



Cochrane Lake Improvement Plan Funding Proposal

Electoral Division: 3

File: 1011-600 / 5050-595

Date:	March 4, 2025
Presenter:	Brenda Mulrooney, Supervisor
Department:	Capital & Engineering Services

REPORT SUMMARY

The purpose of this report is to provide Council with the options for funding the Cochrane Lake Improvement Plan. Administration has been working with the Contributing Landowners ("CLO") to determine the most appropriate funding mechanism and options that will allow work to commence in Spring 2025.

On January 7, 2025, Council, Administration and the CLOs supported Option 3: Construction of a berm with continued discharge to Horse Creek as the most feasible solution for mitigating stormwater issues and improving the water quality of Cochrane Lake. This option includes constructing a berm along a portion of the lakeshore, to raise the water level and create a deeper, algae-resistant lake with enhanced stormwater storage capacity. In recognition of the importance of discharging clean and safe water to Horse Creek, the County is committed to providing the best solution that considers the ecosystem, fish and other living organisms in the natural bionetwork of both Cochrane Lake and Horse Creek. The preliminary cost for Option 3 is approximately \$5.1M +/- 40% accuracy, covering the berm construction, infrastructure upgrades, wetland plantings and a mechanical treatment system to address water quality prior to discharge into Horse Creek. Administration recognizes that these recommendations will benefit the existing communities, the environment and future growth in the area.

In addition to applying for a Drought and Flood Protection Program (DFPP) grant ("the grant") that may cover up to 70% of the project costs, three funding mechanisms have been explored: 1) Creation of a Levy for the area; 2) Cost recovery for the CLOs; 3) Split of costs between the County and the CLOs

Administration Recommendation: The County and the CLOs would split the costs of the project 25/75 (the County contribution of 25% and the CLO contribution of 75%) with a maximum contribution of \$1,275,000. Any cost overruns past the \$5.1MM estimate would be carried by the CLOs.

CLOs Recommendation: The CLOs are proposing the County commits to a 50/50 split of the costs with the County's maximum contribution being \$2.55MM and the CLOs committing to paying any cost overruns above the \$5.1MM estimate.

ADMINISTRATION'S RECOMMENDATION

THAT Council refers the Cochrane Lake Improvement Plan, along with its associated budget allocation and Memorandum of Understanding for Cost Sharing Agreement as per attachment 'C' based on the 25% contribution from the County up to a maximum of \$1,275,000, to the 2025 Spring Budget Finalization for deliberation concurrently with other initiatives.

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### BACKGROUND

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Cochrane Lake has no natural outlet and water quality is an issue as minerals and nutrients entering the lake from stormwater runoff are not adequately flushed out and continue to accumulate in the Lake causing undesirable conditions. In 2013, severe rain events resulted in a portion of the south hamlet homes to experience flooding. Albeit flooding has not been an issue since, the lake water quality has been an ongoing public concern with concerns raised annually by local residents regarding significant odor.

In 2016 a pump station and outlet pipeline were constructed by the County to release water from the lake to Horse Creek. This discharge has served two purposes of lowering lake levels and allowing for the removal of nutrients negatively impacting water quality. To further address water quality concerns, Alberta Environment and Protected Areas (AEPA) approved an increased discharge rate in 2022. Currently, Cochrane Lake is under the jurisdiction of the AEPA while the County manages the lake in accordance with the current management strategy.

Macdonald Communities Limited (MCL) engaged the County in 2022 to explore the vision presented in the 1995 Conceptual Scheme to berm the lake and address hydrological and biological results from past studies of the lake. The County and MCL have worked closely over the past year. ISL Engineering was hired to complete a Cochrane Lake Improvement Plan Review in November 2024. On January 7, 2025, Council, Administration and the CLOs supported Option 3: Construction of a berm with continued discharge to Horse Creek as the most feasible solution for mitigating stormwater issues and improving the water quality of Cochrane Lake

Option 3 is presented as an alternative to the long-term outfall solution proposed in the Cochrane Lake Sub-Catchment Master Drainage Plan (Stormwater Solutions Inc., 2016), which recommended directing 500 L/s to the Bow River. The berm, as defined as a barrier to guard against potential flooding of existing residences and to protect flood-prone areas against erosion, run off and highwater will also aid in allowing more capacity in Cochrane Lake to improve the water quality.

### ANALYSIS

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ISL Engineering provided the County with a Cochrane Lake Improvement Plan Review that evaluated stormwater management solutions proposed to improve the quality of Cochrane Lake and to offer a stormwater solution for future and existing development. Council approved moving forward with Option 3: Berm and continued discharge to Horse Creek and directed “Administration to proceed with negotiations with Contributing Landowners to formalize a cost-sharing agreement, inclusive of grant opportunity to be brought back to Council.” In total, this solution is estimated to cost approximately \$5.1M for the cost of constructing a berm, necessary to protect existing homes, to conduct the necessary infrastructure upgrades to increase discharge to Horse Creek, wetland plantings and a purchase of mechanical treatment system that can be installed at Cochrane Lake to disrupt the growth of Cyanobacteria. The cost estimate captures the initial capital investment but there will be additional ongoing operating costs as required to manage the overall system.

In addition to applying for a Drought and Flood Protection Program (DFPP) grant that may cover up to 70% of the project costs, three funding mechanisms have been explored. The CLOs are hoping to start construction in Spring of 2025, so timing for the CLOs is a very important consideration to move this project forward.

