# County of Vermilion River

## Regional Growth Management Strategy

Prepared by

**Dillon Consulting Limited**

## FINAL REPORT

July 2013

# Executive Summary

Growth can be an exciting but tumultuous experience for predominantly rural municipalities such as the County of Vermilion River. On one hand, the County benefits from an expanding economy, an increasing tax base, and more vibrant communities. On the other hand, the County must contend with a series of challenges including meeting future demands for services and environmental protection. The Future Growth Concept, shown on Map 1, shows how the County can support a projected population of up to 14,500 residents by 2052, in keeping with the County's goals of fiscal, environmental and social sustainability.

### 1. Employment Growth

Commercial and industrial development has been occurring in and around the Lloydminster IDP area, which will eventually be annexed to the City of Lloydminster. The Growth Concept shows expanded highway commercial development and industrial areas around Blackfoot. This will enable the County to develop a sufficient employment tax base in areas which will not be lost to annexation in the future, helping the County to remain financially sustainable and self-sufficient.

### 2. Residential Growth

Residential development activity has historically been, and will continue to be, driven by potential residents that work in urban centres outside or within the County, such as the City of Lloydminster, Town of Vermilion, and Villages of Kitscoty, Marwayne, Dewberry, and Paradise Valley, but choose to reside in a rural setting such as the County. Housing market activity has also been strong in the eastern portion of the County, including around Lloydminster and in Blackfoot.

The growth concept shows how future growth can be accommodated to minimize impacts on valuable farmland without stifling market demand for country residential development. The concept allows for 1/3 of residential growth as rural (country) residential and the other 2/3 of residential growth as urban/suburban/hamlet residential.

### 3. Future Growth Nodes

Both residential and employment development need to be located in appropriate areas. Five key types of development areas are identified on Map 1 to help to accommodate future growth in the County:

1. *Residential Growth Nodes* represent areas which have been designated as the focus for investment for future residential development. These areas are strategically located in close proximity to major transportation corridors, have the current or planned infrastructure base to support future population growth, and/or have historically been a focal point for residential development activity.

2. *Employment Growth Nodes* represent areas which have been designated as the focus for investment for future employment (commercial and industrial) development. These areas are also strategically located in close proximity to major transportation corridors, have the current or planned infrastructure base to support future employment growth, and/or have historically been a focal point for employment development activity.

3. *Rural Community Nodes* represent areas where existing residential and employment development will be maintained; however, conservation design principles should be used in new subdivision proposals to ensure a smaller development footprint. These areas will not be the focus of County investment for future development; however, existing servicing levels will be maintained.

4. *Potential Intermunicipal Development Plan (IDP) Areas* - While the County currently has IDPs with the City of Lloydminster and Town of Vermilion, it does not have any with other Towns or Villages within its borders. To ensure mutually beneficial land uses occur at the borders of neighbouring municipalities, potential Intermunicipal Development Plan (IDP) Areas have been designated for areas where joint planning will be required.

5. *Urban Expansion (Area to be ceded in future annexation)* - The Urban Expansion Areas identified in the Lloydminster IDP are continued in the RGMS. The RGMS does not propose accommodating any future growth within the Urban Expansion Area, as those areas must be developed at urban densities, and will eventually be lost to the City.

## THE ACTION PLAN

The Action Plan (Table 6) identifies how the goals and objectives of RGMS can be achieved. It is structured so that actions are related to each of the three goals and eight objectives. Key recommendations contained in the Action Plan include:

1. *Adopt new or updated statutory plans* –updating the MDP and LUB to incorporate the recommendations of the RGMS.

2. *Develop checklists and development guidelines* – to establish clearer requirements for developers consistent with the goals of the County.

3. *Monitor changes* – to allow the County to periodically compare actual population growth with projections, and to adjust its growth strategy if needed.

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# 1 RGMS OVERVIEW/INTRODUCTION

This Regional Growth Management Strategy (RGMS) has been developed to guide future development in the County of Vermilion River, in a manner that reflects the aspirations of residents, landowners, and other stakeholders. A Vision developed for the County's Strategic and Sustainability Plans to 2018 is '*A sustainable, vibrant and diversified community with opportunities for all*'. This vision has laid the groundwork for the RGMS.

As the County grows and develops, the number of factors that influence growth is growing in number and complexity. Although primarily an agricultural area, the region is experiencing increased oil and gas activity, which has in turn created other business and employment opportunities that are affecting land and infrastructure needs in the County.

In July 2012, the County retained Dillon Consulting Limited to review background documents, assess the County's current situation, consider relevant best practices from other municipalities in Alberta and across Canada, and to draft the RGMS.

## 1.1 Purpose and Objectives

The purpose of the RGMS is to identify potential growth, recommend areas where new development to support growth should be directed, and to provide a means of monitoring change over time. The objective of the RGMS is to help the County manage growth so that it can achieve its future vision.

While the vision, regional goals, and supporting policies provided by the RGMS will be unique to the County, the RGMS must also be consistent with applicable statutory and strategic plans and consider the natural capacity of the land. The ultimate goal is to encourage the development of high quality living environments appropriately integrated with the natural environment, agriculture, oil and gas operations, and existing development.

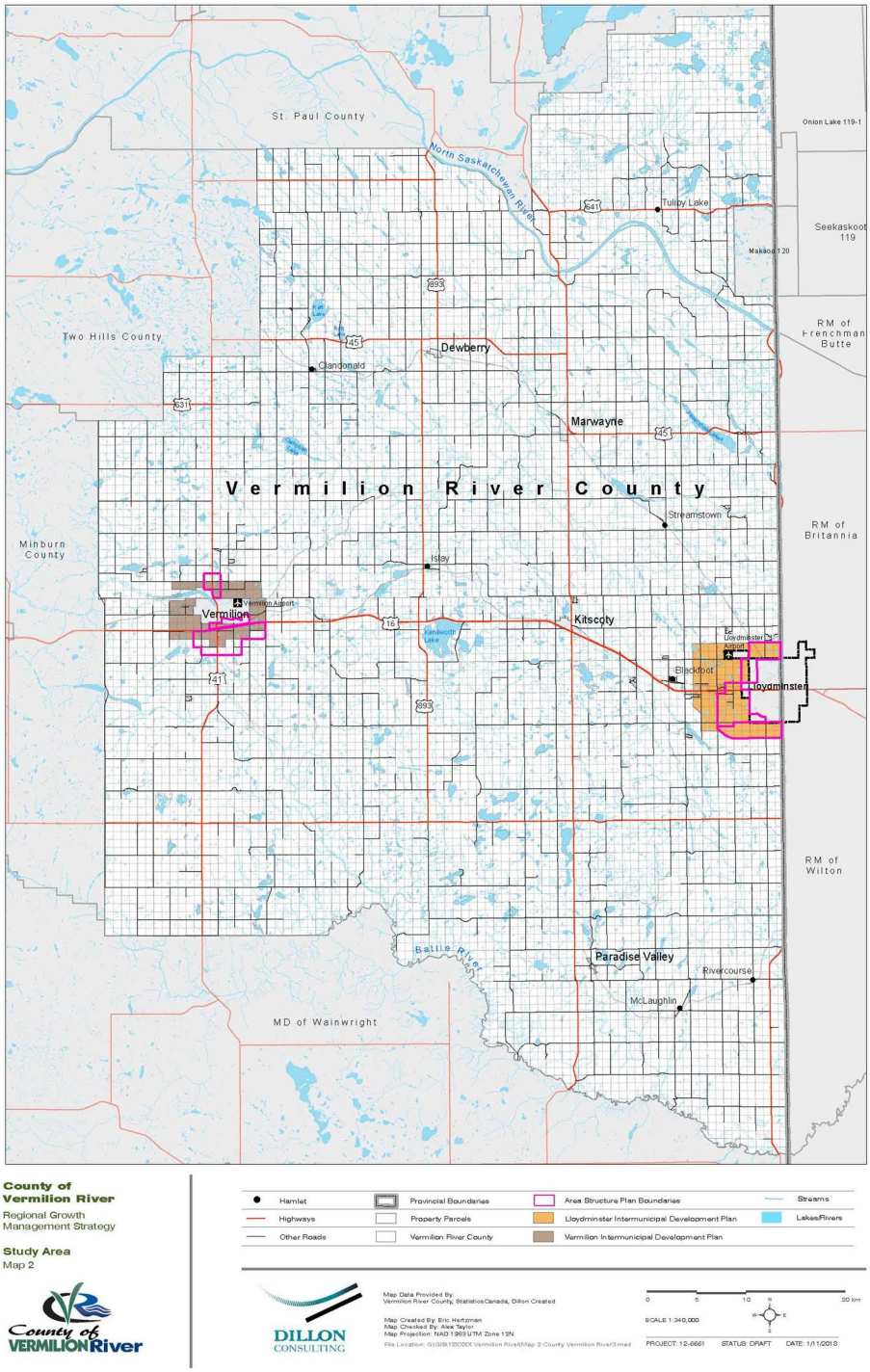
While completely accurate predictions of future growth conditions can never be guaranteed, the RGMS gives the County the background and flexibility to prepare it for an array of probable futures. The RGMS considers what will drive growth in the County, and what impacts that growth may have. Factors to be considered include:

- Residents: age, income, population, population growth;
- Built Form: hamlet locations and makeup, homeownership, infrastructure;
- Land Use: farmland, residential, industrial, and natural resource locations;
- Servicing: municipal water and wastewater servicing, emergency response rates;
- Environment: wildlife populations, sensitive areas, soil types, groundwater; and
- Policy: County, regional, and provincial land use planning documents.

## 1.2 Study Area

The County of Vermilion River is located in Northeast Alberta, bordering on Saskatchewan, just west of the City of Lloydminster. The Study Area shown on Map 2 includes a total land area of approximately 550,000 ha.

Map 2 - Study Area (full size map available in Appendix A)



# 2 WHERE ARE WE NOW? A PORTRAIT OF THE COUNTY

A Situational Analysis of the County completed in February 2013, assembled background data and identified opportunities and constraints to future growth in the County. The final Situational Analysis report is provided as Appendix A. While the Situational Analysis examined a great number of different natural and human aspects of the County, this section of the RGMS presents the key findings for:

- Current conditions in the county that will most likely to change as a result of growth;
- Current conditions that will be required to change as a result of growth;
- Current conditions where there is potential to accommodate growth; and
- Valued aspects of the county that will be vulnerable to change and will need to be protected.

## 2.1 Communities

There are 7 hamlets, 17 residential subdivisions, and 5 industrial subdivisions in the County, shown in Table 1.

Table 1: Vermilion River Hamlets and Subdivisions

| | | |
|---|---|---|
| Hamlets | 1. Blackfoot<br>2. Clandonald<br>3. Islay<br>4. McLaughlin | 5. Rivercourse<br>6. Streamstown<br>7. Tulliby Lake |
| Residential Subdivisions | 1. Brennan Park<br>2. Clover View Acres<br>3. Creekside Estates<br>4. Country Air Estates<br>5. Deerfoot Estates<br>6. Denwood Acres<br>7. Grandview Estates<br>8. Hawkstone Estates<br>9. Horizonview Acres | 10. Indian Lake Meadows<br>11. Lakeview Estates<br>12. Morning Gold Estates<br>13. Ravine View<br>14. Robinwood Acres<br>15. Sandpiper Estates<br>16. Silver Willow Estates<br>17. Willow Creek |
| Industrial Subdivisions | 1. County Energy Park<br>2. Devonia Holdings<br>3. Kam's Industrial Park | 4. Reinhart Property Management<br>5. Industrial Park at NE/NW 33-49-1-W4 (*yet to be named*) |

There are also 6 incorporated urban centres located within or adjacent to the County boundaries including:

- The Villages of Dewberry, Kitscoty, Marwayne and Paradise Valley;
- The Town of Vermilion; and
- The City of Lloydminster.

Each of these communities contributes to the economy and social fabric of the County. The majority of the County population currently lives on farms or in country residential areas, with the remaining County population living in seven Hamlets (see Figure 1). While the Hamlets are home to a smaller percentage of the population, they are the centres for community activities, fire and emergency services.

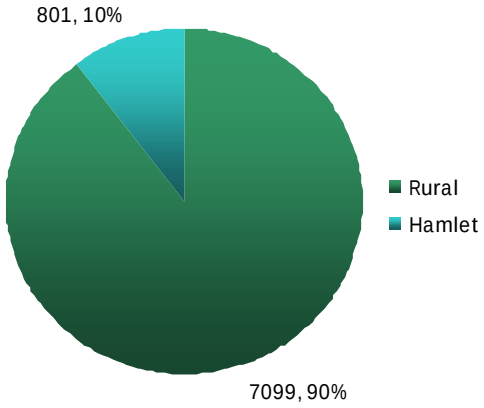



Figure 1: Residential Location Breakdown

### 2.1.1 Population

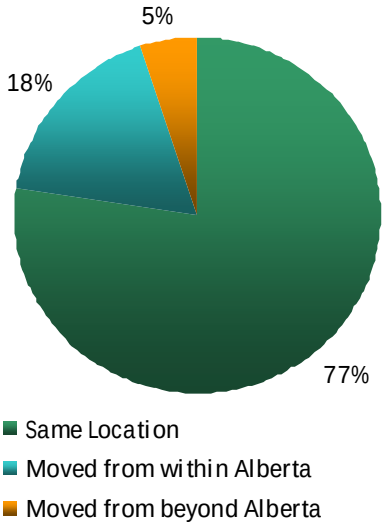



Figure 2: Population Mobility Rates

The most recent federal census was completed in 2011, and preliminary data shows Vermilion River County with a population of 7,900, a steady increase from the previous census. At the same time, the average age of County residents has increased from 37.8 to 38.9.

Population mobility levels have been fairly stable, with less than 23% of residents moving either within or to and from the County (see Figure 2).

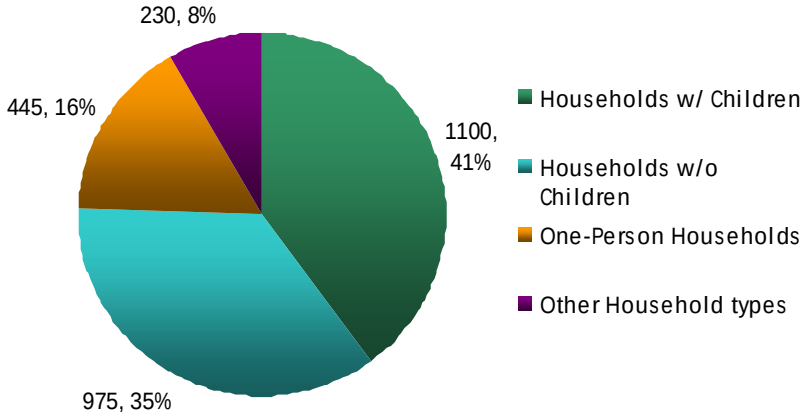



Figure 3: Household Types

### 2.1.2 Income and Employment

As employment data from the most recent federal census (2011) is not yet available, estimates for the current status were developed for this Strategy, based on Statistics Canada data for the County from 2006. As shown in Figure 4, it is estimated that just over half (56%) of the County's workforce works in the County. Data on the amount of jobs in the County does not exist, so these numbers do not include jobs held by residents of other municipalities. There has been significant growth in the County median income from $54,300 to $69,500, while remaining a consistent 5% below the provincial average.

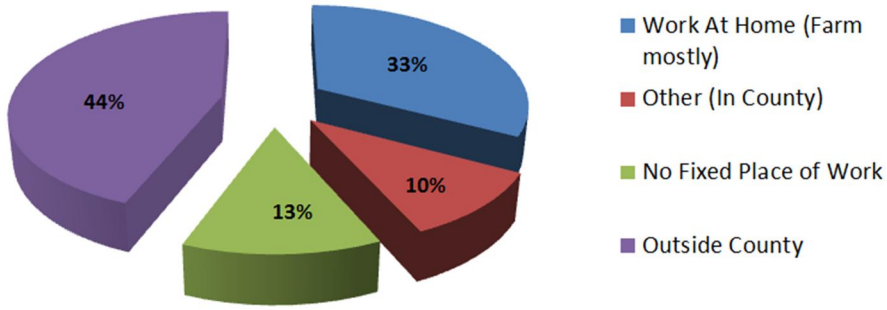



Figure 4: County Workforce – Employment (2011 Est.)

## 2.2 Land Use

Current land use in the County can be divided into six major categories, and the current allocation to each type of land use is shown in Figure 5 below.

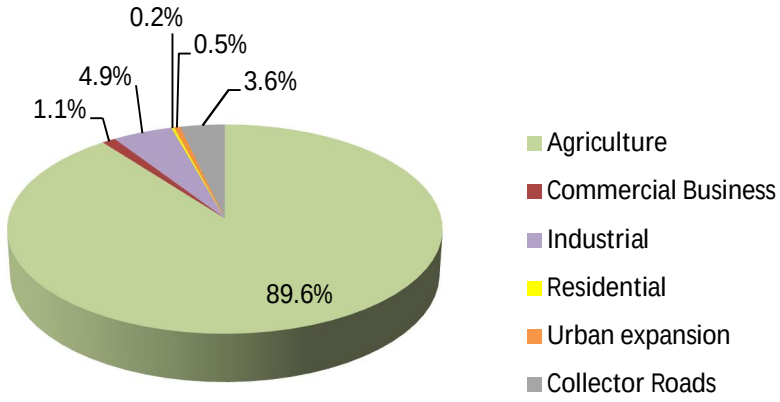



Figure 5: Land Use in the County

Land in the existing IDP areas includes approximately 1.5% of the total area of 550,000 ha (1,359,080 acres).

### 2.2.1 Land Ownership

The vast majority of land within the County is privately owned (88.8%), with the remainder owned by the County or the Crown (see Figure 6). The makeup of private land consists mainly of farmland, with country residential lots distributed throughout. Urban residential and some industrial development are focused in and around the hamlets, Lloydminster, and Vermilion.

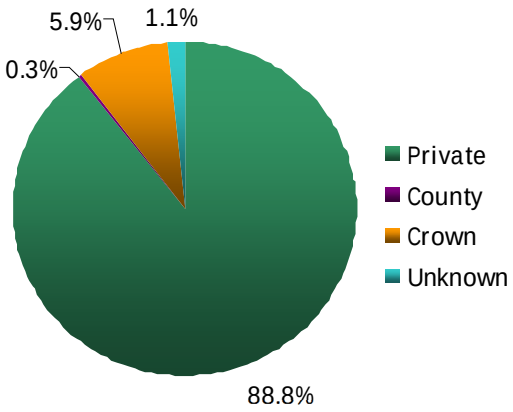



Figure 6: Land Ownership Breakdown

### 2.2.2 Residential Use

Current residential land use represents a small fraction (0.2%) of the total land area of the County. Historically residential development, outside of farm residences, was concentrated in the Hamlets *in* the County and communities *surrounded by* the County, such as the Towns and Villages, and the land required per housing unit was relatively small. More recently Country Residential development has represented the majority of new housing development. Together with a decrease in the number of residents per unit, the County is seeing the conversion of agricultural lands to residential land uses.

### 2.2.3 Agriculture

The County has traditionally been an agricultural area. There is a mix of flat, rolling topography, ideal for farming, mixed with steep valleys. Local soil makeup is well-suited to agriculture with some limitations for agricultural operations as shown in Figure 7.

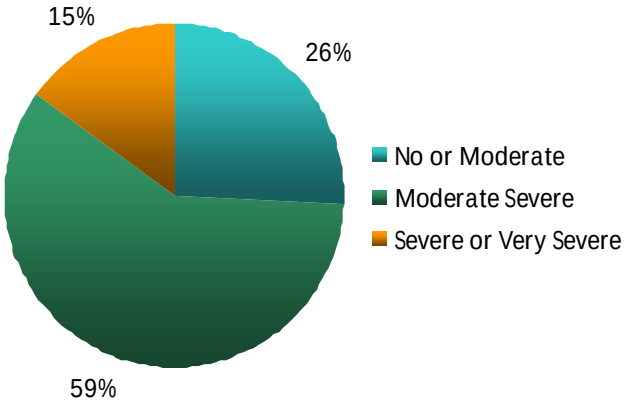



Figure 7: Soil Agricultural Limitations

### 2.2.4 Industrial and Commercial Activities

Oil and gas activities in the County consist primarily of wells and pipelines and are operated by a number of companies. Other industrial and commercial uses in the County include Confined Feeding Operations (CFOs).

