



Capital Regional District

Notice of Meeting and Meeting Agenda Magic Lake Estates Water and Sewer Committee

Tuesday, August 20, 2024

9:30 AM

Goldstream Conference Room, 479 Island
Highway, Victoria, BC

Members of the public can watch the live meeting via MS Teams link: [Click here](#)
Audio and video participation is disabled.

1. Territorial Acknowledgement

2. Approval of Agenda

3. Adoption of Minutes

[24-804](#) Minutes of the June 11, 2024 Magic Lake Estates Water and Sewer
Committee Meeting

Recommendation: That the minutes of the June 11, 2024 meeting be adopted.

Attachments: [Minutes - June 11, 2024](#)

4. Chair's Remarks

5. 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.

6. Commission Business

6.1. [24-805](#) Capital Project Status Reports and Operational Updates - August 2024

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

Attachments: [MLE2024-08-20ProjectAndOpsUpdateAugust](#)

7. Correspondence

8. New Business

9. Adjournment

Next Meeting: September 10, 2024

MINUTES OF A MEETING OF THE Magic Lake Estates Water and Sewer Committee, held Tuesday, June 11, 2024 at 9:30 a.m., In the Goldstream Conference Room, 479 Island Highway, Victoria, BC

PRESENT: Commissioners: M. Fossil (Chair); D. Reed; A. Cyr (EP); R. Sullivan (EP); M. Rondeau (EP)
Staff: D. Robson, Manager, Saanich Peninsula and Gulf Islands Operations; N. Tokgoz, Manager, Water Distribution Engineering and Planning; J. Kelly, Manager, Capital Projects; M. Risvold (Recorder)
REGRETS: J. Deschenes; P. Brent

EP = Electronic Participation

The meeting was called to order at 9:34.

1. APPROVAL OF AGENDA

MOVED by D. Reed, **SECONDED** by M. Rondeau,
That the agenda be approved.

CARRIED

2. ADOPTION OF MINUTES

MOVED by M. Rondeau, **SECONDED** by D. Reed,
That the minutes of the April 9, 2024 Magic Lake Estates Water and Sewer Committee meeting be adopted as amended.

CARRIED

3. CHAIR'S REMARKS

The Chair made no remarks.

4. PRESENTATIONS/DELEGATIONS

There were none.

5. SENIOR MANAGER'S REPORT

D. Robson provided the following updates:

- **Transition from Webex to Microsoft Teams**

As noted in the agenda package sent to Committee members on Friday, the Capital Regional District (CRD) is now using the Microsoft (MS) Teams platform in place of Webex for committee meetings. Staff are pleased to advise that with this platform change, members of the public will now have the option to watch and listen to the meeting proceedings; or the public can continue to dial in to listen by phone. Members of the public wishing to speak at the meeting must register as a presentation or delegation, instructions on how to register is noted under Item 4 of the agenda.

- **Grant Application: Union of British Columbia Municipalities Grant for Disaster Risk Reduction - Climate Adaptation 2024**

The CRD has applied for the Union of British Columbia Municipalities grant for Disaster Risk Reduction - Climate Adaptation 2024. A portion of this grant is requesting funding to install permanent water conservation signage advising residents in vulnerable areas, such as the Juan de Fuca, Southern Gulf Islands, and Salt Spring Island, of current water restriction levels. Staff noted the signage will be similar to the roadside Fire Danger Rating signage. The signs will replace the sandwich boards that are currently used. If the grant is approved there will be no cost to the local services. An update will be provided to the committee when more information is available.

- **Water conservation:**

Magic Lake Estates is currently on Stage 1 water restrictions. The water conservation stages are displayed on the community sandwich board which is located at the Magic Lake Estates treatment plant. The board also advises on the levels of Buck Lake which is updated every two weeks.

6. COMMITTEE BUSINESS

6.1. Magic Lake Estates Secondary Dwelling Unit Capacity

Staff responded to questions and discussion ensued regarding:

- The five-year average increasing
- 15-year linear community growth projection
- Annually monitoring service connections
- Existing secondary suites within Magic Lake Estates
- Requirements for servicing a secondary dwelling unit
- What is considered a single-family unit
- Focusing on water conservation

Staff responded to a question regarding non-registered secondary dwelling units, advising they are challenging to monitor as they are unofficial. However, to follow the bylaws, a secondary dwelling unit would have to be registered.

