



WHEATLAND COUNTY

Regional Growth Management Strategy



Submitted by:



ACKNOWLEDGEMENTS

Residents of Wheatland County

Wheatland County Council

Wheatland County Administration

Western Irrigation District

Royal Canadian Mounted Police

Villages of Hussar, Rockyford & Standard

Town of Strathmore

Alberta Environment

Alberta Sustainable Resource Development

Alberta Culture and Community Spirit

Drumheller & District Solid Waste Management Association

Wheatland and Adjacent Districts Emergency Medical Services Association

LEAD CONSULTANT



REGIONAL GROWTH MANAGEMENT STRATEGY



EXECUTIVE SUMMARY





REGIONAL GROWTH MANAGEMENT STRATEGY

Wheatland County (County) has developed the following Regional Growth Management Strategy (RGMS) to guide future development in the County over the next 40 years. The RGMS reflects the vision and aspirations of residents, landowners, and other stakeholders, while promoting and maintaining the unique natural and physical qualities of the area. The RGMS explores the following:

- Where do we grow? How do we grow? What does growth mean for the health of our natural environment?
- How much growth can be accommodated in existing communities (primarily based on infrastructure capacity)?
- What impact would growth have on infrastructure planning?
- How would growth affect municipal, commercial, and industrial land development requirements?
- How would municipal service delivery be affected?
- What would the potential socio-economic and environmental impacts of growth be?

The RGMS process was initiated in April 2010 and completed in April 2011 through Council adoption. The RGMS was prepared in five (5) parts including project initiation and information gathering, inventory and current (situational) analysis, evaluation criteria and spatial growth assessment, public participation, and Council submittal. Together, the information gathering and situational analysis provided key information regarding socio-economic, demographic, constructed and natural systems within the County. Following inventory and analysis, an evaluation criteria and spatial growth assessment was completed to rank the future growth and development potential of Hamlets and the overall ability of the County to support a **regional projected population of approximately 25,000**

by 2051. Table ES-1 (refer to page iv) shows the community ranking results.

The previous pattern of growth – typically low density, country residential development – is not sustainable and a new paradigm for land use is necessary. The RGMS addresses the desire for growth to occur in a sustainable, nodal pattern that takes into consideration environmental integrity, social well-being, cultural preservation, and economic prosperity.



RGMS VISION STATEMENT

Wheatland County promotes sustainable well planned development which enhances and protects existing agricultural land and natural areas. We will do this in four ways: focusing growth in existing Hamlets, working with other municipalities to ensure mutually beneficial land uses in bordering areas, balancing growth while promoting good use of land, and improving and upgrading infrastructure in our communities to support a good quality of life.



Table ES-1, Evaluation Results –
Community Ranking

<i>Ranking</i>	<i>Community</i>
1	Speargrass
2	Carseland
3	Eagle Lake
4	Rosebud
5	Gleichen
6	Lyalta & Cluny
7	Cheadle
8	Namaka
9	Dalum & Ardenode
10	Redland
11	Nightingale
12	Chancellor

The RGMS accomplishes the goal of sustainable, nodal development through a regional future growth concept that connects and integrates population and employment with land use, infrastructure and transportation, economic development, and community services. It helps manage the consumption of environmental features that may occur through low density development, and charts a course for sustainable community development that focuses on development within existing growth nodes. **Figure 1** (refer to page vii) outlines growth under four (4) main categories as defined below.

- **Growth Nodes** – Represent areas which have been designated as the focus for investment for future development. These areas are strategically located in close proximity to major transportation corridors, have the infrastructure base to support future population growth, and/or have historically been a focal point for development activity. *Population growth in these areas is projected at 2.8% per year and includes the communities of Carseland, Speargrass, Cheadle, Eagle Lake area, Namaka, Lyalta, Rosebud, and Gleichen.*
- **Rural Community Nodes** – Represent areas where existing country residential development will be maintained. However, conservation design principles will be required in new country residential subdivision proposals to ensure a smaller development footprint. These areas will not be the focus of investment for future development; however, existing servicing levels will be maintained. *Population growth in these areas is projected at 1% per year and includes Dalum, Chancellor, Cluny, Redland, Nightingale, and Ardenode.*
- **Potential Intermunicipal Areas** – Ensuring vibrant communities that are able to grow and thrive is a key component of the RGMS. This goal is not only important for Hamlets and subdivisions in the County but also for Towns and villages located within or surrounding the County. To ensure mutually beneficial land uses occur at the borders of neighbouring municipalities,

future discussions regarding Intermunicipal planning are required. *Potential intermunicipal planning areas are identified for the Town of Strathmore, and Villages of Hussar, Rockyford and Standard.*

- **Potential Business Industrial/Commercial Corridor** – Represent areas that are strategically located along major transportation corridors and radiate from existing similar or supporting land uses. *These areas will be tied to communities planned to be the focus of investment for future development (e.g., West of Carseland), will act as an appropriate transition/buffer from adjacent municipalities and First Nation Reserves which are proposing similar land uses (e.g., south of Gleichen and Cluny), or will serve as a natural area for expansion from similar land uses.*

The concept of sustainable community development is operationalized uniquely in every community. For some it may equate to affordable housing while others may focus on job creation, promoting walkable environments and cultural diversity. Generally, sustainable community development is viewed as balancing the environment, economic, social and cultural aspects (four (4) spectra of sustainable community development).

The RGMS outlines the following Principles to ensure sustainable community development occurs within the County:

1. Promote development where infrastructure exists and where future growth is planned.
2. Use conservation subdivision design in new country residential development proposals to ensure a smaller development footprint.
3. Direct country residential development to lands that have marginal agricultural value.
4. Encourage clustered, higher-density, multi-lot development in strategic areas, such as where future growth is planned.
5. Support agricultural land conservation and limit the fragmentation of productive agricultural land.
6. Preserve the natural landscape whenever possible.
7. Promote water conservation and reuse whenever possible.
8. Ensure new developments address potential conflicts with existing agricultural and confined feeding operations.
9. Encourage “green infrastructure” in residential and non-residential development proposals for wastewater and stormwater treatment and reuse.
10. Encourage economic development in strategic areas such as the West Highway 1 industrial corridor.
11. Ensure an Area Structure Plan (ASP) is prepared for developments greater than three (3) lots or where subdivision of land will result in greater than three (3) lots per quarter section.

Conservation subdivision design is defined as an approach to laying out subdivisions so that a significant percentage of buildable lands are protected to create interconnected networks of conservation lands.

Principle is defined as fundamental norms, rules, or values that represent what is desirable and positive for a community, and help it in determining the rightfulness or wrongfulness of its actions.

Green infrastructure is defined as natural systems that capture, cleanse and reduce stormwater runoff using plants, soils and microbes. On the regional scale, green infrastructure consists of the interconnected network of open spaces and natural areas (such as forested areas, floodplains and wetlands) that improve water quality while providing recreational opportunities, wildlife, habitat, and air quality.

The bylaw should meet ASP requirements as identified in the Municipal Government Act (MGA). Moreover, the ASPs should describe for the plan area:










- Stormwater management practices;
- Water conservation practices;
- Historical resources and natural areas (e.g., environmentally sensitive areas, habitats suitable for species-at-risk, natural water features);
- Agricultural soil suitability and current productive uses of the land; and,
- Any other information required by the approving authority to properly evaluate a development proposal.

The following policy statements will assist the County in meeting its vision of growth as well as provide direction to revise the Municipal Development Plan. The policy is intended to allow County staff to make decisions on development permit and subdivision applications that align with the RGMS. Each policy may not apply to each application.





1. **Rural subdivisions may be considered. The following statements may apply - In close proximity to towns, hamlets, villages and named areas; multi-lot clustering; conservation subdivision design principles; and, if an Area Structure Plan is required, it must be prepared by a qualified professional.**
2. **For all applications, Internal road, including service road, access shall be provided by the landowner/developer at their cost for each of the existing and proposed parcels that are part of the application. All roads to be constructed to County Standards.**
3. **All applications will be required connect to existing water/wastewater services where and when available. Each approval will require a deferred service agreement.**
4. **The County promotes residential applications which consider a smaller parcel size and contributes to moving the average housing density in Wheatland County to greater than four (4) units per acre.**
5. **Multi-lot residential applications may provide a mix of housing types.**
6. **The County may direct industrial, business industrial and commercial to designated areas as identified specifically for industrial, business industrial and commercial in the RGMS.**
7. **All applications shall include methods for land conservation to protect productive and viable agricultural lands. By methods such as smaller parcels, multi-lot clustering, conservation easements, and dedication of Environmental Reserve.**
8. **The County supports applications which emphasize the conservation of natural capital (i.e., Environmentally Sensitive Area). Maintain trees, wildlife habitat, and water features.**
9. **All applications within or adjacent to hamlets and named areas may encourage trail and road linkages to adjacent lands.**

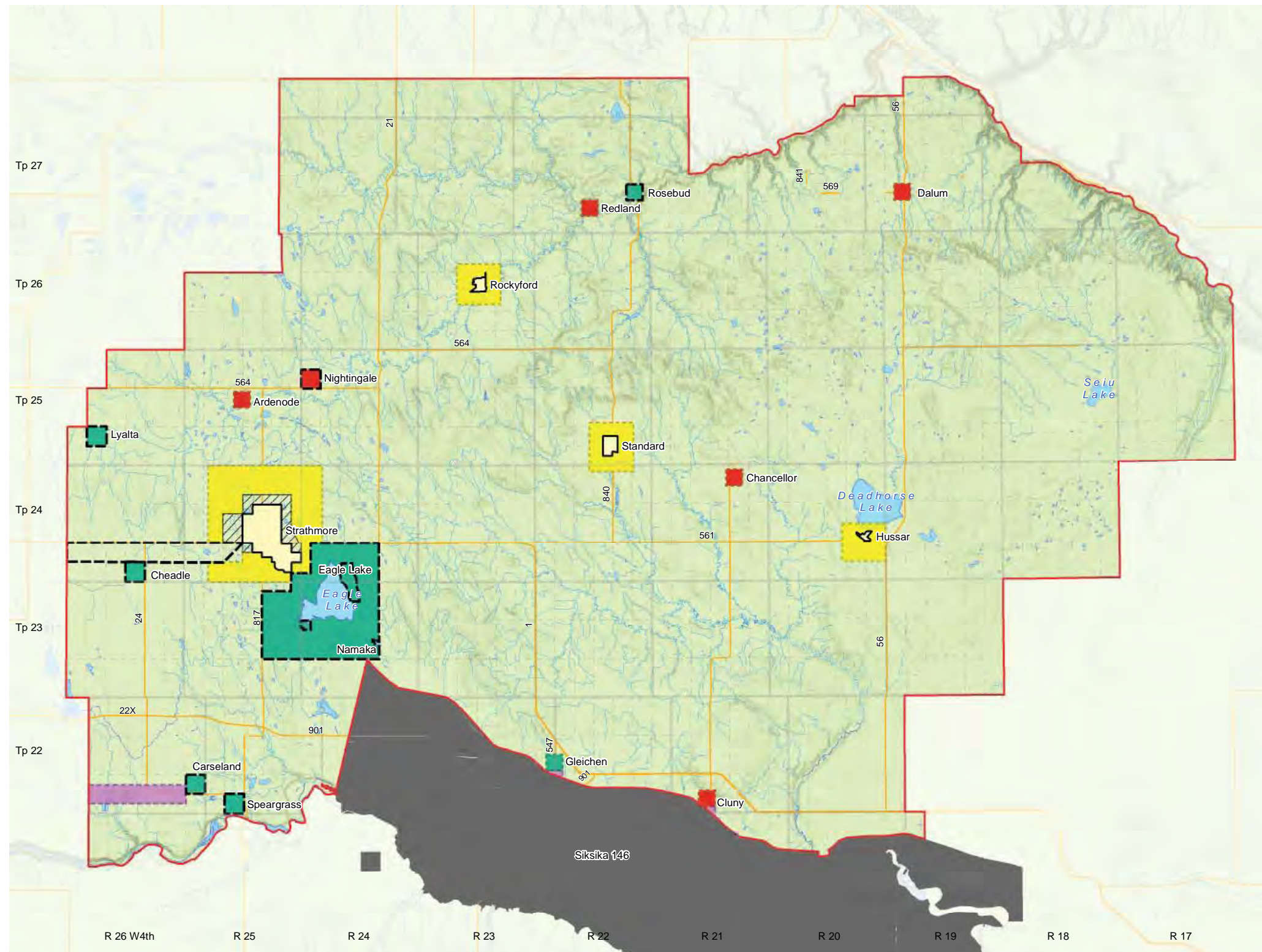
Map 1 - Future Growth Areas

Legend

-  Wheatland County
-  Communities Outside Study Area
-  Strathmore Annexation Area
-  Existing Area Structure Plan
-  First Nation Reserve
-  Provincial Paved Highways
-  Other Roads
-  Water Feature - Stream, River
-  Lakes

Growth Concept

- | | |
|---|---|
|  | Growth Nodes |
|  | Rural Community Nodes |
|  | Potential Intermunicipal Areas |
|  | Potential Business-Industrial / Commercial Corridor Planning Area |



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REGIONAL GROWTH MANAGEMENT STRATEGY



1.0 PROJECT OVERVIEW



1.1 PURPOSE AND OBJECTIVES

Wheatland County (the County) has developed the following Regional Growth Management Strategy (RGMS) to guide future development in the County in a manner that reflects the vision and aspirations of residents, landowners, and other stakeholders, while promoting and maintaining the unique natural and physical qualities of the area.

The purpose of the RGMS is to develop a regional-level planning framework consisting of a vision, directions on growth, and supporting principles and policies which outline growth locations within the County to meet residential, commercial and industrial land needs for the next 40 years. The following were addressed by the Project Team:

- What is the projected population over the next 40 years?
- How much growth can be accommodated in existing communities (primarily based on infrastructure capacity)?
- What impact would growth have on infrastructure planning?
- What are the projected residential, commercial, and industrial land requirements over the next 40 years?
- How would municipal service delivery be affected?
- What would the potential socio-economic and environmental impacts of growth be?
- What would growth look like and where would it occur? What planning policy is required to ensure growth aligns with Wheatland County's Vision?

The Objectives of the Wheatland County RGMS are to:

- Inventory and evaluate existing infrastructure, transportation routes and water/wastewater/stormwater management systems of the region;
- Adhere to and be compliant with all provincial and federal regulations that are applicable to the region, and consistent with all existing relevant studies;
- Provide an assessment of and projection for future needs considering growth and changing trends, public demands, demographics, increasing standards and the vision of Wheatland County Council;
- Provide guidelines for economic development within the County;
- Make recommendations for future development including the upgrading of the existing inventory;
- Provide an analysis of the infrastructure management of both current assets and future assets; and
- Make recommendations for the utilization of environmentally friendly alternatives that minimize impacts to environment.

The purpose of the Regional Growth Management Strategy is to develop a regional-level planning framework consisting of a vision, directions for growth, and supporting principles and policies which outline growth locations within the County in order to meet future residential, commercial and industrial land needs for the next 40 years.

Refer to **Appendix A** to review project Terms of Reference (TOR).

1.2 KEY CONSIDERATIONS

Quality of Life - Wheatland County's RGMS allows the municipality to promote growth that is environmentally and socio-economically sustainable and culturally sensitive, thereby improving the lifestyles of existing communities, while securing the needs of future generations.

Agriculture - Wheatland County is a rural municipality built around natural resources management. The future of the County relies on the preservation and enhancement of the agricultural land base. The RGMS outlines policy to conserve prime agricultural land from subdivision and development.

Community Development - Development is increasingly being proposed throughout the County without considering the full impact of each development on the landscape, social infrastructure requirements, and the municipality's long-term economic well-being. The RGMS recognizes that growth in all areas should remain "balanced" between the vision and goals of residents, and the business needs of the County.

Transportation & Infrastructure - The RGMS will recognize existing and proposed transportation alignments and infrastructure capacities and thresholds for growth planning purposes.

Water Conservation - Consideration will be given to the availability, distribution and quantity of potable water, which has specific management requirements.

1.3 STUDY AREA ¹

Wheatland County (the County) is located approximately 40 km east of Calgary, and has jurisdiction over the communities of Ardenode, Carseland, Chancellor, Cheadle, Cluny, Dalum, Eagle Lake subdivision, Gleichen, Lyalta, Namaka, Nightingale, Redland, Rosebud, and Speargrass (Refer to **Figure 1: Regional Context**, and **Appendix B, Map 2, Wheatland County Study Area**). The Town of Strathmore and Villages of Hussar, Rockyford, and Standard are also located within the County.

The County is bordered by seven (7) Municipal Districts and one (1) First Nation. The Town of Drumheller and Kneehill County are located to the north; Special Areas to the east; County of Newell #4, M.D. of Foothills, and Vulcan County to the south; and Rocky View County to the west. Siksika Nation is located adjacent to the southern border of Wheatland County and has its Administrative and Business District located adjacent to the Hamlet of Gleichen.

¹ Source: AlbertaFirst.com (reviewed Nov 25 2010).

Figure 1- Regional Context



Geographically, the County landscape is primarily prairie with badlands in the northeast. The County sits within two River Basins, the Bow River Basin and the Red Deer River Basin. The Bow River borders the County to the south and is an important source of drinking water, water for irrigation, hydroelectric power, as well as wildlife habitat and recreational uses. The Red Deer River, a tributary of the South Saskatchewan River, runs to the east. Other watercourses within the County include; Rosebud River, and Serviceberry, Crowfoot, Severn, Atusis, Parflesh, Home Coulee and Seiu Creeks. In addition to watercourses, many lakes are found in Wheatland County including six (6) large lakes: Eagle, Dalemead, Deadhorse, Mattoyekiu, Namaka, Seiu, and three (3) small lakes: Whey, Two Bark and Akali.

Several highways run through Wheatland County including, but not limited to: TransCanada (Highway 1), Highway 22X, Highway 901, Highway 561 and Highway 564 allowing for east-west connections to areas such as Calgary, Rocky View County and Special Areas. As well, Highway 9, Highway 21, Highway 24, Highway 56, and Highway 842 allow for north-south connections to areas such as Starland County and Siksika Nation.

Canadian National (CN) and Canadian Pacific (CP) rail lines both run through the County. The CP main line, known as the Brooks Subdivision, runs from Calgary, AB to Regina, SK and passes through the communities of Carseland, Gleichen and Cluny. The CN main line, known as the Drumheller Subdivision, runs through the communities of Lyalta, Rockyford, Redland and Rosebud^{2,3}.

Based on the Federal Census, the estimated population within Wheatland County in 2006 was 8,164. Though beef and grain production are still the main agricultural activity, many other agri-business opportunities are reaching fruition including: modern grain terminals, feedlots, seed cleaning plants, hog production facilities, and various smaller businesses servicing the agriculture sector. Oil and gas activity and support services are provided by small and large corporate companies which promote employment and a strong economy within the County. Due to the close proximity to major transportation links to Calgary, Drumheller, and Bassano, commercial and industrial opportunities continue to grow and include: logistics, warehousing and distribution.

For information on Project Methodology, Study Limitations and Constraints, and Policy Context refer to **Appendices C, D, and E**, respectively.

2 A notice of discontinuance to permanently close the Drumheller subdivision line between Calgary and Drumheller has not been filed by CN; however, a notice has been filed to close the Oyen subdivision between Hanna, AB and Oyen, AB.

3 Source: Canadian Transport Agency (CTA) and Canadian Railway Atlas (Jan 2011).





2.0 WHERE ARE WE NOW?



REGIONAL GROWTH MANAGEMENT STRATEGY

The “Where Are We Now?” section provides an overview of the current situation in three areas that affect the RGMS; demographics, natural systems and constructed systems.

2.1 HISTORY⁴

Below is a brief history of the jurisdictional coverage of Wheatland County.

Wheatland County Governance

1954 – The Municipal District of Bow Valley No. 40 merged with other improvement and municipal districts to form one new municipal district known as the Municipal District of Wheatland No. 40.

1960 – The Municipal District of Wheatland No. 40 and the Wheatland School Division No. 40 combine to form the County of Wheatland No. 16.

1995 – The Village of Cluny is dissolved and becomes part of the County of Wheatland No. 16.

1996 – The County of Wheatland No. 16 changes its name to Wheatland County.

1998 – The Town of Gleichen is dissolved and becomes part of Wheatland County.

As of 2010 – Wheatland County had jurisdiction over the communities of Ardenode, Carseland, Chancellor, Cheadle, Cluny, Dalum, Eagle Lake Subdivision, Gleichen, Lyalta, Namaka, Nightingale, Redland, Rosebud, and Speargrass.



⁴ Source: Alberta Municipal Affairs Location and History Profile for Wheatland County.

2.2 REGIONAL CONTEXT & PROFILE

The following sections contain information regarding socio-economic, natural and constructed components within Wheatland County. For detailed information regarding these topic areas refer to **Appendix F: Supporting Regional Context and Profile Information**.

2.2.1 Demographics

Population

The estimated total population (2010) for communities identified in the RGMS is 2,409⁵. **Table 1** (refer to page 11) shows population numbers for each community. The total estimated population (2010) of Wheatland County is 9,464⁶.

Employment and Education⁷

In 2006, employment rates in the County were high, with 99% of the eligible population employed. The top three (3) employment sectors in Wheatland County are occupations unique to primary industry (30.2%) (e.g., agriculture); trades, transport and equipment operators and related occupations (18.3%); and sales and service occupations (16.6%). Wheatland County is served by the Golden Hills School Division for primary, elementary and secondary education. Post-secondary education in the arts is available at the Rosebud School of the Arts (e.g., Certificate in Theatre Foundations).

Housing

Housing in the County is comprised almost entirely of single detached dwelling units. Based on communities reviewed in the RGMS, 97% of dwelling units are single detached. Exceptions to this include - Carseland which contains twelve (12) duplex units and four (4) fourplex units, Speargrass which contains forty (40) villas/duplex units, Cluny which contains four (4) duplex units, and the Lakes of Muirfield subdivision (located in Lyalta) which contains one (1) duplex unit. Forty-one (41) duplex lots are available and a multi-unit condominium complex is currently under construction in Lakes of Muirfield. The average cost of housing (in terms of average assessed value) throughout the County ranges from approximately \$90,032 - \$460,182 for homes on residential lots within communities. The highest housing costs were located in Lyalta and lowest in Cluny (Refer to **Table 1** for more information regarding housing mix and average cost to own). Non-urban⁸ homes on large acreages have not been factored into the average housing costs for the County.

5 Population information is based on housing counts and a conversion factor of 3 people per dwelling unit (ppdu).

6 Population information includes non-urban residences and is based on an average growth rate of 2.8% per annum since 1989. Growth rate based on 1989 & 2000 Municipal Census values.

7 Source: Employment information obtained from 2006 Statistics Canada data for the County.

8 Non-urban refers to residences in Wheatland County located outside of a designated Hamlet or subdivision.

Table 1 - Current Population, Housing, & Median Cost by Community⁹

Community	Population	Existing Dwelling Unit Mix				Average Assessment (\$)
		Single	Duplex	Fourplex	Apartment	
Ardenode	6	2	-	-	-	n/a
Carseland	759	237	12	4	-	231,433
Chancellor	15	5	-	-	-	167,833
Cheadle	117	39	-	-	-	363,049
Cluny	135	41	4	-	-	90,032
Dalum	3	1	-	-	-	n/a
Eagle Lake Subdivision	48	16	-	-	-	154,118
Gleichen	591	196	1	-	-	123,565
Lyalta	192	63	1	-	-	460,182
Namaka	87	29	-	-	-	315,729
Nightingale	21	7	-	-	-	280,800
Redland	21	7	-	-	-	118,472
Rosebud	108	36	-	-	-	174,653
Speargrass	306	62	40	-	-	422,326
TOTAL	2,409	741	58	4	-	Avg. \$258,891



⁹ Source: Based on 2009 Average Assessment Data provided by Wheatland County.

2.2.2 Natural Systems

Natural systems are an important consideration for growth management planning purposes due to specific setback requirements and restrictions posed on land development as a result of ecosystem sensitivities. Selected natural systems were reviewed as part of the RGMS for Wheatland County including:

- natural water features;
- highly suitable natural habitats for species-at-risk and keystone wildlife; and,
- Environmentally Sensitive Areas.

Species at Risk

A desktop analysis of Wheatland County was completed to assess for species-at-risk. Species-at-risk are those in danger of extinction throughout all or a significant portion of their home range.

Land determined to be suitable for species-at-risk were given a ranking based on the amount of habitat said to be suitable. In the County, most of the highly suitable areas for specific species-at-risk include large areas of native grassland, wetland habitats and unique landforms (e.g., individual trees)¹⁰.

Some species were given a higher sensitivity (e.g., burrowing owl [*Athene cunicularia*]) due to their status under Schedule 1 of the Species at Risk Act, and any amount of habitat available in that section was given a higher overall ranking.

- A ranking of “3” was given to Sections of land that were determined to be 80 to 100 percent (%) highly suitable or suitable for at least one species-at-risk.
- A ranking of “2” was given to Sections of land determined to be 30 to 79 % highly suitable or suitable for species-at-risk.
- A ranking of “1” was given to Sections of land less than 1 to 29 % highly suitable or suitable for species-at-risk.
- A ranking of “0” was given to Sections of land not determined to be highly suitable for species-at-risk.

Map 3 (refer to Appendix B to review maps) identifies the geographic extent of suitable habitat (rankings 0-3) for species-at-risk throughout the County.

The community of Chancellor, for example, does not appear to have any identified (based on desktop review) species-at-risk within a one (1) mile radius of the established Hamlet boundary, and does not fall within a designated Environmentally Sensitive Area. In contrast, lands adjacent to the communities of Namaka and Eagle Lake may contain species-at-risk and are located within an Environmentally Sensitive Area of Provincial significance (e.g., Eagle Lake). Refer to Section 2.3, **Table 9** for a complete overview of the Natural Systems Inventory by Community.

¹⁰ Source: Alberta Conservation Management Information System (Alberta Tourism, Parks and Recreation); Habitat Suitability Model Search Tool (Alberta Sustainable Resource Development); and, Fish and Wildlife Management Information System Internet Mapping Framework (Fish and Wildlife Division, Alberta Sustainable Resource Development) – accessed May 2010.

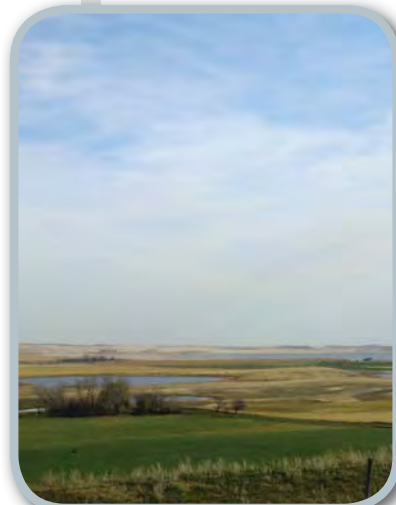
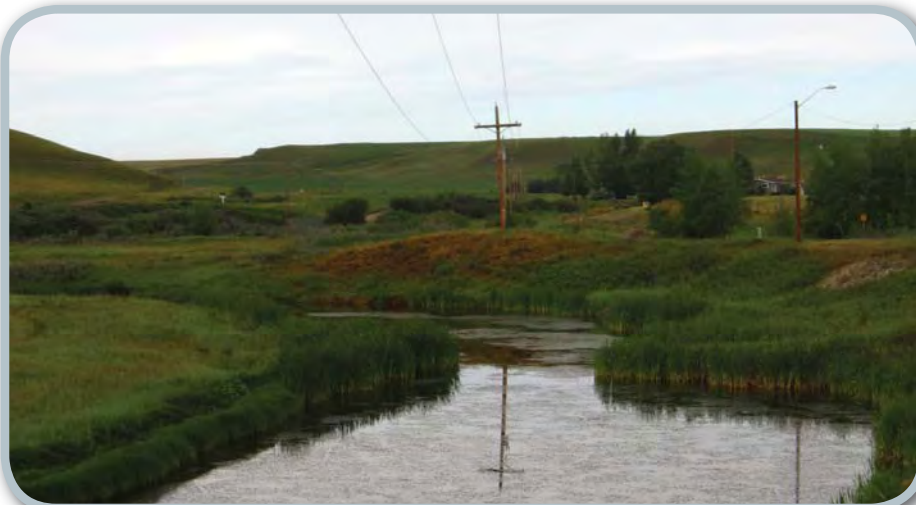
Environmentally Sensitive Areas¹¹

Environmentally Sensitive Areas (ESAs) are shown on **Map 3**. ESAs are ranked as having either Provincial, National or International significance, based on the elements of conservation concern they contain, important natural areas within them, the amount of habitat they provide for species-at-risk, presence of rare or unique landforms (e.g., badlands), and the presence of intact riparian areas.

Further growth in the community of Speargrass, for example, would require a detailed Environmental Assessment due to the presence of several environmentally sensitive features. The land directly adjacent to Speargrass is determined to be highly suitable or suitable for species-at-risk, and several sensitive species have been reported in the area by Alberta Sustainable Resource Development. The community is located within an ESA of National significance; the land within this ESA contains important wildlife habitat, large natural areas and rare/unique landforms. The area also contains important riparian features and water bodies, which will require further assessment to determine the necessary setback distances from development.

The community of Lyalta, contains less environmentally sensitive features, and based on the desktop review, a detailed Environmental Assessment would not be required for development. An Environmental Overview should be performed in the area due to land directly adjacent to the community that has some suitability for species-at-risk and the unidentified water bodies in the area would need to be further classified to determine possible restrictions to development. Refer to Section 2.3, **Table 9** for a complete overview of the Natural Systems Inventory by Community.

11 Source: Alberta Conservation Management Information System (Alberta Tourism, Parks and Recreation).



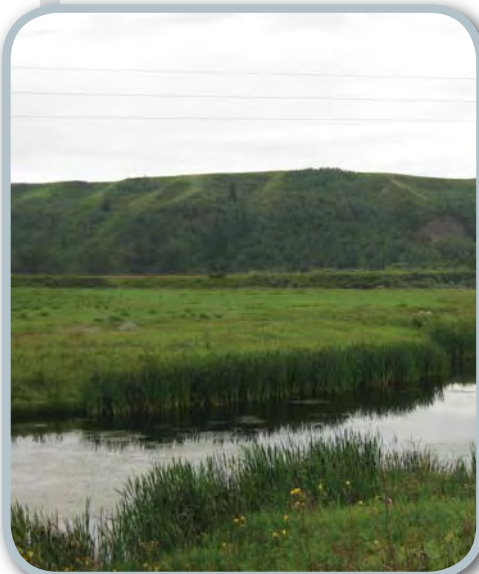
Groundwater Yield¹²

Groundwater yield refers to the amount of groundwater that can be supplied (e.g., litres) from an aquifer at a specific location within a given time period (e.g., litres per minute). Wheatland County groundwater yield was reviewed through desktop analysis and stratified into three categories showing,

- Good Yield: greater than 25 imperial gallons per minute (or greater than 113.8 litres per minute);
- Satisfactory Yield: 5 - 25 imperial gallons per minute (or 22.7- 113.7 litres per minute); and
- Poor Yield: less than 5 imperial gallons per minute (or less than 22.6 litres per minute).

Map 4 (refer to Appendix B to review Maps) identifies groundwater yield for Wheatland County. In general, areas identified to have “Good Yield” have a greater probability to support development compared to “Poor Yield”. Due to variations in surficial geology and hydrogeology, actual field verification is required to determine groundwater yield at a specific location.

The community of Ardenode, for example, is located in an area generally classified as having “Good Yield”, compared to the communities of Redland and Rosebud which generally fall within an area classified as “Poor Yield”. Refer to Section 2.2.3 - Western Irrigation District, Water Treatment & Supply and Water Licenses for more information. Refer to Section 2.3, **Table 9** for a complete overview of the Groundwater Yield by Community.



¹² Source: Agriculture and Agri-Food Canada, Prairie Farm Rehabilitation Administration; Wheatland County Regional Groundwater Assessment, June 2003, by Hydrogeological Consultants Ltd.

2.2.3 Constructed Systems

Selected constructed systems within Wheatland County were inventoried. This section includes information on: Historical Resources, Confined Feeding Operations, Oil and Gas, Wind Farms, Transportation Infrastructure (major roads), Water Treatment and Supply, Wastewater Treatment, Solid Waste Facilities, and Emergency Services.

Irrigation Districts

The Western Irrigation District (WID) operates within Wheatland County. The WID draws and conveys surface water within the County to support a variety of land uses. They currently operate a 1,200 km canal system covering mainly the western and southern portions of the County. **Map 4** (refer to Appendix B to review Maps) illustrates the canal system in Wheatland County.

The WID holds one license to draw water¹³ from the Bow River Basin equaling 195.3 million m³/year. In addition, the WID draws from the Bow River Basin on behalf of Wheatland County's two water licenses in the form of conveyance agreements through the WID system to delivery points chosen by the County. The WID also conveys water to the Villages of Standard and Rockyford through conveyance agreements for which the Villages hold individual municipal water licenses.

The WID is currently amending their existing license to share/lease their water conservation savings from the 1903 allocation from the Bow River by 1.2 million m³/year (or 1,000 acre-feet/year) as permitted by the Water Act and in accordance with provincial policy. Based on the terms of the amendment application, the allocation may be for Wheatland County and may supply water to the West Highway 1 industrial corridor, Lyalta, and the Eagle Lake area as specified in the commercial agreement and in the amendment application to Alberta Environment.

There are no irrigation districts covering the eastern and northeastern portion of Wheatland County.¹⁴ The nearest irrigation district (Eastern Irrigation District) begins adjacent to the eastern boundary of the County. Residents located outside of the coverage area of an irrigation district generally do not irrigate their land (other than gardens and yards). Some may water their yards with well water or dugouts which are filled by surface runoff and precipitation.

13 The WID draws from the Bow River in Calgary at the Nose Creek confluence (located downstream from the Calgary Zoo).

14 Information received from the WID.



Agriculture Land Capability

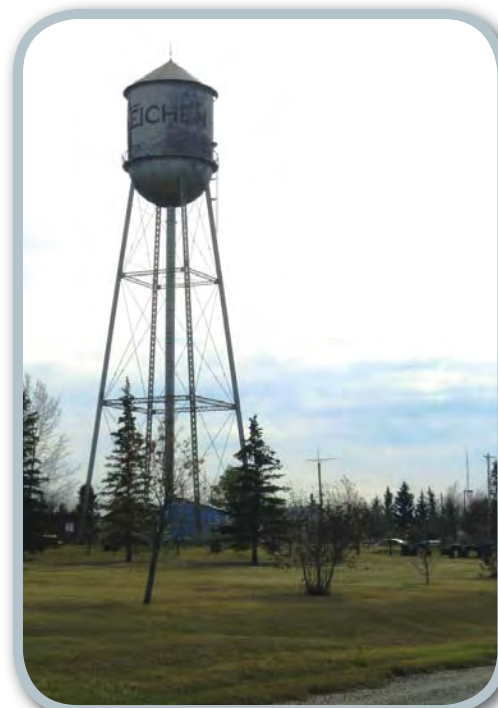
Soil classes in Wheatland County were identified based on the Agricultural Region of Alberta Soil Inventory Database (AGRASID). Identification did not include the capability of the soils to support trees, tree fruits, small fruits, ornamental plants, recreation or wildlife. Soils were grouped into seven classes; classes 1-4 were considered capable of sustained use for cultivated field crops, classes 5 and 6 for perennial field crops, and class 7 for neither. On **Map 5** (refer to Appendix B to review Maps) the classes are separated into three groups: no/moderate limitations for crops, moderately severe limitations for crops, and severe/very severe limitations for crops.

The land encompassing the community of Speargrass, for example, was determined to have lower capabilities for sustainable crop production (Classes 5-7) than other areas. This is likely due to the presence of the Bow River Valley, previous development disturbances (e.g., gravel pit), and associated land features which make the topography not suitable for crops. In contrast, the community of Lyalta is surrounded by very productive soils. Soils in this area have no, or very moderate, limitations for sustainable crop production and are likely able to support a variety of crops.

Refer to Section 2.3, **Table 9** for a complete overview of the Agricultural Land Capability by Community.

Historic Resources

Historic Resources were identified for Hamlets and all lands within the County. A Historical Resources review will identify lands that contain or are believed to contain historic resources, primarily archaeological and palaeontological sites, Aboriginal traditional use sites, and historic structures.



A listing of Historic Resources¹⁵ was received from Alberta Culture and Community Spirit (ACCS). Each parcel of land in the listing was pre-assigned a Historic Resource Value (HRV) from 1 to 5. The HRV's are described as follows:

- HRV 1: The highest level of protection; Provincial Historic Resources, World Heritage Sites
- HRV 2: Municipal or Registered Historic Resource
- HRV 3: Significant Historic Resource that will likely require avoidance
- HRV 4: Historic Resource that may require avoidance
- HRV 5: Believed to contain a Historic Resource

Each listing is further described by the primary Historic Resource category of concern, including archaeological, cultural, historic period, and palaeontological; as well as natural and geological. Historical Resources information is an important consideration of growth management planning as the level of significance, denoted by the HRV, may require a certain setback or a restriction on land development be posed in order to protect (and preserve) the Historic Resource.

Based on the listing, Hamlets of Rosebud and Gleichen contain Historical Resources within their Hamlet boundaries. The Hamlet of Cluny and Town of Strathmore contain registered historical resources near their Hamlet/Town boundary. Refer to **Table 2** for details.

Additionally, land directly adjacent to the community of Rosebud is believed to contain registered Historic Resources and Historic Resources that may require avoidance (depicted as orange and yellow on **Map 6** - refer to Appendix B to review Maps). Historic Resources Act clearance is required for proposed development on these lands. In contrast, the land directly adjacent to the community of Nightingale is believed to contain no Historic Resources, and therefore the Historic Resources Act should not apply to development plans for this community. Refer to Section 2.3, **Table 9** for a complete overview of the Archaeological and Historic Resources by Community.

Table 2 - Historical Resources within or near a community

<i>Community</i>	<i>Historical Resource (HRV Value)</i>
Cluny	Ward Archaeological Site (HRV 1)
Gleichen	Gleichen Water Tower (HRV 1) The Beach/Rennie House (HRV 2) St. Andrew's Anglican Church (HRV 2)
Rosebud	Rosebud Hotel (HRV 2)
Strathmore	The Scheer/Sproule Farm Site (HRV 2)

15 Source: Alberta Culture & Community Spirit Listing of Historic Resources (Government of Alberta 2010b).



Confined Feeding Operations

Confined Feeding Operations (CFOs) were mapped using data provided by the County¹⁶. **Map 7** (refer to Appendix B to review Maps) illustrates CFOs in Wheatland County at the quarter-section level. CFOs are an important consideration for growth management planning as the type and intensity of CFO will determine the setback and restriction on future land development.