## 2.3 Community Infrastructure and Services

Varying types of municipal infrastructure, municipal services and utility services are available within the County, largely dependent on proximity to the larger urban centres.

### 2.3.1 Community Facilities

Community facilities are located throughout the County and include community halls, churches, schools, recreation centres, and cemeteries.

### 2.3.2 Transportation

Transportation within the County consists of a mix of paved and unpaved roads, including Provincial Highway 16. Figure 8 shows the breakdown of County road paving. Industrial activity in the area has increased the cost of road maintenance in recent years.

One active rail line crosses the County, mainly used for freight, and there are also two local airports.

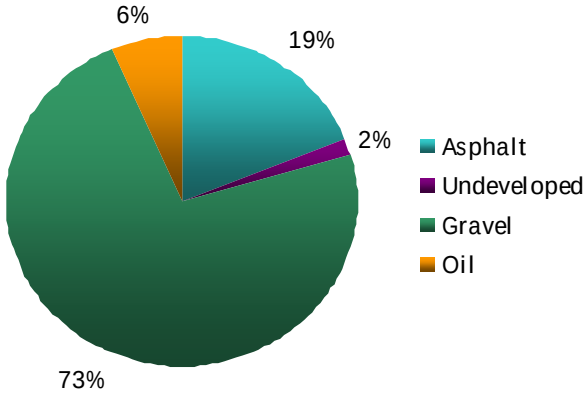



Figure 8: Road Breakdown

### 2.3.3 Water and Wastewater

Piped water services are available in four Hamlets (Blackfoot, Clandonald, Islay, and Mclaughlin). While the remainder of the County uses private groundwater wells. Servicing capacities are shown in Figure 9 by volume of water that can be produced annually, which is estimated to be adequate for growth of up to 300 residents in total. The Alberta Central East Water Corporation is currently tasked with extending piped water services to additional communities. Sanitary services are available in three hamlets (Blackfoot, Clandonald, and Islay with the remainder of the County using private septic systems.). Servicing capacities are shown in Figure 10 and the existing systems have all reached over 78% of the design capacity.

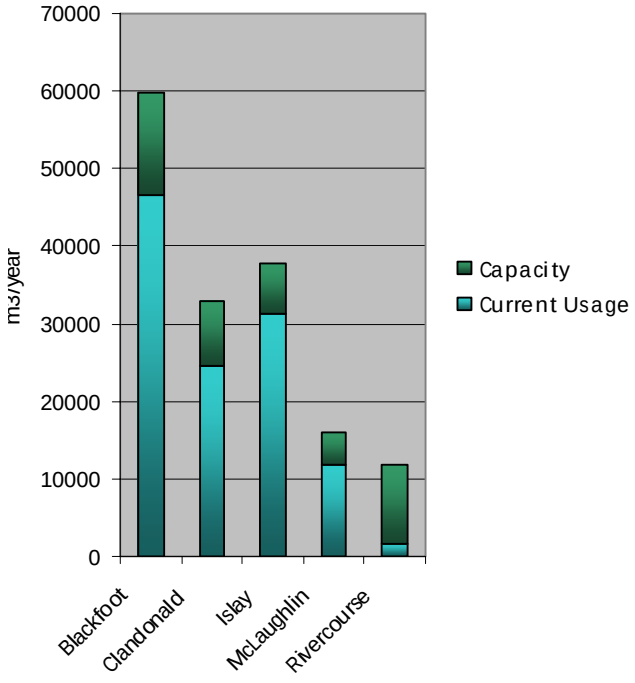



Figure 9: Water Servicing Capacity

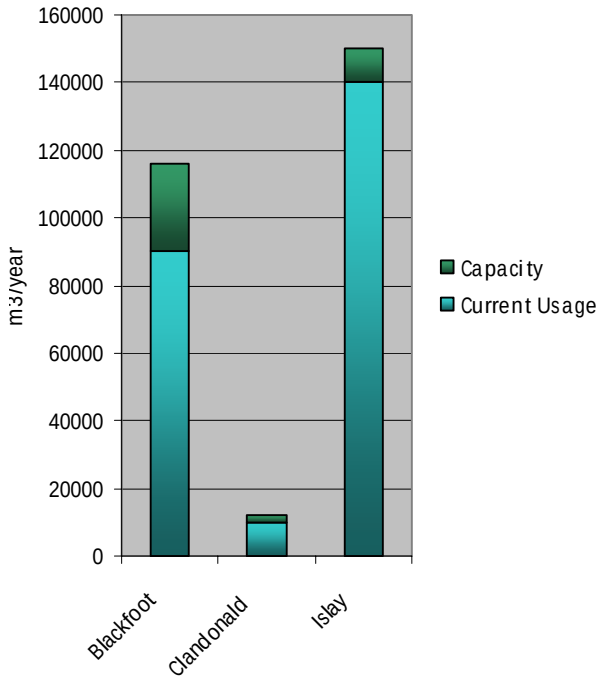



Figure 10: Wastewater Servicing Capacity

### 2.3.4 Stormwater management

A Master Stormwater Management Plan guides all future stormwater management infrastructure development.

### 2.3.5 Solid waste

Other services available in the County include seven solid waste management sites, and landfills and waste transfer stations

### 2.3.6 Fire and Emergency Services

Emergency services (fire and rescue) are dispatched from depots throughout and adjacent to the County. Fire response times are within 6 to 12 minutes to areas immediately surrounding the Hamlets, and longer in more rural areas further from these centres.

### 2.3.7 Utilities

Utility services available in the County include electricity, natural gas, cable and satellite television, land and mobile telephone services, and internet services.

Historical resources, including archaeological, paleontological, Aboriginal, and heritage resources, are identified by the Province, and are located throughout the County.

## 2.4 Natural Environment

The majority of the County has been cultivated to some extent, leaving only isolated pockets of native vegetation. A number of Environmentally Significant Areas (ESAs) have been identified within the County by Provincial government agencies; these consist mainly of upland forested areas, two areas of remnant native grassland, and wetland areas surrounding Kenilworth Lake and a number of small lakes including Raft Lake. The North Saskatchewan River valley has also been identified as an ESA; as it contributes to regional hydrology, critical wildlife and fisheries habitat, sensitive slopes, and native vegetation representative of both the Parkland and Boreal forests. Beyond these designated ESAs, there are a wide range of natural areas that provide valuable habitat to wildlife and may contain rare plants and/or wildlife species.

The County is home to an array of natural areas and wildlife. Two Environmentally Sensitive Areas (ESAs), in addition to Crown reservations and Protected Areas, form 8.1% of the total land within the County, and must be protected from development. Within these protected lands are four distinct sensitive habitat ranges. These ranges are home to 14 avian species (7 at risk), 52 mammal species (10 of conservation concern), and 10 reptile species (2 at risk). There are also four sensitive plant species that are at risk and potentially occur within Vermilion River.

Natural areas are an integral part of the County as they provide habitat for species-at-risk, help regulate the water cycle and provide surface and groundwater for drinking and agricultural purposes, and assist in the formation and stabilization of soils. Wildlife habitat and water production are significant benefits that are provided by certain parcels of land and these benefits have value to all citizens of the County even though they may not be readily apparent.

## 2.5 Water Resources

The majority of County land has good or satisfactory groundwater yields, allowing for an array of future uses (see Figure 11). Regular monitoring of future groundwater well yields is necessary to ensure sustainable use.

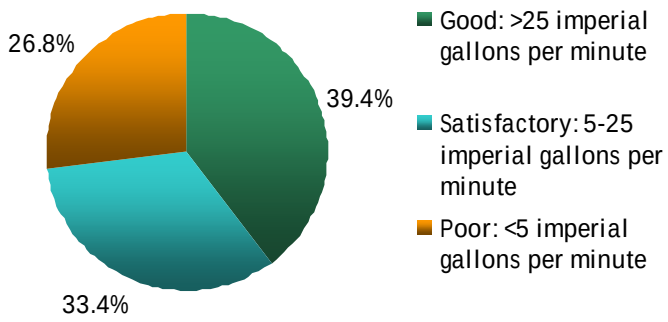



Figure 11: Groundwater Yield

## 2.6 County Finances

The County's finances are stable, with a diversified tax base split between residential and non-residential (e.g., agricultural, commercial, and industrial) assessments, shown in Figure 12. The County residential tax rate is lower than average for a rural Alberta municipality, while its non-residential tax rate is about average. The County's per capita tax assessment is $263,000, compared to the rural Alberta average of $393,400. While below average, this per capita rate is within an acceptable range (in terms of being able to sustain a reasonable level of service).

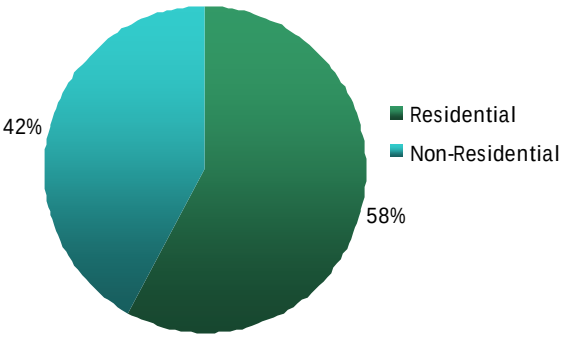



Figure 12: Tax Base Breakdown

## 2.7 Policy Context

The RGMS exists in conjunction with a number of separate documents each with unique visions, principles and desired outcomes, including both County and provincial policies. It is important to ensure alignment and prevent contradictions between relevant documents. Figure 13 shows planning tools that are typically used in Alberta.

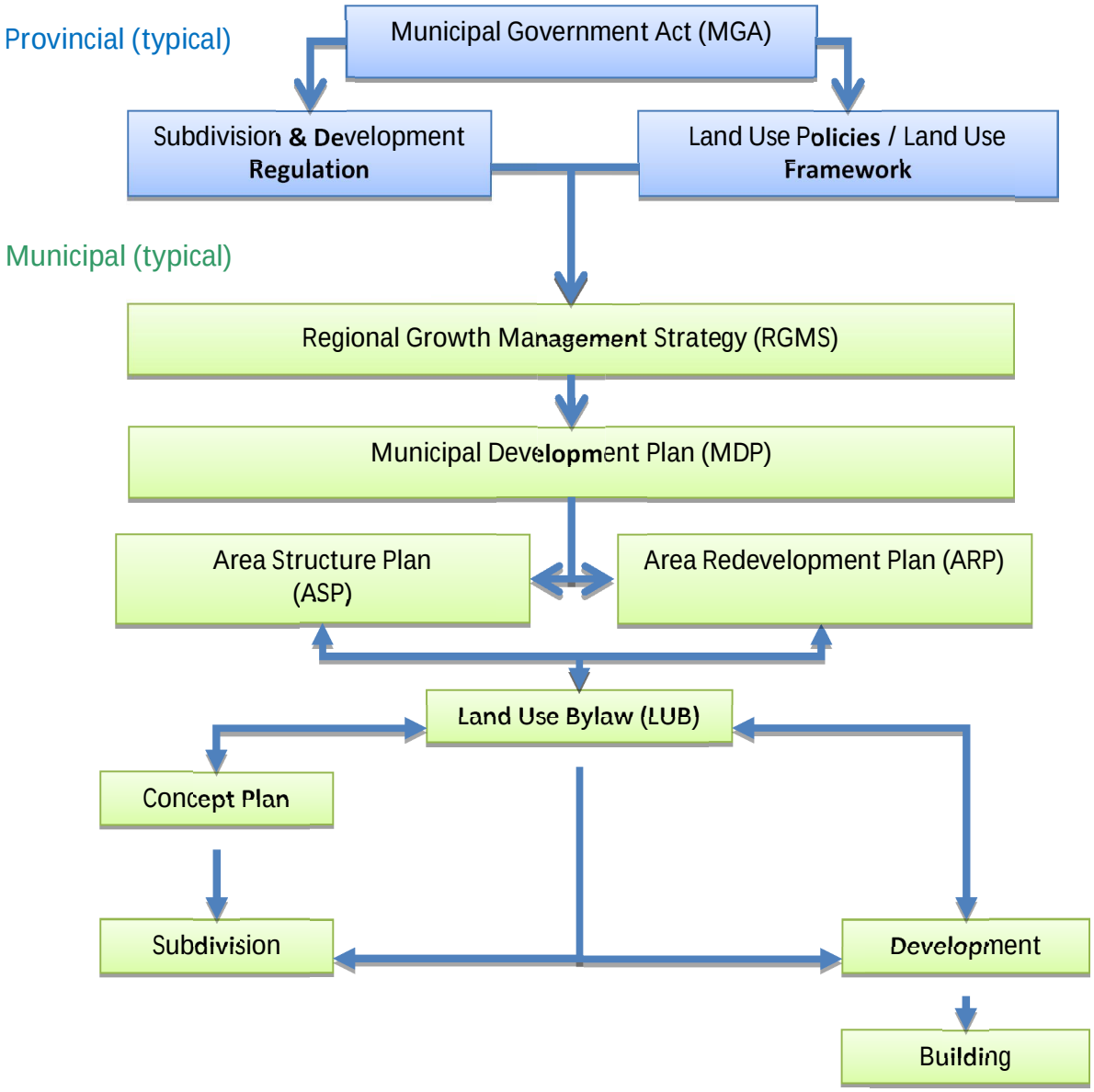



Figure 13: The Planning Hierarchy in Alberta

All Land Use Planning in Alberta is administered under the *Municipal Government Act* (MGA), and the Province provides two documents to provide municipalities with guidance: the Land Use Policies, and the Subdivision and Development Regulation.

The Alberta LUF was created in 2008 to develop regional plans for each of the province's seven watersheds to guide future development. The North Saskatchewan Regional Plan (NSRP) will apply to the County, but it has yet to be developed.

The County's current MDP was approved in 2007, with an understanding that agriculture would continue to be a major economic driver for the County. The goal of the MDP is to protect the rural character of the County from resources and urban-related development. It includes policies on farmland, industrial and resource development, environmental protection, transportation, and the form of urban development. The MDP specifies that urban development within the County must be focused around areas designated for development.

The most recent County Sustainability and Strategic Plans address upcoming challenges for the County including aging rural infrastructure and financial responsibilities. It assumes that demand for housing and industrial uses will continue to grow throughout the region, leading to conflicts with the goals of the current MDP. The Strategic plan identifies six strategies to balance residential and commercial development with agricultural activities. It does not provide for increased commercial and industrial growth.

The County has adopted Inter-municipal Development Plans (IDPs) with the City of Lloydminster (2008) and the Town of Vermilion (2009). Each of these plans set out a framework for a coordinated approach to managing development and attracting economic development. The City of Lloydminster IDP outlines how growth will be managed over a 20-year planning horizon. This IDP assumes a 3% annual population growth rate to support a growing demand within the resource sector. The Town of Vermilion IDP covers all urban reserve land within the Town of Vermilion as well as Policy Areas 1 and 3 of the County Urban Fringe Policy (land identified by the County for future urban development). The majority of the land in this IDP is currently designated agricultural or for agricultural-related use.

# 3 WHAT WILL THE FUTURE BRING?

This section of the Growth Strategy explores the future outlook of the County in the areas of population and employment growth, market demand, and policy change. While historic growth patterns in the County can help estimate what will happen in the future, this section also considers growth trends at the provincial and regional perspective, and provides the County with an idea of the growth that it should be prepared to accommodate over the coming 40 years. To understand how potential future population and employment growth will impact the County, equivalent land demand has been translated from each of the forecasts.

## 3.1 Development Opportunities

The area around the City of Lloydminster, including the County of Vermillion River and other municipalities in the Cold Lake Oil Sands Area, are expected to experience continue growth with the development of the oil sands resources in the area. Energy related employment could increase by as much as 2.5% to 3.0 % over the next 10 years, creating opportunities for various support activities. As the regional economy matures, it is also expected that there will be opportunities to retain more of the economic activity locally within the region.

The County of Vermillion River can be expected to participate in this growth with continued development of its industrial development. The County offers affordable, relatively low-cost industrial space that will continue to be in demand, providing opportunities for light and medium industrial development that is looking to locate in the region. In addition, it can be expected that the County can attract other business and industrial activity that primarily services customers in the City of Lloydminster.

The quality of the regional transportation network and availability of water through the Alberta Central East Water Corporation provides some of the essential serving conditions conducive to accommodating future growth. Access along Highway 16, which is slated for an upgrade, will improve regional mobility and help to create desirable development and location opportunities for businesses and industry which will benefit from highway exposure and access.

## 3.2 Population Growth

Within the greater Lloydminster region, The County of Vermilion River has the potential to attract and accommodate new residential growth and attract business and industrial development. The range of development potential is described using two growth scenarios: a “base” growth forecast and a “high” growth forecast. The “base” growth forecast assumes future growth will be similar to the County's historical growth rates since 2006. The “high” growth forecast assumes that the County would be successful in attracting a larger share of regional growth than it has in the past.

In the "base" growth forecast, the population of the County is projected increase at an annual rate of 1.0%, reaching a population of almost 12,000 by 2052. Bolstered by higher energy resource development in the region, the "high" growth forecast indicates the County's population would increase by 1.5% per year, reaching a population of approximately 14,500 by 2052. These forecasts are shown in Figure 14 below.

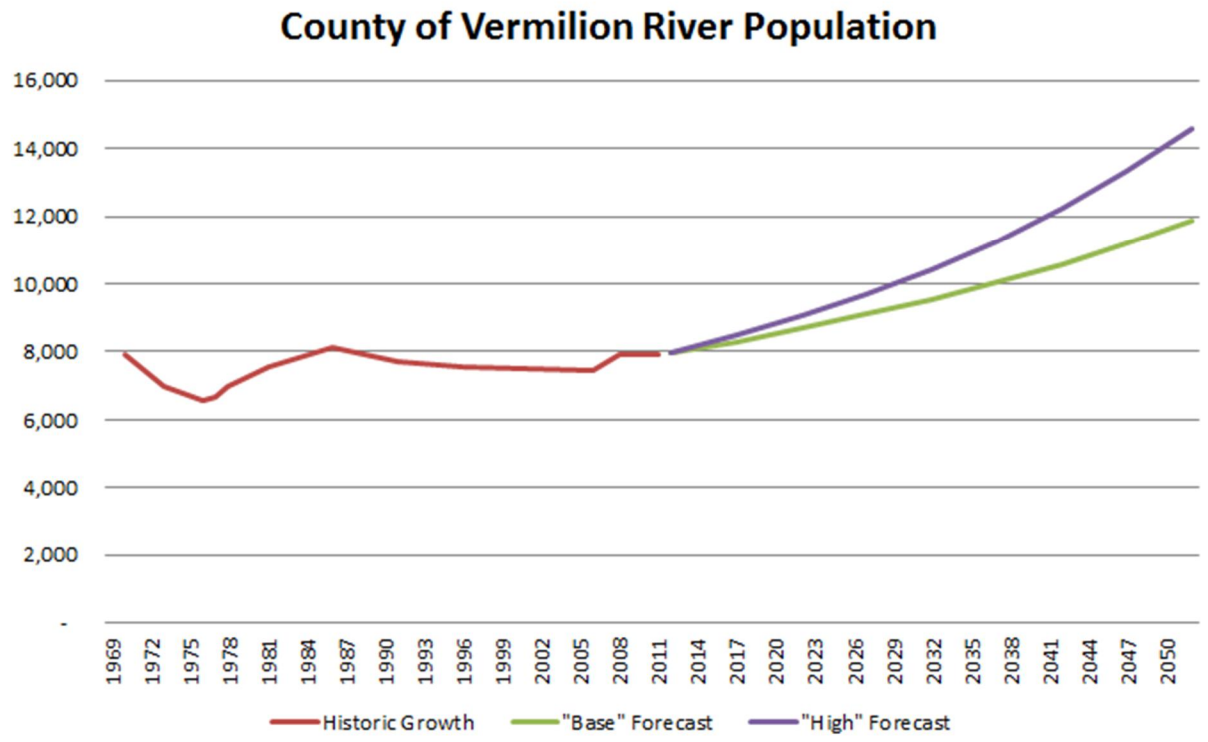



Figure 14: County of Vermilion River – Population Forecasts

### 3.2.1 The "Base" Growth Forecast

The "base" growth forecast projects growth for the County based on the growth achieved between 2006 and 2011. During this period the major driver of population increases was continued development of the oil sands and conventional energy resources.

