



Making a difference...together

**MAGIC LAKE ESTATES WATER AND SEWER COMMITTEE**  
 Notice of Meeting on **Tuesday, May 10, 2022 at 9:30 a.m.**  
 Goldstream Conference Room, 479 Island Highway, Victoria, BC

For members of the **public who wish to listen to the meeting** via telephone please call **1-833-353-8610** and enter the **Participant Code 1911461 followed by #**. You will not be heard in the meeting room but will be able to listen to the proceedings.

M. Fossil (Chair)  
 K. Heslop  
 R. Sullivan

J. Deschenes (Vice Chair)  
 D. Howe, Electoral Area Director

W. Foster  
 D. Reed

## AGENDA

- 1. APPROVAL OF AGENDA**
- 2. ADOPTION OF MINUTES .....3**  
*Recommendation: That the minutes of the March 8, 2022 meeting be adopted.*
- 3. CHAIR'S REMARKS**
- 4. PRESENTATIONS/DELEGATIONS**  
*The public are welcome to attend Commission meetings in-person.*  
*Delegations will have the option to participate electronically. Please complete the [online](#) application for "Addressing the Board" on our website and staff will respond with details.*  
*Alternatively, you may email your comments on an agenda item to the Magic Lake Estates Water and Sewer Committee at [iwsadministration@crd.bc.ca](mailto:iwsadministration@crd.bc.ca).*  
*Requests must be received no later than 4:30 p.m. two calendar days prior to the meeting.*
- 5. COMMITTEE BUSINESS**
  - 5.1. Project and Operations Update .....6**  
*Recommendation: There is no recommendation. This report is for information only.*
  - 5.2. Discussion on investigating and mitigating the loss of 1/3 of treated water as per the last annual report**
  - 5.3. Discussion regarding garburator use impacts on the sewage system**
- 6. CORRESPONDENCE**

*To ensure quorum, advise **Mikayla Risvold 250.474.9518** if you cannot attend.*

**Magic Lake Estates Water and Sewer Committee  
Agenda – May 10, 2022**

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**7. NEW BUSINESS**

**8. ADJOURNMENT**

**Next Meeting:** Tuesday, June 14, 2022



Making a difference...together

**MINUTES OF A MEETING OF THE Magic Lake Estates Water and Sewer Committee, held Tuesday, March 8, 2022 at 9:30 a.m., In the Goldstream Meeting Room, 479 Island Highway, Victoria, BC**

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**PRESENT:** **Committee Members:** M. Fossil (Chair); J. Deschenes (EP) (Vice Chair); W. Foster (EP); K. Heslop (EP); D. Reed (EP); D. Howe (EP)

**Staff:** J. Marr, Acting Senior Manager, Infrastructure Engineering; D. Puskas, Manager, Capital Projects; D. Robson, Manager, Saanich Peninsula and Gulf Islands Operations (EP); D. Dionne, Administrative Coordinator; M. Risvold, Committee and Administrative Clerk (Recorder)

**REGRETS:** R. Sullivan

EP = Electronic Participation

The meeting was called to order at 9:33.

**1. APPROVAL OF AGENDA**

**MOVED** by J. Deschenes, **SECONDED** by K. Heslop,  
That the agenda be approved as amended.

**CARRIED**

**2. ADOPTION OF MINUTES**

**MOVED** by K. Heslop, **SECONDED** by W. Foster,  
That the minutes of the January 11, 2022 meeting be adopted.

**CARRIED**

**3. CHAIR'S REMARKS**

The Chair welcomed R. Sullivan to the committee and thanked everyone for attending.

**4. PRESENTATIONS/DELEGATIONS**

There were no presentations or delegations.

**5. COMMITTEE BUSINESS**

**5.1. Project and Operations Report**

J. Marr introduced the January and February Project and Operations Report.

D. Puskas provided the capital project update.

Staff responded to questions from the committee regarding the electric vehicle (EV) charging station. Staff advised the Capital Regional District (CRD) is moving to electric vehicles as part of a climate action response. Operational areas will be serviced by EV's. The total project budget is \$20,000 and is to be partially funded through a cost matching grant and the Magic Lake Estates Wastewater Service.

D. Robson provided the operations update.

M. Cowley provided the wastewater update.

Staff will provide a site map to the committee in regard to the Wastewater Improvements Sewer Replacement project. The map will indicate the pipes that have been replaced and the pipes that are to be replaced.

