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Trevor Auger  
Superintendent, Public Works and Engineering Services  
Town of Lake Cowichan  
PO Box 860, Lake Cowichan, BC V0R 2G0

Dear Town of Lake Cowichan

**Re: Warning Letter, Permit, 247**

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On February 13, 2019, Ministry of Environment, Environmental Protection Division staff conducted an inspection under *Environmental Management Act (EMA)*, Permit 247. The inspection determined that Town of Lake Cowichan is out of compliance with its Permit 247, and the section(s) listed below. This Warning Letter lists the compliance verification information contained below.

Failure to comply with the requirements set out in your Permit is an offence under the *Environmental Management Act (EMA)*. Section 120(6) of *EMA* states as follows:

*120(6) A person who, holding a permit or approval issued to the person under this Act to introduce waste into the environment, introduces waste into the environment without having complied with the requirements of the permit or approval commits an offence and is liable on conviction to a fine not exceeding \$1 000 000 or imprisonment for not more than 6 months, or both.*

It should also be noted that, as an alternative to prosecution of the offence referenced above, the Ministry may initiate action to impose an administrative penalty against Town of Lake Cowichan. *The Administrative Penalties Regulation (EMA)* (B.C. Reg. 133/2014) (APR) was brought into force in 2014. The APR describes the prescribed provisions of the *EMA* as well as that of specified regulations under which administrative penalties can be assigned. Section 12(5) of the APR states as follows:

*12(5) A person who fails to comply with a requirement of a permit or approval issued or given under the Act is liable to an administrative penalty not exceeding \$40 000, unless the requirement the person failed to comply with is also a prescribed provision of the EMA or the regulations that is subject to a different maximum administrative penalty.*

I request that Town of Lake Cowichan immediately implement the necessary changes or modifications to correct the non-compliance(s) listed above with the *Environmental Management Act*. Further, I request that Town of Lake Cowichan notify this office in writing, by email or letter within 30 days of this letter, advising what corrective measures have been taken, and what else is being done, to prevent similar non-compliances in the future.

Please submit your response to the Ministry's Compliance Mailbox at [EnvironmentalCompliance@gov.bc.ca](mailto:EnvironmentalCompliance@gov.bc.ca).

As a result of this Warning, this authorization will be prioritized for follow-up inspection. The corrective measures will be reviewed by an Officer as part of the next inspection.

Finally, if you fail to take the necessary actions to restore compliance, you may be subject to escalating enforcement action. This Warning Letter and the alleged violations and circumstances to which it refers, will form part of the compliance history of Town of Lake Cowichan and will be taken into account in the event of future violations.

**Inspection Details:**

Requirement Description:	<b>1. AUTHORIZED DISCHARGES, 1.1 Authorized Source</b>  1.1.1: This section applies to the discharge of effluent from a LAKE COWICHAN VILLAGE - OUTFALL. The site reference number for this discharge is E100566. The average rate of discharge is 2200 cubic metres per day.
Details/Findings:	<p>On February 13, 2019, BC Ministry of Environment and Climate Change Strategy (Ministry) Officer Darren Stewart (Officer Stewart) and Officer Chris White (Officer White) conducted an onsite inspection of the Town of Lake Cowichan wastewater treatment system located in/near Lake Cowichan, BC to verify compliance with Permit 247 (Permit). The Permit authorizes the discharge of effluent to the Cowichan River from a lagoon municipal sewage/wastewater treatment system located in the Town of Lake Cowichan, British Columbia. The Permit was first issued on September 18th, 1968, and last amended on September 18th, 2017. Present during the inspection was Trevor Auger, (Superintendent, Public Works and Engineering Services, Town of Lake Cowichan and Terry McMahon, (Mechanic, Utility Operator, Public Works and Engineering Services).</p> <p>The inspection period for this report is from September 18, 2017 to February 13, 2019 and included a review of the following documents;</p> <p>- "Monitoring Report, 2017 Town of Lake Cowichan Sewage Lagoon Effluent Discharge" dated June 2018 prepared by SLR Consulting (Canada) Ltd. (2017 Annual Report). - "Lagoon Flows 2018" and "Sewer Treatment System Report 2018" Excel spreadsheets submitted post inspection by Mr. Auger via email on February 19, 2019. - " 2018 Sampling Results for PE-247" PDF files submitted post inspection by Mr. Auger via email on March 4, 2019. - "Effluent Analysis Memo" PDF file submitted post inspection by Mr. Auger via email on March 1, 2019.</p> <p>The 2017 Annual Report states that the average rate of discharge for 2017 was 1374 m3/day. Officer White calculated the 2018 average rate of discharge, from the "Lagoon Flows 2018" Excel spreadsheet data to be 1313 m3/day.</p>
Compliance:	In
Requirement Description:	<b>1. AUTHORIZED DISCHARGES, 1.1 Authorized Source</b>  1.1.2: This section applies to the discharge of effluent from a LAKE COWICHAN VILLAGE - OUTFALL. The site reference number for this discharge is E100566. The maximum rate of discharge is 4500 cubic metres per day.

