

Cochrane Lake Revitalization

Presented by Macdonald Communities
Limited

Introduction - Macdonald Communities Limited

- ▶ Since 1985, The Macdonald group of companies has created a legacy of residential and commercial properties across North America.
- ▶ Within Rocky View County, Macdonald Communities has developed Swift Creek Estates in Springbank and is currently building the award-winning community of Watermark at Bearspaw.
- ▶ In 2016 Macdonald Communities purchased the land around Cochrane Lake, and over the last 6 years has been working with Rocky View County administration, Alberta Environment and Parks, Sedulous Engineering, Spirogyra Scientific Consulting, and Jacobs Storm Solutions to develop a plan to improve the lake water quality making Cochrane Lake a regional recreation destination.

Cochrane Lake - ASP & Hamlet Plans

- ▶ Cochrane Lake is located north of the center of the Town of Cochrane, Township 26, Range Road 4, west of the 5th meridian within Rocky View County (Appx 6km away from downtown Cochrane)
- ▶ The Cochrane Lake Hamlet plan was adopted in 2007
 - ▶ Edge Districts
 - ▶ Transition Districts
 - ▶ Center Districts
- ▶ The Cochrane North ASP was adopted in 2011
 - ▶ Hamlet
 - ▶ Residential Infill A
 - ▶ Residential Infill B
 - ▶ Residential Infill C
 - ▶ Cluster Residential
 - ▶ The ASP mentions the total population of Cochrane North and Cochrane Hamlet to eventually be between 12,000 to 13,000 inhabitants

Cochrane Lake - Current State

- ▶ The lake is without a natural outlet, which means water levels rise and fall with precipitation and stormwater runoff only.
 - ▶ minerals and nutrients entering the lake from runoff, groundwater or atmospheric deposition are not adequately flushed out and continue to accumulate in the lake water causing elevated dissolved solids (salts) and nutrients which foster the growth of prolific algae
- ▶ Cochrane Lake is currently designated as hazardous to health due to the prolific algae growth
- ▶ Due to the lack of circulation, the lake emits foul odors periodically through the year
- ▶ The current water quality does not allow for any type of recreational opportunities in or near the water as there is currently no natural circulation of water out of the lake.