CFOs and other supporting industry in the County were separated into four (4) groups as follows:

- Chicken, Dairy and Horse Operations
- Cattle Feedlot Operations
- Greenhouse Operations
- Intensive Hog Operations

Refer to Section 2.3, **Table 9** for a complete overview of the Confined Feeding Operations by Community.

¹⁶ Source: Confined Feed Operations information provided by Accurate Assessment Group Ltd.



Oil & Gas Activity

Oil and gas activity is prominent throughout the County and is dominated by two types of activity: wells and pipelines. Numerous companies operate in Wheatland County. Oil and Gas activity is regulated by the Energy Resources Conservation Board (ERCB) of Alberta. Refer to Section 2.3, **Table 9** for a complete overview of oil and gas infrastructure by Community. Oil and Gas activities are occurring at various stages (drilled and cased, flowing, suspended and abandoned)¹⁷ and exist within a one (1) kilometre radius of each community.

Wind Farms^{18, 19}

Wind farm projects are underway in Wheatland County. Suncor Energy Services Inc. in partnership with Teck Resources Limited is constructing a windfarm in the Wintering Hills area located 21 km south-southeast of Drumheller. Construction of the 88 MegaWatt (MW) project is expected to be completed in December 2011 and will consist of 55 turbines (1.6 MW each) and a supporting substation. The project is located on approximately 16,000 acres of privately-owned land. Greengate Power Corp. is also constructing a windfarm in the Wintering Hills area located 30 km southeast of Drumheller. Construction of the 150 MW project is expected to be underway in 2012 and will consist of upwards of 112 turbines (1.5 MW each) on approximately 25,000 acres of privately-owned land.

17 Source: Oil and Gas information provided by Accurate Assessment Group Ltd.

18 Source: <http://renewableenergydev.com/red-wind-power-wintering-hills-wind-project/>

19 Existing and proposed transmission lines and rail lines where not reviewed as part of the desktop analysis.



Transportation Infrastructure

The road system within the County includes a total of 2,747.7 km of roadways. The total length of roads has been divided into six categories based on their final surfacing design, and presented in **Table 3**.

Table 3 - Length of Road in Wheatland County Categorized by Surface Type

<i>Design Surface</i>	<i>Length (km)</i>	<i>Description of Surface Type</i>
Dirt	92.1	A very basic road, commonly a trail down a road allowance over in situ material.
Gravel	1,875.6	Gravel road by design, is an improved grade and includes placing a layer of gravel over the prepared subgrade materials. This layer of gravel increases the roadways allowable loading and durability. The depth and design of the gravel road will be developed based on volume and type of usage of each road.
Gravel Improved	488.7	Gravel Improved road is a gravel road that has been designed to a higher standard with an engineered surveyed grade, graded ditches and widened to accommodate heavier and sustained traffic.
Gravel Resource	122.7	Gravel Resource road is a service road that ends at a resource site.
Chip Seal	91.3	Chip Seal roads are typically a gravel improved road that has been surfaced by a compacted layer of chips and emulsion to create a durable hard final surface.
Paved	77.3	Paved roads will have a thicker base material and are used for main arteries and highways with high volumes of traffic, for increased performance and durability.

A summary of each length of road design surface for the communities of Speargrass, Gleichen, Rosebud, Carseland and Cluny are presented in **Table 4**.

Table 4 - Length of Road Categorized by Community and Surface Type

<i>Design Surface</i>	<i>Speargrass</i>	<i>Gleichen</i>	<i>Rosebud</i>	<i>Carseland</i>	<i>Cluny</i>
Gravel (Km)	1.1	5.4	1.3	4.1	1.8
Chip Seal (Km)	-	6.6	0.7	1.5	1.1
Paved (Km)	3.6	0.6	-	3.2	-
TOTAL (Km)	4.7	12.7	2.0	8.9	2.9

A summary of all road types by community is presented in Section 2.3, **Table 9**.

Water Treatment and Supply

Wheatland County Water Treatment Plants (WTP) are located in five (5) communities; Speargrass/Carseland, Gleichen, Lakes of Muirfield subdivision (located in Lyalta) and Rosebud. The design capacity of each of the water treatment plants is presented in **Table 5** (refer to page 22, Water Treatment Facilities by Community).

All other communities within Wheatland County receive water from individual wells. Typically, each resident of the County has their own well that discharges into a pressurized personal holding tank for on-demand use.

Rosebud has a central holding tank with a capacity of 150,000 US gal (567,812 litres). The holding tank is serviced by two community wells and supports a population of 108 residents.



Table 5 - Water Treatment Facilities by Community^{20,21}

<i>Community</i>	<i>Design Capacity (cubic metre/day)</i>	<i>Design Population</i>	<i>Actual Population</i>	<i>Additional Information</i>
Speargrass	2,177	4,947	306	The WTP at Speargrass is in the process of upgrading to Alberta Environment (AENV) 2012 standard guidelines by installing Ultra Violet (UV) disinfection capabilities. The current facility is able to support an additional population of approximately 4,641 residents.
Gleichen	653	1,484	594	It is expected that the WTP at Gleichen will be replaced with a new model as the current plant can not be upgraded to meet AENV 2012 standards. The capacity of the Gleichen WTP is high because it was originally designed to serve the Siksika Nation. There is a raw water storage area near Gleichen. Water is conveyed to Gleichen by the WID. The current facility is able to support an additional population of approximately 890 residents.
Rosebud	45	101	108	The County is planning to drill another well to service the Rosebud WTP to increase capacity and allow for fire flow.
Carseland	N/A	N/A	759	The WTP located in Carseland was decommissioned and future residential water needs are met by Speargrass. Design capacities were not provided for the Carseland WTP.
Cluny	N/A	N/A	135	Cluny is serviced by individual water wells.
Lakes of Muirfield subdivision (located in Lyalta)	946	2,640	141	Water for residential purposes is provided by the WID through a conveyance agreement. Design capacity is provided by the WID in three stages through individual licenses. All existing developments located adjacent to the site are serviced by individual water wells.

²⁰ Populations are based on approximate number of housing units within each community at an average ppdu of 3.0.

²¹ Lakes of Muirfield subdivision is based on 700 dwelling units consisting of detached, duplex, semi-detached, and multi-family; 180 multi-unit condominiums; and Town Centre consisting of a convenience store, restaurant, club house, and maintenance building. Population is based on approximate number of housing units at an average ppdu of 3.0.

Water Licenses

The County currently holds two licenses to draw water from the Bow River Basin. Surface water is drawn from the Bow River at Speargrass. Total allocation for water draw for the County equals 604,390 m³/year²². Consumptive uses and losses total approximately 180,080 m³/year. Approximately 424,310 m³/year, or enough water to support an additional population of 1,414 residents²³ remains.

Wastewater Treatment

Wastewater Treatment Facilities are located in Carseland, Gleichen, Rosebud, Cluny, and Lakes of Muirfield subdivision (located in Lyalta). All other communities in the County discharge their wastewater through individual septic tanks and fields. Based on the available Wastewater Treatment Facility data, population growth can be sustained in Gleichen, Carseland and Cluny. The capacity of each facility is presented in **Table 6**.

Table 6 - Wastewater Treatment Facilities by Community

<i>Community</i>	<i>Design Population</i>	<i>Actual Population</i>	<i>Additional Information</i>
Speargrass	N/A	306	Speargrass currently uses capacity from the Carseland lagoon.
Gleichen	2,000	594	Gleichen discharges its wastewater into a sewage lagoon. A pivot has been installed for disbursement of effluent..
Rosebud	100	108	Expansion of the Rosebud facility will occur in 2011. Rosebud uses multiple septic tanks and a field for wastewater.
Carseland	1,390	759	The Carseland facility expansion will allow for accommodation of a population of 4,500. Current facility is at/or reaching capacity.
Cluny	260	135	Cluny discharges wastewater into a sewage lagoon. Expansion of the lagoon is not possible due to groundwater conditions. A pivot has been installed for disbursement of effluent.
Lakes of Muirfield subdivision (located in Lyalta)	2,640	141	Wastewater is pumped from the Lakes of Muirfield subdivision through a forcemain to the community of Dalroy in Rocky View County. Wastewater is trucked south from Dalroy to the Hamlet of Langdon for treatment.

22 Source: Alberta Environment. Water License #1 = 1958-07-07-001, total allocation = 148,010 m³/year. Water license #2 = 1978-03-01-001, total allocation = 456,380 m³/year.

23 Based on consumption of 300 litres per person/day.

Solid Waste Facilities

Solid waste management in the County is handled by the Drumheller and District Solid Waste Management Association (DDSWMA). There are eight (8) waste transfer stations located in Wheatland County – near Carseland, Cluny, Gleichen, Rosebud, Rockyford, Standard, Hussar and Strathmore²⁴. DDSWMA has been contracted by the County to transport the solid waste from the transfer stations to the Drumheller waste management facility. Refer to Section 2.3, **Table 9** for a complete overview of solid waste management by Community.

Emergency Services

Map 8 (refer to Appendix B to review Maps) illustrates the locations of each type of Emergency Service provided to Wheatland County, Town of Strathmore, and the Villages of Hussar, Rockyford, and Standard. All communities within the County receive all three types of service (listed below) within provincial mandates.

- Emergency Medical Services (EMS) - Ambulance services are provided by the Wheatland and Adjacent Districts Emergency Medical Services Association (WADEMSA). WADEMSA serves all communities in Wheatland County except Dalum and the northeast area of the County which is serviced by the Badlands EMS located in Drumheller. The provincial benchmark for rural ambulatory service is thirty (30) minutes and this is currently being met with the existing service provision. Based on information received from WADEMSA, future growth can be serviced anywhere within the County, with the west portion providing the least constraint to growth; however, an increase in servicing to the east of Strathmore through provision of an additional location would be required if a population increase of approximately 18,000 residents was proposed²⁵.

²⁴ Source: DDSWMA.

²⁵ Source: WADEMSA.



- Fire Protection Services – Provided to residents of the County through volunteer Fire Halls in Carseland (including Strathmore Rural), Cluny, Dalum, Gleichen, Rosebud, Hussar, Rockyford, and Standard. Based on information received from the fire associations, there are currently no fire protection services constraints that may negatively impact future growth planning within the County²⁶.
- Police Services – Provided by the Royal Canadian Mounted Police (RCMP) through five detachment locations - Bassano, Gleichen, Drumheller, Beiseker, and Strathmore. Wheatland County also has Peace Officers. Based on conversations with representatives from the RCMP and Protective Services, there are currently no RCMP or Peace Officer constraints that may negatively impact future growth planning within the County²⁷.

Refer to Section 2.3, **Table 9** for a complete overview of Emergency Services by Community.

26 Source: Protective Services, Wheatland County.

27 Source: Strathmore RCMP.

2.2.4 Growth Drivers & Construction Activity

Current Residential and Non-Residential Construction Activity

Residential construction is occurring throughout the County in varying degrees. **Map 9** (refer to Appendix B to review Maps) illustrates that historical and current development activity appears to be concentrated within the western portions of the County. Proximity to larger urban centres, such as Calgary, could be a driver for this activity, providing bedroom communities for commuters. very few non-residential development permits have been submitted and approved by the County since 2006, with the largest numbers seen in or near Rosebud, Carseland and Speargrass. Refer to **Table 7** for more information on development activity.

Table 7 - Residential and Non-Residential Construction Activity by Community (2006 – 2010)²⁸

Community	Number of Development Permits Approved 2006-2010	
	Residential	Non-Residential
Ardenode	-	1 - Agriculture
Carseland	5 - Single Family Detached Dwelling (SFD) 1 - Multi Unit	3 - Hamlet Commercial 1 - Community Service
Chancellor	-	-
Cheadle	7 - SFD	-
Cluny	2 - SFD	-
Dalum	-	-
Eagle Lake	-	1 - Accessory Building
Gleichen	7 - SFD	2 - Hamlet Commercial
Lyalta	46 - SFD 1 - Multi Unit	-
Namaka	1 - SFD	-
Nightingale	4 - SFD	-
Redland	1 - SFD	-
Rosebud	7 - SFD	1 - Community Service
Speargrass	47 - SFD 28 - Multi Unit	3 - Hamlet Commercial

²⁸ Source: Construction activity is based on permit approvals recorded by Wheatland County between January 2006 and April 2010.

Potential Future Development

Potential Future Development identifies areas where interest in future residential development exists. This is gauged by the submittal of an Area Structure Plan, Outline Plan, Conceptual Scheme or Proposed Subdivision application by a developer/owner's agent to the County. Based on Plans submitted and approved as of December 31 2010, there is potential for an additional population of approximately 45,350 residents. **Map 9** (refer to Appendix B to review Maps) illustrates existing and future development areas (e.g., approved plans). **Table 8** below provides a review of historical and current subdivision applications received by the County and shows a decreasing trend in applications received.

Table 8 - Subdivision Applications within the County by year^{29,30}

<i>Year</i>	<i>In Progress</i>	<i>Total Received</i>
2008	-	53
2009	-	32
2010	45	-

2.3 COMMUNITY CONTEXT & PROFILES – SUMMARY

The “Where Are We Now?” section is summarized in **Table 9**. The summary table provides an inventory of the information collected and will not only aid in the next steps of the RGMS (e.g., defining future growth areas) but will also allow residents and stakeholders to understand the natural and constructed opportunities and constraints to future community development in Wheatland County.



29 Source: 2008 and 2009 Wheatland County Annual Report.

30 Note: Subdivision application information prior to 2008 was not available.

Table 9 - Community Profiles Summary

COMMUNITY	Demographics	Natural Systems	Constructed Systems
Ardenode	Population: 6 Avg. Cost to own a home: n/a	<ul style="list-style-type: none">The agricultural capability directly adjacent to Ardenode ranges from having moderately severe limitations to severe/very severe limitations for crops. Sustainable agriculture requires conservation practices, and in some areas is not feasible.The area directly adjacent to Ardenode contains land considered to be highly suitable and suitable for species-at-risk. These areas contain natural habitat that would support species-at-risk. In particular, lands south and northeast (near Nightingale) may contain several sensitive species, including the Schedule 1 listed ferruginous hawk (<i>Buteo regalis</i>). Additionally, records indicate previous occurrences of piping plover, another Schedule 1 protected species.Four main water bodies surround Ardenode, including Serviceberry Creek south of the community, Dawson Lake located to the southwest, and an unidentified wetland and creek southwest southwest of Ardenode. The water bodies will need to be assessed in the field to determine the specific classification and the regulations and restrictions applicable to each. Due to the presence of highly suitable habitat and the previous observations of species-at-risk, an Environment Assessment is recommended prior to development.Groundwater yield – Good (> 25 igpm).	<ul style="list-style-type: none">Fire response is provided by Strathmore Rural Fire Department.Police service is accessed from Strathmore RCMP detachment.EMS service is provided by WADEMSA.Discharge their wastewater through individual septic tanks and fields.Solid waste management is provided by DDSWMA through the transfer station located near Strathmore.Contain 25 wells and 11 pipelines within 1 km radius of the community boundary.Historical Resources – None within or adjacent to Ardenode.Confined Feeding Operations – Cattle feedlot operations located north of Ardenode.
Carseland	Population: 759 Avg. Cost to own a home: \$231,433	<ul style="list-style-type: none">The agricultural capability directly adjacent to Carseland is capable of sustainable crop production. The soils typically have no limitations or moderate limitations for a wide range of crops.Observations within 3 km of the community revealed previous occurrences of piping plover; aside from one Section of land (8-22-25-4) which was determined to be highly suitable for sharp-tailed grouse (<i>Tympanuchus phasianellus</i>), land adjacent to Carseland do not appear to contain habitats which would likely support species-at-risk.Two unidentified creeks are located south/west of and north of the Hamlet. Additionally, an unidentified wetland is located nearby (NW/SW-1-22-26-4). To confirm the absence/presence of the observation and to further classify the waterbodies to development to determine the regulations and restrictions applicable to each, an Environmental Overview is recommended prior to development.Groundwater yield – Satisfactory (5 - 25 igpm).	<ul style="list-style-type: none">Fire response is provided by Hall #2 Carseland Fire Department.Police service is accessed from Strathmore RCMP detachment.EMS service is provided by WADEMSA.There is one k-6 school in Carseland (Carseland Elementary School).There are two recreational and community facilities including: one curling centre and one community centre. Two camping facilities are located just outside of Carseland: Calderon Acres (approximately 6 kilometres north of) and Wyndham Carseland Park (just south of).There are 8.8 km of gravel, chip seal and paved road.There is a wastewater treatment facility with a design capacity for a population of 1,390. Facility expansion will allow for accommodation of a population of 4,500.Solid waste management is provided by DDSWMA through the transfer station located near Carseland.Contain 47 wells and 93 pipelines within 1 km radius of the community boundary.Historical Resources – None within or adjacent to Carseland.Confined Feeding Operations – Cattle feedlot operations located northeast and southeast of Carseland. Including “other” operations.
Chancellor	Population: 15 Avg. Cost to own a home: \$167,833	<ul style="list-style-type: none">The agricultural capability directly adjacent to Chancellor ranges from no to moderate limitations for crop production.Groundwater yield – Poor (<5 igpm).	<ul style="list-style-type: none">Fire response is provided by Standard Fire Department.Police service is accessed from Gleichen RCMP detachment.EMS service is provided by WADEMSA.There are no schools in Chancellor.There is a community centre in Chancellor.Discharge their wastewater through individual septic tanks and fields.Solid waste management is provided by DDSWMA through the transfer station located near Standard (or Hussar).Contain 13 wells and 23 pipelines within 1 km radius of the community boundary.Historical Resources – None within or adjacent to Chancellor.Confined Feeding Operations – “Other” operation located northeast of Chancellor.

<i>COMMUNITY</i>	<i>Demographics</i>	<i>Natural Systems</i>	<i>Constructed Systems</i>
Cheadle	Population: 117 Avg. Cost to own a home: \$363,049	<ul style="list-style-type: none"> The agricultural capability directly adjacent to Cheadle ranges from having no limitations or moderate limitations to severe/very severe limitations. Areas with severe limitations are likely along a water body, but the remaining areas appear to be very capable of sustainable crop production. The area adjacent to Cheadle, particularly to the west and south of the community, contains areas determined to be highly suitable and suitable for specific species-at-risk; three of these species are protected under Schedule 1 of the Species at Risk Act. Provincially sensitive species have also been recorded within 3 km of the community (ASRD 2010). An unidentified wetland and creek are located north and west of the community, and will require further classification to determine the regulations and restrictions applicable to each. Due to the presence of highly suitable habitat for Schedule 1 protected species an Environmental Assessment should be performed prior to development. Groundwater yield – Poor (<5 igpm). 	<ul style="list-style-type: none"> Fire response is provided by Strathmore Rural Fire Department. Police service is accessed from Strathmore RCMP detachment. EMS service is provided by WADEMSA. There are no schools in Cheadle. There is one baseball diamond, outdoor rink, community hall, and playground. Discharge their wastewater through individual septic tanks and fields. Solid waste management is provided by DDSWMA through the transfer station located near Strathmore. Contain 19 wells and 7 pipelines within 1 km radius of the community boundary. Historical Resources – None within or adjacent to Cheadle. Confined Feeding Operations – Chicken, dairy, and/or horse operations located north of Cheadle. Including two “other” operations.
Cluny	Population: 135 Avg. Cost to own a home: \$90,032	<ul style="list-style-type: none"> The agricultural capability directly adjacent to Cluny contains all soil classes, ranging from having no limitations to having severe limitations for crop production. Areas with moderately severe to very severe limitations appear to be along water bodies or within areas of land with intermittent water features. The remaining areas are likely capable of sustainable crop production, but with limited variety. The area directly adjacent to Cluny contains areas determined to be highly suitable and suitable for species-at-risk, including several Schedule 1 protected species. Additionally, a ferruginous hawk has been previously recorded within 3 km of the community (ASRD 2010). North of the Hamlet is an unidentified wetland; this wetland will need to be classified prior to development to determine applicable regulations and restrictions. An unidentified creek is also located south of the community, on Siksika Nation land. An Environmental Assessment should be conducted prior to development to further assess the wildlife habitat. Groundwater yield – Good (>25 igpm). 	<ul style="list-style-type: none"> Fire response is provided by Cluny Rural Fire Protection Association. Police service is accessed from Gleichen RCMP detachment. EMS service is provided by WADEMSA. There are no schools in Cluny. There is one post office and one church. There is one campground, baseball diamond, and tennis court. There is 2.9 km of gravel and chip seal road. There is a wastewater treatment facility with a design capacity for a population of 260. Wastewater is currently discharged into a sewage lagoon. Solid waste management is provided by DDSWMA through the transfer station located near Cluny. Contain 10 wells and 15 pipelines within 1 km radius of the community boundary. Historical Resources – None within or adjacent to Cluny.
Dalum	Population: 3 Avg. Cost to own a home: n/a	<ul style="list-style-type: none"> The agricultural capability directly adjacent to Dalum contains all soil classes, ranging from having no limitations to having severe limitations for crop production. Areas with moderately severe to very severe limitations appear to be along water bodies or within portions of land containing intermittent water features. The remaining areas are likely capable of sustainable crop production, but with limited variety and requiring conservation practices. Land north of Dalum are considered to contain areas of land highly suitable and suitable for the prairie falcon, which is typically located in native grassland and coulee habitats. Whey Lake is located adjacent to the community, and is an important wetland feature in the landscape; setback restrictions will apply to this area. An Environmental Overview is recommended in this area prior to development. Groundwater yield – Satisfactory (5 - 25 igpm). 	<ul style="list-style-type: none"> Fire response is provided by Dalum Fire Department. Police service is accessed from Drumheller RCMP detachment. EMS service is provided by Badlands Ambulance Service. There are no schools in Dalum. There is one community hall. Discharge their wastewater through individual septic tanks and fields. Solid waste is accepted at the Drumheller Solid Waste Facility. Contain 28 wells and 13 pipelines within 1 km radius of the community boundary. Historical Resources – An area near Cluny contains the Ward Effigy Archaeological Site. Areas directly north of Dalum are believed to contain palaeontological historical resource(s).

<i>COMMUNITY</i>	<i>Demographics</i>	<i>Natural Systems</i>	<i>Constructed Systems</i>
Eagle Lake subdivision	Population: 48 Avg. Cost to own a home: \$154,118	<ul style="list-style-type: none"> The agricultural capability directly adjacent to Eagle Lake subdivision contains severe limitations for crop production. The subdivision is located along the shores of Eagle Lake and falls within a provincially recognized environmentally sensitive area. The area is determined to have habitats highly suitable or suitable for specific species-at-risk. Groundwater yield – Good (>25 igpm). 	<ul style="list-style-type: none"> Fire response is provided by Strathmore Rural Fire Department. Police service is accessed from Strathmore RCMP detachment. EMS service is provided by WADEMSA. There are no schools in Eagle Lake subdivision. Discharge their wastewater through individual septic tanks and fields. Solid waste management is provided by DDSWMA through the transfer station located near Strathmore. Contain 28 wells and 13 pipelines within 1 km radius of the community boundary. Historical Resources – None within or adjacent to Eagle Lake subdivision.
Gleichen	Population: 594 Avg. Cost to own a home: \$123,565	<ul style="list-style-type: none"> The agricultural capability directly adjacent to Gleichen ranges from having no limitations to having moderately severe limitations for crops. The majority of the landscape should be able to maintain sustainable crop production, but certain areas may require further management and conservation practices or be limited in crop variety. The areas directly adjacent to Gleichen, particularly to the north and within Siksika Nation, contain areas determined to have habitats highly suitable or suitable for specific species-at-risk. Additionally, northern leopard frog (<i>Rana pipiens</i>) has been previously recorded in the area (ASRD 2010). Several unidentified creeks and wetlands surround Gleichen; these water bodies will need to be further classified to determine restrictions and regulations applicable to each. An Environmental Assessment should be performed in this area prior to development. Groundwater yield – Satisfactory (5 - 25 igpm). 	<ul style="list-style-type: none"> Fire response is provided by Gleichen & District Fire Department. Police service is accessed from Gleichen RCMP detachment. EMS service is provided by WADEMSA. There are two schools in Gleichen: Central Bow Valley School (k-12) and Sequoia Outreach School (7-12). There are a number of community and recreation facilities including an arena, curling club, community centre, library, cemetery, baseball diamond, campground, post office and three churches. There are 12.6 km of gravel, chip seal, and paved road. There is a wastewater treatment facility with a design capacity for a population of 2,000. Wastewater is currently discharged into a sewage lagoon. Current water treatment facility has a population design capacity of 1,484. Solid waste management is provided by DDSWMA through the transfer station located near Gleichen. Contain 20 wells and 10 pipelines within 1km radius of the community boundary. Historical Resources – The Beach/Rennie House, Gleichen Water Tower, and St. Andrew's Anglican Church exist within the Hamlet of Gleichen.
Lyalta	Population: 189 Avg. Cost to own a home: \$460,182	<ul style="list-style-type: none"> The agricultural capability directly adjacent to Lyalta is capable of sustainable crop production. The soils typically have no limitations or moderate limitations for a wide range of crops. Lands to the north and south of Lyalta contain areas determined to have habitats highly suitable or suitable for specific species-at-risk. Unidentified creeks surround the community, located to the east, west, south and north of Lyalta; these water bodies will need to be further classified to determine restrictions and regulations applicable to each. An Environmental Overview is recommended prior to development. Groundwater yield – Satisfactory (5 - 25 igpm). 	<ul style="list-style-type: none"> Fire response is provided by Strathmore Rural Fire Department. Police service is accessed from Strathmore and Beiseker RCMP detachments. EMS service is provided by WADEMSA. There are no schools in Lyalta. There is a community centre, two baseball diamonds, playground, campground, and one golf course. Discharge their wastewater through individual septic tanks and fields. Lakes of Muirfield contain a communal wastewater system with treatment occurring in Rocky View County. Solid waste management is provided by DDSWMA through the transfer station located near Strathmore. Contain 35 wells and 22 pipelines within 1 km radius of the community boundary. Historical Resources – None within or adjacent to Lyalta.

<i>COMMUNITY</i>	<i>Demographics</i>	<i>Natural Systems</i>	<i>Constructed Systems</i>
Namaka	Population: 87 Avg. Cost to own a home: \$315,729	<ul style="list-style-type: none"> The agricultural capability directly adjacent to Namaka is moderate-severely limited. The majority of the landscape should be able to maintain sustainable crop production, but certain areas may require further management and conservation practices or be limited in crop variety. Namaka is directly adjacent to land considered highly suitable and suitable for species-at-risk. Additionally, northern leopard frog has been previously observed in the area (ASRD 2010). Namaka is located within and adjacent to two Environmentally Sensitive Areas (ACIMS 2010). These ESAs (#117 and #290) are of National Significance due to their elements of conservation concern which occur within them and the areas of unique habitat. Due to their significance, detailed Environmental Assessments will need to be performed prior to any development. Namaka is also surrounded by several unidentified wetlands and creeks; these water bodies will need to be further classified to determine restrictions and regulations applicable to each. Due to the presence of several environmentally sensitive features, an Environmental Assessment is recommended prior to development. Groundwater yield – Satisfactory (5 - 25 igpm). 	<ul style="list-style-type: none"> Fire response is provided by Strathmore Rural Fire Department. Police service is accessed from Strathmore RCMP detachment. EMS service is provided by WADEMSA. There are no schools in Namaka. There is one community hall. Discharge their wastewater through individual septic tanks and fields. Solid waste management is provided by DDSWMA through the transfer station located near Strathmore. Contain 4 wells and 4 pipelines within 1 km radius of the community boundary. Historical Resources – None within or adjacent to Lyalta. Confined Feeding Operations – Cattle feedlot and hog operation located south of Namaka.
Nightingale	Population: 21 Avg. Cost to own a home: \$280,800	<ul style="list-style-type: none"> The agricultural capability directly adjacent to Nightingale ranges from having moderately severe limitations to severe/very severe limitations for crops. Sustainable agriculture requires conservation practices, and in some areas is not feasible. Nightingale is located adjacent to land determined to contain habitats highly suitable and suitable for species-at-risk; the burrowing owl, a Schedule 1 Endangered species, has been previously observed in the area (ASRD 2010). Serviceberry Creek is located to the south and east of the community, and an unidentified creek is located north of the community. An Environmental Assessment is recommended prior to development to further classify the wetlands and to determine the presence/absence of the burrowing owl and suitable habitat for this and other species-at-risk. Groundwater yield – Poor (<5 igpm). 	<ul style="list-style-type: none"> Fire response is provided by Strathmore Rural Fire Department. Police service is accessed from Strathmore RCMP detachment. EMS service is provided by WADEMSA. There are no schools in Nightingale. There is a community hall, baseball diamond, and playground. Discharge their wastewater through individual septic tanks and fields. Solid waste management is provided by DDSWMA through the transfer station located near Strathmore and/or Rockyford. Contain 20 wells and 18 pipelines within 1 km radius of the community boundary. Historical Resources – None within or adjacent to Nightingale. Confined Feeding Operations – There are feedlots located to the west of Nightingale.
Rosebud	Population: 108 Avg. Cost to own a home: \$174,653	<ul style="list-style-type: none"> The agricultural capability directly adjacent to Rosebud contains all soil classes, ranging from having no limitations to having severe limitations for crop production. Areas with moderately severe to very severe limitations appear to be along water bodies or within portions of land containing intermittent water features. The remaining areas are likely capable of sustainable crop production, but with limited variety and requiring conservation practices. Rosebud is located adjacent to land determined to contain habitats highly suitable and suitable for species-at-risk and several sensitive species have been previously reported in the area (ASRD 2010). Rosebud is located within the ESA #290, which is of national significance due to the elements of conservation concern, unique landforms, and large natural areas. It also contains a site of recognized significance. The Rosebud River and Severn Creek surround the community, and the ESA recognizes that this area contains intact riparian areas and riparian areas along a major river. Due to the amount of highly suitable habitat, water features, and the significance of the ESA, an Environmental Assessment will need to be performed prior to development. Groundwater yield – Poor (<5 igpm). 	<ul style="list-style-type: none"> Fire response is provided by Rosebud Rural Fire Department. Police service is accessed from Drumheller RCMP detachment. EMS service is provided by WADEMSA. There is one school: Rosebud School of Arts (post-secondary). There are a number of community and recreation facilities including a community hall, cemetery, campground, golf course, and one recreation area. There are three cultural facilities: museum, dinner theatre, and church. There is 1.9 km of gravel and chip seal road. There is a water treatment facility with a design capacity for a population of 101. A septic tank and field are used for wastewater treatment with a current design capacity of 100 people. The septic tank and field are not regulated by AENV as there is no discharge. Solid waste management is provided by DDSWMA through the transfer station located near Rosebud. Contains 26 wells and 15 pipelines within 1 km radius of the community boundary. Historical Resources – The Rosebud Hotel is located with the Hamlet of Rosebud. Areas adjacent to Rosebud are believed to contain archaeological and palaeontological historical resources.

<i>COMMUNITY</i>	<i>Demographics</i>	<i>Natural Systems</i>	<i>Constructed Systems</i>
Redland	Population: 21 Avg. Cost to own a home: \$118,472	<ul style="list-style-type: none"> The agricultural capability directly adjacent to Redland contains moderately severe limitations for crop production. Redland is located adjacent to land determined to contain habitats highly suitable and suitable for species-at-risk and several sensitive species have been previously reported in the area (ASRD 2010). Redland is located within the ESA #290, which is of national significance due to the elements of conservation concern, unique landforms, and large natural areas. It also contains a site of recognized significance. The Rosebud River and Severn Creek surround the community, and the ESA recognizes that this area contains intact riparian areas and riparian areas along a major river. Due to the amount of highly suitable habitat, water features, and the significance of the ESA, an Environmental Assessment will need to be performed prior to development. Groundwater yield – Poor (<5 igpm). 	<ul style="list-style-type: none"> Fire response is provided by Rosebud Rural Fire Department. Police service is accessed from Drumheller RCMP detachment. EMS service is provided by WADEMSA. There are no schools in Redland. Discharge their wastewater through individual septic tanks and fields. Solid waste management is provided by DDSWMA through the transfer station located near Rosebud. Historical Resources – Areas directly adjacent to the southern boundary of Redland, and locations directly north, west, and east of Redland are believed to contain a palaeontological historical resource.
Speargrass	Population: 306 Avg. Cost to own a home: \$422,326	<ul style="list-style-type: none"> The agricultural capability directly adjacent to Speargrass is severely to very severely limited for sustainable crop production. Due to its proximity to the Bow River and associated landforms and rolling landscapes, some areas may be suitable for some agricultural activities such as grazing, but conservation improvement by farm machinery may be unfeasible in most areas. Speargrass is located adjacent to land determined to contain habitats highly suitable and suitable for species-at-risk; several sensitive species have been previously observed in the area (ASRD 2010). The community is within ESA #289, which is of national significance due to the elements of conservation concern. It contains, rare and unique landforms, important wildlife habitat, large natural areas and sites of recognized significance. An unidentified creek is located south and east of the community, and the Bow River is located to the south. The ESA recognizes this area contains headwater streams, intact riparian areas, and riparian areas along a major river. Due land containing highly suitable habitats for species-at-risk and important wetland habitats, an Environmental Assessment will need to be performed prior to development. Groundwater yield – Good (>25 igpm). 	<ul style="list-style-type: none"> Fire response is provided by Hall #2 Carseland Fire Department. Police service is accessed from Strathmore RCMP detachment. EMS service is provided by WADEMSA. There are no schools in Speargrass. There is a recreation facility and a golf course. There is 4.7 km of gravel and paved road. Speargrass currently uses wastewater services provided by the Carseland lagoon which has a population design capacity of 1,390. Current water treatment facility has a population design capacity of 4,947. Solid waste management is provided by DDSWMA through the transfer station located near Carseland. Contain 27 wells and 6 pipelines within 1 km radius of the community boundary. Historical Resources – Believed to contain archaeological historical resources to the north and east of Speargrass. Confined Feeding Operations – Cattle feedlot located to the northwest of Speargrass.



3.0 WHERE DO WE WANT TO GO?

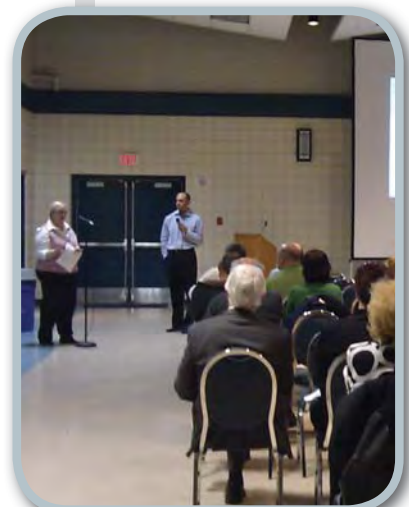


A key outcome of the RGMS is to implement a regional vision within Wheatland County boundaries and concepts for sustainable community development that guide the decision-making process for determining future growth areas. The following section identifies the vision and direction on growth to ensure best practices and next steps are considered in determining how population growth and land base will be managed. Finally, population forecasts and estimated residential and non-residential land requirements were determined for Wheatland County for the next 40 years.

3.1 VISION FOR GROWTH

The following vision for the RGMS was developed based on input received from Wheatland County, stakeholders, and the general public during public participation events.

Wheatland County promotes sustainable well planned development which enhances and protects existing agricultural land and natural areas. We will do this in four ways: focusing growth in existing Hamlets, working with other municipalities to ensure mutually beneficial land uses in bordering areas, balancing growth while promoting good use of land, and improving and upgrading infrastructure in our communities to support a good quality of life.



3.2 SUSTAINABLE COMMUNITY DEVELOPMENT

Growth can be an exciting but tumultuous experience for municipalities. On the one hand, municipalities look forward to the benefits that come with growth, such as an expanding economy, an increasing tax base, and more vibrant communities resulting from greater population. On the other hand, municipalities must contend with a series of questions whose potential outcomes can have serious environmental, financial, and social implications for their future health: Where do we grow? How do we grow? What does growth mean for the health of our natural environment? How will we pay for the infrastructure that is needed to accommodate growth?



Good planning connects and integrates population and employment with land use, infrastructure and transportation, economic development, and community services. It helps manage the consumption of land that occurs through low density development, and charts a course for sustainable community development.

The concept of sustainable community development is operationalized uniquely in every community. For some it may equate to affordable housing while others may focus on job creation, promoting walkable environments and cultural diversity. Generally, sustainable community development is viewed as balancing the environmental, economic, social and cultural (four spectra of sustainable community development) attributes of a community. Smart Growth and Leadership in Energy and Environmental Design for Neighbourhood Development (LEED

ND), and Conservation Subdivision Design provide three examples of systems used to guide the implementation of good planning and sustainable community development, with an emphasis on the four spectra of sustainable community development. They are discussed further in the following sections.

3.2.1. Smart Growth Directions on Growth³¹

Smart Growth is a philosophy which advocates for compact, transit oriented communities with walkable, cyclist friendly, mixed land uses and housing choices. It offers a framework for guiding sustainable community development through a set of principles. The principles advocate for the preservation of the natural environment, fiscally responsive provision of services and infrastructure, and enhanced communities by prioritizing infill and the redevelopment over green field expansion. Within Smart Growth, there is a clear emphasis on promoting growth where it does not conflict with the natural environment and other land uses, and increasing development density so it is better served by public and alternative forms of transportation. Specifically, the **Smart Growth principles** are:

1. Encourage growth in existing communities. Investments in infrastructure, such as roads and schools, are used efficiently, and developments do not unnecessarily take up new land.
2. Preserve open spaces, natural beauty, and Environmentally Sensitive Areas. Development respects natural landscape features and has higher aesthetic, environmental, and financial value.
3. Protect and enhance agricultural lands. A secure and productive land base provides food security, employment, and habitat.
4. Utilize smarter and cost-effective infrastructure and green buildings. Green buildings and other systems can save both money and the environment in the long run.
5. Mix land uses. Each neighbourhood has a mixture of homes, retail, business, and recreational opportunities.
6. Build well designed compact neighbourhoods. Residents can choose to live, work, shop and play in close proximity. People can easily access daily activities, transit is viable, and local businesses are supported.
7. Provide a variety of transportation choices. Neighbourhoods are attractive and have safe infrastructure for walking, cycling and transit, in addition to driving.
8. Create diverse housing opportunities. People in different family types, life stages and income levels can afford a home in the neighbourhood of their choice.
9. Foster a unique neighbourhood identity. Each community is unique, vibrant, diverse, and inclusive.
10. Nurture engaged citizens. Develop places that belong to those who live, work and play there; and encourage engaged citizens to participate in community life and decision-making.



31 Source: Adapted from Smart Growth BC Smart Growth Principles (www.smartgrowth.bc.ca).

3.2.2. LEED ND Directions on Growth

Partially inspired by the principles of Smart Growth, Leadership in Energy and Environmental Design for Neighbourhood Development (LEED ND) takes the promotion of sustainable community development one step further by creating an evaluative checklist to measure sustainable community development. The LEED ND checklist is divided into categories focused on the community location and design, mixed land uses, complete communities, promoting alternative forms of transportation and synthesis with the natural environment. Like Smart Growth, LEED ND also places heavy emphasis on the location of development – promoting higher densities, infill and the unnecessary extension of municipal services in addition to a mix of housing types including affordable housing.