Staff responded to questions from the committee in regard to the Wastewater Improvements Pump Station and Treatment Plant Upgrades. Staff advised McElhanney is working on a conceptual design to address the infrastructure to increase the capacity of the Schooner wastewater treatment plant equalization tank. The purpose is for the tank to handle higher flows, allowing a constant feed through the plant. The storage tank will be drained slowly after a storm. Galleon pump station improvements include infiltration and monitoring the pumps turning on and off, noting it appears to be happening less.

D. Robson provided the operational wastewater update.

**MOVED** by K. Heslop, **SECONDED** by J. Deschenes,  
The Magic Lake Estates Water and Sewer Committee receives this report for information.

**CARRIED**

## **6. CORRESPONDENCE**

There was no correspondence.

## **7. NEW BUSINESS**

### **7.1. MAGIC LAKE WEIR DISCUSSION**

The committee discussed the possibility of increasing the level of Magic Lake by increasing the height of the outflow weir. Staff advised the request will need to be evaluated, noting there may be dam safety requirements or implications.

Discussion ensued regarding:

- Demand and lengthening periods between seasons
- Increasing storage in Buck and Magic Lake by other means
- Rain water recovery
- Cost benefit of each option

**8. ADJOURNMENT**

**MOVED** by K. Heslop, **SECONDED** by W. Foster,  
That the March 8, 2022 meeting be adjourned at 10:13.

**CARRIED**

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**CHAIR**

\_\_\_\_\_  
**SECRETARY**



## REPORT TO MAGIC LAKE ESTATES WATER AND SEWER COMMITTEE MEETING OF TUESDAY, MAY 10, 2022

### **SUBJECT**     Capital Project Status Reports and Operational Updates

### **ISSUE SUMMARY**

To provide the Magic Lake Estates Water and Sewer Committee with capital project status reports and operational updates up to and including April 30, 2022.

### **BACKGROUND**

The Magic Lake Estates (MLE) Water System is located on the south shore of North Pender Island in the Southern Gulf Islands Electoral Area and provides drinking water to approximately 1036 customers. Capital Regional District (CRD) Integrated Water Services is responsible for the overall operation of the water system with day-to-day operation and maintenance, design and construction of water system facilities provided by the CRD Infrastructure Engineering and Operations Divisions. The quality of drinking water provided to customers in the Magic Lake Estates Water System is overseen by the CRD Water Quality Division.

### **CAPITAL PROJECT UPDATE**

#### **Magic Lake Estates Water**

#### **21-02 | Design and Construction Buck Lake and Magic Lake Adjustable Intakes**

**Project Description:** Detailed design and construction of adjustable intakes to inform future capital works to maintain water quality.

**Project Rationale:** Both the Buck and Magic Lake adjustable intakes are unsafe to clean and adjust without employing divers. Funds are required to design and construct adjustable intakes.

**Project Update and Milestones:**

- A consultant was retained in November 2021 and they produced a draft design report summarizing design requirements for the intakes and floats on December 6, 2021.
- Preliminary design drawings are to be received by staff March 4, 2022 for review.
- Tendering scheduled for mid-May 2022 and construction in the fall of 2022.
- Notification of works to the Ministry of Environment through Front Counter BC is required. This is not approvals as permitting is not required based on the scope of works.

<b>Milestone</b>	<b>Completion Date</b>
Consultant retained	November 12, 2021
Draft conceptual design report received	December 6, 2021
Design submitted to Front Counter BC for notification	April 21, 2022

## **21-04 | Buck Lake Dam Repairs - Phase 1**

**Project Description:** Conduct additional inspections, minor repairs, and performance analysis highlighted in the 2019 Dam Safety Review. Phase 2 dam improvements to be completed in the following five years.

**Project Rationale:** Resulting from the Hatch 2019 Dam Safety Review, funds are required to conduct additional inspections, minor dam repairs, and performance analysis. Phase 2 dam improvements to be completed in the following five years. The staff report from the November 26, 2020 Committee meeting outlines the detailed expenditure plan for the Phase 1.

