



Making a difference...together

MAGIC LAKE ESTATES WATER AND SEWER COMMITTEE
Notice of Meeting on **Tuesday, February 13, 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
M. Rondeau

J. Deschenes
D. Reed

P. Brent (EA Director) A. Cyr
R. Sullivan

AGENDA

1. ELECTION OF CHAIR

*(Pursuant to Section 5 Bylaw No. 2339)
Election conducted by Senior Manager*

2. ELECTION OF VICE CHAIR

Election conducted by the Chair

3. APPROVAL OF AGENDA

4. ADOPTION OF MINUTES3

Recommendation: That the minutes of the November 14, 2023 meeting be adopted.

5. CHAIR’S REMARKS

6. 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.

7. SENIOR MANAGER’S REPORT

8. COMMITTEE BUSINESS

8.1. Project and Operations Update7

There is no recommendation, this report is for information only.

9. CORRESPONDENCE

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

**Magic Lake Estates Water and Sewer Committee
Agenda – February 13, 2024**

10. NEW BUSINESS

11. ADJOURNMENT

Next Meeting: At the call of the Chair

MINUTES OF A MEETING OF THE Magic Lake Estates Water and Sewer Committee, held Tuesday, November 14, 2023 at 9:30 a.m., in the Goldstream Conference Room, 479 Island Highway, Victoria, BC

PRESENT: Committee Members: M. Fossil (Chair); J. Deschenes (Vice Chair) (EP); R. Fenton (Alternate EA Director) (EP); W. Foster (EP); D. Reed (EP); R. Sullivan (EP)

Staff: J. Marr, Senior Manager, Infrastructure Engineering; J. Dales, Senior Manager, Wastewater Infrastructure Operations; M. Cowley, Manager, Wastewater Engineering and Planning; L. Xu, Manager, Local Services and Corporate Grants; S. Henderson, Senior Manager, Real Estate and Southern Gulf Islands Administration; D. Robson, Manager, Saanich Peninsula and Gulf Island Operations; J. Kelly, Manager, Capital Projects; M. Risvold (recorder)

REGRETS: P. Brent (EA Director); A. Cyr

EP = Electronic Participation

The meeting was called to order at 9:37 am.

1. APPROVAL OF AGENDA

MOVED by R. Fenton, **SECONDED** by D. Reed,
That the agenda be approved.

CARRIED

2. ADOPTION OF MINUTES

MOVED by R. Fenton, **SECONDED** by D. Reed,
That the minutes of the September 12, 2023 meeting be adopted.

CARRIED

3. CHAIR'S REMARKS

The Chair made no remarks.

4. PRESENTATIONS/DELEGATIONS

There were no presentations or delegations.

5. SENIOR MANAGER'S REPORT

J. Marr provided the following updates:

- Private property winterization. Capital Regional District (CRD) is running a campaign to inform homeowners within small water systems the benefits of winterization to try and avoid leaks during the cold season. Information has been shared on social media platforms and posters will be shared with the committee once they are complete. The information is also available on the respective CRD Drinking Water Systems webpages.
- Internal CRD grant opportunity. Staff applied for an internal grant for Growing Communities to upgrade the Capstan pump station. The grant was unsuccessful. CRD will continue to look for grant opportunities for water and wastewater service.

- Bylaw No. 4447. Staff discussed the Bylaw that outlines the committee's responsibilities. The committee is still responsible for the administration of the service and for reviewing and approving the draft budget.

6. COMMITTEE BUSINESS

6.1. Water Usage Statistics

J. Marr spoke to item 6.1.

Discussion ensued regarding:

- Current water rates
- Water conservation
- Water rate increase
- Rainwater collection

MOVED by R. Sullivan, **SECONDED** by W. Foster,
That the quarterly water usage rate for greater than 80 cubic meters be increased from \$1 per cubic meter to \$1.50 per cubic meter.

CARRIED

6.2. 2024 Operating and Capital Budget

J. Marr spoke to item 6.2.

Staff responded to the following questions:

- Why there is unspent labour. Staff advised the budget includes a contingency for added repairs and one-time maintenance. There is a surplus as it has not been used. As winter approaches, there is a possibility of events occurring that would require that labour.
- The retirement year for the debt summary in the report. Staff advised the retirement year shown in table 1 is the year the debt will be paid off.
- The difference between the Operating Reserve Fund (ORF) and Capital Reserve Fund (CRF). Staff advised the CRF is for replacing larger capital projects like the water treatment plant and pump station. The ORF is for operational activities such as reservoir cleaning, hydrant maintenance and watermain flushing. Operating is short term (year-to-year) funds, and capital is long-term (5+ years).
- Completion of the Buck Lake and Magic Lake adjustable intakes hopefully by the end of the year. Staff advised a contractor has been hired and they are waiting for Magic Lake water levels to increase. Levels are being monitored and construction should begin in late November.
- Budget for replacing the manhole covers. Staff advised some covers are aging and may need to be replaced in the future, but there is nothing imminent.

Discussion ensued.