3.2.3. Conservation Subdivision Design Directions on Growth

The goal of Conservation Subdivision Design (CSD) is to protect as much Environmentally Significant Area and/or important culturally significant features as possible within a proposed development while still allowing for conventional subdivision densities to occur.

CSD differs from traditional country residential development in a number of ways. First, it sets much higher standards for the quantity, quality and configuration of the resulting open space and developable area. CSD also allows communities to be more involved in the design of new subdivisions and also benefit more than just another pocket of housing. Lands protected from development can also be configured, where feasible, to work towards creating an interconnected network of open space linking amenities and adjoining subdivisions, and/or providing buffers between new development and Environmentally Sensitive Areas³².

³² Conservation design for subdivisions: a practical guide to creating open space networks, Randall Arendt, 1996.

Specifically, CSD principles include³³:

1. Enhanced stormwater management. CSD protects water quality and manages water quantity by slowing and filtering stormwater runoff through wetlands, bioretention facilities, and best management practices that maximize soil water infiltration and percolation;
2. Visual access to open space. Views of open space and nature have been shown to be an important amenity for homebuyers shopping in new developments; CSD typically provides access to natural vistas as an added value to residents;
3. Enhanced/protected wildlife habitat. Sensitive site development that minimizes disturbances to streams, steep slopes and sensitive vegetation provides increased opportunities to maintain and enhance habitat;
4. Reduced infrastructure construction costs (streets, sewers, etc.). Smaller, sensitively-placed lots require less total land coverage, thereby requiring shorter lengths of utilities and streets to access all lots;
5. Large scale land reshaping and grading can usually be avoided. Less grading means the native soil is left in place for better establishment of landscape plantings;
6. Reduced maintenance costs. Maintenance is required for any development, but basic CSD principles can reduce overall costs if effectively applied. Examples include less maintenance for narrower shorter streets, fewer problems with soil erosion/sedimentation as a result of sensitive site design, and lower costs associated with use of native/adapted landscape plants that can require significantly fewer inputs (labour, pesticides, etc.) than traditional plantings; and
7. Enhanced profit potential for land owner. Many successful CSD projects have shown that net profit per lot increases when CSD principles are appropriately applied and implemented.

Conservation Subdivision Design is defined as an approach to laying out subdivisions so that a significant percentage of buildable lands are protected to create interconnected networks of conservation lands.



33 University of Nebraska-Lincoln. UN Water: Property Design.2010.

3.2.4. Municipal Directions on Growth

On a macro-level, Smart Growth, LEED ND, and CSD provides the theoretical foundation to guide sustainable community development. Concepts for sustainable community development are further defined within the Wheatland County Municipal Development Plan and Integrated Community Sustainability Plan (ICSP). Importantly, these documents also shape the application of these theoretical concepts through policy statements to achieve sustainable community development within the County. These policies are focused on economic diversification, managing the pressures associated with urban growth, ensuring high quality community and protective services, effectively managing community infrastructure and protecting the natural environment.

The applicable policies for consideration in the RGMS include:

1. Residential development objectives encourage developments that will provide or increase servicing to existing Hamlets and minimize the intrusion of residential development into agricultural lands.
2. Protect existing agricultural lands.
3. Minimize the fragmentation of agricultural lands.
4. Generally direct industrial and commercial development to designated areas.
5. Provide a method whereby industrial and commercial development may be incorporated into the County.
6. Encourage new development in or within close proximity to existing urban communities forming part of Wheatland County and then in proximity to adjacent municipalities.
7. Encourage residential development first in existing serviced Hamlets, and then in unserved Hamlets.
8. Encourage developments to locate in relation to servicing needs. The County prefers that development connect to existing services when available rather than create new separate servicing nodes.
9. Recognize and encourage the conservation of Environmentally Significant and Sensitive Areas.
10. Minimize the pollution of air, water and land.
11. Encourage the conservation and best use of the County's groundwater.

Reflective of the principles of Smart Growth, LEED ND, Conservation Subdivision Design, and related County growth management policy, and exemplifying good planning practices, the above considerations will be relied upon to guide the creation of evaluation criteria and future growth options, and the development of principles, goals, and supporting policy.

3.3. POPULATION

3.3.1. Historical Population Growth

Wheatland County's historical population growth rate shows an increase in population of 4,055 residents over a 21 year period, or approximately 75%³⁴ change in population since 1989. Historical population growth is equivalent to an average annual growth rate of 2.8%, based on existing and estimated population data. Refer to **Table 10** for more information.

In comparison, from 2001-2009 other municipalities and County's within or surrounding Wheatland County have also experienced population growth; For example, Chestermere (268%), Strathmore (59%), Mountain View County (12%), Kneehill County (3%), and Rocky View County (25%) have experienced an average growth rate of 63.5% for that time period, equivalent to an average annual growth rate of 7.9% .

Table 10 - Population History for Wheatland County³⁵

<i>Year</i>	<i>Population % Change</i>
2010	3.7%
2006	2.0%
2000	4.6%
1995	1.1%
1989	
Average Annual Rate - 2.8%	

3.3.2. Population Projection

Population projections for Wheatland County are based on a review of historical growth rates and growth trends within the County. The proposed projections recognize that a majority of the communities in the County are serviced by major regional and local transportation corridors which allows for ease of population migration. Transportation corridors improve accessibility and allow for reasonable travel distances from the County's rural setting to other local "urban centres"³⁶ such as Strathmore or Drumheller. In addition, proximity to major urban centres, such as Calgary, has spurred increased interest in "bedroom

A bedroom community is defined as a suburban residential area where there is little in the way of employment opportunities and most residents commute to neighbouring metropolitan areas to work. With a development pattern showing a growing consumer interest in rural living, while ensuring close proximity to a major urban centre.

³⁴ Estimated 2.8% population increase per year since 1989.

³⁵ 1989 – 2006 population change based on historical population information collected from Official Alberta Population List (Alberta Municipal Affairs); 2010 estimated population of 9,464 based on historical growth rate.

³⁶ Source: Energy Resources Conservation Board (Alberta). "Urban Centre" means a City, Town, New Town, Village, Summer Village, or Hamlet with not less than 50 separate buildings each of which must be an occupied dwelling, or other incorporated centre (e.g., commercial/retail, sports complex, etc.).

community” development (e.g., Lakes of Muirfield subdivision in Lyalta) along the western portion of the County. With a development pattern showing a growing interest in rural living, while ensuring close proximity to a major urban centre, Wheatland County will continue to be a prime destination and a region for continued population growth for people looking to a rural lifestyle, more affordable cost of living, and short commute distances to a major employment centre.



With consideration given to the above noted information, the following population projections have been developed in order to understand the amount of growth that may occur in the County over the next 40 years as well as estimate the residential and non-residential land requirements that may be required. Three projections were developed for the RGMS based on possible low growth (0.5 to 1.0%), medium growth (2.0 – 2.8%), and high growth (4.5%). **Table 11** (refer to page 45) provides the projection on 10 year intervals over a 40 year timeframe. The projections will be comparable to Federal Census numbers starting in 2011 and ending in 2051.

The “low” population growth rate of 1% per annum is based on a growth rate which is lower than the average in Alberta (2.5%) and assumes that the County will experience growth; however, the level of out-migration and minimal development interest will greatly reduce resident population numbers into the future.

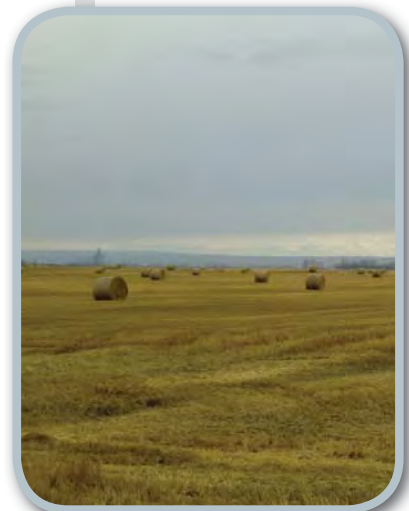
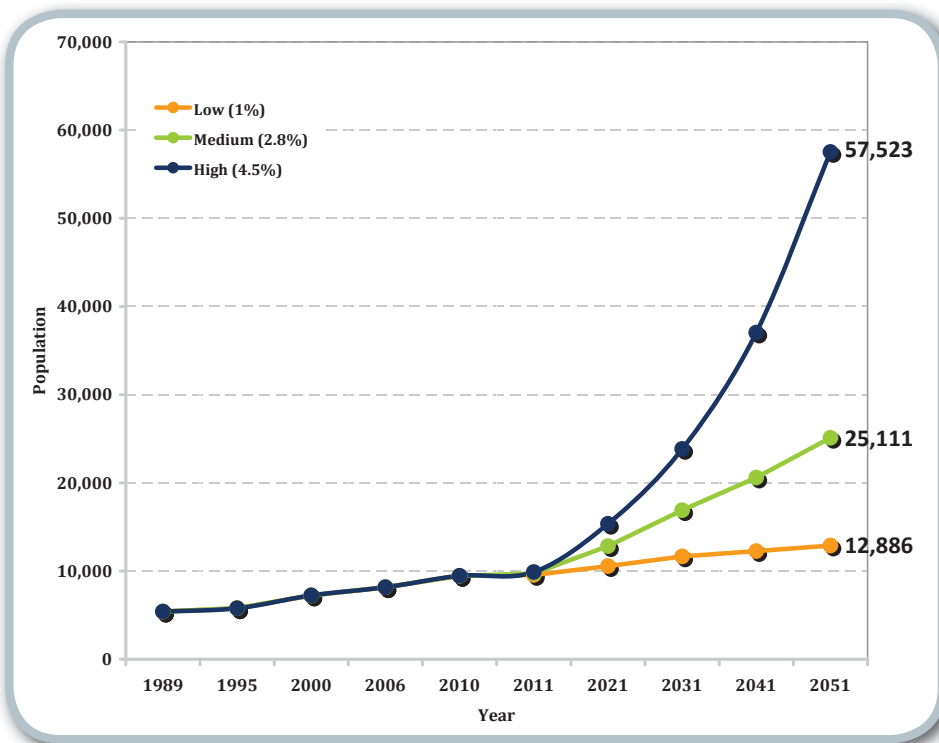
A “medium” growth rate of 2.8% assumes that growth will continue to occur at the same rate as seen in the County over the last 20 years.

A “high” growth rate of 4.5% is based on the growth rate that would occur over the next 40 years as a result of a full build-out of the proposed plans currently approved by the County or those that have been brought forward by Developer’s/Owner’s Agents and are currently under discussion. **Figure 2** (refer to page 45) graphically illustrates population projections for Wheatland County. Both low and medium growth rates were reduced after 2031 to account for any fluctuations in growth and development that may occur over the next 40 years resulting from regional, provincial, and/or national market conditions. The high growth rate assumes that development activity will remain strong and all currently approved developments will achieve full built-out over the next 40 years.

Table 11 - Population Projections for Wheatland County

<i>Year</i>	<i>2011</i>	<i>2021</i>	<i>2031</i>	<i>2041</i>	<i>2051</i>
Low (1%)	9,558	10,558	11,663	12,259	12,886
Annual Growth Rate	1%	1%	1%	0.5%	0.5%
Medium (2.8%)	9,728	12,821	16,899	20,599	25,111
Annual Growth Rate	2.8%	2.8%	2.8%	2.0%	2.0%
High (4.5%)	9,889	15,358	23,851	37,040	57,523
Annual Growth Rate	4.5%	4.5%	4.5%	4.5%	4.5%

Figure 2 - Population Projections for Wheatland County



3.4. GROWTH REQUIREMENTS

With population growth comes the inherent and basic need for land and housing, as well as supporting hard infrastructure such as roads, bridges, drinking water/wastewater supply and treatment systems. These land uses are supplemented with soft infrastructure needs such as commercial/retail, parks and open space, and public services which not only provide local services to residents but also create local employment opportunities.

3.4.1. Estimated Residential and Non-Residential Land Requirements

Table 12 identifies the demand for residential, commercial and industrial land in the County over the next 40 years based on projections completed in section 3.3 and assumptions noted in **Appendix C**, Study Limitations, Assumptions, and Constraints. Residential land requirements have been calculated based on the Country Residential (CR) zoning (minimum density of one (1) unit per acre) noted in the Wheatland County Land Use Bylaw (2007-56) and a potential alternative higher density standard (possible minimum density of four (4) units per acre).

Table 12 - Land Requirements for Wheatland County^{37,38,39}

Land Use	Area Conversion	<i>Future Land Demand</i>		
		Low (1%) scenario	Medium (2.8%) scenario	High (4.5%) scenario
Residential	1 unit per acre	1,109 acres	5,128 acres	15,878 acres
Residential	4 units per acre	277 acres	1,282 acres	3,970 acres
Commercial	22 ft ² /capita	6.5 acres	12.7 acres	29 acres
Industrial	162 ft ² /capita	48 acres	93.4 acres	214 acres

Table 12 illustrates that if residential density is held constant at one (1) unit per acre, then the demand for land will be 1,109 acres, 5,128 acres, and 15,878 acres for the low, medium, and high growth scenarios, respectively. However, comparing the existing Country Residential (CR) zoning in Wheatland County to a higher density (possible minimum four (4) units per acre), then the gross residential land demand is reduced between 832 acres to 11,908 acres, depending on the growth scenario. Ultimately, **Table 12** demonstrates that community development, which adheres to the principles of Smart Growth, LEED ND, and CSD, will reduce land consumption, protect natural habitat and agricultural lands from unnecessary fragmentation, and reduce long-term servicing and infrastructure maintenance costs.

³⁷ For discussion purposes only.

³⁸ Residential Land Use - Total Gross Land requirement to 2051; residential area conversion is based on 3 ppdu.

³⁹ Commercial land demand is based on the building footprint and does not account for parking requirements, which is in the magnitude of an additional 25-50% additional land.



4.0 HOW DO WE GET THERE?



Building from the Vision and Directions for Growth noted in Sections 3.1 and 3.2, this section defines the evaluation criteria that will be used to assess each community's suitability for future growth. The results of the evaluation are also discussed in this section. Refer to **Appendix G**, Detailed Evaluation Results for more information.

4.1. EVALUATION CRITERIA & RESULTS

The following evaluation criteria were used to assess each community in Wheatland County for their future growth potential. Eleven (11) theme areas were investigated based on information collected during the natural and constructed systems analysis (completed in Section 2.2). The analysis is supplemented with information from existing policies (both statutory and non-statutory), feedback received during public participation sessions, and special consideration given to criterion such as agriculture, drinking water supply, infrastructure and proximity of communities to surrounding "urban centres". Refer to **Figure 3** (page 50) for more information regarding the evaluation criteria.



Figure 3 - Description of Evaluation Criteria



Supporting Policy

Which communities are designated for future growth based on the Wheatland County Municipal Development Plan (MDP) or approved Area Structure Plans (ASP)?



Public Participation

Which communities are favoured for future growth based on public and stakeholder opinion?



Agriculture

Which communities can support future growth with minimal to no impact on surrounding viable agricultural land? Which communities are least impacted by Confined Feeding Operations (CFOs)?



Community Development

Which communities have the social infrastructure required to support future growth?



Transportation

Which communities have the existing and future proposed transportation routes to support future growth?



Infrastructure

Which communities have the existing and future wastewater capacity to support future growth?



Natural Environment

Which communities can support future growth with minimal to no impact on the natural environment?



Water

Which communities have the greatest potential for future growth as a result of availability of ground and/or surface water?



Oil and Gas

Which communities are least impacted by surface and subsurface oil and gas infrastructure within one kilometre radius of community boundary?



Development Pressure

Which communities, or fringe areas, have historically had the greatest pressure for development?



Proximity

Which communities are within 30 minute drive (or 40 kilometres) of an “urban centre”?



Table 13 outlines the results of the evaluation. In summary, the results indicate a trend which is similar to the existing pattern of growth and development in Wheatland County. Current development is focused towards the western portion of the County, in close proximity to Calgary, with easy access to major transportation corridors, and within the coverage area of the Western Irrigation District.

Communities which have the greatest potential for future growth, and ranked in the 75-80th percentile, include Speargrass, Carseland, and the Eagle Lake area.

The highest ranking communities are followed by the communities of Rosebud, Gleichen and Lyalta. Rosebud and Lyalta fall within the 60-70th percentile due to their proximity to Urban Centres (e.g., Distance from Rosebud to the Town of Drumheller is 37 kilometres), current development pressure (e.g., Lakes of Muirfield subdivision in Lyalta), coverage by Western Irrigation District, and agricultural soil suitability. One of the additional key determinants for the high ranking of Gleichen was due to the substantial existing capacity in both water and wastewater systems. Although Gleichen is not currently experiencing development pressure, there is potential for the community to support a substantially higher population through selective redevelopment.

Table 13 - Evaluation Results – Community Ranking

<i>Ranking</i>	<i>Community</i>
1	Speargrass
2	Carseland
3	Eagle Lake
4	Rosebud
5	Gleichen
6	Lyalta & Cluny
7	Cheadle
8	Namaka
9	Dalum & Ardenode
10	Redland
11	Nightingale
12	Chancellor

The communities of Cheadle and Namaka ranked in the 55-60th percentile mainly due to their close proximity to urban centres such as Calgary and Strathmore, as well as their close proximity to the Highway 1 corridor which allows for easy access to a myriad of transportation connections north-south and east-west.

The remaining communities ranked between 30-55th percentile due to a variety of constraints such as groundwater yield, lack of existing infrastructure, and development restrictions posed by confined feeding operations and other infrastructure.

For more information regarding the evaluation criteria, weighting factors, and assumptions used to determine community ranking refer to **Appendix G**, Detailed Evaluation Results.

4.2. FUTURE GROWTH CONCEPT & RATIONALE

The Growth Concept for Wheatland County is based on the premise of developing connected, complete, and sustainable communities which will be able to collectively support a projected regional population of 25,000 residents by 2051.

The growth concept recognizes the important role that existing regional and local transportation networks play in regard to community connectivity, employment, future growth, and economic development. With a goal of increasing and diversifying the tax base, the potential for expanded highway commercial development is seen as a major benefit to the County, adjoining municipalities (e.g., Rocky View County), the Town of Strathmore, and the Villages of Hussar, Standard and Rockyford. As a result, transportation corridors and access have been factored into the growth concept.

The growth concept recognizes the housing market trends and activity seen along the western portion of the County including communities such as Speargrass and Lyalta. Development activity has historically, and will continue to be driven by potential residents that work in an urban centre, such as Calgary, but choose to reside in a rural setting such as Wheatland County. The growth concept recognizes proximity to major urban centres as a major determinant of where future growth is likely to occur and directs growth to occur in, or adjacent to, existing communities located on the west side of Wheatland County such as Cheadle, Carseland, Speargrass and Lyalta.

Based on the vision and directions outlined in the RGMS the concept embodies substantial nodal growth in key growth areas in order to reduce the development footprint and prevent sterilization of prime agricultural lands. However, the County will also continue to support country residential housing in select Hamlets notwithstanding that higher density for rural communities based on conservation subdivision design principles will be supported.

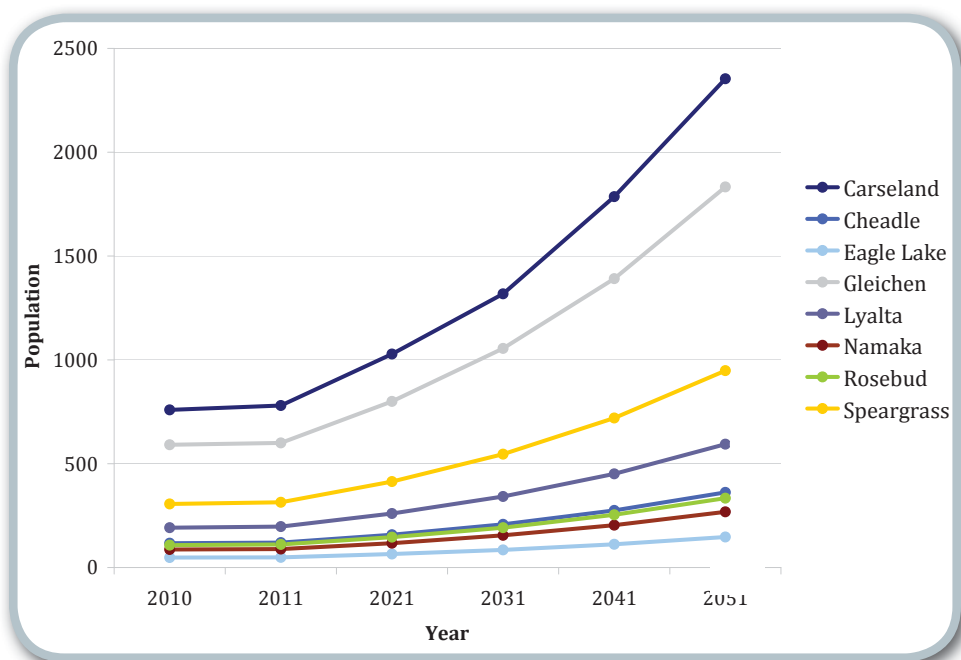
The following provides a definition for each land use category identified in the future growth concept. Refer to **Appendix B, Map 10** to review the growth concept map.



Growth Nodes

Represent areas which have been designated as the focus for investment for future development. These areas are strategically located in close proximity to major transportation corridors, have the infrastructure base to support future population growth, and/or have historically been a focal point for development activity. *Population growth in these areas is projected at 2.8% per year and includes the communities of Carseland, Speargrass, Cheadle, Eagle Lake area, Namaka, Lyalta, Rosebud, and Gleichen.*

Figure 4 - Population Projections for Future Growth Nodes



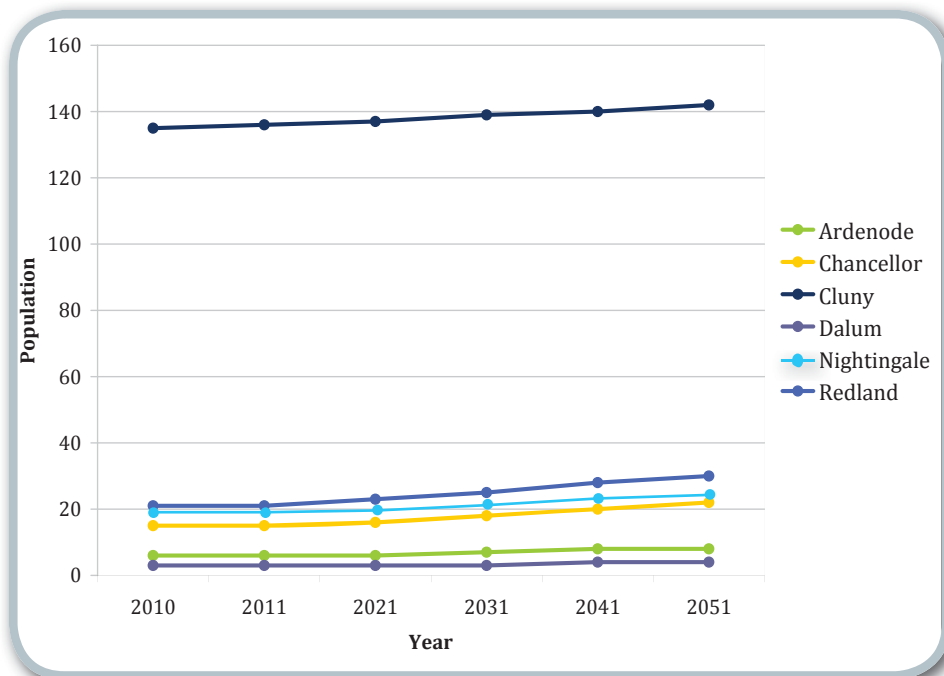
Rural Community Nodes

Represent areas where existing country residential development will be maintained. However, conservation design principles will be required in new country residential subdivision proposals to ensure a smaller development footprint. These areas will not be the focus of investment for future development; however, existing servicing levels will be maintained. *Population growth in these areas is projected at 1% per year and includes Dalum, Chancellor, Cluny, Redland, Nightingale, and Ardenode.*

Potential Intermunicipal Areas

Ensuring vibrant communities that are able to grow and thrive is a key component of the RGMS. This goal is not only important for Hamlets and subdivisions in the County but also for Towns and villages located within or surrounding the County. To ensure mutually beneficial land uses occur at the borders of neighbouring municipalities, future discussions regarding Intermunicipal planning are required. *Potential intermunicipal planning areas are identified for the Town of Strathmore, and Villages of Hussar, Rockyford and Standard.*

Figure 5 - Population Projections for Rural Community Nodes



An Intermunicipal Development Plan (IDP) is a broad policy document endorsed by two or more municipalities that addresses future land use in a defined area; physical, social or economic development; and administration and review of the plan.

Potential Business Industrial/Commercial Corridor

Represent areas that are strategically located along major transportation corridors and radiate from existing similar or supporting land uses. *These areas will be tied to communities planned to be the focus of investment for future development (e.g., West of Carseland), will act as an appropriate transition/buffer from adjacent municipalities and First Nation Reserves which are proposing similar land uses (e.g., south of Gleichen and Cluny), or will serve as a natural area for expansion from similar land uses.*



4.3. DIRECTIONS FOR GROWTH – PRINCIPLES AND POLICY

Principle is defined as fundamental norms, rules, or values that represent what is desirable and positive for a community, and help it in determining the rightfulness or wrongfulness of its actions.

The principles, goals and supporting policy provided in this section were developed by integrating various municipal background reports, best practice research, and consultations with local residents, Wheatland County Council and Administration. Consideration was also given to direction coming from provincial and regional plans.

Theme areas are based on the themes used to organize and evaluate each of the communities for future growth as shown in Section 4.1. Prior to identifying land use goals and policy, it is important to outline overarching Principles which set the tone and encapsulate the most important aspects regarding growth management in Wheatland County. Principles include:

1. Promote development where infrastructure exists and where future growth is planned.
2. Use conservation subdivision design in new country residential development proposals to ensure a smaller development footprint.
3. Direct country residential development to lands that have marginal agricultural value.
4. Encourage clustered, higher-density, multi-lot development in strategic areas, such as where future growth is planned.
5. Support agricultural land conservation and limit the fragmentation of productive agricultural land.
6. Preserve the natural landscape whenever possible.
7. Promote water conservation and reuse whenever possible.
8. Ensure new developments address potential conflicts with existing agricultural and confined feeding operations.
9. Encourage “green infrastructure” in residential and non-residential development proposals for wastewater and stormwater treatment and reuse.
10. Encourage economic development in strategic areas such as the West Highway 1 industrial corridor.
11. Ensure an Area Structure Plan (ASP) is prepared for developments greater than three (3) lots or where subdivision of land will result in greater than three (3) lots per quarter section. The bylaw should meet ASP requirements as identified in the Municipal Government Act (MGA). Moreover, the ASPs should describe for the plan area:
 - Stormwater management practices;
 - Water conservation practices;
 - Historical resources and natural areas (e.g., environmentally sensitive areas, habitats suitable for species-at-risk, natural water features);
 - Agricultural soil suitability and current productive uses of the land; and,
 - Any other information required by the approving authority to properly evaluate a development proposal.

THEME: AGRICULTURE

Overview

Existing Hamlets and non-urban residences will continue to be the underlying fabric of Wheatland County's agricultural heritage. Working farms and supporting industries are vital to the social and economic integrity of the County and make a fundamental contribution to residents' quality of life. Wheatland County's Municipal Development Plan identifies the following philosophy related to agriculture:

- *The County believes that the agricultural industry is the backbone of the County.*
- *The County recognizes the need for land for agricultural support services and secondary agricultural use.*
- *The County recognizes the need for diversification in the agricultural industry to buffer against fluctuating industry productivity.*
- *The County feels that the protection of land for agricultural practices and related uses will always remain a major priority.*
- *The County believes that the land is a finite resource and that all applications will consider the land and the environment with extremely high regard.*

To help achieve the statements set out in the County's philosophy, soils that have the potential for high agricultural productivity are recognized in the RGMS as a finite non-renewable resource. Key to the protection of these viable agricultural lands is a balanced approach to growth. Agricultural activities need to be encouraged throughout the County through many means including discouraging traditional country residential development, and concentrating growth in communities and along recognized transportation corridors. However, the first-parcel-out policy will continue to be supported in rural areas, as farmers and ranchers should retain the ability to manage their properties.

Goal 1

Protect productive agricultural land from development

Supporting Policy

1. Zoning for agricultural uses shall be encouraged.
2. The amount of land removed from agricultural use shall be limited.
3. Fragmentation of productive agricultural land shall be limited.
4. Prime agricultural lands shall be maintained for only those extensive agricultural pursuits requiring high soil quality. This will be done by restricting uses and increasing the typical minimum parcel size to a quarter section.
5. Preservation of large tracts (minimum size quarter section) of productive



agricultural land shall be considered and use shall be limited to agriculture, except in areas where:

- a. Parcels are fragmented by transportation corridors or major streams;
- b. Small-holdings intensive agriculture is desirable and planned land use;
- c. Business agriculture and other appropriate cluster developments are being promoted;
- d. Appropriate conditions for non-agricultural land uses with no impact on production agriculture have been identified; and
- e. Urban growth boundaries have been identified.

Goal 2

Support Agricultural Policy as noted in the Municipal Development Plan

Supporting Policy

County shall,

1. Protect the right to farm philosophy.
2. Allow for greater input from affected parties when applications are considered by utilizing the public hearing process on subdivision and development applications.
3. Support the first-parcel-out policy in rural areas, as farmers and ranchers should retain the ability to manage their properties.
4. Account for environment and state of land in the consideration of the application.
5. Encourage agricultural activities throughout the County by discouraging traditional country residential development, and concentrating growth in complete communities and along recognized transportation corridors.

Goal 3

Avoid conflict between land uses

Supporting Policy

1. The development of new or expansion of existing CFOs shall be limited near Carseland, Speargrass, Cheadle, Lyalta, Eagle Lake, Rosebud, Namaka and Gleichen (as these communities have been identified as future growth nodes within the County).
2. New developments must address potential conflicts with existing agricultural and confined feeding operations. This will be achieved by designing subdivisions in such a manner that offsite impacts from agricultural pursuits, such as noise, dust and odour are minimized.
3. Rural lands shall accommodate those agricultural pursuits not requiring prime agricultural land and with minimal potential conflict with residential uses.
4. Conflicting land uses shall be separated by transitional uses.
5. Non-agricultural development shall be placed in areas where it will not constrain agricultural activities. Agricultural land shall be conserved by concentrating all other forms of development in identified areas and encouraging the donation of agricultural land to land trusts. To sustain the natural infrastructure required for agricultural activities, the County must:
 - a. Protect significant environmental features including water courses, water bodies and, Environmentally Sensitive Areas.
 - b. Allow for development rights to be transferred from productive lands for compensation to

lands identified as growth nodes through the transfer of development credits (TDC).

- c. Adopt supportive community planning policies such as support for transfer development credits and acceptance of conservation easements.

Goal 4

Allow First Parcel Out

Supporting Policy

1. More favorable consideration shall be given to subdivision of first parcel out of an existing farmstead than a bare quarter.
2. Greater flexibility should be provided in allowing for parcel sizes of between 1.2 hectares (3 acres) and 16.2 hectares (40 acres) to encourage continuation of farming operations.
3. The creation of a fourth parcel shall not be allowed unless the area is suited for a multi-lot subdivision and an Area Structure Plan is prepared and approved prior to consideration of further subdivision.
4. The County does not encourage an increase in population in primarily agricultural areas that may result in conflict with agricultural operations. For example, providing a second temporary residence could in some instances provide a viable alternative to subdivision and in no circumstances be considered as a first step to justifying subdivision of a quarter.
5. Applications for a first parcel out shall be strongly considered for an existing farmstead. Notwithstanding County policies regarding multi-lot subdivisions, no further subdivision should be permitted.
6. That subdivision of a bare quarter section shall be discouraged particularly in areas of the County where farmland has not already been fragmented through subdivision. If the owner wishes to apply for subdivision approval, the application shall pay special regard to what impact the subdivision will have on existing and future agricultural operations. In addition to the following criteria that must be met, including but not necessarily limited to, whether the proposed subdivision:
 - a. is on a parcel that is already fragmented;
 - b. has a proven groundwater yield and soil conditions that are adequate for sewage disposal;
 - c. has year-round access via a gravel or paved road; and
 - d. can be easily serviced by power, natural gas, and telephone.
7. A quarter section shall be regarded as the basic agricultural unit. Discouraging fragmentation would conserve the land in larger units suitable for extensive agricultural operations.

First Parcel Out is defined as the provision for the owner of an unsubdivided quarter section to create title to a single residential acreage subject to conditional subdivision approval issued by the subdivision approving authority, that being the Municipal Planning Commission.



8. In areas close to urban centres and along major highway corridors, discretion shall be used to allow for more intensive specialized agricultural uses on smaller parcels (small holdings) provided there is a level of comfort with the approving authority that these do not just become a country residential parcel.

THEME: NATURAL ENVIRONMENT

Overview

Natural areas are an integral part of Wheatland County as they provide habitat for species-at-risk, aid in the regulation of the water cycle to provide surface and groundwater for drinking and agricultural purposes, and assist in the formation and stabilization of soils. Natural areas and Environmentally Sensitive lands include, but are not limited to: water bodies, including rivers, lakes, wetlands, their riparian areas; major wildlife corridors; areas designated by the province as environmentally significant; Provincial Parks, recreation areas, and other protected areas; and municipal and Environmental Reserve lands.

Goal 1

Protect and Manage Natural Areas and Environmentally Sensitive Lands

Supporting Policy

1. Emphasis shall be placed on the conservation of natural terrain, drainage and vegetation in development proposals.
2. Natural areas, drainage courses, stormwater management facilities, and rights of ways shall be incorporated as components of linked open space systems.
3. Focus shall be placed on environmentally sensitive development and the provision of open spaces. These open spaces include; natural parks and trails with vegetative buffers.
4. Implementation of conservation easements, Municipal Reserve and Environmental Reserves shall be encouraged.
5. Areas of natural beauty and environmental significance shall be conserved.
6. A minimum of 30 metres shall be required for setbacks adjacent to natural water features.
7. Wildlife corridors or habitat linkages between adjacent quarter sections shall be conserved wherever possible in order to allow for the free flow of wildlife.
8. The Municipal Reserve (MR) dedication should be taken to the fullest extent whenever possible and directed to areas identified as habitat linkages, habitat patches and riparian habitat areas beyond the required setback distance from lands identified as Environmental Reserve (ER).
9. Other tools, such as conservation easements or ER easements may be considered where maximum required MR dedication and voluntary MR over dedication may not be enough to protect or provide necessary habitat linkages and/or where increased protection of water bodies may be required (i.e., large streams, lakes).



10. All development shall adhere to federal and provincial regulations including provincial and municipal policies and regulations concerning wetlands.
11. All new development shall:
 - a. Minimize or avoid the clearing of natural vegetation, particularly in floodplains; and,
 - b. Minimize or avoid watercourse and wetland disturbance particularly near environmentally significant areas or groundwater recharge/discharge areas.

Goal 2

Provide land for recreational uses

Supporting Policy

1. An appropriate level of year round soft infrastructure shall exist in Hamlets designated as future growth nodes.
2. New subdivisions shall allow for direct access to trails and natural areas, as well as amenities and constructed water features.

THEME: TRANSPORTATION & INFRASTRUCTURE

Overview

Transportation involves the movement of goods and people from one place to another. In Wheatland County, transportation routes, both local and regional, allow for the movement of raw materials, provides goods to customers, enhances the standard of living, and allows for easy access during emergencies. Ultimately, developing and maintaining an efficient and effective transportation system will be a critical component that is required to support the RGMS. As well, ensuring appropriately sized and strategically placed water and wastewater infrastructure will be mandatory for all future development. And finally, ensuring appropriate infrastructure that is sustainable, utilizes “green” technology and meets the needs of residents is also a key component of the RGMS.

Goal 1

Standards for Development

Supporting Policy

1. The developer shall pay all levies and upfront development costs.
2. Internal road access shall be provided to each of the existing and proposed lots that are part of the subject lands.
3. Development shall meet County Road Standards and only be considered where internal roads allow for primary and emergency access.
4. Access roads shall be designed to avoid crossing wetlands or watercourses wherever possible.
5. All on-site and off-site costs, including offsite levy fees, associated with servicing new developments with roadways, utilities and other infrastructure shall be borne by the developer through development charges, levies or cost contribution agreements in accordance with specific development agreements. The costs associated with servicing shall be determined by the County at the time of subdivision.
6. All costs associated with the extension and connection to the County municipal water and sewer systems shall be borne by the developer.

Green infrastructure is defined as natural systems that capture, cleanse and reduce stormwater runoff using plants, soils and microbes. On the regional scale, green infrastructure consists of the interconnected network of open spaces and natural areas (such as forested areas, floodplains and wetlands) that improve water quality while providing recreational opportunities, wildlife habitat, and air quality.

Goal 2

Stormwater Management

Supporting Policy

1. Stormwater management systems constructed as part of any development shall provide sedimentation and contaminant filtration prior to release to water bodies.
2. Integrated stormwater management practices should be implemented to improve stormwater quality, preserve the natural hydrology of the watershed and to mitigate the negative impacts of development.
3. All development must comply with the provisions included in the Environmental Protection and Enhancement Act, the Water Act, the Public Lands Act and the Alberta Environment's Guidelines for Storm Drainage Systems.

THEME: WATER

Overview

Groundwater and surface water in Wheatland County sustains healthy aquatic ecosystems, human populations, and the economy. As a result, sustainable, long-term yield of ground and surface water is a priority.

Goal 1

Maintain Water Quality and Yield

Supporting Policy

1. Work with federal and provincial government agencies and adjacent municipalities in order to develop a long-term, ground and surface water management plan.
2. All development shall provide water onsite.



THEME: ECONOMIC DEVELOPMENT

Overview

Agriculture, confined feeding operations, and supporting businesses are one of the many economic drivers and employment generators in Wheatland County. Growth management in the County will ensure the appropriate distribution of businesses across the County while ensuring compatible land uses.

Goal 1

Focus economic development near growth nodes

Supporting Policy

1. Economic development shall be encouraged in and near identified growth nodes (refer to Appendix B, Map 10) to concentrate development and maximize economies of scale for servicing and infrastructure.

Goal 2

Provide a good supply of properly located industrial and commercial land within the County to meet the needs of the marketplace

Supporting Policy

1. Adequate inventory of industrial, business industrial and commercial sites of varying lot sizes shall be maintained in order to meet the needs of business and industry.
2. Cooperation with neighbouring municipalities must be promoted for provision of wastewater and water services to new and existing industrial and commercial areas located in intermunicipal planning areas.

