



Capital Regional District

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

Tuesday, October 29, 2024

9:30 AM

Main Conference Room, 479 Island
Highway, Victoria, BC

Members of the public can watch the live meeting via MS Teams link: [Click here](#)
Alternatively, you can listen by dialing in via phone: +1 778-402-9211, Participant Code 664758799
followed by #. Audio and video participation is disabled.

MEMBERS:

M. Fossil (Chair)
A. Cyr (Vice-chair)
P. Brent, Electoral Area Director
J. Deschenes
M. Rondeau
D. Reed
R. Sullivan

1. Territorial Acknowledgement

2. Approval of Agenda

3. Adoption of Minutes

3.1. [24-1096](#) Minutes of the August 20, 2024 Magic Lake Estates Water and Sewer Committee

Recommendation: That the minutes of the August 20, 2024 meeting be adopted.

Attachments: [Draft Minutes: August 20, 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 jwsadministration@crd.bc.ca. Requests must be received no later than 4:30 p.m. two calendar days prior to the meeting.

6. Senior Manager's Report

7. Committee Business

7.1. [24-1026](#) Magic Lake Estates Water and Sewer Service 2025 Operating and Capital Budget

- Recommendation:**
1. That the Magic Lake Estates Water System Local Service 2025 operating and capital budget be approved as presented and that the 2024 actual operating deficit be balanced on the 2024 Reserve Funds transfer (Capital Reserve Fund and/or Operating Reserve Fund);
 2. That the Magic Lake Estates Sewerage System Local Service 2025 operating and capital budget be approved as presented and that the 2024 actual operating surplus or deficit be balanced on the 2024 Reserve Funds transfer (Capital Reserve Fund and/or Operating Reserve Fund); and
 3. The Magic Lake Estates Water and Sewer Committee recommends that the Electoral Areas Committee recommend that the Capital Regional District Board approve the 2025 Operating and Capital Budget and the five-year Financial Plan for the Magic Lake Estates Water and Sewer Services as presented.

- Attachments:** [MLE 2025 Operating and Capital Budget Report](#)
[Appendix A](#)
[Appendix B](#)

7.2. [24-1069](#) Capital Project Status Reports and Operational Updates - October 2024

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

Attachments: [Project & Operations Update](#)

7.3. [24-1090](#) Asset Replacement Report Card

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

Attachments: [MLE Asset Management Plan Update](#)
[Appendix A](#)
[Appendix B](#)

8. Correspondence

9. New Business

10. Adjournment

Next Meeting: At the call of the Chair

MINUTES OF A MEETING OF THE Magic Lake Estates Water and Sewer Committee, held Tuesday, August 20, 2024 at 9:30 a.m., In the Goldstream Conference Room, 479 Island Highway, Victoria, BC

PRESENT: Commissioners: M. Fossil (Chair); A. Cyr (EP); R. Sullivan (EP); M. Rondeau (EP)
Staff: J. Marr, Senior Manager, Infrastructure Engineering; D. Robson, Manager, Saanich Peninsula and Gulf Islands Operations; M. Cowley, Manager, Wastewater Engineering and Planning; J. Kelly, Manager, Capital Projects; D. Dionne, Administrative Coordinator (Recorder)

REGRETS: P. Brent; J. Deschenes; D. Reed

EP = Electronic Participation

The meeting was called to order at 9:47 am.

1. TERRITORIAL ACKNOWLEDGEMENT

The Chair provided an acknowledgement.

2. APPROVAL OF AGENDA

Senior Manager's Update was added to the agenda as Item 6 moving Committee Business to Item 7 and all other subsequent items are moved up by one number.

MOVED by M. Rondeau, **SECONDED** by R. Sullivan,
 That the agenda be approved as amended.

CARRIED

3. ADOPTION OF MINUTES

MOVED by M. Rondeau, **SECONDED** by A. Cyr,
 That the minutes of the June 11, 2024 Magic Lake Estates Water and Sewer Committee meeting be adopted.

CARRIED

4. CHAIR'S REMARKS

The Chair made no remarks.

5. PRESENTATIONS/DELEGATIONS

There were none.

6. SENIOR MANAGER'S REPORT

6.1. Status of Water Loss

The Operations Team did some investigation and found two sizeable leaks within the system. D. Robson shared a graph showing the water spikes (graph on file). He noted repairs were made at two locations on Foc'sle Road and another leak was detected. This was repaired the first week of August. The graph shows the remarkable drop in flow.

It has only been a couple of weeks since the leaks were repaired, but staff are seeing between 150 and 200 cubic meters a day reduction in flow, which is a lot. Staff will continue with its leak detection work and provide updates in the Operations report.

6.2. Expiring Membership

An email was sent to the Committee advising of members whose term is expiring on December 31, 2024:

- Jean Deschenes
- David Reed
- Annette Cyr

The vacancies will be advertised in local newspapers and on social media. The deadline for nominations to be received is Thursday, October 24, 2024.

7. COMMITTEE BUSINESS

7.1. Project and Operations Update

Magic Lake Estates Water Capital Projects Update

Staff provided a summary of capital projects and operational updates with the following additional information provided.

- Staff are reviewing with an engineer how to assess the leak detected on the Buck Lake dam crest. Currently sound equipment is used and may need to use “leak gas detection” for this leak instead. Gas is injected into the system so that there is no digging multiple holes on the dam to determine where the leak is.

Staff responded to questions regarding:

- Real time pressure monitoring devices. Staff confirmed these are temporary for the leak detection process and are still waiting for data from them. They will be removed when complete and may be deployed again another time.
- Water flowing into Buck Lake near the corner of Galleon and Tiller. Staff confirmed that they are aware of this and have been out and completed some tests.
- Magic Lake Intake line being tampered with. Staff received an emergency alarm from SCADA and responded. The intake was raised, and staff did some cleaning. Since then, staff have noticed that it has floated. Magic Lake has been shut down due to an algae bloom and water is currently on 100% Buck Lake flow. This may have resulted in some air in the intake, staff will advise the team and they will re-sink it.

Magic Lake Estates Sewer Project:

Staff provided a summary of the project noting that it is 90% complete and provided the following additional information:

- The plan, if all goes well with the wet weather and dry weather testing, is to introduce wastewater into the plant on September 16.
- Schooner pumpstation: Staff have retained Big Digum Excavating to do the excavation work there and the consultants will be on site directing the final restoration and clean up.

Staff responded to questions from the Committee regarding:

- Percentage of water coming through the restoration area versus the culvert at Tiller Road. Staff advised that the restoration area is a designated wetland and a water intake area. Staff suspect there is a damaged or collapsed culvert and have notified Ministry of Transportation, Highways and Infrastructure that the culvert under the road should be replaced. Percentage of water intake in this location would be fairly small compared to Tiller Road.
- Funds for decommissioning Canon Wastewater Treatment Plant. Staff advised that there will be modest decommissioning happening at Canon. Once the new system is up and running and staff have confidence in it. Will be maintaining the infrastructure for emergency purposes. Over time unnecessary equipment would be removed. Same goes for Schooner Wastewater Treatment Plant.

Wastewater Operations Update

Staff provided a summary of capital projects and operational updates.

J. Marr advised that there was a request from the Southern Gulf Island Community Economic Sustainability Commission for an update on the Wastewater Treatment Plant. J. Marr will connect with the Chair on how to respond.

8. NEW BUSINESS

M. Rondeau brought forward the following new business items for information and discussion:

8.1. Hole in Fence on Buck Lake

She advised that there is a hole in the chain link fence at Buck Lake and people are using it to access the lake. Staff enquired as to which chain link fence as there are two. M. Rondeau stated that she would get the exact location and provide to staff.

8.2. Magic Lake Property Owners Society (MLPOS) Bullfrog Eradication on Buck Lake

She advised that the members of the MLPOS participated in a Bullfrog eradication at Buck Lake. She noted that it is likely to happen again next year.

8.3. Concerns with Public Communications Process by Committee Members

She raised the following concerns she had with a recent Facebook post by a Magic Lake Estates Water and Sewer Committee member:

- The social media post, urging homeowners to check for leaks, was posted without authorization from the Capital Regional District (CRD).
- In the post, the Committee member stated that they were speaking on behalf of the CRD and the Magic Lake Water and Sewer Committee.

With these two concerns noted, she asked that the Committee tighten up its communication process. Noting that, while a committee member may have concerns, they should not be speaking on behalf of the CRD or the Committee. Communication to the public, when warranted, should be coming from CRD staff.

Staff advised that if they had any urgent concerns related to the leak they would vet a proper communications document through the CRD’s Corporate Communications department and that would be published to the public via the CRD’s social media following the proper communications protocol. That communication could then be shared out via personal social media accounts.

The Committee member stated that they were very concerned about the water loss and felt the amount was huge. They stated they were uncomfortable with the lack of communication from the CRD, since, while reviewing the Annual Report in June they happened to notice that there was a water loss up to 6,000 cubic meters per month and didn’t understand why the committee wasn’t notified. They felt they were just trying to be helpful and apologized for mis-wording the post as on behalf of the CRD and the Committee.

The Chair stated that the Committee has is a certain role and must be careful about communicating with the public as an individual, as it presents a sense that the whole committee is in concurrence. He noted that the CRD has professionals dealing with the operations on a day-to-day basis and that if there is something they need our role is to support that.

There was a discussion regarding when the committee would be notified of an issue, and staff advised that the standard practice is to notify committee when there is a real concern. Staff don’t communicate most operational items unless there is some urgency.

The Chair stated that when the Committee saw that big spike at the last meeting, it did raise eyebrows and members had the opportunity to question and get feedback. He wasn’t concerned because he knew that staff were not concerned and were looking after it. This has been a great learning and discussion point. Going forward we will consider some communications guidelines for the committee.

9. ADJOURNMENT

MOVED by M. Rondeau, **SECONDED** by A. Cyr,
That the August 20, 2024 Magic Lake Estates Water and Sewer Committee meeting be adjourned at 10:49 am.

CARRIED

CHAIR

SECRETARY



Making a difference...together

**REPORT TO MAGIC LAKE ESTATES WATER AND SEWER COMMITTEE
MEETING OF TUESDAY, OCTOBER 29, 2024**

SUBJECT **Magic Lake Estates Water and Sewer Service 2025 Operating and Capital Budget**

ISSUE SUMMARY

To present the 2025 Operating and Capital Budget for Committee approval pursuant to Bylaw No. 2339 "Magic Lake Estates Water and Sewer Committee Bylaw 1995".

BACKGROUND

The Capital Regional District (CRD) is required by legislation under the *Local Government Act* (LGA) to prepare an annual Operating and Capital budget and a five-year Financial Plan. CRD staff have, therefore, prepared the financial plans for the following services:

- Magic Lake Estates Water System Local Service (Appendix A)
- Magic Lake Estates Sewerage System Local Service (Appendix B)

The Operating Budgets include the regular annual costs to operate the service. The Capital Expenditure Plan shows the anticipated expenditures for capital additions. These may include purchases of new assets or infrastructure upgrades, improvements to existing assets or asset review and study work potentially leading to future capital improvements.

In preparing the Operating Budget, CRD staff considered:

- Actual expenditures incurred between 2022 and 2024
- Anticipated changes in level of service (if any)
- Maximum allowable tax requisition
- Annual cost per taxpayer and per single family equivalent (SFE)

In preparing the Capital Expenditure Plan, CRD staff considered:

- Available funds on hand
- Projects in progress
- Condition of existing assets and infrastructure
- Regulatory, environmental and health and safety factors

Adjustments for surpluses or deficits from 2024 may be made in January 2025. The CRD Board will give final approval to the budget and financial plan in March 2025.

The Financial Plan for the years 2026 – 2029 may be changed in future years.

BUDGET OVERVIEW

Magic Lake Estates Water System Local Service (Appendix A)

Operating Budget

It is projected that the 2024 operating expenses will be approximately \$44,967 over budget.

Magic Lake Estates Water and Sewer Committee – October 29, 2024
Magic Lake Estates Water and Sewer Service 2025 Operating and Capital Budget **2**

Factors contributing to the operating overage include emergency response and corrective maintenance primarily due to the following events:

- Water system leak repairs:
 - Pirates Road water service line failure
 - Frigate Road water service line failure
 - Foc'sle Road water main leak repairs (x2)
 - Bosuns pressure regulating/pump station operational site
 - Anchor Way auto-flush service line leak
 - Spyglass water main leak repair (located within the Buck Lake West Dam)
- Replacement of the Buck Lake Pump Station uninterruptable power supply (UPS) electrical equipment.
- Schooner Water Treatment Plant network computer repairs.
- Significant operational effort performing water system leak investigations.
- Buck Lake and Magic Lake Dam corrective maintenance.

It is projected that the 2024 operating revenue will be \$3,010 lower than budget primarily due to projected lower water sales revenue.

As a result, there is an overall operating deficit of approximately \$47,977. To balance the operating budget, it is proposed that the 2024 transfer to the Capital Reserve Fund (CRF) in the amount of \$42,060 not be made and that the 2024 transfer to the Operating Reserve Fund (ORF) be decreased by \$5,917.

Operating costs for 2025 (excluding 2025 one-time cyclical program funded by the Operating Reserve Fund (ORF) in the amount of \$45,000 for fire hydrant corrective maintenance and Schooner Water Treatment Plant tank inspection) has increased by \$38,973 (5.3%) compared to 2024. The increase is primarily to account for core inflation, adjustments for chemical supplies and labour costs reflecting the renewed collective agreement since 2023.

