

**NPDES PERMIT MODIFICATION**  
**issued to**

**Location Address:**

Connecticut Department of Energy and Environmental Protection,  
Bureau of Water Protection and Land Reuse,  
Planning and Standards Division  
79 Elm Street  
Hartford, CT 06106

Silver Lake, Norton Lane  
Berlin, CT 06037

**Attention:** Charles Lee

**Permit ID:** CT0029947

**Permit Expires:** September 27, 2014

This permit modification is issued in accordance with section 22a-430 of Chapter 446k, Connecticut General Statutes ("CGS"), section 22a-430-4(p)(5) of the Regulations of Connecticut State Agencies ("RCSA") adopted thereunder, as amended, and Section 402(b) of the Clean Water Act, as amended 33 USC 1251, et. seq., and pursuant to an approval dated September 26, 1973, by the Administrator of the United States Environmental Protection Agency for the State of Connecticut to administer a N.P.D.E.S. permit program.

The Commissioner of Energy and Environmental Protection ("the Commissioner") has made a final determination on this permit modification and found that the continuance of the existing system to treat the discharge will protect the waters of the state from pollution. The Commissioner's decision is based on Application No. 201303165 for permit modification received on June 17, 2013 and addendum dated September 16, 2013 and the administrative record established in the processing of that application.

Connecticut Department of Energy and Environmental Protection, Bureau of Water Protection and Land Reuse, Planning and Standards Division, ("Permittee"), shall comply with all conditions of Permit No. CT0029947 ("the permit") issued on April 28, 2011 with the following modifications:

- 1) The permit expiration date is changed from April 27, 2016 to September 27, 2014.
- 2) Section 5, Table A of the Permit is hereby replaced and superseded with Table A attached hereto. Specifically the following changes were made:
  - a) The monitoring requirement, concentration and mass based limits for "Arsenic, Total<sup>4</sup>" were removed. However, the monitoring requirement, concentration and mass based limits for "Arsenic, Total" still remain in Table A.
  - b) Footnote 4 in the current permit was removed while footnote 5 was renumbered as footnote 4.
  - c) Reference to footnote 5 in the column for aquatic toxicity was changed to reference to footnote 4.
  - d) "pH, Minimum" and "pH, Maximum" will be the permit parameters used in this permit, replacing "pH, Day of sampling" used in the current permit. This term is being changed to be consistent with EPA's ICIS parameter language used in NetDMR.
  - e) Added footnote 5 that reads "For this parameter, the Permittee shall report the minimum and the maximum pH for the sampling month on the discharge monitoring report and submit the weekly pH sampling as an attachment."
- 3) The Compliance schedule in Section 10 of the Permit is deleted.

The Commissioner hereby authorizes the Permittee to discharge in accordance with the provisions of this permit modification, permit No. CT0029947, the above referenced application, and all approvals issued by the Commissioner or the Commissioner's authorized agent for the discharges and/or activities authorized by, or associated with, this permit.

The Commissioner reserves the right to make appropriate revisions to the permit in order to establish any appropriate effluent limitations, schedules of compliance, or other provisions that may be authorized under the Clean Water Act or the Connecticut General Statutes or regulations adopted thereunder, as amended. The permit as modified under this paragraph may also contain any other requirements of the Clean Water Act or Connecticut General Statutes or regulations adopted thereunder which are then applicable.

All other terms and conditions of Permit No. CT0029947 issued on April 28, 2011 shall continue in full force and effect.

This modification is hereby issued on

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Macky McCleary  
Deputy Commissioner