Goal 3

Economic Growth and Diversification

Supporting Policy

1. Value-added agricultural industries shall be promoted.
2. Partnerships between government and industry shall be promoted to develop alternative agricultural enterprises, agri-tourism, and tourism.
3. All future commercial and industrial development shall be developed in a manner that is beneficial to the community and does not create undue negative impacts.

THEME: DEVELOPMENT PRESSURE

Overview

Community development pressures are seen mainly in the western portion of Wheatland County due to close proximity with Calgary. As a result, the County must embrace the need to transition from a “bedroom community” to a collection of “complete communities” while promoting nodal, compact, complete development in areas designated as future growth nodes.

Goal 1

Working with Developers

Supporting Policy

The County shall:

1. Be open to novel approaches to environmental solutions as some new technologies can provide significant benefits at minimal or reduced cost.
2. Ensure that bylaws and regulations allow for innovative approaches.
3. Create a regulatory framework that promotes environmental conservation and stewardship.
4. Establish conditions for Environmentally Sensitive Areas (ESAs) and areas where species-at-risk classifications show a ranking of 2 or 3, and ensure that the guidelines for development address ways to protect ecosystem values, for example by restricting timing of construction so that it does not compromise nesting or spawning.
5. Provide incentives for environmental conservation and stewardship. Consider incentives for good developments.
6. Promote the use of native species in landscaping. Use native tree species for boulevard plantings, and native shrubs and herbs for landscaping work.
7. Restore natural tree cover that will promote shading and discourage the growth of some invasive plant species.



THEME: COMMUNITY DEVELOPMENT

Overview

Comprehensive, well planned communities with amenities and appropriate infrastructure are a key success factor for Wheatland County. Presently County residents live on farmsteads, in multi-lot country residential subdivisions, in Hamlets and in some instances, in resort developments. As previously discussed, Smart Growth principles suggest that compact growth at higher densities should be promoted. Whereas over the last five to ten years, much of the new demand for residential development has been accommodated in multi-lot country residential subdivisions, less land consumptive options need to be pursued. Residential growth should be encouraged in existing Hamlets, particularly ones where municipal services exist. Opportunities also need to be pursued for smaller lot residential development in areas immediately around urban centres and along regional or communal water and wastewater lines that can be economically served by piped wastewater and water.

Residential development should be directed away from prime agricultural lands to avoid fragmentation and land use conflicts. Despite public perception that acreage development adds to the County's tax base evidence shows the additional costs of providing municipal services usually exceeds tax revenues generated.

Goal 1

Promote Smart Growth Development

Incorporate smart growth principles into community design. Smart growth principles result in the conservation of natural areas and open space as well as preserving environmentally significant areas. The retention of greenways and the use of green infrastructure in particular, as well as Conservation Subdivision Design techniques foster healthy livable green communities that are sensitive to the environment. Smart growth also supports walkable communities, which in a rural setting means easy access to multi-use and natural trails. Where conflicts arise between the different needs of trail users, separation of trails to serve different functions may be required.

Supporting Policy

1. Multi-lot country residential subdivisions shall be directed to areas near urban centres or in established Hamlets where municipal and community services already exist.
2. The County shall revitalize existing Hamlets, with preference given to designated future growth nodes, through the preparation and adoption of Area Structure Plans and investment in infrastructure to accommodate additional growth.
3. Clustering of country residential subdivisions shall not adversely affect groundwater supplies and wastewater disposal systems.
4. The Land Use Bylaw shall allow for a full range of housing choice with varying lot sizes to encourage more compact and orderly development that is less land-consumptive.

Goal 2

Incorporate conservation subdivision design principles in country residential development

Supporting Policy

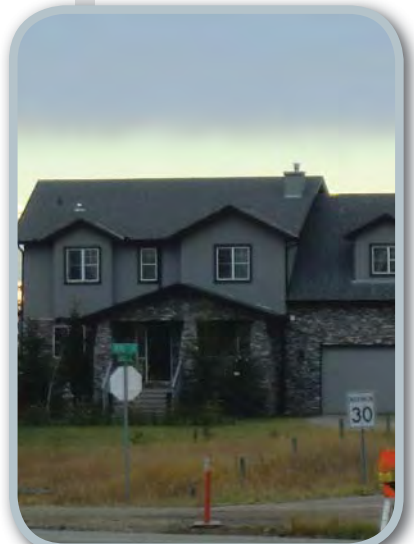
1. Conservation subdivision design principles shall be used in new country residential subdivision proposals to ensure a smaller development footprint while safeguarding Wheatland County's social and ecological features.
2. Compact residential development through the clustering of smaller lots shall be promoted.
3. Green spaces and buffering techniques shall be utilized to minimize visual impact of the residential development from surrounding uses.
4. All new country residential developments shall demonstrate the ability to provide trail and road linkages to adjacent quarter sections, where previous land development, constructed structures (i.e., railway line) or major natural features would not hinder this ability.
5. All new development must connect to existing services where possible.

Goal 3

Strict Subdivision Policies

Supporting Policy

1. The County shall take Environmental Reserve and Municipal Reserve dedications, or cash-in-lieu, to the fullest extent allowed under the Municipal Government Act.
2. No existing country residential parcel shall be permitted to be subdivided into parcels that are smaller than the smallest existing country residential parcel within that development to retain character of the existing development.
3. Where lands proposed to be subdivided are located directly adjacent to an existing country residential development, appropriate transitioning in terms of lot sizes and/or buffering between the existing and new development should be provided to ensure the character of the existing country residential development is not negatively impacted.



Goal 4**Development Planning****Supporting Policy**

1. Progressive development of the County's Hamlets shall be fostered.
2. Clustered, higher-density, multi-lot development in strategic areas shall be promoted and given priority for development.
3. Clustered development of business industrial (e.g., West Highway 1 corridor) and agricultural service industries (e.g., Highway 24, west of Carseland) shall be promoted in designated areas or where compatible land uses already exist.
4. 'Green infrastructure' in growth Hamlets and rural-urban fringe areas shall be promoted.

4.4. IMPLEMENTATION

The following key recommendations will assist in the implementation of the RGMS and guide future development in Wheatland County.

1. Review and update all County specific planning documents (e.g., MDP, LUB) to incorporate the RGMS.
2. Revise 10 year paving and grading program to align with priority areas (i.e., growth nodes) identified in RGMS (refer to Appendix B, Map 10).
3. The definition of what constitutes productive agricultural lands needs to be refined in the Municipal Development Plan, and through partnership with Alberta Agriculture and Rural Development, a better screening process is needed in determining where productive agricultural land areas should be allowed to be subdivided.
4. Foster the use of intensive, potentially viable, small-holding, agricultural enterprises (not including CFOs) on existing fragmented parcels of suitable size such as,
 - a. Areas that are already fragmented by railways, utilities, highways and roads, streams and other biophysical barriers; and
 - b. Areas designated as cluster development near urban areas.
5. Establish an Agricultural Impact Assessment process.
6. Requirement for further municipal and provincial studies by developers/ stakeholder prior to development (Biophysical Impact Assessment, Historical Resources Overview, Environmental Impact Assessment, etc.).
7. Ensure a full awareness of how planning decisions may impact agricultural activity through a formalized process. There should be a requirement for all reports to Council pertaining to projects where agriculture may be affected such as statutory plans, subdivisions, rezoning, and major project, to include a statement on the impact of the proposal on the preservation of agricultural land and agricultural viability.
8. Distribute growth accordingly based on the 2.8% and 1% growth scenarios.
9. Population projections must be updated on a regular basis (annually) to track growth (pressures) throughout the County.
10. The RGMS may be reviewed:
 - a. At the request of Council; or
 - b. Upon amendment of the Municipal Development Plan (MDP) to ensure consistency; or
 - c. After a period of five (5) years to ensure that the policies remain applicable, that no new technology is available that may change the direction of the policies and that the overall environment and market remain the same.



The following table identifies statutory plans which require updating (i.e., amendment) or development in order to conform to the RGMS.

Table 14 - Plan Amendments

<i>Statutory Plan</i>	<i>Action</i>	<i>Timeline</i>
Municipal Development Plan	Update	2011
Cheadle and Namaka Area Structure Plans	Develop	2012
Land Use Bylaw	Update	2013
Gleichen Area Redevelopment Plan	Develop	2014
Agricultural Viability Strategy	Develop	2015
Open Space Master Plan	Develop	2017



APPENDICES



REGIONAL GROWTH MANAGEMENT STRATEGY

APPENDIX A - TERMS OF REFERENCE

REGIONAL GROWTH MANAGEMENT STRATEGY

Request for Proposal (RFP) for a Growth Management Strategy

Issued By: Wheatland County

Date RFP Issued: Wednesday, February 3, 2010

RFP Number: RFP-2010-01

Closing Date: 1:00 P.M., Tuesday, March 2, 2010

Submission Format: 1 Digital Copy, 15 Hard Copies

Proposals Mailed To: Wheatland County

Hwy 1, RR1

Strathmore, AB T1P 1J6

Attention: Jennifer Deak, CAO

All proposals are to be sealed and marked:

“Wheatland County – Growth Management Strategy”

Inquiries concerning the Request for Proposal and the subject of the request can be made to:

Linda Henrickson, Planner

403 934-3321(ph)

403 934-4889 (fax)

linda.Henrickson@wheatlandcounty.ca

Growth Management Strategy (GMS)

The GMS will take a regional approach, focusing in the following areas;

- Identify and provide a profile of the current situation;
- Assess the needs and pressures on development and provide a forward-looking master development plan, referencing existing Statutory Plans;
- Analyze infrastructure management of both current assets and future potential;
- Develop a set of principles and guidelines to evaluate funding options/strategies for development and infrastructure within the identified area based on leading/best practices;

- Identify opportunities, locations, and timelines for growth based on demographics, land requirements and availability, existing gaps and challenges in relation to planning and infrastructure;
- And provide recommendations for short (0-7 years), medium (7-20 years) and long term (20-40 years) strategies to address these findings and align with the Provincial Land Use Framework and applicable Provincial Regional Plan (South Saskatchewan).

C. Proposal Requirements

Proposal Submission requirements	Who	Due
a. Letter of Introduction, including RFP Title, proponent's profile, legal name, address, telephone, fax, email, and contact person, signed by the person(s) authorized to bind the proponent to the proposal and any subsequent negotiations. The letter shall also include the following statement: "The statements made in this proposal are correct and truthful representations. If selected, I/we shall negotiate in good faith with Wheatland County.";		
b. Experience and qualifications of the firm and the particular staff and all team members that will be assigned to this engagement.		
c. Three relevant and recent references providing verification of eligibility and contact information;		
d. A detailed work plan, including the approach, extent of analytical procedures to be used, timelines for completing the project, as per the Project Timelines contained herein, and the expectations of		

the Coordination Team and proposed meetings as necessary. The proposal should also identify and describe any anticipated problems and the firm's approach to resolving these problems including any special assistance required from the County.		
e. Expected contract fees for the development of the GMS, with a breakdown of hourly rates for all team members, sub consultant fees, and disbursement fees (travel, reproduction, telephone, meeting, all out-of-pocket expenses);		
f. Proposed payment schedule for payment of fees to proponent;		
g. Additional work items or levels of service that you have available and recommend outside this Terms of Reference may be listed separately with a brief explanation and an estimated extra cost;		
h. Allowance for engaging sub-consultants, hiring temporary staff and rental of specialized equipment are to be identified and included in the overall budget.		

D. Plan Goals and Objectives

The specific GMS objectives are:

- a. To approach the study from a regional perspective, encompassing the needs, wants and desires of beneficial study/strategy for the whole of Wheatland County;
- b. To undertake an inventory and evaluation of existing infrastructure, transportation routes and water/wastewater/storm management systems, of the region;
- c. To ensure the GMS adheres to and is compliant of all Provincial and Federal regulations that are applicable to the region and is consistent with all existing relevant studies;
- d. To provide an assessment of and projection of future needs considering growth and changing trends, public demands, demographics, increasing standards and the vision of Wheatland County Council;
- e. To use the assessment to develop and incorporate into the Strategy a comprehensive economic development strategy for the County;
- f. To make recommendations for future development including the upgrading of the existing inventory and providing a property tax impact analysis on construction and any ongoing operation costs, for short (0-7 years), medium (7-20 years) and long term (20-40 years) strategies to address these findings;
- g. Provide an analysis for the infrastructure management of both current assets and future assets;
- h. Taking into consideration the potential for the utilization of environmentally friendly alternatives that have a cleaner impact on the environment, and incorporating those recommendations into the GMS.

E. Proponent's Eligibility

It is understood by all interested proponents submitting proposals that in order to qualify, the successful proponent/consulting team must:

- a. Have demonstrated expertise in engineering practices, research and analysis;
- b. Be skilled at interpreting statistical data, using statistical models and/or computer simulation models;
- c. Be aware and familiar of the current issues, practices, and trends in water/wastewater/storm management, economic development and service delivery;

- d. Have a strong understanding of municipal budgeting processes, capital planning and infrastructure;
- e. Have excellent writing and presentation skills, including the ability to prepare written documents and deliver oral presentations that deliver and capture pertinent information;
- f. Have demonstrated success at working with committees and the public gathering pertinent information to contribute to recommendations.

I. Proposal Submission

Proponents are required to provide sixteen (16) copies (1 electronic, 15 hard copies) of their proposal no later than 1:00 P.M. local time, on Tuesday, March 2, 2010.

Public opening of submissions will be conducted at 1:01 P.M. local time on Tuesday, March 2, 2010 at the Wheatland County Administration Office.

Only the names of the Proponents will be read out at this opening with no other details provided.

In addition, please consider the following recommendations:

- 1. Proposals are to be clear and concise using bullets where appropriate;
- 2. Additional work items or levels of service that you have available and recommend outside the Terms of Reference may be listed separately with a brief explanation and estimate of extra costs;
- 3. Allowances for engaging sub-consultants, hiring temporary staff and rental of specialized equipment are to be identified and included in the overall budget.

I. Project Timelines

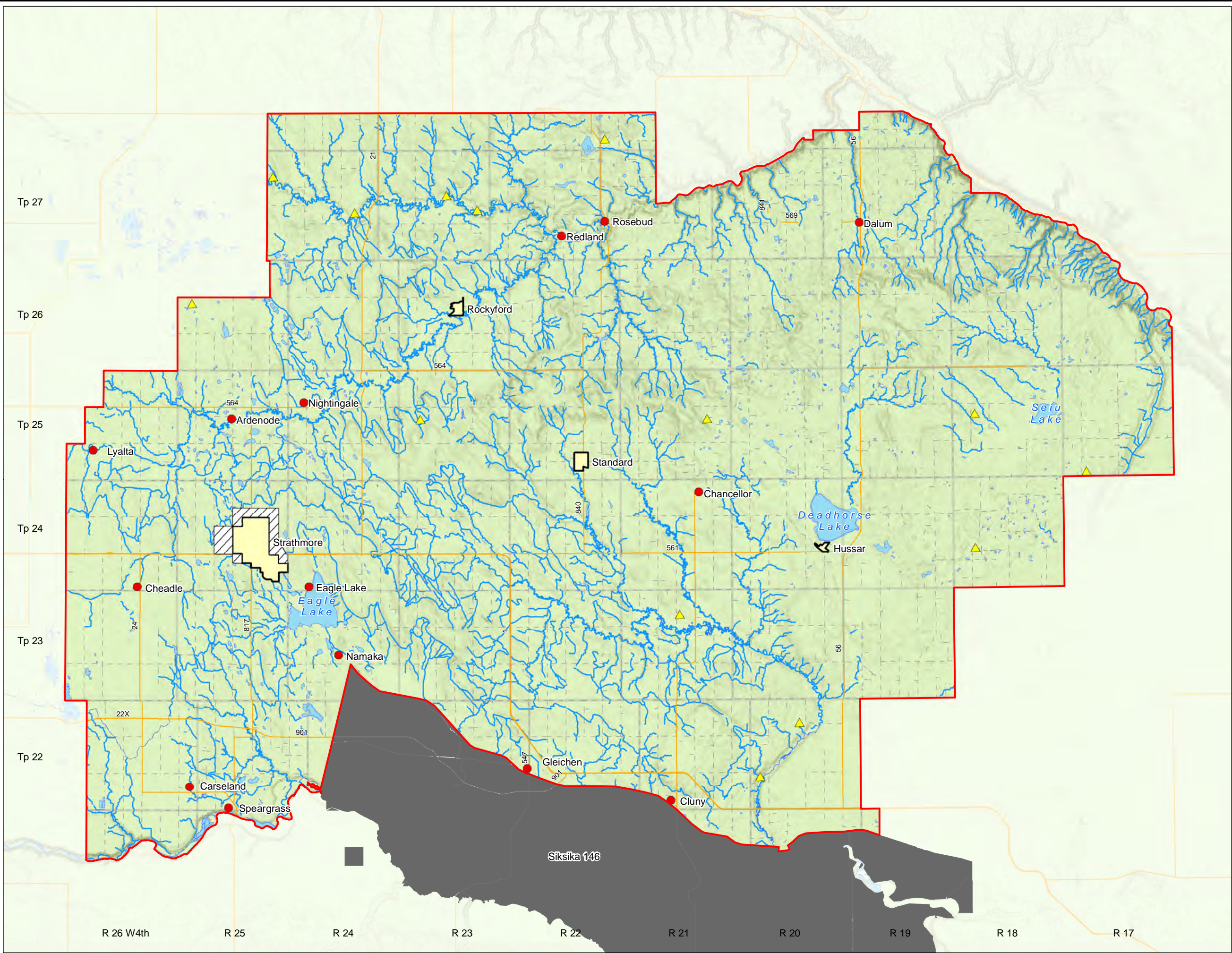
Study/Strategy Development and Completion

Initial Meeting with Coordination Team:	Within 2 weeks
Meeting with Coordination Team:	3 rd Month
First Draft Presented to Coordination Team:	6 th Month
First Draft Presented at Council Meeting:	6 th Month, 2 weeks
Public Consultation:	7 th Month, 2 weeks
'Final' Draft Presented to Coordination Team:	8 th Month, 2 weeks
'Final' Draft Presented at Council Meeting:	9 th Month

APPENDIX B - MAPS

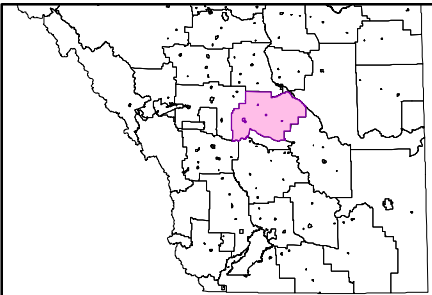
REGIONAL GROWTH MANAGEMENT STRATEGY

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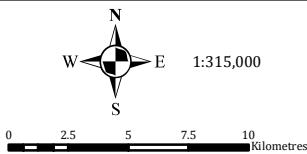


Legend

- Wheatland County
- First Nation Reserve
- Communities in Study Area
- Hutterite Colonies
- Strathmore Annexation Area
- Communities Outside Study Area
- Provincial Paved Highways
- Other Roads
- Water Features (streams / lakes)



Scale - 1:10,000,000



NAD 83, UTM Z12

Client



Produced by



Title

**Map 2 - Wheatland County
Study Area**

Data Source

Altalis, Dillon Consulting,
Geobase, NRCAN, Wheatland County

Project Name

**WHEATLAND COUNTY
REGIONAL GROWTH MANAGEMENT STUDY**

Drawn By

GEG

Reviewed By

JS

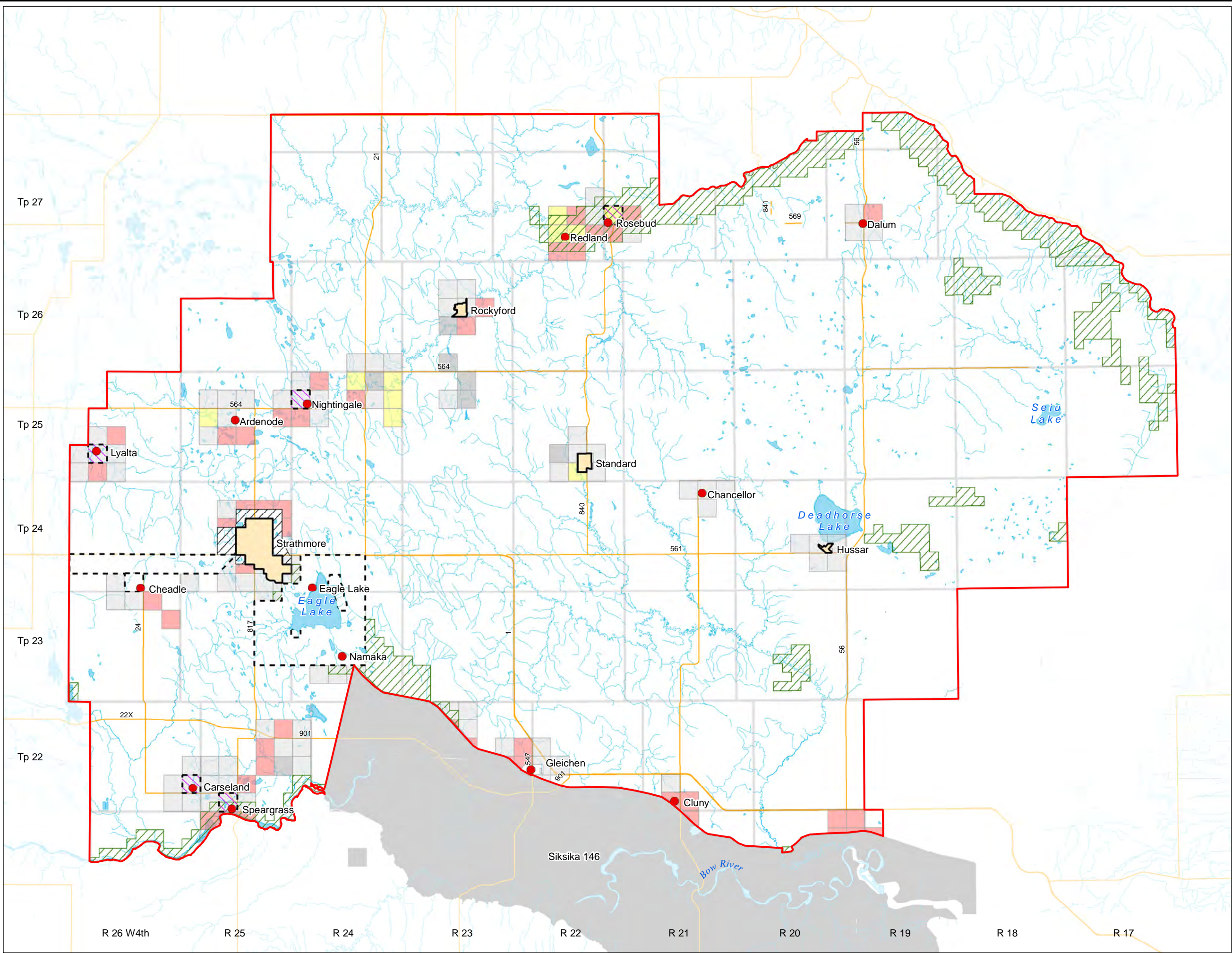
Project Number

10-3367

Date

March 3, 2011

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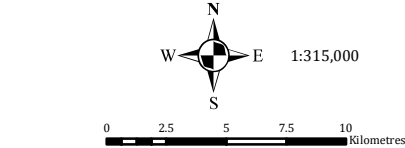
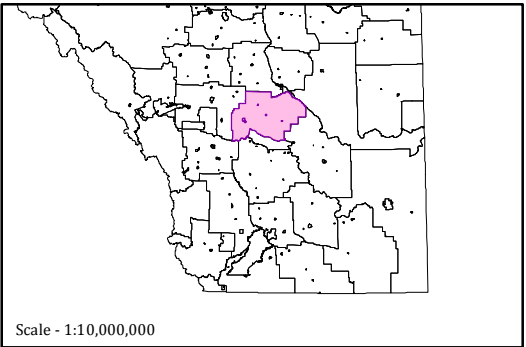


Legend

- Wheatland County
- Communities in Study Area
- Water Feature (streams / lakes)
- Strathmore Annexation Area
- Environmentally Sensitive Areas
- Existing Area Structure Plan
- Existing Area Structure Plan within Hamlet

Habitat Suitability Index Ranking

- 0
- 1
- 2
- 3



NAD 83, UTM Z12

Client



Produced by



Title

**Map 3 - Wheatland County
Important Natural Areas**

Data Source

Altalis, Dillon Consulting, Geobase,
NRCAN, Province of Alberta, Wheatland County

Project Name

**WHEATLAND COUNTY
REGIONAL GROWTH MANAGEMENT STUDY**

Drawn By

GEG

Reviewed By

JS

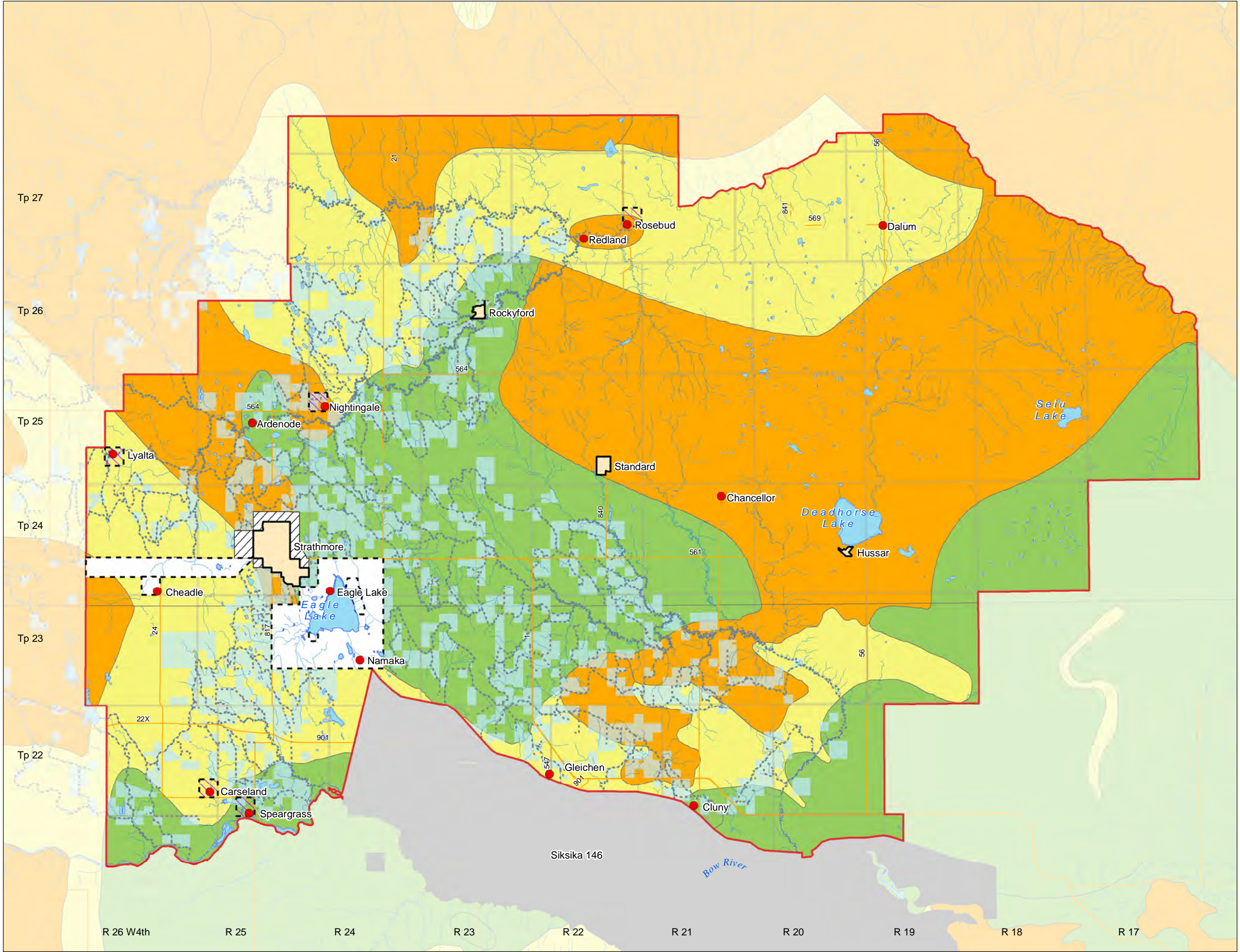
Project Number

10-3367

Date

March 3, 2011

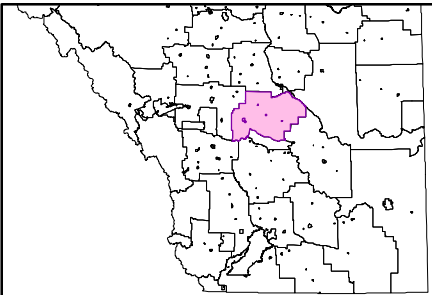
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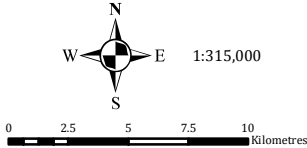
Legend

- Wheatland County
 - Communities in Study Area
 - Strathmore Annexation Area
 - Existing Area Structure Plan
 - Existing Area Structure Plan within Hamlet
 - Provincial Paved Highways
 - Water Feature (streams / lakes)
 - WID Irrigation Network
 - WID Service Areas
- Groundwater Yield*
- Poor Yield (< 5 igpm)
 - Satisfactory Yield (5 to 25 igpm)
 - Good Yield (> 25 igpm)

*igpm refers to Imperial Galons per Minute.



Scale - 1:10,000,000



NAD 83, UTM Z12

Client



Produced by



Title

**Map 4 - Wheatland County
Water Yield & Distribution**

Data Source

Altalis, Dillon Consulting,
Geobase, NRCAN, Wheatland County

Project Name

**WHEATLAND COUNTY
REGIONAL GROWTH MANAGEMENT STUDY**

Drawn By

GEG

Reviewed By

JS

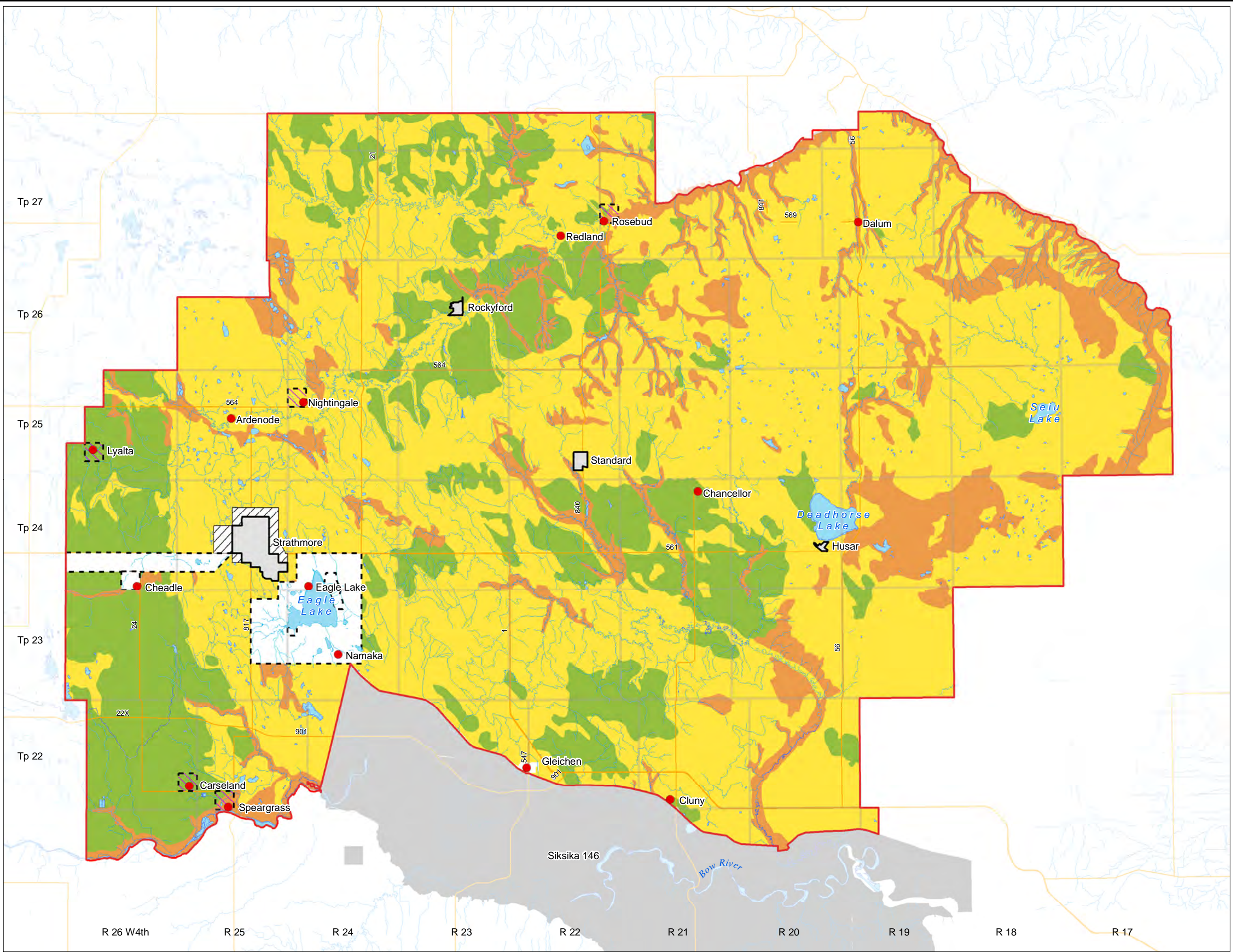
Project Number

10-3367

Date

March 3, 2011

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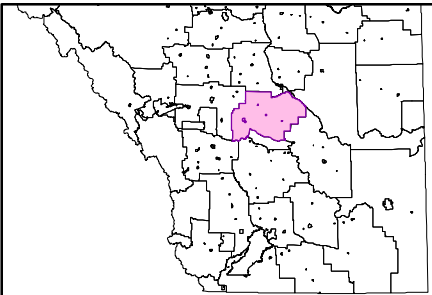


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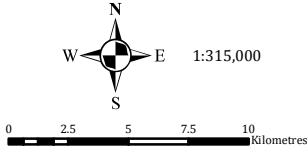
- Wheatland County
- Communities in Study Area
- Existing Area Structure Plan
- Existing Area Structure Plan within Hamlet
- Strathmore Annexation Area
- Water Feature (streams / lakes)

Soil Classes

- Class 1, 2 - No/Moderate Limitations for Crops
- Class 3, 4 - Moderately Severe Limitations
- Class 5, 6, 7 - Severe/Very Severe Limitations



Scale - 1:10,000,000



NAD 83, UTM Z12

Client



Produced by



Title

**Map 5 - Wheatland County
Agricultural Land Capability**

Data Source

Altalis, Dillon Consulting, Geobase, Geogratis
NRCAN, Province of Alberta, Wheatland County

Project Name

**WHEATLAND COUNTY
REGIONAL GROWTH MANAGEMENT STUDY**

Drawn By

GEG

Reviewed By

JS

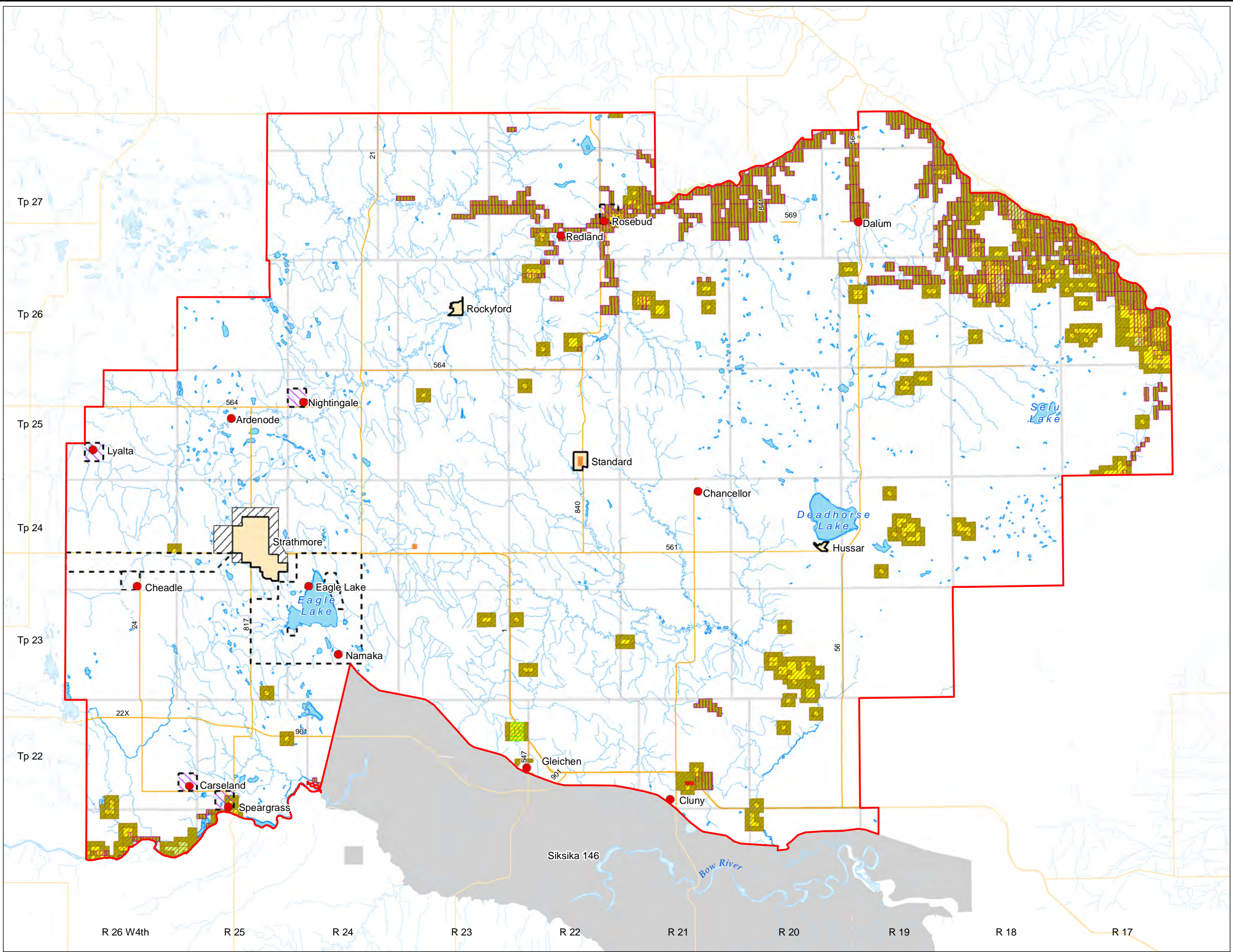
Project Number

10-3367

Date

March 3, 2011

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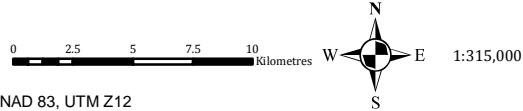
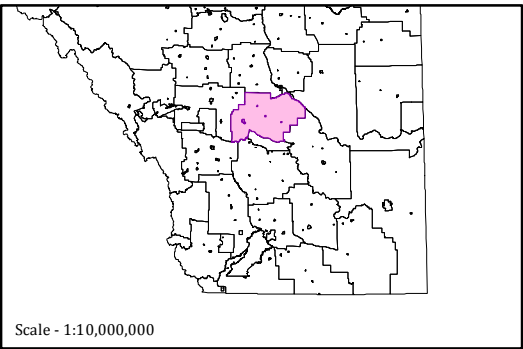
- Wheatland County
- Communities in Study Area
- Existing Area Structure Plan
- Existing Area Structure Plan within Hamlet
- Strathmore Annexation Area
- Water Feature (streams / lakes)

