

To:	Warden Hicks and Members of Grey County Council
Committee Date:	July 8, 2021
Subject / Report No:	TR-CW-14-21
Title:	Condition of Grey County Sand Domes
Prepared by:	Pat Hoy, Director of Transportation Services Jim Nicoll, Maintenance Manager
Reviewed by:	Kim Wingrove, CAO
Lower Tier(s) Affected:	Grey Highlands
Status:	Adopted as presented by Committee of the Whole through Resolution CW7114-21; Endorsed by County Council CC57-21

Recommendation

1. **That Report TR-CW-14-21 Condition of Grey County Sand Domes be received; and,**
2. **That the additional preventative maintenance arising from the 2021 specialized dome inspections be undertaken; and,**
3. **That the funds for the maintenance and repair projects of \$205,000 to be funded from any year end surplus and if none exists, from the Transportation Services Facilities – Depots & Domes Reserve.**

Executive Summary

Sand and salt storage structures are important for winter maintenance operations. Issues with some of the County's domes developed over the past winter season and new inspections of the facilities have brought forward issues with the wood and shingle domes in Chatsworth, Dundalk and Ayton as well as the fabric structure in Kimberley. Transportation Services will require \$205,000 of unbudgeted 2021 funds to complete the necessary work to bring the domes up to a good level of repair.

Background and Discussion

Grey County owns seven sand and salt storage domes that are either wood panel and shingle construction or fabric covered. These domes are inspected every five years as

part of the Building Condition Assessments program. In addition, as they are a specialized structure, they require periodic inspections by an expert. The prior specialized inspection of structures was completed in 2012.

In general, all the work required for the wood and shingle domes is similar. The domes are basically a self-supporting structure and function similar to an igloo with upgraded support. Each panel is plywood on a wooden frame that is its own structural member, leaning on the others for additional support. Each piece of plywood is placed with the wood grain vertical, glued and nailed for additional support. All the repairs needed are basically repairing certain panels and fixing shingles.

Kimberly and Feversham are cloth domes. Kimberley is addressed in this report and Feversham will be addressed in a future report.

Immediate Maintenance Requirements

The Chatsworth Dome is located at 317157 Highway 6 & 10 just north of Chatsworth. The structure is approximately 40 years old and constructed from wood and shingles. An inspection has detected a major sag in four panels that will need replaced and the entrances trusses also require repair. Total cost for repairs for 2021 would be \$50,000. Completing these repairs will extend the lifecycle to 2027 when the dome is scheduled for replacement.

The Dundalk Dome is located at 170 Glenelg Street in Dundalk. The structure is approximately 35 years old and constructed from wood and shingles. An inspection has determined that it should be completely re-shingled and new plywood placed in areas of deterioration. \$50,000 has been budgeted for 2021 to repair certain sectors of the dome. An additional \$70,000 is required to completely re-shingle and repair the dome and entrance trusses. Completing these repairs will extend the life to 2030.

The Ayton Dome is located at 112735 Grey County Road 3, 5 km south of Grey Road 4. It is approximately 35 years old and constructed from wood and shingles. An inspection has determined that \$30,000 in repairs to replace the door header and repair a truss. Complete re-shingling of the dome is scheduled for 2022. Completing these repairs will extend life cycle to 2030.

The Clarksburg Dome is located at 827489 Grey Road 40, 1 kilometer west of Grey Road 13. It is approximately 35 years old and constructed from wood and shingles. An inspection has determined that \$40,000 worth of repairs to replace two panels and replace structure around the panels. Completing these repairs will extend the life cycle to 2026.

The Kimberley Dome is located at 235409 Grey Road 13, 1 kilometer north of Kimberley. It is a fabric dome constructed in the early 1990's. An inspection has determined that \$15,000 worth of repairs to replace cables and patch small holes in the

tarp in various locations. Completing these repairs will extend the lifecycle to 2023 when the dome is scheduled for replacement.

Future Replacement Considerations

Modern sand and salt storage buildings are constructed as conventional buildings that allow for the inside loading of sand and salt. The anticipated cost to construct a new building is approximately between \$ 650,000 and \$850,000 depending on capacity. Transportation Services is currently putting \$156,100 into reserve annually for future construction costs.

Legal and Legislated Requirements

None.

Financial and Resource Implications

If insufficient surplus exists at year-end, a total of \$205,000 will be funded from the Transportation Services Facilities – Depots & Domes Reserve in order to complete this work.

<i>Dome Location</i>	<i>Funding Source</i>	<i>Funding Amount</i>
Chatsworth	Transportation Services Facilities - Depots & Domes Reserve	\$50,000
Dundalk	Transportation Services Facilities - Depots & Domes Reserve	\$70,000
Ayton	Transportation Services Facilities - Depots & Domes Reserve	\$30,000
Clarksburg	Transportation Services Facilities - Depots & Domes Reserve	\$40,000
Kimberley	Transportation Services Facilities - Depots & Domes Reserve	\$15,000
Total		\$205,000

Should reserve funding be required for these unanticipated projects, the Transportation Services Facilities – Depots & Domes Reserve will have a projected balance of \$418,349 at year-end.

Relevant Consultation

- Internal: Finance Department
- External: Municipality of Grey Highlands

Appendices and Attachments

None