



MAGIC LAKE ESTATES WATER AND SEWER COMMITTEE
 Notice of Meeting on **Tuesday, April 9, 2024 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)	J. Deschenes	P. Brent (EA Director)	M. Rondeau
A. Cyr (Vice-chair)	D. Reed	R. Sullivan	

AGENDA

- 1. APPROVAL OF AGENDA**
- 2. ADOPTION OF MINUTES2**
Recommendation: That the minutes of the February 13, 2024 meeting be adopted.
- 3. CHAIR’S REMARKS**
- 4. PRESENTATIONS/DELEGATIONS**
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.

Requests must be received no later than 4:30 p.m. two calendar days prior to the meeting.
- 5. SENIOR MANAGER’S REPORT**
- 6. COMMITTEE BUSINESS**
 - 6.1. Project and Operations Update6**
There is no recommendation, this report is for information only.
- 7. CORRESPONDENCE**
- 8. NEW BUSINESS**
- 9. ADJOURNMENT**

Next Meeting: Tuesday, May 14, 2024

To ensure quorum, advise IWSadministration@crd.bc.ca if you cannot attend.

MINUTES OF A MEETING OF THE Magic Lake Estates Water and Sewer Committee, held Tuesday, February 13, 2024 at 9:30 a.m., In the Goldstream Conference Room, 479 Island Highway, Victoria, BC

PRESENT: Committee Members: M. Fossil (Chair); A. Cyr (Vice Chair); P. Brent (EA Director); J. Deschenes (EP); M. Rondeau (EP); R. Sullivan (EP)

Staff: J. Marr, Senior Manager, Infrastructure Engineering; J. Dales, Senior Manager, Wastewater Operations; J. Kelly, Manager, Capital Projects; D. Robson, Manager, Saanich Peninsula and Gulf Island Operations; M. Risvold (Recorder)

REGRETS: D. Reed

EP = Electronic Participation

The meeting was called to order at 9:35 am.

1. ELECTION OF CHAIR

The Senior Manager called for nominations for the position of Chair of the Magic Lake Estates Water and Sewer Committee for the term ending December 31, 2024.

P. Brent nominated M. Fossil. M. Fossil accepted the nomination.

The Senior Manager called for nominations a second time.

M. Rondeau nominated R. Sullivan. R. Sullivan accepted the nomination.

The Senior Manager called for nominations a third and final time.

Ballots were distributed by D. Dionne and M. Risvold and collected by D. Dionne. The confidential texting poll was opened by M. Risvold.

The ballots (including the texting votes) were counted by D. Dionne and M. Risvold.

The Senior Manager declared M. Fossil Chair of the Magic Lake Estates Water and Sewer Committee for the term ending December 31, 2024.

MOVED by A. Cyr and **SECONDED** by P. Brent,
That the ballots be destroyed.

CARRIED

2. ELECTION OF VICE CHAIR

The Chair called for nominations for the position of Vice Chair of the Magic Lake Estates Water and Sewer Committee for the term ending December 31, 2024.

J. Deschenes nominated A. Cyr. A. Cyr accepted the nomination.

The Chair called for nominations a second time.

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M. Rondeau nominated R. Sullivan. R. Sullivan accepted the nomination.

The Chair called for nominations a third and final time.

Ballots were distributed by D. Dionne and M. Risvold and collected by M. Risvold.
The confidential texting poll was opened by M. Risvold.

The ballots (including the texting votes) were counted by D. Dionne and M. Risvold.

The Chair declared A. Cyr Vice Chair of the Magic Lake Estates Water and Sewer Committee for the term ending December 31, 2024.

MOVED by P. Brent and **SECONDED** by A. Cyr,
That the ballots be destroyed.

CARRIED

3. APPROVAL OF AGENDA

The following was added to the agenda as new business:

- Properties with Zero Water Usage
- Secondary Suite Capacity within the Magic Lake Estates Area
- Condition of the water distribution system

MOVED by P. Brent, **SECONDED** by A. Cyr,
That the agenda be approved as amended.

CARRIED

4. ADOPTION OF MINUTES

MOVED by P. Brent, **SECONDED** by J. Deschenes,
That the minutes of the November 14, 2023 meeting be adopted.

CARRIED

5. CHAIR'S REMARKS

The Chair made no remarks.

6. PRESENTATIONS/DELEGATIONS

There were none.

