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MAGIC LAKE ESTATES WATER AND SEWER COMMITTEE

Notice of Meeting on **Tuesday, April 19, 2016 at 9:30 am**

Main Conference Room, 479 Island Highway, Victoria, BC

J. Petrie (Chair)
Director D. Howe

M. Steel
C. Rodash

K. Heslop
A. Wilson

J. Gill

AGENDA

1. Approval of Agenda
2. Adoption of Minutes of March 8, 2016
3. Wastewater Infrastructure Projects - Phase 1 Update (staff report)
4. Chart Drive Septic System Replacement – Receipt of Tenders
2016-127 and 2016-138 (staff report)
5. Schooner Way and Cannon Crescent Wastewater Treatment Plants
Marine Environment Monitoring Program Update (information report)
6. Water and Wastewater Operations Report – March 2016 (information report)
7. Review of Action List
8. Correspondence
 - e-mail from Resident – Sewer Connection
9. New Business
10. Motion to Close the Meeting
That the Magic Lake Estates Water and Sewer Committee close the meeting in
accordance with the Community Charter, Part 4, Division 3, 90(1)(g) *litigation or potential
litigation affecting the municipality.*
11. Adjournment

To ensure quorum, advise Lorrie Siemens 250.360.3087 or lsiemens@crd.bc.ca if you cannot attend.



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**Minutes of a Meeting of the Magic Lake Estates Water and Sewer Committee
Held Tuesday, March 8, 2016 in the Main Conference Room, 479 Island Highway, Victoria,
BC**

PRESENT: **Committee Members:** J. Petrie (Chair), A. Wilson, K. Heslop, M. Steel, C. Rodash, J. Gill, Alternate Director P. LeBlond
Staff: M. Cowley, Senior Manager, Infrastructure Engineering, M. McCrank, Senior Manager, Infrastructure Operations, S. Mason, Manager, Water Engineering and Planning, D. Puskas, Project Engineer, D. Robson, Manager, Saanich Peninsula and Gulf Islands Operations, J. Marr, Project Engineer, (for item 5), C. Moch, Manager, Water Quality (for item 6), L. Siemens (recorder)
Two members of the public: David Reed, Wally Foster, Magic Lake Estates Property Owners Society

The meeting was called to order at 9:30 am.

1. Approval of Agenda

The following changes were made to the agenda:

- Move Item 5 to follow New Business.
- Add Presentations/Delegations under New Business.

MOVED by A. Wilson, **SECONDED** by M. Steel,
That the agenda be approved as amended.

CARRIED

2. Adoption of Minutes of February 9, 2016

MOVED by M. Steel, **SECONDED** by K. Heslop,
That the minutes of February 9, 2016 be adopted as presented.

CARRIED

3. Wastewater Infrastructure Projects – Phase 1 Update

M. Cowley presented a written report.

MOVED by K. Heslop, **SECONDED** by M. Steel,
That the Magic Lake Estates Water and Sewer Committee:

1. Receive the report for information;
2. Direct staff to issue two tenders for both design options (pump station and septic field), include lifecycle costing analysis in the tender evaluation and incorporate recommendations from a legal review into the tender documents; and
3. Pass a resolution endorsing the application with the Ministry of Forests Lands and Natural Resource Operations for a blanket right-of-way or Crown Grant acquisition of Lot 64 for the purpose of construction staging and long-term access for the Chart Drive facility.

CARRIED

4. Water and Wastewater Operations Report –February 2016

D. Robson presented a written report.

D. Robson also reported that CRD Environmental Monitoring staff will present information on outfall sampling requirements at the next Magic Lake Estates Water and Sewer Committee meeting.

MOVED by K. Heslop, **SECONDED** by A. Wilson,
That the Magic Lake Estates Water and Sewer Committee receive the report for information.

CARRIED

5. Water Quality Report

C. Moch provided a verbal report. The following items were noted:

- Raw water supply is running on 80% Buck Lake and 20% Magic Lake.
- Potassium permanganate injection remains effective on both source lakes and regular jar testing continues to confirm the effectiveness.
- There have been no major operational issues related to water quality.
- One water quality complaint was received in early February regarding strong chlorine odour. Investigative work was done. No chloramines were found. Investigation will continue.
- One resident contacted Water Quality to discuss an ongoing issue with staining fixtures. Samples were taken which revealed that the growth was not a cause of water quality.
- Sampling has been conducted monthly and bi-weekly sampling will commence in May.
- One resident contacted Water Quality for data on metal concentrations in raw and treated water. All test report information is posted on the CRD website.
- Samples for disinfection by-products will be done as scheduled.
- Algae population remains low in both Buck and Magic Lakes.
- Turbidity in both lakes is low.

C. Moch was requested to send a letter to the resident with stained water fixtures.

MOVED by A. Wilson, **SECONDED** by K. Heslop,
That the Magic Lake Estates Water and Sewer Committee receive the report for information.

CARRIED

6. Review of Action List

The action list was reviewed and updated.

7. Correspondence

There was no correspondence.

8. New Business

Wally Foster from the Magic Lake Estates Property Owners Association was in attendance to ask questions of the committee as follows:

1. Can Bylaw 4048, if approved through the AAP process, be used for either the pump station design on the septic field replacement design?

Answer: yes.

