a day of highly treated domestic sewage wastewaters from the Mashantucket Pequot Tribal Nation Wastewater Treatment Plant (“MPTN WWTP”) and potable water, as needed, to irrigate approximately 220 acres of turf grass at the Lake of Isles Golf Resort. The activity takes place at the Lake of Isles Golf Resort located off 1 Clubhouse Drive in North Stonington, CT. The activity occurs around the Lake of Isles and Shewville Brook. Irrigation is limited to protect human health and occurs during non-playing hours (typically 9 PM to 6 AM), April 1 through October 31 during dry weather conditions.

Domestic sewage generated at the clubhouse and villas is sent to the MPTN WWTP for treatment. According to the application documents, domestic sewage generated from the facilities at the Maintenance Building is discharged to a Health Code compliant septic system approved by the local sanitarian.

The permit was initially issued on August 31, 2005 (Application No. 200300949) and was renewed on August 8, 2012.

The Permittee is not subject to any ongoing enforcement actions.

The federal Clean Water Act does not regulate point source discharges to groundwater as this authority lies with the states. The state of CT does not have direct water discharge permitting authority over discharges to surface water or groundwater from a wastewater treatment plant owned by a native American tribe located on their reservation. Native American tribes are sovereign on their reservations and have the right and authority to regulate activities on their lands independently from state government. The wastewater treatment plant providing enhanced treatment and generating the reuse water that is land applied at the Lake of Isles Golf Resort, is not regulated under section 22a of the Connecticut General Statutes or section 22a of the Regulations of Connecticut State Agencies because it is owned and operated by the Mashantucket Pequot Tribal Nation and located on their reservation. However, since the reuse quality water is used as supplemental irrigation on a golf course entering ground waters of the State and the golf course is not located on a tribal reservation, the discharge to groundwater on the golf course is regulated by the state of Connecticut under section 22a of the Connecticut General Statutes and section 22a of the Regulations of Connecticut State Agencies.

SECTION 4.0 PROCESS AND TREATMENT DESCRIPTION

MPTN WWTP is designed to treat up to five (5) million gallons a day (3 million gallons a day design average) of domestic sewerage and is located on the MPTN reservation. The WWTP consists of the following treatment: Sequence Batch Reactors, nitrification, denitrification, phosphorus removal, filtration, and UV disinfection to reduce BOD, TSS, nitrogen, and phosphorus and bacteria prior to irrigation. Reclaimed water not used for irrigation is discharged to the existing rapid infiltration basins located on the MPTN reservation.

Reclaimed treated wastewater is diverted from the MPTN WWTP to an 80,000-gallon holding tank. Chlorine is directly added to the water prior to the holding tank at the MPTN WWTP at a concentration range of 0.2-1.0 mg/l to control the potential regrowth of bacteria in the tank, prior to being land applied. In addition to the reclaimed water, potable water may also be used to irrigated on an as needed basis.

DEEP did not review and approve the MPTN WWTP design because it is on tribal territory and not within DEEPs jurisdiction. U.S EPA reviewed and approved the treatment plant; however, DEEP did coordinate with U.S. EPA alongside the Department of Public Health to determine the appropriate level of treatment and subsequent effluent limits prior to the land application of wastewater. The MPTN WWTP is designed with an automated reject and return system ensuring wastewater that does not meet the reuse effluent limits does not enter the storage tank to be land applied and is returned to the MPTN WWTP to be disposed of through the rapid infiltration basins discharging to groundwater.

SECTION 5.0 COMPLIANCE SCHEDULE

Does the permit include a compliance schedule? YES (X) NO ()

This permit contains an enforceable compliance schedule which requires the Permittee submit the results of a detailed compliance audit to the Commissioner every two years. The audit must be performed by a qualified professional engineer.

SECTION 6.0 BASIS FOR LIMITATIONS, PERMIT STANDARDS OR CONDITIONS

The permit contains limits and conditions developed on a Case-by-Case Determination using Best Professional Judgment (“BPJ”) RCSA Sections 22a-430-4(1)(4)(D)(iii) and 22a-430-4(m).

This permit was written in accordance with the EPA Guidelines for Water Reuse, as amended, as well as similar case studies of reclaimed wastewater discharges as regulated by the states of Massachusetts and New Hampshire: [Guidelines for Water Reuse | Water Reuse and Recycling | US EPA](#).

6.1 Permit Conditions

Section 3.1 of the permit contains terms and conditions for irrigation designed to assure:

- only properly treated wastewater is used for irrigation,
- no human exposure to irrigation water, and
- all irrigation water is fully absorbed into the ground.

These terms and conditions include:

- limiting the times irrigation spray may be applied;
- setting minimum treatment requirements for all waters diverted to the holding tank;
- setting minimum quality requirements for all waters diverted to the holding tank;
- requiring automatic rejection and return to the WWTS, ensuring it does not enter the storage tank; and
- reporting requirements to assure the above conditions are met.

6.2 Table A: Treated Effluent

Numeric permit limits listed in Table A of the permit are for the treated effluent leaving the WWTP prior to entering the holding tank that is then used as irrigation water and must be met prior to entering the water reuse storage tank. Chlorine is added and monitored using a meter following the UV treatment at the WWTP, prior to being pumped to the storage tank.