7. SENIOR MANAGER'S REPORT

J. Marr stated he is looking forward to working with the committee in 2024.

8. COMMITTEE BUSINESS

8.1. Project and Operations Update

Staff provided a capital projects and operational update.

Staff responded to the following questions:

- If there is a habitat restoration plan for when the wastewater treatment project is complete as there is an overgrowth of invasive and toxic Daphne currently growing on the bank. Staff advised they will notify the design team of the Daphne growing and will determine if there is anything available to combat the future growth.
- The ability to share Capital Regional District (CRD) briefings and documents publicly. Staff advised information available on the CRD website is public and can be shared on social media etc., noting it is beneficial to share links to documents and webpages to ensure the information being shared is current.
- What is done to identify higher inflows traced back to private properties. Staff advised once the property is identified, CRD will approach the property owner to advise them of high flows.
- If the new wastewater facility will have more protection against freezing. Staff responded that it will be built in.

9. CORRESPONDENCE

There was none.

10. NEW BUSINESS

10.1. Properties with Zero Water Usage

The committee requested quarterly statistics including the number of properties that are not using any water. Staff advised that will investigate what they could provide to the committee.

10.2. Capacity for Secondary Suites within the Magic Lake Estates Area

The committee asked staff if the Magic Lake Estates Water and Wastewater systems will allow for secondary suites.

Staff advised both the water and wastewater systems were constructed for a full build-out of the existing lots but does not believe that included secondary suites.

Staff noted that the Magic Lake Estates is not fully built out, however, there could be an issue if secondary suites were permitted, and the lots get built out, there may not be capacity.

The Electoral Area Director requested a professional staff assessment as to how many secondary suites could be supported considering the level of risk.

Discussion ensued regarding:

- Management practices for community growth
- Anticipated usage for a full build-out
- Risks associated with a full build-out combined with secondary suites
- What is considered a full build-out

10.3. Leak Detection/Condition of the Water Distribution System

The committee discussed initiating a plan to upgrade the water distribution system, wanting to begin the planning process, and the ability to have zone meters installed. Staff advised it is a great idea, noting assets should be considered as they are older.

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An asset management plan will be presented to the committee to show the age of the assets and costs associated with upgrading.

Discussion ensued regarding:

- Zone meters
- Pressure regulating valve stations
- Unaccounted for water for 2022
- Addressing issues as an ongoing basis
- Leak detection program
- Annual report data

MOVED by P. Brent, **SECONDED** by A. Cyr,

That the committee direct staff to prepare a report and include the available options and estimated costs to reduce the amount of non-revenue water associated with system losses.

CARRIED

Staff responded to a question regarding invasive ivy removal at the wastewater treatment plant, and the ability for community members to volunteer their time for the removal work. Staff will follow-up with the committee as there would likely be an indemnification.

Requests from the committee:

- Staff to provide information indicating the number of properties that are not using any water.
- Staff to provide an assessment as to how many secondary suites the current systems can support considering the level of risk.
- Staff to provide follow-up to the committee regarding the ability for community members volunteering their time to remove ivy.

11. ADJOURNMENT

MOVED by P. Brent, **SECONDED** by M. Rondeau,

That the February 13, 2024 meeting be adjourned at 10:49.

CARRIED

CHAIR

SECRETARY

**REPORT TO MAGIC LAKE ESTATES WATER AND SEWER COMMITTEE
MEETING OF TUESDAY, APRIL 09, 2024**

SUBJECT Capital Project Status Reports and Operational Updates – April 2024

ISSUE SUMMARY

To provide the Magic Lake Estates Water and Sewer Committee with capital project status reports and operational updates up to and including March 31, 2024.

BACKGROUND

The Magic Lake Estates (MLE) Water and Sewer Systems are located on the south shore of North Pender Island in the Southern Gulf Islands Electoral Area and provides drinking water and wastewater services to approximately 1,072 customers. Capital Regional District (CRD) Integrated Water Services is responsible for the overall operation of the water and wastewater systems with day-to-day operation, maintenance, design and construction of water and wastewater 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 Section.

CAPITAL PROJECT UPDATE

Magic Lake Estates Water

23-03 | SCADA and Radio Communication Upgrades

Project Description: Replace SCADA Communication infrastructure with modern radio system based on Radio Pathway Study completed under wastewater capital project 21-01.