Assumptions this forecast makes include:

- A continued increase in oil sands production in the region that is consistent with the growth and development achieved between 2006 and 2011.
- A continuation of exploration use of advanced recovery techniques for conventional oil and natural resources in the region. It is also expected that there will be a decline and decommissioning of some wells that will become obsolete in the forecast period.

- An increase in the local regional and sub-regional capture of spin-off activity associated with energy growth.
- The County's share of regional growth and development will continue in a similar pattern to that which has occurred over the past decade.

### 3.2.2 The "High" Growth Forecast

The high growth forecast includes consideration of the increased development opportunities that would exist in the region as a result of an increase in the development and production of oil sands resources.

Assumptions this forecast makes include:

- The opportunity for oil sands development in the region is expected to increase significantly on the basis of both the continued technological improvements making the recovery of energy resources more attractive and prices that allow producers to make significant returns on their investment.
- The higher rate of oil sands activity is expected to accelerate development of business and industrial activity that captures more of these economic benefits in the local regional economy.
- Technology improvements that help improve the economic viability of recovering previously uneconomic conventional oil and gas reserves can result in an increase in the employment base of the County.
- The continued growth and development of Lloydminster will create additional opportunities for the County to host this development that is looking for lower cost development opportunities.

## 3.3 Employment Growth

The County has the potential to attract a relatively higher proportion of the regional jobs than it has historically. With a vision of sustainable growth, Table 2 below shows the employment growth the County will need to see to maintain a balanced tax base (Residential vs. non-Residential assessment). Based on population estimates, non-farm employment in the County will need to increase by about 150% ("base" forecast) to 220% ("high" forecast).

Assumptions this forecast makes include:

- The "Work at home" component (which is mainly farm employment) would remain at the estimated 2011 level.
- Those workers who don't have a fixed location of work (e.g., plumber, electrician, etc.) will also remain constant.
- The "Other" employment category represents all other employment that is associated with business and industrial development, and it is this category that is used to balance the population growth with the needed non-residential development.

Table 2: Future Employment Estimate

| | | 2006 | 2011 (Est.) | 2052 Base | 2052 High |
|---|---|---|---|---|---|
| Workforce (77% of Adults 15+) | | 4,425 | 4,755 | 7,123 | 8,746 |
| In County | Work at home (Farm mostly) | 1,450 | 1,558 | 1,500 | 1,500 |
| | Other | 510 | 500 | 1,237 | 1,594 |
| | No Fixed Place | 510 | 600 | 600 | 600 |
| Outside County | | 1,945 | 2,100 | 3,786 | 5,052 |

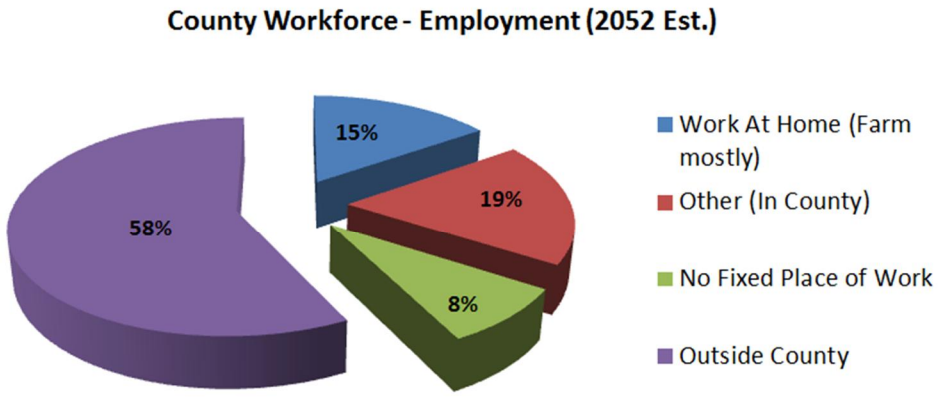



Figure 15: Estimated 2052 Employment Breakdown

## 3.4 Policy Change

During the life of this plan, there will likely be a number of policy changes related to growth and development in both the province as a whole, and the region. Under the Alberta Land use Framework (LUF), the North Saskatchewan Regional Plan (NSRP) is slated for development over the coming decade. Once it is adopted, all County land use policies will need to be consistent with the NSRP. Until the NSRP is developed and adopted, all County land use documents, including the RGMS, should be aligned with the LUF itself.

Specifically, the LUF includes the *Efficient Use of Land* policy, which contemplates five key measures:

- Using Land Efficiently;
- Using Green Technologies;
- Encouraging Higher Density Residential Redevelopment;
- Supporting Development Where Services Already Exist; and
- Planning Land Uses to Reduce the Frequency and Length of Travel through Mixed Use Development.

Other definite policy changes will include updates and reviews to the County Municipal Development Plan (MDP) and Land Use Bylaw (LUB). Both of these documents will be updated based on the Future vision, goal and objectives included in the RGMS.

## 3.5 Future Land Needs

Depending on actual growth and development patterns, the amount of land that will need to be developed for residential, commercial and industrial uses could vary quite significantly.

### 3.5.1 Future Residential Land Needs

The population forecasts provide future population of the County (through natural increase and immigration) to 2052. Using an average household size of 2.8 people (PPH - People Per Household), the County can expect the need to accommodate between 1,414 ("base" forecast) and 2,379 ("high" forecast) new households by 2052.

The number of new households translates into various land demands, depending on the type of housing that is developed. It is likely that these new residents will be accommodated in a variety of housing forms (called the 'housing mix'). Higher density "suburban" style houses require less land per unit than low-density Country Residential housing units.

Figure 16 below shows the range of land areas that would need to be developed at different housing mixes:

1. All new households are low-density Country Residential (CR);
2. *2/3* of new households are low-density Country Residential and *1/3* are higher-density 'urban' style;
3. *1/2* of new households are low-density Country Residential and *1/2* are higher-density 'urban' style; and
4. *1/3* of new households are low-density Country Residential and *2/3* are higher-density 'urban' style.

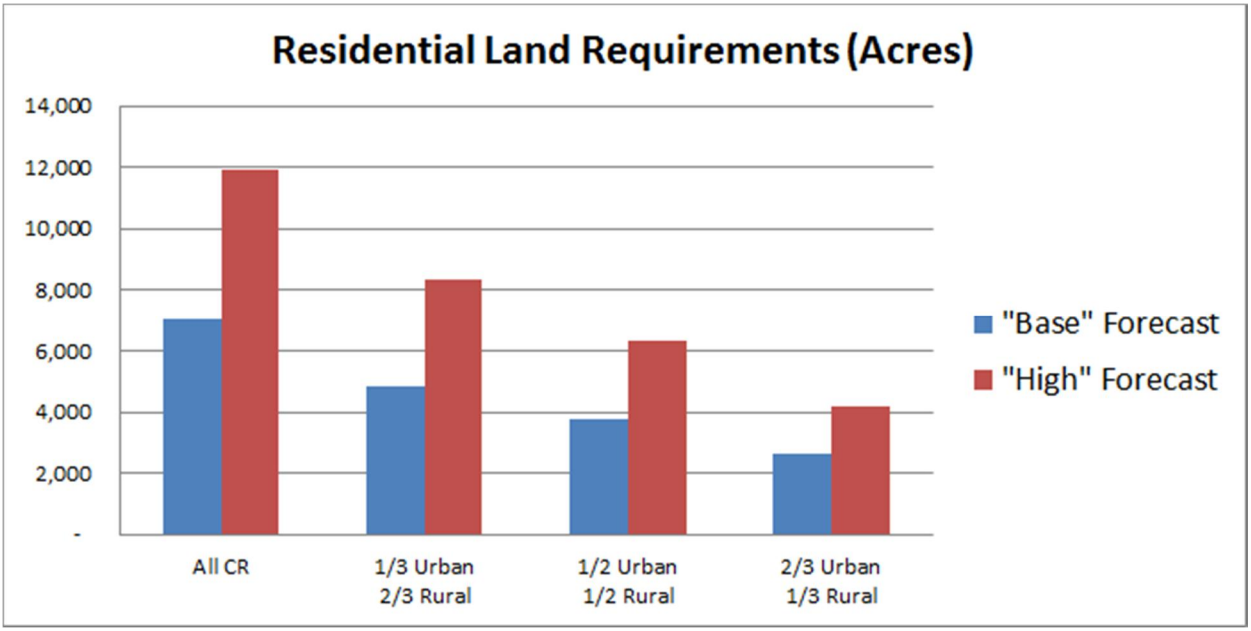



Figure 16: New Residential Land Requirements

Based on the population forecasts, the amount of land that will be needed to accommodate future population growth ranges from a minimum of 2,637 gross acres to a maximum of 11,896 gross acres. As seen in Figure 16, the more new residents that are housed in higher density "urban-style" housing, the less land that will need to be developed. Consequently this will reduce the amount of land that will likely need to be converted from agricultural use.

The following assumptions were used to calculate the residential land requirements:

- Density of "Urban" housing would be 4 Units Per Acre (UPA), (1/4 acre lots) and this type of development in a residential growth node would require an additional 10% Municipal Reserve (MR) dedication (from the gross developable area) and an average of 23% for roads, Public Utility Lots (PULs) and other municipal uses. It does not factor in any Environmental Reserve (ER) that the County may take should development be proposed for an environmental sensitive area.
- Density of "Rural" Country Residential (CR) housing would be 0.2 UPA (5 acre lots), and would not require MR or Roads, PULs, etc. It also does not factor in any Environmental Reserve (ER) that the County may take should development be proposed for an environmental sensitive area. (Net and Gross needs are the same).

These land needs could vary significantly based on the housing mix that is determined by the County's Growth Vision (see Section 4.0 of this Strategy).

### 3.5.2 Future Employment Land Needs

Based on the goal of balancing the residential / non-residential tax assessment, the amount of land that will be needed to accommodate future employment growth ranges from a minimum of 16,785 acres (150% increase from 2012 levels) to a maximum of 24,617 acres (220% increase from 2012 levels).

Figure 17 below compares the current amount of land that is used for residential and employment in the County, with the forecasted minimum (the "base" forecast) and maximum (the "high" forecast) amount of land estimated to be needed by 2052. It also shows the amount of land that will need to be converted from agricultural use to residential or employment (commercial and industrial) use.

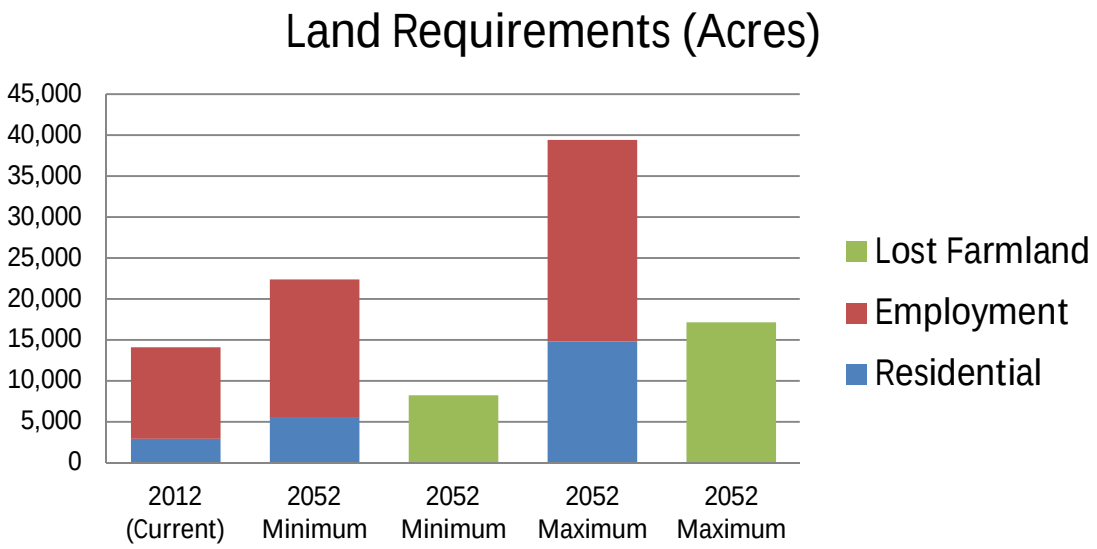



Figure 17: Future Land Requirements

### 3.5.3 Summary of Future Land Needs

Table 3 summarizes the approximate range of total new land supply that would be needed to meet residential and employment land needs.

Table 3: Future Land Needs (New)

| | Residential | Non Residential (Employment) | Total Land Need (Gross Acres |
|---|---|---|---|
| 2052 Minimum Need | 2,637 | 5,595 | 8,232 |
| 2052 Maximum Need | 11,896 | 13,428 | 25,323 |

## 3.6 Future Land Supply

In examining available land in the County, there are only a few areas where policy has already been set for growth areas, including future land use. The Lloydminster and Vermilion Intermunicipal Development Plan (IDP) areas include a significant amount of land that has been slated for future development for a variety of land uses, including residential and employment (commercial and industrial) growth.

The numbers in Table 4 are for illustration purposes only, as they represent total land identified in each of the IDPs; vacancy of that land was not measured as a part of this Strategy.

Table 4: Land Supply in the IDP Areas

| Land Supply (Acres) | Residential | | | | Non-Residential | | | Total Land Supply (Gross Acres) |
|---|---|---|---|---|---|---|---|---|
| | Urban | Country (CR) | UE | Total | General | UE | Total | |
| Lloydminster IDP Area | - | 4,262 | 4,066 | 8,327 | 3,527 | 2,377 | 5,904 | 14,232 |
| Vermilion IDP Area | 1,064 | 2,585 | - | 3,648 | 2,462 | - | 2,462 | 6,110 |
| Totals | 1,064 | 6,846 | 4,066 | 11,976 | 5,989 | 2,377 | 8,366 | 20,342 |

### 3.6.1 The Lloydminster IDP Area

Urban Expansion Areas were identified and approved by the County and City of Lloydminster in the IDP approved by both municipalities and last updated in 2009. The Urban Expansion Areas represent those areas which will eventually be annexed to the City and developed to urban uses and densities. These lands will not be available to the County in the mid- to long-term. This entire Strategy has been based on the assumption that these Urban Expansion Areas will be lost - no more. All other areas identified in the IDP outside of the Urban Expansion Area will be developed in accordance with County standards for the long term and remain in the County.

### 3.6.2 The Vermilion IDP Area

The Vermilion IDP area includes lands identified for Urban Residential uses, Country Residential uses and land slated for employment development (Highway Commercial, Industrial, Rural Industrial and Institutional uses).

### 3.6.3 Future Land Allocation

Figures 18 and 19 show the allocation of land to different land uses in the County Land based on the "Base" forecast and the "High" forecast. Even under the "high" forecast, the estimated amount of land needed for future residential and employment use remains a fraction of the County's total land base.

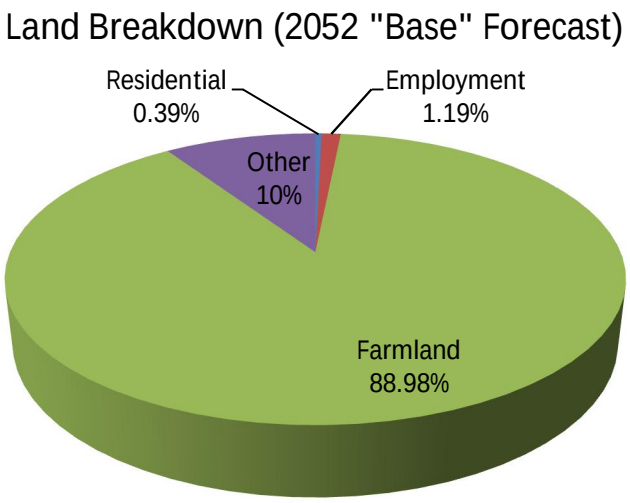



Figure 18: Future Land Supply Allocation
(% of total County land) – 2052 "Base" Forecast

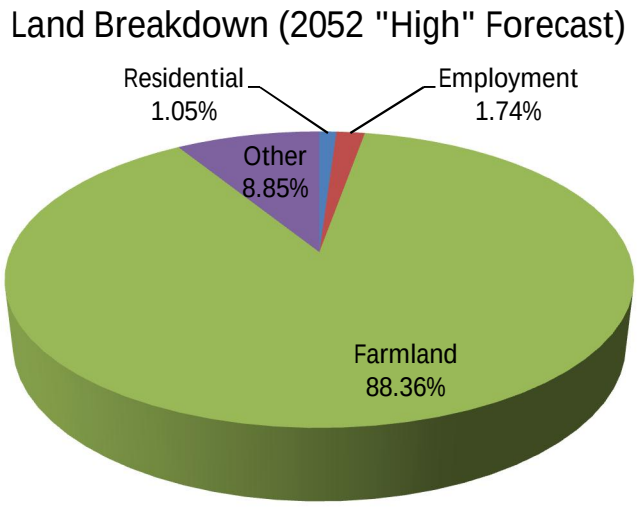
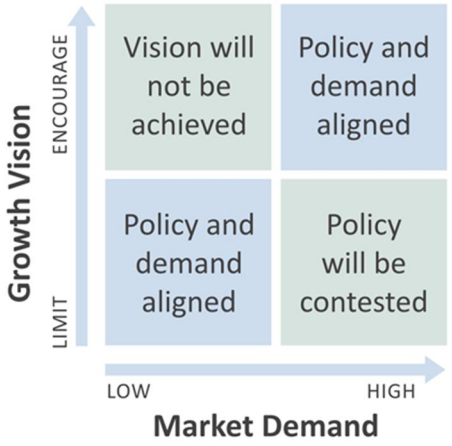



Figure 19: Future Land Supply Allocation
(% of total County land) – 2052 "High" Forecast

# 4 WHERE DO WE WANT TO GO?




Two key factors will influence future growth: *Market Demand* and *The County's Growth Vision*. Population and employment forecasts provided in the previous section help us to understand the potential long term market demand. This section identifies the growth vision, and sets guiding principles, goals and objectives that will act as the foundational elements for the Strategy.

Growth can be an exciting but tumultuous experience for predominantly rural municipalities such as the County of Vermilion River. On one hand, the County benefits from an expanding economy, an increasing tax base, and more vibrant communities resulting from greater population. On the other hand, the County must contend with a series of challenges that come with change, including where to grow, how to grow, and how to mitigate any potential environmental, financial, and social implications that come with 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 development (particularly low density development), and charts a course for sustainable community development.

## 4.1 Growth Vision

The following vision for the RGMS was developed based on input received from County Council, Administration, Stakeholders and residents during the development of the Strategy.

*The County of Vermilion River promotes sustainable and well-planned development that enhances and protects our existing communities, agricultural land, natural areas and quality of life. We will do this in four ways:*

- *Focusing growth in existing Hamlets and built up areas (including around Lloydminster and Vermilion);*
- *Working with adjacent municipalities to ensure mutually beneficial land uses in bordering areas;*
- *Maintain the County's fiscal position, ensuring that future annexation does not detract from the County's financial sustainability and balancing residential and non-residential growth in the County; and*
- *Making efficient use of existing infrastructure, and improving and upgrading the level of service in our communities.*

## 4.2 Goals and Objectives

Building on the growth vision, three overarching goals and corresponding objectives were developed to guide growth in the County. These goals and objectives were developed by integrating various municipal background reports, best practice research, and consultations with local residents, County Council, and staff. Consideration was also given to direction coming from future provincial and regional plans. Specific actions to achieve each goal and objective are outlined in Section 5.

A summary of the Goals and related objectives is shown in Table 5 below, followed by a more complete description of each:

Table 5: Growth Vision - Summary of Goals and Related Objectives

| Goal | Objective |
|---|---|
| 1. Protect and Enhance the County's Heritage | 1.1 Protect and enhance the County's communities |
| | 1.2 Protect and enhance the County's agricultural land base |
| | 1.3 Protect and enhance the County's natural environment |
| | 1.4 Protect and enhance the County's water resources |
| 2. Ensure the County's Financial Sustainability | 2.1 Maintain a balance of Residential to non-residential development in the county to sustain current or increased levels of service. |
| | 2.2 Strive to achieve the greatest efficiency and economy in the provision of municipal services. |
| 3. Promote Efficient Use of Land | 3.1 Adopt Smart Growth Principles |
| | 3.2 Adopt Conservation Subdivision Design in rural areas |

### 4.2.1 Goal 1: Protect and enhance the County's heritage, including its communities, agriculture, natural environment, and water resources.