- 1) **Creation of a Levy for the area:** Given the length of time it takes to create a levy structure, examine the benefitting areas, public engagement process and approval by Council, Administration does not recommend this funding mechanism. In addition, considering the limited servicing in the area and the possibility that the CLOs may likely be the only developers approved

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to proceed with their development until a servicing solution is found, the costs of the project would have to be borne by the County and Levy funds collected by the CLOs as their development proceeds. The length and complexity of this process is why the Levy option is not recommended.

- 2) **Cost recovery for the CLOs:** In this situation, the CLOs would bear all costs related to Option 3 and enter into a cost sharing agreement with the County to facilitate collection of funds from future developers. Again, given the limited servicing in the area and the possibility that the CLOs may likely be the only developers approved to proceed with their development until a servicing solution is found, this option would not benefit the CLOs as no other developers are expected to be approved in the near term.
- 3) **Split of costs between the County and the CLOs:**

### Administration Recommendation:

In addition to applying for the DFPP grant, administration is proposing the County, and the CLOs commit to splitting the costs of the project 25/75 (the County contribution of 25% and the CLO contribution of 75%). The maximum contribution made by the County would be \$1,275,000. Any cost overruns past the \$5.1MM estimate would be carried by the CLOs. The County contribution would come from the available Local Government Fiscal Framework - LGFF Capital Fund.

The justification for the 25/75 split is depicted on the map in Attachment A whereby existing communities surrounding Cochrane Lake equates to 22% of the total benefitting area, with the benefitting area defined as the area of lands developed or soon to be developed, excluding areas that are not approved for development.

### CLOs Recommendation:

In addition to applying to the DFPP grant, the CLOs are proposing and are prepared to enter into an agreement where the County would commit to a 50/50 split of the costs, with the County's maximum contribution being \$2.55MM and the CLOs committing to paying any cost overruns above the \$5.1MM estimate. If the grant is approved in the Fall for 70% of the project costs, the County and the CLOs would split the remainder on a 50/50 basis. The justification for the 50/50 split of costs is depicted in the CLOs Memo attached as Attachment C

## COMMUNICATIONS / ENGAGEMENT

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AEPA was favorable to approving the increased discharge to Horse Creek, provided the County can demonstrate the quality of water discharged to Horse Creek will be maintained. Further talks with AEPA suggests approvals regarding the Water Act for the new activity of constructing the berm will be required in addition to amending the current Water Act approval of increasing the discharge rate to 150l/s. For the work required near the bed and shore of Cochrane Lake, a temporary permit from Public Lands will need to be obtained to work on the bed and shore area of the Lake while constructing the berm.

## IMPLICATIONS

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### Financial

The total estimated cost for Option 3 is approximately \$5.1 million. This figure covers all currently identified activities required to implement the proposed improvements and construct a berm on the Southern end of Cochrane Lake, as well as infrastructure upgrades, wetland plantings and purchase of a mechanical system to improve the lake quality. The \$5.1M estimate provides the financial framework for Option 3 as it stands, while acknowledging the potential for further costs, borne by a future developer, if the need arises to protect or develop other areas of Cochrane Lake. This approach helps ensure that the immediate project is sufficiently funded and that any extra costs due to landowner-driven developments

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are assigned appropriately. The County’s contribution for this project would be debited from the available Local Government Fiscal Framework Capital fund (LGFF).

### Economic Benefits

The financial opportunities that would result from the approval of the Cochrane Lake Improvement Plan would be to capitalize on the investment spent and ongoing management and provision of the residential utilities and services in the area. Additionally, the improved infrastructure will create a more attractive environment for residential development, providing CLOs with a valuable opportunity to develop their lands for residential sales and unlock significant economic value.

### Environmental

Improvements to Cochrane Lake will increase the quality of the water and stormwater management to facilitate future development and mitigate against flooding. Completion of the work presented in the Cochrane Lake Improvement Plan will lead to upgrading the Master Drainage plan for the area. The County and CLOs are committed to the protection of the environment and ensures the quality of water discharged to Horse Creek is improved and adheres by all AEPA standards.

## STRATEGIC ALIGNMENT

Key Performance Indicators		Strategic Alignment	
Effective Service Delivery	SD2: Services are resourced and delivered to specific groups as intended, and citizens are satisfied with the outcomes	SD2.1: Percent of citizens satisfied with the range of County services available/delivered	Moving forward with the improvement plan will result in a higher level of service for the people in the community and increased residential development opportunities.
Thoughtful Growth	TG2: Defined land use policies and objectives are being met and communicated	TG2.2: Percent of growth/approvals within the approved growth areas within the Regional Growth Plan	This investment is contrary to the strategic KPI being outside the Preferred Growth Area; however, it is recognized that improvements would provide a safer, more thoughtfully managed development area for future growth, leading to increased County cost recovery on regional servicing systems.

## ALTERNATE DIRECTION

THAT Council refers the Cochrane Lake Improvement Plan, along with its associated budget allocation and Memorandum of Understanding for Cost Sharing Agreement as per attachment ‘C’ based on the 50% contribution from the County up to a maximum of \$2,550,000, to the 2025 Spring Budget Finalization for deliberation concurrently with other initiatives.

## ATTACHMENTS

- Attachment A: Benefitting Area Map
- Attachment B: CLO Memo: Cost split justification
- Attachment C: Draft Memorandum of Understanding for Cost Sharing Agreement

Cochrane Lake Improvement Plan

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**APPROVALS**

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Manager:	Jeannette Lee, Manager
Chief Operating Officer:	Byron Riemann, Chief Operating Officer
Chief Administrative Officer:	Reegan McCollough, Chief Administrative Officer