Staff noted the water consumption rate that was changed in item 6.1 relating to the top tier water usage over 80 cubic meters and rates being increased from \$1 to \$1.50, the incremental revenue on water sales is approximately \$5,000. Staff do not recommend relying on that revenue in the budget as the rate increase is intended to be a water conservation tool. If the rate increase is effective, less people should be using over 80 cubic meters of water. The rate change will be incorporated into the Fee and Charges Bylaw which will be presented to the Board in December 2023. If the Board approves the bylaw, the new rate will be in effect. Staff do not recommend changing the budget projected revenue higher than \$22,000.

MOVED by D. Reed, **SECONDED** by M. Fossil,
The Magic Lake Estates Water and Sewer Committee:

1. Approve the 2024 operating and capital budget for the:
 - a) Magic Lake Estates Water System Local Service as amended and that the 2023 actual operating deficit be balanced on the 2023 Reserve Funds transfer (Capital Reserve Fund and/or Operating Reserve Fund); and
 - b) Magic Lake Estates Sewerage System Local Service as presented and that the 2023 actual operating surplus or deficit be balanced on the 2023 Reserve Funds transfer (Capital Reserve Fund and/or Operating Reserve Fund); and
2. Recommends that the Electoral Areas Committee recommend that the Capital Regional District Board approve the 2024 Operating and Capital Budget and the five-year Financial Plan for the Magic Lake Estates Water and Sewer Services as amended.

CARRIED

Staff responded to a question regarding the \$462,000 water operations CRF, and if the entire amount will be spent in five years. Staff responded yes, however, each year approximately \$40,000 is being added to the CRF with the budget. Staff also noted an upwards trend as there is some existing debt retiring which can be utilized and leveraged to build up the reserves. Existing debt will be retiring from 2025 until 2028. Discussion ensued.

6.3. Project and Operations Update

Staff provided a capital projects and operational update.

Discussion ensued regarding:

- Water conservation.
- Properties containing statutory right of ways for access to dam sites.

Staff responded to the following questions regarding the wastewater treatment plant upgrades:

- Environmental restoration. Staff advised environmental restoration will involve excavation, digging channels and ponds, placing wood debris and weirs to control the water going in and out of the area, and vegetation planting. Costs are currently unknown.
- Cost of additional outstanding work. Staff advised based on tender amount received, it is approximately \$1.5 million.
- If there will be any landscaping to hide the view of the plant. Staff advised once the plant is built, there are plans to add a re-vegetated berm in front of the plant facing Privateers Road.

7. CORRESPONDENCE

There was no correspondence.

8. NEW BUSINESS

The Chair advised there was a conversation on social media regarding a strong chlorine smell. Staff noted weekly testing is completed for chlorine residuals in the system and operational adjustments are made as required, noting slight operational adjustments can have a significant impact to the public. Staff requested the location of where the chlorine smell was detected so it can be investigated. Discussion ensued.

9. ADJOURNMENT

MOVED by D. Reed, **SECONDED** by R. Fenton,
That the November 14, 2023 meeting be adjourned at 11:37 am.

CARRIED

CHAIR

SECRETARY



**REPORT TO MAGIC LAKE ESTATES WATER AND SEWER COMMITTEE
MEETING OF TUESDAY, FEBRUARY 13, 2024**

SUBJECT Capital Project Status Reports and Operational Updates - February 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 January 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 will likely occur towards the end of the Treatment Plant upgrades in 2024.

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

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). Installation is forecast before end of Q1 2024.

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
Substantial Completion (Anticipated)	Q1 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 in 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 are being completed as of 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

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 to commence 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

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 November, December 2023 and January 2024.

- Replacement of the UPS Buck Lake Raw Water Pump Station.
- Facility winterization procedure and resulting tasks completed in late November.
- Corrective maintenance completed at Privateers Pressure Control Station. Due to the significant cold weather event in January resulted in freezing of some of the control piping.
- Several emergency responses to power outages during this reporting period.
- Galleon Way at Bosun Way watermain interconnection valve repair/replacement corrective maintenance.
- Water system leak/break repairs:
 - Galleon Way – December 20
 - Pirates Road (water service line failure) – January 20
- Three water service connection installations were completed during this reporting period: two water service connection installations were fully funded by the applicants and one water service connection was identified as “prepaid” back in 1998. This water service installation and the costs are funded through the Magic Lake Estates Water operating budget.

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 work is complete, and the tanks are being tested for watertightness. When the tanks have passed the test, the perimeter drain will be installed and then they can be backfilled.
- Wood framing and trusses for the superstructure Operations building has commenced.
- Aeration diffuser equipment is starting to be installed inside the tanks.
- The remaining pre-purchased equipment is continuing to be delivered to the site.
- Cannon pump station wet well is installed and piping is being connected.
- Mechanical and electrical equipment will start to be installed at Cannon later this month.
- The Habitat Restoration Plan for compensation of disturbing the wetland area adjacent to Schooner WWTP is being developed and will be submitted to the Ministry when complete.
- Worked halted for about one week in January due to freezing and snow conditions. The Contractor requested a one-week extension to the contract which was granted.