Project Rationale: Upgrade communication equipment at water facilities as part of the wastewater upgrades (under Project 21-01) to make the entire system more secure and reliable.

Project Update and Milestones:

- The scope of work for the SCADA and Radio upgrades was included in the Wastewater Upgrade Tender.
- Contract 2022-846 - Magic Lake Estates Wastewater Pump Station and Treatment Plant Upgrades was awarded to Coast Utility Contracting Ltd. in April 2023.
- Installation of the radio upgrades at Lively Peak/Captains Reservoir will commence on April 10 and all the upgrades will occur at other locations in batches up until final commissioning in July.

Milestone	Completion Date
Detailed Design	January 2023
Tender	March 2023
Construction	May 2023 – June 2024
Commissioning (Substantial Completion)	July 2024
Warranty	July 2025

21-02 | Design and Construction Buck Lake and Magic Lake Adjustable Intakes (Complete)

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.
- Design was completed.
- Tendering closed on June 29, 2022, but no bids were received.
- CRD had discussions with potential bidders who may be interested in providing quotations for this scope, only Pacific Industrial Marine (PIM) was interested in bidding.
- Recommendation to Award to PIM was signed off on November 4, 2022.
- Contract was executed on February 1, 2023, and Notice to Proceed was provided on February 7, 2023.
- Shop drawings have been reviewed and returned to Contractor to commence off-site construction.
- The stipulated Substantial Completion date is September 30, 2023, but this was permitted to extend to Q1 2024 based on Contractor deliverables and operational coordination requirements (e.g. lower water demand period in fall, frozen water in January and need for pre-launch dive inspection). Installations were completed the week of March 18, 2024, and the Contractor had demobilized by March 22, 2024.
- Administrative closeout efforts still underway.

Milestone	Completion Date
Consultant retained	November 12, 2021
Draft conceptual design report received	December 6, 2021
Design submitted to Front Counter BC for notification	April 21, 2022
Original Tender Closing (no bids)	June 29, 2022
Subsequent bid and Recommendation to Award to PIM	November 4, 2022
Contract Executed	February 1, 2023
Notice to Proceed	February 7, 2023
Shop Drawing Review	August 22, 2023
Off-Site Dock Construction Complete	Q4, 2024
Pre-Dive Installation Inspection	Feb 2, 2024
Installations Complete	March 22, 2024

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 November 26, 2020 staff report outlines the detailed expenditure plan for 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. This was reviewed during the 2022 annual inspection and a scope for warning signage is being proposed to be installed in 2023.
- Consultant was retained to conduct a dam breach analysis for both dams to confirm the dam flood area and improve the dam emergency plan. This report was finalized January 2023.
- Operations to coordinate with CRD Protective Services so that dam emergencies are part of CRD's Public Alert Notification System (PANS).
- CRD staff have started compiling required information for the dam emergency plan and operating and maintenance manuals. Updates were completed January 2023.
- In 2023, engineering is assessing options for installation of a v-notch weir to monitor lower flow seepage rates and will continue with design work into 2024.

Milestone	Completion Date
Consultant retained to conduct dam breach analysis	December 20, 2021
Draft Dam Breach Analysis Complete and Comments returned	July 14, 2022
Final Dam Breach Analysis Complete	January 2023
Design of Seepage Weir on West Dam	Ongoing

22-01 | Failed Valve Replacement (Complete)

Project Description: Replace six failed water main valves.

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

Project Update and Milestones:

- Project commenced upon CRD Board approval of the 5-year capital plan at the March 16, 2022 meeting.
- Operations has completed replacement of six valves. This project is considered complete.

22-02 | EV Charging Station (Complete)

Project Description: Construct a new Electric Vehicle (EV) Charging Station at the Water Treatment Plant.

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 Service.

Project Update and Milestones:

- Project delivery is currently being planned with CRD Facilities and Operations.
- The installation is complete. Administrative close out activities still underway.

Milestone	Completion Date
Notification of conditional grant approval	January 18, 2022
Installation Complete	Q4, 2023

WATER SYSTEM OPERATIONAL UPDATE

This is a water system operational update report for February and March 2024.

- Water Treatment Plant floor maintenance. Floors were professionally cleaned due to buildup of dirt and grime.
- Hydrant 55 corrective maintenance completed.
- Completed watermain leak repairs at the Bosuns pressure regulating/pump station site.
- Supported the Magic Lake and Buck Lake floating intake capital work which was completed during this reporting period.
- Water Service connection installation on Jolly Rodger Crescent. Installation costs funded by the applicant.
- Water loss management tool added to the SCADA system to assist in leak detection efforts for the service.