Historical Resource Category

- Archaeological
- Cultural
- Historic Period
- Palaeontological

Historical Resource Values

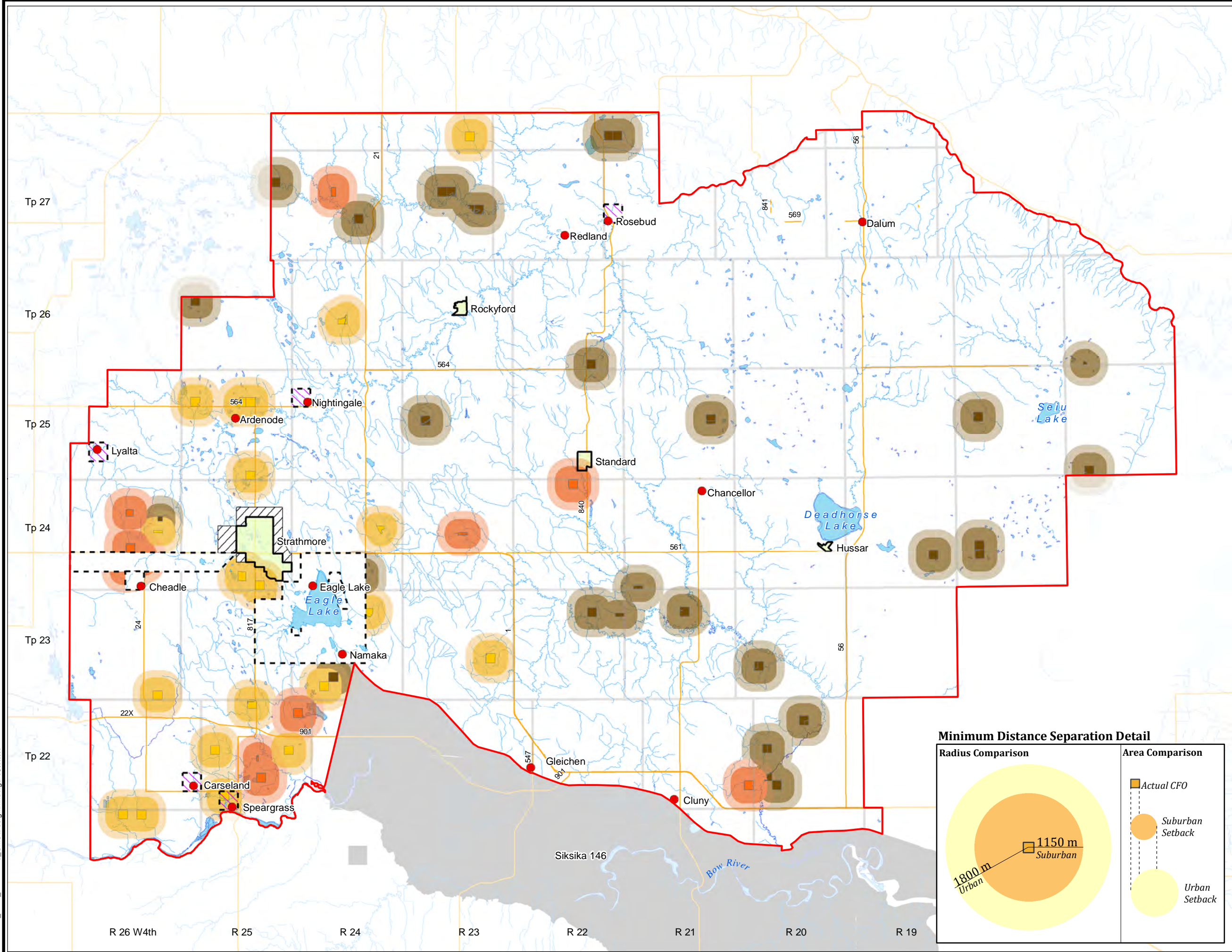
- Provincial Historic Resource
- Registered Historic Resource
- Historic Resource That Will Likely Require Avoidance
- Historic Resource That May Require Avoidance
- Believed to Contain a Historic Resource



NAD 83, UTM Z12	Produced by

Title	
Map 6 - Wheatland County Archaeological & Historical Resources	
Data Source	
Altalis, Dillon Consulting, Geobase, NRCAN, Province of Alberta, Wheatland County	
Project Name	
WHEATLAND COUNTY REGIONAL GROWTH MANAGEMENT STUDY	
Drawn By	Reviewed By
GEG	JS
Project Number	Date
10-3367	March 3, 2011

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Legend

- Wheatland County
- Communities in Study Area
- Existing Area Structure Plan
- Existing Area Structure Plan within Hamlet
- Strathmore Annexation Area
- Water Feature (streams / lakes)

Confined Feeding Operations (CFOs)

- Chicken, Dairy, Horse
- Cattle Feedlot
- Hog

Minimum Suburban Distance Separation

- Chicken, Dairy, Horse (1200 m)
- Cattle Feedlot (1150 m)
- Hog (1150 m)

Minimum Urban Distance Separation

- Chicken, Dairy, Horse (1900 m)
- Cattle Feedlot (1800 m)
- Hog (1850 m)

Scale - 1:10,000,000

0 2.5 5 7.5 10 Kilometres

1:315,000

NAD 83, UTM Z12

Client

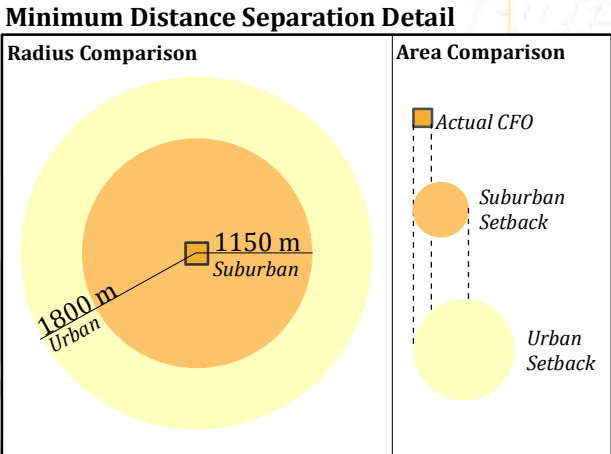
Produced by

Title **Map 7 - Wheatland County Confined Feeding Operations**

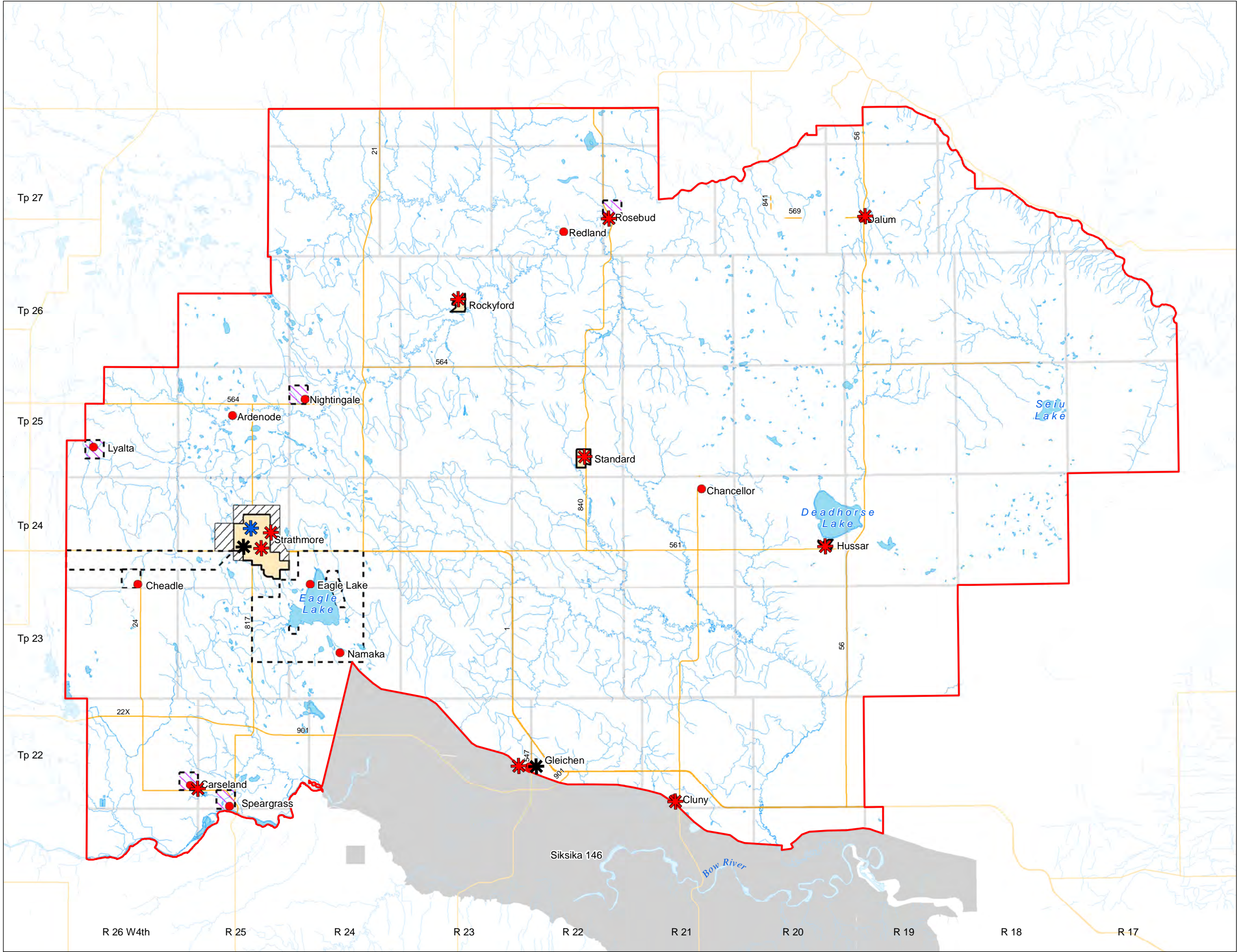
Data Source Altalis, Dillon Consulting, Geobase, NRCAN, Province of Alberta, Wheatland County

Project Name **WHEATLAND COUNTY REGIONAL GROWTH MANAGEMENT STUDY**

Drawn By GEG	Reviewed By JS
Project Number 10-3367	Date March 3, 2011



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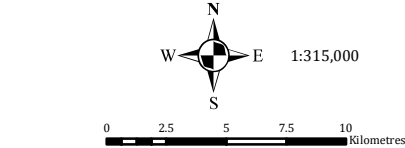
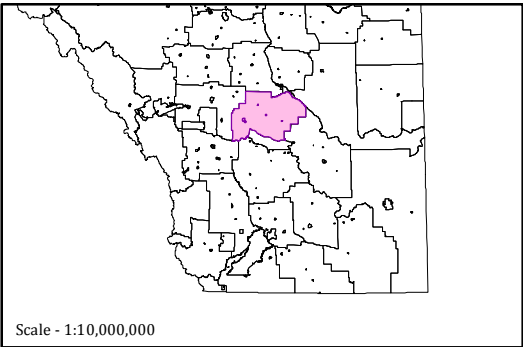


Legend

- Wheatland County
- Communities in Study Area
- Existing Area Structure Plan
- Existing Area Structure Plan within Hamlet
- Strathmore Annexation Area
- Water Feature (streams / lakes)

Emergency Services

- EMS
- RCMP
- Fire Halls



NAD 83, UTM Z12

Client



Produced by



Title

**Map 8 - Wheatland County
Emergency Services**

Data Source

Altalis, Dillon Consulting, Geobase,
NRCAN, Province of Alberta, Wheatland County

Project Name

**WHEATLAND COUNTY
REGIONAL GROWTH MANAGEMENT STUDY**

Drawn By

GEG

Reviewed By

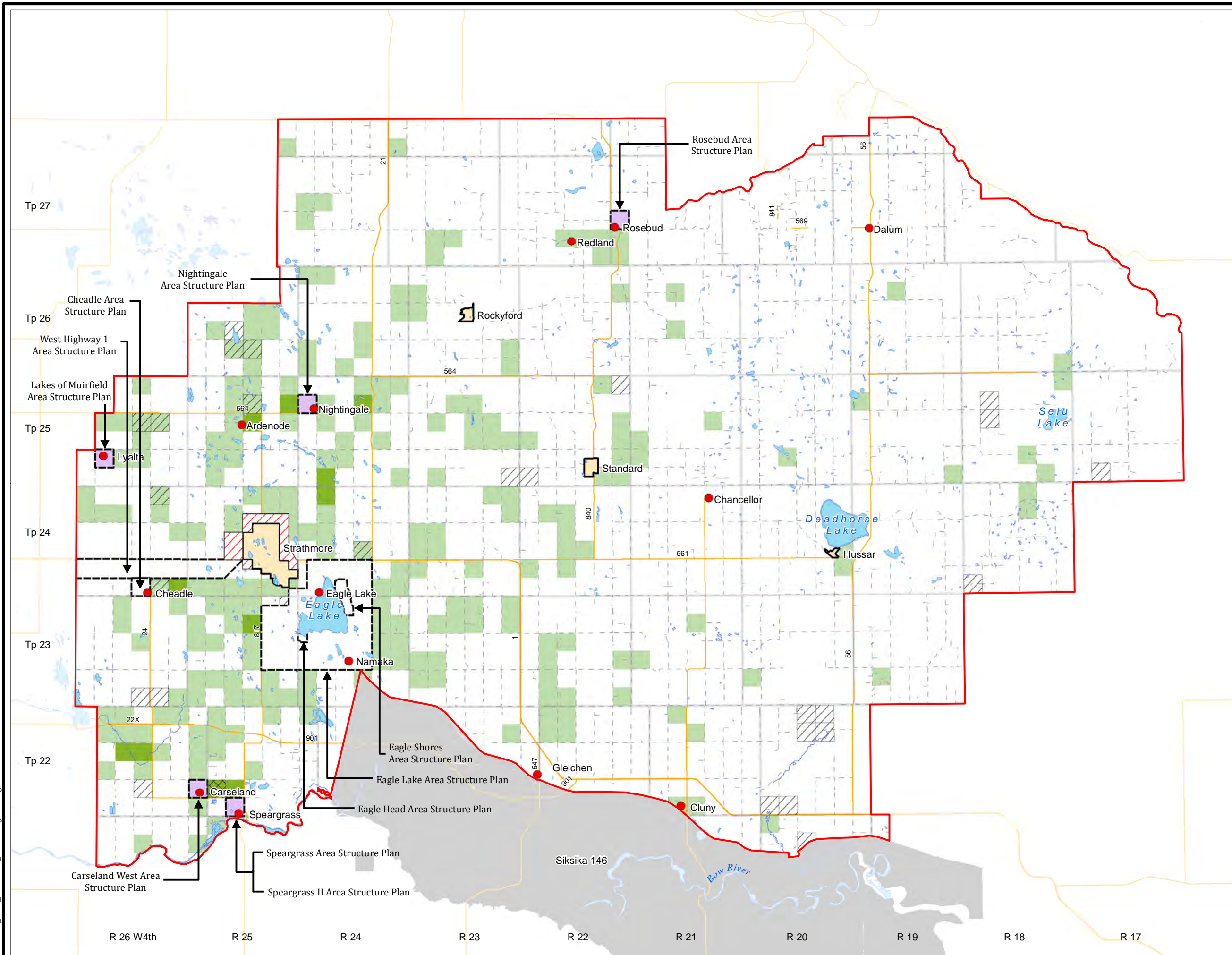
JS

Project Number

10-3367

Date

March 3, 2011



Legend



Wheatland County



Communities in Study Area



Strathmore Annexation Area



Existing Area Structure Plans within Hamlet



Existing Area Structure Plans

Development Permit Applications

2006-2010 Residential



1 - 2



3 - 10



>10

2006-2010 Non-Residential



1

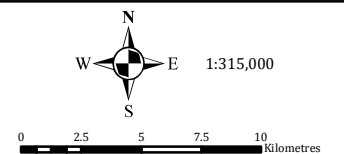
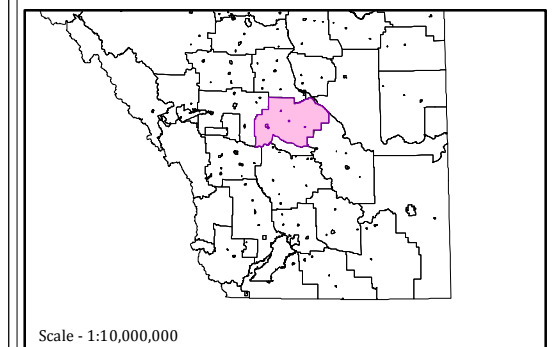


2



3

Existing Area Structure Plans within Hamlets are represented at the quarter section level.



NAD 83, UTM Z12

Client	
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Produced by	
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Title

Map 9 - Wheatland County Development Activity

	Data Source

Altalis, Dillon Consulting, Geobase,
AN, Province of Alberta, Wheatland County

Project Name	
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WHEATLAND COUNTY
REGIONAL GROWTH MANAGEMENT STUDY

Drawn By	
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GEG

Reviewed By

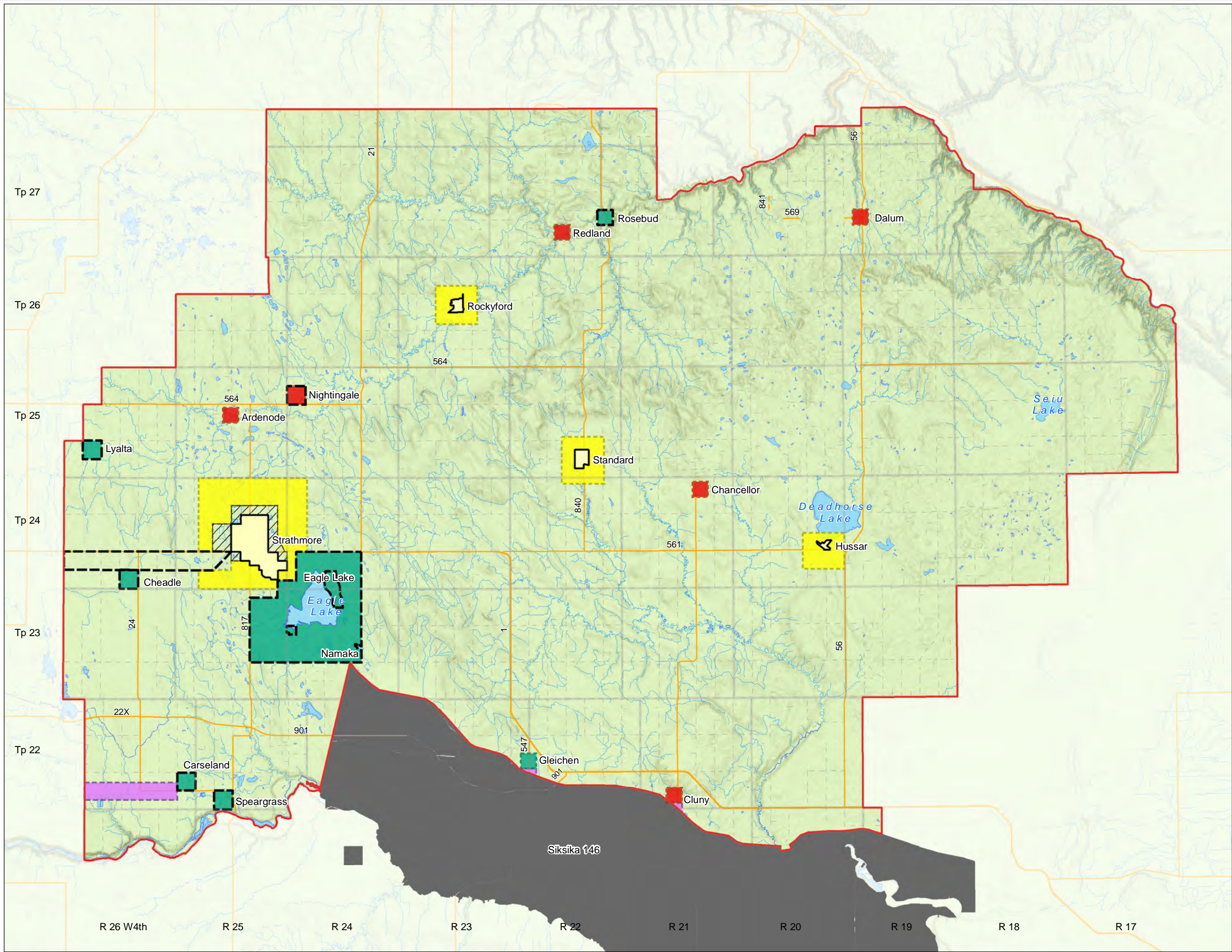
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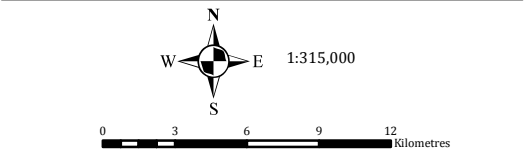
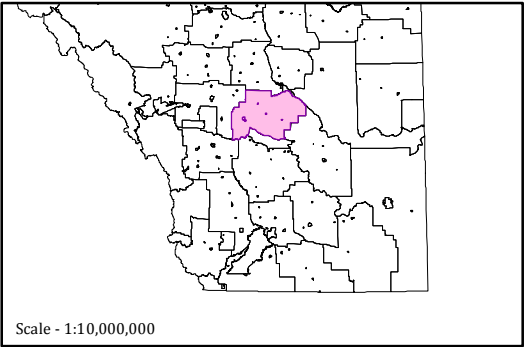
Date

March 3, 2011



Legend

- Wheatland County
- Communities Outside Study Area
- Strathmore Annexation Area
- Existing Area Structure Plan
- First Nation Reserve
- Provincial Paved Highways
- Other Roads
- Water Feature - Stream, River
- Lakes
- Growth Concept**
- Growth Nodes
- Rural Community Nodes
- Potential Intermunicipal Areas
- Potential Business-Industrial / Commercial Corridor Planning Area



NAD 83, UTM Z12 For illustration purposes only

Client 	Produced by
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Title
Map 10 - Wheatland County Growth Areas

Data Source
Altalis, Dillon Consulting, Geobase, NRCAN, Wheatland County

Project Name
WHEATLAND COUNTY REGIONAL GROWTH MANAGEMENT STUDY

Drawn By GEG	Reviewed By JS
Project Number 10-3367	Date March 3, 2011

APPENDIX C - PROJECT METHODOLOGY

REGIONAL GROWTH MANAGEMENT STRATEGY

The Regional Growth Management Strategy (RGMS) was comprised of five (5) parts:

- A: Project Initiation & Information Gathering
- B: Inventory & (Current) Situational Analysis
- C: Evaluation Criteria and Spatial Growth Assessment
- D: Public Participation
- E: Council Submittal

Each part included the following stated tasks and activities which are described below.

A: Project Initiation & Information Gathering

The purpose of this phase of the project was to create an inventory of data using information collected from the County and other sources. Data required for collection was divided into six categories:

- general study area (i.e., aerial photography and land ownership);
- socio-economic and demographics (i.e., population growth rate, employment trends);
- land use (i.e., existing and proposed land use designations and applicable policy);
- services (i.e., storm sewer, sanitary sewer, water servicing infrastructure and capacity, transportation links and hierarchy, proposed and scheduled upgrades);
- environmental constraints (i.e., floodplain/topographic mapping, environmentally sensitive areas); and,
- Meetings with key stakeholders.

B: Inventory & (Current) Situational Analysis

The information gathered during Part A was analyzed and compiled to produce empirical data and analysis maps on the opportunities and constraints facing the County. The Situational Analysis was divided into three components; constructed systems, natural systems and demographics, with each area of analysis supported by GIS based maps.

Constructed Systems

As part of the constructed systems scan, information about the water, wastewater, and stormwater management systems, roads, utilities and solid waste facilities for the County were collected, where available. This was followed by a determination of available capacity to accommodate future development.

Natural Systems

As part of the environmental scan, natural and constructed constraints to development within the County at the community and regional level were identified. This analysis determined the carrying capacity of and development potential of the natural environment.

Constructed environmental opportunities and constraints included; Oil and gas leases and confined feeding operations present in the County. The constructed opportunities and constraints analysis further determined the location and constraints associated with municipal and private water well sites, wastewater facilities, and utility corridors.

The second part of the natural systems involved an evaluation of land-based environmental opportunities and constraints. This included a desktop biophysical assessment that determined agricultural suitability of soil, evaluated water based environmental opportunities and constraints, identified species and habitats, and analyzed terrestrial and aquatic systems at the regional level.

Demographics

The demographics scan determined the social, cultural, and community impacts of development to the County. Analysis of socio-economic data pertaining to employment, housing needs, market characteristics and growth drivers/economic development for the County at a regional level were reviewed.

The demographic analysis also included an analysis for each community to proximity and accessibility to health, safety, education, recreation, cemeteries, major commercial and service centers, and any other community facilities and services.

C: Evaluation Criteria and Preliminary Spatial Growth Assessment

Evaluation criteria for assessing locations for future growth were developed and based on best practices research and included, but not limited to, vision and directions for growth, agriculture, economy and employment, community development, ease of servicing (water, wastewater and roads), current and future fiscal impacts of development, natural environment, and health and safety.

D: Public Participation

Stakeholders and the general public were engaged through a number of means.

Wheatland County Regional Growth Management Process

Wheatland County is working with Utah Landcare Limited (www.ullc.com) to prepare a Regional Growth Management Process (RGMS). The purpose of the RGMS is to plan the future growth, both residential and non-residential, in a sustainable, coordinated, and efficient manner. The first step in the process is to engage our residents.

Please complete the questionnaire and return to the Wheatland County office located at Box #1, 1000, Northview, UT 84054. If you are unable to return the questionnaire, please email it to rgms@wheatlandcountyu.org or contact us at 435-834-4400. If you have any questions please contact Taylor Bick, Project Manager at 435-834-4400 or by email at taylor.bick@wheatlandcountyu.org.

1. In which community do you reside? Please check (X) the correct box(es) for the below:

<input type="checkbox"/> Alton	<input type="checkbox"/> Blanding	<input type="checkbox"/> Cannonville	<input type="checkbox"/> Henrieville
<input type="checkbox"/> Hatch	<input type="checkbox"/> Hightower	<input type="checkbox"/> Hurricane	<input type="checkbox"/> Monticello
<input type="checkbox"/> Panguitch	<input type="checkbox"/> Tropic	<input type="checkbox"/> Vernal	<input type="checkbox"/> Big Water

2. Where do you see the most community growth and development in the future? Please check (X) the correct box(es) for the below:

Issue	1	2	3	4	5
Land development (residential, commercial, industrial, etc.)					
Economic development (business, agriculture, etc.)					
Infrastructure (roads, water, sewer, etc.)					
Environment (natural resources, recreation, etc.)					
Health & Safety (crime, accidents, etc.)					

In April, 2010 a **community questionnaire** was distributed to residents of Wheatland County through their annual tax bill, an insert in the Strathmore Standard, and an advertisement and web link on the County website. The questionnaire was available for completion from April to July 2010. A total of 188 responses (Approx. 3% response rate) were received.

Based on the list of key stakeholders created during the Information Gathering Process (Part A), a **developers meeting** was held in May 2010. The purpose of this meeting was to gather and exchange information with various local developers about current and proposed residential and non-residential development opportunities within the County.

A **public open house** (#1) was held on June 17, 2010 at the County office. To maximize participation, the engagement was scheduled and held at a

venue agreed upon with County staff. The engagement session was advertised through multiple means including; posters at several post offices and community venues, a posting on the County website, and an advertisement in the Strathmore Standard for six (6) weeks leading up to the event.

The purpose of the engagement was to:

- review the results of the inventory and analysis and obtain feedback that would contribute to the development of a vision for growth in the County;
- develop growth management goals; and
- identify public and stakeholder preferred growth management options based on six themes (Agriculture, Economy & Employment, Community Development, Infrastructure, Natural Environment, Health & Safety).

A second (#2) **public open house** occurred on Oct 13, 2010. The purpose of the open house was to review key components of the draft RGMS and provide the community and stakeholders with an opportunity to respond to the growth nodes and related strategies developed for the RGMS.

A third (#3) **public open house** occurred on March 9, 2011. The purpose of the open house was to present the draft RGMS and answer



questions from residents and stakeholders regarding the background research, key concepts and proposed guidelines.

E: Council Submittal

Once completed, the RGMS was submitted to Council for review. Through the review process the document was formally adopted in April, 2011. The adopted RGMS will be implemented through revisions to statutory plans, land use redesignations/rezoning, subdivision applications, and municipal initiatives, such as transportation and infrastructure projects.

APPENDIX D - STUDY LIMITATIONS, CONSTRAINTS AND ASSUMPTIONS

REGIONAL GROWTH MANAGEMENT STRATEGY

The following section outlines limitations, constraints and assumptions used to guide this study. Population, land requirement, and financial assumptions were used to forecast future growth and land demand for select communities, provide direction regarding growth, and assist in the formation of a comprehensive regional growth strategy.

Study Limitations

- The research, analysis and findings of the RGMS rely on historic and 2010 market conditions. It is recognized that population, employment and the demand for land may change due to fluctuating market conditions. These factors may also change due to influential policies, regulations and agreements developed at the regional, provincial, national and international scale or other unforeseen events. However, the RGMS uses the best information available for the analysis and evaluation.
- Any municipal planning documents like the RGMS are subordinate to any provincial legislation and regulation. The South Saskatchewan Regional Plan (SSRP) under the Land Use Framework (LUF) is currently under development, which limits the ability to ensure this RGMS is consistent with the LUF. Once enacted, the SSRP will provide broad policy objectives that offset land use and development with strategies targeting the efficient use of land, using green technologies, encouraging higher density residential redevelopment, supporting development where servicing already exists and planning land uses to reduce the frequency and length of travel by promoting mixed use development. At that time it may be necessary to review the RGMS to ensure consistency.
- Any municipal planning documents like the RGMS are subordinate to any provincial functional transportation plans. The Highway 1 functional study (between Highway 842 and Highway 797 planning study) is currently under development. Once completed, the study will identify the Highway 1 bypass of Strathmore, future freeway corridor requirements east of Calgary, and rationalize the long-term provincial highway network between Calgary and Gleichen. At that time it may be necessary to review the RGMS to ensure consistency.

Study Constraints

- Due to the project scope as defined in the Project Terms of Reference, the Villages of Hussar, Standard, and Rockyford were not assessed. However, the potential for fringe development surrounding these communities was considered in the RGMS.

Overall Study Assumptions

- Information regarding existing and future planned growth was provided by the County and is up to date and accurate to the best of our knowledge.
- Commercial land need forecasts are based on a 25% building to lot area coverage factor. These forecasts are considered to be in line with existing national development trends.
- Industrial land need forecasts are based on historical industrial land absorption in Wheatland County.
- Per Capita Commercial Space and Industrial land need estimates used for growth forecasting purposes are based on a combination of professional experience and current conditions. A long-term gross land target of 22.0 square feet built commercial space per capita, and 162.0 square feet bare industrial land is considered an appropriate direction for growth.
- Future growth and development in the County needs to be guided by an updated Municipal Development Plan (MDP). The RGMS is intended to define the future growth pattern in the County, which in turn is expected to form the foundation for an updated MDP. It is assumed

that aspects of the current MDP remain relevant and these aspects were incorporated into the RGMS's analysis where appropriate.

- Growth around municipalities internal to the County (e.g., Town of Strathmore, Villages of Hussar, Rockyford and Standard) will need to be discussed with them, and coordinated within Intermunicipal Development Plans where required.
- Accurate and updated population numbers at a community and regional level were not available. Population numbers for 2010 were determined through desktop housing counts and using a people per dwelling unit factor of 3.0.
- Identification of natural considerations is a preliminary exercise and should be further validated through field analysis prior to development. This should include the following actions (refer to Section 4.0 for more information about natural considerations):
 - Further classification of all water features will need to be completed in the field to determine the setback restrictions and regulations applicable to each;
 - Detailed Fish and Wildlife Management Information System (FWMIS) records will need to be queried; a wildlife habitat assessment will need to be performed, particularly in areas determined to be highly suitable for species-at-risk and with previous FWMIS observations, to determine presence/absence of species-at-risk;
 - For each community, either an environmental assessment or environmental overview is recommended to identify potential impacts to the natural features within the county and possible mitigation measures; and
 - Specific assumptions regarding future growth, densities, and other factors that relate to understanding residual land demand are addressed in the RGMS.

APPENDIX E - PLANNING POLICY CONTEXT

REGIONAL GROWTH MANAGEMENT STRATEGY

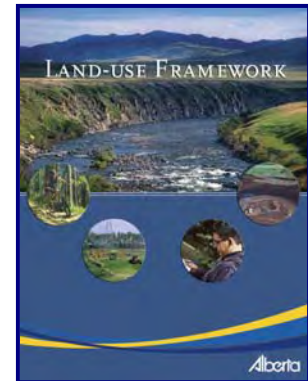
A number of provincial and municipal policy documents were reviewed to gather relevant information to guide this RGMS. Below is a summary of the guiding principles and policies within both a provincial and municipal context.

Provincial Planning Policy

Alberta Land Use Framework

The Alberta Land Use Framework is the keystone policy document to guide all future development in the County. It is a statutory requirement that all future land use documents are consistent with the Land Use Framework. Therefore, the RGMS must be consistent with the direction provided by the Land Use Framework and have regard for the Efficient Use of Land policy which contemplates:

- **Using Land Efficiently:** minimize the amount of land consumed for urban uses and specifically, minimize greenfield development;
- **Using Green Technologies:** using technology in all new development which will reduce the impact of the development on the natural environment and systems;
- **Encouraging Higher Density Residential Redevelopment:** where there is the opportunity for redevelopment to occur, this development should be encouraged to be a higher density than the former use of the land;
- **Supporting Development Where Services Already Exist:** development should be prioritized where there is existing, unused capacity available in water, sewer, road, and other infrastructure services; and
- **Planning Land Uses to Reduce the Frequency and Length of Travel through Mixed Use Development:** reduce the provision of transportation services by reducing need by encouraging mixed use development where commercial, residential and industrial land uses are located in close proximity.



Profile of the South Saskatchewan Region

The South Saskatchewan Regional Plan is the policy document that will identify and set resource and environmental management outcomes for air, land, water and biodiversity, and guide future resource decisions while considering social and economic impacts. It will take direction from the Provincial Land Use Framework. While the South Saskatchewan Region's plan (the area which encompasses Wheatland County) is not yet completed at the time of writing this report, the RGMS should have regard for the following direction provided by the terms of reference for this future planning policy document:

- **Set thresholds to manage the cumulative effects of development** at the regional level. This recognizes that a region's airsheds, watersheds and landscapes are not limitless, nor are its economic and social foundations; this will help guide future development in the region.



Provincial Functional Planning Study – Highway 1 Alignment and Network East of Calgary

Alberta Transportation is currently in the process of conducting a planning study east of Calgary between Highway 842 and Highway 797. Completion date is spring 2011. This is a very long-term planning study, but will provide recommendations for staged improvements towards the ultimate highway network to meet future demands. The purpose is to; first, identify the highway bypass of

Strathmore; second, identify future freeway corridors east of Calgary; and third, rationalize the long-term provincial highway network between Calgary and Gleichen.

Municipal Planning Policy

Wheatland County Municipal Development Plan

In Section Three (3.0) of the Municipal Development Plan (MDP), a philosophy toward development is outlined and states:

- “Wheatland County believes that within the County all developments should take into consideration, firstly the suitability of the land itself, and secondly the compatibility with the surrounding existing and future land use and development. These shall be the main considerations, but not the only considerations.”
- “Wheatland County believes that urban centres within the rural environment are extremely important. **A clear directive for new development to first consider a location in or in close proximity to existing urban communities** forming part of Wheatland County and then in proximity to adjacent municipalities is in place” (Municipal Development Plan By-law 2006-01, pages 5 & 6).

Supporting objectives and policies aim to:

- Enhance the land through development and land use, not encumbering or hindering, nor causing cost to others.
- Residential development objectives **encourage developments that will provide or increase servicing to existing Hamlets** and minimize the intrusion of residential development into agricultural lands.
- **Commercial and industrial development policy is to prefer rural and industrial development in designated areas.** The main designated areas at this time are the industrial/commercial area of the Wheatland Highway 1 Area Structure Plan and existing industrially and commercially zoned parcel within the Hamlets.

For a Hamlet to be eligible for grant funding under Alberta Infrastructure and Transportation grant programs, it must meet the following criteria:

- a) Be a designated Hamlet as defined by Municipal Affairs, and consist of a group of 10 or more occupied dwellings, the majority of which are on titled parcels of less than 1850 m² (19,913.89ft²) / 0.185ha (0.56ac), and
- b) have a defined boundary, and a distinct name, and
- c) have the existence of provision for non-residential uses, or
- d) Be on the official list of eligible Hamlets for the Streets Improvement Program, as determined by Alberta Transportation (these are generally urbanized communities that have been previously deemed to be eligible for grant funding).

Eligible Hamlets are not intended to include country residential subdivisions, condominium associations, or private developments; the program is intended to support the construction of lasting public street and transportation improvements within urbanized communities. **The Hamlets currently recognized by Alberta Transportation for the purpose of their grant programs, are Carseland, Cluny, Gleichen and Rosebud.**

Of the Hamlets recognized by the Municipality, the following are recognized as growth centres within the County: Carseland, Cluny, Gleichen, Rosebud, Cheadle, Lyalta, and Namaka. These are Hamlets that have shown a Historic potential for growth and are logical places for growth to continue provided adequate servicing can be achieved. Objectives related to this include (10.02; 2006-10):

- To promote development potential within existing Hamlet boundaries. This will apply to all forms of development, not just residential.
- To promote the implementation or upgrade of servicing within Hamlet boundaries through any development proposals.
- To increase the viability of Hamlets.