MOVED by M. Rondeau, **SECONDED** by R. Sullivan,

That staff be directed to:

1. Allow up to three new secondary dwelling unit connections to the Magic Lake Estates water and sewer service system, subject to meeting all other applicable regulatory requirements including bylaws; and
2. Monitor and report back the number of new connections to each system and assess system capacity trends annually prior to allowing further connections.

CARRIED

6.2. 2023 Annual Report

D. Robson spoke to item 6.2.

Staff advised the current primary operational focus is to quantify operational use of water. The leak detection program is currently taking place which will help focus on water loss that is typically due to leakage.

Discussion ensued regarding:

- Increased production
- Less increase of demand
- Potential for unauthorized connections
- Zone metering
- Public notifications in the event of a cyanobacteria bloom

Staff responded to the following question regarding surface sampling advising that water samples are collected at the pump station monthly. Operator and public observations are reviewed as well.

6.3. Project and Operations Update

J. Kelly spoke to item 6.3.

Staff responded to the following questions:

- How a floating platform is related to an adjustable intake. Staff advised the intake is in the middle of the lake, the platform is above the lake and the platform is attached to the intake and allows staff to adjust the intake level and also pull the intake for maintenance (e.g. cleaning screens). This prevents the need for divers to be hired to conduct maintenance and gives operators the flexibility to adjust intake level for water quality reasons.
- Beautification of the intake. Staff advised additional funding would be required to beautify the intake platform, which will require direction from committee or community of what they want it to look like. The Committee indicated that the change seems to be less noticeable with time and that no additional action is requested from staff until further notice.
- If there is an updated schedule for commissioning and having the new plant online. Staff advised that commissioning typically occurs as a phased approach and takes time for the new plant to be fully online and meeting all performance targets. Some commissioning activities were already underway, and the process was expected to continue into August of this year.

The committee decided they will continue to monitor the response from residents regarding the intake platform and noted the idea of a printed cover may be problematic due to upkeep. The committee agreed this topic can be discussed at a future meeting if it is still a concern.

7. CORRESPONDENCE

The committee thanked staff for the correspondence and information sheet regarding the logs that were laying on the road relating to the wetland restoration. The information sheet was

helpful, and it was appreciated by the Magic Lake Estates Community.

8. NEW BUSINESS

The committee asked when the asset management report will be provided to the committee. Staff advised an asset management report will be presented to the committee in September.

9. ADJOURNMENT

MOVED by D. Reed, **SECONDED** by M. Rondeau,
That the June 11, 2024 Magic Lake Estates Water and Sewer Committee meeting be adjourned at 10:51 am.

CARRIED

CHAIR

SECRETARY

DRAFT



**REPORT TO MAGIC LAKE ESTATES WATER AND SEWER COMMITTEE
MEETING OF TUESDAY, AUGUST 20, 2024**

SUBJECT Capital Project Status Reports and Operational Updates – August 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 August 15, 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.
- All radio equipment has been installed now at the Water Treatment Plant, Lively Peak, Captain’s Reservoir, Frigate Reservoir, Magic Lake Pump Station, Bosun Pump Station, Galleon Pump Station, Buck Lake Pump Station, and Schooner Pump Station.
- The equipment is being tested and will be commissioned in August/September.

Milestone	Completion Date
Detailed Design	January 2023
Tender	March 2023
Construction	May 2023 – July 2024
Commissioning (Substantial Completion)	August 2024
Warranty	August 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.
- Discussions with Committee to continue with respect to any desired aesthetic improvement works to be pursued.

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.
- Engineering consultant onboarded for design in July 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

WATER SYSTEM OPERATIONAL UPDATE

This is a water system operational update report for June and July 2024.