Details/Findings:	<p>The 2017 Annual Report states that the daily discharge rate was above the permitted value of 4,500 m3/day on the following 10 occasions;</p> <p>January 18, 2017- 4,962 m3/day  January 19, 2017- 5,524 m3/day  February 16, 2017- 5,008 m3/day  November 15, 2017- 5,259 m3/day  November 16, 2017- 5,489 m3/day  November 22, 2017- 4,727 m3/day  November 23, 2017- 6,966 m3/day  November 25, 2017- 4,619 m3/day  November 26, 2017- 4,633 m3/day  November 27, 2017- 4,687 m3/day</p> <p>2018 Flow data submitted via email on February 19, 2019 show 8 exceedances on:</p> <p>January 22, 2018- 4,824 m3/day  January 30, 2018- 5,052 m3/day  November 27, 2018- 5,797 m3/day  November 28, 2018- 5,634 m3/day  December 14, 2018- 5,634 m3/day  December 18, 2018- 5,056 m3/day  December 19, 2018- 5,772 m3/day  December 20, 2018- 5,251 m3/day</p>
Compliance:	Out
Requirement Description:	<p><b>1. AUTHORIZED DISCHARGES, 1.1 Authorized Source</b></p> <p>1.1.4: This section applies to the discharge of effluent from a LAKE COWICHAN VILLAGE - OUTFALL. The site reference number for this discharge is E100566. The characteristics of the discharge must be equivalent to or better than; Biochemical Oxygen Demand Maximum 45 mg/L Total Suspended Solids Maximum 60mg/L Total Chlorine Residual Maximum 0.05mg/L</p>
Details/Findings:	<p>The 2017 Annual Report states that the Total Suspended Solids (TSS) permit limit was exceeded on September 5, 2017. The reported result was 70 mg/L, as confirmed in Maxxam Analytics certificated of analysis provided in the Appendix C of 2017 Annual Report.</p> <p>A review of 2018 sampling results submitted via email on March 4, 2019 by Mr. Auger show no exceedances.</p>
Compliance:	Out



Actions to be taken:	As per the permit, the characteristics of the discharge must be equivalent to or better than; Total Suspended Solids Maximum 60mg/L.
Requirement Description:	<b>1. AUTHORIZED DISCHARGES, 1.1 Authorized Source</b> 1.1.5: This section applies to the discharge of effluent from a LAKE COWICHAN VILLAGE - OUTFALL. The site reference number for this discharge is E100566. The authorized works are an aerated lagoon, a polishing lagoon, lagoon Cell No. 3 and related pipe works that are not hydraulically connected to the treatment works or process, chlorination and dechlorination facilities, flow measuring equipment, an outfall and and related appurtenances approximately located as shown on the Site Plan.
Details/Findings:	Ministry staff observed the following authorized works during the inspection; aerated lagoon, a polishing lagoon, lagoon Cell No. 3, chlorination and dechlorination facilities and flow measuring equipment.
Compliance:	In
Requirement Description:	<b>1. AUTHORIZED DISCHARGES, 1.1 Authorized Source</b> 1.1.6: This section applies to the discharge of effluent from a LAKE COWICHAN VILLAGE - OUTFALL. The site reference number for this discharge is E100566. The authorized works must be complete and in operation while discharging
Details/Findings:	The authorized works that were complete and in operation while Officers were onsite were, an aerated lagoon, a polishing lagoon, lagoon Cell No. 3, chlorination and dechlorination facilities and flow measuring equipment.
Compliance:	In
Requirement Description:	<b>1. AUTHORIZED DISCHARGES, 1.1 Authorized Source</b> 1.1.8: This section applies to the discharge of effluent from a LAKE COWICHAN VILLAGE - OUTFALL. The site reference number for this discharge is E100566. The location of the point of discharge is the Cowichan River via an Outfall that connects to an Outlet of the dechlorination lagoon.



