

**CHINOOK RIDGE LODGE AND GOLF COURSE
INTEGRATED WATER MANAGEMENT PLAN FOR POTABLE WATER, WASTEWATER AND
STORMWATER**

Introduction
September 12, 2011

2.0 Introduction

The purpose of this report is to provide the details of the overall site water management plan for the proposed Chinook Ridge Lodge and Golf Course (Chinook). The report will provide the information required for various regulatory approvals for this project. The report contains innovative and creative water resource solutions required for rural development challenges. Potable water, wastewater and stormwater quantities and quality of water necessary for the project are combined in an Integrated Water Management Plan. The report includes the framework for water reuse and conservation within the development.

To support the project’s regulatory approval requirements, design considerations, including supporting studies such as the Stormwater Management Plan and Land Classification for Irrigation are presented in this report. The hydrological report required to obtain the water license for the development has been completed and submitted for approval and is attached in **Appendix F**. Detailed design has not been completed at this time and will be completed in conjunction with golf course design so that may be fully integrated.



Irrigation water will be sourced from treated domestic wastewater, stormwater and rainwater capture. It is the intent of Chinook Ridge not to use potable water for golf course irrigation. By identifying the total site water demands (water balance) water conservation methods can then be determined, and deficits and opportunities can be addressed.

This report is divided into three main sections:

1. Potable Water System for domestic use
2. Domestic Wastewater Treatment and Re-use System for irrigation
3. Stormwater Management and Re-use System for irrigation

To comply with the Municipal Development Bylaw, the site will have available a fire water pond that can be used for fire suppression.

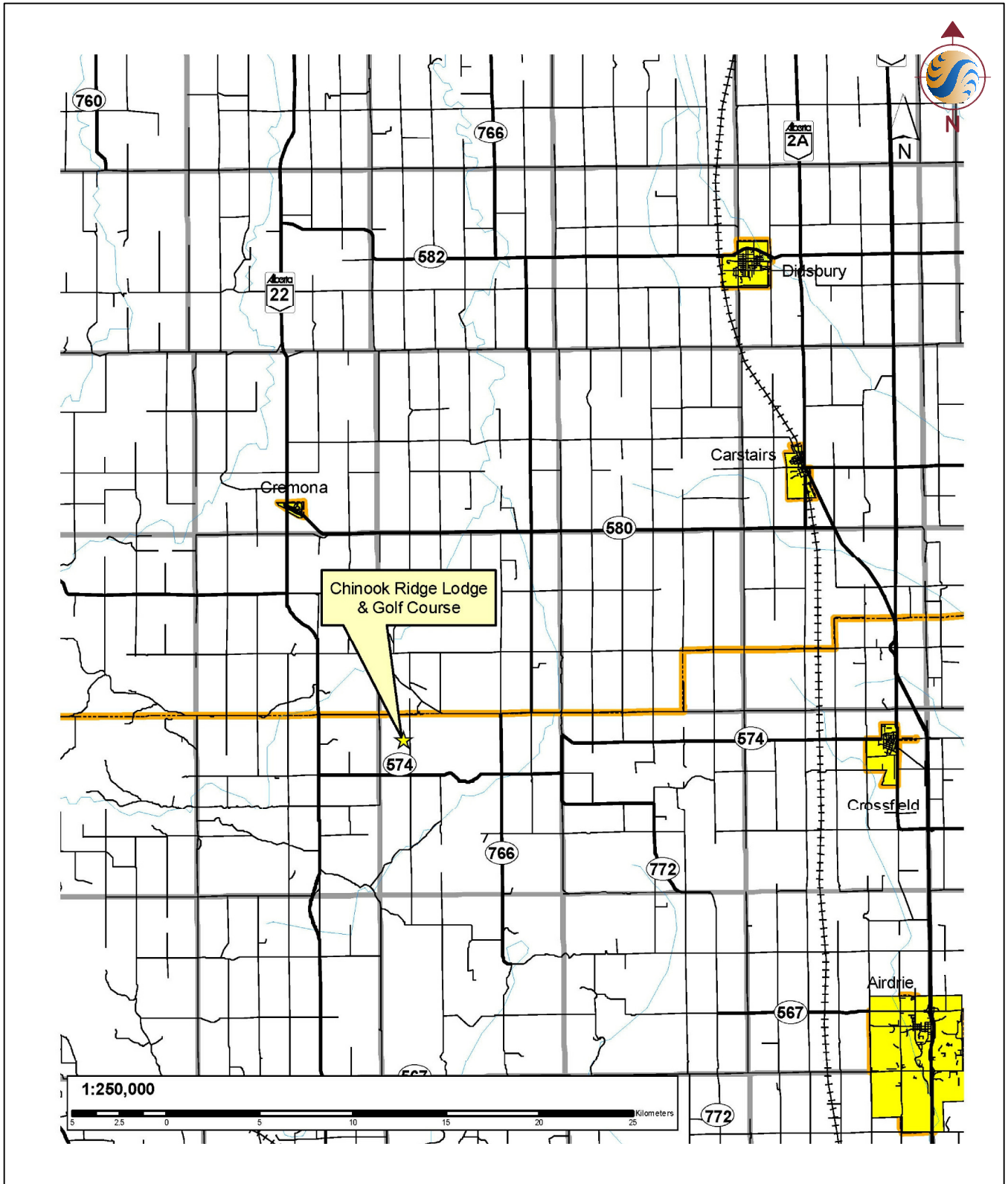
2.1 PROJECT BACKGROUND

2.1.1 Location

Chinook Ridge is located (SE 31-TWP 28-RNG 3-W5) 30 minutes from Calgary, Airdrie and Cochrane. The land is on a high ridge with a 180 degree view of the Rocky Mountains. The terrain consists of high vistas, knolls, dips, pockets, sandstone outcroppings and a significant valley. Elevations range from a high of 4,035 feet to a low of 3,960 feet. Overall, the land slopes predominately to the west with one small area that slopes to the north. The construction of the golf course will simply require some exaggeration of the land's natural features – increasing the size of the knolls and dips and developing water features and sand bunkers in the pockets. The terrain is more suited to a golf course, not so advantageous for farmland and is explained in this report. **Figure 2.1** shows the location of the project in relation to nearby communities.

2.1.2 Description of Activities

The Chinook Ridge Lodge & Golf Course will include an 18-hole golf course, a lodge with a 21 room boutique hotel on the upper level, a banquet hall with seating for up to 500 people with a commercial kitchen, his and hers spas, exercise/weight-room, 2 station beauty salon, locker rooms, spike room, meeting and break-out rooms and a pro-shop. The Lodge will require water for showering, toilets, food preparation, cleaning and laundry. There will be 15 small "sleeping" cabins with no water services. A recreational vehicles (RV) camp site will consist of 15 stalls and will not have individual hook ups. A potable water filling station will be provided upon entry of the resort for the RV's. No septage receiving facilities will be provided at the site.



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Client/Project

CHINOOK RIDGE LODGE AND GOLF COURSE LTD.

INTEGRATED WATER MANAGEMENT PLAN

Figure No.

2.1

Title

Regional Site Plan



Stantec