**Project Update and Milestones:**

- Detailed scope of work and acceptable options for preventing high live loads at Buck Lake Dam's west dam have been developed. Work is to be complete in September 2022.
- Consultant has been retained to conduct a dam breach analysis for both dams to confirm the dam flood area and improve the dam emergency plan. The kick off meeting is tentatively scheduled for the week of March 7, 2022.
- Operations to coordinate with CRD Protective Services so that dam emergencies are part of CRD's Public Alert Notification System.
- CRD staff have started compiling required information for the dam emergency plan and operating and maintenance manuals. Updates are to be completed by December 2022.

<b>Milestone</b>	<b>Completion Date</b>
Consultant retained to conduct dam breach analysis	December 20, 2021

## **22-01 | Failed Valve Replacement**

**Project Description:** Replace 6 failed water main valves.

**Project Rationale:** Through annual operations of the water system, three valves have been identified as have failed. Funding is required to replace these valves at 4708 Capstan Crescent, Schooner Way and Privateers, 3710 Rum Road, Schooner Way and Ketch Road, 4742 Bosun Way, and 37140 Galleon Way.

**Project Update and Milestones:**

- Project to commence upon CRD Board approval of the 5-year capital plan at the March 16, 2022 meeting.
- Operations is currently scheduling for works to commence in September and October unless an earlier opportunity is available.

## **22-02 | EV Charging Station**

**Project Description:** Construct a new Electric Vehicle (EV) Charging Station at the Water Treatment Plant, project to be split across MLE Water, Wastewater, and a possible grant.

**Project Rationale:** Construct a new EV Charging station at the water treatment plant, project is to be partially funded through a cost matching grant and the MLE Wastewater Service.

**Magic Lake Estates Water and Sewer Committee – May 10, 2022**  
**Capital Project Status Reports and Operational Updates**

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**Project Update and Milestones:**

- Project delivery is currently being planned with CRD Facilities and Operations.
- Execution to occur in October pending equipment delivery, early delivery will occur if possible.

Milestone	Completion Date
Notification of conditional grant approval	January 18, 2022

**22-03 | Process Pipe Replacement**

**Project Description:** Replace corroded process pipe in the water treatment plant.

**Project Rationale:** The water treatment plant has corroded process piping. Funding is required to plan and replace the affected pipe.

**Project Update and Milestones:**

- A consultant will be required for design.
- Detailed design and a construction staging plan may commence in August 2022, with future process pipe replacement.

**OPERATIONAL UPDATE**

This is an operational update report period for March/April 2022.

- MLE Water Treatment Plant Dissolved Air Flotation (DAF) train two gear drive trouble shooting. Grease seal corrective maintenance completed.
- Supervisory Control and Data Acquisition (SCADA) system software upgrade from ClearSCADA to GeoSCADA. This was unplanned work but necessary to ensure continued SCADA system operation.
- Frigate/Captains reservoir communications failure and troubleshooting. Corrective maintenance performed by replacement of failed Remote Terminal Unit (RTU) back up battery equipment as a result of an extended power outage.
- MLE Water Treatment Plant programming modifications of the DAF rinse to waste cycle. This work was necessary to reduce/eliminate critical alarming and emergency response.
- MLE Water Treatment Plant train two ultraviolet (UV) corrective maintenance performed. Replacement of a UV sensor was necessary as a result of a failed critical seal.
- MLE Water Treatment Plant DAF train two float simmer chain inspection and preventative maintenance completed.
- Completed the Buck Lake Building Lighting Replacement capital project.



### **Magic Lake Estates Sewer Utility**

#### **20-01 | Wastewater Improvements – Sewer Replacement**

**Project Description:**

1. Replace about 3km of failing asbestos cement (AC) pipe and install Cannon forcemain pipe (2021).
2. Replace as much failing AC pipe as possible with remaining funds left from \$6 million loan (2022-23).

**Project Rationale:** Several km of failing AC sewer pipe requires replacement (to be completed over 3 years from 2021-2023).

**Project Update and Milestones:**

- Triahn Enterprises Ltd. has remobilized from April 25 to 29, 2022 to complete the list of deficiencies. The hydrostatic test on the new forcemain was performed and passed on April 26.
- The next phase of sewer replacement work will occur after the pump station and treatment plant tender is closed so that we know the remaining funds left from the \$6 million loan.