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DRAFT

**Table A**

**Discharge Serial Number:**001-1 **Monitoring Location:** 1

**Wastewater Description:** Settled wastewater associated with the hydraulic dredging of soft sediments from Silver Lake

**Monitoring Location Description:** End of pipe following the final settling basin

**Allocated Zone of Influence (ZOI):** 481,077gph **In stream Waste Concentration (IWC):** 15.4%

PARAMETER	UNITS	FLOW/TIME BASED MONITORING				INSTANTANEOUS MONITORING			Minimum Level Test <sup>3</sup>
		Average Monthly Limit	Maximum Daily Limit	Sample/ Reporting Frequency <sup>2</sup>	Sample Type or Measurement to be Reported	Instantaneous Limit or Required Range	Sample/ Reporting Frequency	Sample Type or Measurement to be Reported	
Aquatic Toxicity, Daphnia pulex, NOAEL>100% <sup>4</sup>	%	NA	NA	NR	NA	≥90%	Monthly	Grab	
Aquatic Toxicity Pimephales promelas, NOAEL>100% <sup>4</sup>	%	NA	NA	NR	NA	≥90%	Monthly	Grab	
Aluminum, Total	mg/l	NA	NA	NR	NA	0.883	Monthly	Grab	*
Aluminum, Total	kg/d	NA	NA	NR	NA	3.51	Monthly	Grab	*
Arsenic, Total	ug/l	NA	NA	NR	NA	27	Monthly	Grab	*
Arsenic, Total	kg/d	NA	NA	NR	NA	0.127	Monthly	Grab	
Copper, Total	ug/l	NA	NA	NR	NA	57.6	Monthly	Grab	*
Copper, Total	kg/d	NA	NA	NR	NA	0.229	Monthly	Grab	*
Flow Rate, (Average Daily) <sup>1</sup>	gpd	1,050,000	NA	Daily	Total Daily Flow	NA	NR	NA	
Flow, Maximum During a 24 Hour Period <sup>1</sup>	gpd	NA	4,800,000	Daily	Total Daily Flow	NA	NR	NA	
Flow (Day of Sampling)	gpd	NA	4,800,000	Weekly	Total Daily Flow	NA	NR	NA	
Iron, Total	mg/l	NA	NA	NR	NA	----	Monthly	Grab	
Lead, Total	ug/l	NA	NA	NR	NA	11.1	Monthly	Grab	*
Lead, Total	kg/d	NA	NA	NR	NA	0.044	Monthly	Grab	*
Nickel, Total	ug/l	NA	NA	NR	NA	----	Monthly	Grab	*
pH, Minimum <sup>5</sup>	S.U.	NA	NA	NR	NA	6.0	Weekly	Grab	
pH, Maximum <sup>5</sup>	S.U.	NA	NA	NR	NA	9.0	Weekly	Grab	
Phosphate, Total	mg/l	NA	NA	NR	NA	----	Monthly	Grab	
Suspended Solids, Total	mg/l	NA	NA	NR	NA	30	Monthly	Grab	
Turbidity	NTU	NA	NA	NR	NA	50	Weekly	Grab	
Zinc, Total	ug/l	NA	NA	NR	NA	----	Monthly	Grab	*

**Table Footnotes:**

- <sup>1</sup> For this parameter, the Permittee shall maintain at the facility a record of the total flow for each day of discharge and shall report the Average Daily Flow and the Maximum Daily Flow for month.
- <sup>2</sup> The first entry in this column is the 'Sample Frequency'. If a 'Reporting Frequency' does not follow this entry and the 'Sample Frequency' is more frequent than monthly then the 'Reporting Frequency' is monthly. If the 'Sample frequency' is specified as monthly, or less frequent, then the 'Reporting Frequency' is the same as the 'Sample Frequency'.
- <sup>3</sup> Minimum Level Test refers to Section 6 Paragraph (A)(3) of this permit.
- <sup>4</sup> The results of the Toxicity Tests shall be recorded in % on the DMR.
- <sup>5</sup> For this parameter, the Permittee shall report the minimum and the maximum pH for the sampling month on the discharge monitoring report and submit the weekly pH sampling as an attachment."



**PERMIT FEES**

<i>Discharge Code</i>	<i>DSN Number</i>	<i>Annual Fee</i>
1140000N	DSN 001	NA

Permit modification fee of \$940.00 was waived.

**FOR NPDES DISCHARGES**

Drainage basin Code: 4601

Water Quality Standard: A

**NATURE OF BUSINESS GENERATING DISCHARGE**

The Department of Energy and Environmental Protection (“the Department”) has been allocated funds by the Connecticut State Legislature to make improvements to Silver Lake in an effort to increase its recreational use. The Department is using these funds to reduce the amount of organic growth in the lake by dredging the lake bed to remove organic peat (soft sediment).