Purposed Plan

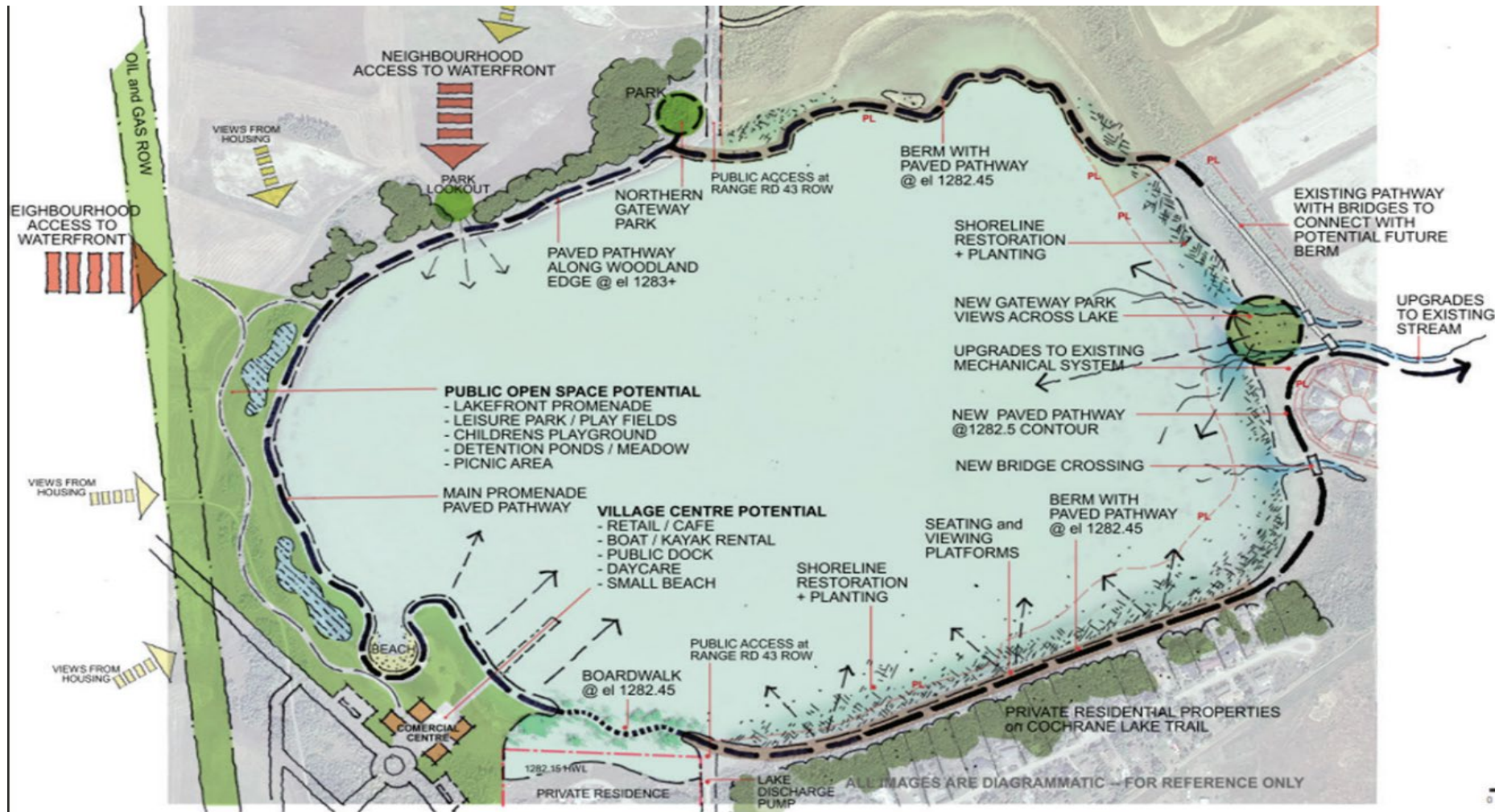
- ▶ Macdonald Communities has worked with Rocky View County , water quality experts and civil engineers over the last several years to develop a plan to improve the lake quality.
- ▶ **Improve Water Quality**
 - ▶ By utilizing existing County owned pump infrastructure, and constructing berms around the lake, the water level can be raised and the lake water circulated. An increased lake depth and the infusion of fresh water will reduce the overall temperature of the lake which has been know to reduce algae growth
 - ▶ A fresh water supply can be pumped from the Bow River to Cochrane Lake, using existing infrastructure, allowing a consistent water level to be met throughout periods of heat or low precipitation
 - ▶ Upgrading the current pumps at the pumping station at the south end of the lake allows the drainage of excess water, directing it to Horse Creek providing the ability to stabilize lake levels when the water is too high – flood prevention
 - ▶ The use of these pumps will facilitate the continuous movement of water out of the lake providing much needed circulation

Purposed Plan

► Recreational Destination

- Macdonald Communities is proposing the construction of a significant recreational pathway system along the lake's edge (berm) that would provide year round public access.
 - A pathway would connect all residents around the lake.
 - Additionally, the creation of a berm would contribute to mitigating future flood issues, allowing for seasonal increases to lake levels.
 - The improvements to the lake and water quality would lead to the largest recreational destination (200 acres) within Rocky View County and second largest lake destination within the region.

Concept Drawing



Next Steps

- ▶ Based on preliminary works, Macdonald Communities estimates the project will cost 8 million dollars to complete.
- ▶ Macdonald Communities would like to explore different forms of recovery methods to help fund the upgrades for water quality and the creation of the berm.
- ▶ Macdonald Communities would like Council to direct Administration to work with Macdonald representatives to explore the viability of funding the revitalization plan via one or multiple of the following funding mechanisms:
 - ▶ Developer Contributions
 - ▶ Recreational Levy
 - ▶ Storm Levy
 - ▶ Tax Stabilization
 - ▶ Grant Dollars (i.e. Community Revitalization Levy)

Conclusion

- ▶ Cochrane Lake is a public recreational area. The future potential of this amenity will be fully realized with the input of those who live there and know the history of the lake.
- ▶ Macdonald Communities would like Cochrane Lake to be a recreational destination for all Rocky View County residents and neighboring municipalities
- ▶ We are confident with the support of Rocky View County Council we will be able to revitalize the lake and provide a recreational amenity for future generations