Parameter	Maximum Daily Limit	Instantaneous limit
Biological oxygen demand,-5 day (BOD5)	10.0 mg/l	NA
Chlorine, total residual	NA	0.2 to 1.5 mg/l
E-coli	NA	NA
Fecal coliform	NA	2.2 col./100 ml
Nitrogen, total	1.0 mg/l	NA
pH	NA	6.0 to 9.0 S.U (minimum and maximum)
Phosphorus, total	1.0 mg/l	NA
Total suspended solids	5.0 mg/l	NA
Turbidity	NA	2 NTU

6.3 Table B: Inspection, Monitoring, and Maintenance

Table B establishes minimum inspection, monitoring, and maintenance schedule for the water reuse system.

6.4 Table C: Holding Tank Monitoring

Table C requires monitoring the final effluent at the irrigation holding tank for the same parameters as in Table A to ensure the effluent quality has not substantially changed since entering the hold tank.

6.5 Modifications to Permit

This permit contains the following changes from the previous permit.

Table A:

1. Chlorine monitoring was clarified.
2. Turbidity and bacteria instantaneous limits from Section 3 were added.

Table B:

1. Removed the requirement to inspect the capacity of the booster pumps as there are no booster pumps to inspect.
2. Clarified that the outdoor locking mechanisms are electronic and not mechanical.

Tables C and D:

1. Table C was converted to a monitoring location of the final effluent discharged from the irrigation tank.
2. Groundwater and surface water monitoring in the 2012 permit, Tables C and D, were eliminated since the reclaimed irrigation water is highly treated and not the only contributing factor to the nearby surface and groundwaters. DEEP has determined monitoring the final effluent from the irrigation tank provides a more precise location for determining the quality of the discharge and its potential impact on the environment.

SECTION 7.0 VARIANCES AND WAIVERS

The facility did not request a variance or waiver.

SECTION 8.0 E-REPORTING

The Permittee is being required to report discharge monitoring reports electronically using NetDMR.

SECTION 9.0 PUBLIC PARTICIPATION PROCESS

9.1 Information Requests

Interested persons may obtain copies of the application from Keith Grove, 1 Clubhouse Drive, North Stonington CT Phone No.: 860 396 3036

The application is available for inspection by contacting Steve Edwards at 860-424-3838 or

steve.edwards@ct.gov, at the Department of Energy and Environmental Protection, Bureau of Materials Management and Compliance Assurance, 79 Elm Street, Hartford, CT 06106-5127 from 8:30 - 4:30, Monday through Friday.

Any interested person may request in writing that his or her name be put on a mailing list to receive notice of intent to issue any permit to discharge to the surface waters of the state. Such request may be for the entire state or any geographic area of the state and shall clearly state in writing the name and mailing address of the interested person and the area for which notices are requested.

9.2 Public Comment

Prior to making a final decision to approve or deny any application, the Commissioner shall consider written comments on the application from interested persons that are received within thirty (30) days of this public notice. Written comments should be directed to DEEP.UICPermitting@ct.gov, or the Department of Energy and Environmental, Bureau of Materials Management and Compliance Assurance Protection, Water Permitting and Enforcement Division, 79 Elm Street, Hartford, CT 06106-5127 from 8:30 - 4:30, Monday through Friday.. The Commissioner may hold a public hearing prior to approving or denying an application if in the Commissioner's discretion the public interest will be best served thereby and shall hold a hearing upon receipt of a petition signed by at least twenty-five persons. Notice of any public hearing shall be published at least thirty (30) days prior to the hearing.

9.3 Petitions For Hearing

Petitions for a hearing shall be submitted within thirty (30) days from the date of publication of this public notice and should include the application number noted above and also identify a contact person to receive notifications. Petitions may also identify a person who is authorized to engage in discussions regarding the application and, if resolution is reached, withdraw the petition. The Office of Adjudications will accept electronically-filed petitions for hearing in addition to those submitted by mail or hand-delivered. Petitions with required signatures may be sent to deep.adjudications@ct.gov; those mailed or delivered should go to the DEEP Office of Adjudications, 79 Elm Street, Hartford, CT 06106. If the signed original petition is only in an electronic format, the petition must be submitted with a statement signed by the petitioner that the petition exists only in that form. Original petitions that were filed electronically must also be mailed or delivered to the Office of Adjudications within thirty (30) days of electronic submittal. Additional information can be found at www.ct.gov/deep/adjudications.

The Connecticut Department of Energy and Environmental Protection is an Affirmative Action/Equal Opportunity Employer that is committed to complying with the requirements of the Americans with Disabilities Act (ADA). If you are seeking a communication aid or service, have limited proficiency in English, wish to file an ADA or Title VI discrimination complaint, or require some other accommodation, including equipment to facilitate virtual participation, please contact the DEEP Office of Diversity and Equity at 860-418-5910 or by email at deep.accommodations@ct.gov. Any person needing an accommodation for hearing impairment may call the State of Connecticut relay number - 711. In order to facilitate efforts to provide accommodation, please request all accommodations as soon as possible following notice of any agency hearing, meeting, program, or event.