2. Will the committee consider the new regulation regarding composting toilets?

Staff's response: The "Manual of Composting toilet and Greywater Practice" is just a guideline. The approval of gravity toilets is the responsibility of the Building Inspection Division as regulated by the BC Building Codes. IWS will discuss with the CRD Building Inspector and inquire if an information sheet can be prepared on this matter, if directed by the committee.

3. Is there an update on the Boydel treatment system?

Staff advised that they have been in contact with Boydel and they are still interested in submitting a response to the Request for Expression of Interest (REFI) when it is issued. Staff are currently working on the REFI and a draft may be ready to present to the Committee in April.

9. Motion to Close the Meeting

MOVED by Kathy Heslop, **SECONDED** by M. Steel,
That the Magic Lake Estates Water and Sewer Committee close the meeting in accordance with the Community Charter, Part 4, Division 3, 90(1)(g) *litigation or potential litigation affecting the municipality*.

CARRIED
Wilson opposed

The Magic Lake Estates Water and Sewer Committee closed the meeting at 11:05 am and resumed in open session at 11:35 am.

10. Adjournment

MOVED by A. Wilson, **SECONDED** by K. Heslop,
That the meeting be adjourned at 11:36 am.

CARRIED



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REPORT TO MAGIC LAKE ESTATES WATER AND SEWER COMMITTEE MEETING OF TUESDAY, APRIL 19, 2016

SUBJECT WASTEWATER INFRASTRUCTURE PROJECTS – PHASE 1 UPDATE

ISSUE

To provide an update to the Magic Lake Estates Water and Sewer Committee on the Phase 1 wastewater projects.

BACKGROUND

At the March 8, 2016 committee meeting, the committee was provided with an update on the progress of the Alternative Approval Process (AAP) and initial feedback from the public open house held February 27, 2016 to seek elector approval for funding for the Phase 1 projects.

Since that time, the March 30, 2016 deadline to receive AAP response forms has passed and only 25 responses were received at the Capital Regional District (CRD) corporate office. This is less than the 10% threshold (of 62 responses) indicating preliminary approval of the AAP. The AAP results were presented to the CRD Board on April 13, 2016 and the Board approved the recommendation, (see attached staff report as Attachment #1). With the adoption of Loan Authorization Bylaw 4048, staff will forward the information to the Inspector of Municipalities for final approval after the 30 day quashing period.

Once approved by the Inspector of Municipalities, interim borrowing can be acquired by the CRD until an application to borrow funds through the Municipal Finance Authority (MFA) can occur in the fall.

Chart Drive Replacement Update

The tenders for the two Chart Drive replacement options were issued on March 14, 2016 and closed on April 13, 2016. CRD staff and Urban Systems are evaluating the submitted tenders to ensure they are compliant and meet tender and project requirements. Further details are presented in the in Magic Lake Estates Water and Sewer Committee staff report entitled "Chart Drive Septic System Replacement – Receipt of Tenders 2016-127 and 2016-138", dated April 19, 2016.

Ministry Lot 64 (adjacent to the Chart Drive Facility)

At the March 8, 2016 committee meeting, the Committee passed the following motion:

"Pass a resolution endorsing the application with the Ministry of Forests Lands and Natural Resource Operations for a blanket right-of-way or Crown Grant acquisition of Lot 64 for the purpose of construction staging and long-term access for the Chart Drive facility".

Since that time, staff have worked with the Province to get temporary access to Lot 64 for construction purposes and have investigated whether long term or permanent use of Lot 64 is possible. The temporary access approval is in progress and anticipated to be approved by May 1, 2016.

Initial indications from the Province are that long term or permanent occupation of Lot 64 may be possible. Staff are working through the preliminary process, it is anticipated to take 18 months to complete. Staff will inform the committee of milestones and key dates as they become known.

The Other Phase 1 Projects

After the Inspector of Municipalities issues final approval, staff will then commence with preparing project initiation forms for the Inflow and Infiltration Reduction project, Buck Lake and Privateer Road Sewer Replacement project, and Schooner Tank assessment project. The designs for this work could commence later this year and construction will likely start in 2017.

New Building Canada Fund – Small Communities Fund Second Intake

Staff are working to complete the grant application for the second intake. The grant application will be submitted in advance of the April 28, 2016 deadline.

ALTERNATIVES

Alternative 1

That the Magic Lake Estates Water and Sewer Committee receive this report for information.

Alternative 2

That the Magic Lake Estates Water and Sewer Committee receive this report for information and direct staff to provide additional information that can be presented at a subsequent meeting.

IMPLICATIONS

Alternative 1 - The preliminary approval of the AAP enables the loan authorization bylaw to proceed to borrow up to \$1,530,000 to undertake the phase 1 projects. The tender for Chart Drive Replacement has recently closed and evaluation of the tenders received is included in a separate staff report. Planning and initiation of the other Phase 1 projects can commence after final approval is received from the Inspector of Municipalities. Staff will continue to advance the request for temporary access approval for Lot 64 and submit a grant application for second intake of the New Building Canada Fund – Small Communities Fund.

Alternative 2 - Staff will provide additional information as requested and present at a subsequent committee meeting.

CONCLUSION

Preliminary results of the AAP indicate that it was successful and enables the Phase 1 Wastewater Improvements for the Magic Lake Estates wastewater system to proceed as planned. Upon award of the Chart Drive Replacement tender, it is estimated that construction could commence this summer and be substantially complete by the end of the year. Staff will continue to advance temporary and permanent access to Lot 64 for construction and maintenance and will

be submitting a grant application for the second intake of the New Building Canada Fund – Small Communities Fund.