The County of Vermilion River has a rich history of agricultural settlement and building rural communities, based on a foundation of supportive land and water. The first goal of this Strategy is to protect and enhance this cultural and natural heritage that the County was founded upon. This will be done through objectives for four distinct aspects of the County's heritage, including its communities, agriculture, natural environment and water resources.

Objective 1.1: Protect and enhance the County's communities

As one County resident stated at an engagement event for this Strategy: "Community is more than farmland - it's our people!" County residents and their communities form the backbone of the region and contribute to its quality of life. With growth in the region, the County is expected to see both growth in the number of residents and jobs, and so the first objective is to protect and enhance each of the County's communities. This objective includes protecting the rural atmosphere of the County's communities, respecting and enhancing their unique character, and promoting strong local identities. Also, as communities evolve it will be imperative to engage residents in the evolution of their communities, in a way that responds both to local needs and development pressure. Lastly the development of residential communities in close proximity to jobs to create complete communities where residents can live, work, and play should be promoted.

Objective1.2: Protect and enhance the County's agricultural land base

Agricultural products are renewable resources that provide jobs and contribute significantly to the economy, and working farms represent an important part of the County's heritage and contribute to resident's quality of life. The agricultural land base also represents a significant portion of the County's natural capital, which should be protected for future generations.

Over the next 40 years, our agricultural and rural heritage will continue to be the underlying fabric of the County and its communities. As stewards of the land, farmers will continue to manage their land and the County's natural landscapes.

Objective 1.3: Protect and enhance the County's natural environment

Future growth in the County must be carefully managed to ensure that environmental impacts and cumulative impacts on the natural environment (features and attributes as explained in Section 1 of the report) are fully anticipated and addressed. The impacts of development on land are often cumulative and the environmental carrying capacity of an area can vary widely. When making development decisions Council should be mindful of impacts on watersheds, wildlife habitat and the natural environment.

Objective1. 4: Protect and enhance the County's water resources

Water has played a large part in the evolution of the County's landscape, and both groundwater and surface water in lakes and rivers continue to provide a significant benefit to resident's quality of life. Rivers, lakes, and their associated riparian areas and wetlands help improve water quality, contribute to groundwater recharge, reduce erosion and flooding, provide recreation opportunities, and help protect biodiversity. Most human activities such as community building, and even farming, can have negative impacts on the quantity and quality of water. Based on the provincial Water for Life Strategy, this objective seeks to ensure a safe, secure drinking water supply, support the retention of healthy aquatic ecosystems, and provide reliable, quality water supplies for a sustainable economy.

### 4.2.2 Goal 2: Ensure the County's Financial Sustainability

As the County grows, communities will be further developed and the need for services and facilities to serve new residents will increase. The cost to build communities, provide services and operate facilities is dependent on many factors, including location, infrastructure needs, and residents' demand for services. Revenue to build and operate these services generally comes from developers, the Province, businesses and residents. A goal of this strategy is to maintain the County's financial sustainability by ensuring growth can finance the costs of servicing it, and maintaining or improving the County's balance of residential to non-residential tax base.

Objective 2.1: Maintain a balance of Residential to non-residential development in order to sustain current or increased levels of service.

Although the County is currently in a sound financial position, unbalanced future growth could jeopardize this. Current trends suggest that residential assessment may increase at a much faster rate than the non-residential assessment, which would likely increase the County's financial risk and decrease its ability to finance services for residents and businesses. This risk is increased significantly if the County were to lose a portion of its non-residential tax base to a future annexation.

This Strategy notes that future residential and non-residential growth needs to be balanced and not negatively affect the County; increases in the non-residential assessment base (e.g., commercial and industrial development) need to keep pace with residential growth.

Objective 2.2: Achieve efficiencies in the provision of municipal services

The increasing costs of providing and maintaining services, such as roads, waste management, community infrastructure and emergency services (among many), has been of concern to many Alberta municipalities, including the County of Vermilion River. Many County residents are also concerned about the costs of development and believe that while there will be benefits of growth, it should be self-sustaining and not add a burden to current ratepayers.

### 4.2.3 Goal 3: Promote Efficient Use of Land

The concept of sustainable community development is different in each community. For some it may mean affordable housing or job creation; for others it may mean walkable environments and cultural diversity. Generally, sustainable community development is viewed as balancing the environmental, economic, social and cultural attributes of a community (often referred to as the four pillars of sustainable development). Smart Growth and Conservation Subdivision Design provide two examples of systems used to guide the implementation of good planning and sustainable community development, with an emphasis on the four pillars of sustainable community development.

Objective 3.1: Adopt Smart Growth Principles

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 greenfield expansion (previously undeveloped land). Smart Growth promotes growth where it does not conflict with the natural environment and other land uses, and increasing development density so it is better served by alternative forms of transportation.

This objective aims to promote the use of these principles by new development in specific growth nodes, where their use will allow the County to improve existing communities and quality of life.

Objective 3.2: Adopt Conservation Subdivision Design Principles

The goal of Conservation Subdivision Design (CSD) is to protect as much of the natural environment 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. It 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 Areas (Conservation design for subdivisions: a practical guide to creating open space networks, Randall Arendt, 1996).

Specific Smart Growth Strategies Include:

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.

*Adapted from Smart Growth BC Smart Growth Principles (www.smartgrowth.bc.ca).*

The Benefits of CSD Include:

1. Enhanced stormwater management. CSD protects water quality and manages water quantity by slowing and filtering stormwater runoff through wetlands, bio-retention 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 home buyers 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.

*Adapted from University of Nebraska-Lincoln. UNL Water: Property Design. 2010.*
http://water.unl.edu/web/propertydesign/subdivisions

## 4.3 Future Growth Concept

The Future Growth Concept, shown on Map 1, below, was developed to demonstrate how growth can be accommodated in keeping with the vision, goals and objectives. It represents the future County that is able to collectively support a projected population of up to 14,500 residents by 2052. It recognizes the important role that existing regional and local transportation networks play in regard to community connectivity, employment, future growth, and economic development.

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 east side of the County.

### Employment Growth

With a goal of increasing and diversifying the tax base, the potential for expanded highway commercial development and industrial areas around Blackfoot is seen as a major benefit to the County. Recognizing that a large portion of the IDP Area around Lloydminster was identified in that IDP as Urban Expansion for eventual annexation to the City of Lloydminster, the goal of this RGMS is not to direct growth away from that area, but to enable the County to develop a sufficient employment tax base in and around the Hamlet of Blackfoot, which will not be lost to annexation in the future and will help the County be financially sustainable and self-sufficient in the future.

All employment growth will be of urban densities and located in the appropriate areas in and around the hamlet of Blackfoot and current and future Intermunicipal Development Plan (IDP) Areas.

### Residential Growth

The growth concept also recognizes the housing market trends and activity seen in the eastern portion of the County, including around Lloydminster and in Blackfoot. Development activity has historically, and will continue to be driven by potential residents that work in urban centres outside of, or internal to, the County, such as the City of Lloydminster, Town of Vermilion, and Villages of Kitscoty, Marwayne, Dewberry, and Paradise Valley, but choose to reside in a rural setting such as the County.

The following growth ratios were used to develop the growth concept to help ensure that market demand for country residential demand will not be stifled, while also striving to protect valuable farmland and reduce fragmentation of the agricultural land base.

- 1/3 of residential growth in the County will be rural (country) residential, located in appropriate areas, as determined by the Municipal Development Plan and Land Use Bylaw; and
- 2/3 of residential growth in the County will be urban residential, located in the appropriate areas within identified residential growth nodes and rural community nodes, including Hamlets, and current and future Intermunicipal Development Plan (IDP) Areas.

Map 1: Future Growth Concept

St. Paul County

Onion Lake 119-1

Tuliby Lake

Seekaskoot 119

Makaoo 120

RM of Frenchman Butte

Two Hills County

Dewberry

Clandonald

Marwayne

Vermilion River County

Streamstown

RM of Britannia

Minburn County

Islay

Kitscoty

Vermilion

Blackfoot

Lloydminster

RM of Wilton

Battle River

Paradise Valley

Rivercourse

McLaughlin

MD of Wainwright

**County of Vermilion River**

Regional Growth Management Strategy

**Future Growth Concept**

Map 1

County of VERMILION River

- Residential Growth Nodes
- Employment Growth Nodes
- Rural Community Nodes
- Potential IDP Area
- Urban Expansion (Land to be Ceded to Annexation)
- Hamlet
- Major Roads
- Minor Roads
- Areas outside the County
- IDP Areas
- Abandoned Railway
- CN (Active) Railway

DILLON CONSULTING

Map Data Provided By:
Vermilion River County, StatisticsCanada, Dillon Created
Elevation model is an approximation based on 5m contours

Map Created By: Eric Hertzman
Map Checked By: Alex Taylor
Map Projection: NAD 1983 UTM Zone 12N

File Location: G:\GIS\12XXXX Vermilion River\Final Map Sketch Up.mxd

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N W E S

SCALE 1:340,000

PROJECT: 12-6661 STATUS: DRAFT DATE: 4/4/2013

Growth Nodes

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 some country residential housing throughout the County in appropriate places, notwithstanding that higher density for rural communities based on conservation subdivision design principles will be supported (As promoted in the Alberta Land Use Framework).

Five key types of development areas are identified each of which will help to accommodate future growth in the County, and indeed the region:

1. Residential Growth Nodes
2. Employment Growth Nodes
3. Rural Community Nodes
4. Potential Intermunicipal Development Plan (IDP) Areas
5. Urban Expansion (Area to be ceded in future annexation)

The following provides a definition for each land use category identified in the future growth concept. (Refer to Map 1: Future Growth Concept.)

### 4.3.1 Residential Growth Nodes

Residential Growth Nodes represent areas which have been designated as the focus for investment for future residential development. These areas are strategically located in close proximity to major transportation corridors, have the current or planned infrastructure base to support future population growth, and/or have historically been a focal point for residential development activity. Residential Growth Nodes include in and adjacent to the Hamlets of Blackfoot, Islay and Clandonald, and specific portions of the IDP Areas of Lloydminster and Vermilion.

### 4.3.2 Employment Growth Nodes

Employment Growth Nodes represent areas which have been designated as the focus for investment for future employment (commercial and industrial) development. These areas are also strategically located in close proximity to major transportation corridors, have the current or planned infrastructure base to support future employment growth, and/or have historically been a focal point for employment development activity. Employment Growth Nodes include in and around the Hamlet of Blackfoot, and specific portions of the IDP Areas of Lloydminster and Vermilion.

### 4.3.3 Rural Community Nodes

Rural Community Nodes represent areas where existing residential and employment development will be maintained however, conservation design principles will be required in new 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. Rural Community Nodes include the Hamlets of McLaughlin, Rivercourse, Streamstown and Tuliby Lake.

### 4.3.4 Potential Intermunicipal Development Plan (IDP) Areas

*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.*

While the County currently has IDPs with the City of Lloydminster and Town of Vermilion, it does not have any with other Towns or Villages within its borders. To ensure mutually beneficial land uses occur at the borders of neighbouring municipalities, future discussions regarding Intermunicipal planning are required. As a result, potential Intermunicipal Development Plan (IDP) Areas have been designated around the communities of Kitscoty, Dewberry, Marwayne, and Paradise Valley. They represent areas where joint planning will be required, in collaboration with the adjacent municipality. Ensuring vibrant communities that are able to grow and thrive is a key component of this Growth Strategy. This is not only important for Hamlets and subdivisions in the County but also for Towns and villages located within or adjacent to the County.

### 4.3.5 Urban Expansion (Area to be ceded in future annexation)

The Urban Expansion Areas identified in the Lloydminster IDP are continued in this Growth Strategy, as they have been slated for future annexation by the City, thus removing them from the jurisdiction and tax base of the County. One of the goals of this Growth Strategy is to ensure a sustainable mix of residential and non-residential land use tax base for the County. This Strategy does not propose accommodating any future growth within the Urban Expansion Area, as that must be developed at urban densities, and will eventually be lost to the City.

# 5 HOW DO WE GET THERE? (THE ACTION PLAN)

## 5.1 Recommended Actions and Tools

This RGMS has been developed to assist the County to guide and manage growth in keeping with the vision, goals and objectives. Strategies are needed when the future is uncertain – they identify critical points when decisions need to be made and advise what can be done under changing circumstances.

The RGMS aligns itself with the Future Land Use concepts in each of the two existing IDPs, to ensure consistency when managing current and future development.

Table 6: CVR Action Plan



| Policy | | Actions | Tools | Existing or New | Timeline |
|---|---|---|---|---|---|
| 1. Protect and enhance the County's heritage, including its communities, agriculture, natural environment, and water resources. | | | | | |
| 1.1 Protect and enhance the County's communities | | | | | |
| a | Residents should be engaged in the evolution of their communities. | Develop an Area Structure Plans for Blackfoot. | ASP | New | Short term |
| | | Develop Area Structure Plans for other communities | ASPs | New | Medium to Long term |
| b | New development should be compatible with the rural character of the county. | Develop site design guidelines and standards. | Policy | New | Short term |
| | | Review the General Municipal Servicing Standards and Landscaping Controls. | Policy | Existing | Medium term |
| c | Support ongoing study and preservation of local culture and heritage. | Explore grants and support to develop an inventory of built heritage in the County, and develop policies to protect and enhance this heritage. | Inventory<br>MDP<br>LUB | New<br>Update<br>Update | Short term |
| 1.2 Protect and enhance the County's agricultural land base | | | | | |
| a | Support agricultural land conservation and limit fragmentation and premature conversion of agricultural lands to other uses. | Add Council-supported Agricultural policies to the MDP. | MDP | Update | Short term |
| b | New development should be directed to lands with marginal agricultural value and areas where it will not constrain agricultural activities, including country residential development. | Identify in the MDP areas where growth will be supported (Identified growth nodes), and encourage growth to locate there. | MDP | Update | Short term |
| c | Conflicts between intensive agricultural operations and other land uses should be managed as part of the planning process. | Establish an Agricultural Impact Assessment process that will apply to new, large, residential and non-residential developments in the County. All reports to Council for projects where agriculture may be affected (such as statutory plans, subdivisions, rezoning, and major projects) should be required to include a statement on the impact of the proposal on the preservation of agricultural land and agricultural viability. | Impact assessment process | New | Medium term |
| d | Continued diversification of the agricultural industry will be supported including growth of on-farm operations that result in value-added to farm produce, such as packing, processing, cooking, tasting or farm gate sales. | Continue developing the County's Economic Development Plan | Economic Development Plan | On-going | Short term |
| e | Adjacent land uses shuold be compatible with existing agricultural uses/practices. | Provide for effective zoning, buffering and transitional uses in the MDP. | MDP<br>LUB | Update | Short term |

| Policy | | Actions | Tools | Existing or New | Timeline |
|---|---|---|---|---|---|
| 1.3 Protect and enhance the County's natural environment | | | | | |
| a | Recognize the importance of ecological infrastructure that supports natural processes such as water production and climate regulation, and provide wildlife habitat. | Recognize the inventory of Provincial Enviromentally Significant Areas (ESAs) in the MDP; encourage the creation and maintenance of shelter belts, forest belts and uncultivated areas to promote snow capture, conserve topsoil and provide wildlife habitat. | MDP | Update | Short term |
| b | Natural areas should be protected whenever and wherever possible. | Develop a policy on ESAs and development in and adjacent to ESAs. | MDP | Update | Short term |
| c | New development should incorporate measures to conserve natural terrain, drainage and vegetation. | Develop an environmental review checklist to provide for consistent review of development applications. | Checklist | New | Short term |
| d | Natural landscapes and biodiversity are valued assets in the County, and environmentally significant landscapes and habitats should be protected. | Provide public education opportunities, and support NGOs who have an environmental education mission, active in the County including initiatives like ALUS, Cows and Fish, the AB Conservation Association and the Nature Conservancy of Canada. | Partnerships / Programs | Existing | Short term |
| e | The use of native species should be encourage for landscaping to promote wildlife habitat. | Encourage development applications to include the use of native species in site landscaping, and provide a list of appropriate species. | LUB | Update | Short term |
| f | The use of green building strategies to conserve water and energy should be promoted | In the Land Use Bylaw, encourage development applications to use of green building strategies to conserve water and energy. | LUB | Update | Short term |

| Policy | | Actions | Tools | Existing or New | Timeline |
|---|---|---|---|---|---|
| 1.4 Protect and enhance the County's water resources | | | | | |
| a | Any negative impacts on water quality due to run off associated with development should be minimized. | Identify ways to protect and enhance the County's water resources in the MDP. | MDP | Update | Short term |
| b | Water conservation and reuse should be promoted whenever possible. | Encourage "green infrastructure" in residential and non-residential development proposals for wastewater and stormwater treatment and reuse. | MDP | Update | Short term |
| c | Wetlands should be preserved and protected. | Support ALUS in mapping wetlands and use appropriate buffers (such as environmental reserve [ER], Environmental Reserve Easement [ERE] or Municipal Reserve [MR]) in the MDP | MDP | Update | Short term |
| d | Shoreline development should be limited to avoid critical wildlife or fish habitat, protect critical riparian ecosystems, and increase or maintain biodiversityh and wildlife habitat, while allowing for some public recreational access. | Where lakes and other water bodies are to be used for recreational development, implement setbacks as determined by the Department of Environment and Sustainable Development (ESRD). | MDP and LUB | Update | Short term |
| e | All new development should make use of best management practices such as storm water ponds, overland drainage systems, infiltration practices and filtering practices that protect the future quality and supply of groundwater and surface water. | Develop an environmental review checklist to provide for consistent review of development applications. | Checklist | New | Short term |
| f | The County should support and participate in environmental management initiatives undertaken by watershed councils and water stewardship groups. | Support NGOs (provide space, funding, opportunities?) who have a water/watershed education mission, active in the County | Partnerships / Programs | On-going | Short term |

| Policy | | Actions | Tools | Existing or New | Timeline |
|---|---|---|---|---|---|
| 2. Ensure the County's Financial Sustainability | | | | | |
| 2.1 Maintain a balance of Residential to non-residential development in order to sustain current or increased levels of service. | | | | | |
| a | The County should stay ahead of, and even encourage, market demand for non-residential development. | The MDP should plan for the future supply of non-residential land, and align locations with the employment growth nodes identified in the RGMS Future Growth Concept. | MDP | Update | Short term |
| b | | Annual tax assessment data should be analyzed to determine the balance, and compare it to past trends. | Monitor | Existing | Short term |
| c | Any future loss of land through annexation should not jeopardize the County's long-term fiscal position. | Complete a fiscal impact assessment to determine future potential costs and revenues related to the identified annexation area. | Fiscal impact assessment | New | Short term |
| 2.2 Achieve the greatest efficiency and economy in the provision of municipal services | | | | | |
| a | Existing infrastructure capacity should be an important consideration when determining planned growth areas. | Align areas identified for future growth in the MDP with growth nodes identified in the RGMS. | MDP | Update | Short term |
| b | The County should work to achieve the greatest efficiency and economy in provision of services. | Continue to work with municipal neighbours on infrastructure projects. | MDP | Update | Short term |
| c | Economic development should be encouraged in strategic areas where services exist or may be available. | The MDP should align areas for future growth with growth nodes identified in the RGMS. | ASPs | New | Varies |
| | | | MDP | Update | Short term |
| d | Development should be phased to respond to development pressure, while avoiding premature investment by the county. | The MDP should identify appropriate phasing, and prohibit leap-frog development adjacent to Hamlets. | MDP | Update | Short term |
| e | The impact of development on groundwater and wear and tear on the County roads should be minimized. | Encourage country residential (multi-lot) development to growth areas identified in the RGMS Future Growth Concept so that they are close to available municipal services (piped water and sanitary services). | MDP | Update | Short term |
| f | Future development should pay for itself in all cases, especially if it requires new infrastructure | Monitor Off-site levy program | Off-site levy program | Existing | n/a |
| g | All potential municipal costs associated with new development proposals must be considered, including road construction and maintenance, servicing infrastructure and provision of soft services (such as police and EMS). | Review the Development Cost review checklist to provide for consistent review of development applications. | Checklist | Existing | Short term |

| Policy | | Actions | Tools | Existing or New | Timeline |
|---|---|---|---|---|---|
| 3. Promote Efficient Use of Land | | | | | |
| 3.1 Adopt Smart Growth Principles | | | | | |
| a | County communities should be developed with a mix of land uses, a range of housing options, transportation choices, employment opportunities, and a strong property tax base. | Include Smart Growth principles in the MDP | MDP | Update | Short Term |
| b | Developers should be encouraged to follow smart growth principles. | Review the development checklist for smart growth development. | Checklist | Existing | Short Term |
| 3.2 Adopt Conservation Subdivision Design Principles | | | | | |
| a | New country residential development proposals should be encouraged to minimize the development footprint. | Review the development checklist for conservation subdivision design. | Checklist | Existing | Short Term |
| b | Where future growth is planned, clustered, higher-density, multi -lot development should be encouraged. | Policies in the MDP and LUB should encourage clustered, higher-density, multi -lot development. | MDP and LUB | Update | Short Term |
| c | It is important for natural features to be preserved in new residential subdivisions. | Develop policies in the MDP that require/encourage clustering of development, based on the maximum of 4 lots per quarter section (3 plus the remnant). | MDP and LUB | Update | Short Term |

## 5.2 Implementation Strategy

The most important first step in managing growth is simply to have a strategy. This Growth Strategy represents the highest level guiding document that a municipality usually develops for that purpose. However it is only the first of a series of tools that the County will use to manage future growth. This section of the Growth Strategy shows how growth guided by the Future Growth Concept, and managed in keeping with the vision, goals and objectives.