Details/Findings:	The outfall pipe in the Cowichan River was not visually inspected as heavy snowfall impeded travel to the site, therefore, compliance with this section was not determined.
Compliance:	Not Determined
Requirement Description:	<b>2. GENERAL REQUIRMENTS, 2.4 Maintenance of Works and Emergency Procedures</b>  2.4: The authorized works must be inspected regularly and maintained in good working order. In the event of an emergency or condition beyond the control of the permittee which prevents effective operation of the authorized works or leads to an unauthorized discharge, the permittee must take appropriate remedial action and notify the Director immediately. The Director may reduce or suspend operations to protect the environment until the authorized works has been restored, and/or corrective steps taken to prevent unauthorized discharges.
Details/Findings:	Mr. Auger informed Officers that the authorized works were inspected regularly and maintained in good working order. Sewer Treatment System Report sheets filled out in the electrical/flow meter shack show daily onsite staff. Mr. Auger was unaware of any emergencies that required notification of the Director. A review of the 2017 Annual Report and Ministry electronic file confirmed there were no emergencies during inspection period.
Compliance:	In
Requirement Description:	<b>2. GENERAL REQUIRMENTS, 2.5 Bypasses</b>  2.5: Any bypass of the authorized works is prohibited unless the approval of the Director is obtained and confirmed in writingAny bypass authorization granted is without legal effect if any condition or requirement of the bypass is not fully complied with.
Details/Findings:	At the time of the inspection, Ministry staff did not observe any bypasses of the authorized works. A review of Ministry electronic file contains no bypass requests or authorizations for the period covered by this inspection. As no bypass of the authorized works was requested, compliance with this section is not applicable.
Compliance:	Not Applicable

Requirement Description:	<p><b>2. GENERAL REQUIRMENTS, 2.7 Process Modifications</b></p> <p>2.7: The Director must be notified prior to implementing changes to any process that may adversely affect the quality and/or quantity of the discharge. Despite notification under this section, permitted levels must not be exceeded.</p>
Details/Findings:	<p>A review of the Ministry electronic file verified that there has been no notification made to the Director under this requirement for the period covered by this inspection report. As no changes to any process that may adversely affect the quality and/or quantity of the discharge were implemented, compliance with this section is not applicable.</p>
Compliance:	Not Applicable
Requirement Description:	<p><b>2. GENERAL REQUIRMENTS, 2.9 Change for Monitoring and Reporting</b></p> <p>2.9: The need for subsequent increased or decreased monitoring and reporting will be assessed on the basis of the data submitted and any other data gathered in connection with the discharges.</p>
Details/Findings:	<p>The 2017 Annual Report states in Table 6: Cowichan River Water Quality Results Upstream and Downstream of Town of Lake Cowichan Discharge, that the Total Phosphorus (mg P/L) exceeded Water Quality Objectives for the Cowichan River on all sampling events. Levels were 4x to 9x higher than upstream of outfall samples. Fecal coliform samples (CFU/100ml) were higher than Approved Water Quality Guidelines above and below the outfall.</p> <p>A review of 2018 sampling results submitted via email on March 4, 2019 by Mr. Auger continue to show fecal coliform levels being above BC Approved Water Quality Guidelines.</p> <p>The need for subsequent increased or decreased monitoring and reporting has not yet been evaluated; therefore, compliance with this section is not determined at this time.</p>
Compliance:	Not Determined
Requirement Description:	<p><b>2. GENERAL REQUIRMENTS, 2.10 Standby Power</b></p> <p>2.10: Once the Phase 2 Headworks upgrade has been completed, the Permittee must provide auxiliary power facilities to ensure continuous operation of the authorized works and operations building during power outages.</p>

Details/Findings:	A review of the 2017 Annual Report and Ministry electronic files show no Phase 2 Headworks upgrade completion. As the upgrade has not been completed at this time, compliance with this section is currently not applicable.
Compliance:	Not Applicable
Actions to be taken:	Once Phase 2 Headworks upgrade has been completed, provide auxiliary power facilities to ensure continuous operation of the authorized works and operations building during power outages.
Requirement Description:	<b>2. GENERAL REQUIRMENTS, 2.11 Environmental Impact</b>  2.11: Based on results of inspections and/or any other information available to the Director on the effect of the discharge on the receiving environment, changes may be required to undertake additional monitoring, install additional authorized works or change the method of operation.
Details/Findings:	The 2017 Annual Report states in Table 6: Cowichan River Water Quality Results Upstream and Downstream of Town of Lake Cowichan Discharge, that the Total Phosphorus (mg P/L) exceeded Water Quality Objectives for the Cowichan River on all sampling events. Levels were 4x to 9x higher than upstream of outfall samples. Fecal coliform samples (CFU/100ml) were higher than BC Approved Water Quality Guidelines above and below outfall.  A review of 2018 sampling results submitted via email on March 4, 2019 by Mr. Auger continue to show fecal coliform levels being above BC Approved Water Quality Guidelines.  The need for additional monitoring, installation of additional authorized works or changes to the method of operation has not yet been evaluated; therefore, compliance with this section is not determined at this time.
Compliance:	Not Determined
Requirement Description:	<b>2. GENERAL REQUIRMENTS, 2.12 Infiltration and Inflow Reduction</b>  2.12: The Permittee must take measures to reduce the inflow and infiltration into the wastewater collection system and submit a report once every year to the Regional Director that provides details of the measures take in the preceding year to reduce inflow and infiltration.