**PROCESS AND TREATMENT DESCRIPTION (by DSN)**

DSN 101: Silver Lake will be hydraulically dredged to remove soft sediments from the lake bed. These soft sediments will be placed in one of two containment basins to settle and remove gross sediments. After the addition of polymer/floculants, the supernatant from the containment basins will be transferred to a final settling basin prior to being discharged back into Silver Lake.

**RESOURCES USED TO DRAFT PERMIT**

- Federal Effluent Limitation Guideline
- Performance Standards
- Federal Development Document
- Treatability Manual
- Department File Information
- Connecticut Water Quality Standards
- Anti-degradation Policy
- Coastal Management Consistency Review Form
- Other – Explain (See General Comments)

**BASIS FOR LIMITATIONS, STANDARDS, OR CONDITIONS**

- Best Available Technology on a Case-by-Case Determination using Best Professional Judgment (See General Comments)  
MIL for arsenic, iron, nickel, phosphate (total), total suspended solids, turbidity, and zinc
- In order to meet in-stream water quality (See General Comments)

*MIL for aluminum, arsenic, aquatic toxicity, copper, lead, and pH*

*MIL: - Maximum Instantaneous Limit*

**GENERAL COMMENTS (PERTAIN TO PERMIT RENEWAL OF APRIL 28, 2011)**

*With the permit renewal issued April 28, 2011, a new zone of influence (ZOI) was established for this discharge in accordance with the Connecticut Water Quality Standards (December 17, 2002). The ZOI was calculated consistent with the EPA Technical Support Document for Water Quality-based Toxics Control (EPA/505/2-90-001), the EPA NPDES Permit Writers' Manual (EPA-833-K-10-001 September 2010) and Water Quality Standard 10 of the "Inland Water Quality Standards" section of the Connecticut Water Quality Standards (December 17, 2002).*

*The need for inclusion of water quality based discharge limitations in this permit was evaluated consistent with Connecticut Water Quality Standards and criteria, pursuant to 40 CFR 122.44(d). Each parameter was evaluated for consistency with the available aquatic life criteria (acute and chronic) and human health (fish consumption only) criteria, considering the zone of influence allocated to the facility where appropriate. The reasonable potential statistical procedures outlined in the EPA Technical Support Document for Water Quality-based Toxics Control (EPA/505/2-90-001) were employed to calculate the need for such limits. Comparison of monitoring data and its inherent variability with the calculated water quality based limits indicates a statistical probability of exceedance of such limits. Therefore, water quality based limits were included in the permit for aluminum, arsenic, copper, and lead at this time.*

*When the Permit was previously issued on June 30, 2003, the water quality criterion for arsenic was 0.14ug/l (human health). Since that time the arsenic human health criterion has been reduced to 0.021ug/l. It was determined during the application process that the Permittee may not meet arsenic limits calculated using this new criterion. For this reason the permit contains a three year schedule for the Permittee to meet the new arsenic limits. The permit requires the Permittee to perform an arsenic impact study to evaluate the effect the Silver Lake Reclamation Project has on arsenic concentration levels in Silver Lake and the necessity for additional treatment of the discharge from the project. The Permittee must then install additional treatment as needed to meet water quality requirements and the final limits. The permit requires that the Permittee meet interim arsenic limits based on the previous arsenic water quality standard (the same limits contained in the June 30, 2003 permit), until the new limits come into effect.*

*Due to the consistent nature of the operation, it was determined that grab samples are adequate to monitor the discharge for the permit. The instantaneous concentration limits contained in the permit were determined using the average monthly water quality based discharge limits. Instantaneous mass limits were calculated by multiplying the average water quality based concentration limits by the average daily flow rate of the discharge.*

*In accordance with section 22a-430-(4)(l)(4)(A)(xxiii) of the RCSA, the aquatic toxicity limits from the previous permit was used for this permit (NOAEL > 100%).*

*Monitoring and limits for total suspended solids and turbidity were included in the permit to verify the efficiency of the wastewater treatment system to remove solids. They are the same limits contained in the June 30, 2003 permit.*