Strategies are needed when the future is uncertain – they identify critical points when different decisions may need to be made. Strategies need to provide advice – what is the best thing to do IF population growth is high, creating a demand for more residential development, but employment growth is low and there is little demand for non-residential development.

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

### 5.2.1 Adoption of New or Updated Statutory Plans

Review and update all County specific planning documents to incorporate the recommendations of the RGMS. Included in these documents is the Municipal Development Plan (MDP) for the County, Intermunicipal Development Plans (IDPs) for land adjacent to other municipalities, Area Structure Plans (ASPs) for smaller communities, and the Land Use Bylaw (LUB). The following actions will help the County ensure that the planning framework, which is established by the provincial government, is up to date and clear for residents and developers alike.

Review and Update the Municipal Development Plan (MDP) and Land Use Bylaw (LUB)

A municipality's Municipal Development Plan (MDP) serves as its principal statutory plan. Other municipal planning tools that are used to direct growth and land use include the Land Use Bylaw (LUB), Area Structure Plans (ASPs), Area Redevelopment Plans (ARPs) and Concept Plans (CPs) or Conceptual Schemes (CSs). Each municipality with a population over 1,500 must have an MDP and LUB, while using ASPs, ARPs, and CPs/CSs is not mandatory. The MDP is the overarching policy document approved by the County – all other plans must conform to this plan. Some municipalities also develop a Growth Management Strategy that, while not a bylaw, is approved by Council to provide further overarching policy direction for land use planning.

Review and Develop New Area Structure Plans (ASPs)

Areas Structure Plans (ASPs) exist for a number of areas around the County. Some have been developed by the County to guide future growth and help landowners understand how best to make use of their land, and other have been developed by landowners to outline how they propose to subdivide and develop their land.

| Statutory Plan | Action | Timeline |
|---|---|---|
| Municipal Development Plan (MDP) | Update | 2013 |
| Land Use Bylaw (LUB) | Update | 2013 |
| Blackfoot Area Structure Plan (ASP) | Develop | Short-term |
| Islay Area Structure Plan (ASP) | Develop | Medium-term |
| Clandonald Area Structure Plan (ASP) | Develop | Medium-term |
| Kitscoty Intermunicipal Development Plan (IDP) | Develop | Long-term |
| Dewberry Intermunicipal Development Plan (IDP) | Develop | Long-term |
| Marwayne Intermunicipal Development Plan (IDP) | Develop | Long-term |
| Paradise Valley Intermunicipal Development Plan (IDP) | Develop | Long-term |
| Regional Growth Management Strategy (Non-Statutory) | Update | 2018 |
| Lloydminster Intermunicipal Development Plan (IDP) | Update | 2018 or following Annexation (whichever is sooner) |
| Vermilion Intermunicipal Development Plan (IDP) | Update | 2019 |

Review and Develop New Intermunicipal Development Plans (IDPs)

Intermunicipal Development Plans (IDPs) exist between the County and two adjacent municipalities: The City of Lloydminster and the Town of Vermilion. They outline where and how future growth will occur in these two areas. IDPs are usually developed with the intention of reviewing them every 5 to 10 years. To help implement this Growth Strategy, the County should review and update the two existing IDPs to respond to changing growth pressures and patterns as appropriate. The Lloydminster/County IDP should be reviewed by 2018 or immediately after annexation (whichever is sooner), and the Vermilion/County IDP should be reviewed by 2019.

To help ensure efficient use of resources and sustainability of the County's smaller internal municipalities (including the Villages of Kitscoty, Dewberry, Marwayne, and Paradise Valley), the County should explore developing shared servicing arrangements (at a minimum) or IDPs with each of these Villages, should the areas immediately adjacent to these Villages be faced with significant growth pressures during the life of this Strategy.

### 5.2.2 Develop Checklists and Development Guidelines

Establish clearer requirements for further studies by developers / stakeholders prior to development (such as Biophysical Impact Assessments, Historical Resources Overviews, Environmental Impact Assessments, etc.).

### 5.2.3 Monitor Change

As with any Strategy, monitoring and evaluation is key to its successful implementation. As a non-statutory municipal document, this Strategy gives the County the background and flexibility to prepare it for an array of probable futures. Routine monitoring will provide the County with an idea of how successful this Strategy has been in directing growth to be consistent with the Growth Vision.

Population Growth

Population statistics should be reviewed annually and compared to previous years and baseline information presented in Section 2 of this RGMS.

Development/Market Trends

Information that is currently collected by the County can be summarized annually in order to understand market trends such as:

- Number and type of development permits issued;
- Number of potential parcels approved in ASPs or ACPs;
- Number of potential parcels receiving third reading on land use;
- Number of new titled parcels registered; and
- Average new parcel size (by year).

Tax Assessment

The balance of residential and non-residential tax assessment should be reviewed annually and compared to previous years and baseline information presented in Section 2 of this RGMS.

## 5.3 Adjust Implementation Tools

If the results of monitoring show that the intended vision, goals and objectives are not being achieved, determine what changes need to be made to guidelines, checklists, or elements of statutory plans. Each of these tools is identified in the Action Plan presented in Section 5.1 of the RGMS.

## 5.4 Updating the Management Strategy (RGMS)

This Strategy has been developed with a long-term outlook, but should be reviewed every 5 years to ensure that it continues to reflect the vision and goals of the County. A revisiting of its goals and objectives should also occur if population growth or market conditions change dramatically from those projected and used to develop this strategy. The RGMS may also be reviewed at the request of Council, upon amendment of the Municipal Development Plan (MDP) to ensure consistency, or should any of the municipalities internal to the County dissolve and fall under jurisdiction of the County.

# APPENDIX A

## Final Situational Report

# County of Vermilion River

## Regional Growth Management Strategy

### Stage One - Situational Analysis

Prepared by

**Dillon Consulting Limited**

FINAL REPORT

February 2013

# CONTENTS



## MAPS

# 1.0 INTRODUCTION

The County of Vermilion River is located in Northeast Alberta, bordering on Saskatchewan, just west of the City of Lloydminster. The most recent census by Statistics Canada (2011) shows the population of the County is approximately 7,900 people, while the total regional population is approximately 27,000. The majority of the County population currently lives on farms or in country residential areas. Communities internal or adjacent to the County include the City of Lloydminster, the Town of Vermilion, and the Villages of Dewberry, Kitscoty, Marwayne and Paradise Valley.

Although primarily an agricultural area, the region is experiencing increased oil and gas activity, which has in-turn created other business and employment opportunities that are affecting land and infrastructure needs in the County.

The County has adopted Intermunicipal Development Plans (IDP's) with The Town of Vermilion (2009) and the City of Lloydminster (2008). Each of these plans set out a framework for a coordinated approach to managing development and attracting economic development; however, the IDP's cover only a small percentage (approximately 9,448 ha or 1.7%) of the total County land area of 550,000 hectares.

The County has 7 Hamlets, 17 residential subdivisions, and 5 industrial subdivisions, including:

| | | |
|---|---|---|
| Hamlets | 1. Blackfoot<br>2. Clandonald<br>3. Islay<br>4. McLaughlin | 5. Rivercourse<br>6. Streamstown<br>7. Tulliby Lake |
| Residential Subdivisions | 1. Brennan Park<br>2. Clover View Acres<br>3. Creekside Estates<br>4. Country Air Estates<br>5. Deerfoot Estates<br>6. Denwood Acres<br>7. Grandview Estates<br>8. Hawkstone Estates<br>9. Horizonview Acres | 10. Indian Lake Meadows<br>11. Lakeview Estates<br>12. Morning Gold Estates<br>13. Ravine View<br>14. Robinwood Acres<br>15. Sandpiper Estates<br>16. Silver Willow Estates<br>17. Willow Creek |
| Industrial Subdivisions | 1. County Energy Park<br>2. Devonia Holdings<br>3. Kam's Industrial Park | 4. Reinhart Property Management<br>5. Industrial Park at NE/NW 33-49-1-W4 (*yet to be named*) |

The County's regional context is shown on Map 1, while the Study Area is shown on Map 2.

## 1.1 Project Purpose

The purpose of the County's RGMS is to guide future development in the County in a manner that reflects the vision and aspirations of residents, landowners, and other stakeholders, considering both economic growth and environmental responsibilities.

A Vision, regional goals, and supporting policies will be unique to the County, but must be consistent with applicable statutory and strategic plans and consider the natural capacity of the land. The ultimate goal is to encourage the development of high quality living environments appropriately integrated with the natural environment, agriculture, oil and gas operations, and existing development.

## 1.2 Project Objectives

The RGMS will identify potential growth areas and benefits to the County, as well as providing a means of monitoring success as the strategy is implemented. The objectives of the RGMS are to:

- Encompass the needs, wants and desires of County residents, stakeholders, Council, and Administration that are beneficial for the whole of the County;
- Adhere to and be compliant of all Provincial and Federal regulations that are applicable to the region and is consistent with all existing relevant studies;
- Inform the Municipal Development Plan and Land Use Bylaws currently under revision;
- Project and assess future needs considering growth and changing trends, public demands, demographics, changing standards, and the vision of the County;
- Evaluate existing infrastructure and provide an analysis of infrastructure management needs of both current and future assets;
- Assess the long-term growth relationship between the County and the City of Lloydminster and provide supporting information that may be required for future intermunicipal negotiations; and
- Provide recommendations for future development including the upgrading of the existing inventory.

## 1.3 Project Methodology

The RGMS is being conducted in five stages, as outlined below. This Situational Analysis Report is a component of Stage One.

Stage One – Data Gathering and Situational Analysis
Stage Two – Public Consultation Round One
Stage Three – Draft Regional Growth Management Strategy
Stage Four – Public Consultation Round Two
Stage Five – Final Regional Growth Management Strategy

# 2.0 WHERE ARE WE NOW? SITUATIONAL ANALYSIS

The primary focus of the Situational Analysis was to collect all relevant background data and to identify opportunities and constraints to future growth in the County. Using the data, an analysis was completed for four areas:

1. Natural systems,
2. Human-built systems,
3. Demographics, and
4. The policy context.

## 2.1 Natural Systems

Natural Systems were reviewed as part of the RGMS, and include topography, soils, natural water features, highly suitable natural habitats for sensitive species and keystone wildlife, and Environmentally Sensitive Areas.

### Topography

Topography is shown on Map 3. While most of the County is flat or slightly rolling topography, areas around the river valleys have steep slopes (>15%) where development should be prohibited. Of particular note, drainage is an issue in many of the flat areas of the County. Development recommendations will need to consider this and may have specific requirements for development in these areas.

### Soils

Soils in the County of Vermilion River were mapped using data provided by the Agricultural Region of Alberta Soil Inventory Database (AGRASID), which describes the spatial distribution of soils and associated landscapes within Alberta's agricultural region. It classifies soils according to the Canadian System of Soil Classification (Soil Classification Working Group 1998). Chernozems are the dominant Soil Order throughout the County, and are representative of grassland communities or grassland-forest communities with associated shrubs and forbs. Gleysolic soils are indicative of prolonged periods of intermittent or continuous saturation with water, but often occur in association with other soils in the landscape. Brunisolic and Luvisolic soils, limited to a portion north of the North Saskatchewan River and western edge of the County, are typically formed under forested habitats. Solonetzic soils occur on saline parent materials, commonly associated with a vegetative cover of grasses and forbs. Regosolic soils, located along watercourses in the County, are generally rapidly to imperfectly drained, and occur under a wide range of vegetative habitats. Organic soils, limited to the northeast corner of the County, are composed of organic materials, and are commonly known as peat, bog or fen soils (Soil Classification Working Group 1998). The County's soils are shown on Map 4.

Soil classifications are strongly correlated to the Agricultural Land Capability, which is covered later in this chapter. For example, chenozemic soils generally have a higher agricultural capability than gleysolic soils. While the highest quality land is best for agriculture, it is usually preferable for development as well, as poor soils are usually under wetlands, are steep slopes or are unstable, which can create challenges with construction of buildings, roads, etc. The RGMS will need to consider how to balance priorities where land is suited to both agriculture and development.

## Geology

Geology can occasionally pose a constraint to development, in areas where bedrock or outcrops can be found. However, based on the available data, there are no major areas where development will be restricted due to geology. Geotechnical investigations for specific development proposals will need to be conducted to supplement any data provided here. The County's geology is shown on Map 5.

## Groundwater Yield

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). Groundwater yield for the County was reviewed at a regional level and stratified into three categories showing:

- Good: > 25 imperial gallons per minute (or >113.7 litres per minute);
- Satisfactory: 5 - 25 imperial gallons per minute (or 22.7- 113.7 litres per minute); and
- Poor: < 5 imperial gallons per minute (or < 22.7 litres per minute).

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 hydrology, actual field verification is required to determine ground water yield at a specific location. The breakdown of County land into these categories is shown in Table 1 below, and shown on Map 6.

Table 1: Groundwater Yield Breakdown

| Yield Range *(both estimated and established)* | Land within County (Approx.) | | |
|---|---|---|---|
| | Hectares | Acres | % |
| • Good Yield (>25 gallons per minute) | 227,222 | 561,477 | 39.8% |
| • Satisfactory Yield (5-25 gallons per minute) | 190,907 | 471,740 | 33.4% |
| • Poor Yield (<5 gallons per minute) | 153,426 | 379,125 | 26.8% |
| Total | 571,555 | 1,412,341 | 100.0% |

While most (73%) of the County has a good or satisfactory yield that could likely support additional development, growth in the northeastern part of the County, as well as the far southeast, may not be able to be sustained via groundwater wells. Growth in these locations may require regional water lines or other sources of water supply. Also, although locations may have good groundwater yield, there are

few confirmed best practices with regards to well density; communities that are serviced by individual wells may need a maximum permitted well density to be stipulated, to ensure long-term sustainability of current wells and groundwater yields.

### Endangered Species & Sensitive Habitats

Specific atlases and field guides were used to determine which species have ranges overlapping in the County. The Fish and Wildlife Management Information System (FWMIS) and Alberta Conservation Information Management System (ACIMS) were searched to reveal any previous observations of species at risk within or adjacent to each community. The FWMIS online mapping tool (AESRD 2012) was used to perform a general search for species at risk in the area, and to identify key wildlife zones and sensitive wildlife ranges. *Prior to development, detailed FWMIS records will need to be queried; a wildlife habitat assessment will need to be performed, particularly in areas determined to be suitable for species at risk and with previous FWMIS observations, to determine presence/not detected of species at risk.* Often these species require specific habitat features (e.g. trees and cliffs) and Alberta Environment Sustainable Resource Development (AESRD) recommends specific setback distances from species at risk and their habitats.

### Wildlife Species at Risk

Four sensitive habitat ranges for avian species have been confirmed within the County, including Sensitive Raptor Range, specifically for the bald eagle (*Haliaeetus leucocephalus)*, sharp-tailed grouse (*Tympanuchus phasianellus*) range, a piping plover (*Charadrius melodus*) waterbody (Albert Lake) and a great blue heron (*Ardea herodias*) breeding colony (AESRD 2012). While only a few habitats have been confirmed within the County, this does not indicate that no other species, or habitats, are present elsewhere in the County. The lack of observations in the County may be a result of lack of field investigations in this area.

After reviewing records in the Atlas of Breeding Birds of Alberta (Federation of Alberta Naturalists 2007) and records from the FWMIS database, 174 avian species have the potential to occur in the County. Of the 174 species, 7 are species at risk, listed under Schedule 1 of the *Species at Risk Act* and/or the *Alberta Wildlife Act* and 46 are species of conservation concern (given an SRank of S3 or lower, or listed as Sensitive, May Be At Risk, At Risk or Undetermined under Alberta's General Status of Wildland Species, 2010). The majority (116) of potential bird species are Secure or Apparently Secure and 5 are Exotic to Alberta.

The Mammals of Alberta (Pattie and Fisher 1999) and the FWMIS database were used to determine possible species occurring within or adjacent to the County. The range of 52 species overlapped the area, including 10 species of conservation concern, 40 Secure species, and 2 Exotic species. No mammal species at risk have ranges overlapping the County. The Western Reptiles and Amphibians Field Guide (Stebbins 2003) and the FWMIS database were used to determine species potentially occurring within or

adjacent to the County. Ten species were identified as potentially occurring in the County, including 2 species at risk, 5 species of conservation concern, and 3 Secure species.

### Vegetation Species at Risk

The ACIMS database (ACIMS 2012) and Rare Vascular Plants of Alberta (Kershaw et al. 2001) were reviewed to determine potential vegetation species at risk to occur in the County. Approximately 45 sensitive plant species at risk have the potential to occur in the County. Several plant species have been reported to ACIMS throughout the County; these records do not necessarily indicate that these species are limited to those locations. The lack of observations in the County may be a result of lack of field investigations in certain areas.

Map 7 shows confirmed species at risk, based on data from the Government of Alberta.

## Environmentally Significant Areas (ESAs)

Environmentally Sensitive Area (ESA) locations were identified using ACIMS, which also provided details on what makes these areas sensitive. ESA's 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.

Within the County, several ESA's of National and Provincial significance exist. ESA #690 occurs south of Tuliby Lake; located within the North Saskatchewan River Basin, this Boreal ESA is of National Significance. The land within this ESA contains 65 elements of conservation concern, habitat for focal species, important wildlife habitat, intact riparian area and riparian areas along major rivers, large natural areas and sites of recognized significance. ESA #117, a Grassland ESA of National Significance, is located south of Vermilion, north of Paradise Valley, and southeast of Rivercourse and McLaughlin. This ESA contains habitat for focal species and large natural areas, important for wildlife.

Environmentally Significant Areas are shown on Map 8, and the breakdown of County land is shown on Table 2.

Table 2: Environmentally Significant Area (ESA) Breakdown

| Environmentally Significant Areas (ESAs) | Land within County (Approx.) | | |
|---|---|---|---|
| | Hectares | Acres | % |
| • Designated ESA | 45,173 | 111,624 | 7.9% |
| • Alberta Parks Crown Reservations | 423 | 1,046 | 0.07% |
| • Protected Areas | 628 | 1,551 | 0.11% |
| ESA Parks and Crown Reservation Total | 46,224 | 114,221 | 8.09% |
| County Total Lands | 571,555 | 1,412,341 | 100% |

ESAs, Crown reservations, and Protected Areas make up approximately 8.1% of the County. The RGMS will need to direct growth away from these areas.

## Agricultural Land Capability

Soil classes in the County of Vermilion River were mapped using the Agricultural Region of Alberta Soil Inventory Database (AGRASID). Classifications 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 2 and 6 for perennial field crops, and class 7 for neither. On Map 9 and Table 3, the classes are separated into 3 groups: no/moderate limitations for crops, moderately severe limitations for crops, and severe/very severe limitations for crops. 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, 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.