RECOMMENDATION

That the Magic Lake Estates Water and Sewer Committee receive this report for information.

Dale Puskas, P.Eng.
Project Engineer
Infrastructure Engineering

Malcolm Cowley, P.Eng.
Acting Senior Manager
Infrastructure Engineering

Ted Robbins, B.Sc., C.Tech.
General Manager, Integrated Water Services
Concurrence

DP/MC:ls

Attachments: Alternative Approval Process Results for Magic Lake Estates Wastewater
Borrowing Bylaw No. 4048



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REPORT TO THE MAGIC LAKE ESTATES WATER AND SEWER COMMITTEE MEETING OF TUESDAY, APRIL 19, 2016

SUBJECT **CHART DRIVE SEPTIC SYSTEM REPLACEMENT – RECEIPT OF TENDERS
2016-127 AND 2016-138**

ISSUE

The purpose of this report is to advise the Magic Lake Estates Water and Sewer Committee of the Chart Drive Septic System Replacement tenders that were received and recommend the next steps.

BACKGROUND

The Chart Drive Septic Disposal System was constructed in the 1960's to provide sewage treatment for 19 adjacent properties. The disposal field reached the end of its life and when it failed in 2014, Island Health issued a "Stop Use" Order which required pumping and hauling the wastewater from the Chart Drive septic tank to the Schooner sewer collection system at a cost of approximately \$1,000/week.

At the September 8, 2015 committee meeting, the committee passed the following motion:

That the Magic Lake Estates Water and Sewer Committee direct staff to:

- 1. Complete tender ready designs for Option 2b (new dosing tank and raised bed synthetic media septic field) and Option 4 (pump station and force main) and proceed to tender once funding is approved and bring a recommendation back to the committee for approval; and*
- 2. Fund associated costs to retain a design consultant from the capital reserves up to \$100,000.*

Urban Systems Ltd (USL) were retained through a competitive process to provide engineering services associated with the design and tendering of the two alternative designs, as well as the construction and commissioning phase for the chosen alternative. The total approved project budget for the Chart Drive septic system replacement project was \$810,000.

The preliminary construction estimate provided by USL, excluding contingency and taxes was \$400,000 for the new septic system and \$480,000 for the pump station and forcemain. However, even though the pump station option has a higher capital cost, the committee directed staff at their March 8, 2016 meeting to include lifecycle costing analysis in the tender evaluation.

Two tenders, (one for the septic system and the other for the pump station), were issued on March 14, 2016 and closed on April 13, 2016. It was noted in the tenders that only one project would be awarded and that evaluation of the bids would also include lifecycle costing analysis. Three bids were received as follows:

Tenderers	Septic Field Replacement (2016-127)	Pump to Spyglass Road (2016-138)
JRSC Ltd	Non-compliant	---
Stone Pacific Contracting Ltd	---	\$487,059.00 + \$30,000 contignecy + \$25,911.95 GST \$542,911.95 Total (Non-compliant)*
Saanichton Development Ltd	---	Non-compliant

The tenders received from JRSC Ltd. and Saanichton Development Ltd were determined to be non-compliant at the tender opening because they did not provide the required Surety to Bond.

* Upon review of the Stone Pacific tender, it was noted that they had incorrectly submitted the wrong Schedule of Prices and Estimated Quantities form. Therefore, legal advice was requested from the CRD's Solicitor (Stewart McDannold Stuart), and it was determined that the tender from Stone Pacific was also non-compliant.

ALTERNATIVES

Alternative 1

That the Magic Lake Estates Water and Sewer Committee receive this report for information and direct staff to cancel the current tenders (No. 2016-127 and 2016-138) and issue two new tenders for the same two projects.

Alternative 2

That the Magic Lake Estates Water and Sewer Committee receive this report for information and direct staff to undertake a different approach to procuring construction services.

IMPLICATIONS

Alternative 1 – Cancelling the two tenders is recommended because all of the tenders that were received were non-compliant. Re-tendering the two projects would enable all interested companies to submit tenders, that would hopefully be compliant, enabling staff to evaluate and recommend the award of a contract for one project to replace the Chart Drive Septic System. Re-tendering will postpone the construction start date by about 4 weeks to August, 2016 instead of July, but proceeding to award a contract to a non-compliant tenderer could result in a legal action which could add more cost and delay to the project.

Alternative 2 – The committee could direct staff to undertake a different approach to procuring construction services which could be discussed more fully at the committee meeting and, if necessary, staff could report back to the committee at a subsequent meeting with additional information. However, negotiating with one or more of the parties that tendered could lead to legal action from the other parties and is not recommended by our lawyers (SMS).

CONCLUSIONS

The Chart Drive Septic Disposal System has failed and requires replacement to eliminate the ongoing expenses of \$1,000/week for pump/hauling of the wastewater to the Schooner sewer system. Two alternative solutions were designed and tendered (one for a new septic system and the other for a new pump station and forcemain). Three tenders were received: two for the pump station alternative, (tender no. 2016-138), and one for the new septic field alternative, (tender no 2016-127). All tenders were determined to be non-compliant with the tender call. The advice from our lawyers (SMS) is to cancel the current tenders and to issue two new tenders.

RECOMMENDATIONS

That the Magic Lake Estates Water and Sewer Committee receive this report for information and direct staff to cancel the current tenders (No. 2016-127 and 2016-138) and issue two new tenders for the same two projects.