<b>Milestone</b>	<b>Completion Date</b>
Construction	Substantial Completion on December 17, 2021
Warranty Period	December 17, 2022

#### **21-01 | Wastewater Improvements – Pump Station and Treatment Plant Upgrades**

**Project Description:**

1. Renew Buccaneer, Galleon, Schooner, Capstan, Cutlass and Masthead Pump Stations.
2. Replace Cannon Wastewater Treatment Plant (WWTP) with a new pump station.
3. Upgrade Schooner WWTP.

**Project Rationale:** Successfully received an Infrastructure Canada grant to complete upgrades on six pump stations, install a new pump station at Cannon to pump to Schooner WWTP, and upgrade Schooner WWTP to treat flow from Cannon and renew many components to bring the wastewater system into compliance with environmental regulations.

**Project Update and Milestones:**

- McElhanney has completed all the survey and geotechnical work and is working on the conceptual design.
- McElhanney has prepared a Technical Memo on four wastewater treatment technologies and once the recommended technology is decided, the conceptual design can be completed.
- CRD submitted a notification to Ministry of Environment to request an amendment to the existing treatment plant registrations.
- CRD submitted a complete package of information on First Nations consultation to Infrastructure Canada (a requirement of the grant).
- CRD will be meeting with Islands Trust to confirm if any planning permits are required.
- Overall, the project is generally on track as planned.

**Magic Lake Estates Water and Sewer Committee – May 10, 2022**  
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<b>Milestone</b>	<b>Completion Date</b>
Preliminary Design	May 31, 2022
Detailed Design	September 30, 2022
Tender Period	October 31, 2022
Construction	December 31, 2023
Warranty Period	December 31, 2024

## **22-01 | EV Charging Station**

**Project Description:** Construct a new EV Charging Station at the Water Treatment Plant, project to be split across MLE Water, Wastewater, and a possible grant.

**Project Rationale:** Construct a new EV Charging Station at the Water Treatment Plant, project to be split across MLE Water, Wastewater, and a possible grant.

**Project Update and Milestones:**

- Project delivery is currently being planned with CRD Facilities and Operations.
- Execution to occur in October pending equipment delivery, early delivery will occur if possible.

## **OPERATIONAL UPDATE**

This is an operational update report period for March/April 2022.

- Sewer collection system backup near 37257 Schooner Way. Corrective maintenance included the vacuum truck services and sewer flushing and root cutting services to clear blockage.
- Portable genset block heater replacement corrective maintenance.
- Schooner Wastewater Treatment Plant Return Activated Sludge (RAS) pump #1 replacement.
- Emergency response due to extended power outage on April 4/5 that included the use of vacuum truck services for pumping down of various sewage lift stations.
- Sewer connection corrective maintenance for 4846 Pirates Road. Repairs included the replacement of several meters of pipe and the installation of an Inspection Chamber (IC).
- Schooner Wastewater Treatment Plant mechanical blower Variable Frequency Drive (VFD) investigation troubleshooting and replacement.

**Magic Lake Estates Water and Sewer Committee – May 10, 2022**  
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**Table 1: Operating Permit Regulatory Non-compliance reporting for March/April 2022**

Facility	March/April Reports Issued	Reports YTD 2022	Total Reports 2021	Cause
<b>Schooner WWTP</b>	3	7	24	Environmental Incidence Reports are issued typically as a result of: 1. Facility power outage causing loss of UV disinfection resulting in exceedance of fecal coliform (FC) regulatory requirements (permit <200 cfu/100ml). 2. Exceedance of permitted daily maximum flows (< 640m3/day). Flow exceedances are due to excessive collection system inflow and infiltration (I&I). 3. Exceedance of permitted total suspended solids (TSS) (<45mg/l). This is type of exceedance is the result of high I&I.
<b>Schooner Pump Station</b>	0	0	2	Typically, these are overflow events into the marine environment (Boat Nook) due to extended power failures in the area. There is no standby power at the facility.
<b>Cannon WWTP</b>	0	4	52	Exceeding maximum daily flows due to storm water entering through I&I.

**RECOMMENDATION**

There is no recommendation. This report is for information only.

Submitted by:	Ian Jesney, P.Eng., Senior Manager, Infrastructure Engineering
Submitted by:	Matt McCrank, M.Sc., P.Eng, Senior Manager, Wastewater Infrastructure Operations
Concurrence:	Ted Robbins, B.Sc., C.Tech., General Manager, Integrated Water Services