Table 3: Agricultural Land Capability Breakdown

| Agricultural Land Capability | Land within County (Approx.) | | |
|---|---|---|---|
| | Hectares | Acres | % |
| • No or Moderate (Class 1 & 2) | 146,429 | 361,832 | 25.6% |
| • Moderate Severe (Class 3 & 4) | 338,382 | 836,160 | 59.2% |
| • Severe or Very Severe (Class 5, 6 & 7) | 84,819 | 209,591 | 14.8% |
| • Other/Unknown | 1,996 | 4,931 | 0.3% |
| Total | 571,625 | 1,412,514 | 100.0% |

Most soils in the County are class one through four, which have no or only moderate restrictions for growing crops. This is a positive for agriculture but means that development may be taking quality land out of production.

Agriculture is one of the economic and cultural foundations of the County, and protection of Agricultural land is one of the County's key strategic priorities. Although very few municipalities in Alberta currently restrict development from their most productive land in their policies, the Alberta Land Use Framework and the Alberta Land Stewardship Act (ALSA) have set out strategies for protecting agricultural land in rural areas of the province. Current policies (such as the Lloydminster Intermunicipal Development Plan that states "development in most of the plan area will likely take better agricultural land out of production") have *begun* to set a precedent where development takes priority over agriculture, even on high quality cropland, based on demand. The RGMS will need to consider how to balance priorities where lands suited to both agriculture and development.

## 2.2 Human-Built Systems

To help determine the available capacity to accommodate future development, Dillon compiled and reviewed the human built systems within Vermilion River County. Eleven categories of information were collected: land ownership, current land use, community facilities, recent development, transportation infrastructure (major roads), underground infrastructure (including potable water servicing, wastewater treatment), solid waste management, emergency services, historical resources, oil and gas infrastructure, and other human-built constraints. They provide an overview of where opportunities for development currently exist.

### Land Ownership

There are three categories of land ownership in the County: County, Crown, and Private. Most land in the County is privately owned. Pockets of crown land exist throughout the County, with a significant portion in the northeast corner, north of Tulliby Lake. The County owns a limited number of parcels, which are distributed throughout the entire County, and are for the purpose of municipal services (typically community halls). Map 10 provides the locations of the three forms of land ownership, and Table 4 shows the breakdown of County land.

Table 4: Land Ownership Breakdown

| Land Ownership | Land within County (Approx.) | | |
|---|---|---|---|
| | Hectares | Acres | % |
| • Private | 507,461 | 1,253,962 | 88.8% |
| • County | 1,509 | 3,728 | 0.3% |
| • Crown | 33,833 | 83,603 | 5.9% |
| • Unknown | 6,184 | 15,281 | 1.1% |
| Total Land | 548,987 | 1,356,574 | 96.1% |
| • Other Crown Ownership (Waterbodies, etc.) | 22,568 | 55,767 | 3.9% |
| Total Area | 571,555 | 1,412,341 | 100.0% |

Most land in the County (almost 90%) is privately owned, with only small portions under the jurisdiction of the Crown or the County. The RGMS will need to include policies to manage development on all the privately held land in the County.

## Current Land Use

Map 11 shows current land use in the County. Current land use is a mix of residential, agricultural, commercial and industrial uses. The dominant land use in the County is agriculture. Residential growth in the past has been concentrated around the urban centers of Lloydminster, Vermilion, Kitscoty, Marwayne, Dewberry and Paradise Valley (which are all surrounded by large areas of Urban Expansion, Controlled Urban Development, Business District, Industrial Development and Highway Development) and in the Hamlets. Small parcels of Country Residential development can be seen throughout the County. Commercial and industrial development has thus far been concentrated around Lloydminster and to a lesser extent Vermilion. All major growth areas exist along major transportation corridors.

## Recent Development

One of the main reasons for developing a Regional Growth Management Strategy is to better accommodate development pressures. While Map 11 shows current land use, Map 12 shows more recent development pressure over the past three years; it shows the locations of all development permits that the County approved from 2010 to 2012. It divides development into two categories: residential and non-residential. As evident from the map, residential growth over the past three years has been spread throughout the County, and non-residential growth has been concentrated just west of Lloydminster, along Highway 16. Table 5 shows the total number of permits issued during that time and the split between residential and non-residential, and Table 6 shows the number of permits that were issued in the IDP Areas and within five kilometers of Lloydminster and Vermilion over the past three years.

Table 5: Total Development Permits (2010 – 2012)

| Development Permits (2010 – 2012) | # | % |
|---|---|---|
| • Residential | 290 | 75.3 |
| • Non-Residential | 95 | 24.7 |
| Total | 385 | 100.0 |

Table 6: Development Permits (2010 – 2012) close to Lloydminster and Vermilion

| | | Near Lloydminster | | | | Near Vermilion | | | | Near Either | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Total | IDP Area | | Within 5 Km | | IDP Area | | Within 5 Km | | IDP Areas | | Within 5 Km | |
| | # | # | % | # | % | # | % | # | % | # | % | # | % |
| Residential | 290 | 3 | 1.0% | 17 | 5.9% | 2 | 0.7% | 6 | 2.1% | 5 | 1.7% | 23 | 7.9% |
| Non-Residential | 95 | 40 | 42.1% | 45 | 47.4% | 6 | 6.3% | 6 | 6.3% | 46 | 48.4% | 51 | 53.7% |
| Total | 385 | 43 | 11.2% | 62 | 16.1% | 8 | 2.1% | 12 | 3.1% | 51 | 13.2% | 74 | 19.2% |

From 2010 to 2012, 75.3% of development permits issued by the County of Vermilion River were for residential dwellings. Of those, only 1.7% of those were within the IDP Areas, and only 7.9% of those were within 5 kilometers of Vermilion or Lloydminster – the two main growth areas that have been identified in policy. *This indicates that past and current policy has not been able to direct new residential development to identified growth areas, with the goal of preventing fragmentation of and protection of farmland. This also indicates that demand for new country residential dwellings throughout the County, especially in remote rural areas, is currently driving residential development patterns.*

From 2010 to 2012, the remaining 24.7% of development permits issued by the County were for non-residential (commercial and industrial) developments. Just over 42% of those were in the Lloydminster IDP Area, and 53.7% of those were within five kilometers of either Lloydminster of Vermilion. *This indicates that past and current policy has been partially successful at directing new non-residential development to identified growth areas, such as the IDP areas, although demand for this type of development is also not in close proximity to where policy would like it to be.*

## Community Facilities

Community facilities are located throughout the County of Vermilion, providing a variety of services to populations living in both urban and rural areas. Table 7 provides an overview of community facilities. Future growth should focus on areas with existing infrastructure; current community facilities are shown on Map 13.

Table 7: Community Facilities in the County

| Facility Type | Total # | Description |
|---|---|---|
| Community Halls | 29 | Located throughout the County, each major community has a community hall. |
| Churches | 10 | All are located throughout the County and are not connected directly to existing hamlets. |
| Schools | 13 | Three are located within the Hamlets of Kitscoty, Marwayne, and Paradise Valley; four are in Vermilion, and one is located along a rural route. |
| Recreation | 3 | Two are located just outside of Vermilion, one is outside of Lloydminster, and one is located in rural area north of Marwayne. |
| Cemetery | 12 | Four are connected to a church or community hall, eight are not. |

## Transportation

The road system within the County contains a total of 3,555 kilometres of roads. There are four types of roads, as shown in Table 8. Gravel roads are prominent, providing secondary links within rural areas. Asphalt roads connect all hamlets and urban centers. 18 percent of the County is within one kilometer of asphalt, while 71 percent is within five kilometers, as shown on Map 14, which shows the County's transportation system.

Table 8: County Road Types

| Surface Type | Road Length (km) |
|---|---|
| Asphalt | 671 |
| Undeveloped | 55 |
| Gravel | 2603 |
| Oil | 226 |
| Total | 3,555 |

Highway 16, which runs the east to west through the County, is slated to be upgraded by the Province. In 2005, a Freeway Corridor Management Study was completed, with the goal of converting the highway to a freeway. Planning studies are currently underway to identify interchange locations. Once interchange locations are determined, all other accesses to Highway 16 will be removed and alternative routes to the interchanges will be identified. Table 9 shows the breakdown of road types by Hamlet.

Table 8: Road Breakdown in Hamlets

| | Paved | | Gravel | | Undeveloped | | Oil | | |
|---|---|---|---|---|---|---|---|---|---|
| Hamlet | kms | % | kms | % | kms | % | kms | % | Total |
| • Blackfoot | 0 | 0 | 5.1 | 100% | 0 | 0 | 0.0 | 0% | 5.15 |
| • Clandonald | 0 | 0 | 3.8 | 82% | 0 | 0 | 0.8 | 18% | 4.59 |
| • Islay | 0 | 0 | 3.3 | 100% | 0 | 0 | 0.0 | 0% | 3.29 |
| • McLaughlin | 0 | 0 | 1.6 | 79% | 0 | 0 | 0.4 | 21% | 2.03 |
| • Rivercourse | 0 | 0 | 0.6 | 100% | 0 | 0 | 0.0 | 0% | 0.61 |
| • Streamstown | 0 | 0 | 1.1 | 100% | 0 | 0 | 0.0 | 0% | 1.12 |
| • Tulliby Lake | 0 | 0 | 0.6 | 100% | 0 | 0 | 0.0 | 0% | 0.63 |
| Total Hamlet Road Length | 0 | 0 | 16.2 | 93% | 0 | 0 | 1.2 | 7% | 17.42 |
| Total County Road Length | 671.3 | 19% | 2,602.6 | 73% | 54.9 | 2% | 226.1 | 6% | 3,554.89 |

Three rail lines cross the County of Vermilion River. Two are Canadian Pacific Railway (CPR) lines and one is a Canadian National Railway (CNR) line. The first CPR line connects Lloydminster to Two Hills County; the second is an abandoned line that runs from Paradise Valley into Saskatchewan. The CNR line connects Lloydminster to Minburn County. Two airports, one in Lloydminster, the other in Vermilion, connect the County by Air.

## Underground Infrastructure

Existing underground infrastructure includes existing utilities, water treatment and supply, and wastewater treatment, and can also include stormwater management facilities.

### Utilities

Utilities in the Country of Vermilion River are provided by a variety of private suppliers, and are generally available throughout the County:

- Electricity is provided by Fortis Alberta and ATCO Electric;
- Natural Gas is provided by the County of Vermilion River Natural Gas Utility, which is a member of the Federation of Alberta Gas Coops; and ATCO Gas;
- Television services are provided by a variety of providers, including “Regional Cable TV” and a variety of satellite providers, including Bell Express Vu and Shaw Direct;
- Telephone services are provided by Telus and various cell phone companies (Telus, Bell, Rogers, etc.); and
- Internet services are provided by Telus and various wireless providers.

## Potable Water Servicing

Water treatment and supply is currently available in four of the County's Hamlets: Blackfoot, Clandonald, Islay and McLaughlin. Table 9 below shows the design capacity and current use of each facility, as well as the potential population growth the facility could accommodate (assuming the system is in good shape and based on 400 L/day use per capita). All other residences in the County are serviced through individual private wells. Existing potable water servicing for Blackfoot and McLaughlin is shown on Map 15, and for Clandonald and Islay on Map 16.

Table 9: Water Servicing Capacity

| Hamlet | Design Capacity (m3/Yr) | Current Use (m3/Yr) | % of Capacity | Growth Potential (people) |
|---|---|---|---|---|
| Blackfoot | 59,688.345 | 46,573.489 | 78% | 90 |
| Clandonald | 32,828.590 | 24,621.442 | 75% | 56 |
| Islay | 37,854.100 | 31,336.381 | 83% | 45 |
| McLaughlin | 15,916.892 | 11,937.669 | 75% | 27 |
| Rivercourse | 11,937.669 | 1,514.164 | 13% | 71 |

Over the past decade, there has been significant discussion between the various levels of government about regional water supply. As a result, the Alberta Central East (ACE) Water Corporation is a consortium of municipalities in east central Alberta that was created to provide a reliable and secure supply of potable water to residents. With significant funding from the provincial Government, a new water system is currently being developed to provide water to approximately twenty communities, a number of them within the geographical boundary of Vermilion River County. In October 2012, phase one was completed, sending water from the Vegreville Water Transfer Station through pipelines to four of the partner municipalities.[1] Vermilion River County Communities that are slated to receive regional water include the Hamlets of Clandonald, Islay, and Blackfoot, while Municipalities internal to Vermilion River County include Vermilion, Kitscoty, Dewberry, Marwayne and Paradise Valley.[2] The total cost of the project in about $150 million split between 15 municipalities between Vegreville and Lloydminster.[3] Once complete, it will be one of the largest regional systems in Alberta.

[1] *Vermilion River County, Press Release. www.vermilion-river.com/mrws/filedriver/2012-10-26_ACERibbon_Cutting.pdf*

[2] *Vegreville Observer, October 2012. http://vegobserver.com/wordpressmu/files/2012/10/ACE-Phases.jpg*

[3] *Vermilion Standard, April 10, 2012. www.vermilionstandard.com/2012/04/10/ace-water-pipeline-enters-phase-two*

### Sanitary Servicing

Wastewater servicing is available in three of the County's Hamlets: Blackfoot, Clandonald, and Islay. Table 10 below shows the design capacity and current use of each facility, as well as the potential population growth the facility could accommodate (assuming the system is in good shape and based on current user per capita). All other residences in the County are serviced through individual private septic systems.

Table 10: Wastewater Servicing Capacity

| Hamlet | Design Capacity (m3/Yr) | Current Use (m3/Yr) | % at Capacity | Growth Potential (people) |
|---|---|---|---|---|
| Blackfoot | 116,000 | 90,000 | 78% | 79 |
| Clandonald | 12,000 | 10,000 | 83% | 25 |
| Islay | 150,000 | 140,000 | 93% | 16 |

Existing sanitary servicing for Blackfoot is shown on Map 15, and for Clandonald and Islay on Map 16.

### Stormwater Management

Based on available data, there are no stormwater management facilities in any of the County's residential areas, although there are a series of open channels and stormwater pipes in the area adjacent to the City of Lloydminster. Stormwater in the County is to be managed according to the County of Vermilion River Master Stormwater Management Plan, and its sub components for various drainage basins. The RGMS will need to consider stormwater concerns in growth area recommendations.

## Solid Waste Management

The County of Vermilion has seven solid waste sites. The sites are located in Paradise Valley, Kitscoty, Marwayne, Tulliby Lake, between Clandonald and Dewberry, Vermilion and Preston. Map 17 provides the locations of Solid Waste Management Facilities.

## Emergency Services

Fire Services for the County are dispatched from eight locations in or adjacent to the County: Clandonald, Dewberry, Marwayne, Vermilion, Islay, Kitscoty, Blackfoot, and Paradise Valley. Rescue Services for the County are dispatched from five locations in or adjacent to the County: Dewberry, Marwayne, Vermilion, Kitscoty and Lloydminster. Fire response times can be found on Map 18 and rescue response times can be found on Map 19.

## Historical Resources

Historical Resources were identified by the Alberta Culture & Community Spirit Listing of Historic Resources. This listing identifies lands that contain or are believed to contain historic resources, primarily archaeological and paleontological sites, Aboriginal traditional use sites, and historic structures.

Each parcel of land in the Listing of Historic Resources is 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; and
- HRV 5: Believed to contain a historic resource.

Each entry is further described by the primary historic resource category of concern, including archaeological, cultural, historic period, and paleontological, as well natural and geological.

Archaeological and Historic Resources may require protection from development. Further analysis (e.g., Historical Resource Assessment) may be required to determine development restrictions on a site by site basis.

Historical resources are shown on Map 20.

## Oil & Gas Infrastructure

Oil and gas activity is prominent throughout the County and is dominated by two types of activity: wells and pipelines. Numerous companies operate in the County of Vermilion River. Oil and Gas activity is regulated by the Energy Resources Conservation Board (ERCB) of Alberta. Oil and gas infrastructure is shown on Map 21. Through the development of the RGMS, significant residential development could be restricted within a certain distance of oil and gas infrastructure.

## Other Human-Built Constraints

There are a number of other constraints to development that must be considered, including Confined Feeding Operations (CFOs), Landfills and Waste Transfer Stations, and Sewage Lagoons. These have been mapped, including the setbacks that are either recommended (in the case of CFOs) or regulated. These are shown on Map 22.

## 2.3 Demographics

This analysis helps to consider potential social, cultural, and community impacts of future development.

### Current Population

According to the 2011 Federal census, the population of Vermilion River County is 7,900. Population estimates for Hamlets and the rural area is shown in Table 11 below.

Table 11: County Population Breakdown

| Community | Population | % of County Population |
|---|---|---|
| Blackfoot | 275 | 3.5% |
| Clandonald | 125 | 1.6% |
| Islay | 220 | 2.8% |
| McLaughlin | 60 | 0.8% |
| Rivercourse | 55 | 0.7% |
| Streamstown | 49 | 0.6% |
| Tulliby Lake | 17 | 0.2% |
| Rural | 7099 | 89.9% |
| Total | 7,900 | 100% |

*Note: Populations for Blackfoot, Clandonald and Islay have been published by Statistics Canada; Populations all others (except Tulliby Lake) were calculated by Dillon Consulting Limited based on aggregate 2011 Federal Census data; Population for Tulliby Lake was calculated by Dillon Consulting Limited based on 2008 County Census data.*

### Population Trends

Between 2006 and 2011, the total population of the County of Vermilion River increased by 430 people, reflecting an average annual growth rate of 1.13%. This represents a reversal of the trend exhibited between 2001 and 2006 when the population decreased at an average rate of -0.15%.

An Aging Population - Generally, the population of the County has aged since 2001. The average age has increased from 37.8 years in 2001 to 38.9 years in 2011. Similarly, the proportion of the total population aged 15 years and over has increased from 77.9% in 2001 to 78.4% in 2011. The share of the population aged 0-4 grew from 5.8 % of the total population in 2001 to 6.6% in 2011. This represents an increase of 90 children aged 0-4. Likewise, the age group 55-64 also experienced strong growth increasing at 185 at an average growth of 3.9% a year. Blackfoot is generally younger than the County as a whole with 77% of its population aged 15 years and older (compared to 78.2% for the County). Clandonald is also generally younger than the County as a whole, with only 75.5% of its population being 15 years and older (compared to 78.2% for the County). With an assisted living centre, Islay is also home to 12.5% of

those aged 85 years and over in the County, which makes its population much older than the County's average.

A population comparison from 2001 to 2011 is shown in Table 12 below, and Details for the Hamlets of Blackfoot, Clandonald and Islay are shown in Tables 13, 14, and 15.