Municipal Finance Authority (MFA) Debt

Loan Authorization Bylaw 3633 (LA3633) was approved and adopted in 2009 to borrow \$2,560,000 to upgrade water treatment and water systems. Table 1 below summarizes the detailed information for existing MFA debt issue related to LA3633.

Table 1 – Existing Debt Summary

<i>MFA Issues</i>	<i>Term</i>	<i>Borrowing Year</i>	<i>Retirement Year</i>	<i>Refinance Year</i>	<i>Original Interest Rate</i>	<i>Current Interest Rate</i>	<i>Principal</i>	<i>Principal Payment</i>	<i>Interest Payment</i>	<i>Total Annual Debt Cost</i>
LA3633-110	15	2010	2025	2020	4.50%	1.28%	\$723,000	\$38,812	\$9,254	\$48,066
LA3633-116	15	2011	2026	2021	4.20%	1.47%	\$250,000	\$13,420	\$3,675	\$17,095
LA3633-121	15	2012	2027	2022	2.90%	2.90%	\$559,500	\$30,035	\$18,967	\$49,002
LA3633-124	15	2013	2028	2023	3.15%	4.52%	\$1,002,500	\$53,816	\$45,313	\$99,129
LA3633-126	15	2013	2028	2023	3.85%	4.52%	\$25,000	\$1,342	\$1,130	\$2,472
Total							\$2,560,000	\$137,425	\$78,339	\$215,764

Operating Reserve Fund

The Operating Reserve Fund (ORF) is used to fund cyclical maintenance activities, equipment and supplies purchases that typically do not occur on an annual basis to mitigate the swings in expense and revenue requirement year over year. Typical maintenance activities include hydrant/standpipe maintenance, reservoir cleaning and inspection and ground water well servicing. Additionally, the ORF is also used to respond to unforeseen events and operating emergencies.

The ORF transfers planned in the budget are evaluated and guided by the CRD Operating Reserve Guidelines endorsed by the CRD Board.

It is proposed that 2025 transfers to the operating reserve fund be set at \$18,000. The Operating Reserve Fund balance at the end of 2024 is projected to be approximately \$54,024. There is \$85,000 of planned maintenance to be funded by the ORF over the next five years.

Capital Reserve Fund

The Capital Reserve Fund (CRF) is to be used to pay for capital expenditures that are not funded by other sources such as grants, operating budget, or debt.

The CRF transfers planned in the budget are evaluated and influenced by the funding required to support the five-year capital expenditure plan and the emergency response to infrastructure failures, also guided by the CRD Capital Reserve Funding Guidelines endorsed by the CRD Board.

It is proposed that the budgeted transfer to the CRF be set at \$48,885 in 2025. The capital reserve fund balance at the end of 2024 is projected to be \$448,782.

In addition to the general CRF outlined above, there is a separate reserve fund from the insurance settlement of \$592,842 in 2021, which is dedicated to fund the Water Treatment Plant Upgrades in the future. This balance at the end of 2024 is projected to be \$673,208.

Capital Expenditure Plan

The 5-year plan includes \$2,707,000 of expenditures to be funded by a combination of capital on hand, the service's CRF, and future debt.

Proposed 2025 capital expenditures include continuation of Phase 1 Buck Lake Dam repairs (21-04), ISOPAC permanent handling and storage improvements, concept design for Captains Tank upgrades and WTP Process Pipe condition assessment update.

Other future planned works include Phase 2 Buck Lake Dam Repairs (26-01), funded by CRF, and a Watermain Replacement program (27-01) funded by future debt, pending a successful Alternative Approval Process (26-03) to obtain elector input into this borrowing proposal.

Table 2 below provides the future debt servicing cost simulation for analytical purposes with the indicative interest rate provided by MFA at the time of simulation. The debt servicing is for Water Main Replacement project for a total of \$2,000,000. Please refer to the 2025 – 2029 Five Year Capital Plan for details.

Table 2 – Future New Debt Simulation

Future Borrowing(s) Estimation	Term	Borrowing Year	Retirement Year	Estimated Interest Rate	Principal	Principal Payment	Interest Payment	Total Annual Debt Cost
	25	2027	2052	4.40%	\$200,000	\$5,067	\$8,800	\$13,867
	25	2028	2053	4.40%	\$800,000	\$20,267	\$35,200	\$55,467
	25	2029	2054	4.40%	\$1,000,000	\$25,334	\$44,000	\$69,334
Total					\$2,000,000	\$50,668	\$88,000	\$138,668

At the commencement of each loan, 1% of the gross amount borrowed is withheld and retained by MFA as Debt Reserve Fund (DRF). To provide the full amount to fund the capital project, this 1% DRF amount is budgeted in operating budget in the year of borrowing. However, there is no principal payment required in the year of borrowing. The estimated debt servicing cost of \$138,668 equates to approximately \$115.94 cost per parcel.

Capital Projects Fund

As specific capital projects are approved, the funding revenues for them are transferred into the capital project fund from multiple funding sources if applicable, including CRF, grant funding, external contributions, and debt. Any funds remaining upon completion of a project are transferred back to the CRF for use on future capital projects or its original non-CRF funding sources if required.

User Charge and Parcel Tax

The service is funded by fixed user charges, parcel taxes, and variable water consumption charges. Properties connected to the water system pay the annual user charge and water consumption and all properties within the local service area are responsible for the parcel tax. The tiered water consumption rates remain unchanged from 2024.

Table 3 below summarizes the 2025 over 2024 changes for parcel tax and user charge.

Table 3 – Parcel Tax and User Charge Summary

Budget Year	Parcel Tax	Taxable Folios Numbers	Parcel Tax per Folio*	User Charge	SFE Numbers	User Charge per SFE	Parcel Tax & User Charge
2024	\$580,060	1,196	\$510.46	\$396,230	1,072	\$369.62	\$880.08
2025	\$597,460	1,196	\$525.77	\$427,931	1,082	\$395.50	\$921.27
Change (\$)	\$17,400	0	\$15.31	\$31,701	10	\$25.88	\$41.19
Change (%)	3.00%	0.00%	3.00%	8.00%	0.93%	7.00%	4.68%

* Includes the 5.25% admin fee charged by the Ministry of Finance (not CRD revenue)

Magic Lake Estates Sewerage System Local Service (Appendix B)

Operating Budget

It is projected that the 2024 operating expenses will be approximately \$54,285 over budget. Factors contributing to the projected overage include emergency response and corrective maintenance primarily due to the following events:

- Schooner Wastewater Treatment Plant capital project operational involvement for facility commissioning and operational staff training.
- Schooner Wastewater Treatment Plant air blower equipment failure.
- Buccaneers Pump Station pump control float replacements.
- Cutlass Pump Station pump replacement.
- Cannon Wastewater Treatment Plant process pump replacement.
- Several weather-related emergency responses affecting facility infrastructure and wastewater treatment processes that require environmental incident response and reporting.

It is projected that the 2024 operating revenue will be on budget.

As a result, there is an overall estimated operating deficit of approximately \$54,285. To balance the operating budget, it is proposed that the planned 2024 CRF transfer be reduced by \$41,025 and the 2024 ORF transfer of \$13,260 not be made. Otherwise, the deficit must immediately be included as an expenditure to be recovered from revenue in 2025 financial plan as required by *Local Government Act* Section 374(11).

Operating costs for 2025 has been increased by \$43,815 (6.4%) compared to 2024. The increase is primarily to account for core inflation, adjustments for chemical supplies, wastewater screenings hauling and disposal, facility cleaning contract services and labour costs reflecting the renewed collective agreement since 2023.

Municipal Finance Authority Debt

Loan Authorization Bylaw 4048 (LA4048) to borrow \$1,530,000 was approved and adopted in 2016 for the wastewater system renewal and upgrade. Table 4 below summarizes the detailed information for existing MFA debt issues related to LA4048.

Table 4 – Existing Debt Summary (applicable to all Properties in the service area)

<i>MFA Issues</i>	<i>Term</i>	<i>Borrowing Year</i>	<i>Retirement Year</i>	<i>Refinance Year</i>	<i>Interest Rate</i>	<i>Principal</i>	<i>Principal Payment</i>	<i>Interest Payment</i>	<i>Total Annual Debt Cost</i>
LA4048-139	10	2016	2026	NA	2.10%	\$745,000	\$64,987	\$15,645	\$80,632
LA4048-142	10	2017	2027	NA	3.15%	\$250,000	\$21,808	\$7,875	\$29,683
LA4048-146	10	2018	2028	NA	3.20%	\$535,000	\$46,668	\$17,120	\$63,788
Total						\$1,530,000	\$133,463	\$40,640	\$174,103

Loan Authorization Bylaw 4320 (LA4320) to borrow up to \$6,000,000 was approved and adopted in 2019 for Wastewater Treatment Plant Improvements. One-time lump-sum special payment option was provided to the ratepayers and 137 properties exercised the payment option. As the result, \$1,130,268 was collected from lump-sum payments. In 2021, total of \$3,760,000 was borrowed through two debt issuances, LA4320-153 in the spring and LA4320-156 in the fall, and another \$1,000,000 was borrowed through LA4320-157 in the spring of 2022 to finance the Wastewater Treatment Plant Improvements project. Only the properties that didn't exercise the one-time lump sum payment option will pay the debt servicing cost related to LA4320 for the debt term of 30 years.

Table 5 below summarizes the detailed information for existing MFA debt issues related to LA4320.

Table 5 – Existing Debt Summary (only applicable to properties no one-time payment received)

<i>MFA Issues</i>	<i>Term</i>	<i>Borrowing Year</i>	<i>Retirement Year</i>	<i>Refinance Year</i>	<i>Interest Rate</i>	<i>Principal</i>	<i>Principal Payment</i>	<i>Interest Payment</i>	<i>Total Annual Debt Cost</i>
LA4320-153	30	Spring 2021	2051	2031	2.41%	\$2,500,000	\$59,248	\$60,250	\$119,498
LA4320-156	30	Fall 2021	2051	2031	1.98%	\$1,260,000	\$29,861	\$24,948	\$54,809
LA4320-157	30	Spring 2022	2052	2032	3.36%	\$1,000,000	\$22,778	\$33,600	\$56,378
Total						\$4,760,000	\$111,887	\$118,798	\$230,685

Operating Reserve Fund

The Operating Reserve Fund (ORF) is used to fund cyclical maintenance activities, equipment and supplies purchases that typically do not occur on an annual basis to mitigate the swings in expense and revenue requirement year over year. Typical maintenance activities include hydrant/standpipe maintenance, reservoir cleaning and inspection and ground water well servicing. Additionally, the ORF is also used to respond to unforeseen events and operating emergencies.

The ORF transfers planned in the budget are evaluated and guided by the CRD Operating Reserve Guidelines endorsed by the CRD Board.

It is proposed that 2025 transfers to the Operating Reserve Fund be set at \$15,000. The Operating Reserve Fund balance at the end of 2024 is projected to be approximately \$30,541. There is \$55,000 of planned maintenance to be funded by the Operating Reserve Fund over the next five years.

Capital Reserve Fund

The Capital Reserve Fund (CRF) is to be used to pay for capital expenditures that are not funded by other sources such as grants, operating budget, or debt.

The CRF transfers planned in the budget are evaluated and influenced by the funding required to support the five-year capital expenditure plan and the emergency response to infrastructure failures, also guided by the CRD Capital Reserve Funding Guidelines endorsed by the CRD Board.

It is proposed that the budgeted transfer to the CRF be set at \$46,000 in 2025. The capital reserve balance at the end of 2024 is projected to be approximately \$416,450.

Capital Expenditure Plan

The 5-year plan includes \$2,805,000 of expenditures to be funded by a combination of capital on hand, the service’s CRF, grants, and future debt. In 2025, \$460,000 in expenditures are forecasted, which is primarily for close out costs associated with the larger Wastewater Treatment Plant and Pump Station improvements projects that were completed through 2024, in addition to funding for a replacement towable generator.

Other future planned works include:

- Renewal of Buccaneer, Capstan, Cutlass and Masthead pump stations (27-02), with some planning/design efforts within the 5-year period funded by CRF and physical improvements to be deferred in attempts of receiving grant funding to support;
- Closed-circuit television (CCTV) inspections of AC pipe (28-01), funded by CRF, with the intent of prioritizing pipelines for replacement; and
- AC Sewer Pipe Replacement (28-03) as a placeholder budget to begin replacement of AC sewer pipes. This program is proposed to be funded by future debt, which will be subject to a successful Alternative Approval Process (27-01) to obtain elector input into this borrowing proposal.

Table 6 below provides the future debt servicing cost simulation for analytical purposes with the indicative interest rate provided by MFA at the time of simulation. The debt servicing is for two (2) projects for a total of \$2,100,000. Please refer to the 2025 – 2029 Five Year Capital Plan for details on these projects.

Table 6 – Future New Debt Simulation

Future Borrowing(s) Estimation	Term	Borrowing Year	Retirement Year	Estimated Interest Rate	Principal	Principal Payment	Interest Payment	Total Annual Debt Cost
	25	2028	2053	4.40%	\$800,000	\$20,267	\$35,200	\$55,467
	25	2029	2054	4.40%	\$1,300,000	\$32,934	\$57,200	\$90,134
Total					\$2,100,000	\$53,201	\$92,400	\$145,601

At the commencement of each loan, 1% of the gross amount borrowed is withheld and retained by MFA as Debt Reserve Fund (DRF).