Richard Edwards, PEng.
Project Engineer, Capital Projects

Ian Sander, P.Eng.
Manager, Capital Projects
Concurrence

Malcolm Cowley, P.Eng.
A. Sr. Manager, Infrastructure Engineering
Concurrence

Ted Robbins, B.Sc., C.Tech
General Manager, Integrated Water Services
Concurrence

RE:ls



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**REPORT TO CAPITAL REGIONAL DISTRICT BOARD
MEETING OF WEDNESDAY, APRIL 13, 2016**

SUBJECT **Alternative Approval Process Results for Magic Lake Estates Wastewater Borrowing Bylaw No. 4048**

ISSUE

To present the results of the alternative approval process for Bylaw No. 4048 "Magic Lake Estates Wastewater System Loan Authorization Bylaw No. 2, 2015", and to adopt the bylaw.

BACKGROUND

At its meeting held December 9, 2015, the Board gave three readings to Bylaw No. 4048 "Magic Lake Estates Wastewater System Loan Authorization Bylaw No. 2, 2015" and directed that the required elector approval for the bylaw be obtained through an alternative approval process. The purpose of Bylaw No. 4048 is to authorize the borrowing of \$1,530,000 for the purpose of funding the capital renewal and upgrade of the Magic Lake Estates wastewater system.

Elector approval was sought by way of an alternative approval process within the Magic Lake Estates Sewer Service Area, located on North Pender Island, in the Capital Regional District. The alternative approval process for Bylaw No. 4048 was advertised in local newspapers, information was placed on the CRD website, and a public open house was held on North Pender Island. As part of this process, the Board determined that 62 electors, representing 10% of the total number of electors (618) in the service area, must submit elector response forms to require the Board to obtain the assent of the electors by way of referendum before proceeding to adopt Bylaw No. 4048.

At the close of the deadline date of March 30, 2016 for receipt of elector responses, it was determined that Twenty Five (25) elector response forms had been received. A copy of the Corporate Officer's Certification of the results is attached (Appendix A). As this represents less than the required 10% to obtain the assent of the electors by referendum, approval of the electors by alternative approval process has been obtained, and the Board may proceed to adopt Bylaw No. 4048 (Appendix B).

ALTERNATIVES

Alternative 1

- 1) That the attached of Corporate Officer's Certification of the results of the alternative approval process for Bylaw No. 4048 be received.
- 2) That Bylaw No. 4048, "Magic Lake Estates Wastewater System Loan Authorization Bylaw No. 2, 2015", be adopted.

Alternative 2

That the Board direct staff to carry out a referendum prior to adoption of Bylaw No. 4048.

IMPLICATIONS

With the adoption of Bylaw No. 4048, the CRD can proceed with the following the following upgrades that have been identified by the Magic Lake Estates (MLE) Water and Sewer Committee as high priority projects:

1. Replacement of the Chart Drive septic system which has failed and a notice from Island Health Authority requires that it be replaced;
2. Replacement of sewers along Buck Lake and Privateers Road with larger pipes to prevent overflows during peak flow storm events;
3. An inflow and infiltration program to identify leaking pipes so that they can be repaired in order to reduce wet weather flows at the Cannon and Schooner Wastewater Treatment Plants (WWTP) to meet permit requirements, prevent overflows and extend the life of the treatment plants; and
4. Ultrasonic testing and condition assessment of the metal walls of the clarifier tanks at Schooner WWTP which will determine the remaining life of the tanks so that plans can be initiated to replace them before they fail.

The CRD held a referendum in June 2015 to consider borrowing up to \$6,050,000 for upgrades and renewal to the Magic Lake Estates wastewater system. The referendum was unsuccessful. The MLE Water and Sewer Committee reviewed the upgrade and renewal component projects and identified the above four projects as a high priority. There are insufficient funds in the MLE sewer capital reserve fund to pay for the estimated project costs without borrowing.

CONCLUSION

The Corporate Officer's Certification of the results of the alternative approval process for Bylaw No. 4048 indicates that less than 10% of the estimated total number of electors in the Magic Lake Estates Sewer Service Area submitted forms opposed to the bylaw. Therefore, the Board may proceed to adopt Bylaw No. 4048.

RECOMMENDATIONS

- 1) That the attached of Corporate Officer's Certification of the results of the alternative approval process for Bylaw No. 4048 be received.
- 2) That Bylaw No. 4048, "Magic Lake Estates Wastewater System Loan Authorization Bylaw No. 2, 2015", be adopted.

Submitted by:	Brent Reems, MA, LLB, Senior Manager, Legislative & Information Services
Concurrence:	Ted Robbins, BSc, CTech, General Manager, Integrated Water Services
Concurrence:	Raj Sharma, B.Eng, MBA, CPA, CMA, Acting Chief Financial Officer
Concurrence:	Kevin Lorette, P.Eng., MBA, Acting Chief Administrative Officer

SMN:smn

Attachments: Appendix A: Corporate Officer's Certification of Results of Alternative Approval Process for Bylaw No. 4048
Appendix B: Bylaw No. 4048



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REPORT TO MAGIC LAKE ESTATES WATER AND SEWER COMMITTEE MEETING OF TUESDAY, APRIL 19, 2016

SUBJECT SCHOONER WAY AND CANNON CRESCENT WASTEWATER TREATMENT PLANTS MARINE ENVIRONMENT MONITORING PROGRAM UPDATE

ISSUE

This information report is to update the Committee on the rationale and status of the marine outfall environmental monitoring programs for the Schooner Way and Cannon Crescent wastewater treatment plants.