Magic Lake Estates Sewer Utility

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

Project Description:

1. Renew Galleon and Schooner Pump Stations (upgrade communications at Buccaneer, 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 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:

- Notice to Proceed for Contract 2022-846 was issued to Coast Utility Contracting Ltd. in May 2023. The contractor mobilized in late June/early July.
- **Schooner WWTP**
 - Concrete tanks have passed the water tightness test.
 - Perimeter drains installed and the tanks are backfilled.
 - Operations building interior: plumbing, electrical, drywall is nearing completion.
 - Building exterior: doors, windows, and siding is being installed.
 - Equipment installation inside the building will now commence.
 - Aeration diffusers and piping in the tanks is being installed.
 - Yard piping and electrical conduits are being installed.
 - Structural steel for tank walkway and stairs will be installed later in April.
- **Cannon Pump Station**
 - Wet well pumps and piping will be installed in April.
 - Lock block walls and site grading work is commencing.
 - Concrete slab for electrical kiosk will be formed and poured.

- **Schooner Pump Station**
 - Concrete slabs for kiosk and genset will be poured.
 - Electrical kiosk and generator will be installed later in April.
 - Pumps and piping will be completed after BC Hydro has installed a new service.

- **Galleon Pump Station**
 - Concrete slabs for kiosk and genset will be poured.
 - Electrical kiosk and generator will be installed later in April.
 - Pumps and piping will be installed in May.

- The Habitat Restoration Plan for compensation of disturbing the wetland area adjacent to Schooner WWTP is being developed. An on-site meeting with stakeholders is scheduled for April 11.
- Overall, the project is about 65% complete.
- The total project cost is anticipated to be completed within the revised project scope budget of \$9,379,909.
- As of February 21, 2024, we have received a total of \$2,258,890 of the total eligible grant amount of \$5,653,266. Another grant claim will be submitted in April.
- See photos below the table showing some of the progress.

Milestone	Completion Date
Preliminary Design (30%)	September 2022
Detailed Design (90%)	December 2022
Tender Period	January 27 – March 14, 2023
Construction Period	May 2023 – July 2024
Substantial Completion	July 2024
Warranty Period	July 2025



WWTP Yard Piping



Northwest Corner of Operation Building



Siding installed on west side of Ops Bldg



Operations Bldg Interior



WWTP Tank Diffusers and Piping



Cannon Pump Station Prep for Lockblock Wall



Galleon Pump Station Conc Pads



Schooner Pump Station Conduits

WASTEWATER SYSTEM OPERATIONAL UPDATE

This is a wastewater system operational update report for February and March 2024.

- Installation/improvement of the water service connection to the new Cannon Pump Station as per the Wastewater System capital improvement project. Improvement included the installation of a water meter and increase in the water service connection size.
- Sewer service connection installed on Starboard Crescent. Installation costs funded by the applicant.

Table 1: Operating Permit Regulatory Non-compliance reporting for January through March 2024

Facility	January to March Reports Issued	Reports YTD 2024	Total Reports 2023	Cause
Schooner WWTP	7	7	10	Environmental Incidence Reports are issued typically as a result of: <ol style="list-style-type: none"> 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.
Schooner Pump Station	0	0	0	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.
Cannon WWTP	9	9	5	Exceeding maximum daily flows due to storm water entering through I&I. However other non-compliances can be: <ul style="list-style-type: none"> • Permit exceedance: total suspended solids (TSS) (<60mg/l) and carbonaceous biochemical oxygen demand (CBOD) (<45mg/l) • Toxicity testing

RECOMMENDATION

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

Submitted by:	Malcolm Cowley, P.Eng., Manager, Wastewater Engineering and Planning
Submitted by:	Dan Robson, A.Sc.T., Manager, Saanich Peninsula and Gulf Islands Operations
Submitted by:	Jared Kelly, P.Eng., Manager, Capital Projects
Concurrence:	Jason Dales, B.Sc., WD IV., Senior Manager, Infrastructure Wastewater Operations
Concurrence:	Joseph Marr, P.Eng., Senior Manager, Infrastructure Engineering
Concurrence:	Alicia Fraser, P.Eng., General Manager, Integrated Water Services