Wheatland County Integrated Community Sustainability Plan

The Integrated Community Sustainability Plan (ICSP) outlines a number of goals with related strategies and alignments. As proposed in the plan, the County **“will be a place to live and work where the services and infrastructure are in place in order to encourage balanced, sustainable, growth while also acknowledging the importance of agricultural based industries and a rural way of life”**. Two goals within the ICSP provide guidance to the RGMS:

- Goal C addressed strategic management of future development and states that a specific approach to development is to be created in order to “direct change in a manner that respects local character while **supporting sustainable growth and creating an area which is appropriate for industrial development**”. This RGMS is one of the strategies for achieving this growth and will direct the revision of by-laws and policies and the approval of future development permits, and subdivision applications. The development of future industrial development will be managed by promoting any new industrial commercial applications to develop within the identified lands.
- Goal D addresses the provision of programs and plans that are beneficial to the environment and requires that the **environment is a “key consideration in all aspects of the municipality’s operations and decision making process.”** It requires that the County look for innovative alternatives when planning construction projects, and requires the County to follow recommendations set out in the RGMS, and to use environmentally friendly alternatives and innovative solutions.

Wheatland County Transportation and Infrastructure Master Plans

Wheatland County has developed County Roads (and Paving) Programs that guide the development of new roads and maintenance of existing roads up to 2018.

Town of Strathmore Municipal Development Plan

The Town of Strathmore Municipal Development Plan speaks to the Town/County Mutual Cooperation Development Area and addresses it through the following:

- Identification of an Urban Fringe area which acts as a buffer between certain types of rural uses and urban development which may be incompatible.

Town of Strathmore Growth Management Study

The Strathmore Growth Management Study provides a direction for the Town of Strathmore to sustain future long-term growth by identifying future growth areas outside of the existing Town boundaries. Based on a proposed population of 56,731 by 2058, the Town will require an addition eighteen (18) quarter sections of land; 11.3 residential, 2.6 commercial, 1.1 industrial, and 2.0 other. Seven of the quarter sections are located to the west (proposed future residential and commercial), five to the north (proposed future residential and commercial), four to the east (proposed future residential and commercial), and two to the south (proposed future commercial and industrial) of the existing Town boundary.

- **Town of Strathmore Annexation (April 2010)**

The Town of Strathmore announced the approval of its annexation of 18.5 quarter sections of land. The land which Strathmore sought and received represents an estimated 50 year supply of land to support a population of approximately 50,000 people. This will provide along term supply of residential, commercial and industrial land uses and will allow for expanded and comprehensive municipal infrastructure.

Carseland West Area Structure Plan

The Carseland West Area Structure Plan provides a policy framework to guide planned and orderly expansion of the existing Hamlet using a similar or compatible density and housing type, and is located on the west limit of the Hamlet of Carseland. Proposed population for the ASP area is approximately 1,403 residents (465 units).

Wheatland Industrial Subdivision (Formerly known as Cavendish II Conceptual Scheme)

The purpose of this Conceptual Scheme document is to provide a comprehensive planning framework for future development of the lands located northwest of Cheadle. The 66 acres of land are proposed for industrial and commercial land uses south of Highway 1, adjacent to the Cavendish Phase 1 lands that were approved for similar land uses in September 2006, and enabled through Bylaw 2006-45 / ACP 2006-001 and Bylaw 2006-46 / AR 2006-058. Access to the lands will be provided by a new road connecting Range Road 264 and Boundary Road. The Wheatland Industrial subdivision is located within the West Highway 1 Area Structure Plan.

Cheadle Area Structure Plan

Cheadle Area Structure Plan addresses the current natural and constructed features of the study area, as well as the importance of bordering agricultural land uses, and provides objectives for future development, which include: the establishment of appropriate residential development, while preserving and protecting environmentally sensitive areas; respecting and adhering to existing residential development style while minimizing impact on adjacent land uses; minimizing cost of new services and maximizing the use of existing facilities; encouraging rural development that is site appropriate; providing municipal reserve land that meets recreational needs; properly integrating internal and external road systems; and protecting environmentally sensitive areas.

Eagle Head Area Structure Plan

Eagle Head Area Structure Plan provides a policy framework to guide and evaluate the Country Residential (CR) designation and development proposal within the plan area. The plan area is situated approximately eight (8) kilometres southeast of the Town of Strathmore and encompasses approximately 62 hectares (153 acres) at the southwest of Eagle Lake. The plan area is located within the Eagle Lake ASP area and includes plans for eleven (11) residential units.

Eagle Lake Area Structure Plan

Eagle Lake Area Structure Plan provides a policy framework to guide present landowners and participants in the use or development of the area as a future year-round recreation based settlement. The plan area is situated approximately 4.8 kilometres southeast of the Town of Strathmore and surrounds Eagle Lake. With a total developable area of 1,180 hectares (2,913 acres) the Eagle Lake Direct Control District policy area could hold a maximum of 4,370 residential units and would contain other supportive uses such as, parks, wildlife habitat and golf courses as well as, school and retail commercial sites.

Eagle Shores Area Structure Plan

boundaries of the original Eagle Lakes Area Structure Plan and was adopted by the County and directed an amendment to the original plan. The community is located 3.2km North of Namaka and will receive services from the County. Full build-out of the community is anticipated to be 12,000-15,000 residents at a density of six (6) to eight (8) units per gross acre. Amenities proposed for this site include a village core, school site, and golf course.

Lakes of Muirfield Area Structure Plan

Muirfield Area Structure Plan provides a framework for the development of a golf course and security gated residential community that will adjoin the existing Hamlet of Lyalta. It will be comprised of the following residential uses: approximately 700 dwelling units and an assisted living, multi-family senior's oriented residential cell.

Speargrass Area Structure Plan

Speargrass Area Structure Plan provides a policy framework to guide landowners and developers in the use and development of Speargrass as a year round Recreation Based Settlement. As such, the goals to achieve this include: prioritizing recreational uses above development along the Bow River; adhering to the recreational settlement plan objectives and policies of the MDP; and reclaiming existing gravel mining operations with agricultural value for recreation settlement. It also identifies future residential, recreational, municipal and infrastructure land uses.

Speargrass Area II Structure Plan

Speargrass II Area Structure Plan provides a policy framework to guide landowners and developers in the use and development of Speargrass as a year round Recreation Based Settlement. As such, the goals to achieve this include: prioritizing recreational uses above development along the Bow River; adhering to the recreational settlement plan objectives and policies of the MDP; and reclaiming existing gravel mining operations with agricultural value for recreation settlement. It also identifies future residential, recreational, municipal and infrastructure land uses.

Other Planning Documents

Oxbow Creek Residential Conceptual Scheme, Homesteads at Lyalta Concept Plan, and Thiessen Area Structure Plan, were also reviewed and illustrate future development concepts for communities within or adjacent to Wheatland County. They have not been outlined above but each generally shows small development cells, and information regarding the type and size of development for all potential future development can be reviewed in **Appendix F** (Potential Future Development by Plan). In addition, statutory (e.g., Municipal Development Plan and Land Use Bylaw) and non-statutory (e.g., Growth Strategy) planning documents, where available, from other municipalities and governing bodies (First Nation) were reviewed to ensure complimentary and mutually beneficial land uses occur along bordering municipalities. Bordering municipalities and First Nations include,

- Town of Strathmore & Villages of Hussar, Standard, and Rockyford
- Special Areas
- Town of Drumheller
- Siksika Nation
- County of Newell
- Vulcan County
- M.D. of Foothills
- Kneehill County
- Rocky View County

APPENDIX F - SUPPORTING REGIONAL CONTEXT & PROFILE INFORMATION

REGIONAL GROWTH MANAGEMENT STRATEGY

NATURAL & CONSTRUCTED SYSTEMS

Species at Risk & Environmentally Sensitive Area

The following sources were used to identify species at risk, water features and habitat suitability within the project area:

- *Species at Risk* - The Fish and Wildlife Management Information System (FWMIS) was searched to reveal any previous observations of species-at-risk within or adjacent to each community. The Fish and Wildlife Management Information System (FWMIS) online mapping tool (ASRD 2010b) was used to perform a general search for species-at-risk in the area. Prior to development, detailed FWMIS records will need to be queried; a wildlife habitat assessment will need to be performed prior to development, particularly in areas determined to be highly suitable for species-at-risk and with previous FWMIS observations, to determine presence/absence of species-at-risk. Often these species require specific habitat features (i.e., trees and cliffs) and Alberta Sustainable Resource Development recommends specific setback distances from species-at-risk and their habitats.
- *Water Features* - Water features were identified from the Altalis data source (Altalis 2010); prior to development, further classification of all water features will need to be completed in the field to determine the setback restrictions and regulations applicable to each.
- *Habitat Suitability* - The Habitat Suitability Index (HSI) Model (ASRD 2010a) was used to identify areas of high habitat values for specific species-at-risk. This model identifies areas that may have habitat features associated with species-at-risk, and if the appropriate habitat feature is present there is a high likelihood of that species occurring in that area. However, a highly suitable ranking does not mean that those species will occur in the area, and additional species may also occur in the areas not ranked as highly suitable or suitable. The purpose of this model is to assist in completing pre-development wildlife surveys in a specific area; detailed wildlife habitat assessments should be performed prior to any development.

Detailed Search Results for Species-at-Risk in Wheatland County (*Information presented on Map 3, Appendix B*)

Area	Alberta Township System (ATS)	Score
Rosebud	13-027-22-4	0
	13-027-22-4	3
	13-027-22-4	1
	13-027-22-4	3
	24-027-22-4	0
	24-027-22-4	3
	24-027-22-4	0
	24-027-22-4	0
	18-027-21-4	2
	18-027-21-4	2
	18-027-21-4	0
	18-027-21-4	3
	07-027-21-4	3
	07-027-21-4	3
	07-027-21-4	3
	07-027-21-4	3

AREA	ATS	SCORE
	08-027-21-4	0
	08-027-21-4	0
	08-027-21-4	0
	08-027-21-4	0
	12-027-22-4	3
	12-027-22-4	3
	12-027-22-4	2
	12-027-22-4	3
	17-027-21-4	3
	17-027-21-4	3
	17-027-21-4	3
	17-027-21-4	3
Redland	14-027-22-4	3
	14-027-22-4	3
	14-027-22-4	0
	14-027-22-4	0
	15-027-22-4	2
	15-027-22-4	3
	15-027-22-4	1
	15-027-22-4	3
	10-027-22-4	2
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	03-027-22-4	3
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	11-027-22-4	2
	11-027-22-4	3
	11-027-22-4	3
	02-027-22-4	3
	02-027-22-4	0
	02-027-22-4	0
	02-027-22-4	1
Carseland	06-022-25-4	0
	06-022-25-4	0
	06-022-25-4	0
	06-022-25-4	0
	17-022-25-4	0
	17-022-25-4	0
	17-022-25-4	0
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	08-022-25-4	0
	08-022-25-4	3
	08-022-25-4	0
	08-022-25-4	0

AREA	ATS	SCORE
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	05-022-25-4	1
	05-022-25-4	1
	07-022-25-4	0
	07-022-25-4	0
	07-022-25-4	0
	07-022-25-4	0
	18-022-25-4	0
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Gleichen	13-022-23-4	3
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AREA	ATS	SCORE
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	17-022-22-4	0
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	08-022-23-4	0
	08-022-23-4	0
	08-022-23-4	0
Namaka	16-023-24-4	3
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	08-023-24-4	0
	10-023-24-4	0

AREA	ATS	SCORE
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	10-023-24-4	3
	10-023-24-4	3
Eagle Lake Subdivision	06-024-24-4	0
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	06-024-24-4	0
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AREA	ATS	SCORE
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Speargrass	05-022-25-4	0
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AREA	ATS	SCORE
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	20-025-24-4	3
	19-025-24-4	3
	19-025-24-4	3
	19-025-24-4	3
	19-025-24-4	3
	25-025-25-4	0
	25-025-25-4	0
	25-025-25-4	0
	25-025-25-4	0
	24-025-25-4	3
	24-025-25-4	3
	24-025-25-4	0
	24-025-25-4	1
Ardenode	21-025-25-4	0
	21-025-25-4	0
	21-025-25-4	1
	21-025-25-4	3
	28-025-25-4	0
	28-025-25-4	0
	28-025-25-4	0
	28-025-25-4	0
	27-025-25-4	0
	27-025-25-4	0
	27-025-25-4	0
	27-025-25-4	0
	15-025-25-4	3
	15-025-25-4	3
	15-025-25-4	0
	15-025-25-4	0
	16-025-25-4	3
	16-025-25-4	2
	16-025-25-4	0
	16-025-25-4	3
	17-025-25-4	0
	17-025-25-4	1
	17-025-25-4	0
	17-025-25-4	1
	20-025-25-4	2
	20-025-25-4	1
	20-025-25-4	1
	20-025-25-4	3
	29-025-25-4	0
	29-025-25-4	0
	29-025-25-4	0
	29-025-25-4	0

AREA	ATS	SCORE
	22-028-25-4	0
	22-028-25-4	3
	22-028-25-4	3
	22-028-25-4	3
Cheadle	03-024-26-4	3
	03-024-26-4	3
	03-024-26-4	2
	03-024-26-4	0
	04-024-26-4	0
	04-024-26-4	0
	04-024-26-4	0
	04-024-26-4	1
	33-023-26-4	0
	33-023-26-4	3
	33-023-26-4	0
	33-023-26-4	0
	34-023-26-4	0
	34-023-26-4	3
	34-023-26-4	0
	34-023-26-4	3
	35-023-26-4	3
	25-023-26-4	3
	25-023-26-4	0
	25-023-26-4	0
	02-022-24-4	0
	02-022-24-4	0
	02-022-24-4	0
	02-022-24-4	0
	11-024-26-4	0
	11-024-26-4	1
	11-024-26-4	0
	11-024-26-4	3
	10-024-26-4	0
	10-024-26-4	2
	10-024-26-4	2
	10-024-26-4	2
Lyalta	07-025-26-4	0
	07-025-26-4	0
	07-025-26-4	0
	07-025-26-4	0
	06-025-26-4	0
	06-025-26-4	0
	06-025-26-4	0
	06-025-26-4	0
	05-025-26-4	3
	05-025-26-4	0
	05-025-26-4	3
	05-025-26-4	0

AREA	ATS	SCORE
	04-025-26-4	0
	04-025-26-4	0
	04-025-26-4	0
	04-025-26-4	0
	09-025-26-4	0
	09-025-26-4	0
	09-025-26-4	0
	09-025-26-4	0
	16-025-26-4	3
	16-025-26-4	0
	16-025-26-4	0
	16-025-26-4	0
	17-025-26-4	0
	17-025-26-4	0
	17-025-26-4	0
	17-025-26-4	0
	08-025-26-4	0
	08-025-26-4	0
	08-025-26-4	0
	08-025-26-4	0
	18-025-26-4	0
	18-025-26-4	0
	18-025-26-4	0
	18-025-16-4	0
Cluny	05-022-21-4	3
	05-022-21-4	3
	05-022-21-4	3
	05-022-21-4	0
	08-022-21-4	0
	08-022-21-4	0
	08-022-21-4	0
	08-022-21-4	3
	04-022-21-4	3
	04-022-21-4	3
	04-022-21-4	1
	04-022-21-4	3
	33-021-21-4	3
	33-021-21-4	0
	33-021-21-4	3
	33-021-21-4	3
Standard	02-025-22-4	0
	02-025-22-4	0
	02-025-22-4	0
	02-025-22-4	0
	03-025-22-4	2
	03-025-22-4	1
	03-025-22-4	0
	03-025-22-4	3

AREA	ATS	SCORE
	04-025-22-4	0
	04-025-22-4	0
	04-025-22-4	0
	04-025-22-4	0
	10-025-22-4	0
	10-025-22-4	0
	10-025-22-4	1
	10-025-22-4	0
	09-025-22-4	1
	09-025-22-4	3
	09-025-22-4	0
	09-025-22-4	3
	15-025-22-4	0
	15-025-22-4	0
	15-025-22-4	0
	15-025-22-4	0
	11-025-22-4	0
	11-025-22-4	0
	11-025-22-4	0
	11-025-22-4	0
Chancellor	35-024-21-4	0
	35-024-21-4	0
	35-024-21-4	0
	35-024-21-4	0
	34-024-21-4	0
	34-024-21-4	0
	34-024-21-4	0
	34-024-21-4	0
	26-024-21-4	0
	26-024-21-4	0
	26-024-21-4	0
	26-024-21-4	0
	36-024-21-4	0
	36-024-21-4	0
	36-024-21-4	3
	36-024-21-4	0
Dalum	08-027-19-4	0
	08-027-19-4	3
	08-027-19-4	0
	08-027-19-4	3
	17-027-19-4	0
	17-027-19-4	3
	17-027-19-4	0
	17-027-19-4	3
	16-027-19-4	3
	16-027-19-4	0
	16-027-19-4	3
	16-027-19-4	0

AREA	ATS	SCORE
	09-027-19-4	0
	09-027-19-4	3
	09-027-19-4	0
	09-027-19-4	3
Hussar	14-024-20-4	0
	14-024-20-4	3
	14-024-20-4	0
	14-024-20-4	0
	13-024-20-4	0
	13-024-20-4	0
	12-024-20-4	0
	12-024-20-4	0
	12-024-20-4	0
	12-024-20-4	0
	11-024-20-4	0
	11-024-20-4	0
	11-024-20-4	0
	11-024-20-4	0
	15-024-20-4	0
	15-024-20-4	0
Rockyford	21-026-23-4	0
	21-026-23-4	0
	21-026-23-4	1
	21-026-23-4	1
	28-026-23-4	0
	28-026-23-4	0
	28-026-23-4	0
	28-026-23-4	0
	27-026-23-4	0
	27-026-23-4	0
	27-026-23-4	2
	22-026-23-4	0
	22-026-23-4	0
	22-026-23-4	1
	22-026-23-4	3
	23-026-23-4	3
	23-026-23-4	1
	23-026-23-4	3
	23-026-23-4	3
	15-016-23-4	3
	15-026-23-4	3
	15-026-23-4	3
	15-026-23-4	0
	16-026-23-4	1
	16-026-23-4	3
	16-026-23-4	3
	16-026-23-4	3

Agricultural Land Capability

Agricultural land capability was assessed and classified using Agrasid data source, which is a database that describes the spatial distribution of soils and associated landscapes within the agricultural region of Alberta (Government of Alberta 2010a). Soils were grouped into seven classes; classes 1-4 were considered capable of sustained use for cultivated field crops, classes 2 and 6 for perennial field crops, and class 7 for neither. Specifically, the soils were classified as follows:

- **Class 1:** Soils in this class have no significant limitations in use for crops; they can be managed and cropped without difficulty and are moderately high to high in productivity for a wide range of crops.
- **Class 2:** Soils in this class have moderate limitations which restrict the range of crops or require conservation practices; they can be managed and cropped with little difficulty and are moderately high to high in productivity for a fairly wide range of crops.
- **Class 3:** Soils in this class have moderately severe limitations which restrict the range of crops or require special conservation practices. The limitations are more severe than Class 2 soils and may affect agricultural practices such as timing, choice of crops and method of conservation. Under good management they are fair to moderately high in productivity for a fair range of crops.
- **Class 4:** Soils in this class have severe limitation which restrict the range of crops and/or require special conservation practices. The limitations seriously affect agricultural practices; the soils are low to fair in productivity, but may have high productivity for a specially adapted crop.
- **Class 5:** Soils in this class have very severe limitations which restrict their capability to produce perennial forage crops; improvement practices are feasible, but the limitations are so severe that soils are not capable of use for sustained production of annual field crops. The production of native or tame species may be improved by use of farm machinery, and may include clearing of bush, cultivation, seeding, and fertilizing or water control.
- **Class 6:** Soils in this class are capable only of producing perennial forage crops, and improvement practices are not feasible. Improvement by farm machinery is impractical as soils may not respond to improvement; soils may provide sustained grazing for livestock.
- **Class 7:** Soils in this class have no capability for arable culture or permanent pasture. This includes rock land, non-soil areas and bodies of water.

Archeological and Historical Resources

The following are definitions and additional information as it pertains to Historical, Archaeological, and Paleontological Resources.

A Historic Resource is any work of nature or of humans that is primarily of value for its paleontological, archaeological, prehistoric, historic, cultural, natural, scientific or esthetic interest including, but not limited to, a paleontological, archaeological, prehistoric, historic or natural site, structure or object.

An Archaeological Resource is a work of humans that is primarily of value for its prehistoric, historic, cultural or scientific significance, and is or was buried or partially buried in land in Alberta or submerged beneath the surface of any watercourse or permanent body of water in Alberta, and includes those works of humans or classes of works of humans designated by the regulations as archaeological resources.

A Paleontological Resource is a work of nature consisting of or containing evidence of extinct multicellular beings and includes those works of nature or classes of works of nature designated by the regulations as paleontological resources.

Listing of Historic Resources (Government of Alberta 2010b) is updated twice a year, with a goal to provide industry and development with advance notification of possible historic resource concerns. The *Alberta Historic Resources Act* may require that any proposed activity likely to threaten the integrity of a historic resource be preceded by a Historic Resources Impact Assessment (HRIA), and avoidance of the resource may be required.

Detailed Search Results for Historical Resources in Wheatland County (*Information presented on Map 6, Appendix B*)

Alberta Township System (ATS)	HRV & Category	Historical Resource Value	Category
4-17-24-32-9,10,15	5 a	Believed to contain a Historic Resource	Archaeological
4-17-24-32-16	4 a	Historic Resource that may require avoidance	Archaeological
4-17-24-33-1-5,10-13,15	5 a	Believed to contain a Historic Resource	Archaeological
4-17-24-33-6-11,14-16	4 a	Historic Resource that may require avoidance	Archaeological
4-17-24-34-11,12,14	5 p	Believed to contain a Historic Resource	Palaeontological
4-17-24-34-2-4,7,10,15	5 a	Believed to contain a Historic Resource	Archaeological
4-17-24-34-5,6,11-14	4 a	Historic Resource that may require avoidance	Archaeological
4-17-25-3-2-7,10-14	5 a	Believed to contain a Historic Resource	Archaeological
4-17-25-3-3,10,16	5 p	Believed to contain a Historic Resource	Palaeontological
4-17-25-3-3-6,12	4 a	Historic Resource that may require avoidance	Archaeological
4-17-25-4-4-9,16	5 a	Believed to contain a Historic Resource	Archaeological
4-17-25-4-1-3	4 a	Historic Resource that may require avoidance	Archaeological
4-17-25-5-1,2	5 a	Believed to contain a Historic Resource	Archaeological
4-17-25-10-1	5 p	Believed to contain a Historic Resource	Palaeontological
4-17-25-11-5,11,15	5 p	Believed to contain a Historic Resource	Palaeontological
4-17-25-14-10,13,15	5 a	Believed to contain a Historic Resource	Archaeological
4-17-25-14-14	4 a	Historic Resource that may require avoidance	Archaeological

4-17-25-23-2-4	5 a	Believed to contain a Historic Resource	Archaeological
4-17-25-24-4,5,9-12,14	5 p	Believed to contain a Historic Resource	Palaeontological
4-17-25-25-4,5,10-12,14	5 p	Believed to contain a Historic Resource	Palaeontological
4-17-25-26-2,7,10	5 p	Believed to contain a Historic Resource	Palaeontological
4-17-25-35-9,10,14,15	5 a	Believed to contain a Historic Resource	Archaeological
4-17-25-35-16	4 a	Historic Resource that may require avoidance	Archaeological
4-17-25-36-9-12,14	5 a	Believed to contain a Historic Resource	Archaeological
4-17-25-36-13,15,16	4 a	Historic Resource that may require avoidance	Archaeological
4-17-26-1-5,9,10,14,15	5 a	Believed to contain a Historic Resource	Archaeological
4-17-26-1-6,12,15,16	5 p	Believed to contain a Historic Resource	Palaeontological
4-17-26-1-1-4,6-8,11-13	4 a	Historic Resource that may require avoidance	Archaeological
4-17-26-2-3,6,11,13-15	5 a	Believed to contain a Historic Resource	Archaeological
4-17-26-2-1,2,7-10,16	4 a	Historic Resource that may require avoidance	Archaeological
4-17-26-3-16	5 a	Believed to contain a Historic Resource	Archaeological
4-17-26-7-6-9,11,14,15	5 a	Believed to contain a Historic Resource	Archaeological
4-17-26-7-10,16	4 a	Historic Resource that may require avoidance	Archaeological
4-17-26-8-2-5,7-16	5 a	Believed to contain a Historic Resource	Archaeological
4-17-26-8-6,10,13-16	4 a	Historic Resource that may require avoidance	Archaeological
4-17-26-9-12,13	5 a	Believed to contain a Historic Resource	Archaeological
4-17-26-10-1-16	5 a	Believed to contain a Historic Resource	Archaeological
4-17-26-10-9,10,16	4 a	Historic Resource that may require avoidance	Archaeological
4-17-26-11-1-16	5 a	Believed to contain a Historic Resource	Archaeological
4-17-26-11-1-3,6-11,13-16	5 p	Believed to contain a Historic Resource	Palaeontological
4-17-26-11-2,10-14	4 a	Historic Resource that may require avoidance	Archaeological
4-17-26-11-3-6	3 a	Historic Resource that will likely require avoidance	Archaeological
4-17-26-12-1-16	5 p	Believed to contain a Historic Resource	Palaeontological
4-17-26-12-1-16	5 a	Believed to contain a Historic Resource	Archaeological
4-17-26-12-5-7,10-15	4 a	Historic Resource that may require avoidance	Archaeological
4-17-26-13-1-16	5 p	Believed to contain a Historic Resource	Palaeontological
4-17-26-13-2-7,9-16	5 a	Believed to contain a Historic Resource	Archaeological
4-17-26-13-1,8	4 a	Historic Resource that may require avoidance	Archaeological
4-17-26-14-1-16	5 a	Believed to contain a Historic Resource	Archaeological
4-17-26-14-1-16	5 p	Believed to contain a Historic Resource	Palaeontological
4-17-26-14-2-7,10-13	4 a	Historic Resource that may require avoidance	Archaeological
4-17-26-15-16	5 p	Believed to contain a Historic Resource	Palaeontological
4-17-26-15-2-7,12,13	5 a	Believed to contain a Historic Resource	Archaeological
4-17-26-15-1,8-11,14-16	4 a	Historic Resource that may require avoidance	Archaeological
4-17-26-16-4	5 a	Believed to contain a Historic Resource	Archaeological

4-17-26-17-1-4	5 a	Believed to contain a Historic Resource	Archaeological
4-17-26-18-1,2	5 a	Believed to contain a Historic Resource	Archaeological
4-17-26-19-1,8,9,13-15	5 a	Believed to contain a Historic Resource	Archaeological
4-17-26-20-2-4,7,10-12	5 a	Believed to contain a Historic Resource	Archaeological
4-17-26-20-5,6	4 a	Historic Resource that may require avoidance	Archaeological
4-17-26-21-11-16	5 p	Believed to contain a Historic Resource	Palaeontological
4-17-26-22-1,2,4-16	5 p	Believed to contain a Historic Resource	Palaeontological
4-17-26-22-1-8	5 a	Believed to contain a Historic Resource	Archaeological
4-17-26-22-2,3	4 a	Historic Resource that may require avoidance	Archaeological
4-17-26-23-1-16	5 a	Believed to contain a Historic Resource	Archaeological
4-17-26-23-1-16	5 p	Believed to contain a Historic Resource	Palaeontological
4-17-26-24-1-16	5 a	Believed to contain a Historic Resource	Archaeological
4-17-26-24-1-16	5 p	Believed to contain a Historic Resource	Palaeontological
4-17-26-26-1-16	5 a	Believed to contain a Historic Resource	Archaeological
4-17-26-26-1-16	5 p	Believed to contain a Historic Resource	Palaeontological
4-17-26-27-1-16	5 a	Believed to contain a Historic Resource	Archaeological
4-17-26-27-1-16	5 p	Believed to contain a Historic Resource	Palaeontological
4-17-26-28-1-16	5 p	Believed to contain a Historic Resource	Palaeontological
4-17-26-28-4,5,12-15	5 a	Believed to contain a Historic Resource	Archaeological
4-17-26-29-1-4,6,9-12,16	5 a	Believed to contain a Historic Resource	Archaeological
4-17-26-29-5,7,8	4 a	Historic Resource that may require avoidance	Archaeological
4-17-26-30-1,2,4-6,8-14	5 a	Believed to contain a Historic Resource	Archaeological
4-17-26-30-3,7	4 a	Historic Resource that may require avoidance	Archaeological
4-17-26-31-1,3-6,8,9,13-15	5 a	Believed to contain a Historic Resource	Archaeological
4-17-26-31-1,8,10,12,14,16	5 p	Believed to contain a Historic Resource	Palaeontological
4-17-26-31-4	4 a	Historic Resource that may require avoidance	Archaeological
4-17-26-32-1-16	5 p	Believed to contain a Historic Resource	Palaeontological
4-17-26-32-1-4,7-12,15,16	5 a	Believed to contain a Historic Resource	Archaeological
4-17-26-32-5,6	4 a	Historic Resource that may require avoidance	Archaeological
4-17-26-33-1-16	5 a	Believed to contain a Historic Resource	Archaeological
4-17-26-33-1-16	5 p	Believed to contain a Historic Resource	Palaeontological
4-17-26-33-3,4,12	4 a	Historic Resource that may require avoidance	Archaeological
4-17-26-34-1-15	5 p	Believed to contain a Historic Resource	Palaeontological
4-17-26-34-1-16	5 a	Believed to contain a Historic Resource	Archaeological
4-17-27-3-1-16	5 a	Believed to contain a Historic Resource	Archaeological
4-17-27-3-1-16	5 p	Believed to contain a Historic Resource	Palaeontological
4-17-27-4-1-16	5 p	Believed to contain a Historic Resource	Palaeontological
4-17-27-4-3,4,6,8-16	5 a	Believed to contain a Historic Resource	Archaeological
4-17-27-4-1,2,5,7	4 a	Historic Resource that may require avoidance	Archaeological
4-17-27-5-1,3,5,6,8,9,13-15	5 a	Believed to contain a Historic Resource	Archaeological
4-17-27-5-1-5,7-10,12-16	5 p	Believed to contain a Historic Resource	Palaeontological
4-17-27-5-4	4 a	Historic Resource that may require avoidance	Archaeological

		avoidance	
4-17-27-6-1,8	5 a	Believed to contain a Historic Resource	Archaeological
4-17-27-6-2-6,11-16	5 p	Believed to contain a Historic Resource	Palaeontological
4-17-27-7-1,2,4-6,8-16	5 p	Believed to contain a Historic Resource	Palaeontological
4-17-27-7-1-16	5 a	Believed to contain a Historic Resource	Archaeological
4-17-27-8-1,2,4-16	5 a	Believed to contain a Historic Resource	Archaeological
4-17-27-8-1-16	5 p	Believed to contain a Historic Resource	Palaeontological
4-17-27-8-3	4 a	Historic Resource that may require avoidance	Archaeological
4-17-27-18-1-16	5 a	Believed to contain a Historic Resource	Archaeological
4-17-27-18-1-8,10,12,15	5 p	Believed to contain a Historic Resource	Palaeontological
4-18-24-17-12,13	5 a	Believed to contain a Historic Resource	Archaeological
4-18-24-18-9,10,13-16	5 a	Believed to contain a Historic Resource	Archaeological
4-18-24-18-16	4 a	Historic Resource that may require avoidance	Archaeological
4-18-24-19-4,5,7,8,10-12	5 a	Believed to contain a Historic Resource	Archaeological
4-18-24-19-1-3,6	4 a	Historic Resource that may require avoidance	Archaeological
4-18-24-20-4,5	5 a	Believed to contain a Historic Resource	Archaeological
4-18-26-8-5-7,10,12-15	5 a	Believed to contain a Historic Resource	Archaeological
4-18-26-8-11	4 a	Historic Resource that may require avoidance	Archaeological
4-18-26-20-6-8,11,14	5 a	Believed to contain a Historic Resource	Archaeological
4-18-26-20-9,13-16	5 p	Believed to contain a Historic Resource	Palaeontological
4-18-26-20-9,10,15,16	4 a	Historic Resource that may require avoidance	Archaeological
4-18-26-21-5,7,8,10,12-16	5 a	Believed to contain a Historic Resource	Archaeological
4-18-26-21-9-16	5 p	Believed to contain a Historic Resource	Palaeontological
4-18-26-21-9	4 a	Historic Resource that may require avoidance	Archaeological
4-18-26-22-5,12,13	5 a	Believed to contain a Historic Resource	Archaeological
4-18-26-25-11-13,15	5 p	Believed to contain a Historic Resource	Palaeontological
4-18-26-25-4-7,9,10,15	5 a	Believed to contain a Historic Resource	Archaeological
4-18-26-25-11-14,16	4 a	Historic Resource that may require avoidance	Archaeological
4-18-26-26-1,2,7,9,10,15	5 a	Believed to contain a Historic Resource	Archaeological
4-18-26-26-9-16	5 p	Believed to contain a Historic Resource	Palaeontological
4-18-26-26-8,16	4 a	Historic Resource that may require avoidance	Archaeological
4-18-26-27-4,5,12	5 a	Believed to contain a Historic Resource	Archaeological
4-18-26-27-9-16	5 p	Believed to contain a Historic Resource	Palaeontological
4-18-26-28-2,4,5,7,9,10,12-15	5 a	Believed to contain a Historic Resource	Archaeological
4-18-26-28-3-6	5 p	Believed to contain a Historic Resource	Palaeontological
4-18-26-28-1,3,6,8,11	4 a	Historic Resource that may require avoidance	Archaeological
4-18-26-28-11-14	4 p	Historic Resource that may require avoidance	Palaeontological
4-18-26-28-1,2,7-10,15,16	3 p	Historic Resource that will likely require avoidance	Palaeontological
4-18-26-29-3,6,9-11	5 a	Believed to contain a Historic Resource	Archaeological
4-18-26-29-9-16	5 p	Believed to contain a Historic Resource	Palaeontological

4-18-26-29-1,2,7,8	4 a	Historic Resource that may require avoidance	Archaeological
4-18-26-30-10-13,15	5 a	Believed to contain a Historic Resource	Archaeological
4-18-26-30-1-16	5 p	Believed to contain a Historic Resource	Palaeontological
4-18-26-30-14	4 a	Historic Resource that may require avoidance	Archaeological
4-18-26-31-2,4-7	5 a	Believed to contain a Historic Resource	Archaeological
4-18-26-31-6,7,11,14	5 p	Believed to contain a Historic Resource	Palaeontological
4-18-26-31-3	4 a	Historic Resource that may require avoidance	Archaeological
4-18-26-32-1,2,9	5 p	Believed to contain a Historic Resource	Palaeontological
4-18-26-32-8,9,13-16	5 a	Believed to contain a Historic Resource	Archaeological
4-18-26-33-1-16	5 a	Believed to contain a Historic Resource	Archaeological
4-18-26-33-9-12	5 p	Believed to contain a Historic Resource	Palaeontological
4-18-26-33-1-8	4 p	Historic Resource that may require avoidance	Palaeontological
4-18-26-33-6,7,12	4 a	Historic Resource that may require avoidance	Archaeological
4-18-26-34-1-12,14,16	5 p	Believed to contain a Historic Resource	Palaeontological
4-18-26-34-3,4,6,11-13	5 a	Believed to contain a Historic Resource	Archaeological
4-18-26-34-5	4 a	Historic Resource that may require avoidance	Archaeological
4-18-26-35-1,6-9,13,16	5 p	Believed to contain a Historic Resource	Palaeontological
4-18-26-35-2,6-9,11,14-16	5 a	Believed to contain a Historic Resource	Archaeological
4-18-26-35-1,10	4 a	Historic Resource that may require avoidance	Archaeological
4-18-26-36-2,4-6,8-11	5 a	Believed to contain a Historic Resource	Archaeological
4-18-26-36-2-4,14	5 p	Believed to contain a Historic Resource	Palaeontological
4-18-26-36-1,3,7	4 a	Historic Resource that may require avoidance	Archaeological
4-18-27-1-1,2,4-16	5 p	Believed to contain a Historic Resource	Palaeontological
4-18-27-1-11,12,14	5 a	Believed to contain a Historic Resource	Archaeological
4-18-27-1-13	4 a	Historic Resource that may require avoidance	Archaeological
4-18-27-2-1,6-8,10,11	5 p	Believed to contain a Historic Resource	Palaeontological
4-18-27-2-9,10,15	5 a	Believed to contain a Historic Resource	Archaeological
4-18-27-2-16	4 a	Historic Resource that may require avoidance	Archaeological
4-18-27-3-1,4-8	5 a	Believed to contain a Historic Resource	Archaeological
4-18-27-3-2,3	4 a	Historic Resource that may require avoidance	Archaeological
4-18-27-4-2,6,7,10,13-15	5 a	Believed to contain a Historic Resource	Archaeological
4-18-27-4-2-7,11-15	5 p	Believed to contain a Historic Resource	Palaeontological
4-18-27-4-3-5,11,12	4 a	Historic Resource that may require avoidance	Archaeological
4-18-27-5-1,8,9,16	5 a	Believed to contain a Historic Resource	Archaeological
4-18-27-5-1-16	5 p	Believed to contain a Historic Resource	Palaeontological
4-18-27-6-2-4,6-9,11,12,14,16	5 p	Believed to contain a Historic Resource	Palaeontological
4-18-27-7-1,3,6,8,9,11,12,14,15	5 p	Believed to contain a Historic Resource	Palaeontological
4-18-27-8-1,2,4,5,7,8,10-15	5 p	Believed to contain a Historic Resource	Palaeontological
4-18-27-8-16	5 a	Believed to contain a Historic Resource	Archaeological