To provide the full amount to fund the capital project, this 1% DRF amount is budgeted in operating budget in the year of borrowing. However, there is no principal payment required in the year of borrowing. The estimated debt servicing cost of \$145,601 equates to approximately \$205.36 cost per parcel.

Capital Projects Fund

As specific capital projects are approved, the funding revenues for them are transferred into the Capital Project Fund from multiple funding sources if applicable, including CRF, grant funding, external contributions, and debt. Any funds remaining upon completion of a project are transferred back to the CRF for use on future capital projects or its original non-CRF funding sources if required.

User Charge and Parcel Tax

The service is mainly funded by user charge and parcel tax. Properties connected to the wastewater system pay the annual user charge and all properties within the local service area are responsible for the parcel tax. Table 7 below summarizes the 2025 over 2024 changes for parcel tax and user charge.

Table 7 – Parcel Tax 1 and User Charge Summary

Budget Year	Parcel Tax 1	Taxable Folios Numbers	Parcel Tax per Folio*	User Charge	SFE Numbers	User Charge per SFE	Parcel Tax & User Charge
2024	\$606,635	709	\$900.54	\$291,047	651	\$447.08	\$1,347.62
2025	\$624,830	709	\$927.55	\$317,390	651	\$487.54	\$1,415.09
Change (\$)	\$18,195	0	\$27.01	\$26,343	0	\$40.46	\$67.47
Change (%)	3.00%	0.00%	3.00%	9.05%	0.00%	9.05%	5.01%

* Includes the 5.25% admin fee charged by the Ministry of Finance (not CRD revenue)

In 2020 property owners were provided the option of paying a one-time lump sum of \$8,249.30 for their share of the cost of the Wastewater Treatment Plant Upgrade or to pay debt servicing costs over 30 years through parcel tax. The new debt servicing cost must be budgeted and levied separately through a second parcel tax roll (Parcel Tax 2) in order to facilitate a parcel tax only levied to those taxable folios that did not pay the lump-sum.

The estimated parcel tax on the second parcel roll (Parcel Tax 2) related to the debt servicing cost is displayed in Table 8 below. Parcel Tax 2 excludes 137 folios that elected to pay one-time lump sums totaling \$1,130,268.

Table 8 – Parcel Tax 2 Summary – New Debt Only

Budget Year	Parcel Tax 2	Taxable Folios Numbers	Parcel Tax per Folio*
2024	\$229,459	573	\$421.48
2025	\$229,455	573	\$421.47
Change (\$)	-\$4	0	-\$0.01
Change (%)	0.00%	0.00%	0.00%

* Includes the 5.25% admin fee charged by the Ministry of Finance (not CRD revenue)

A summary of total parcel tax (1 and 2) and user charge arranged by payment option on new debt is displayed in table 9 below.

Table 9 – Comparative - Total Parcel Tax and User Charge per Folio by Payment Option

Parcel Tax and User Charge	2024	2025 Lump-sum option			2025 Debt-servicing option		
		Amount	Change (\$)	Change (%)	Amount	Change (\$)	Change (%)
Parcel Tax 1	\$900.54	\$927.55	\$27.01	3.00%	\$927.55	\$27.01	3.00%
Parcel Tax 2	\$421.48				\$421.47	-\$0.01	0.00%
User Charge	\$447.08	\$487.54	\$40.46	9.05%	\$487.54	\$40.46	9.05%
Total	\$1,769.10	\$1,415.09	\$67.47	5.01%	\$1,836.56	\$67.46	3.81%

RECOMMENDATION

1. That the Magic Lake Estates Water System Local Service 2025 operating and capital budget be approved as presented and that the 2024 actual operating deficit be balanced on the 2024 Reserve Funds transfer (Capital Reserve Fund and/or Operating Reserve Fund); and
2. That the Magic Lake Estates Sewerage System Local Service 2025 operating and capital budget be approved as presented and that the 2024 actual operating surplus or deficit be balanced on the 2024 Reserve Funds transfer (Capital Reserve Fund and/or Operating Reserve Fund); and
3. The Magic Lake Estates Water and Sewer Committee recommends that the Electoral Areas Committee recommend that the Capital Regional District Board approve the 2025 Operating and Capital Budget and the five-year Financial Plan for the Magic Lake Estates Water and Sewer Services as presented.

Submitted by:	Jason Dales, B.SC., WD IV, Senior Manager, Wastewater Infrastructure Operations
Submitted by:	Joseph Marr, P.Eng., Senior Manager, Infrastructure Engineering
Concurrence:	Varinia Somosan, CPA, CGA, Senior Manager, Financial Services / Deputy CFO
Concurrence:	Alicia Fraser, P. Eng., General Manager, Integrated Water Services
Concurrence:	Ted Robbins, B. Sc., C. Tech., Chief Administrative Officer

ATTACHMENT(S)

- Appendix A: 2025 Magic Lake Water Service Budget
- Appendix B: 2025 Magic Lake Sewer Service Budget

CAPITAL REGIONAL DISTRICT

2025 Budget

Magic Lake Water

Commission Review

OCTOBER 2024

Service: 2.630 Magic Lake Estates Water

Committee: Electoral Area

DEFINITION:

LSA -1 To provide and operate water supply and distribution facilities for the Magic Lake Estates Water System. Specified Area on North Pender Island. Bylaw No. 1874 (June 11, 1991).

PARTICIPATION:

Local Service Area # 1 - D(764) LSA #9.

MAXIMUM LEVY:

Greater of \$160,000 or \$3.50 / \$1,000 of actual assessed value of land and improvements.

COMMITTEE:

Magic Lake Estates Water & Sewer Committee established by Bylaw No. 1870 (November 28, 1990).

FUNDING:

Any deficiencies after user charge and/or frontage tax or parcel tax to be levied on taxable school assessments.

- User Charge:** Annual charge per single family equivalency unit connected to the system.
The consumption charge for water will be the total volume of water metered to the water service connections, measured in cubic meters at the following rate:
- Greater than 50 cubic metres - \$0.50 / cubic metre
 - Greater than 80 cubic metres - \$1.50 / cubic metre
- Parcel Tax:** LSA-1 Annual charge only on properties capable of being connected to the system.
- Turn on/Turn Off Fee:** \$0 during normal working hours; \$25 outside of normal working hours
- Connection Charges:** Actual Engineering and Construction costs, plus 15% Administration costs. The minimum charge is \$500

RESERVE FUND:

Magic Lake Estates - Water System Capital Reserve Fund. Bylaw No. 1498
Magic Lake Estates - Water System Operating Reserve Fund. Bylaw No. 4144

2.630 - Magic Lake Water	2024		BUDGET REQUEST				FUTURE PROJECTIONS			
	BOARD BUDGET	ESTIMATED ACTUAL	CORE BUDGET	ONGOING	ONE-TIME	TOTAL	2026	2027	2028	2029
<u>OPERATING COSTS</u>										
Repairs & Maintenance	25,710	45,040	26,470	-	45,000	71,470	67,000	27,540	28,080	28,650
Allocations	57,263	57,263	59,519	-	-	59,519	61,090	62,314	63,566	64,845
Water Testing	21,643	23,800	22,060	-	-	22,060	15,715	16,029	16,350	16,677
Electricity	52,480	53,300	54,050	-	-	54,050	55,130	56,230	57,350	58,500
Supplies	58,800	54,290	64,450	-	-	64,450	65,740	67,060	68,400	69,770
Labour Charges	466,700	485,000	488,120	-	-	488,120	497,878	507,837	517,997	528,359
Other Operating Expenses	58,210	67,080	65,110	-	-	65,110	67,608	70,276	73,152	76,229
TOTAL OPERATING COSTS	740,806	785,773	779,779	-	45,000	824,779	830,161	807,286	824,895	843,030
*Percentage Increase over prior year			5.3%		6.1%	11.3%	0.7%	-2.8%	2.2%	2.2%
<u>DEBT / RESERVES</u>										
Transfer to Operating Reserve Fund	10,000	4,083	18,000	-	-	18,000	60,000	60,000	60,000	60,000
Transfer to Capital Reserve Fund	42,060	-	48,885	-	-	48,885	72,585	98,250	158,520	193,335
MFA Debt Reserve Fund	740	740	1,070	-	-	1,070	1,070	3,070	9,070	11,070
MFA Debt Principal	137,425	137,425	137,425	-	-	137,425	98,613	85,193	60,225	25,334
MFA Debt Interest	78,339	78,339	73,712	-	-	73,712	67,248	67,610	41,387	55,000
TOTAL DEBT / RESERVES	268,564	220,587	279,092	-	-	279,092	299,516	314,123	329,202	344,739
TOTAL COSTS	1,009,370	1,006,360	1,058,871	-	45,000	1,103,871	1,129,677	1,121,409	1,154,097	1,187,769
*Percentage Increase over prior year			4.9%		4.5%	9.4%	2.3%	-0.7%	2.9%	2.9%
<u>FUNDING SOURCES (REVENUE)</u>										
Transfer from Operating Reserve Fund	-	-	-	-	(45,000)	(45,000)	(40,000)	-	-	-
Sales - Water	(22,000)	(16,400)	(22,000)	-	-	(22,000)	(22,000)	(22,000)	(22,000)	(22,000)
User Charges	(396,230)	(398,820)	(427,931)	-	-	(427,931)	(440,767)	(453,989)	(467,607)	(481,639)
Lease Revenue	(8,100)	(8,100)	(8,100)	-	-	(8,100)	(8,100)	(8,100)	(8,100)	(8,100)
Other Revenue	(2,980)	(2,980)	(3,380)	-	-	(3,380)	(3,430)	(3,480)	(3,530)	(3,580)
TOTAL REVENUE	(429,310)	(426,300)	(461,411)	-	(45,000)	(506,411)	(514,297)	(487,569)	(501,237)	(515,319)
REQUISITION - PARCEL TAX	(580,060)	(580,060)	(597,460)	-	-	(597,460)	(615,380)	(633,840)	(652,860)	(672,450)
*Percentage increase over prior year										
Sales - Water			0.0%			0.0%	0.0%	0.0%	0.0%	0.0%
User Fees			8.0%			8.0%	3.0%	3.0%	3.0%	3.0%
Requisition			3.0%			3.0%	3.0%	3.0%	3.0%	3.0%
Combined			4.9%			4.9%	2.9%	2.9%	2.9%	2.9%

**Magic Lake Water
Reserve Summary Schedule
2025 - 2029 Financial Plan**

Reserve/Fund Summary

	Estimated	Budget				
	2024	2025	2026	2027	2028	2029
Operating Reserve Fund	54,024	27,024	47,024	107,024	167,024	227,024
Capital Reserve Fund	448,782	447,667	298,252	321,502	420,022	533,357
Capital Reserve Fund - Settlement Fund	673,208	573,208	573,208	573,208	573,208	573,208
Total	1,176,014	1,047,899	918,484	1,001,734	1,160,254	1,333,589

Reserve Schedule

Reserve Fund: 2.630 Magic Lakes Estate Water - Operating Reserve Fund - Bylaw 4144

Reserve fund used for: unforeseen operational repairs and maintenance; infrequent maintenance activities such as reservoir cleaning and inspection, hydrant maintenance etc.

Reserve Cash Flow

Fund:	1500	Estimated	Budget				
		2024	2025	2026	2027	2028	2029
Fund Centre:	105212						
Beginning Balance		47,811	54,024	27,024	47,024	107,024	167,024
Transfer from Ops Budget		4,083	18,000	60,000	60,000	60,000	60,000
Transfer to Ops Budget		-	(45,000)	(40,000)	-	-	-
Planned Maintenance Activity			Fire Hydrant Corrective Maintenance & WTP ROV inspection	Frigate & Captains Reservoir cleaning & inspection			
Interest Income*		2,130					
Ending Balance \$		54,024	27,024	47,024	107,024	167,024	227,024

Assumptions/Background:
 * Interest in planning years nets against inflation which is not included.