Table 12: Population of Vermilion River County

| County of Vermilion River | 2001 | | | 2006 | | | 2011 | | |
|---|---|---|---|---|---|---|---|---|---|
| | Total | Male | Female | Total | Male | Female | Total | Male | Female |
| 0-4 | 435 | 220 | 215 | 470 | 240 | 235 | 525 | 265 | 265 |
| 5-14 | 1,235 | 640 | 595 | 1,130 | 610 | 520 | 1,200 | 635 | 560 |
| 15-19 | 690 | 340 | 355 | 640 | 340 | 300 | 600 | 315 | 285 |
| 20-24 | 365 | 190 | 180 | 395 | 195 | 195 | 365 | 195 | 170 |
| 25-44 | 2,075 | 1,025 | 1,050 | 1,805 | 895 | 905 | 1,895 | 955 | 940 |
| 45-54 | 1,165 | 615 | 555 | 1,340 | 690 | 650 | 1,365 | 665 | 695 |
| 55-64 | 695 | 370 | 330 | 880 | 455 | 430 | 1,065 | 570 | 500 |
| 65-74 | 515 | 275 | 240 | 440 | 235 | 205 | 565 | 315 | 260 |
| 75-84 | 285 | 170 | 115 | 295 | 175 | 125 | 240 | 130 | 105 |
| 85+ | 65 | 35 | 25 | 75 | 35 | 40 | 80 | 35 | 45 |
| Total population | 7,525 | 3,880 | 3,660 | 7,470 | 3,870 | 3,605 | 7,900 | 4,080 | 3,825 |
| Median age of the population | 37.8 | 38.3 | 37.4 | 39.0 | 38.8 | 39.1 | 38.9 | 38.9 | 38.9 |
| % of the population aged 15 and over | 77.9% | 77.9% | 77.8% | 78.5% | 78.1% | 79.0% | 78.2% | 77.8% | 78.4% |

Table 13: Hamlet of Blackfoot

| Blackfoot | 2011 | | |
|---|---|---|---|
| | Total | Male | Female |
| 0-4 | 35 | 20 | 20 |
| 5-14 | 25 | 20 | 10 |
| 15-19 | 10 | 5 | - |
| 20-24 | 15 | 10 | 10 |
| 25-44 | 95 | 45 | 50 |
| 45-54 | 45 | 20 | 25 |
| 55-64 | 25 | 15 | 10 |
| 65-74 | 15 | 5 | 5 |
| 75-84 | 10 | 5 | 5 |
| 85+ | - | 5 | 5 |
| Total population | 275 | 150 | 140 |
| Median age of the population | 33 | 32 | 34 |
| % of the population aged 15 and over | 77.0% | 75.5% | 78.7% |

*Statistics Canada, 2011 Community profiles for Blackfoot (UNP)*

Table 14: Hamlet of Clandonald

| Clandonald | 2011 | | |
|---|---|---|---|
| | Total | Male | Female |
| 0-4 | - | - | - |
| 5-14 | 25 | 10 | 15 |
| 15-19 | 10 | 5 | 5 |
| 20-24 | 5 | - | 5 |
| 25-44 | 30 | 10 | 20 |
| 45-54 | 20 | 10 | 10 |
| 55-64 | 20 | 5 | 10 |
| 65-74 | 5 | 5 | - |
| 75-84 | 5 | 5 | - |
| 85+ | 5 | - | - |
| Total population | 125 | 50 | 65 |
| Median age of the population | 35 | 33 | 36 |
| % of the population aged 15 and over | 75.5% | 78.6% | 72.2% |

*Statistics Canada, 2011 Community profiles for Clandonald (UNP)*

Table 15: Hamlet of Islay

| Islay | 2011 | | |
|---|---|---|---|
| | Total | Male | Female |
| 0-4 | 20 | 10 | 10 |
| 5-14 | 35 | 20 | 15 |
| 15-19 | 10 | 5 | - |
| 20-24 | 5 | - | 5 |
| 25-44 | 65 | 30 | 35 |
| 45-54 | 30 | 20 | 15 |
| 55-64 | 20 | 10 | 15 |
| 65-74 | 15 | 10 | 5 |
| 75-84 | 10 | - | 5 |
| 85+ | 10 | 5 | 10 |
| Total population | 220 | 110 | 115 |
| Median age of the population | 38 | 37 | 39 |
| % of the population aged 15 and over | 75.7% | 74.5% | 80.5% |

*Statistics Canada, 2011 Community profiles for Islay (UNP)*

## Mobility

Statistics Canada reports on the mobility status of residents by community as part of the census. For the two most recent years that census information is available for (2001 and 2006 – mobility data has not yet been released for the 2011 Census), the mobility analysis indicates that the population of the County is very stable. In each of 2001 and 2006, between 75% and 80% of residents had lived at the same location for at least the previous five years. Only 16% to 18% moved to the County from somewhere else

in Alberta and less than 5% moved to the County from somewhere else in Canada or outside Canada. Mobility data from 2001 and 2006 is shown in Table 16.

Table 16: Mobility of Vermilion River County Residents

| County of Vermilion River | 2001 | | | 2006 | | |
|---|---|---|---|---|---|---|
| | Total | Male | Female | Total | Male | Female |
| Total population 5 years and over | 7,070 | 3,600 | 3,470 | 6,955 | 3,590 | 3,360 |
| Lived at the same address 5 years ago | 5,450 | 2,765 | 2,685 | 5,500 | 2,850 | 2,650 |
| Lived within the same province/territory 5 years ago; but changed address | 1,290 | 660 | 630 | 1,135 | 575 | 555 |
| Lived in a different province/territory or country 5 years ago | 330 | 175 | 155 | 320 | 160 | 150 |

*Statistics Canada, 2001 and 2006 Community profiles for County of Vermilion River*

## Employment

While employment data from the 2011 Census is not yet available, between 2001 and 2006 the total labour force in the County of Vermilion River essentially did not change (a small decrease of 80 workers which represents an average annual decrease of 0.35%). Despite the small change in labour force, agriculture and the combined construction and manufacturing sectors experienced declines of -3.17% and -5.79% respectively. This decline was countered by a strong 6.34% growth in the health and education industry.[4]

Table 17: County of Vermilion River - Employment

| County of Vermilion River | 2001 | | | 2006 | | |
|---|---|---|---|---|---|---|
| | Total | Male | Female | Total | Male | Female |
| Total - Experienced labour force | 4,600 | 2,555 | 2,045 | 4,520 | 2,485 | 2,035 |
| Agriculture and other resource-based industries | 2,120 | 1,440 | 680 | 1,805 | 1,265 | 545 |
| Manufacturing and construction industries | 485 | 345 | 140 | 360 | 290 | 65 |
| Wholesale and retail trade | 505 | 250 | 255 | 575 | 260 | 315 |
| Finance and real estate | 80 | 25 | 50 | 95 | 35 | 55 |
| Health and education | 500 | 65 | 435 | 680 | 120 | 555 |
| Business services | 490 | 270 | 225 | 555 | 280 | 270 |
| Other services | 420 | 160 | 265 | 450 | 225 | 220 |

*Statistics Canada, 2001 and 2006 Community profiles for County of Vermilion River*

[4] Note that employment reflects the jobs held by County residents.

## Shelter and Household Characteristics

### Dwelling Units

Table 18: County of Vermilion River – Dwelling Units

| County of Vermilion River | 2001 Total | 2006 Total |
|---|---|---|
| Total private dwellings occupied by usual residents | 2,610 | 2,635 |
| Number of owned dwellings | 2,320 | 2,435 |
| Number of rented dwellings | 290 | 200 |
| Number of dwellings constructed before 1986 | | 1,755 |
| Number of dwellings constructed between 1986 and 2006 | | 880 |
| Number of dwellings constructed before 1991 | 2,255 | |
| Number of dwellings constructed between 1991 and 2001 | 355 | |

*Statistics Canada, 2001 and 2006 Community profiles for County of Vermilion River*

Between 2001 and 2006 the County of Vermilion River experience a modest growth of 25 new private dwellings. Overall, there was an increase of 115 owned units while there was a decrease of 90 units occupied by renters. Table 18 shows the number of dwelling units within the County.

### Household Characteristics

Consistent with the reported increase in population between 2006 and 2011, there was an increase in the number of households in the County. The number of total private households experienced annual growth of 0.15% between 2001 and 2006 but increased to 1.26% between 2006 and 2011. The other household type, which includes single parents, saw the largest annual growth of 6.23% to bring it back to its 2001 level. The "Other" household type, which includes single parents, saw the largest annual growth of 6.23% to bring it back to its 2001 level. Table 19 shows the characteristics of households within the County.

Table 19: County of Vermilion River – Household Characteristics

| County of Vermilion River | 2001 Total | 2006 Total | 2011 Total |
|---|---|---|---|
| Total private households | 2,610 | 2,630 | 2,800 |
| Households containing a couple (married or common-law) with children | 1,110 | 1,105 | 1,100 |
| Households containing a couple (married or common-law) without children | 850 | 945 | 975 |
| One-person households | 430 | 410 | 445 |
| Other household types | 225 | 170 | 230 |
| Average household size | 2.9 | 2.8 | 2.8 |
| Median family income All census families | 54,329 | 69,491 | |

*Statistics Canada, 2001, 2006 and 2011 Community profiles for County of Vermilion River*

Average household size has essentially not changed over the past 10 years, averaging between 2.8 and 2.9 people per household. In 2006, Statistics Canada reported that the median income of all private households was approximately $69,500. This reflects a significant increase since the comparable 2001 figure of $54,300. In each year the median family income was roughly 5% below the provincial average.

### Municipal Finance

In reviewing the County of Vermilion River's municipal fiscal position, it is concluded that the County is in a sound financial position. Its residential municipal tax rates (2011) are below the provincial average for rural municipalities (3.010 as compared to 4.442 for all rural municipalities in Alberta). The County's non-residential tax rate is roughly equal to the provincial average for rural municipalities (11.385 as compared to 11.717 for all rural municipalities in Alberta).

In addition to tax rates, the relative size of a municipality's assessment base and composition of that assessment base are measures of a municipality's fiscal capacity, or tax base. The County of Vermilion River has a favourable balance between residential and non-residential assessment as compared to other rural municipalities in Alberta. Typically, the higher the proportion of a municipality's assessment base that is comprised of non-residential assessment, the greater the fiscal capacity of the municipality. The County's assessment base is comprised of 42% of non-residential assessment.

On a per capita basis, the County has a below average fiscal capacity. In 2011 the County of Vermilion River's total equalized assessment per capita was $263,000 as compared to the provincial average for rural municipalities of $393,400. While below the provincial average, this measure of fiscal capacity is well within the range of being acceptable. However, it does raise the issue of future development and the need for 'balanced growth', where there would be an increase in the non-residential assessment base (e.g., commercial and industrial development) that keeps pace with residential growth.

## 2.4 The Planning Hierarchy and Regional Policy Context

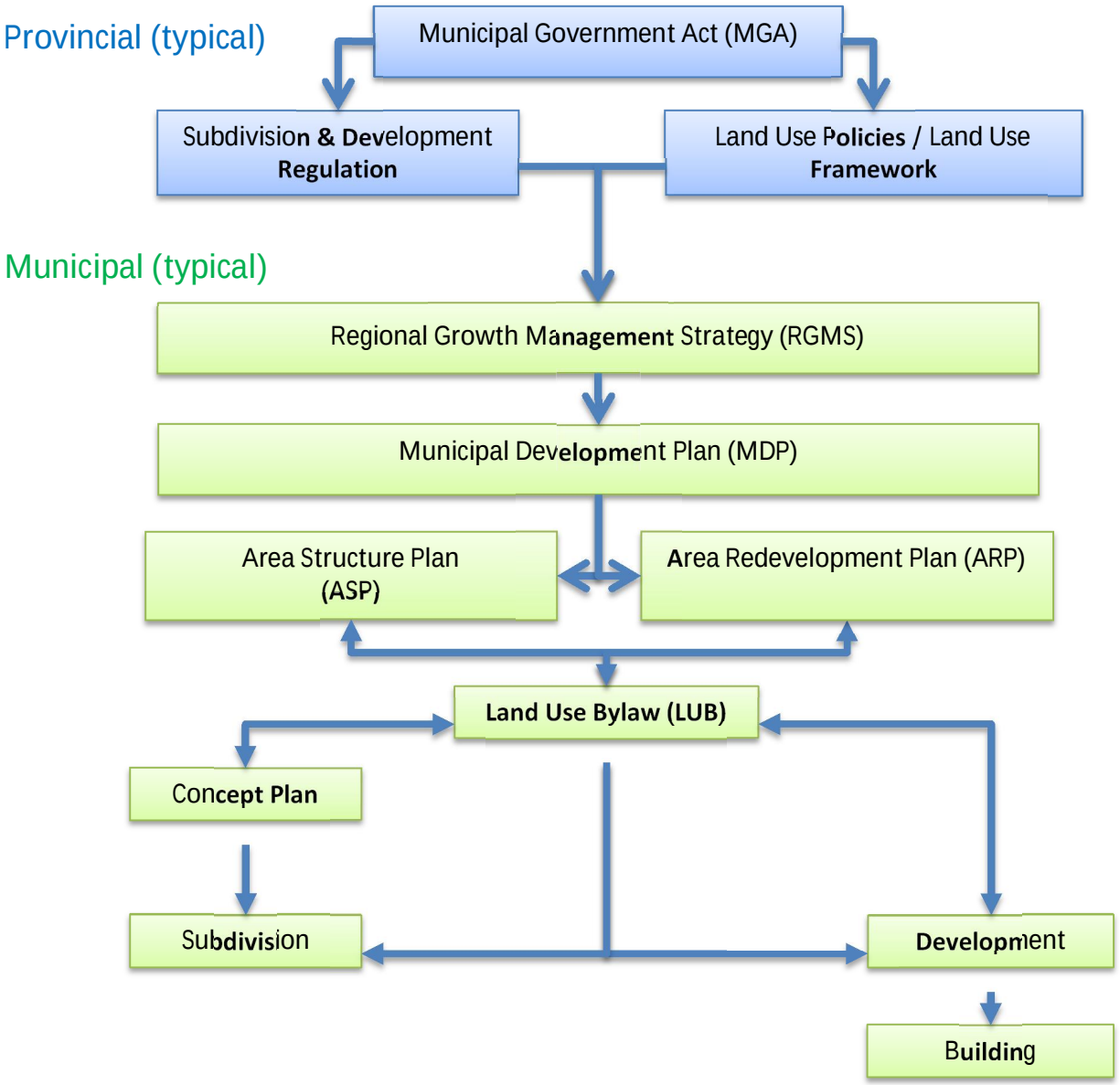
This section reviews and compares visions, principles and desired outcomes contained in provincial and County policy documents in the context of the Regional Growth Management Strategy (RGMS) to identify potential alignments and contradictions. It also sets the policy context for the RGMS.

In Alberta, Land Use Planning is administered under the *Municipal Government Act* (MGA). Two documents are set by the Province to provide municipalities with a process to follow: the Land Use Policies, and the Subdivision & Development Regulation. The Province has also recently approved a new framework for planning land use at a regional level within the province: the Land Use Framework (LUF). Through this new process, regional land use plans will be created over the coming years, and municipal land use plans will be required to conform.

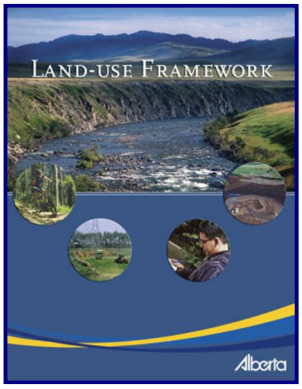
A municipality's Municipal Development Plan (MDP) serves as its principal statutory plan, and is adopted under the provisions of Alberta's *Municipal Government Act*. Other planning tools that are used to direct future growth and land use include the Land Use Bylaw (LUB), Area Structure Plans (ASPs), Area Redevelopment Plans (ARPs) and Concept Plans (CPs) or Conceptual Schemes (CSs). Each municipality with a population of more than 1,500 must have an MDP and LUB, while using ASPs, ARPs, and CPs/CSs is not mandatory. The MDP is the overarching policy document approved by the County – all other plans must conform to this plan. Some municipalities also develop a Growth Management Strategy that, while

not a bylaw, is approved by Council to provide further overarching policy direction for all land use planning. Figure 1 shows planning tools that are typically used in Alberta.

Figure 1: The Planning Hierarchy in Alberta



## Alberta Land Use Framework (LUF) and the North Saskatchewan Regional Plan (NSRP)

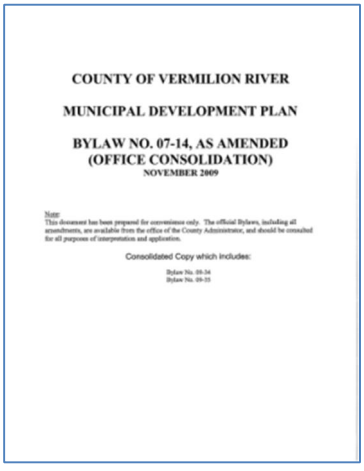



The Alberta Land Use Framework (LUF) was created in 2008 as a response to rapid growth in the province, and divides the province into seven watersheds. The goal of the LUF is to develop regional plans for each watershed, which in turn will guide all future development within its boundaries. Vermilion River County is located within the North Saskatchewan River Basin; however, the North Saskatchewan Regional Plan (NSRP) has yet to be developed. Once it is, it will direct growth and land use throughout the North Saskatchewan Basin, and all County land use policies will need to be consistent with the NSRP.

In the absence of a regional Plan for the North Saskatchewan Region, it is prudent for all land use documents to be aligned with the Land Use Framework. Specifically, all County documents (including the RGMS) should 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 then 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.

## Current Municipal Development Plan (MDP)


COUNTY OF VERMILION RIVER

MUNICIPAL DEVELOPMENT PLAN

BYLAW NO. 07-14, AS AMENDED
(OFFICE CONSOLIDATION)
NOVEMBER 2009

Note:
This document has been prepared for convenience only. The official Bylaws, including all amendments, are available from the office of the County Administrator, and should be consulted for all purposes of interpretation and application.

Consolidated Copy which includes:

Bylaw No. 09-34
Bylaw No. 09-35

The County's current Municipal Development Plan, Approved in 2007, was developed with an understanding that agriculture is the County's most enduring asset, and it would continue to be a major economic driver within the community. The MDP specifies that urban development within the County must be focused around areas designated for development. The County is currently updating its MDP, but for the purposes of the RGMS, the current MDP is the approved document until the new one is approved.

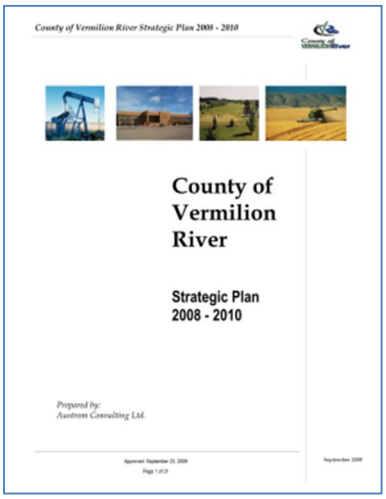
The MDP identifies that: "Notwithstanding the urban-style development the Plan allows, it is still the opinion of the County that agriculture development should not normally be restricted by other forms of development. However other resources and development and development related to the urban centers in the County should take careful note of other development forms, especially residential uses within the County. The rural residential amenity of the County should be protected from conflict with resources and urban-related development."

Supporting objectives and policies aim to:

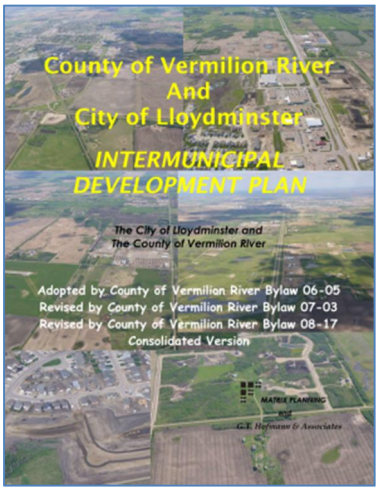
- Protect high quality agriculture land from residential or other development.
- Reduce the impact of resource extraction on agriculture uses by doing them in the least detrimental way to reduce the impact on agriculture uses.
- Cluster industrial development to limit the impact on agriculture and resource extraction.
- Ensure that industrial development accounts for the environment and is located close to existing transportation routes and urban forms and development.
- Encourage future urban development to not infringe on the rural area.

## Sustainability / Strategic Plan (2008-2010)

The Sustainability / Strategic Plan provides a strategy to address upcoming challenges, including aging rural infrastructure and financial responsibilities. It assumes that demand for alternative land uses beyond agriculture, such as housing, and industrial uses will continue to grow throughout the region, leading to land use conflict. The plan includes six strategies that focus on balancing residential and commercial development with agricultural activities. It does not provide for increased commercial and industrial growth.



## City of Lloydminster IDP (2009)




The City of Lloydminster, an adjacent municipality to the County of Vermilion River, is expecting growth over the next 20 years to support a growing demand within the resource sectors. The City has had a compounded average annual population growth of 3% since 1971. The IDP assumes the growth rate will continue for another 30 years, for a projected population of approximately 57,000 people, which would require approximately 800 to 900 additional hectares for residential growth. The IDP outlines how growth will be managed over a 20 year planning horizon within the total IDP area, comprising of 6,092 hectares. It provides a regional framework for attracting economic opportunities and managing land use, and subdivision development in the IDP Area. Current existing land uses include agriculture, oil and gas facilities and some country residential land use.