Details/Findings:	<p>The 2017 Annual Report does not include a report that provides details of the measures taken in the preceding year to reduce inflow and infiltration. A review of the Ministry electronic files shows no inflow and infiltration report has been filed since 2015.</p> <p>On March 1, 2019, Mr. Auger submitted a document titled "Effluent Analysis Memo" regarding the effluent discharge and precipitation analysis however, it did not provide any details on the measures taken to reduce inflow and infiltration.</p>
Compliance:	Out
Actions to be taken:	Submit a report once every year to the Regional Director that provides details of the measures taken in the preceding year to reduce inflow and infiltration.
Requirement Description:	<p><b>2. GENERAL REQUIRMENTS. 2.13 Receiving Environment Monitoring B) Substrate Sampling (algal growth)</b></p> <p>2.13 B): At each station, the permittee shall collect 3 replicate samples of algal growth from the natural substrate, once during the first 10 days of August each year, once during the 3<sup>rd</sup> week of August each year, and once during the first 10 days of September each year. Each sample shall be analyzed for chlorophyll a.</p>
Details/Findings:	<p>A review of 2017 Annual Report shows required sampling was completed on August 1 and 15, and September 5, 2017.</p> <p>A review of the 2018 sampling data shows required sampling was completed on August 7 and 21, and September 4, 2018.</p>
Compliance:	In
Requirement Description:	<p><b>2. GENERAL REQUIRMENTS. 2.13 Receiving Environment Monitoring C) River Water Sampling</b></p> <p>2.13 C): C) River Water Sampling</p> <p>The permittee shall collect a sample of river water at each station and a sample of the authorized discharge once during the first 10 days of August each year, once during the 3<sup>rd</sup> week of August each year and once during the first 10 days of September each year in conjunction with the substrate sampling. Obtain analysis of the samples for the following: Total Phosphorus (P), Ortho Phosphorus (P) Total Nitrogen (N) , Nitrate plus Nitrite Nitrogen (N) Ammonia Nitrogen (N) Fecal Coliform, pH and Temperature</p>

Details/Findings:	<p>A review of the 2017 Annual Report shows that required sampling was completed on August 1 and 15, and September 5, 2017.</p> <p>A review of the 2018 sampling data shows required sampling was completed on August 7 and 21, and September 4, 2018.</p>
Compliance:	In
Requirement Description:	<p><b>2. GENERAL REQUIRMENTS. 2.13 Receiving Environment Monitoring D) Phographic Record</b></p> <p>2.13 D): The permittee shall take photographs of the algal growth on the river bottom and substrates being sampled at each sampling station during the first 10 days of August each year, once during the 3<sup>rd</sup> week of August each year and once during the first 10 days of September each year.</p>
Details/Findings:	<p>A review of the 2017 Annual Report shows required sampling was completed on August 1 and 15, and September 5, 2017. Photos can be found in Appendix D of the 2017 Annual Report.</p> <p>A review of the 2018 sampling data shows required sampling was completed on August 7 and 21, and September 4, 2018.</p>
Compliance:	In
Requirement Description:	<p><b>3. SAMPLING REQUIRMENTS, 3.1 Sampling Procedures</b></p> <p>3.: Sampling is to be carried out in accordance with the procedures described in the "British Columbia Field Sampling Manual for Continuous Monitoring and the Collection of Air, Air-Emission, Water, Wastewater, Soil, Sediment, and Biological Samples, 2003 Edition (Permittee)", or most recent edition, or by suitable alternative procedures as authorized by the Director.</p> <p>A copy of the above manual is available on the Ministry web page at <a href="http://www.env.gov.bc.ca/epd/wamr/labsys/lab_meth_manual.html">www.env.gov.bc.ca/epd/wamr/labsys/lab_meth_manual.html</a>.</p>
Details/Findings:	Sampling procedure was not observed at the time of inspection, therefore compliance with this section cannot be determined.
Compliance:	Not Determined