**Magic Lake Estates Water and Sewer Committee – February 13, 2024
Capital Project Status Reports and Operational Updates - February 2024**

- Overall, the project is about 35% complete.
- See the financial status of the project below. The total project cost is anticipated to be completed within the revised project scope budget.
- As of November 15, 2023, we have received a total of \$1,302,693 of the total eligible grant amount of \$5,653,266. Another grant claim will be submitted in February.
- 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 – June 2024
Substantial Completion	July 2024
Warranty Period	July 2025



Inlet Screen Channels



WWTP Tanks and Operation Building



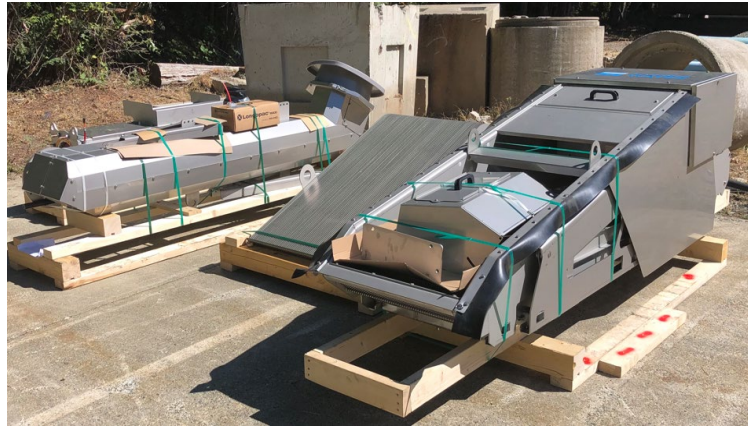
Diffusers installed in WWTP Tank



Cannon Pump Station



Pre-Purchased Equipment Received



Magic Lake Estates Water and Sewer Committee – February 13, 2024
Capital Project Status Reports and Operational Updates - February 2024

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Financial Status of Projects 21-01 and 23-01 (as of January 30, 2024)

Projects/Tasks	Approved Revised Budget	Actual and Committed Cost to Date	Remaining Cost to Complete	Variance
21-01 WWTP and Pump Station (Phase 2/3)	\$9,205,045	\$8,764,164	\$410,000	\$30,881
<i>Construction</i>	\$8,000,000	\$7,680,630	\$275,000 <i>Note 1</i>	\$44,370
<i>Implementation</i>	\$ 250,000	\$215,022	\$40,000	(\$5,022) <i>Note 2</i>
<i>Design and Inspection</i>	\$ 850,000	\$868,512	\$20,000	(\$38,512) <i>Note 2</i>
<i>Contingency</i>	\$105,045	\$0	\$75,000 <i>Note 3</i>	\$30,045
Project Management	\$84,864	\$84,864	\$0	\$0
23-01 SCADA Upgrades	\$90,000	\$112,000 <i>Note 4</i>	\$0	(\$22,000)
Total (both projects)	\$9,379,909	\$8,961,028	\$410,000	\$8,881

1. The Construction Remaining Cost to Complete includes potential unforeseen construction change orders, habitat restoration costs, etc.
2. The Implementation and Design & Inspection costs include allowances for schedule extensions, unforeseen design, programming and commissioning changes; and are anticipated to exceed their budgets but can be covered by contingency funds.
3. Contingency Remaining Cost to Complete is lowered to offset the anticipated higher costs for implementation, design and inspection.
4. The SCADA (\$112,000) amount is based on the tender 2022-846 amount for that specific line item. The overage will be covered by the positive variance in project 21-01.

WASTEWATER SYSTEM OPERATIONAL UPDATE

This is a wastewater system operational update report for November, December 2023, and January 2024.

- Wastewater collection system inflow and infiltration inspections and observations. Several locations were identified as having high inflow from private property.
- Facility winterization procedure and resulting tasks completed in late November.
- Several emergency responses to power outages during this reporting period.
- Corrective maintenance completed on failed piping at the Schooner WWTP. Due to the significant cold weather event in January, resulted in freezing and breakage of some of the sludge wasting PVC piping.
- Schooner WWTP UV system emergency response and corrective maintenance.
- Emergency response to sewer backup on Cannon Crescent. Sewer backup was determined to be on the private side of the sewer system.
- Ongoing operational support for the Schooner Wastewater Treatment Plant Capital Project upgrades.

Table 1: Operating Permit Regulatory Non-compliance reporting for November and December 2023

Facility	November and December Reports Issued	Reports YTD 2023	Total Reports 2022	Cause
Schooner WWTP	3	10	20	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.
Schooner Pump Station	0	0	1	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	4	5	12	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:	Joseph Marr, P.Eng., Senior Manager, Infrastructure Engineering
Concurrence:	Jason Dales, B.Sc., WD IV., Senior Manager, Infrastructure Wastewater Operations
Concurrence:	Alicia Fraser, P.Eng., General Manager, Integrated Water Services