BACKGROUND

The Schooner Way and Cannon Crescent wastewater treatment plants (SWWTP and CCWTP, respectively) are located in Magic Lake Estates on the southwest side of North Pender Island. The SWWTP discharges disinfected secondary-treated effluent into Swanson Channel through a 198-metre long outfall at a depth of 8 metres below sea level. The CCWTP discharges secondary-treated effluent (not disinfected), also into Swanson Channel, through a 204 metre long outfall at a depth of 29 meters below sea level.

The operation of the SWWTP is regulated under the BC Municipal Wastewater Regulation (MWR) under Registration No. RE-01693, granted in 2000. The CCWTP is regulated through a Waste Management Permit PE-00220, granted in 1981. These regulatory instruments require a BC Ministry of Environment (MOE) approved monitoring program to assess outfall performance efficiency and potential impacts to the marine receiving environment.

The current marine monitoring programs for these facilities were designed in collaboration with MOE staff and drafted in February 2011. Final approval did not occur until after two consecutive rounds of annual sampling around each outfall (2011-2012 for SWWTP and 2012-2013 for CCWTP). The intent of the pre-approval sampling was to characterize marine conditions around the outfalls when plant treatment performance was anticipated to be most challenged (i.e., during winter months when flow volumes were high). Following a collaborative review of the characterization results, MOE approved the program designs in 2013. The programs for both facilities consist of 2 components: routine or scheduled sampling and emergency or unanticipated sampling. This sampling design is consistent with the programs at the CRD's 3 other small treatment plants (i.e., two on Salt Spring Island and one in Port Renfrew).

The routine sampling involves undertaking 1 sampling round every 4 years when plant treatment performance is anticipated to be most challenged (i.e., during winter months when flow volumes are high). Each routine sampling round includes 5 days of sampling spread out over a 30-day period ("5-in-30") at 6 stations around each outfall to confirm operational efficiency of the treatment plant and outfall and potential impacts to the marine receiving environment. At 4 of the 6 stations, samples are collected at the surface and mid-water column. At the remaining 2 stations, only surface samples are collected. This results in a total of 10 samples per day per outfall. All samples are analyzed for 2 bacteriological indicators: fecal coliforms and Enterococci. Routine sampling is currently ongoing for 2016 and will occur again in 2020.

Emergency, or unanticipated, sampling is required whenever planned bypass, plant failure/overflow or wet weather overflow events occur that exceed 3 days duration in the winter

(assumed to be September 15 to April 30) or 1 day duration in the summer (assumed to be May 1 to September 14). Sampling takes place as soon as possible after these events, weather permitting, to assess whether outfall impacts (bacteria) can be detected. The same stations and depths are sampled as the routine program, but only on a single day following an event unless high levels of pathogenic bacteria are detected. Emergency sampling has occurred approximately 7 times since 2011.

ENVIRONMENTAL IMPLICATIONS

All sampling results are compared to BC and federal water quality guidelines (WQG) set to protect human health (for those recreating around the outfalls) and shellfish harvesting. The “5-in-30” sampling that occurs as part of the routine monitoring is necessary to allow for direct comparison to the WQG which require geometric average bacterial levels to be determined over a 30 day period. For human health recreation protection, geometric average fecal coliform concentrations are not to exceed the provincial limit of 200 CFU/100mL, while geometric average Enterococci concentrations are not to exceed the provincial limit of 20 CFU/100mL or the federal limit of 35 CFU/100mL. The emergency sampling results are compared to the federal single sample maximum WQG for protection of human health for Enterococci of 70 CFU/100mL. All routine and emergency results are also compared to the federal WQG for shellfish harvesting which requires results not to exceed a geometric average of fecal coliforms of 14 CFU/100mL or more than 10% of the samples exceeding 43 CFU/100mL.

All routine and emergency sampling results since 2011 have been below the human health and shellfish WQG geometric average limits for both bacteriological indicators and the single sample Enterococci limit. A few individual results have exceeded the shellfish fecal coliform threshold of 43 CFU/100mL, but sampling frequency is not high enough to accurately determine if more than 10% of the samples exceeded the threshold. Regardless of the low sampling frequency, there is a Canadian Shellfish Sanitation Program bivalve shellfish harvesting closure (Appendix A) in place along the entire western shore of North Pender Island. The federal government expanded this closure to its current size in June 2011 and is in place primarily as a result of the overflow challenges at the SWWTP and CCWTP, and the potential for shellfish WQG to be exceeded during these events.

Wet weather overflow events longer than 3 days have been occurring more frequently this year, particularly at the CCWTP. Two emergency sampling days have already taken place in 2016: 1 for the CCWTP and 1 for the SWWTP. Some of the additional emergency sampling that would have been required following these wet weather overflows have been covered by the 2016 “5-in-30” sampling that is currently taking place. However, there exists a gray area in commitments to MOE regarding how frequently emergency sampling should take place following consecutive overflows that exceed 3 days duration, particularly when results show limited or no bacteriological impact around the outfalls. Staff have initiated contact with MOE to confirm emergency sampling requirements for future wet seasons. In addition, staff are checking the CCWTP flow meter calibration to confirm it is operating properly and that the increase in overflow frequency is real and not an artefact of an improperly functioning flow meter.