Requirement Description:	<p><b>3. SAMPLING REQUIRMENTS, 3.4 Analysis A)</b></p> <p>3.4 A): Obtain analysis of the sample for the following:</p> <p>A suitable sampling facility must be installed and a grab sample of the effluent authorized by Section 1.1 must be obtained once each day. Proper care must be taken in sampling, storing and transporting the samples to adequately control temperature and avoid contamination, breakage, etc.</p> <p>Parameter: Total residual chlorine, mg/L</p>
Details/Findings:	<p>Data submitted on February 19, 2019 via email titled "Sewer Treatment System Report 2018" contain the daily 2018 Total Residual Chlorine (mg/L) grab sample results. There were no reported Total residual chlorine exceedances in the data.</p> <p>The 2017 Annual Report has no mention of sampling for Total Residual Chlorine (mg/L).</p>
Compliance:	In
Actions to be taken:	Total residual chlorine data should be submitted to the Ministry as required.
Requirement Description:	<p><b>3. SAMPLING REQUIRMENTS. 3.4 B) Analysis</b></p> <p>3.4 B): A suitable sampling facility must be installed and a grab sample of the effluent authorized by Section 1.1 must be obtained once each month. Proper care must be taken in sampling, storing and transporting the samples to adequately control temperature and avoid contamination, breakage, etc. Parameters: 5- day biochemical oxygen demand, total suspended solids, ortho-phosphorus (P) , Total Phosphorus (P), Total Kjeldahl Nitrogen (TKN) ammonia nitrogen (N) nitrate plus nitrate nitrogen (N) total and fecal coliform.</p>
Details/Findings:	<p>A review of the 2017 Annual Report shows required sampling has been completed. Results can be found in Table 6: Cowichan River Water Quality Results Upstream and Downstream of Town of Lake Cowichan Discharge.</p> <p>A review of the 2018 sampling data shows required sampling was completed.</p>
Compliance:	In



Requirement Description:	<p><b>3. SAMPLING REQUIRMENTS. 3.4 Analysis</b></p> <p>3.4 C): A suitable sampling facility must be installed and a grab sample of the effluent authorized by Section 1.1 must be obtained once each quarter . Proper care must be taken in sampling, storing and transporting the samples to adequately control temperature and avoid contamination, breakage etc.</p> <p>Parameter: Lethal Concentrations LC50- 96 Hour</p>
Details/Findings:	<p>A review of the 2017 Annual Report shows LC50-96 Hour toxicity sampling was completed on February 7, May 2, August 2 and November 7, 2017.</p> <p>A review of the 2018 sampling data shows LC50-96 Hour toxicity sampling was completed on February 7, May 2, August 8 and November 7, 2018.</p>
Compliance:	In
Requirement Description:	<p><b>3. SAMPLING REQUIRMENTS, 3.5 Chlorination Contact Chamber/Facilities Monitoring</b></p> <p>3.5: A suitable sampling facility must be installed and a grab sample of the effluent form the chlorination chamber/facilities must be obtained once each day.</p> <p>Obtain an analysis of the sample for total residual chlorine</p>
Details/Findings:	<p>Data submitted on February 19, 2019 via email titled " Sewer Treatment System Report 2018" contain the 2018 Total Residual Chlorine (mg/L) results. There are no exceedances.</p> <p>The 2017 Annual Report does not include required sampling data for Total Residual Chlorine (mg/L).</p>
Compliance:	In
Actions to be taken:	Please include total residual chlorine data in reports to the Ministry as required.
Requirement Description:	<p><b>4. OPERATIONAL REQUIRMENTS FOR EFFLUENT DISCHARGES, 4.1 Flow Measurement</b></p> <p>4.1: A suitable flow measuring device must be installed and maintained and the effluent volume discharged over a 24- hour period recorded once each day.</p>

Details/Findings:	The 2017 Annual Report and the 2018 Lagoon flows excel data sheet, include the effluent volume discharged over a 24-hour period recorded once a day. Officer Stewart and Officer White observed a flow chart recorder on the day of inspection.
Compliance:	In
Requirement Description:	<b>4. OPERATIONAL REQUIRMENTS FOR EFFLUENT DISCHARGES, 4.2 Posting of Outfall</b> 4.2: A sign must be erected along the alignment of the outfall above high water mark. The sign shall identify the nature of the works. The wording and size of the sign must be acceptable to the Director.
Details/Findings:	Officers on day of inspection did not visit the outfall due to recent large snowfall. A review of the 2017 Annual Report shows in Appendix D a photo of the out fall sign dated July 14, 2017.
Compliance:	In
Requirement Description:	<b>4. OPERATIONAL REQUIRMENTS FOR EFFLUENT DISCHARGES, 4.3 Outfall Inspection</b> 4.3: The outfall must be inspected once every two years by a qualified professional to ensure it is in good working condition. An inspection report must be submitted to the Director, Environmental Protection, within 30 days after the inspection date. The next report must be submitted by June 30, 2017.
Details/Findings:	The 2017 Annual Report, Appendix D includes photographs showing the outfall pipe dated July 14, 2017. Although the photos show the entire outfall pipe, there is no evaluation/condition description of the outfall to ensure it is good working order.  In addition this "inspection report" of the outfall was submitted electronically on June 21, 2018 which is not within 30 days after the inspection report.
Compliance:	Out