Reserve Schedule

Reserve Fund: 2.630 Magic Lakes Estate Water - Capital Reserve Fund
--

Bylaw 1498

Reserve Cash Flow

Fund:	1024	Estimated	Budget				
Fund Centre:	101368	2024	2025	2026	2027	2028	2029
Beginning Balance		531,782	448,782	447,667	298,252	321,502	420,022
Transfer from Ops Budget		-	48,885	72,585	98,250	158,520	193,335
Transfer to Cap Fund		(105,000)	(50,000)	(222,000)	(75,000)	(60,000)	(80,000)
Transfer from Cap Fund		-					
Interest Income*		22,000					
Ending Balance \$		448,782	447,667	298,252	321,502	420,022	533,357

<u>Assumptions/Background:</u>

* Interest in planning years nets against inflation which is not included.
--

Reserve Schedule

Reserve Fund: 2.630 Magic Lakes Estate Water - Capital Reserve Fund (Settlement Funds)

Bylaw 1498

Reserve Cash Flow

Fund:	1024	Estimated	Budget				
Fund Centre:	102245	2024	2025	2026	2027	2028	2029
Beginning Balance		644,468	673,208	573,208	573,208	573,208	573,208
Transfer to Cap Fund		-	(100,000)	-	-	-	-
Interest Income*		28,740					
Ending Balance \$		673,208	573,208	573,208	573,208	573,208	573,208

<u>Assumptions/Background:</u>

* Interest in planning years nets against inflation which is not included.
--

**CAPITAL REGIONAL DISTRICT
FIVE YEAR CAPITAL EXPENDITURE PLAN SUMMARY - 2025 to 2029**

Service No.	2.630 Magic Lake Estates Water (Pender)	Carry Forward from 2024	2025	2026	2027	2028	2029	TOTAL
--------------------	--	--------------------------------	-------------	-------------	-------------	-------------	-------------	--------------

EXPENDITURE

Buildings	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Equipment	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Land	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Engineered Structures	\$155,000	\$270,000	\$222,000	\$275,000	\$860,000	\$1,080,000	\$2,707,000	\$2,707,000
Vehicles	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
	\$155,000	\$270,000	\$222,000	\$275,000	\$860,000	\$1,080,000	\$2,707,000	\$2,707,000

SOURCE OF FUNDS

Capital Funds on Hand	\$120,000	\$120,000	\$0	\$0	\$0	\$0	\$0	\$120,000
Debenture Debt (New Debt Only)	\$0	\$0	\$0	\$200,000	\$800,000	\$1,000,000	\$2,000,000	\$2,000,000
Equipment Replacement Fund	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Grants (Federal, Provincial)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Donations / Third Party Funding	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Reserve Fund	\$35,000	\$150,000	\$222,000	\$75,000	\$60,000	\$80,000	\$587,000	\$587,000
	\$155,000	\$270,000	\$222,000	\$275,000	\$860,000	\$1,080,000	\$2,707,000	\$2,707,000

Definitions for the 5-year Capital Plan

Asset Class	<p>Asset class is used to classify assets for financial reporting in accordance with the Public Sector Accounting Board (PSAB) 3150.</p> <p>L - Land S - Engineering Structure B - Buildings V - Vehicles E - Equipment</p>
Capital Expenditure Type	<p>Capital expenditure type is used for reporting on asset investments and may be used to justify operational needs for a service.</p> <p>Study - Expenditure for feasibility and business case report. New - Expenditure for new asset only Renewal - Expenditure upgrades an existing asset and extends the service ability or enhances technology in delivering that service Replacement - Expenditure replaces an existing asset</p>
Carryforward	<p>Represents the carryforward amount from the prior year capital plan that is remaining to be spent. Forecast this spending over the next 5 years.</p>
Funding Source	<p>Debt - Debenture Debt (new debt only) ERF - Equipment Replacement Fund Grant - Grants (Federal, Provincial) Cap - Capital Funds on Hand Other - Donations / Third Party Funding Res - Reserve Fund WU - Water Utility</p> <p>If there is more than one funding source, additional rows are shown for the project.</p>

Service: **2.630** **Magic Lake Estates Water (Pender)**

Project Number 21-04 **Capital Project Title** Buck Lake Dam Repairs - Phase 1 **Capital 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.

Project Number 23-01 **Capital Project Title** Decommission Magic Lake old Syphon and Replacement of CSP Spill Culverts - Engineering Assessment **Capital Project Description** Engineering assessment and coordination with Dam Safety Office to develop a plan for decommissioning of the old syphon and replacement of twin CSP spillway culverts.

Project Rationale The old syphon at Magic Lake is no longer required, and does not function. Funds are required to remove the overland and underwater pipe, and decommission the underground pipe.

Project Number 23-02 **Capital Project Title** ISOPAC Permanent Handling & Storage **Capital Project Description** Permanent solution to reduce drum waste and reduce handling is required.

Project Rationale Safety improvements to reduce Operator injury when handling the ISOPAC drums were carried out in 2019-2020. A permanent solution to reduce the use of drums which cannot be readily disposed of, was initiated in concept in 2024 and is anticipated to continue into 2025 for implementation.

Project Number 26-01 **Capital Project Title** Buck Lake Dam Repairs - Phase 2 **Capital Project Description** Conduct additional geotechnical investigations, seepage analysis, monitoring, tree removal and the next DSR (2029).

Project Rationale Resulting from the Hatch 2019 Dam Safety Review, funds are required to conduct additional geotechnical investigations, seepage analysis and monitoring, tree removal, and the next Dam Safety Review (2029).

Project Number 25-01 **Capital Project Title** Captains Tank Upgrade - Concept Design **Capital Project Description** Initial budget is to conduct site reviews, options assessment, concept design and cost estimate for the replacement of Captains Tank.

Project Rationale Captains Tank is beyond it's service life. This initial budget is to conduct site reviews, options assessment, concept design and cost estimate for the replacement of Captains Tank.

Service: **2.630** **Magic Lake Estates Water (Pender)**

Project Number	26-02	Capital Project Title	WTP Process Pipe Condition Assessment	Capital Project Description	Conduct an updated condition assessment for process piping in the water treatment plant with potential spot repairs or maintenance.
Project Rationale	Utilizing funding from previous settlement, allocate funding for further assessment and planning for process pipe repairs and possible replacement.				

Project Number	26-03	Capital Project Title	Alternative Approval Process	Capital Project Description	Conduct public consultation to inform strategies to borrow necessary future capital funds.
Project Rationale	Funding to conduct an Alternative Approvals Process to solicit public approval to secure debt in order to carry out necessary future Capital improvements.				

Project Number	27-01	Capital Project Title	Water Main Replacement	Capital Project Description	Replacement of select watermains within the distribution network to address leaks and reduce non revenue water.
Project Rationale	Interim budget to advance watermain replacements within the water system. Budget and prioritization will be further refined continually through planning and design.				

2.630 - Magic Lake Water Utility (Pender)

Capital Projects

Updated @ Sep 23, 2024

Year	Project#	Status	Capital Project Description	Total Project Budget	Spending		Cap on Hand
					Expenditure Actuals	Remaining Spending	
2010	CE.258.4602	Close	Water System Upgrade	8,894,740	8,660,163	234,577	8,894,740
2019	CE.678.5501	Open	2019 Buck Lake Dam - Dam Safety Review	50,000	49,983	17	50,000
2021	CE.744	Open	MLE Safety Improvements	20,000	11,604	8,396	20,000
2021	CE.779.7501	Close	Design and Construction of Buck Lake and Magic Lake Adjustable Intakes	225,000	225,090	(90)	225,090
2021	CE.678	Open	Buck Lake Dam Repairs	180,000	84,389	95,611	180,000
2023	CE.779.1602	Close	SCADA and Radio Communication Upgrades	90,000	90,000	-	90,000
2024	CE.779.4501	Open	ISOPAC Permanent Handling & Storage	60,000	2,459	57,542	60,000
			Totals	9,519,740	9,123,687	396,053	9,519,830

Service:	2.630	Magic Lake Water	Committee: Electoral Area
-----------------	--------------	-------------------------	----------------------------------

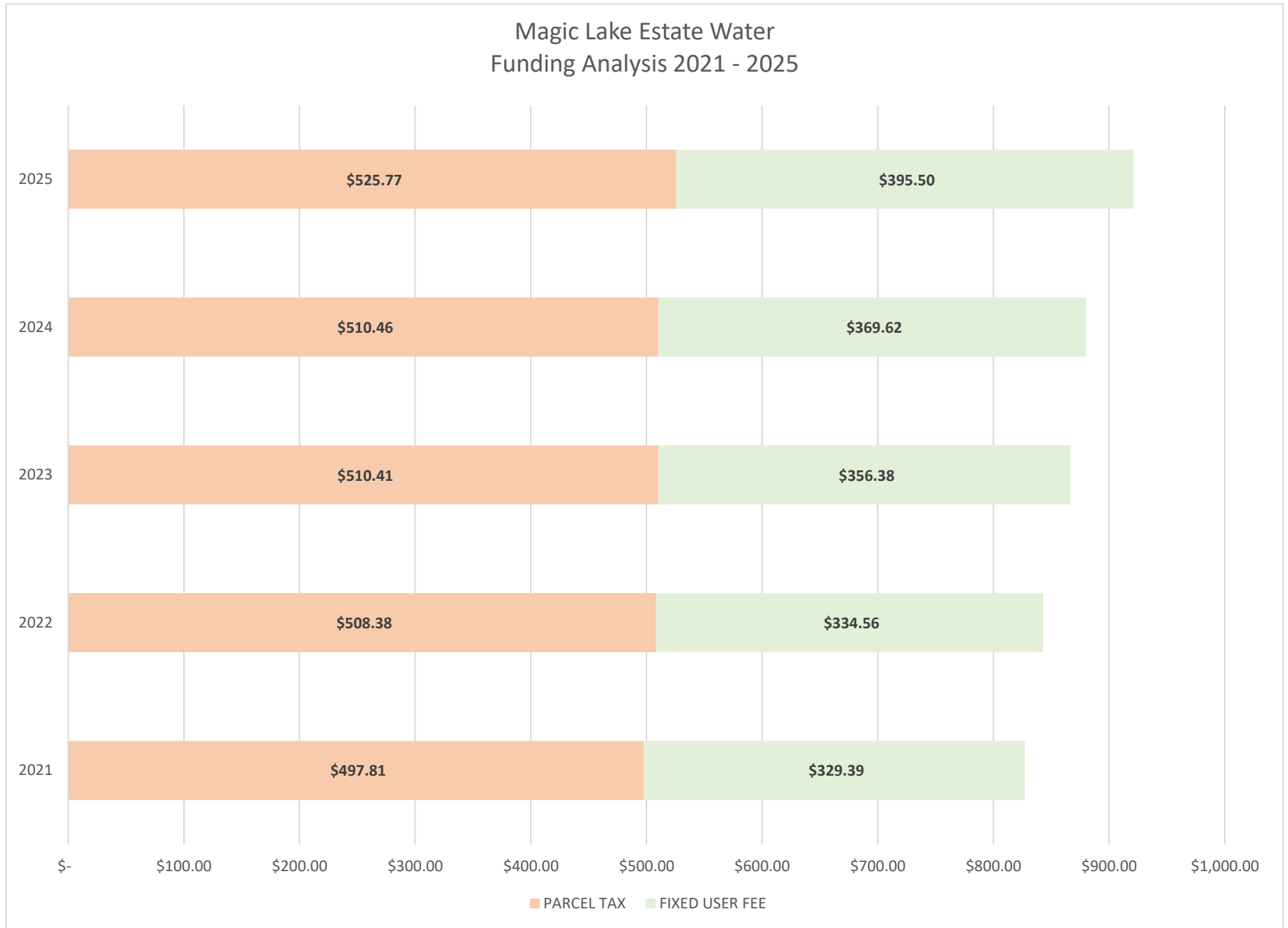
<u>Year</u>	<u>Taxable Folios</u>	<u>Parcel Tax Per Folio</u>	<u>SFE's</u>	<u>User Charge Per SFE*</u>	<u>Total Tax & Charges</u>	<u>Bylaw</u>	<u>Actual Assessments \$(000's)</u>
2012	1,206	\$496.57	1,005	\$250.00	\$746.57	3847	\$390,273.10
2013	1,206	\$496.57	1,008	\$250.00	\$746.57	3892	\$356,311.00
2014	1,206	\$496.57	1,011	\$250.00	\$746.57	3924	\$336,525.60
2015	1,206	\$496.57	1,012	\$250.00	\$746.57	3987	\$327,129.00
2016	1,205	\$496.98	1,015	\$281.69	\$778.67	4074	\$327,129.00
2017	1,203	\$497.81	1,020	\$280.31	\$778.12	4170	\$328,976.80
2018	1,203	\$497.81	1,020	\$291.37	\$789.18	4233	\$407,278.90
2019	1,203	\$497.81	1,028	\$302.10	\$799.91	4274	\$469,844.20
2020	1,202	\$497.81	1,034	\$321.96	\$819.76	4337	\$510,125.00
2021	1,202	\$497.81	1,043	\$329.39	\$827.20	4389	\$544,463.70
2022	1,199	\$508.38	1,050	\$334.56	\$842.94	4471	\$757,028.70
2023	1,196	\$510.41	1,059	\$356.38	\$866.79	4524	\$880,055.80
2024	1,196	\$510.46	1,072	\$369.62	\$880.08	4587	\$866,832.30
2025	1,196	\$525.77	1,082	\$395.50	\$921.27		

Change from 2024 to 2025

\$15.31	\$25.88	\$41.19
3.00%	7.00%	4.68%

* Parcel Tax authority under LSA-1

**User Charge is an annual charge per connected SFE



CAPITAL REGIONAL DISTRICT

2025 Budget

Magic Lake Estates Sewer

Commission Review

OCTOBER 2024

Service: 3.830 Magic Lake Sewer Utility (Pender)

Committee: Electoral Area

DEFINITION:

To provide, operate and maintain sewage collection and disposal facilities for the Magic Lake Estates Sewerage System Specified Area on North Pender Island (Local Service Establishment Bylaw No. 1873 - June 26, 1991).

PARTICIPATION:

Specified Area - B(764) SA#8

MAXIMUM LEVY:

Greater of \$200,000 or \$7.10 / \$1,000 on actual assessed value of land and improvements.

MAXIMUM CAPITAL DEBT:

AUTHORIZED: LA Bylaw No. 4048 (Dec 2015). Fall Borrowing \$1,530,000 for 10 years

COMMITTEE:

Magic Lake Estates Water & Sewer Committee established by Bylaw No. 1870 (November 28, 1990).

FUNDING:

User Charge: Per single family equivalency unit to connected properties only

Parcel Tax: Only on properties capable of being connected to system.