*Analysis of the discharge indicates that on average it contains low concentrations of iron (0.27 mg/l), nickel (0.0048 mg/l), phosphorous (0.04 mg/l), and zinc (0.0109 mg/l). The permit requires the discharge to be monitored for these parameters to verify that their concentration in the discharge remains the same.*

*During the review of the application, the possible effects of the Silver Lake Project on local ground water were evaluated in view of the fact that: (1) the project's dewatering settling basins are unlined, (2) the NPDES discharge from the dewatering basins contains arsenic, and (3) the Department received a complaint in 2002 that there were sulfur odors emanating from a nearby drinking water well shortly after dredged material was removed from the dewatering basins. This evaluation included a review of the original 2002 complaint, available TCLP analyses of the lake peat, local geography, the geology of the area, and local water supplies. The assessment did not reveal any issues of concern. The findings of this evaluation were forwarded to the Remediation Division of the Bureau of Water Protection & Land Reuse. Remediation Division staff was to follow-up this evaluation by testing the drinking water well for arsenic and lead.*

**OTHER COMMENTS (PERTAIN TO PERMIT MODIFICATION)**

*The Department issued a NPDES Permit No. CT0029947 (“the permit”) to Connecticut Department of Energy and Environmental Protection, Bureau of Water Protection and Land Reuse, Planning and Standards Division on April 28, 2011, which included requirements to comply with final arsenic limits that become effective 1095 days after permit issuance and a compliance schedule to conduct an arsenic impact study in Sections 5 and 10 of the permit respectively.*

*On June 17, 2013, the Permittee submitted Application No. 201303165 requesting modification of the permit to eliminate the requirement for the arsenic impact study and extend the effective date of the arsenic limits. An addendum was submitted on September 16, 2013 agreeing to change the permit expiration date from April 27, 2016 to September 30, 2014. The requests were made because:*

- 1) The purpose of the study was to determine the effects of arsenic on the lake from the discharge and if needed, design a treatment system to reduce arsenic in the discharge in the next dredging phase. At the time of permit issuance, the belief of the Permittee was that there were going to be fourth and fifth (final) dredging phases. However, it has been determined that the fourth dredging phase would be the final phase. Since dredging will be discontinued after the current phase (fourth dredging phase), the result of any arsenic study would never be implemented. Therefore, performing an arsenic study will be unnecessary.*
- 2) There was delay in the start-up of the fourth dredging phase because the bids for the fourth dredging phase were higher than expected and the Permittee had to rebid. As a result, there were no discharges such that the Permittee could not study the arsenic loading from the discharge and therefore could not develop plans to comply with the new arsenic limits.*

*A review of discharge monitoring report from the date of issuance to July 2013 confirmed that apart from the discharge in July 2013, there had been no other discharges since the issuance of the permit. The Department agrees that since there had been no discharges, the Permittee could not have conducted the required arsenic study or performed any remedial actions needed to comply with the final arsenic limits. Since the dredging project will be completed in September 2014, the Department decided that rather than extend the effective date of the final arsenic limits, it will be better to eliminate the final arsenic limits and terminate the permit earlier. Therefore, the permit has been modified to:*

- 1) reduce the expiration date of the permit from April 27, 2016 to September 27, 2014,*
- 2) eliminate the final arsenic limits that become effective 1095 days after the issuance of the permit and*
- 3) remove the compliance schedule that required the Permittee to conduct an arsenic impact study.*
- 4) “pH, Minimum” and “pH, Maximum” will be the permit parameters used in this permit modification, replacing “pH, Day of sampling” used in the current permit. This term is being changed to be consistent with EPA’s ICIS parameter language used in NetDMR.*

**NOTICE OF TENTATIVE DECISION  
INTENT TO MODIFY A NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT FOR  
THE FOLLOWING DISCHARGE INTO THE WATERS OF THE STATE OF CONNECTICUT**

**TENTATIVE DECISION**

The Commissioner of Energy and Environmental Protection ("the Commissioner") hereby gives notice of a tentative decision to modify a permit based on an application submitted by **Connecticut Department of Energy and Environmental Protection, Bureau of Water Protection and Land Reuse, Planning and Standards Division** ("the applicant") under section 22a-430 of the Connecticut General Statutes ("C.G.S.") for a permit to discharge into the waters of the state.