Actions to be taken:	<p>An outfall inspection report must be submitted to the Director, Environmental Protection, within 30 days after the inspection date.</p> <p>The inspection must include summary information that confirms the outfall is in good working condition.</p>
Requirement Description:	<p><b>4. OPERATIONAL REQUIRMENTS FOR EFFLUENT DISCHARGES, 4.6 Chlorination</b></p> <p>4.6: Maintain a chlorine residual (at the point of discharge or prior to dechlorination) between 0.1 and 1.0 mg/L at all times and provide not less than one hour's contact time at average flow rates.</p>
Details/Findings:	<p>Data submitted on February 19, 2019 via email titled " Sewer Treatment System Report 2018" contain the 2018 total residual chlorine (mg/L) results. There are no exceedances and is between 0.1 and 1.0 mg/L at all times.</p> <p>The 2017 Annual Report does not include sampling data for Total Residual chlorine (mg/L).</p>
Compliance:	In
Actions to be taken:	Include chlorine residual data in required submissions to the Ministry.
Requirement Description:	<p><b>4. OPERATIONAL REQUIRMENTS FOR EFFLUENT DISCHARGES, 4.7 Dechlorination</b></p> <p>4.7: The effluent must be dechlorinated prior to discharge to reduce the chlorine residual below detectable limits. 0.05 mg/L</p>
Details/Findings:	<p>Data submitted on February 19, 2019 via email titled " Sewer Treatment System Report 2018" contain the 2018 total residual chlorine (mg/L) results. There are no exceedances and was below detectable limits of 0.05mg/L at all times.</p> <p>The 2017 Annual Report does not include sampling data for Total Residual chlorine (mg/L).</p>
Compliance:	In



Actions to be taken:	Include chlorine residual parameters in required data submissions to the Ministry.
Requirement Description:	<b>4. OPERATIONAL REQUIRMENTS FOR EFFLUENT DISCHARGES, 4.8 Treatment Plant Sludge Wasting and Disposal</b> 4.8: Sludge wasted from the treatment plant must be disposed of to a site and in a manner approved by the Director, or as authorized by regulation under the Environmental Management Act.
Details/Findings:	Mr. Auger informed Officers that Cell #1 and #2 have not been dredged in recent history and that the disposal method was unknown; therefore, compliance with this requirement was not determined.
Compliance:	Not Determined
Actions to be taken:	Ensure that when dredging/sludge disposal occurs, it is to a site and in a manner approved by the director.
Requirement Description:	<b>4. OPERATIONAL REQUIRMENTS FOR EFFLUENT DISCHARGES, 4.11 Nutrients</b> 4.11: Should nutrients be added to increase the efficiency of any biological treatment system, the quantity of nutrient must be so controlled that excess nutrients are not discharged to the receiving waters. The ratio of BOD:N:P must be recorded and data kept available for inspection.
Details/Findings:	Officers were informed via email on February 15, 2019 from Mr. Auger that nutrients are not added to increase efficiency; therefore, compliance with this requirement was not applicable.
Compliance:	Not Applicable