Connection Charge: Actual Engineering and Construction costs, plus 15% Administration costs. The minimum charge is \$500.

RESERVE FUND:

Magic Lake Estates sewage system capital reserve fund (Dec 17, 1986). Bylaw No. 1497.

3.830 - Magic Lake Estates Sewer	2024		BUDGET REQUEST				FUTURE PROJECTIONS			
	BOARD BUDGET	ESTIMATED ACTUAL	CORE BUDGET	ONGOING	ONE-TIME	TOTAL	2026	2027	2028	2029
<u>OPERATING COSTS</u>										
Sludge Hauling Contracts	108,000	109,800	111,240	-	-	111,240	113,460	115,730	118,040	120,400
Grit & Waste Sludge Disposal	85,000	85,500	87,550	-	-	87,550	89,300	91,090	92,910	94,770
Screening Disposal	2,500	2,500	2,600	17,400	-	20,000	20,400	20,810	21,230	21,650
Repairs & Maintenance	24,460	23,210	25,200	-	-	25,200	65,700	41,210	26,730	27,270
Allocations	46,397	46,397	49,553	-	-	49,553	50,894	51,927	52,977	54,043
Electricity	25,030	23,200	25,780	-	-	25,780	26,300	26,830	27,370	27,920
Supplies	24,610	12,160	25,320	(7,100)	-	18,220	18,590	18,960	19,340	19,730
Labour Charges	323,715	380,500	338,283	-	-	338,283	345,048	351,952	358,994	366,176
Other Operating Expenses	39,890	50,620	44,641	2,950	-	47,591	49,205	50,905	52,716	54,649
TOTAL OPERATING COSTS	679,602	733,887	710,167	13,250	-	723,417	778,897	769,414	770,307	786,608
*Percentage Increase over prior year			4.5%	1.9%		6.4%	7.7%	-1.2%	0.1%	2.1%
<u>DEBT / RESERVES</u>										
Transfer to Capital Reserve Fund	46,540	5,515	46,000	-	-	46,000	49,110	118,675	145,995	179,335
Transfer to Operating Reserve Fund	13,260	-	15,000	-	-	15,000	25,000	50,000	50,000	50,000
Debt Reserve Fund	380	380	530	-	-	530	530	530	8,530	13,000
MFA Principal Payment	133,463	133,463	133,463	-	-	133,463	133,463	68,476	46,668	20,267
MFA Interest Payment	40,640	40,640	40,640	-	-	40,640	40,640	24,995	25,920	49,500
TOTAL DEBT / RESERVES	234,283	179,998	235,633	-	-	235,633	248,743	262,676	277,113	312,102
TOTAL COSTS	913,885	913,885	945,800	13,250	-	959,050	1,027,640	1,032,090	1,047,420	1,098,710
Sludge Disposal Recovery	(11,590)	(11,590)	(11,940)	-	-	(11,940)	(12,180)	(12,420)	(12,670)	(12,920)
TOTAL COSTS NET OF RECOVERIES	902,295	902,295	933,860	13,250	-	947,110	1,015,460	1,019,670	1,034,750	1,085,790
*Percentage Increase over prior year			3.5%	1.5%		5.0%	7.2%	0.4%	1.5%	4.9%
<u>FUNDING SOURCES (REVENUE)</u>										
Transfer from Operating Reserve Fund	-	-	-	-	-	-	(40,000)	(15,000)	-	-
User Charges	(291,047)	(291,047)	(304,140)	(13,250)	-	(317,390)	(326,910)	(336,720)	(346,820)	(364,160)
Grants in Lieu of Taxes	(3,333)	(3,333)	(3,430)	-	-	(3,430)	(3,500)	(3,570)	(3,640)	(3,710)
Other Revenue	(1,280)	(1,280)	(1,460)	-	-	(1,460)	(1,480)	(1,500)	(1,520)	(1,010)
TOTAL REVENUE	(295,660)	(295,660)	(309,030)	(13,250)	-	(322,280)	(371,890)	(356,790)	(351,980)	(368,880)
REQUISITION - PARCEL TAX	(606,635)	(606,635)	(624,830)	-	-	(624,830)	(643,570)	(662,880)	(682,770)	(716,910)
*Percentage increase over prior year										
User Fees			4.5%	4.6%		9.1%	3.0%	3.0%	3.0%	5.0%
Requisition			3.0%	0.0%		3.0%	3.0%	3.0%	3.0%	5.0%
Combined			3.5%	1.5%		5.0%	3.0%	3.0%	3.0%	5.0%

3.830D - Magic Lake Estates Sewer - Debt Only 6M Phase 1 Wastewater Treatment Plan Upgrade	2024		BUDGET REQUEST				FUTURE PROJECTIONS			
	BOARD BUDGET	ESTIMATED ACTUAL	CORE BUDGET	ONGOING	ONE-TIME	TOTAL	2026	2027	2028	2029
<u>DEBT</u>										
Debt Reserve Fund	1,030	1,030	1,520	-	-	1,520	1,520	1,520	1,520	1,520
MFA Principal Payment	111,887	111,887	111,887	-	-	111,887	111,887	111,887	111,887	111,887
MFA Interest Payment	118,798	118,798	118,798	-	-	118,798	118,798	118,798	118,798	118,798
TOTAL DEBT	231,715	231,715	232,205	-	-	232,205	232,205	232,205	232,205	232,205
<u>FUNDING SOURCES (REVENUE)</u>										
MFA Debt Reserve Earning	(1,030)	(1,030)	(1,520)	-	-	(1,520)	(1,520)	(1,520)	(1,520)	(1,520)
Grants in Lieu of Taxes	(1,226)	(1,226)	(1,230)	-	-	(1,230)	(1,250)	(1,280)	(1,310)	(1,340)
REQUISITION - PARCEL TAX	(229,459)	(229,459)	(229,455)	-	-	(229,455)	(229,435)	(229,405)	(229,375)	(229,345)
*Percentage increase over prior year Requisition			0.0%			0.0%	0.0%	0.0%	0.0%	0.0%

**Magic Lake Estates Sewer
Reserve Summary Schedule
2025 - 2029 Financial Plan**

Reserve/Fund Summary

	Estimated	Budget				
	2024	2025	2026	2027	2028	2029
Operating Reserve Fund	30,541	45,541	30,541	65,541	115,541	165,541
Capital Reserve Fund	416,450	402,450	451,560	450,235	471,230	650,565
Total	446,990	447,990	482,100	515,775	586,770	816,105

Reserve Schedule

Reserve Fund: 3.830 Magic Lake Sewer System - Operating Reserve Fund - Bylaw 4144
--

Reserve fund used for: unforeseen operational repairs and maintenance; infrequent maintenance activities such as treatment facility tankage draining/cleaning/inspection etc.

Reserve Cash Flow

Fund:	1500	Estimated	Budget				
Fund Centre:	105217	2024	2025	2026	2027	2028	2029
Beginning Balance		29,241	30,541	45,541	30,541	65,541	115,541
Transfer from Ops Budget		-	15,000	25,000	50,000	50,000	50,000
Planned Expenditures		-	-	(40,000)	(15,000)	-	-
Planned Maintenance Activity				Sewer System Flushing	Outfall Inspection		
Interest Income*		1,300					
Ending Balance \$		30,541	45,541	30,541	65,541	115,541	165,541

<u>Assumptions/Background:</u>

* Interest in planning years nets against inflation which is not included.
--

Reserve Schedule

Reserve Fund: 3.830 Magic Lake Sewer System - Capital Reserve Fund

Bylaw 1497

Reserve Cash Flow

Fund:	1042	Estimated	Budget				
Fund Centre:	101386	2024	2025	2026	2027	2028	2029
Beginning Balance		393,385	416,450	402,450	451,560	450,235	471,230
Transfer from Ops Budget		5,515	46,000	49,110	118,675	145,995	179,335
Transfer to Cap Fund		-	(60,000)	-	(120,000)	(125,000)	-
Transfer from Cap Fund		-					
Interest Income*		17,550					
Ending Balance \$		416,450	402,450	451,560	450,235	471,230	650,565

<u>Assumptions/Background:</u>

* Interest in planning years nets against inflation which is not included.
--

**CAPITAL REGIONAL DISTRICT
FIVE YEAR CAPITAL EXPENDITURE PLAN SUMMARY - 2025 to 2029**

Service No. 3.830 Magic Lake Sewer Utility (Pender)	Carry Forward from 2024	2025	2026	2027	2028	2029	TOTAL
--	--	-------------	-------------	-------------	-------------	-------------	--------------

EXPENDITURE

Buildings	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Equipment	\$60,000	\$60,000	\$0	\$0	\$0	\$0	\$60,000
Land	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Engineered Structures	\$400,000	\$400,000	\$0	\$120,000	\$925,000	\$1,300,000	\$2,745,000
Vehicles	\$0	\$0	\$0	\$0	\$0	\$0	\$0
	\$460,000	\$460,000	\$0	\$120,000	\$925,000	\$1,300,000	\$2,805,000

SOURCE OF FUNDS

Capital Funds on Hand	\$200,000	\$200,000	\$0	\$0	\$0	\$0	\$200,000
Debenture Debt (New Debt Only)	\$0	\$0	\$0	\$0	\$800,000	\$1,300,000	\$2,100,000
Equipment Replacement Fund	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Grants (Federal, Provincial)	\$200,000	\$200,000	\$0	\$0	\$0	\$0	\$200,000
Donations / Third Party Funding	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Reserve Fund	\$60,000	\$60,000	\$0	\$120,000	\$125,000	\$0	\$305,000
	\$460,000	\$460,000	\$0	\$120,000	\$925,000	\$1,300,000	\$2,805,000

Definitions for the 5-year Capital Plan

Asset Class	<p>Asset class is used to classify assets for financial reporting in accordance with the Public Sector Accounting Board (PSAB) 3150.</p> <p>L - Land S - Engineering Structure B - Buildings V - Vehicles E - Equipment</p>
Capital Expenditure Type	<p>Capital expenditure type is used for reporting on asset investments and may be used to justify operational needs for a service.</p> <p>Study - Expenditure for feasibility and business case report. New - Expenditure for new asset only Renewal - Expenditure upgrades an existing asset and extends the service ability or enhances technology in delivering that service Replacement - Expenditure replaces an existing asset</p>
Carryforward	<p>Represents the carryforward amount from the prior year capital plan that is remaining to be spent. Forecast this spending over the next 5 years.</p>
Funding Source	<p>Debt - Debenture Debt (new debt only) ERF - Equipment Replacement Fund Grant - Grants (Federal, Provincial) Cap - Capital Funds on Hand Other - Donations / Third Party Funding Res - Reserve Fund WU - Water Utility</p> <p>If there is more than one funding source, additional rows are shown for the project.</p>

Service: **3.830** **Magic Lake Sewer Utility (Pender)**

Project Number 21-02 **Capital Project Title** Wastewater Improvements - Pump Station and Treatment Plant Upgrades **Capital Project Description** 1. Renew Galleon and Schooner Pump Stations
2. Replace Cannon WWTP with a new pump station
3. Upgrade Schooner WWTP (headworks, EQ tank, 2nd aeration tank, new clarifiers, electrical/genaset)
Project Rationale Wastewater Improvements - Pump Station and Treatment Plant Upgrades

Project Number 24-01 **Capital Project Title** Towable Genset Replacement **Capital Project Description** Replacement of the towable genset as it is nearing the end of life.
Project Rationale Replacement of the towable genset as it is nearing the end of life.

Project Number 28-01 **Capital Project Title** CCTV Inspection of AC Pipe **Capital Project Description** Conduct a CCTV inspection of all remaining asbestos cement pipe to monitor its condition and identify pipe that might require replacement.
Project Rationale CCTV inspections of AC sewer mains to prioritize replacement.

Project Number 27-02 **Capital Project Title** Pump Stations - Mechanical and Electrical Upgrades (Replace when grant received or sufficient funds in CRF) **Capital Project Description** Renew Buccaneer, Capstan, Cutlass and Masthead Pump Stns
Project Rationale Additional funding required to carry out the works to upgrade Capstan, Cutlass (top priorities) as well as Buccaneers and Masthead (secondary priority).

Project Number 28-03 **Capital Project Title** AC Sewer Pipe Replacement **Capital Project Description** Based on CCTV inspection, replace portions of AC sewer pipe that are at end of life.
Project Rationale Replacement of AC sewer pipes based on CCTV. Cost estimation to be further developed following CCTV and concept design.