FINANCIAL IMPLICATIONS

The routine marine monitoring occurs every 4 years (2016, 2020, etc.). Some of the costs associated with routine marine monitoring are shared with the 2 CRD treatment plants on Salt Spring Island. Staff coordinate sampling across all 4 CRD Gulf Island outfalls. Shared costs include mobilization and demobilization staff time, boat travel time from Sidney to Pender/Salt Spring, and boat fuel. Actual sampling time and bacteriological analyses costs are not shared

Magic Lake Estates Water and Sewer Committee – April 19, 2016
Schooner Way & Cannon Crescent WWTP Marine Environment Monitoring Prgm Update 3

across the 4 facilities. Emergency sampling costs are solely supported by individual facilities unless emergency sampling events occur simultaneously at the different facilities and sampling can be scheduled concurrently. Sampling is undertaken by Environmental Protection division staff using a Regional Parks division boat. Bacteriological analyses are performed by a commercial laboratory in Victoria at a cost of approximately \$50/sample.

To budget for the routine marine monitoring component, staff accounted for the full routine sampling round in 2016, then allocated ¼ of the costs per year (2017-2019) in anticipation of the next routine sampling round scheduled for 2020. Staff have also budgeted for 1 day of emergency sampling per treatment plant per year. A summary of the 2016-2019 budgets for the CCWTP and SWWTP can be found in Appendix B.

Overall, wet weather overflow events appear to be increasing in frequency in recent years for the SWWTP and CCWTP, and at some of the other CRD treatment facilities. To reduce the frequency of these events at the SWWTP and CCWTP, and the subsequent emergency sampling requirements and costs, reductions of inflow and infiltration into the sewage conveyance systems and/or an increase in plant flow capacities would be required.

CONCLUSIONS

The marine receiving environment monitoring programs for the CCWTP and SWWTP are undertaken to satisfy provincial regulatory requirements. Routine monitoring is undertaken every 4 years while emergency monitoring is triggered by various anticipated and unanticipated events. Staff are working with BC MOE staff to confirm ongoing emergency sampling frequency, particularly following repetitive wet weather overflow events. Results of both the routine and emergency monitoring since 2011 indicate that both outfalls are performing as expected and that human health risk (to those recreating around the outfalls) is low. However, impact to shellfish harvesting areas could be occurring around the outfalls and, as a result, a federal bivalve shellfish closure is in place along the west side of North Pender Island to protect consumers.

RECOMMENDATION

That the Magic Lake Estates Water and Sewer Committee receive this report for information.

Glenn Harris, Ph.D., R.P.Bio.
Senior Manager,
Environmental Protection

Mike Walton
Acting General Manager,
Parks & Environmental Services
Concurrence

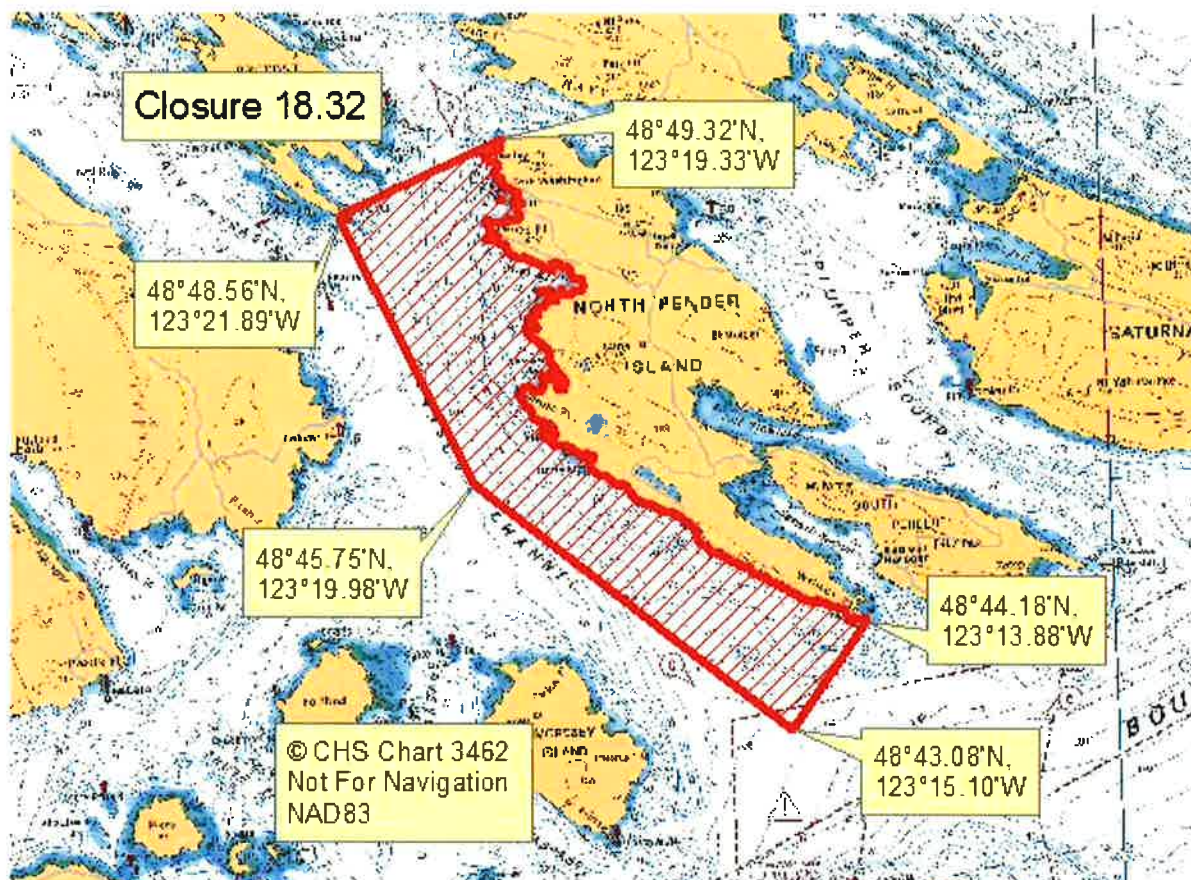
Ted Robbins, B.Sc., C.Tech.
General Manager, Integrated Water Services
Concurrence