- Magic Lake Intake: first quarterly cleaning of the new adjustable intake screen by operators.
- Leak detection planning and execution:
 - Installation of real time pressure monitoring devices at key locations throughout the water system to collect pressure data for analysis.
 - Initial focus on the Frigate Tank pressure zone with approximately 70 hours of unplanned work completed during the reporting period. This resulted in leaks being located on Foc’sle Road and a second leak on the Spyglass Road located on the Buck Lake Dam crest.
- Watermain/water service line leak repairs:
 - Foc’sle Road
 - Foc’sle Road (completed in early August)
 - Anchor Way (auto flush station)
- Schooner Way Water Treatment Plant electrical room exhaust fan repairs.
- Annual fire hydrant maintenance continues for the service
- Ongoing operational water usage review with the focus to determine actual water system losses.

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**
 - Operations building and all electrical and mechanical equipment is installed (blowers, pumps, membranes, pumps, motor control center, etc.).
 - Concrete tanks have been filled with water to commence with wet-testing in early September.
 - Inlet screen, washer/compactor, and standby generator are installed.
 - Yard piping and electrical conduits are complete and BC Hydro will install the new service in August.
 - Structural steel for tank walkway and stairs is installed.
 - Commissioning plan and schedule has been established and testing will commence in late August and commissioning in September. Plan to start plant with wastewater at around mid-September.
- **Cannon Pump Station**
 - Wet well pumps and piping is complete.
 - Lock block walls and site grading work is commencing.
 - Concrete slab for electrical kiosk will be formed and poured.
 - Electrical kiosk will be installed in August.
 - Plan to test and commission the pump station in late September depending on the new BC Hydro service connection.
- **Schooner Pump Station**
 - This pump station is substantially complete and was commissioned on June 7.
 - Final restoration and clean-up remain to be completed.
- **Galleon Pump Station**
 - This pump station is substantially complete and was commissioned on May 27.
 - Final restoration and clean-up remain to be completed.
- The Habitat Restoration Plan for compensation of disturbing the wetland area adjacent to Schooner WWTP has been approved by the Ministry of Forests, Lands and Natural Resources. A sign and info sheet has been prepared to explain the restoration work. Wetland work will commence on August 19 and should be complete in 5-6 days.

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- Planting work will commence in late September/early October.
- Overall, the project is about 90% complete.
- As of August 2, the total actual and committed cost is at \$8,988,849 and the remaining costs for the project is anticipated to be within the revised total budget of \$9,379,909.
- As of July 18, 2024, we have received a total of \$4,863,607 of the total eligible grant amount of \$5,653,266. Another grant claim will be submitted in October.
- See the milestone table and photos below 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 – September 2024
Substantial Completion	September - October 2024
Warranty Period	September - October 2025



Schooner WWTP Tanks and Operations Building



WWTP Screen and Genset



Equalization Tank and Diffusers



Membrane Tanks and Membranes



Permeate and Air Piping



Lab and Control Room



Permeate Pump Room



Blower Room



Cannon PS – Prep for Lockblock Wall



Schooner PS – Kiosk and Genset



Galleon PS – Kiosk and Genset

WASTEWATER SYSTEM OPERATIONAL UPDATE

This is a wastewater system operational update report for June and July 2024.

- Buccaneers Pump Station: replacement of pump stop float control.
- Cannon Wastewater Treatment Plant: replacement of scum pump.
- Cutlass Pump Station: pump replacement procurement commenced. System is currently operating on one pump only.
- Investigation of Cannon Wastewater Treatment Plant odour complaints. Sludge hauling and process adjustments were completed to address the concern.
- Ongoing operational support for the sewer improvement capital project.

Table 1: Operating Permit Regulatory Non-compliance reporting for June and July 2024

Facility	June and July Reports Issued	Reports YTD 2024	Total Reports 2023	Cause
Schooner WWTP	1	8	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.

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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	0	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
Concurrence:	Jason Dales, B.Sc., WD IV., Senior Manager, Infrastructure Wastewater Operations
Concurrence:	Jared Kelly, P.Eng., Acting Senior Manager, Infrastructure Engineering
Concurrence:	Shayne Irg, P.Eng., Acting General Manager, Integrated Water Services