Project Number 27-01 **Capital Project Title** Alternative Approval Process **Capital Project Description** Conduct public consultation to inform strategies to borrow necessary future capital funds.
Project Rationale

3.830 - Magic Lake Sewer Utility (Pender)

Capital Projects Fund

Updated @ Sep 09, 2024

Year	Project#	Capital Plan#	Status	Capital Project Description	Total Project Budget	Spending		Total Funding in Place	Funding Pending Receivable
						Expenditure Actuals	Remaining Spending		
2020	CE.708	20-01	Open	MLE Wastewater Treatment Plant Upgrade	11,653,266	10,315,097	1,338,169	10,863,875	789,391
2021	CE.775	21-01	Open	MLE Safety Upgrades	30,000	10,408	19,592	30,000	-
				Total	11,683,266	10,325,504	1,357,761	10,893,875	789,391

Service:	3.830 Magic Lake Sewe	3.830 Magic Lake Sewer Utility (Pender)	Committee: Electoral Area
----------	------------------------------	--	----------------------------------

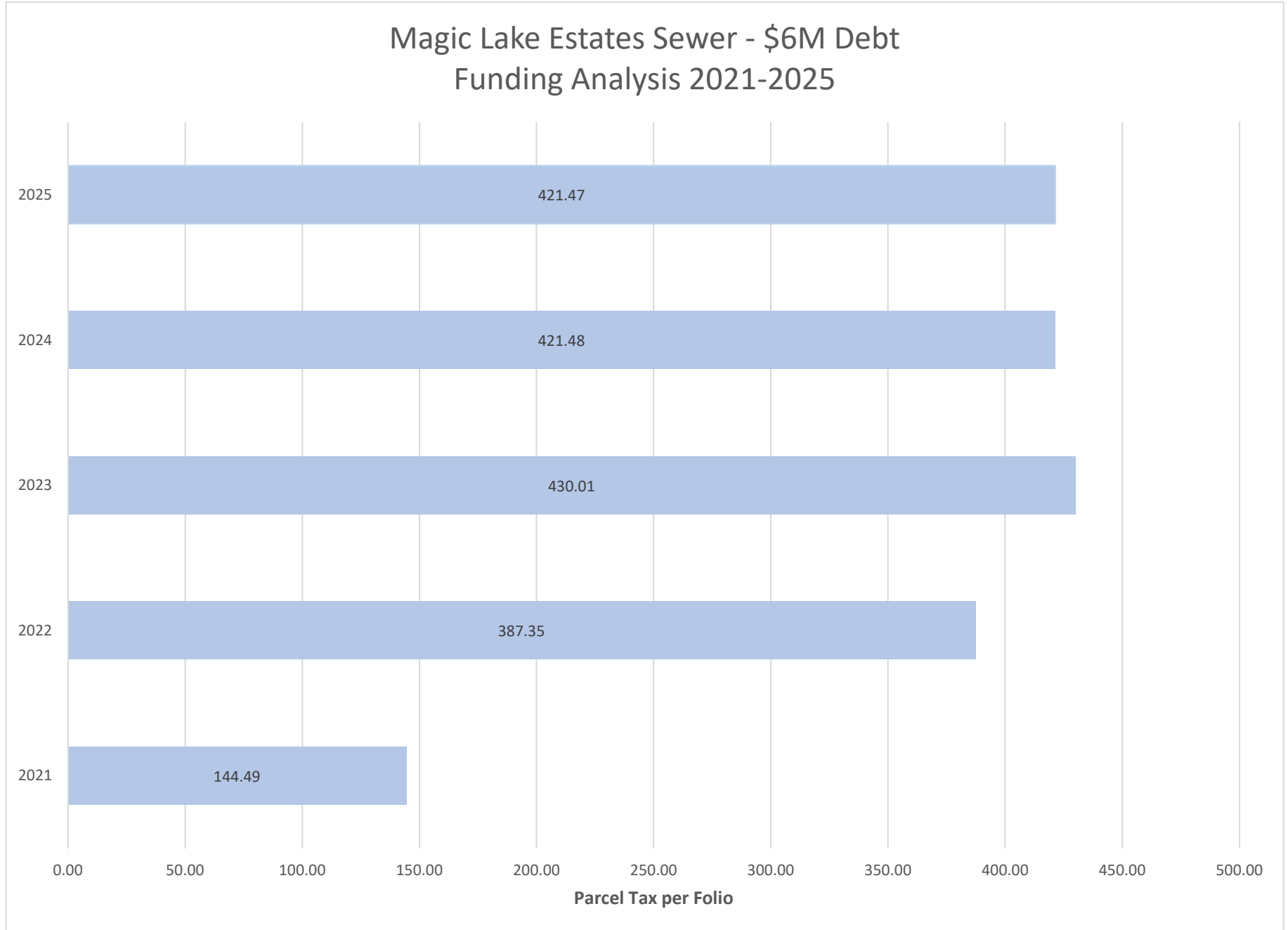
<u>Year</u>	<u>Taxable Folios</u>	<u>Parcel Tax 1 per Folio</u>	<u>Taxable Folios</u>	<u>Parcel Tax 2 per Folio</u>	<u>SFE's</u>	<u>User Charge per SFE</u>	<u>Total Tax(1&2) & Charges</u>	<u>Bylaw</u>
2012	714	\$414.76			617	\$272.00	\$686.76	3847
2013	714	\$414.76			621	\$272.00	\$686.76	3892
2014	714	\$414.76			620	\$272.00	\$686.76	3924
2015	714	\$414.76			621	\$272.00	\$686.76	3987
2016	714	\$493.70			623	\$271.12	\$764.83	4074
2017	713	\$750.36			623	\$271.12	\$1,021.48	4170
2018	713	\$750.37			623	\$300.40	\$1,050.77	4233
2019	713	\$777.60			623	\$381.54	\$1,159.14	4274
2020	714	\$1,029.82			630	\$394.02	\$1,423.83	4337
2021	714	\$850.30	577	\$144.49	635	\$394.02	\$1,388.81	4389
2022	712	\$866.26	575	\$387.35	639	\$405.70	\$1,659.31	4471
2023	709	\$869.92	573	\$430.01	642	\$416.04	\$1,715.97	4524
2024	709	\$900.54	573	\$421.48	651	\$447.08	\$1,769.10	4586
2025	709	\$927.55	573	\$421.47	651	\$487.54	\$1,836.56	

Change from 2024 to 2025

	\$27.01	-\$0.01	\$40.46	\$67.46
	3.00%	0.00%	9.05%	<u>3.81%</u>

Total Parcel Tax(1) and Charges (lump-sum payment option only)	\$1,415.09
Change from 2024 to 2025	\$67.47 5.01%





**REPORT TO MAGIC LAKE ESTATES WATER AND SEWER COMMITTEE
MEETING OF TUESDAY, OCTOBER 29, 2024**

SUBJECT Capital Project Status Reports and Operational Updates - October 2024

ISSUE SUMMARY

To provide the Magic Lake Estates Water and Sewer Committee with capital project status reports and operational updates.

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, tested and commissioned 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. Ongoing monitoring of the communication signal strength is required over the winter (particularly during storm events).
- The only site remaining is Cannon Pump Station which will be commissioned in early November.

**Magic Lake Estates Water and Sewer Committee – October 29, 2024
Capital Project Status Reports and Operational Updates - October 2024**

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

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.
- Design complete and weir plate fabrication underway in Q3 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	Q2 2024

WATER SYSTEM OPERATIONAL UPDATE

This is a water system operational update report for August and September 2024.

- 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. Second deployment.

- Planning work for the leak detection and repairs on the watermain through the Buck Lake Dam (Spyglass). Since repair work will require digging within the dam structure there is a requirement for an Interim Dam Safety Risk Mitigation Plan (IDSRMP) to be prepared and submitted to the Invasive Investigation Plan prepared by a professional and submitted to the Provincial Dam Safety Officer.
- Watermain/water service line leak repairs:
 - Foc'sle Road (second leak location)
 - Continued work and surface restoration from the leak at Bosuns pressure regulating/pump station that occurred earlier this year.
- Magic Lake Raw Water Intake troubleshooting after event on floating platform with new raising/lowering mechanism
- Schooner Way Water Treatment Plant chlorination troubleshooting. It was determined that a recent sodium hypo chlorite chemical delivery was the incorrect strength.
- 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**
 - All treatment plant equipment has been installed, tested and commissioned from September 9 -19. The plant officially started treating wastewater on September 19.
 - Two sets of effluent samples have been sent to the lab, and the effluent quality is excellent meeting all regulatory requirements.
 - The plant will continue to be optimized over the next few months.
 - The tanks from the old plant were pumped into the new treatment plant and are being cleaned out. Parts of the old plant can now be de-commissioned as included in Coast's scope of work. Other components of the plant (not in Coast's scope) can be removed over time.
 - All that remains is, final road surfacing, fencing, landscaping, and the completion of deficiencies.
- **Cannon Pump Station**
 - All equipment has been installed at Cannon pump station and we are waiting for BC Hydro to energize the new pump station which is scheduled for October 30.

**Magic Lake Estates Water and Sewer Committee – October 29, 2024
Capital Project Status Reports and Operational Updates - October 2024**

- The pump station will be commissioned in early November.
- All that remains is final road surfacing, fencing, landscaping, and the completion of deficiencies.
- **Schooner Pump Station**
 - This pump station is substantially complete and was commissioned on June 7.
 - It is performing very well as expected.
- **Galleon Pump Station**
 - This pump station is substantially complete and was commissioned on May 27.
 - It is performing very well as expected.
- The Habitat Restoration Plan for compensation of disturbing the wetland area adjacent to Schooner WWTP has been substantially completed with one final day of planting left. Residents in the area have been appreciative of the work that was completed.
- Overall, the project is about 97% complete.
- As of October 15, the total actual and committed cost is at \$9,004,750 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 in Operation



Cannon PS – Wetwell and Kiosk



Wetland Restoration beside Galleon PS and Buck Lake

WASTEWATER SYSTEM OPERATIONAL UPDATE

This is a wastewater system operational update report for August and September 2024.

- Emergency response for a sewer blockage at 27143 Schooner Way and 2726 Spyglass Way.
- Ongoing operational support for the sewer improvement capital project. This reporting period includes significant involvement operationally with the Schooner Wastewater Treatment Plant commissioning and operational training provided by the consultants, contractors and equipment suppliers.

Table 1: Operating Permit Regulatory Non-compliance reporting for August and September 2024

Facility	August and September Reports Issued	Reports YTD 2024	Total Reports 2023	Cause
Schooner WWTP	1	9	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	1	10	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:	Alicia Fraser, P.Eng., General Manager, Integrated Water Services

**REPORT TO MAGIC LAKE ESTATES WATER AND SEWER COMMITTEE
MEETING OF TUESDAY, OCTOBER 29, 2024**

SUBJECT Asset Replacement Report Card

ISSUE SUMMARY

To provide the Magic Lake Estates (MLE) Water and Sewer Committee with asset replacement report cards for the MLE Water and Sewer Systems.

BACKGROUND

The Capital Regional District (CRD) has prepared asset replacement report cards for the MLE Water and Sewer Systems located on North Pender Island in the Southern Gulf Islands Electoral Area. The objective of these report cards is to provide an overview of asset replacement values and a financial forecast for the next 40 years.

DISCUSSION

An asset register was prepared for each service using the inventory of all existing assets from the CRD's maintenance management and geographic information systems. Newly constructed assets and assets under construction in 2024 are included in the asset register. The asset inventory and asset conditions were verified by site visits and discussions with system operators.

MLE Water System

The MLE Water System has 2,431 asset components in the register that are grouped by asset class with replacement values as follows:

Asset Class	Average Asset Condition	2024 Replacement Value
Dams	Good	\$544,000
Operations Buildings	Fair	\$490,000
PRV Stations	Good	\$550,000
Pump Stations	Good	\$1,050,000
Water Intake	Good	\$840,000
Water Mains	Good	\$49,800,000
Water Storage	Fair	\$1,180,000
Water Treatment Facilities	Good	\$7,200,000
Total	Good	\$66,500,000

The average asset condition is a weighted average based on asset replacement cost. Assets in good condition have more than 50 percent of estimated service life remaining and fair condition assets have less than 50 percent of their estimated service life remaining. Replacement values are in 2024 dollars, based on inflated historical costs or unit rates from suppliers.

The total asset replacement value for the service is \$66.4 million dollars. Assets are due for replacement at varying times, based on their installation year, expected service life, and condition.

Magic Lake Estates Water and Sewer Committee – October 29, 2024
Asset Value and Forecasting

2

A report card is provided in Appendix A, which includes graphical breakdowns of current asset condition and forecasted replacement year for each asset class. An analysis of the asset register indicates that most assets will require replacement in the next 40 years with many assets requiring replacement more than once over that timeframe. The estimated cost of asset replacements over the next 40 years is \$67 million. Approximately \$40 million of this cost is for infrastructure that was constructed in the 1970s, including over 16 kilometers of water mains and Captains Reservoir.

Captains Reservoir has corrosion on its exterior shell and roof which can permit rainwater and debris to enter the tank, affecting water quality. The structure does not have guardrails or tie offs which can pose a safety risk when roof access is required. Public safety is also a concern, as there is evidence of unauthorized access to the roof of the structure. The Captains Reservoir has reached the end of its estimated service life and is considered in poor condition. In the report card, Captains Reservoir is shown as infrastructure backlog.

MLE Sewer System

The MLE Sewer System has 1,103 asset components in the register that are grouped by asset class with replacement values as follows:

Asset Class	Average Asset Condition	2024 Replacement Value
Force Mains	Good	\$4,300,000
Gravity Mains	Fair	\$29,450,000
Pump Stations	Fair	\$4,750,000
Wastewater Treatment Facilities	Good	\$7,500,000
Total	Good	\$46,000,000

The average asset condition is a weighted average based on asset replacement cost. Assets in good condition have more than 50 percent of estimated service life remaining and fair condition assets have less than 50 percent of their estimated service life remaining. Replacement values are in 2024 dollars, based on inflated historical costs or unit rates from suppliers.

The total asset replacement value for the service is \$46 million dollars. Newly constructed assets and assets under construction as part of the Wastewater Pump Station and Treatment Plant Upgrades project are included in the register.

