

**Birchwood Country Condo  
Condominium Corporation No. 882 0814  
P.O. BOX 134, LINDALE, AB T0C 1W0**

May 11, 2018

Dear Owners:

On February 9, 2018 Alberta Environment, Drinking Water Operations requested a meeting to include attendance of Birchwood Condominium Corporation Directors and Water services contractors.

The purpose of the meeting was to determine and clearly identify upgrades with regards to the waterworks system within Birchwood. Alberta Environment stressed that our water is very safe which is the reason that there was no prior urgency to have such upgrades done.

Alberta Environment provided some background about regulation changes in place for public water treatment systems in Alberta. Environmental water standards were changed in 2006. These standards were necessary to deal with viruses and their ability to live a long time underground. Therefore, it is possible for these viruses to infiltrate ground water and then subsequently our well water supply. One of the ways to combat and kill viruses is to treat them with chlorine, as we are currently doing, but our present treatment is not to the specifications now required. Other methods of testing for these viruses is extremely costly and not a viable option.

The Birchwood attendees were then given a report that was completed in March of 2012 titled, Groundwater Disinfection Concept Cost Assessment – Birchwood Village Greens Water Treatment Plant. This report was prepared by Associated Engineering at the request of the Alberta Government. **Prior to this meeting this report was not provided to the Condominium Corporation and the Alberta Environment representatives confirmed this was an oversight.** We are posting this report on our website [www.birchwoodcountycondo.com/Water Upgrades](http://www.birchwoodcountycondo.com/Water%20Upgrades) for any owner who wishes to review.

Alberta Environment indicated that the report showed that our water has the possibility of passing through our tanks too quickly to be treated properly to effectively kill harmful viruses. Basically, our tanks are too small, and our pumps are too big. Even though our water used currently is being treated effectively, if the existing pumps were to pump as much water as they are capable of, our water would not be treated properly as it would pass through the tank too quickly for the chlorine to be effective. **We were advised that if any tanks are added, or any new pumps installed we would be required to engage an engineer to be compliant with this upgrade. They indicated that a specialized engineer would be required to ensure the report acceptable.** The engineer would determine how much water we require throughout each day and then determine the size of tank needed and the proper size of pump required.

Bear in mind that all Provincial public water systems are required to comply with the new regulations. We were advised that all costs of rebuilding or modifying the well houses, water system and equipment to achieve the new requirements would be born solely by the Birchwood Condominium Corporation. We are a private corporation and therefore would **not qualify for any type of grant from the government.**

In summary, Alberta Environment stressed that action must be taken to resolve upgrade requirements at all three well houses. **Failure to do so will result in Alberta Environment issuing a non-compliance letter to the Condominium Corporation.** Further action may be taken by Alberta Health Services issuing a 'boil water advisory' and then further penalties may be imposed on the Condominium Corporation.

Subsequent to the meeting and the report provided in February the Board of Directors were advised that additional requirements may be imposed on Public water systems that would further increase our operating costs for testing and certification as well as infrastructure upgrades.

The current Board feels we must correct the deficiencies in our water distribution system beginning with an approved engineered report as soon as possible. The associated costs of the entire process may be more than can be born under the present Condominium Corporation structure since we are not eligible to apply for any grants.

The coming Board will be challenged to explore all possible alternatives for the governance of our community and for the health and safety of our residents. We must all be prepared for whatever changes need to be made. We must face the fact that Governmental and Environment Legislation has reached a point that is beyond our present financial and human resource assets. All avenues of possibility should be considered including remaining a private Corporation or undergoing dissolution and becoming a part of Brazeau County in such a form such as a rural residential subdivision, a hamlet, etc. We are truly at a crossroads and cannot remain stagnant but must move forward to cope with the changes in the world around us that are most often beyond our control.

Attached is the summary of the Upgrade Recommendations and Costing taken directly from the report we were presented with at the meeting.

Respectfully

The Board of Directors  
Condominium Corporation 882 0814

# Upgrade Recommendations & Costing

## 6.1 FUNDING ELIGIBILITY

Alberta Transportation provides financial assistance for non-private, municipal-owned water supply/treatment and wastewater treatment projects under the Alberta Municipal Water/Wastewater Partnership program. Accepted projects receive grants as a percentage of project costs. Percentages are calculated with a population-based formula.

To access funding, eligible municipalities must apply directly to the Department of Transportation. Questions regarding the eligibility for grant funding assistance should be directed to Alberta Transportation's Regional Director. The Department staff in the area is available to answer questions and provide advice to the municipality during the preparation of the project proposal.

## 6.2 ONLINE INSTRUMENTATION & CONTROLS UPGRADE

AE recommends installing online chlorine analyzers and chlorine feed pump upgrades to enable automatic chlorine dose control to maintain specific chlorine residual leaving the WTP. Automation includes online chlorine analyzers, feed pump connected by a PID loop to the chlorine analysers and controls.

## 6.3 DISINFECTION UPGRADE RECOMMENDATION

While many options discussed in Section 5 of this report are viable, it is important to consider the following factors in selecting an upgrade option:

- Cost effectiveness (capital and operating);
- Easy to incorporate into the existing system;
- Upgrade construction sequencing (no major shut-down requirements);
- Ease of operation;
- Operations safety; and
- Further proof-testing or pilot testing needs.

It should be noted that the findings presented here-in are feasibility level in nature, using the limited information made available during the brief study period. The upgrade recommendations are to be considered preliminary, and are to be used for planning and budgeting purposes. A site specific predesign

is still recommended in order to further detail the scope and design criteria of disinfection upgrades and to confirm upgrade costs.

# 6

## Government of Alberta Environment and Water

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**Cedar Glen**

**Willow Ridge**

**Aspen Grove**

Design flow (m<sup>3</sup>/d): 199 327 196

Design flow basis (Current Maximum or Design Maximum):

### Recommended Upgrade Options & Costs to Meet Disinfection Needs:

Clearwell/storage Improvements

Construct additional disinfectant contact volume (\$): \$64,000 \$64,000 \$64,000

Expansion type: Inline tank Inline tank Inline tank

Additional volume needed (m<sup>3</sup>): 4.5 6.5 4

### Online Instrumentation/Automation

Install online chlorine analyzer c/w alarms (\$): \$ 22,000 \$ 22,000 \$ 22,000

Connect online chlorine analyzer to control disinfectant feed  
(incl. pump upgrade allowance)

(\$): \$ 38,000 \$ 38,000 \$ 38,000

### Upgrade Costs

Recommended upgrade:

Clearwell Expansion

Estimated disinfection process upgrade cost allowance (\$): \$ 64,000 \$ 64,000 \$ 64,000

Estimated online instrumentation/controls upgrade cost allowance (\$): \$ 60,000 \$ 60,000 \$ 60,000

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**Estimated Total Upgrade Cost Allowance**

**(\$): \$124,000 \$124,000 \$124,000**

The cost allowance includes 50% contingency and 15% engineering allowances but excludes taxes.

*NB: This diagram was reduced by the Birchwood Condo Board to indicate only those items that were recommended to us as feasible. The original study included a variety of other treatment processes and options that were beyond the scope or cost deemed to be required by the current Alberta Environment Standards. Please refer to the online copy of the document if you require further information that is posted on our website: [www.birchwoodcountrycondo.com/Water Upgrades](http://www.birchwoodcountrycondo.com/Water%20Upgrades).*