CL:cam

Attachments: 2

- Appendix A: Map - Canadian Shellfish Sanitation Program Bivalve Shellfish Closure 18.32
- Appendix B: Summary of 2016-2019 WMEP Budget – Schooner Way and Cannon Crescent

Canadian Shellfish Sanitation Program Bivalve Shellfish Closure 18.32
(<http://www.pac.dfo-mpo.gc.ca/fm-gp/contamination/sani/area-secteur-18/18.32-eng.html>).



APPENDIX B

Summary of 2016-2019 Wastewater and Marine Environment Program budgets for the CCWTP and SSWTP, broken down by wastewater and marine receiving environment (surface water) components.

Facility/Year	2016	2017	2018	2019
CANNON CRESCENT (CCWTP)				
Wastewater	\$ 1,376	\$ 1,404	\$ 1,432	\$ 1,460
Surface Water "Routine"	\$ 6,098	\$ 1,555	\$ 1,586	\$ 1,618
Surface Water "Emergency"	\$ -	\$ 1,244	\$ 1,269	\$ 1,294
TOTAL	\$ 7,474	\$ 4,202	\$ 4,286	\$ 4,372
SCHOONER WAY (SSWTP)				
Wastewater	\$ 5,439	\$ 5,548	\$ 5,659	\$ 5,772
Surface Water "Routine"	\$ 6,098	\$ 1,555	\$ 1,586	\$ 1,618
Surface Water "Emergency"	\$ -	\$ 1,244	\$ 1,269	\$ 1,294
TOTAL	\$ 11,537	\$ 8,347	\$ 8,514	\$ 8,684



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**REPORT TO MAGIC LAKE ESTATES WATER AND SEWER COMMITTEE
MEETING OF TUESDAY, APRIL 19, 2016**

SUBJECT WATER AND WASTEWATER OPERATIONS REPORT – MARCH 2016

PURPOSE

The purpose of this report is to provide the Magic Lake Estates Water and Sewer Committee general information regarding significant operational activities carried out for the water and wastewater service.

BACKGROUND

Daily operations and maintenance for the Magic Lake Estates water and wastewater systems is performed by Capital Regional District (CRD) on-island operations staff. Additional operational support is also provided by CRD Saanich Peninsula operations staff as well as CRD Core Area electrical and mechanical operations staff when required.

REPORT

On March 31, 2016 on-island standby duties reverted back to the Saanich Peninsula Operations. On-island standby duties will resume in the fall (October 1). During this period, water and wastewater alarms will be received by the Peninsula standby operator who may need to contact on-island staff to respond. In the event on-island staff cannot be contacted and depending of the severity of the issue, Peninsula Operations staff may need to respond.

During the month of March 2016, staff attended to the regular operational and maintenance activities for the water and wastewater service. The activities listed below are intended to capture significant regular maintenance undertakings, capital project activities and unplanned emergency events.

Wastewater Service Activities

TASK	DATE	Notes
Schooner Treatment Plant operation mode change.	Early March	Scheduled seasonal change of the treatment plant operation from step feed mode to standard inlet plug flow.
Emergency response due to power outages	March 10, 2016	Staff responded to the Schooner Wastewater Treatment Plant as a result of alarms being generated due to the power outage. In addition, a heavy rainfall event caused additional challenges during the outage.
Galleon Way pumping station electrical repairs	March 22, 2016	Removed and repaired pump #1 electrical motor. In addition, electrical capacitors were also replaced at the site that service both pumps.

TASK	DATE	Notes
Chart Drive capital project	March 29, 2016	Assisted Infrastructure Engineering at a tender site meeting with prospective contractors.
Chart Drive septage hauling and disposal.	Ongoing	Ongoing operations to haul and dispose of Chart Drive septage. Approximately 7 hours per week of staff time being expended.

Water Service Activities

TASK	DATE	Notes
Leak repair near 4610 Ketch Road	March 4, 2016	After a significant search effort, a water leak was located and repaired. A water service connection near the main spilt.
Emergency response due to power outages	March 10, 2016	Staff responded to the water treatment facility as a result of alarms being generated due to the power outage and plant restart.
Emergency response to a water leak on Galley Cress	March 16, 2016	Operations was notified of the leak by a local resident. Crews responded immediately and repairs were completed. Water service was interrupted to approximately 8 properties for a short duration as a result of the leak.
Magic Lake Water Treatment Plant UV lamp replacement	March 16, 2016	Replaced ultraviolet light (UV) reactor lamps as a result of alarms being generated due to low UV intensity.
Water connection installation	March 21, 2016	A request for a water connection to 1613 Schooner Way was completed.
Magic Lake staff gauge	March 31, 2016	Approved capital project. Staff gauge is now installed at the Magic Lake South Dam. Reservoir levels can now be monitored.
Buck Lake Building Improvements	Ongoing	Approved capital project. Building renovations are approximately 95% complete. Exterior painting work remains pending good weather.