Assets are due for replacement at varying times, based on their installation year, expected service life, and condition. A report card is provided in Appendix B, which includes graphical breakdowns of current asset condition and forecasted replacement year for each asset class. An analysis of the asset register indicates that most assets will require replacement in the next 40 years with 15 percent of assets requiring replacement more than once over that timeframe. The estimated cost of asset replacements over the next 40 years is \$57 million.

In the next 5 years, there are some assets that have reached their end of estimated service life and should be planned for replacement, including gravity mains installed in the 1970s and electrical and mechanical equipment at Buccaneers, Capstan, Cutlass, and Masthead pump stations.

Magic Lake Estates Water and Sewer Committee – October 29, 2024
Asset Value and Forecasting

3

There are assets that will need to be decommissioned and possibly removed in the years to come with the new treatment plant and pump stations coming online.

While removal costs are not included in the capital renewal forecast, they should be considered as part of the life-cycle management of assets.

These report cards are intended for budgeting and capital planning purposes in conjunction with other asset and financial processes. The report cards can be further developed into long-term financial and asset management plans for the systems. Asset management plans may include natural assets, such as lakes, shorelines, and trees, which were not part of the report cards.

RECOMMENDATION

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

Submitted by:	Laura Hardiman, P.Eng., Manager, Asset Management
Submitted by:	Stephen Henderson, BSc, PG.Dip.Eng., MBA, Senior Manager of Real Estate and Administration of the Southern Gulf Islands Electoral Area
Concurrence:	Joseph Marr, P.Eng., Senior Manager, Infrastructure Engineering
Concurrence	Alicia Fraser, P.Eng., General Manager, Integrated Water Services

ATTACHMENT

Appendix A: Asset Replacement Report Card – Water Service

Appendix B: Asset Replacement Report Card – Sewer Service

Asset Replacement Report Card

2.630 Magic Lake Estates Water

Services

Water Distribution
Water Supply
Water Treatment

Total Replacement Value

\$66.5M

Average Condition

Good

Total Number of Assets

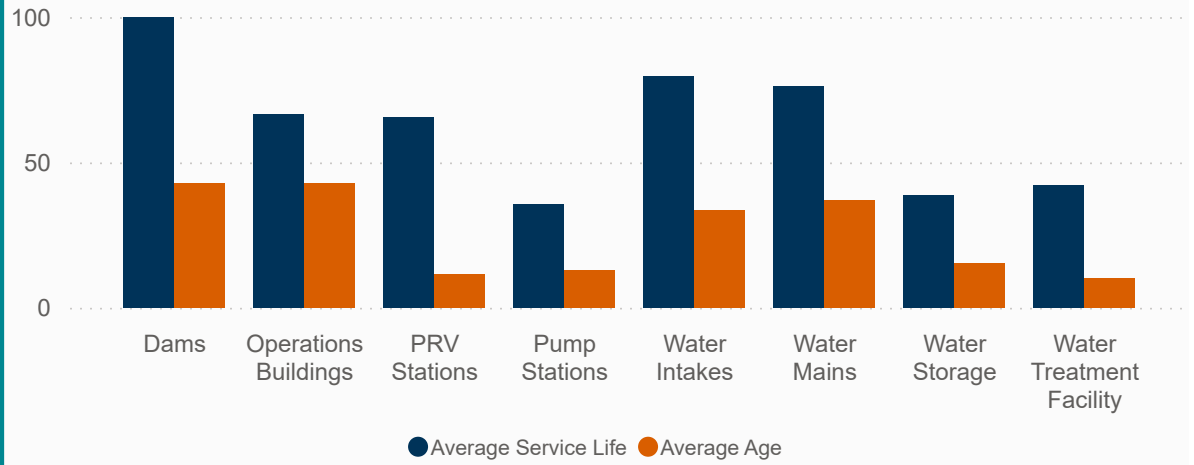
2453

Asset Summary

Dams	3
Operations Buildings	3
PRV Stations	6
Pump Stations	4
Water Intakes	2
Water Mains	29,794 m
Water Storage	2
Water Treatment Facility	1

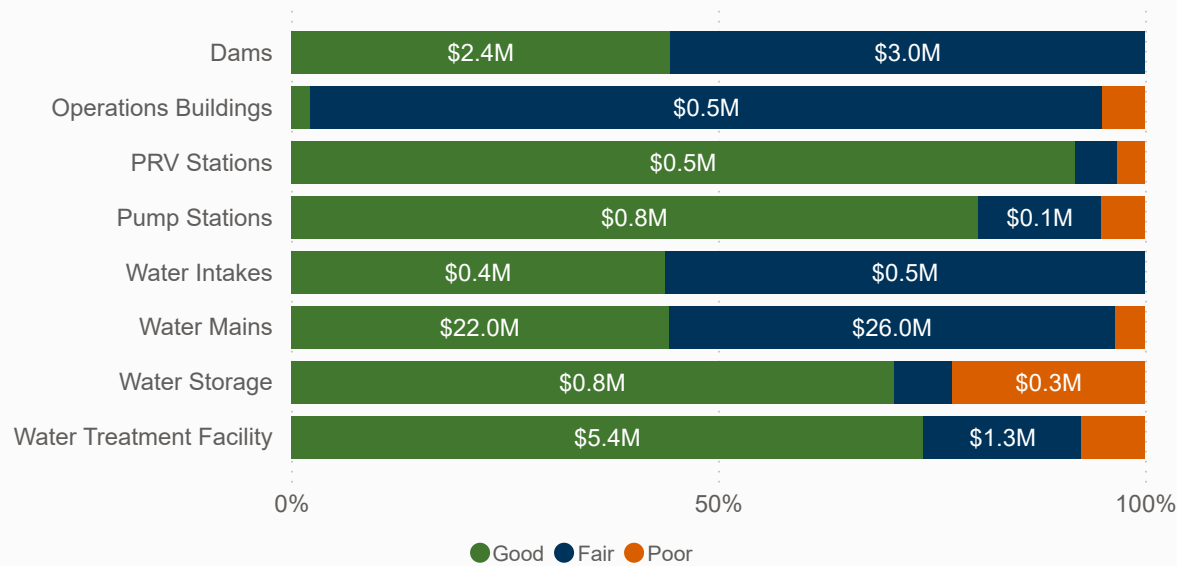


Magic Lake WTP



The Asset Service Life chart shows the average expected service life of each asset class in relation to the average age of the assets within the class. A weighted average is used based on replacement value.

Asset Condition by Asset Class



Overall condition rating of the asset classes is based on remaining expected service life. Replacement values are shown in relation to the condition rating.

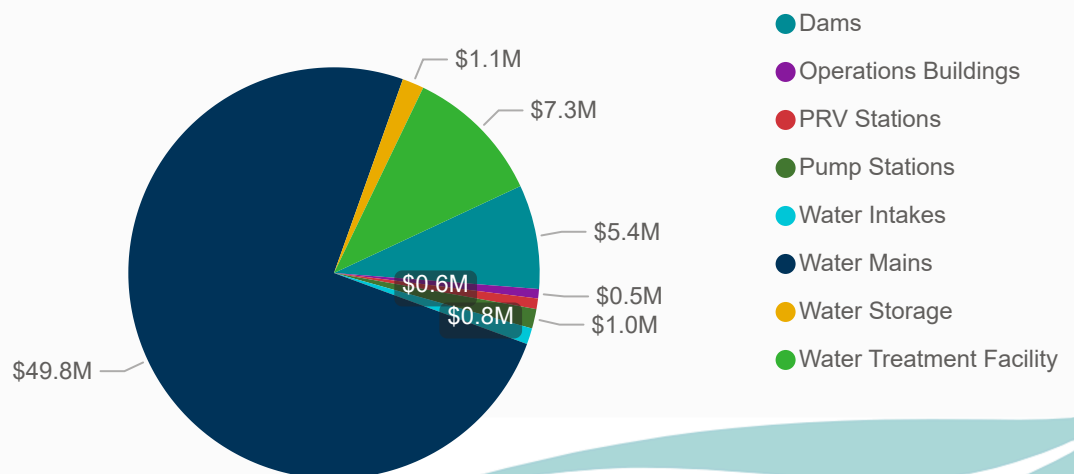
Good - Asset has more than 50% of remaining expected service life.

Fair - Asset has between 1% and 50% of remaining expected service life.

Poor - Asset has reached the end of expected service life.

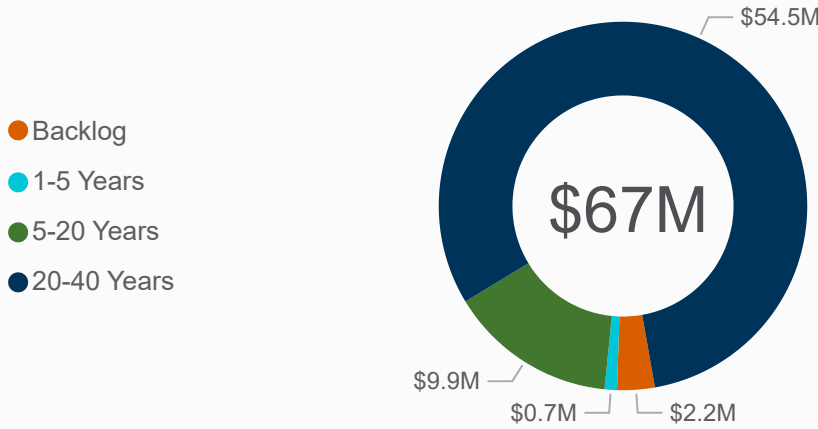
Assets identified in poor condition may still be performing adequately for the service. A condition assessment is advised prior to replacement.

Asset Replacement Cost by Asset Class



2.630 Magic Lake Estates Water

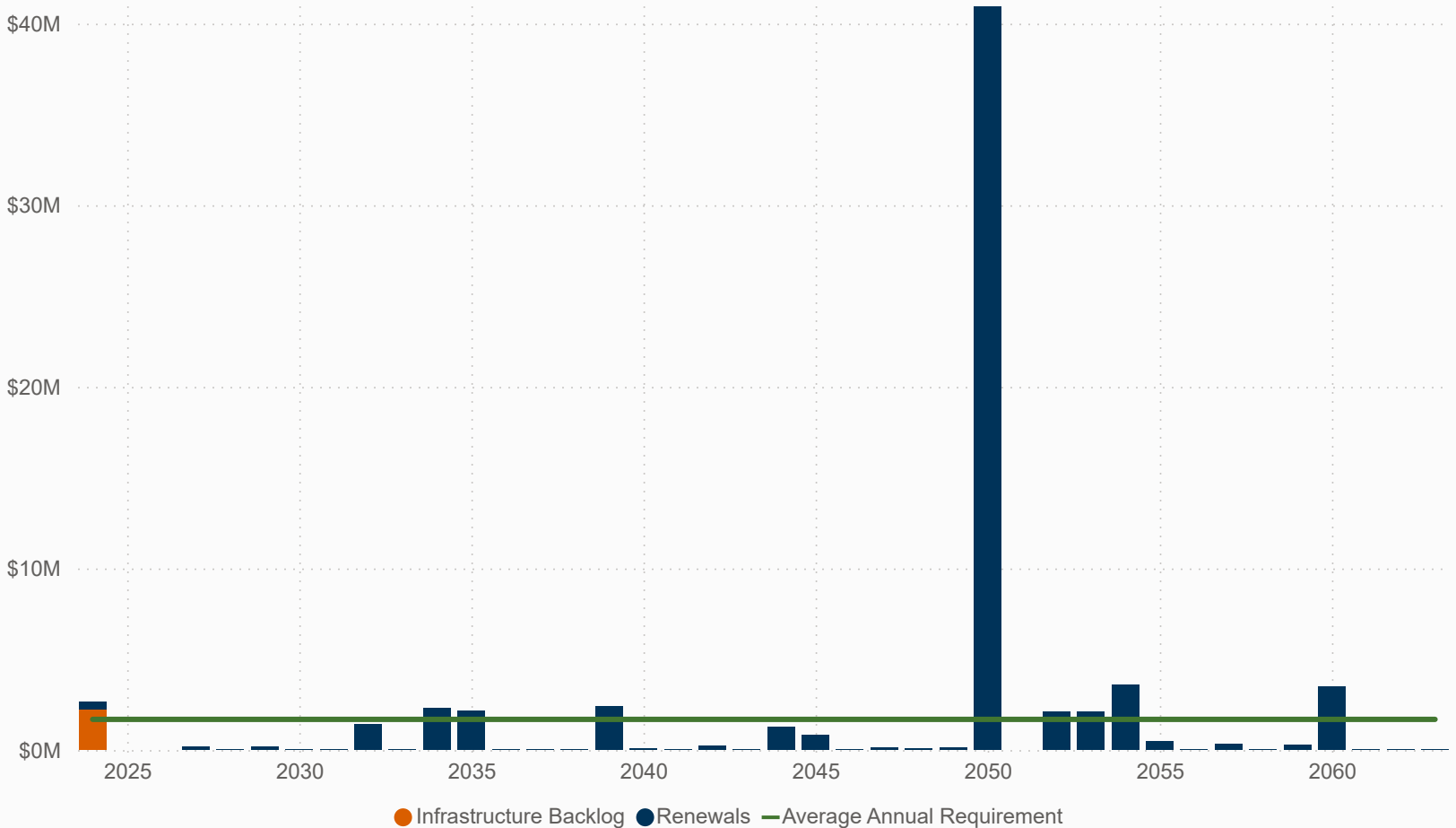
40-Year Asset Replacement Cost by Timeframe



In the next 40 years, it is estimated that \$67M in assets will need to be replaced (an average of \$1.7M per year).