Requirement Description:	<p><b>4. OPERATIONAL REQUIREMENTS FOR EFFLUENT DISCHARGES, 4.12 Facility Classification and Operator Certification</b></p> <p>4.12: The Permittee must have the authorized works classified (and the classification must be maintained) by the Environmental Operators Certification Program Society (Society). The authorized works must be operated and maintained by persons certified within and according to the program provided by the Society. Certification must be completed to the satisfaction of the Director. In addition, the Director must be notified of the classification level of the facility and certification levels of the operators, and changes of operators and/or operator certification levels within 30 days of any change. Alternatively, the authorized works must be operated and maintained by persons who can demonstrate to the satisfaction of the Director, are qualified in the safe and proper operation of the facility for the protection of the environment.</p>
Details/Findings:	The Environmental Operators Certification Program Society (EOCP) website, states the Town of Lake Cowichan municipal sewage/wastewater treatment facility is designated as #29, with Terry McMahan, David Campbell and Kenneth Makortoff as designated "required operators".
Compliance:	In
Requirement Description:	<p><b>5.REPORTING REQUIREMENTS, 5.1 Reporting</b></p> <p>5.: Maintain data of analyses and flow measurements for inspection and submit the data, suitably tabulated, to the Director, for the previous quarter. All reports must be submitted within 30 days of the end of the end of the previous quarter.</p> <p>Please submit all data and reports to the Routine Environmental Reporting Submission Mailbox, <a href="mailto:EnvAuthorizationsReporting@gov.bc.ca">EnvAuthorizationsReporting@gov.bc.ca</a> more information can be found here:</p> <p><a href="http://www2.gov.bc.ca/gov/content/environment/waste-management/waste-discharge-authorization/data-and-report-submissions/routine-environmental-reporting-submission-mailbox">http://www2.gov.bc.ca/gov/content/environment/waste-management/waste-discharge-authorization/data-and-report-submissions/routine-environmental-reporting-submission-mailbox</a></p>
Details/Findings:	<p>A review of Ministry electronic files shows there has been no quarterly data of analyses and flow measurements submitted since 2015. Data was however included in the annual reports.</p> <p>Data submitted via email by Mr. Auger on February 19, 2019, upon Officers request, consisted of all 2018 data. These reports were still outside the 30 days of the end of the previous quarter.</p>
Compliance:	Out

Actions to be taken:	All quarterly reports must be submitted within 30 days of the end of the previous quarter.
Requirement Description:	<p><b>5.REPORTING REQUIRMENTS, 5.2 Annual Report Submission</b></p> <p>5.2: Submit to the Director annually, on or before June 30 of the year following the period of review an annual report containing all items outlined in section 5.3 below, through the Routine Environmental Reporting Submission Mailbox: EnvAuthorizationsReporting@gov.bc.ca</p>
Details/Findings:	<p>The 2017 Annual Report was submitted on June 21, 2018.</p> <p>Mr. Auger confirmed the 2018 Annual Report, due June 30, 2019, is currently being written.</p>
Compliance:	In
Requirement Description:	<p><b>5.REPORTING REQUIRMENTS, 5.3 Annual Report Evaluation</b></p> <p>5.3: Maintain all data of analysis and flow measurements, new works information, and the quality assurance/ quality control data.</p> <p>The Annual Report must review and interpret the monitoring data for the preceding calendar year, and include a comparison with data collected over time and provide a graphical analysis with suitable interpretation of any trends in monitoring results by a qualified professional.</p> <p>When applicable, the report shall include an assessment of any pertinent data that the Environmental Monitoring, Assessment and Stewardship, unit of the Ministry of Environment have collected during the year at these monitoring sites.</p> <p>The Annual Report must include an evaluation of the performance of the treatment works and identify any necessary changes. The Annual Report must include an implementation schedule for any alterations to the treatment and disposal works.</p> <p>Additional Annual Report Requirements</p> <p>Reporting shall use actual river and effluent flow data when calculating dilutions for the year. River flow data is available from Environment Canada.</p> <p>Toxicity, total suspended solids, biochemical oxygen demand and fecal coliform still need to be considered in the report. However, in the case of sewage discharges to freshwater, the issue of nutrient loading is the dominant impact on the river. The report needs to show a basic level of understanding of the nutrient issue. Changes to the receiving environment monitoring program will include chlorophyll a measurement and the report shall provide an assessment of this parameter.</p>