RECOMMENDATION

That the Magic Lake Estates Water and Sewer Committee receive this report for information.

Dan Robson, ASCT
Manager, Saanich Peninsula and Gulf
Islands Operations

Matt McCrank, MSc., P.Eng.
Senior Manager, Infrastructure Operations
Concurrence

Ted Robbins, B.Sc., C.Tech.
General Manager, Integrated Water Services
Concurrence

DR:ls:



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**MAGIC LAKE ESTATES WATER AND SEWER LOCAL SERVICE COMMITTEE
ACTION LIST**

	TASK	ACTION	STATUS
July 9, 2013			
1.	Negotiate for R/W over dam with property owners.	J. Petrie C. Rodash	Ongoing
March 8, 2016			
2.	Send a follow up letter to the resident with stained plumbing fixtures	C. Moch	
3.	Prepare a report to committee on wastewater pilot project Expression of Interest	D. Puskas	

Dale Puskas

From:
Sent: Thursday, March 24, 2016 9:54 AM
To: Dale Puskas
Subject: Re: 2614 Chart Dr. Pender Island, - application for waste water connection

Dale,

I have let my offer expire on this property and have passed your email along to the owners realtors. Any further action would be with the property owners.

Thank you for your timely response.

> On Mar 21, 2016, at 11:00 AM, Dale Puskas <dpuskas@crd.bc.ca> wrote:

>

>

> As per our phone conversation this morning, I am summarizing the information I relayed for your consideration:

>

> - We have conducted an order of magnitude cost estimate including construction, engineering and administration to process the request for inclusion, design time for the connection, approvals through Island Health, approvals from the Magic Lake Estates Water & Sewer Local Services Committee, Electoral Area Services Committee and CRD Board for bylaw amendment and have come up with approximately \$10,000. This is just an initial estimate to give an idea of the order of magnitude to process this request for inclusion and provide a sanitary service connection, actual construction costs may vary.

>

> - Based upon a quick look at the local contours, it is likely that 2614 Chart Drive will need a residential sanitary pump station to convey wastewater to the service connection at the property line. All costs associated with the pump station and sanitary forcemain on private property, including design, approvals and construction, are the responsibility of the property owner.

>

> - The request for inclusion process can be a lengthy process and is dependent on scheduled Committee monthly meetings. This process requires approval by the Magic Lake Estates Water & Sewer Local Services Committee before it is recommended to the Electoral Area Services Committee and consequently the CRD Board for a bylaw amendment. Upon successful approval from the CRD Board the bylaw amendment for inclusion within the sewer service area is referred to the BC Inspector of Municipalities for approval before the applicant's property is included in the service area.

>

> - The Magic Lake Estates Sewer Service Area is currently in an alternative approval process to borrow funds to complete a number of projects, including the replacement of the Chart Drive septic field - which the noted property would be connected to if the request is processed. Whether the alternative approval process is successful or not may be a factor that affect whether the Magic Lake Estates Water & Sewer Local Services Committee approves the request for inclusion and recommends it going to the CRD Board as a bylaw amendment. The alternative approval process closes March 30th, 2016 with results published shortly thereafter.

>

> As discussed, please let me know whether you would like to proceed further with the request for inclusion. If you have any further questions please contact me.

>
> Regards,
>
> Dale K. Puskas, P.Eng.
> Project Engineer
> CRD Integrated Water Services
> Ph: 250.474.9648
> E: dpuskas@crd.bc.ca
>
>
> -----Original Message-----
> From: Derek Arthur
> Sent: Tuesday, March 15, 2016 9:51 AM
> To: [REDACTED]
> Cc: Dale Puskas <dpuskas@crd.bc.ca>
> Subject: RE: 2614 Chart Dr. Pender Island, - application for waste water connection
>

>
> As per our phone conversation, we have received your application for a sewer connection to 2614 Chart Dr. The property is not currently located within the Magic Lake Sewer Service Area, therefore it will have to follow a process to be included in to the service area. Dale Puskas, our Project Engineer, will coordinate with you on the inclusion process. I've included Dale by copy of this email.

>
> If the inclusion process proceeds and is accepted, I will coordinate the installation of the sewer service with you.

>
> Dale will be following up with you shortly.

>
> Thanks,
>
> Derek Arthur
> Engineering Technologist, Development
>
>
>

> Capital Regional District
> Integrated Water Services
> 479 Island Highway
> Victoria, BC V9B 1H7
> Ph: (250) 474-9607
> Fax: (250) 474-4012
>
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>

>
> -----Original Message-----
> From: [REDACTED]
> Sent: Monday, March 14, 2016 4:56 PM
> To: Derek Arthur <darthur@crd.bc.ca>
> Cc: Dale Puskas <dpuskas@crd.bc.ca>
> Subject: Re: 2614 Chart Dr. Pender Island, - application for waste water connection
>
> Hi Derek,

>

> The application for connection to a sewer utility at 2614 Chart Drive, Pender Island is attached. Also included is a contract of purchase and sale amendment with the property owner for who will bear the cost.

>

> I'll follow up with you on Tuesday.

>

> Thank you,

>

>

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