Approximately \$24M of these replacements are for water mains. There are \$2.2M in assets identified as backlog; these are assets that have passed their expected service life and are due for replacement.

40-Year Asset Renewal Forecast



The capital renewal forecast is based on the expected service life of assets and their replacement cost (in 2024 dollars). Instances where an asset requires multiple replacements over the 40 year period are accounted for in the projection. Assets beyond their expected service life, identified as "infrastructure backlog" may fail prior to renewal and their replacement should be considered. Given the large renewal cost in 2050, a replacement plan can be developed to spread the renewals out over multiple years. A more comprehensive long-term financial plan will inform replacement planning for budgeting purposes.

The report card does not include natural assets, such as lakes, shorelines, and trees. Natural assets may be included in a future asset management plan.

This report card is intended for a high level overview and for budgeting and capital planning purposes in conjunction with other asset and financial planning processes.

Asset Replacement Report Card

3.830 Magic Lake Estates Sewer

Services

Wastewater Conveyance
Wastewater Treatment

Total Replacement Value

\$46.0M

Average Condition

Good

Total Number of Assets

1103

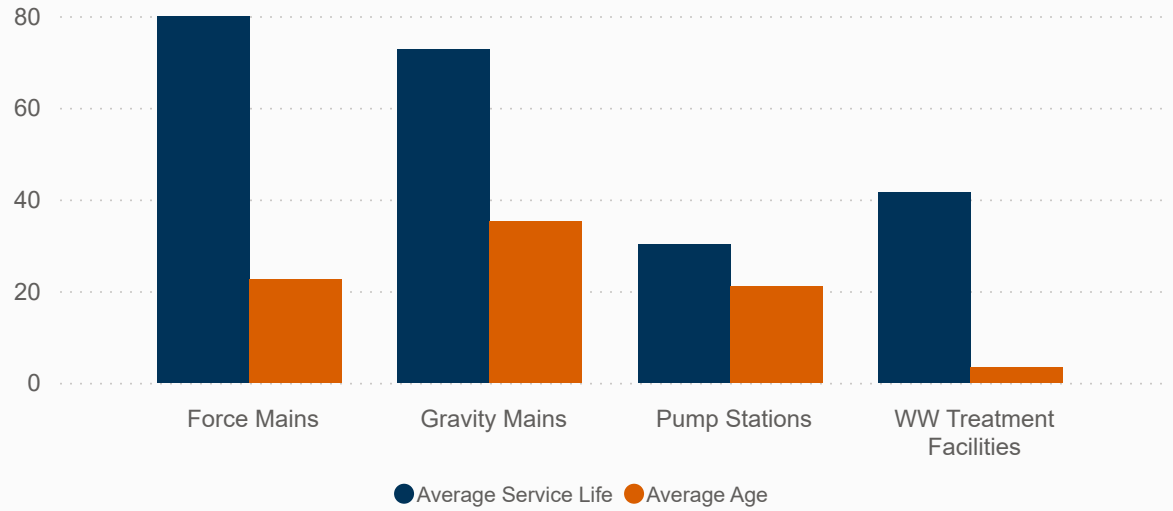
Asset Summary

Force Mains	2,986 m
Gravity Mains	18,515 m
Pump Stations	8
WW Treatment Facilities	1



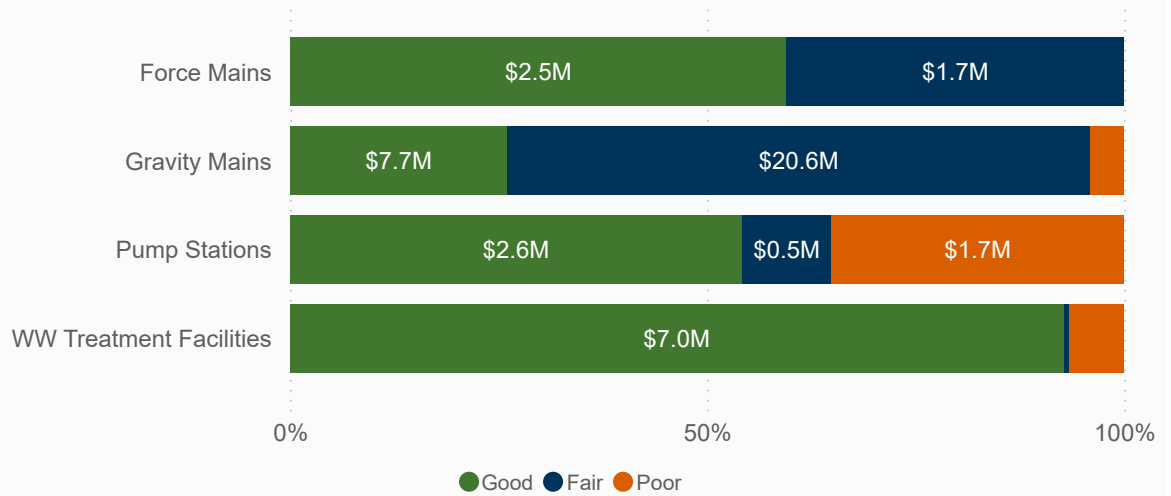
Galleon Pump Station

Asset Service Life



The Asset Service Life chart shows the average expected service life of each asset class in relation to the average age of the assets within the class. A weighted average is used based on replacement value.

Asset Condition by Asset Class



Overall condition rating of the asset classes is based on remaining expected service life. Replacement values are shown in relation to the condition rating.

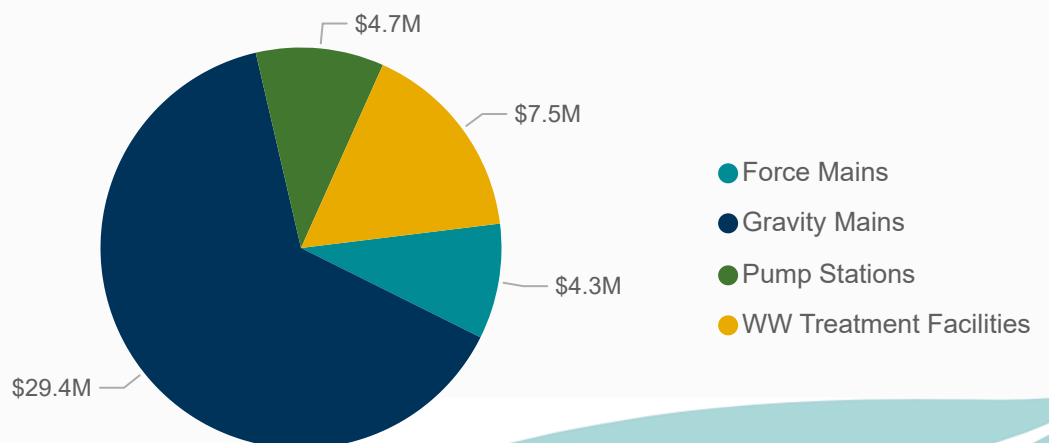
Good - Asset has more than 50% of remaining expected service life.

Fair - Asset has between 1% and 50% of remaining expected service life.

Poor - Asset has reached the end of expected service life.

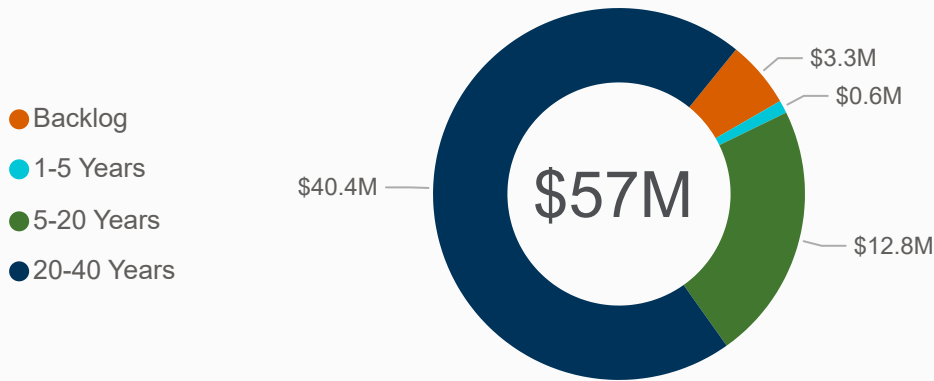
Assets identified in poor condition may still be performing adequately for the service. A condition assessment is advised prior to replacement.

Asset Replacement Cost by Asset Class



3.830 Magic Lake Estates Sewer

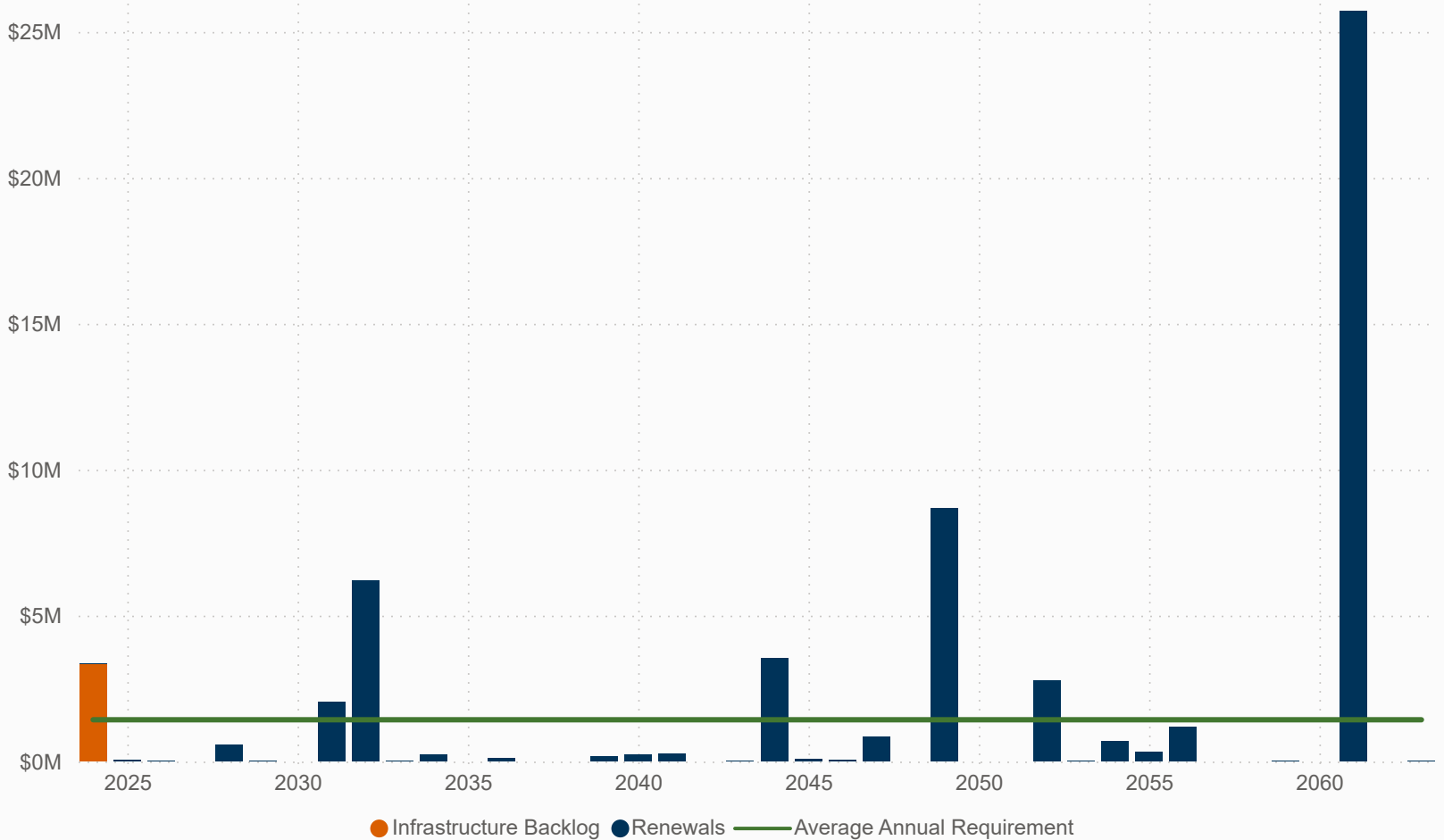
40-Year Asset Replacement Cost by Timeframe



In the next 40 years, it is estimated that \$57M in assets will need to be replaced (an average of \$1.4M per year).

Approximately \$21M of these replacements are for gravity mains. There are also \$3.3M in assets identified as backlog; these are assets that have passed their expected service life and are due for replacement.

40-Year Capital Renewal Forecast



The capital renewal forecast is based on the expected service life of assets and their replacement cost (in 2024 dollars). Instances where an asset requires multiple replacements over the 40 year period are accounted for in the projection. Since some assets (identified as infrastructure backlog) are beyond their expected service life, they may fail prior to renewal. Given the large renewal cost in 2061, a replacement plan can be developed to spread the renewals out over multiple years. A more comprehensive long-term financial plan will inform replacement planning for budgeting purposes.

The report card does not include natural assets, such as lakes, shorelines, and trees. Natural assets may be included in a future asset management plan.

The report card is intended for a high level overview and for budgeting and capital planning purposes in conjunction with other asset and financial planning processes.