4-18-27-9-13,14	5 a	Believed to contain a Historic Resource	Archaeological
4-18-27-9-3-5	5 p	Believed to contain a Historic Resource	Palaeontological
4-18-27-11-1,2,6-8,10,11,14,15	5 a	Believed to contain a Historic Resource	Archaeological
4-18-27-11-1,8-11,14-16	5 p	Believed to contain a Historic Resource	Palaeontological
4-18-27-11-9,10,16	4 a	Historic Resource that may require avoidance	Archaeological
4-18-27-12-1-6,8-16	5 p	Believed to contain a Historic Resource	Palaeontological
4-18-27-12-3-5,9,10,12,13,15	5 a	Believed to contain a Historic Resource	Archaeological
4-18-27-12-16	4 a	Historic Resource that may require avoidance	Archaeological
4-18-27-13-1-16	5 a	Believed to contain a Historic Resource	Archaeological
4-18-27-13-1-16	5 p	Believed to contain a Historic Resource	Palaeontological
4-18-27-14-1-16	5 a	Believed to contain a Historic Resource	Archaeological
4-18-27-14-5	4 a	Historic Resource that may require avoidance	Archaeological
4-18-27-14-1-16	3 p	Historic Resource that will likely require avoidance	Palaeontological
4-18-27-15-1,8,9,12,13	5 a	Believed to contain a Historic Resource	Archaeological
4-18-27-15-7-10,15,16	5 p	Believed to contain a Historic Resource	Palaeontological
4-18-27-16-16	5 p	Believed to contain a Historic Resource	Palaeontological
4-18-27-16-2-7,9-16	5 a	Believed to contain a Historic Resource	Archaeological
4-18-27-16-4,6,14,16	4 a	Historic Resource that may require avoidance	Archaeological
4-18-27-17-1,8	5 a	Believed to contain a Historic Resource	Archaeological
4-18-27-17-1-3,5-16	5 p	Believed to contain a Historic Resource	Palaeontological
4-18-27-18-1,2,8,9,16	5 p	Believed to contain a Historic Resource	Palaeontological
4-18-27-19-4,5,11-13	5 p	Believed to contain a Historic Resource	Palaeontological
4-18-27-20-1-3,7-10,15,16	5 p	Believed to contain a Historic Resource	Palaeontological
4-18-27-21-1-16	5 p	Believed to contain a Historic Resource	Palaeontological
4-18-27-21-1-8,16	5 a	Believed to contain a Historic Resource	Archaeological
4-18-27-21-2,3	4 a	Historic Resource that may require avoidance	Archaeological
4-18-27-22-1-15	5 a	Believed to contain a Historic Resource	Archaeological
4-18-27-22-1-16	5 p	Believed to contain a Historic Resource	Palaeontological
4-18-27-23-1-8,10-13	5 p	Believed to contain a Historic Resource	Palaeontological
4-18-27-23-1-9,11-16	5 a	Believed to contain a Historic Resource	Archaeological
4-18-27-29-1,2,6-16	5 p	Believed to contain a Historic Resource	Palaeontological
4-18-27-29-9,10	2 h	Registered Historic Resource	Historic Period
4-18-27-30-1,2,4-11,13-16	5 p	Believed to contain a Historic Resource	Palaeontological
4-18-27-30-5-9,12-16	5 a	Believed to contain a Historic Resource	Archaeological
4-18-27-30-10,11	4 a	Historic Resource that may require avoidance	Archaeological
4-18-27-31-1-16	5 p	Believed to contain a Historic Resource	Palaeontological
4-18-27-32-1-7,11-14	5 p	Believed to contain a Historic Resource	Palaeontological
4-18-28-6-1-16	5 p	Believed to contain a Historic Resource	Palaeontological
4-18-28-6-8,9,13-16	5 a	Believed to contain a Historic Resource	Archaeological
4-19-24-4-11,12,14	5 a	Believed to contain a Historic Resource	Archaeological
4-19-24-4-13	4 a	Historic Resource that may require avoidance	Archaeological
4-19-24-5-9,16	5 a	Believed to contain a Historic Resource	Archaeological

4-19-24-8-1	5 a	Believed to contain a Historic Resource	Archaeological
4-19-24-9-3,4	5 a	Believed to contain a Historic Resource	Archaeological
4-19-24-14-5,6,11,14	5 a	Believed to contain a Historic Resource	Archaeological
4-19-24-14-12,13	4 a	Historic Resource that may require avoidance	Archaeological
4-19-24-15-6-16	5 a	Believed to contain a Historic Resource	Archaeological
4-19-24-15-9,10,14	4 a	Historic Resource that may require avoidance	Archaeological
4-19-24-16-9,10,15	5 a	Believed to contain a Historic Resource	Archaeological
4-19-24-16-16	4 a	Historic Resource that may require avoidance	Archaeological
4-19-24-21-1,2,8,9,16	5 a	Believed to contain a Historic Resource	Archaeological
4-19-24-22-4,6,9,10,13-15	5 a	Believed to contain a Historic Resource	Archaeological
4-19-24-22-1-3,5,7,8,11,12	4 a	Historic Resource that may require avoidance	Archaeological
4-19-24-23-3-5,12	5 a	Believed to contain a Historic Resource	Archaeological
4-19-24-28-14-16	5 a	Believed to contain a Historic Resource	Archaeological
4-19-24-33-1,3,6-8	5 a	Believed to contain a Historic Resource	Archaeological
4-19-24-33-2	4 a	Historic Resource that may require avoidance	Archaeological
4-19-25-27-9-13,16	5 a	Believed to contain a Historic Resource	Archaeological
4-19-25-27-14,15	4 a	Historic Resource that may require avoidance	Archaeological
4-19-25-34-1-4,6-8	5 a	Believed to contain a Historic Resource	Archaeological
4-19-25-34-2	4 a	Historic Resource that may require avoidance	Archaeological
4-19-25-35-1-5,8-12	5 a	Believed to contain a Historic Resource	Archaeological
4-19-25-35-6,7	4 a	Historic Resource that may require avoidance	Archaeological
4-19-26-3-1-5,8-12	5 a	Believed to contain a Historic Resource	Archaeological
4-19-26-3-6,7	4 a	Historic Resource that may require avoidance	Archaeological
4-19-26-10-6-9,11,14-16	5 a	Believed to contain a Historic Resource	Archaeological
4-19-26-10-10	4 a	Historic Resource that may require avoidance	Archaeological
4-19-26-19-9,10,15	5 a	Believed to contain a Historic Resource	Archaeological
4-19-26-19-16	4 a	Historic Resource that may require avoidance	Archaeological
4-19-26-20-11,12,14	5 a	Believed to contain a Historic Resource	Archaeological
4-19-26-20-13	4 a	Historic Resource that may require avoidance	Archaeological
4-19-26-23-15,16	5 a	Believed to contain a Historic Resource	Archaeological
4-19-26-24-13,14	5 a	Believed to contain a Historic Resource	Archaeological
4-19-26-25-10-14	5 p	Believed to contain a Historic Resource	Palaeontological
4-19-26-25-3,5,6	5 a	Believed to contain a Historic Resource	Archaeological
4-19-26-25-4	4 a	Historic Resource that may require avoidance	Archaeological
4-19-26-26-2,7,8	5 a	Believed to contain a Historic Resource	Archaeological
4-19-26-26-9-16	5 p	Believed to contain a Historic Resource	Palaeontological
4-19-26-26-1	4 a	Historic Resource that may require avoidance	Archaeological

4-19-26-27-6-12	5 p	Believed to contain a Historic Resource	Palaeontological
4-19-26-28-9-16	5 p	Believed to contain a Historic Resource	Palaeontological
4-19-26-29-3,5,6	5 a	Believed to contain a Historic Resource	Archaeological
4-19-26-29-9,10,15,16	5 p	Believed to contain a Historic Resource	Palaeontological
4-19-26-29-4	4 a	Historic Resource that may require avoidance	Archaeological
4-19-26-30-2,7,8	5 a	Believed to contain a Historic Resource	Archaeological
4-19-26-30-1	4 a	Historic Resource that may require avoidance	Archaeological
4-19-26-31-1-5,8-12	5 a	Believed to contain a Historic Resource	Archaeological
4-19-26-31-6,7	4 a	Historic Resource that may require avoidance	Archaeological
4-19-26-33-7-10	5 p	Believed to contain a Historic Resource	Palaeontological
4-19-26-34-1,2,6-8	5 p	Believed to contain a Historic Resource	Palaeontological
4-19-26-35-1-7	5 p	Believed to contain a Historic Resource	Palaeontological
4-19-26-36-8,9,14,16	5 p	Believed to contain a Historic Resource	Palaeontological
4-19-27-16-3-6,11-14	5 p	Believed to contain a Historic Resource	Palaeontological
4-19-27-17-1,2,7-10,15,16	5 p	Believed to contain a Historic Resource	Palaeontological
4-19-27-20-1,2,7-10,14-16	5 p	Believed to contain a Historic Resource	Palaeontological
4-19-27-21-4,5,12	5 p	Believed to contain a Historic Resource	Palaeontological
4-19-27-24-6,7,10,11,13-15	5 p	Believed to contain a Historic Resource	Palaeontological
4-19-27-25-1-3,7-10,15,16	5 p	Believed to contain a Historic Resource	Palaeontological
4-19-27-29-1,2,7-10,15,16	5 p	Believed to contain a Historic Resource	Palaeontological
4-19-27-32-1-3,6,7,9,10,15,16	5 p	Believed to contain a Historic Resource	Palaeontological
4-19-27-36-1	5 p	Believed to contain a Historic Resource	Palaeontological
4-19-28-1-16	5 a	Believed to contain a Historic Resource	Archaeological
4-19-28-1-8-11,14-16	5 p	Believed to contain a Historic Resource	Palaeontological
4-19-28-2-10,15,16	5 p	Believed to contain a Historic Resource	Palaeontological
4-19-28-5-1-3,6,7,10,11,13-15	5 p	Believed to contain a Historic Resource	Palaeontological
4-19-28-6-7,10,12-15	5 p	Believed to contain a Historic Resource	Palaeontological
4-19-28-10-1,7-10,15,16	5 p	Believed to contain a Historic Resource	Palaeontological
4-19-28-11-1,2,4-16	5 p	Believed to contain a Historic Resource	Palaeontological
4-19-28-12-1,8	5 a	Believed to contain a Historic Resource	Archaeological
4-19-28-12-1-16	5 p	Believed to contain a Historic Resource	Palaeontological
4-20-21-30-13-15	5 a	Believed to contain a Historic Resource	Archaeological
4-20-21-31-2-7,11,13-15	5 a	Believed to contain a Historic Resource	Archaeological
4-20-21-31-3-5,12	4 a	Historic Resource that may require avoidance	Archaeological
4-20-22-6-2,4-7	5 a	Believed to contain a Historic Resource	Archaeological
4-20-22-6-3	4 a	Historic Resource that may require avoidance	Archaeological
4-20-22-27-14-16	5 a	Believed to contain a Historic Resource	Archaeological
4-20-22-28-4,5,12	5 a	Believed to contain a Historic Resource	Archaeological
4-20-22-29-1,2,7,9,10	5 a	Believed to contain a Historic Resource	Archaeological
4-20-22-29-8	4 a	Historic Resource that may require avoidance	Archaeological
4-20-22-32-9,16	5 a	Believed to contain a Historic Resource	Archaeological
4-20-22-33-11,12,14,16	5 a	Believed to contain a Historic Resource	Archaeological
4-20-22-33-13	4 a	Historic Resource that may require avoidance	Archaeological

4-20-22-34-1,3,6-8,13-15	5 a	Believed to contain a Historic Resource	Archaeological
4-20-22-34-2	4 a	Historic Resource that may require avoidance	Archaeological
4-20-23-2-2,7,10-14	5 a	Believed to contain a Historic Resource	Archaeological
4-20-23-2-3-6	4 a	Historic Resource that may require avoidance	Archaeological
4-20-23-3-1,3,4,8-16	5 a	Believed to contain a Historic Resource	Archaeological
4-20-23-3-14	4 a	Historic Resource that may require avoidance	Archaeological
4-20-23-4-1,16	5 a	Believed to contain a Historic Resource	Archaeological
4-20-23-8-9,16	5 a	Believed to contain a Historic Resource	Archaeological
4-20-23-9-1-3,6,8-12,14-16	5 a	Believed to contain a Historic Resource	Archaeological
4-20-23-9-7-10,13,14	4 a	Historic Resource that may require avoidance	Archaeological
4-20-23-10-5,10,15	5 a	Believed to contain a Historic Resource	Archaeological
4-20-23-10-1-4,6-9,11-14,16	4 a	Historic Resource that may require avoidance	Archaeological
4-20-23-11-1-6,8-12,14	5 a	Believed to contain a Historic Resource	Archaeological
4-20-23-11-4,7,13	4 a	Historic Resource that may require avoidance	Archaeological
4-20-23-14-3,4	5 a	Believed to contain a Historic Resource	Archaeological
4-20-23-15-1-4	5 a	Believed to contain a Historic Resource	Archaeological
4-20-23-16-1,2,5-7	5 a	Believed to contain a Historic Resource	Archaeological
4-20-23-16-3,4	4 a	Historic Resource that may require avoidance	Archaeological
4-20-23-17-1,8	5 a	Believed to contain a Historic Resource	Archaeological
4-20-23-21-9,10,15	5 a	Believed to contain a Historic Resource	Archaeological
4-20-23-21-16	4 a	Historic Resource that may require avoidance	Archaeological
4-20-23-22-12,13	5 a	Believed to contain a Historic Resource	Archaeological
4-20-23-27-4	5 a	Believed to contain a Historic Resource	Archaeological
4-20-23-28-1,2	5 a	Believed to contain a Historic Resource	Archaeological
4-20-27-7-1-16	5 p	Believed to contain a Historic Resource	Palaeontological
4-20-27-8-1,2,7-10,13-16	5 p	Believed to contain a Historic Resource	Palaeontological
4-20-27-16-1-12,14-16	5 p	Believed to contain a Historic Resource	Palaeontological
4-20-27-17-1-16	5 p	Believed to contain a Historic Resource	Palaeontological
4-20-27-18-1-6,8,9,11-15	5 p	Believed to contain a Historic Resource	Palaeontological
4-20-27-19-2-16	5 p	Believed to contain a Historic Resource	Palaeontological
4-20-27-20-1-6,9-16	5 p	Believed to contain a Historic Resource	Palaeontological
4-20-27-21-1-3,5-7,10-14	5 p	Believed to contain a Historic Resource	Palaeontological
4-20-27-22-1-4,6-8,10-15	5 p	Believed to contain a Historic Resource	Palaeontological
4-20-27-26-11-13	5 p	Believed to contain a Historic Resource	Palaeontological
4-20-27-27-4,5,11-14,16	5 p	Believed to contain a Historic Resource	Palaeontological
4-20-27-28-4,5,9-16	5 p	Believed to contain a Historic Resource	Palaeontological
4-20-27-29-1-16	5 p	Believed to contain a Historic Resource	Palaeontological
4-20-27-30-1-9,11,12,15,16	5 p	Believed to contain a Historic Resource	Palaeontological
4-20-27-33-1-12,14,15	5 p	Believed to contain a Historic Resource	Palaeontological
4-20-27-34-1-12,14-16	5 p	Believed to contain a Historic Resource	Palaeontological
4-20-27-35-5-16	5 p	Believed to contain a Historic Resource	Palaeontological
4-20-28-1-1-16	5 p	Believed to contain a Historic Resource	Palaeontological

4-20-28-2-1-10,12,13,16	5 p	Believed to contain a Historic Resource	Palaeontological
4-21-21-25-16	5 a	Believed to contain a Historic Resource	Archaeological
4-21-21-36-1,8,9,16	5 a	Believed to contain a Historic Resource	Archaeological
4-21-22-4-14-16	5 a	Believed to contain a Historic Resource	Archaeological
4-21-22-9-1-16	5 a	Believed to contain a Historic Resource	Archaeological
4-21-22-9-2	4 a	Historic Resource that may require avoidance	Archaeological
4-21-22-9-7,8	1 a	Provincial Historic Resource	Archaeological
4-21-22-10-1-16	5 p	Believed to contain a Historic Resource	Palaeontological
4-21-22-10-4,5,11,12,14	5 a	Believed to contain a Historic Resource	Archaeological
4-21-22-10-13	4 a	Historic Resource that may require avoidance	Archaeological
4-21-22-15-3,5,6	5 a	Believed to contain a Historic Resource	Archaeological
4-21-22-15-4	4 a	Historic Resource that may require avoidance	Archaeological
4-21-22-16-1,8	5 a	Believed to contain a Historic Resource	Archaeological
4-21-22-34-8-12,14-16	5 p	Believed to contain a Historic Resource	Palaeontological
4-21-22-35-3,5,6,12	5 p	Believed to contain a Historic Resource	Palaeontological
4-21-23-18-13-15	5 a	Believed to contain a Historic Resource	Archaeological
4-21-23-19-2,5-7	5 a	Believed to contain a Historic Resource	Archaeological
4-21-23-19-3,4	4 a	Historic Resource that may require avoidance	Archaeological
4-21-26-16-13-15	5 a	Believed to contain a Historic Resource	Archaeological
4-21-26-17-16	5 a	Believed to contain a Historic Resource	Archaeological
4-21-26-19-8,9,16	5 a	Believed to contain a Historic Resource	Archaeological
4-21-26-20-1,5-11,14,16	5 a	Believed to contain a Historic Resource	Archaeological
4-21-26-20-6,11-15	5 p	Believed to contain a Historic Resource	Palaeontological
4-21-26-20-10-15	4 a	Historic Resource that may require avoidance	Archaeological
4-21-26-21-2,7,10-12	5 a	Believed to contain a Historic Resource	Archaeological
4-21-26-21-3-6	4 a	Historic Resource that may require avoidance	Archaeological
4-21-26-23-1,2,7,9,10	5 a	Believed to contain a Historic Resource	Archaeological
4-21-26-23-8	4 a	Historic Resource that may require avoidance	Archaeological
4-21-26-24-4,5,12	5 a	Believed to contain a Historic Resource	Archaeological
4-21-26-25-4,5,12	5 a	Believed to contain a Historic Resource	Archaeological
4-21-26-26-1-3,6,9-11	5 a	Believed to contain a Historic Resource	Archaeological
4-21-26-26-14,16	5 p	Believed to contain a Historic Resource	Palaeontological
4-21-26-26-7,8	4 a	Historic Resource that may require avoidance	Archaeological
4-21-26-29-1-4	5 a	Believed to contain a Historic Resource	Archaeological
4-21-26-30-1	5 a	Believed to contain a Historic Resource	Archaeological
4-21-27-6-3-5,12-14	5 p	Believed to contain a Historic Resource	Palaeontological
4-21-27-7-14-16	5 a	Believed to contain a Historic Resource	Archaeological
4-21-27-7-4,5,10-15	5 p	Believed to contain a Historic Resource	Palaeontological
4-21-27-7-14	2 h	Registered Historic Resource	Historic Period
4-21-27-11-3,6,10,11,14-16	5 p	Believed to contain a Historic Resource	Palaeontological
4-21-27-13-3,5,6	5 p	Believed to contain a Historic Resource	Palaeontological
4-21-27-14-2,6-8,11-13	5 p	Believed to contain a Historic Resource	Palaeontological

4-21-27-15-11,12,14,15	5 p	Believed to contain a Historic Resource	Palaeontological
4-21-27-15-14-16	5 a	Believed to contain a Historic Resource	Archaeological
4-21-27-16-11,12,14	5 a	Believed to contain a Historic Resource	Archaeological
4-21-27-16-7,8,10-16	5 p	Believed to contain a Historic Resource	Palaeontological
4-21-27-16-13	4 a	Historic Resource that may require avoidance	Archaeological
4-21-27-17-3,4,6,9,11,12,14-16	5 a	Believed to contain a Historic Resource	Archaeological
4-21-27-17-3-9,11,12,14,15	5 p	Believed to contain a Historic Resource	Palaeontological
4-21-27-17-5	4 a	Historic Resource that may require avoidance	Archaeological
4-21-27-18-1-11,14,15	5 p	Believed to contain a Historic Resource	Palaeontological
4-21-27-18-1-3,6-11	5 a	Believed to contain a Historic Resource	Archaeological
4-21-27-18-2,7,8	4 a	Historic Resource that may require avoidance	Archaeological
4-21-27-19-2,7,10,13,14	5 p	Believed to contain a Historic Resource	Palaeontological
4-21-27-20-1	5 p	Believed to contain a Historic Resource	Palaeontological
4-21-27-20-3,6-8,10,15,16	5 a	Believed to contain a Historic Resource	Archaeological
4-21-27-20-1,2,9	4 a	Historic Resource that may require avoidance	Archaeological
4-21-27-21-1-8,10-14	5 p	Believed to contain a Historic Resource	Palaeontological
4-21-27-21-3-5,12,13	5 a	Believed to contain a Historic Resource	Archaeological
4-21-27-22-1,3,6-8	5 a	Believed to contain a Historic Resource	Archaeological
4-21-27-22-1-4,6-12,15,16	5 p	Believed to contain a Historic Resource	Palaeontological
4-21-27-22-2	4 a	Historic Resource that may require avoidance	Archaeological
4-21-27-23-4-16	5 p	Believed to contain a Historic Resource	Palaeontological
4-21-27-24-9-16	5 p	Believed to contain a Historic Resource	Palaeontological
4-21-27-25-1-10,12,13,16	5 p	Believed to contain a Historic Resource	Palaeontological
4-21-27-33-1,7,8,10-13	5 p	Believed to contain a Historic Resource	Palaeontological
4-21-28-7-15,16	5 a	Believed to contain a Historic Resource	Archaeological
4-21-28-8-13	5 a	Believed to contain a Historic Resource	Archaeological
4-21-28-17-4,5	5 a	Believed to contain a Historic Resource	Archaeological
4-21-28-18-2,7,8	5 a	Believed to contain a Historic Resource	Archaeological
4-21-28-18-1	4 a	Historic Resource that may require avoidance	Archaeological
4-22-22-7-13	5 a	Believed to contain a Historic Resource	Archaeological
4-22-22-18-4,5,12	5 a	Believed to contain a Historic Resource	Archaeological
4-22-22-18-4	2 h	Registered Historic Resource	Historic Period
4-22-23-7-7,8,10,15,16	5 a	Believed to contain a Historic Resource	Archaeological
4-22-23-7-9	4 a	Historic Resource that may require avoidance	Archaeological
4-22-23-8-5,6,11,13,14	5 a	Believed to contain a Historic Resource	Archaeological
4-22-23-8-12	4 a	Historic Resource that may require avoidance	Archaeological
4-22-23-13-16	5 a	Believed to contain a Historic Resource	Archaeological
4-22-23-24-1,8	5 a	Believed to contain a Historic Resource	Archaeological
4-22-23-30-2-5,7,10-12	5 a	Believed to contain a Historic Resource	Archaeological
4-22-23-30-6	4 a	Historic Resource that may require avoidance	Archaeological
4-22-25-3-16	2 h	Registered Historic Resource	Historic Period

4-22-25-10-1	2 h	Registered Historic Resource	Historic Period
4-22-25-29-13	5 a	Believed to contain a Historic Resource	Archaeological
4-22-25-30-15,16	5 a	Believed to contain a Historic Resource	Archaeological
4-22-25-31-2,7,8	5 a	Believed to contain a Historic Resource	Archaeological
4-22-25-31-1	4 a	Historic Resource that may require avoidance	Archaeological
4-22-25-32-4,5	5 a	Believed to contain a Historic Resource	Archaeological
4-22-26-4-13	5 a	Believed to contain a Historic Resource	Archaeological
4-22-26-5-15,16	5 a	Believed to contain a Historic Resource	Archaeological
4-22-26-8-2,7,8	5 a	Believed to contain a Historic Resource	Archaeological
4-22-26-8-1	4 a	Historic Resource that may require avoidance	Archaeological
4-22-26-9-4,5	5 a	Believed to contain a Historic Resource	Archaeological
4-22-26-10-1	5 p	Believed to contain a Historic Resource	Palaeontological
4-22-26-10-1-5,8,9,12-16	5 a	Believed to contain a Historic Resource	Archaeological
4-22-26-10-6,7,10,11	4 a	Historic Resource that may require avoidance	Archaeological
4-22-26-21-14-16	5 p	Believed to contain a Historic Resource	Palaeontological
4-22-26-24-1-10,15,16	5 p	Believed to contain a Historic Resource	Palaeontological
4-22-26-25-9-12,15,16	5 p	Believed to contain a Historic Resource	Palaeontological
4-22-26-29-13-15	5 a	Believed to contain a Historic Resource	Archaeological
4-22-26-30-16	5 a	Believed to contain a Historic Resource	Archaeological
4-22-26-31-1	5 p	Believed to contain a Historic Resource	Palaeontological
4-22-26-31-1,8,9	5 a	Believed to contain a Historic Resource	Archaeological
4-22-26-32-1-3,6,8-12	5 a	Believed to contain a Historic Resource	Archaeological
4-22-26-32-1-4,16	5 p	Believed to contain a Historic Resource	Palaeontological
4-22-26-32-3-7	4 a	Historic Resource that may require avoidance	Archaeological
4-22-26-33-13,16	5 p	Believed to contain a Historic Resource	Palaeontological
4-22-26-36-2,3,6,7,10,11,14,15	5 p	Believed to contain a Historic Resource	Palaeontological
4-22-27-3-13	5 a	Believed to contain a Historic Resource	Archaeological
4-22-27-3-5-7,10,14	5 p	Believed to contain a Historic Resource	Palaeontological
4-22-27-4-15,16	5 a	Believed to contain a Historic Resource	Archaeological
4-22-27-9-1,6,10,11	5 p	Believed to contain a Historic Resource	Palaeontological
4-22-27-9-2,7,9,10	5 a	Believed to contain a Historic Resource	Archaeological
4-22-27-9-1,8	4 a	Historic Resource that may require avoidance	Archaeological
4-22-27-10-1,10-12,15,16	5 p	Believed to contain a Historic Resource	Palaeontological
4-22-27-10-4,5,12	5 a	Believed to contain a Historic Resource	Archaeological
4-22-27-11-1-4,9-12	5 p	Believed to contain a Historic Resource	Palaeontological
4-22-27-12-5,6,12,14-16	5 p	Believed to contain a Historic Resource	Palaeontological
4-22-27-13-1,2,8	5 p	Believed to contain a Historic Resource	Palaeontological
4-22-27-15-5,12	5 p	Believed to contain a Historic Resource	Palaeontological
4-22-27-16-2,6,7,11-16	5 p	Believed to contain a Historic Resource	Palaeontological
4-22-27-17-9-16	5 p	Believed to contain a Historic Resource	Palaeontological
4-22-27-18-9-16	5 p	Believed to contain a Historic Resource	Palaeontological
4-22-27-19-1-6	5 p	Believed to contain a Historic Resource	Palaeontological
4-22-27-20-1-3,7-10	5 p	Believed to contain a Historic Resource	Palaeontological
4-22-27-21-3,4,12,13	5 p	Believed to contain a Historic Resource	Palaeontological

4-22-28-8-3,4	5 p	Believed to contain a Historic Resource	Palaeontological
4-23-22-13-3,6,9-11	5 a	Believed to contain a Historic Resource	Archaeological
4-23-22-13-1,2,7,8	4 a	Historic Resource that may require avoidance	Archaeological
4-23-22-23-16	5 a	Believed to contain a Historic Resource	Archaeological
4-23-22-24-13-16	5 a	Believed to contain a Historic Resource	Archaeological
4-23-22-24-13-15	4 c	Historic Resource that may require avoidance	Cultural
4-23-22-25-1-3,6,8-12	5 a	Believed to contain a Historic Resource	Archaeological
4-23-22-25-2-7	4 a	Historic Resource that may require avoidance	Archaeological
4-23-22-25-2-7,10-12	4 c	Historic Resource that may require avoidance	Cultural
4-23-22-26-1,8,9	5 a	Believed to contain a Historic Resource	Archaeological
4-23-23-25-4,5,12	5 a	Believed to contain a Historic Resource	Archaeological
4-23-23-26-1-3,6,9-11	5 a	Believed to contain a Historic Resource	Archaeological
4-23-23-26-7,8	4 a	Historic Resource that may require avoidance	Archaeological
4-23-24-18-8	2 h	Registered Historic Resource	Historic Period
4-23-25-29-5-7,10,12-15	5 a	Believed to contain a Historic Resource	Archaeological
4-23-25-29-11	4 a	Historic Resource that may require avoidance	Archaeological
4-23-27-13-5,9-16	5 p	Believed to contain a Historic Resource	Palaeontological
4-23-27-14-5-8	5 p	Believed to contain a Historic Resource	Palaeontological
4-23-27-20-5-8	5 p	Believed to contain a Historic Resource	Palaeontological
4-23-27-24-1-4	5 p	Believed to contain a Historic Resource	Palaeontological
4-24-22-7-7,11	5 p	Believed to contain a Historic Resource	Palaeontological
4-25-21-30-5,11	5 p	Believed to contain a Historic Resource	Palaeontological
4-25-21-31-1,2,11,12,15,16	5 p	Believed to contain a Historic Resource	Palaeontological
4-25-21-31-8,9,16	5 a	Believed to contain a Historic Resource	Archaeological
4-25-21-32-13-16	5 p	Believed to contain a Historic Resource	Palaeontological
4-25-21-32-5,6,9-11,13-15	5 a	Believed to contain a Historic Resource	Archaeological
4-25-21-32-12,16	4 a	Historic Resource that may require avoidance	Archaeological
4-25-21-33-11,12,14	5 a	Believed to contain a Historic Resource	Archaeological
4-25-21-33-13	4 a	Historic Resource that may require avoidance	Archaeological
4-25-22-4-3-5,12	5 a	Believed to contain a Historic Resource	Archaeological
4-25-22-5-1,2,7,9,10	5 a	Believed to contain a Historic Resource	Archaeological
4-25-22-5-8	4 a	Historic Resource that may require avoidance	Archaeological
4-25-22-23-9,10,15	5 a	Believed to contain a Historic Resource	Archaeological
4-25-22-23-16	4 a	Historic Resource that may require avoidance	Archaeological
4-25-22-24-12,13	5 a	Believed to contain a Historic Resource	Archaeological
4-25-22-25-4	5 a	Believed to contain a Historic Resource	Archaeological
4-25-22-26-1,2	5 a	Believed to contain a Historic Resource	Archaeological
4-25-23-1-4,5,12	5 a	Believed to contain a Historic Resource	Archaeological
4-25-23-2-1,2,7,9,10	5 a	Believed to contain a Historic Resource	Archaeological
4-25-23-2-8	4 a	Historic Resource that may require avoidance	Archaeological

4-25-24-7-12,13	5 a	Believed to contain a Historic Resource	Archaeological
4-25-24-18-4,5	5 a	Believed to contain a Historic Resource	Archaeological
4-26-21-19-1-4,9-12	5 p	Believed to contain a Historic Resource	Palaeontological
4-26-21-19-5,7,11,13,16	5 a	Believed to contain a Historic Resource	Archaeological
4-26-21-19-1-4,6,8-10,12,14,15	4 a	Historic Resource that may require avoidance	Archaeological
4-26-21-20-2,4-7,9,10,12,13,15,16	5 a	Believed to contain a Historic Resource	Archaeological
4-26-21-20-4,8,12	5 p	Believed to contain a Historic Resource	Palaeontological
4-26-21-20-3,4,16	4 a	Historic Resource that may require avoidance	Archaeological
4-26-21-21-11-14	5 a	Believed to contain a Historic Resource	Archaeological
4-26-21-21-12,14	5 p	Believed to contain a Historic Resource	Palaeontological
4-26-21-21-13	4 a	Historic Resource that may require avoidance	Archaeological
4-26-21-23-4-16	5 a	Believed to contain a Historic Resource	Archaeological
4-26-21-23-9,14-16	3 a	Historic Resource that will likely require avoidance	Archaeological
4-26-21-24-5-11,15,16	5 a	Believed to contain a Historic Resource	Archaeological
4-26-21-24-12-14	3 a	Historic Resource that will likely require avoidance	Archaeological
4-26-21-25-1-10,15,16	5 a	Believed to contain a Historic Resource	Archaeological
4-26-21-25-3,4	3 a	Historic Resource that will likely require avoidance	Archaeological
4-26-21-26-1-4,8	5 a	Believed to contain a Historic Resource	Archaeological
4-26-21-27-5-8	5 p	Believed to contain a Historic Resource	Palaeontological
4-26-21-28-3-7,10,15	5 a	Believed to contain a Historic Resource	Archaeological
4-26-21-28-7,8,11	5 p	Believed to contain a Historic Resource	Palaeontological
4-26-21-28-11-14	4 a	Historic Resource that may require avoidance	Archaeological
4-26-21-29-1,2,8,9,16	5 a	Believed to contain a Historic Resource	Archaeological
4-26-21-30-1-4	5 a	Believed to contain a Historic Resource	Archaeological
4-26-21-31-9,16	5 a	Believed to contain a Historic Resource	Archaeological
4-26-21-32-1,10-12,14,15	5 a	Believed to contain a Historic Resource	Archaeological
4-26-21-32-13,14	4 a	Historic Resource that may require avoidance	Archaeological
4-26-21-33-2-4	5 a	Believed to contain a Historic Resource	Archaeological
4-26-22-5-2-5,7,10-12	5 a	Believed to contain a Historic Resource	Archaeological
4-26-22-5-3,6	4 a	Historic Resource that may require avoidance	Archaeological
4-26-22-6-1	5 a	Believed to contain a Historic Resource	Archaeological
4-26-24-12-9,10,15	5 a	Believed to contain a Historic Resource	Archaeological
4-26-24-12-16	4 a	Historic Resource that may require avoidance	Archaeological
4-26-24-13-2,7,8	5 a	Believed to contain a Historic Resource	Archaeological
4-26-24-13-1	4 a	Historic Resource that may require avoidance	Archaeological

Registered Historic Resources

Detailed Information on Historical Resources within Hamlets/Town/Villages (*Information presented on Map 6, Appendix B*)

Demographics



HISTORIC PLACE:	BEACH / RENNIE HOUSE, THE
LOCATION:	128 - 7 Avenue, Gleichen
LEGAL DESCRIPTION:	Plan 5345 N, Block D, Lots 13 to 17
DESIGNATION STATUS:	Registered Historic Resource
DATE OF DESIGNATION:	1995/09/18

Historic Function(s):Residence : Single Dwelling

HERITAGE SIGNIFICANCE

The Beach family represents one of Gleichen's early residents. Thomas Harry Beach arrived in Gleichen from London, Ontario in 1906 and set up a harness and saddlery shop. He had other shops in Arrowwood and Cluny. The family home was built in around 1907. T.H. Beach was very active in local affairs, being one of the first elected councillors for the village in 1907 and in 1910 one of the first councillors after Gleichen became a town. T.H. Beach was also the first fire chief for the town and served in that capacity several times (1907, 1920, and 1931). He was a member of the Board of Trade and its president from 1910 to 1911, and vice-president from 1912 to 1913. During this time he took part in advocating the construction of an agricultural college (built eventually in 1919). He remained a member of the Board of Trade for a number of years returning as president and vice-president in the 1920s. He was also part of the group that founded the local Agricultural Society in 1908. Other local organizations he was involved with included the Gleichen Chapter of the Masons and the Red Cross Society during World War Two.

Demographics



HISTORIC PLACE:	GLEICHEN WATER TOWER, GLEICHEN
LOCATION:	Gleichen
LEGAL DESCRIPTION:	Plan 1465 AD, Block 14, Lots 1 thru 8
DESIGNATION STATUS:	Provincial Historic Resource
DATE OF DESIGNATION:	2008/04/15

Statement of Significance

Description of Historic Place

The Gleichen Water Tower is an early twentieth-century structure situated on eight lots in the Hamlet of Gleichen. The structure features a wood shingle-clad tank supported by riveted steel supports.

Heritage Value

The heritage value of the Gleichen Water Tower lies in its status as one of the few remaining examples of a municipal water tower, a once common landmark in Alberta communities.

Like many other early southern Alberta communities, Gleichen came into being as a result of the construction of the Canadian Pacific Railway's (CPR's) transcontinental line through the region in the early 1880s. Situated in the midst of several major CPR irrigation projects and north of the Blackfoot reserve, the community developed into a staging point for rail travel and a service centre for both settlers and Natives. Unlike many early settlements in the area, however, Gleichen was not located near a reliable source of water, nor was it slated for inclusion in an irrigation project. When the Town of Gleichen was incorporated in 1910 with a population of over 500, one of municipal council's first initiatives was to address the urgent need for a more sophisticated water and sewer system to serve its growing citizenry. The town contracted the Des Moines Bridge & Iron Company of Pittsburgh to construct a water tower in the community. Completed in 1911, the water tower served not only the people of Gleichen, but also the inhabitants of the Blackfoot reserve to the south. The Gleichen Water Tower remained in use until the 1970s. It remains a visually striking landmark and a reminder of the once essential role water towers played in the municipal infrastructure of many Alberta communities.

Source: Alberta Culture and Community Spirit, Historic Resources Management Branch (File: Des. 2183)

Character-Defining Elements

The character-defining elements of the Gleichen Water Tower include:

- those features of the site necessary to maintain adequate water volume and pressure, including the height of the tower, the central shaft, the capacity of the tank, and the location of the tower at a relatively high elevation;
- those features of the structure required to ensure the strength and durability of an essential component of municipal infrastructure, including the riveted steel construction of the supporting tower, the tie rods and turnbuckles, and the wood shingle cladding of the tank;
- the name plate of the Des Moines Bridge & Iron Company of Pittsburgh, an indication of the role of American companies played in building some municipal water towers in Alberta.

Demographics



HISTORIC PLACE:	ST. ANDREW'S ANGLICAN CHURCH
LOCATION:	Gleichen
LEGAL DESCRIPTION:	Plan 249 B, Block 3, Lots 18 to 20
DESIGNATION STATUS:	Registered Historic Resource
DATE OF DESIGNATION:	1990/07/04
Historic Function(s):	Religion, Ritual and Funeral, Religious Facility or Place of Worship

HERITAGE SIGNIFICANCE

St. Andrew's is one of the oldest Anglican churches in Alberta. The first Anglican minister assigned to the Gleichen area was the Reverend J.W. Timms in 1883. Because of its proximity to the Blackfoot Reserve, the minister in charge of St. Andrew's was expected to serve both the native population of the area and incoming settlers.

Between 1883 and 1885 Timms and other Anglicans raised money for the construction of a church, which was finally begun in 1885 and completed in 1886 at a cost of 1,348.96 dollars. The resulting church is an excellent example of a Carpenter's Gothic church, a style of church architecture in which wood is used instead of brick or stone to produce Gothic design elements. This style is unique to North America and represents an adaptation of traditional church architecture to new material and social conditions.

Demographics



HISTORIC PLACE:	WARD EFFIGY ARCHAEOLOGICAL SITE, THE
LOCATION:	Cluny, Near
LEGAL DESCRIPTION:	Location Withheld
DESIGNATION STATUS:	Provincial Historic Resource
DATE OF DESIGNATION:	2000/02/22

Provincial Historic Resource

Other Names:	Lee Ward Effigy Ward Effigy
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Statement of Significance

Description of Historic Place

The Ward Effigy Archaeological Site is situated on 16 hectares of land just northeast of the Hamlet of Cluny. The central element of the site is the stone outline of a humanoid figure with discernible features including: slightly bent legs, male genitals, a rectangular body, a right arm, a heart, a neck, and a head. The effigy is located upon a low knoll on the southern end of a plateau with panoramic views of the Bow River valley to the south and the Rocky Mountains to the west. Two stone circles and a cairn are located west of the effigy.

Heritage Value

The heritage value of the Ward Effigy Archaeological Site lies in its status as an exceptionally rare example of a Prehistoric stone effigy.