In accordance with applicable federal and state law, the Commissioner has made a tentative decision that continuance of the existing system to treat the discharge would protect the waters of the state from pollution and the Commissioner proposes to modify a permit for the discharge to Silver Lake.

The proposed permit modification, if issued by the Commissioner, will require that all wastewater be treated to meet the applicable effluent limitations and will require periodic monitoring to demonstrate that the discharge will not cause pollution.

**APPLICANT'S PROPOSAL**

Connecticut Department of Energy and Environmental Protection, Bureau of Water Protection and Land Reuse, Planning and Standards Division presently discharges 4.8 million gallons per day of water to Silver Lake from the dewatering of sediments dredged from the bottom of the lake in order to improve recreational use of the lake. The applicant proposes to terminate the project sooner than expected and seeks modification of Permit No. CT0029947 ("the permit") by reducing the expiration date of the permit from April 27, 2016 to September 27, 2014. Since the fifth phase of the project will not be conducted, the applicant also seeks elimination of the final arsenic limits in the permit and removal of the compliance schedule that required the Permittee to conduct an arsenic impact study.

The name and mailing address of the permit applicant are: Connecticut Department of Energy and Environmental Protection, Bureau of Water Protection and Land Reuse, Planning and Standards Division, 79 Elm Street, CT 06106.

The activity takes place at: Norton Lane, Berlin, along the northeast shore of Silver Lake.

**REGULATORY CONDITIONS**

Type of Treatment

Solids settling in earthen basins.

Effluent Limitations

This permit contains effluent limitations consistent with Best Available Technology (BAT) on a Case by Case Determination using the criteria of Best Professional Judgment and will meet Water Quality Standards including the anti-degradation policy.

**COMMISSIONER'S AUTHORITY**

The Commissioner is authorized to approve or deny such permits pursuant to section 402(b) of the Federal Water Pollution



Control Act, as amended, 33 USC 1251, et. seq. and section 22a-430 of the C.G.S. and the Water Discharge Permit Regulations (sections 22a-430-3 and 4 of the Regulations of Connecticut State Agencies).

### **INFORMATION REQUESTS**

The application has been assigned the following numbers by the Department of Energy and Environmental Protection. Please use these numbers when corresponding with this office regarding this application.

APPLICATION NO. 201303165

PERMIT ID NO.CT0029947

Interested persons may obtain copies of the application from Charles Lee, Connecticut Department of Energy and Environmental Protection, Bureau of Water Protection and Land Reuse, Planning and Standards Division, 79 Elm Street, Hartford, CT 06106, (860) 424-3716.

The application is available for inspection by contacting Oluwatoyin Fakilede at 860-424-3018, 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.

### **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 30 days of this public notice. Written comments should be directed to Oluwatoyin Fakilede, Bureau of Materials Management and Compliance Assurance, Department of Energy and Environmental Protection, 79 Elm Street, Hartford, CT 06106-5127. 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 30 days prior to the hearing.

Petitions for a hearing 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. Original petitions must be *mailed or delivered* to: DEEP Office of Adjudications, 79 Elm Street, 3<sup>rd</sup> floor, Hartford, CT 06106-5127. Petitions cannot be sent by fax or email. Additional information can be found at [www.ct.gov/deep/adjudications](http://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. Any person with a disability who may need a communication aid or service may contact the agency's ADA Coordinator at 860-424-3194 or at [deep.hrmed@ct.gov](mailto:deep.hrmed@ct.gov). Any person with limited proficiency in English, who may need information in another language, may contact the agency's Title VI Coordinator at 860-424-3035 or at [deep.aaoffice@ct.gov](mailto:deep.aaoffice@ct.gov). ADA or Title VI discrimination complaints may be filed with DEEP's EEO Manager at (860) 424-3035 or at [deep.aaoffice@ct.gov](mailto:deep.aaoffice@ct.gov).

Oswald Inglese, Jr.  
Director  
Water Permitting and Enforcement Division  
Bureau of Materials Management and Compliance Assurance

Dated: 9/26/2013