Details/Findings:	<p>The 2017 Annual Report was completed by qualified professionals at SLR Global Environmental Solutions Consulting (Canada) Ltd. Topics covered are lagoon daily flow monitoring, lagoon effluent quality, lagoon effluent toxicity, Cowichan River substrate biomass and water quality. Chemical and biological data was compared to the last fourteen years of data (2003-2017). The report contains actual river and effluent flow data when calculating dilutions for the year. The report addresses nutrient levels and chlorophyll a, in the receiving environment.</p> <p>However, the 2017 Annual Report does not include an evaluation of the performance of the treatment works or identify any necessary changes. It also does not include an implementation schedule for any alterations to the treatment and disposal works.</p>
Compliance:	Out
Actions to be taken:	<p>Annual Report's must include an evaluation of the performance of the treatment works and identify any necessary changes. The Annual Report must include an implementation schedule for any alterations to the treatment and disposal works.</p> <p>Please ensure an evaluation of the works is included in the upcoming 2018 Annual Report.</p>
Requirement Description:	<p><b>6. NON-COMPLIANCE REPORTING, 6.1 Non-compliance Reporting and Follow Up</b></p> <p>6.: The Permittee must immediately notify the Director or designate of any non-compliance with the requirements of this Permit via email to <a href="mailto:EnvironmentalCompliance@gov.bc.ca">EnvironmentalCompliance@gov.bc.ca</a> and take appropriate remedial action.</p> <p>Written confirmation of all non-compliance events, including available test results is required by email within 24 hours of the original notification unless otherwise directed by the Director, Environmental Protection.</p> <p>Additionally, for any noncompliance with the requirements of this permit, the Permittee must submit to the Director, Environmental Protection, a written report within 30 days of the non-compliance occurrence. The report must include, but is not necessarily to be limited to, the following:</p> <ul style="list-style-type: none"> <li>a. all relevant test results related to the non-compliance;</li> <li>b. an explanation of the most probable cause(s) of the non-compliance; and,</li> <li>c. remedial action planned and/or taken to prevent similar non-compliance(s) in the future.</li> </ul> <p>Please submit the required information to: <a href="mailto:EnvironmentalCompliance@gov.bc.ca">EnvironmentalCompliance@gov.bc.ca</a></p> <p>A template for reporting is available at this link:  <a href="http://www2.gov.bc.ca/gov/content/environment/waste-management/waste-discharge-authorization/data-and-report-submissions/non-compliance-reporting-mailbox">http://www2.gov.bc.ca/gov/content/environment/waste-management/waste-discharge-authorization/data-and-report-submissions/non-compliance-reporting-mailbox</a></p>

Details/Findings:	The Total Suspended Solids (TSS) exceedance that occurred on September 5, 2017 was reported by Nagi Rizk, Superintendent, Public Works & Engineering Services, on September 14, 2017.
Compliance:	In

The Ministry of Environment Compliance and Enforcement Policy and Procedure (C&E Policy) prescribes common requirements and procedures for all Ministry staff to ensure consistent and riskbased assessment and response to non compliance. Using the Non-Compliance Decision Matrix, the compliance determination for this inspection has been assessed as a **Level 2 Category B Warning**.

More information about Environmental Compliance and how it is assessed can be found at:

<https://www2.gov.bc.ca/gov/content/environment/natural-resource-stewardship/natural-resource-law-enforcement/environmental-compliance/how-compliance-is-assessed>

**Compliance History:**

2013-11-06 - IR11961 - Level 2 Category B Warning for flow exceedances, lack of Inflow and Infiltration reporting, report for 2012.

2015-07-22 - IR21188 - Level 1 Category A Advisory for flow exceedances.

Please be advised that this inspection report may be published on the provincial government website within 7 days.

Below are attachments related to this inspection.

If you have any questions about this warning, please contact the undersigned.

Yours truly,

Chris White  
Environmental Protection Officer

cc:

**Attachments:**

1) PE 247 Photo Record.pdf      Photo record for PE 247

**Deliver via:**

Email: ☒      Fax: ☐      Mail: ☐  
Registered Mail: ☐      Hand Delivery: ☐

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**Ministry of Environment  
and Climate Change  
Strategy**

Compliance  
Environmental  
Protection Division

Mailing Address:  
2080-A  
Labieux Rd  
Nanaimo BC V9E 6J9

Telephone: 250 751 3100  
Facsimile: 250 751 3103  
Website: [www.gov.bc.ca/env](http://www.gov.bc.ca/env)

**DISCLAIMER:**

Please note that sections of the permit, regulation or code of practice referenced in this inspection record are for guidance and are not the official version. Please refer to the original permit, regulation or code of practice.

To see the most up to date version of the regulations and codes of practices please visit  
<http://www.bclaws.ca>

If you require a copy of the original permit, please contact the inspector noted on this inspection record.

It is also important to note that this inspection record does not necessarily reflect each requirement or condition of the authorization therefore compliance is noted only for the requirements or conditions listed in the inspection record.



Authorization: PE-247	Client Name: Town of Lake Cowichan
NRIS IR #: 117246	Site Inspection Date: February 13, 2019

Photo 1

Lagoon #1.  
Aerated Lagoon



Photo 2

Lagoon 2



Authorization: PE-247	Client Name: Town of Lake Cowichan
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Photo 3

Chlorination  
Contact  
Chamber



Photo 4.

Dechlorination  
cell



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Photo 5

Sample facility  
where effluent  
leaves the  
dechlorination  
cell en route to  
the outfall



Photo 6

Flow chart  
recorder