Of the thousands of archaeological sites in Alberta, only a tiny fraction - roughly a dozen - contain stone effigies like that found at the Ward Effigy Archaeological Site. The stone effigy near Cluny is a simple figural outline made of cobbles that depict a rectangular body and several anatomical features, including legs, an arm, a heart, a neck, and a head. The shape of the figure bears strong similarities to anthromorphs found in petroglyphs throughout the Northern Plains. The style of the Ward Effigy (consisting of an outline of the human figure, rather than a rock-filled body, and its prominent male genitalia) suggests that it was created during the Late Prehistoric period by ancestors of the Blackfoot people and that it may represent the trickster deity Napi. Located to the west of the effigy are two stone circles, likely tipi rings, and a cairn. The extreme rarity of effigy figures in Alberta and the spiritual significance of such places to modern Aboriginal people distinguish the Ward Effigy Archaeological Site as a particularly valuable resource for future research and interpretation and as a privileged element in the spiritual landscape of Alberta's Aboriginal people.

Source: Alberta Culture and Community Spirit, Historic Resources Management Branch (File: Des. 2052)

Character-Defining Elements

The character-defining elements of the Ward Effigy Archaeological Site include:

- its location northeast of Cluny on a low knoll in native prairie grassland at the south end of a plateau, and including expansive sight lines to the traditional winter camping area of the Siksika Nation in the Bow River valley to the south, as well as to the Rocky Mountains to the west;
- the size and arrangement of stones in a style thought to evoke the Blackfoot Napi deity;
- the potential for surface and sub-surface archaeological artifacts;
- two stone rings and cairn situated to the west.

Demographics



HISTORIC PLACE:	ROSEBUD HOTEL
LOCATION:	Corner of Main Street and Railway Avenue, Rosebud
LEGAL DESCRIPTION:	Plan 6742 BQ, Block 1, Lots 6 to 8
DESIGNATION STATUS:	Registered Historic Resource
DATE OF DESIGNATION:	1990/06/07
Historic Function(s):	Commerce / Commercial Services : Hotel, Motell

HISTORICAL SIGNIFICANCE

The development of the Rosebud town site is closely associated with the construction of the Canadian Northern Railway branch line from Drumheller to Calgary, started in 1911 and completed in 1913. Before the railway arrived, however, the surrounding agricultural settlement was well established, under development since the 1885 arrival of James Wishart, who homesteaded the quarter section presently occupied by the Hamlet of Redland.

Unlike the majority of prairie urban communities, Rosebud was not surveyed at the specific initiative of the railway company during the construction phase. The actual town site plan was not registered at the Land Title Office until August 1917. The development of the town site was promoted by Fred Gilbert of Gilbert Farm Lands Limited. Gilbert Farm Lands was established in 1911 by Orville Newton Gilbert, who had originally come from Nebraska. When his brothers joined him in the business, Fred served as president of the company.

The first building to appear as a result of Gilbert's efforts was a grain elevator constructed by the Corgill Grain Company in 1913. In 1914, construction of the Rosebud Hotel met the need for accommodation on the part of many land seekers passing through the area. In 1916 the property was purchased by Alfred E. Vigar, member of a pioneer family that had homesteaded the section of land on which the village of Rosebud was located. Since 1916, a succession of local businessmen operated the hotel until the Rosebud Fellowship acquired it in 1970 for use as a dormitory and classroom accommodation for a school. Throughout its years as a commercial structure, it was part of a small agricultural service centre of some 200 people, featuring a lumberyard, a Canadian Bank of Commerce branch office, two schools, a blacksmith and three elevators.

The Rosebud Hotel was therefore a significant element in the local entrepreneurial activity associated with the settlement process and the agricultural community in south-central Alberta.

ARCHITECTURAL SIGNIFICANCE

The Rosebud Hotel is a utilitarian structure built to provide basic accommodation during the initial years of the development of Rosebud. It is basically a rectangular box with a veranda on the facade. The only decoration the building has in addition to the veranda is a combination of white and brown paint to highlight the windows, doorframes and corners of the building. It is very typical of hotel structures erected in early rural Alberta villages. Their survival depended on a limited degree of town development and growth.

Demographics



HISTORIC PLACE:	SCHEER / SPROULE FARM SITE, THE
LOCATION:	Strathmore, Near
LEGAL DESCRIPTION:	Plan 891 0466, Lot 1
DESIGNATION STATUS:	Registered Historic Resource
DATE OF DESIGNATION:	1995/08/16
Historic Function(s):	Food Supply : Farm or Ranch

HERITAGE SIGNIFICANCE

The Sproule house and barn near Strathmore sits on land first settled by the "Harry" Scheer family from Illinois in 1909. The barn was built in 1916, four years before the grand house was completed, a pattern that was typical of prairie homestead development in this period. It is a common form of twin-cupola, gambrel roofed barn found both in Ontario and across the west. The house is also relatively typical of the numerous grand farm homes that were built throughout Western Canada from the mid-eighties onward. It was built by the Hornstrom Brothers of Calgary who used Andy Pederson as their foreman. Pederson remained in the area as an independent builder for forty years. The Hornstroms went onto build in the Carstairs area, Alpha Milk and the Gaetz Church in Red Deer, and many of the province's Bank of Commerce Buildings.

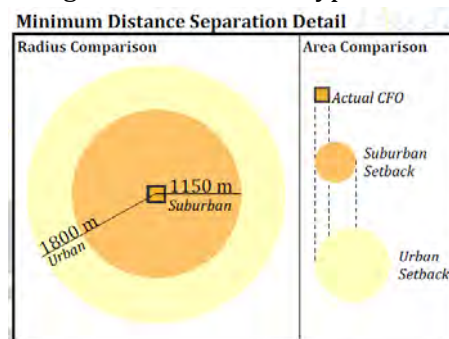
(AHRF)

Confined Feeding Operations

The Agricultural Operation Practices Act (AOPA) sets out requirements for new and expanding CFOs as well as some operational requirements for existing CFOs. One of the requirements for new or expanding CFOs is that the Minimum Distance Separation (MDS) is met. MDS is the distance the manure storage and collection areas of a new or expanding CFO must be from neighbouring residence walls. MDS is measured at the time of application for the new or expanded CFO and takes into consideration odour based on the nuisance value of the livestock, technology used, and the number of animals. CFOs are not required to maintain their MDS from neighbouring residences after the operation is constructed and operating. **Minimum distance separation will never be less than 150 metres**, unless the requirement is waived in writing by neighbours or if the residence is owned or under the control of the owner or operator of the facility.

NRCB approval officers consider four categories of land zoning and residential types in the calculation of minimum distance separation:

- **Category 1** - residences on land zoned for agricultural purposes (e.g., farmstead, acreage residences),
- **Category 2** - residences on land zoned for non-agricultural purposes (e.g., country residential, rural commercial businesses),
- **Category 3** - residences on land zoned for high use recreational or commercial purposes, and
- **Category 4** - residences on land zoned for large-scale country residential, rural Hamlet, village, town or city.



The minimum distance separation (MDS) is set for each category ranging from the shortest distance for Category 1 to the longest distance for Category 4.

As shown on Map 7, a MDS was applied to each of the identified CFOs within the County. Setbacks were developed using a median number for each of Suburban areas (or country residential) and Urban areas (or Hamlets). The adjacent figure illustrates the setback distances applied to each CFO.

Additional information provided by the Natural Resources Conservation Board - Agricultural Operation Practices Act (AOPA). Minimum Distance Separation Distances were calculated using AOPA value ranges.

Detailed Search Results for Confined Feeding Operations (CFOs) in Wheatland County
(Information presented on Map 7, Appendix B)

Rural - ATS	Code	Description	Notes
SE-6-25-19-4	974	INDUSTRIAL / COMMERCIAL SITE:	IND.
NE-34-27-19-4	974	INDUSTRIAL / COMMERCIAL SITE:	IND.
SW-5-26-17-4	970	INTENSIVE HOG OPERATION:	
NE-7-22-20-4	970	INTENSIVE HOG OPERATION:	
SW-8-22-20-4	970	INTENSIVE HOG OPERATION:	
SE-19-22-20-4	970	INTENSIVE HOG OPERATION:	HOG BARN, 4-5000 HEAD SWINE NURSERY
SE-19-22-20-4	970	INTENSIVE HOG OPERATION:	HOG NURSERY BARNS 20,000 HEAD
NE-28-22-20-4	970	INTENSIVE HOG OPERATION:	
NW-8-23-20-4	970	INTENSIVE HOG OPERATION:	HOG, 5-2000 HEAD GROW TO FINISH BARNS
NW-8-23-20-4	970	INTENSIVE HOG OPERATION:	3 LARGE PIG BARNS
SW-14-23-20-4	974	INDUSTRIAL / COMMERCIAL SITE:	IND.
NE-18-23-20-4	973	GREEN HOUSE OPERATION:	
SW-5-25-17-4	970	INTENSIVE HOG OPERATION:	
NE-14-24-20-4	974	INDUSTRIAL / COMMERCIAL SITE:	HUSSAR LAGOON SITE
SE-7-25-20-4	974	INDUSTRIAL / COMMERCIAL SITE:	IND.
SW-17-25-20-4	974	INDUSTRIAL / COMMERCIAL SITE:	IND.
SE-20-27-20-4	974	INDUSTRIAL / COMMERCIAL SITE:	IND.
SW-1-22-21-4	974	INDUSTRIAL / COMMERCIAL SITE:	IND.
NE-8-22-21-4	974	INDUSTRIAL / COMMERCIAL SITE:	COM.
SE-12-22-21-4	972	CHICKEN, DAIRY, HORSE, ETC:	1200 Sheep, Milkers & Sheering
SW-27-22-21-4	973	GREEN HOUSE OPERATION:	BRASSARD GREENHOUSES
NE-16-23-21-4	974	INDUSTRIAL / COMMERCIAL SITE:	IND.
NW-27-23-21-4	970	INTENSIVE HOG OPERATION:	
SE-36-23-21-4	974	INDUSTRIAL / COMMERCIAL SITE:	IND.
SW-5-24-21-4	974	INDUSTRIAL / COMMERCIAL SITE:	IND.
SE-6-24-21-4	970	INTENSIVE HOG OPERATION:	
NE-35-24-21-4	974	INDUSTRIAL / COMMERCIAL SITE:	IND.
NW-8-24-18-4	970	INTENSIVE HOG OPERATION:	HOG FINISHER BARNS 2 X 2000
SE-23-25-21-4	970	INTENSIVE HOG OPERATION:	HOG BARN 66' X 420'
SW-4-27-21-4	974	INDUSTRIAL / COMMERCIAL SITE:	IND.
SW-17-24-18-4	970	INTENSIVE HOG OPERATION:	
NE-6-28-21-4	970	INTENSIVE HOG OPERATION:	
NW-6-28-21-4	970	INTENSIVE HOG OPERATION:	
NE-23-24-18-4	974	INDUSTRIAL / COMMERCIAL SITE:	IND.
SE-30-22-22-4	974	INDUSTRIAL / COMMERCIAL SITE:	IND.
NE-34-22-22-4	974	INDUSTRIAL / COMMERCIAL SITE:	IND.
SW-21-23-22-4	974	INDUSTRIAL / COMMERCIAL SITE:	IND.
NE-25-23-22-4	970	INTENSIVE HOG OPERATION:	
NW-26-23-22-4	970	INTENSIVE HOG OPERATION:	PINNACLE
SW-36-23-22-4	974	INDUSTRIAL / COMMERCIAL SITE:	
N -1-24-22-4	974	INDUSTRIAL / COMMERCIAL SITE:	IND. METERING STATION

SE-10-24-22-4	973	GREEN HOUSE OPERATION:	
SW-15-24-22-4	974	INDUSTRIAL / COMMERCIAL SITE:	IND.
NW-34-24-22-4	972	CHICKEN, DAIRY, HORSE, ETC:	10,100 BROILER CHICKEN OPERATION
NW-3-25-22-4	974	INDUSTRIAL / COMMERCIAL SITE:	LAGOON SITE
NW-9-25-22-4	974	INDUSTRIAL / COMMERCIAL SITE:	IND.
NW-12-25-22-4	974	INDUSTRIAL / COMMERCIAL SITE:	
SW-2-26-22-4	970	INTENSIVE HOG OPERATION:	Very Rough Estimate 5,000, 1-Large shop
SW-24-22-23-4	974	INDUSTRIAL / COMMERCIAL SITE:	GLEICHEN LAGOON SITE
NE-8-23-23-4	974	INDUSTRIAL / COMMERCIAL SITE:	IND.
SE-14-23-23-4	971	FEEDLOT OPERATION:	
NE-27-23-23-4	974	INDUSTRIAL / COMMERCIAL SITE:	IND.
SW-30-23-23-4	974	INDUSTRIAL / COMMERCIAL SITE:	IND.
NE-31-23-23-4	973	GREEN HOUSE OPERATION:	
SW-20-25-18-4	970	INTENSIVE HOG OPERATION:	
SE-4-24-23-4	974	INDUSTRIAL / COMMERCIAL SITE:	IND.
SW-19-24-23-4	973	GREEN HOUSE OPERATION:	Abandoned
SW-22-24-23-4	972	CHICKEN, DAIRY, HORSE, ETC:	CHICKENS 3 LARGE BARNS
SW-16-25-23-4	974	INDUSTRIAL / COMMERCIAL SITE:	IND.
SW-20-25-23-4	970	INTENSIVE HOG OPERATION:	
NE-22-25-23-4	974	INDUSTRIAL / COMMERCIAL SITE:	IND.
NW-27-25-23-4	974	INDUSTRIAL / COMMERCIAL SITE:	
SE-28-25-23-4	973	GREEN HOUSE OPERATION:	
NE-31-26-23-4	974	INDUSTRIAL / COMMERCIAL SITE:	IND.
NW-13-27-23-4	970	INTENSIVE HOG OPERATION:	
NW-13-27-23-4	970	INTENSIVE HOG OPERATION:	
NE-14-27-23-4	970	INTENSIVE HOG OPERATION:	
NE-22-27-23-4	970	INTENSIVE HOG OPERATION:	
NW-22-27-23-4	970	INTENSIVE HOG OPERATION:	
NE-2-28-23-4	971	FEEDLOT OPERATION:	
NE-7-28-23-4	974	INDUSTRIAL / COMMERCIAL SITE:	IND.
NW-29-22-24-4	974	INDUSTRIAL / COMMERCIAL SITE:	IND.
NE-5-23-24-4	971	FEEDLOT OPERATION:	
SE-9-23-24-4	974	INDUSTRIAL / COMMERCIAL SITE:	IND.
SW-9-23-24-4	970	INTENSIVE HOG OPERATION:	
NW-26-23-24-4	971	FEEDLOT OPERATION:	
NE-1-24-24-4	974	INDUSTRIAL / COMMERCIAL SITE:	IND.
NE-3-24-24-4	970	INTENSIVE HOG OPERATION:	
NW-5-24-24-4	973	GREEN HOUSE OPERATION:	
NE-15-24-24-4	974	INDUSTRIAL / COMMERCIAL SITE:	COM.
NE-16-24-24-4	974	INDUSTRIAL / COMMERCIAL SITE:	
SE-23-24-24-4	971	FEEDLOT OPERATION:	
NE-31-25-24-4	974	INDUSTRIAL / COMMERCIAL SITE:	IND.
SW-14-26-24-4	974	INDUSTRIAL / COMMERCIAL SITE:	
NE-16-26-24-4	971	FEEDLOT OPERATION:	
NE-27-26-24-4	974	INDUSTRIAL / COMMERCIAL SITE:	com.
SE-14-27-24-4	970	INTENSIVE HOG OPERATION:	

NW-27-26-18-4	974	INDUSTRIAL / COMMERCIAL SITE:	GRAV
NW-22-27-24-4	972	CHICKEN, DAIRY, HORSE, ETC:	DAIRY
NE-28-26-18-4	974	INDUSTRIAL / COMMERCIAL SITE:	GRAV
NE-28-26-18-4	974	INDUSTRIAL / COMMERCIAL SITE:	GRAV
NW-28-26-18-4	974	INDUSTRIAL / COMMERCIAL SITE:	GRAV
NW-30-27-24-4	974	INDUSTRIAL / COMMERCIAL SITE:	IND.
SW-30-27-24-4	970	INTENSIVE HOG OPERATION:	
SE-28-26-18-4	974	INDUSTRIAL / COMMERCIAL SITE:	GRAV
SW-28-26-18-4	974	INDUSTRIAL / COMMERCIAL SITE:	GRAVEL PIT
NE-33-21-25-4	974	INDUSTRIAL / COMMERCIAL SITE:	GRAV.
SW-3-22-25-4	974	INDUSTRIAL / COMMERCIAL SITE:	IND.
NW-5-22-25-4	971	FEEDLOT OPERATION:	
NW-6-22-25-4	974	INDUSTRIAL / COMMERCIAL SITE:	LAGOON
NW-10-22-25-4	972	CHICKEN, DAIRY, HORSE, ETC:	QUALITY DAIRY FARM LTD
NW-15-22-25-4	972	CHICKEN, DAIRY, HORSE, ETC:	CHICKENS & TURKEYS
SE-33-26-18-4	974	INDUSTRIAL / COMMERCIAL SITE:	GRAVEL PIT
SW-18-22-25-4	974	INDUSTRIAL / COMMERCIAL SITE:	IND.
SE-19-22-25-4	971	FEEDLOT OPERATION:	
NE-21-22-25-4	974	INDUSTRIAL / COMMERCIAL SITE:	IND.
SE-23-22-25-4	971	FEEDLOT OPERATION:	STRANGEMUIR FARMS
NE-33-22-25-4	971	FEEDLOT OPERATION:	3L RANCHES
SW-33-22-25-4	974	INDUSTRIAL / COMMERCIAL SITE:	COM.
NE-36-26-18-4	974	INDUSTRIAL / COMMERCIAL SITE:	IND.
SW-36-22-25-4	972	CHICKEN, DAIRY, HORSE, ETC:	HORSES
NW-15-23-25-4	973	GREEN HOUSE OPERATION:	
NE-27-23-25-4	974	INDUSTRIAL / COMMERCIAL SITE:	COM.
SW-2-24-25-4	971	FEEDLOT OPERATION:	
NW-3-24-25-4	971	FEEDLOT OPERATION:	WESTREN FEEDLOTS
SE-4-24-25-4	974	INDUSTRIAL / COMMERCIAL SITE:	COM.
SE-16-24-25-4	974	INDUSTRIAL / COMMERCIAL SITE:	AUCTION MART
SW-16-24-25-4	974	INDUSTRIAL / COMMERCIAL SITE:	IND.
NW-22-24-25-4	974	INDUSTRIAL / COMMERCIAL SITE:	WATER TREATMENT
NE-27-24-25-4	974	INDUSTRIAL / COMMERCIAL SITE:	IND.
SE-3-25-25-4	971	FEEDLOT OPERATION:	
SE-27-25-25-4	971	FEEDLOT OPERATION:	
SW-27-25-25-4	971	FEEDLOT OPERATION:	
SE-30-25-25-4	971	FEEDLOT OPERATION:	
NE-33-25-25-4	974	INDUSTRIAL / COMMERCIAL SITE:	IND.
NE-19-26-25-4	970	INTENSIVE HOG OPERATION:	
NE-32-21-26-4	971	FEEDLOT OPERATION:	
NE-33-21-26-4	971	FEEDLOT OPERATION:	FEEDLOT 4800 HEAD
SW-8-22-26-4	974	INDUSTRIAL / COMMERCIAL SITE:	IND
S -9-22-26-4	974	INDUSTRIAL / COMMERCIAL SITE:	COM.
SW-10-22-26-4	974	INDUSTRIAL / COMMERCIAL SITE:	IND.
SW-11-22-26-4	974	INDUSTRIAL / COMMERCIAL SITE:	IND.
SE-16-22-26-4	974	INDUSTRIAL / COMMERCIAL SITE:	IND
NE-24-22-26-4	974	INDUSTRIAL / COMMERCIAL SITE:	SPRAY AIR
SE-2-23-26-4	971	FEEDLOT OPERATION:	

NW-6-24-26-4	974	INDUSTRIAL / COMMERCIAL SITE:	AIRPORT
SE-9-24-26-4	972	CHICKEN, DAIRY, HORSE, ETC:	CHICKEN BARNS
NE-10-24-26-4	972	CHICKEN, DAIRY, HORSE, ETC:	CHICKEN
NE-10-24-26-4	972	CHICKEN, DAIRY, HORSE, ETC:	CHICKENS
NW-10-24-26-4	970	INTENSIVE HOG OPERATION:	
NW-10-24-26-4	972	CHICKEN, DAIRY, HORSE, ETC:	CHICKENS
SW-10-24-26-4	970	INTENSIVE HOG OPERATION:	
SW-15-24-26-4	972	CHICKEN, DAIRY, HORSE, ETC:	COUNTRY LANE FARMS LTD.POULTRY BARN
NE-17-24-26-4	974	INDUSTRIAL / COMMERCIAL SITE:	IND.
NE-23-24-26-4	970	INTENSIVE HOG OPERATION:	MARTIN REGEHR SWINE PRODUCTION HOG ,SOWS
SE-23-24-26-4	971	FEEDLOT OPERATION:	
NW-26-24-26-4	974	INDUSTRIAL / COMMERCIAL SITE:	IND.
SW-27-24-26-4	972	CHICKEN, DAIRY, HORSE, ETC:	SMALL EQUESTRIAN OPERATION
1 -SE-18-25-17-4	974	INDUSTRIAL / COMMERCIAL SITE:	IND.
14-NW-12-26-19-4	974	INDUSTRIAL / COMMERCIAL SITE:	IND.
5 -SW-17-27-19-4	974	INDUSTRIAL / COMMERCIAL SITE:	IND.
13-NW-36-24-21-4	974	INDUSTRIAL / COMMERCIAL SITE:	IND
2 -SE-1-27-21-4	974	INDUSTRIAL / COMMERCIAL SITE:	IND.
NW-36-24-26-4	973	GREEN HOUSE OPERATION:	
16-NE-22-22-23-4	974	INDUSTRIAL / COMMERCIAL SITE:	Compressor Site
12-NW-19-27-24-4	974	INDUSTRIAL / COMMERCIAL SITE:	IND.
3 -SW-5-28-24-4	974	INDUSTRIAL / COMMERCIAL SITE:	IND.
NW-5-22-26-4	974	INDUSTRIAL / COMMERCIAL SITE:	IND.
N -6-22-26-4	974	INDUSTRIAL / COMMERCIAL SITE:	IND.
SW-8-25-26-4	974	INDUSTRIAL / COMMERCIAL SITE:	STATION GROUNDS
NE-9-25-26-4	973	GREEN HOUSE OPERATION:	HAUS TREE FARM
SE-27-25-26-4	973	GREEN HOUSE OPERATION:	
NE-11-24-19-4	970	INTENSIVE HOG OPERATION:	
Category 4 - Minimum Urban Distance Separation	Category 3 - Minimum Suburban Distance Separation		
1850	1150		
1800	1150		
1900	1200		

Oil and Gas Activity

The following table provides a complete list of information for oil and gas activity (and infrastructure) by community.

Oil and Gas Activity by Community (within a 1 km radius)

Ardenode	<u>Quantity - 25</u> Type – Gas (6), Unknown (19) Status - Drilled & cased (1), Flowing (13), Abandoned (2), Unknown (9)	<u>Quantity - 11</u> Type – Natural Gas (11) Status – Operating (11)
Carseland	<u>Quantity - 47</u> Type – Water (7), Crude Oil (27), Gas (4), Unknown (9) Status – Drilled & cased (2), Pumping (8), Flowing (4), Suspended (8), Abandoned (18), Unknown (7)	<u>Quantity - 93</u> Type – Fresh water (9), Salt water (21), Natural gas (20), Oil well effluent (43) Status – Operating (66), Discontinued (16), Abandoned (11)
Chancellor	<u>Quantity - 13</u> Type – Gas (7), Crude oil (1), Unknown (5) Status – Drilled & cased (1), Flowing (5), Suspended (1), Abandoned (5), Unknown (1)	<u>Quantity - 23</u> Type – Crude Oil (5), Natural Gas (10), Oil well effluent (6), HVP products (2) Status – Operating (12), Discontinued (6), Abandoned (5)
Cheadle	<u>Quantity - 19</u> Type – Gas (1), Unknown (18) Status – Gas testing (1), Drilled & Cased (1), Flowing (7), Abandoned (4), Unknown (6)	<u>Quantity - 7</u> Type – Natural Gas (7) Status – Operating (7)
Cluny	<u>Quantity - 10</u> Type – Gas (10) Status – Flowing (10)	<u>Quantity - 15</u> Type – Natural Gas (15) Status – Operating (15)
Dalum	<u>Quantity - 28</u> Type – Gas (12), Crude oil (1), Unknown (15) Status – Drilled & cased (2), Flowing (15), Unknown (11)	<u>Quantity - 13</u> Type – Natural Gas (13) Status – Permitted (1), Operating (12)
Eagle Lake	<u>Quantity - 28</u> Type – Unknown (4) Status – Drilled & cased (1), Flowing (1), Abandoned (1), Unknown (1)	<u>Quantity - 13</u> Type – Natural Gas (5) Status – Permitted (4), Operating (1)
Gleichen	<u>Quantity - 20</u> Type – Gas (8), Unknown (12) Status – Flowing (8), Unknown (12)	<u>Quantity - 10</u> Type – Natural Gas (10) Status – Permitted (3), Operating (7)

Lyalta	<u>Quantity – 35</u> Type – Gas (2), Unknown (33) Status – Drilled & Cased (3), Flowing (16), Suspended (2), Abandoned (3), Unknown (11)	<u>Quantity – 22</u> Type – Natural Gas (22) Status – Operating (21), Abandoned (1)
Namaka	<u>Quantity – 4</u> Type – Gas (2), Unknown (2) Status – Drilled & Cased (2), Flowing (2)	<u>Quantity – 4</u> Type – Natural Gas (4) Status – Operating (4)
Nightingale	<u>Quantity – 20</u> Type – Gas (2), Unknown (18) Status – Flowing (10), Abandoned (2), Unknown (8)	<u>Quantity – 18</u> Type – Natural Gas (18) Status – Operating (18)
Redland	<u>Quantity – 20</u> Type – Gas (3), Unknown (5) Status – Flowing (4), Abandoned (1), Unknown (3)	<u>Quantity – 18</u> Type – Natural Gas (5) Status – Operating (5)
Rosebud	<u>Quantity – 26</u> Type – Gas (11), Crude Oil (1), Unknown (14) Status – Drilled & Cased (3), Flowing (12), Abandoned (4), Unknown (7)	<u>Quantity – 15</u> Type – Natural Gas (15) Status – Operating (15)
Speargrass	<u>Quantity – 7</u> Type – Gas (3), Unknown (4) Status – Flowing (3), Unknown (4)	<u>Quantity – 6</u> Type – Fresh Water (3), Natural Gas (3) Status – Operating (6)

Water Licensing

Water licensing agreements are required for withdrawal of both surface water and groundwater in Alberta. All water licensing within the province is regulated by Alberta Environment through the "Water Act

Surface Water

Wheatland County draws surface water from two main watercourses, the Bow River and the Red Deer River. Generally, land south of Serviceberry Creek and Strathmore is located in the Bow River Basin while land north of Serviceberry Creek would draw water from the Red Deer River Basin. Currently, water licensing for the Bow River is closed to application and water licensing for the Red Deer River is temporarily closed and under review. For new development requiring surface water to be permitted, a license would be required. Currently, landowners and developers have two options for acquiring a license:

1. Acquisition through transfer – If a developer/landowner is able to purchase an existing license from a holder and transfer the agreement, they can acquire a license for development. Many surface licenses are currently held by Municipalities, Counties and Irrigation Districts. Alternatively, a County or Municipality is able to increase the amount of water available by "freeing up water". This means that an Irrigation District and the County can reach an agreement in which the County pays all or part of the amount required for the District to convert canals into a piped system. Large amounts of water are lost to evaporation in Alberta due to the arid climate. Burying of the canals reduces water loss by huge sums and this water can then be recovered and used by the County for future development.

Ground Water

Similar to Surface Water use, Groundwater requires licensing. However, licenses are more readily available as long as an applicant is able to prove that their needs do not exceed the capacity of the aquifer they plan to draw from. A household drawing well water for personal use does not require a license as long as the amount drawn does not exceed 1,250m³ per year. A license is required if the water is going to be used for any other use other than personal household use. A license is also required by all Municipalities/Counties that are drawing water for distribution. To acquire a groundwater license, an application must be made under the provincial Water Act and must prove that there is enough water (differential between use and supply).

Potential Future Development by Plan Area

The following table provides a summary of potential future development within Wheatland County.

Proposed Development Type and Size by Community				
<i>Community</i>	<i>Proposed Population</i>	<i>Residential (Units)</i>	<i>Commercial / Industrial</i>	<i>Other</i>
Carseland West ASP (March 2007)	1,403	465 112 (seniors)	Part of Mixed use development	Seniors Facility (112 of the residential units) Church facility (1.65 ac) Green Space (14.83 ac)
Wheatland Industrial Subdivision (Phase 1 approved)	-	-	Industrial/ Commercial General (242 acres)	-
Cheadle ASP (August 2007)	-	45	-	-
Eagle Head ASP	33	11		
Eagle Lake ASP (October 1999)	10,925	4,370	Identified but not quantified	School and playing field sites (10-15ac) Recreation area, campground, wildlife area, boat launch, golf course
Eagle Shores ASP (October 2009)	12,000-15,000	-	-	School site Golf course (215 ac)
The Homesteads at Lyalta ASP (Proposed. Not adopted)	10,000	3,200	Central retail and office district	EMS Fire Services
Lakes of Muirfield ASP (March 2005)	2,100	700	Town Centre Commercial 5.2 acres	Golf course (161 ac) Assisted living Seniors Facility (128 units on 4.5 ac)
Estates of Muirfield (Proposed. June 2009 – First Reading Only)	2,590	Phase 1 – 70 Phases 2 & 3 - unknown	13.6 acres	Fire Hall (0.90 ac) Stables (8.0 ac)
Speargrass ASP (December 1997)	828	276	-	Equestrian Centre (5.39 ac) Open Space and Golf (218.47 ac)
Speargrass II ASP	1,272	424	-	Open Space (83.22 ac)
Oxbow Creek Residential Conceptual Scheme (Proposed)	2,400	800	-	-
Thiessen ASP (February 2007)	-	-	Light Industrial (15.14 acres)	-
West Hwy 1 ASP (March 2006)	-	-	-	-

Population values shown in italics have been determined using a ppdu value of 3.

Current Subdivision Applications

Current subdivision applications (April 2010) in the County are summarized and presented below. The values presented are based on information provided from the County. Submission of subdivision applications can be an indicator of development pressure and as such the communities of Ardenode, Namaka, Nightingale, Rosebud and Lyalta are experiencing the highest current development pressure in the County.

Current Subdivision Applications by Size and Community (April 2010)

Community	Proposed Number of Acres
Ardenode	1 x 5.63ac
	1 x 5.23ac
	1 x 5.18ac
	1 x 3.0ac
Chancellor	-
Cheadle	8 x 1.0ac
Cluny	-
Dalum	-
Gleichen	-
Namaka	1 x 3.0ac
	1 x 10.21ac
	1 x 5.0ac
	1 x 5.13ac
	2 x 5.0ac
Nightingale	3 x 1.0ac
	3 x 1.0ac
Redland	-
Rosebud	5 x 2.0ac
Carseland	-
Eagle Lake subdivision	1 x 5.0ac
	1 x 6.38ac
Speargrass	4.0ac
Lyalta	65 x 1.0ac

Subdivision applications are based on permit approvals recorded by Wheatland County between January 2010 and April 2010.

APPENDIX G - DETAILED EVALUATION RESULTS

REGIONAL GROWTH MANAGEMENT STRATEGY

A numerical rating system was used to assess and rank each community's suitability for future growth. The numerical rating system included three (3) categories – No/Moderate Limitations for Future Growth, Future Growth Potential Unknown, and Moderate/Severe Limitations for Future Growth. Refer below for information on evaluation metrics.

Evaluation Rating System

Definition	There are No/Moderate Limitations for Future Growth; Suitable; Yes.	Future Growth potential unknown. Further analysis is required before a decision can be made.	Moderately Severe/Very Severe Limitations for Future Growth; Not Suitable; No.
Points Awarded	4	2	1

A weighting factor was assigned to each Theme Area as part of the numerical rating system. A higher weighting factor will be assigned to ***Agriculture, Developer Interest, Public Participation and Water*** based on information received from County Council on September 14, 2010 and public participation sessions. Municipal servicing focuses on the cost of supplying various infrastructure services.

Weighting Factor by Theme Area

Theme Area	Weighting Factor
<i>Supporting Policy</i>	10
<i>Public Participation</i>	20
<i>Agriculture</i>	30
<i>Confined Feeding Operations</i>	10
<i>Community Development</i>	10
<i>Transportation</i>	10
<i>Infrastructure</i>	10
<i>Natural Environment</i>	10
<i>Water</i>	20
<i>Developer Interest</i>	30
<i>Proximity</i>	10

The total point score for each community was determined by multiplying each theme area weighting factor by the points awarded to each community for a particular theme area. Refer below for an example of the numerical rating system and total point score tally.

Total Point Score Example

<i>Theme Area</i>	<i>Weighting Factor</i>	<i>Points Awarded to Community "A"</i>	<i>Total</i>
<i>Supporting Policy</i>	10	<i>4 points</i>	(10 x 4 =) 40
<i>Public Participation</i>	20	<i>1 point</i>	(20 x 1 =) 20
<i>TOTAL POINTS</i>			60

Total point scores were tallied for all communities. A community's total point score which falls within the 70 – 100% percentile was selected for the fiscal impact analysis completed in Appendix H. The final results of the evaluation, total point score, and ranking can be seen in the following table.

Theme Area	Weighting Factor	Ardenode		Carseland		Chancellor		Cheadle		Cluny		Dalum		Eagle Lake		Gleichen		Lyalta		Namaka		Nightingale		Redland		Rosebud		Speargrass	
Supporting Policy	10	1	10	4	40	1	10	4	40	4	40	1	10	4	40	4	40	4	40	4	40	1	10	1	10	4	40	4	40
Public Participation	20	1	20	4	80	1	20	1	20	1	20	1	20	2	40	1	20	4	80	1	20	1	20	2	40	4	80	2	40
Agriculture	30	2	60	1	30	1	30	4	120	2	60	4	120	4	120	2	60	1	30	2	60	2	60	2	60	2	60	4	120
CFO's	10	1	10	4	40	4	40	2	20	4	40	4	40	4	40	4	40	4	40	2	20	4	40	4	40	4	40	1	10
Community Development	10	1	10	4	40	1	10	1	10	1	10	1	10	1	10	4	40	1	10	1	10	1	10	1	10	4	40	1	10
Transportation	10	1	10	4	40	1	10	1	10	4	40	1	10	1	10	4	40	1	10	1	10	1	10	1	10	4	40	4	40
Infrastructure - wastewater	10	1	10	4	40	1	10	1	10	1	10	1	10	1	10	4	40	1	10	1	10	1	10	1	10	2	20	4	40
Natural Environment	10	4	40	4	40	4	40	4	40	4	40	4	40	1	10	4	40	4	40	1	10	4	40	1	10	1	10	1	10
Water - groundwater/WID	20	4	80	2	40	1	20	1	20	4	80	1	20	4	80	4	80	2	40	4	80	1	20	2	40	1	20	4	80
Developer Interest	30	2	60	2	60	1	30	2	60	2	60	1	30	2	60	1	30	2	60	2	60	2	60	2	60	2	60	4	120
Proximity	10	4	40	4	40	1	10	4	40	1	10	4	40	4	40	1	10	4	40	4	40	4	40	4	40	4	40	4	40
TOTAL SCORE		350		490		230		390		410		350		460		440		400		360		320		330		450		550	
Numerical Ranking		10		2		13		8		6		10		3		5		7		9		12		11		4		1	
Percentile Ranking		55%		77%		36%		61%		64%		55%		72%		69%		63%		56%		50%		52%		70%		86%	

Rating System Interpretation and Limitations

Theme Area	Key Findings
Supporting Policy	<ul style="list-style-type: none"> Communities identified as growth nodes within the Wheatland County Municipal Development Plan were given a 'Go' for development.
Public Participation	<ul style="list-style-type: none"> Communities that received the greatest support, ranking within the top four for two (2) out of three (3) land uses (residential, commercial, or industrial) given a 'Go'.
Agriculture (including Confined Feeding Operation)	<ul style="list-style-type: none"> Communities with the greatest limitations for agricultural uses based on soil class were given a 'Go' for development. Communities that did not fall within the minimum distance separation for at least one (1) Confined feeding operation (CFO) were given a 'Go' for development. All results on soils map regarding limitation to agricultural uses based on soil type/class are provided by the province on a regional and province wide scale. Additional assessment will be required at the ASP/development level and should be assessed on a case-by-case basis by subject property as other factors may influence the development potential of the land. All data provided on the CFO map is accurate to May 2010. However, the CFO map is not inclusive as there is the possibility that certain CFOs have not been registered with the County and/or the province. Additionally, minimum distance separation values are median based on CFO type and are thus a generalized number. Additional assessment will be required at the ASP/development level and should be assessed on a case-by-case basis by subject property as other factors may influence the development potential of the land.
Community Development	<ul style="list-style-type: none"> Communities that contained a school and other social infrastructure were considered 'Go' for development. Social infrastructure includes the following facilities: schools, community halls, recreation facilities and amenities, historical and cultural facilities, and post offices.
Transportation	<ul style="list-style-type: none"> Suitability was based on communities which appeared to have the best road system inventory within the County.
Infrastructure	<ul style="list-style-type: none"> Only communities which have existing treatment facilities (wastewater) with extra capacity were given a 'Go'. Communities with existing facilities that were at capacity were given a 'proceed with caution'.
Natural Environment	<ul style="list-style-type: none"> Communities that were not identified as being within a 'Highly Suitable Habitat (ranking 1-3) were given a 'Go' for development This data is provided by quarter section. Additional assessment will be required at the ASP/development level and should be assessed on a case-by-case basis by subject property as other factors may influence the development potential of the land.
Water	<ul style="list-style-type: none"> All communities have the potential for groundwater. What is affected is the number of wells required to draw enough water to support growth. Therefore groundwater is not a limiting factor to growth but it is a limiting factor to the amount and density of growth, due to of the number of wells, the distance that would be required between them and the community (therefore the distance to move the water through pipe). Therefore, areas with more available water could have higher capacity wells and draw more water from one location than communities with lower water availability. Communities which are within the supply area of a WID are considered appropriate for development. This combined with the availability of groundwater within each community determines whether the community is considered a 'go' for development.
Developer Interest	<ul style="list-style-type: none"> Only communities with the highest number of development permits approved were given a 'Go' for development.
Proximity	<ul style="list-style-type: none"> Communities located near (approximately 40 km drive or 30 minutes) an urban centre, town or city were given a 'go' for development.