The IDP identifies five land use designations, which are divided into 10 different 'cells', including:

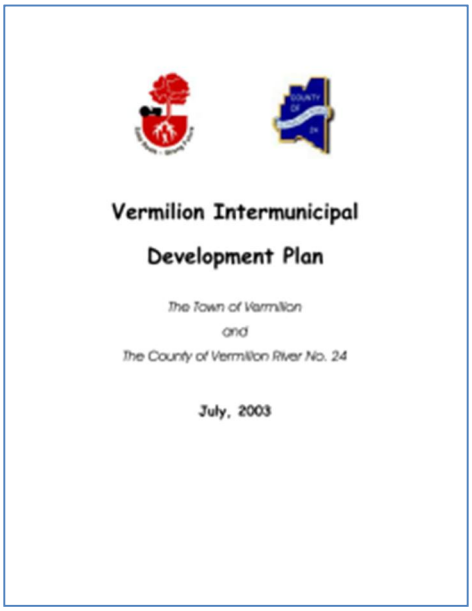
| Designation | Hectares | Acres | % |
|---|---|---|---|
| Urban Expansion (UE) | 2,972 | 7,343.96 | 48.8% |
| Rural Commercial/Industrial (RCI) | 893 | 2,206.65 | 14.7% |
| Highway Profile Development (HPD) | 470 | 1,161.39 | 7.7% |
| Rural Development (RD) | 1692 | 4,181.02 | 27.8% |
| Airport Protection Area (APA) | 34.8 | 85.99 | 0.6% |
| *Area to be redesignated AP to RCI* | 30.2 | 74.63 | 0.5% |
| Total | 6092 | 15,053.64 | 100.0% |

Land Use Development policies have been developed to guide growth within each of the five land use designations.

The RGMS will need to consider *Section 3 Future Land Use Concept* in directing land use, as it provides general guidelines for future development. *Subsection 3.2 Overall Future Land Use Concept* references a map that provides a long-term delineation as to which lands will develop in accordance with County standards and those that will eventually be annexed to the City and developed to urban uses and densities.

## Town of Vermilion IDP (2003)

The Vermilion Intermunicipal Development Plan (IDP) covers all of the urban reserve land within the Town of Vermilion as well as Policy Areas 1 and 3 of the County Urban Fringe Policy (land identified by the County for future urban development). The IDP area covers 3,675 hectares and is largely undeveloped. Current land uses include farmsteads, an Agricore distribution centre and a landfill; most of the remaining land is cultivated or pasture. Provisions for a broad mix of land uses throughout the IDP area have been established, recognizing the need for opportunities for each class of land use within both the Town and County. Land use policies have also been developed to guide development.


Vermilion Intermunicipal

Development Plan

The Town of Vermilion
and
The County of Vermilion River No. 24

July, 2003

The RGMS will need to consider *Section 3.2 Future Land Use Concept* sub-headings a)- q) as they provide a sequence for development within the IDP. While not intended to be prepared down to the street level, it is sufficient detail to guide how future development links to existing development.

# 3.0 SUMMARY AND CONCLUSIONS

As a result of the comprehensive Situational Analysis that has been completed for Stage One of the Regional Growth Management Strategy, the following preliminary conclusions can be made:

- Based on the *Natural Systems* analysis, the lowest Habitat Sensitivity Index is surrounding Rivercourse, Streamstown, and Marwayne. All had limited SAR (Species-At-Risk) observations, previously altered habitats (surrounded by agriculture), and limited waterbodies (fewer wetlands and creeks that would require compensation and involvement with AENV).
- Based on *Agricultural Suitability*, the most suitable areas for development are around Rivercourse, McLaughlin, Clandonald and Blackfoot. All had Class 3-4 soils in immediate area compared to Class 1-2 in other areas.
- Based on *Groundwater Yields*, growth in the northeastern part of the County, as well as the far southeast may not be able to be sustained via groundwater wells. Growth in those locations may require regional water lines or other sources of water supply.
- Based on available *Water Servicing* data, population growth could be sustained by existing systems in Blackfoot (approximately 90 people), Clandonald (approximately 56 people), Islay (approximately 45 people), McLaughlin (approximately 27 people) and Rivercourse (approximately 71 people). Significant growth elsewhere in the County would require new water supply infrastructure.
- Based on the available *Wastewater Treatment Facility* data, population growth could be sustained by existing systems in Blackfoot (approximately 79 people), Clandonald (approximately 25 people) and Islay (approximately 16 people). Significant growth elsewhere in the County would require new wastewater treatment infrastructure.
- Based on current *Fire* Response time data, growth in the Hamlets of Clandonald, Blackfoot, Islay, and surrounding Vermilion, Kitscoty, Dewberry, Marwayne and Paradise Valley would not require increase in Fire Services.
- Based on current *Rescue* Response time data, growth in the Hamlet of Blackfoot, and surrounding Vermilion, Kitscoty, Dewberry and Marwayne would not require increase in Emergency Services.
- Based on *existing land use policy*, growth is supported in the Intermunicipal Development Plan Areas with Lloydminster and Vermilion. There is no current policy explicitly supporting or prohibiting growth in other places.
- Based on *Recent Development*, there is a demand for Country Residential development throughout the County and for non-residential development both within close proximity to Lloydminster and throughout the County.

- Based on the County's *Municipal Finances*, the County is in a good financial position; however, future development needs to be 'balanced, so that increases in the non-residential assessment base (e.g.: commercial and industrial development) keep pace with residential growth.

These preliminary conclusions will be considered as a number of growth scenarios are developed and evaluated in the next stage of the development of the RGMS. Factors from each individual analysis will be overlaid to develop evaluation criteria for future growth policy options.

# 4.0 REFERENCES

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Alberta Environment Sustainable Resource Development (AESRD). 2010. Status of Alberta wild species 2010. Available at: http://www.srd.alberta.ca/fishwildlife/speciesatrisk/GeneralStatusOfAlbertaWildSpecies/GeneralStatusofAlbertaWildSpecies2010/Default.aspx. Accessed October 2012.

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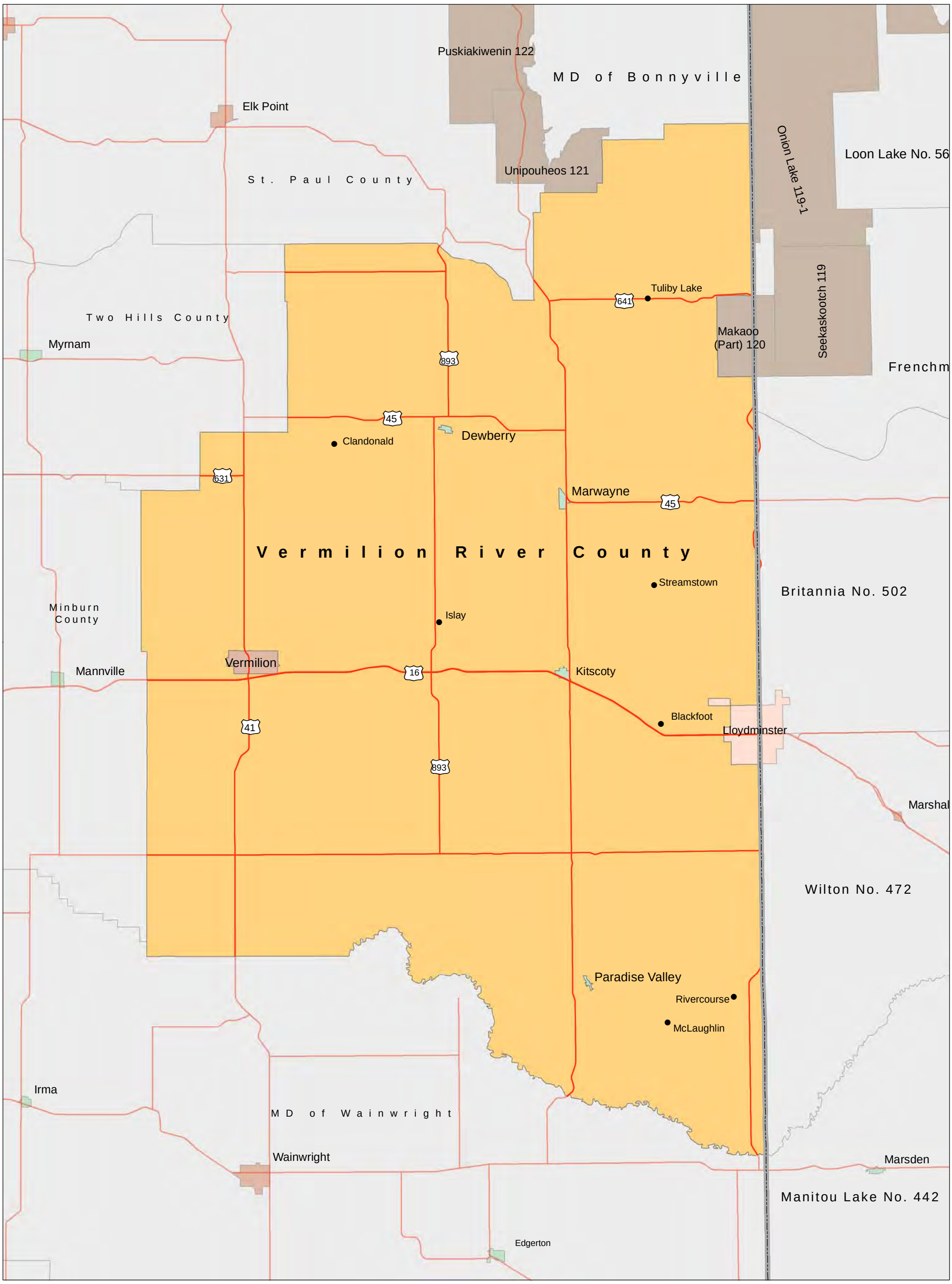


**County of Vermilion River**

Regional Growth Management Strategy

**Regional Context**

Map 1

| | | | | | |
|---|---|---|---|---|---|
| ● | Hamlet | | Vermilion River County | | Village |
| — | Highways | | Municipal District/Rural Municipality | | City |
| | Provincial Boundaries | | Town | | Indian Reserve |

DILLON CONSULTING

Map Data Provided By:
Vermilion River County, StatisticsCanada, Dillon Created

Map Created By: Eric Hertzman
Map Checked By: Alex Taylor
Map Projection: NAD 1983 UTM Zone 12N

File Location: G:\GIS\12XXXX Vermilion River\Map 1 Regional Context.mxd

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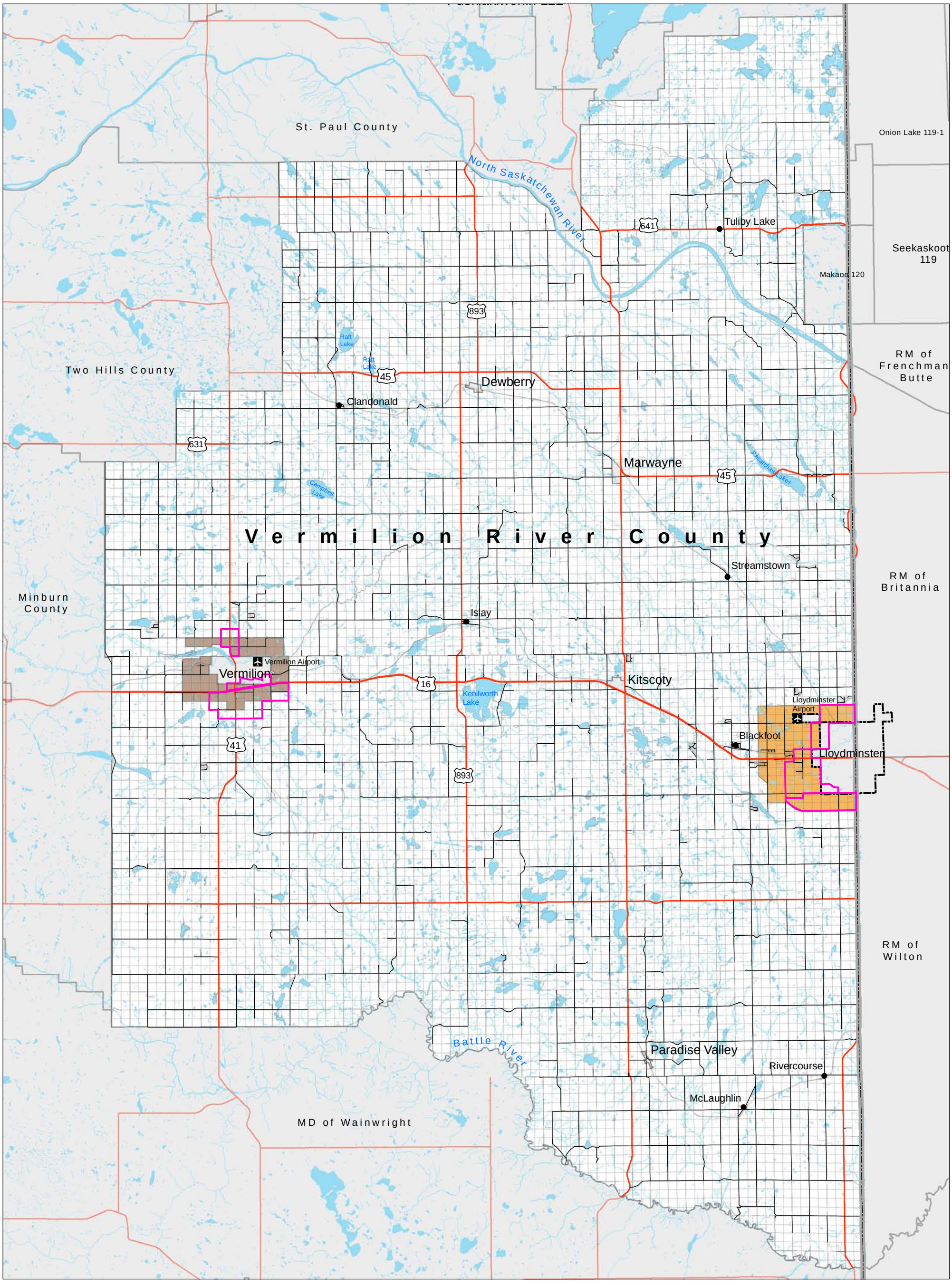
SCALE 1:340,000

N W E S

PROJECT: 12-6661 STATUS: DRAFT DATE: 1/11/2013




**County of Vermilion River**

Regional Growth Management Strategy

**Study Area**

Map 2

| | | | |
|---|---|---|---|
| Hamlet | Provincial Boundaries | Area Structure Plan Boundaries | Streams |
| Highways | Property Parcels | Lloydminster Intermunicipal Development Plan | Lakes/Rivers |
| Other Roads | Vermilion River County | Vermilion Intermunicipal Development Plan | |

DILLON CONSULTING

Map Data Provided By:
Vermilion River County, StatisticsCanada, Dillon Created

Map Created By: Eric Hertzman
Map Checked By: Alex Taylor
Map Projection: NAD 1983 UTM Zone 12N

File Location: G:\GIS\12XXXX Vermilion River\Map 2 County Vermilion River3.mxd

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SCALE 1:340,000

PROJECT: 12-6661 STATUS: DRAFT DATE: 1/11/2013

St. Paul County

Onion Lake 119-1

Tuliby Lake

Seekaskoot 119

Makaoo 120

RM of Frenchman Butte

Two Hills County

Dewberry

Clandonald

Marwayne

Vermilion River County

Streamstown

RM of Britannia

Minburn County

Islay

Vermilion

Kitscoty

Blackfoot

Lloydminster

RM of Wilton

Battle River

Paradise Valley

Rivercourse

McLaughlin

MD of Wainwright

**County of Vermilion River**

Regional Growth Management Strategy

**Topography**

Map 3

Elevation

High : 779m

Low : 500m

Steep Slopes

15 - 46%

Map Data Provided By:
Vermilion River County, StatisticsCanada, Dillon Created
Elevation model is an approximation based on 5m contours

Map Created By: Eric Hertzman
Map Checked By: Alex Taylor
Map Projection: NAD 1983 UTM Zone 12N

File Location: G:\GIS\12XXXX Vermilion River\Map 3 Topography.mxd

0 5 10 20 km

SCALE 1:340,000

N W E S

PROJECT: 12-6661 STATUS: DRAFT DATE: 1/14/2013

St. Paul County
Onion Lake 119-1
North Saskatchewan River
Tuliby Lake
Seekaskoot 119
Makaoo 120
Two Hills County
Raft Lake
Raft Lake
RM of Frenchman Butte
Dewberry
Clandonald
Marwayne
Campbell Lake
Pasatahaw Lakes
Minburn County
Streamstown
RM of Britannia
Islay
Vermilion
Kitscoty
Kenilworth Lake
Blackfoot
Lloydminster
RM of Wilton
Battle River
Paradise Valley
Rivercourse
McLaughlin
MD of Wainwright

**County of Vermilion River**

Regional Growth Management Strategy

**Soils**

Map 4

Soil Orders in Vermilion River County

| | | |
|---|---|---|
| Unknown Order | Gleysolic | Regosolic |
| Brunisolic | Luvisolic | Solonetzic |
| Chernozemic | Organic | |

DILLON CONSULTING

Map Data Provided By:
Vermilion River County, StatisticsCanada, Dillon Created Soil Data from AGRASID data Alberta Agriculture and Rural Development.

Map Created By: Eric Hertzman
Map Checked By: Alex Taylor
Map Projection: NAD 1983 UTM Zone 12N

File Location: G:\GIS\12XXXX Vermilion River\Map 4 Soils.mxd

0 4 8 16 km

N W E S

SCALE 1:340,000

PROJECT: 12-6661 STATUS: DRAFT DATE: 1/11/2013

St. Paul County
North Saskatchewan River
Onion Lake 119-
Tuliby Lake
Seekaskoo
119
Makaoo 120
Two Hills County
Raft Lake
Raft Lake
RM of
Frenchma
Butte
Dewberry
Clandonald
Marwayne
Campbell Lake
Pasquatchaw Lakes
Vermilion River County
Streamstown
RM of
Britannia
Minburn
County
Islay
Vermilion
Kitscoty
Blackfoot
Lloydminster
RM of
Wilton
Battle River
Paradise Valley
Rivercourse
McLaughlin
MD of Wainwright

**County of Vermilion River**

Regional Growth Management Strategy

**Geology**

Map 5

| | | | |
|---|---|---|---|
| No Type | hummocky | thick rolling to hummocky | undulating to rolling |
| flat to gently undulating | hummocky to ridged | undulating | |
| flat to undulating | ridges, irregular shaped hills & depression | undulating to hummocky | |

DILLON CONSULTING

Map Data Provided By:
Vermilion River County, StatisticsCanada, Dillon Created
Alberta Geological Survey

Map Created By: Eric Hertzman
Map Checked By: Alex Taylor
Map Projection: NAD 1983 UTM Zone 12N

File Location: G:\GIS\12XXXX Vermilion River\Map 5 Geology.mxd

0 5 10 20 km

SCALE 1:340,000

N W E S

PROJECT: 12-6661 STATUS: DRAFT DATE: 1/11/2013

St. Paul County
North Saskatchewan River
Onion Lake 119-
Tuliby Lake
Seekaskoo
119
Makaoo 120
Raft
Lake
Two Hills County
RM of
Frenchma
Butte
Dewberry
Clandonald
Marwayne
Pasatchaw Lakes
Campbell
Lake
Streamstown
RM of
Britannia
Minburn
County
Islay
Vermilion
Kitscoty
Kenilworth
Lake
Blackfoot
Lloydminster
RM of
Wilton
Battle River
Paradise Valley
Rivercourse
McLaughlin
MD of Wainwright

**County of Vermilion River**

Regional Growth Management Strategy

**Groundwater Yields**

Map 6

| Yield range in Imperial gallons per minute | Degree of Certainty |
|---|---|
| Good Yield (>25 gallons per minute) | Estimated |
| Satisfactory Yield (5-25 gallons per minute) | Established |
| Poor Yield (<5 gallons per minute) | |

DILLON CONSULTING

Map Data Provided By:
Vermilion River County, StatisticsCanada, Dillon Created Groundwater Yield data from Alberta Geological Survey data collected by Alberta Research Council between 1971 and 1983.

Map Created By: Eric Hertzman
Map Checked By: Alex Taylor
Map Projection: NAD 1983 UTM Zone 12N

File Location: G:\GIS\12XXXX Vermilion River\Map 6 Groundwater Yields.mxd

0 4 8 16 km

SCALE 1:340,000

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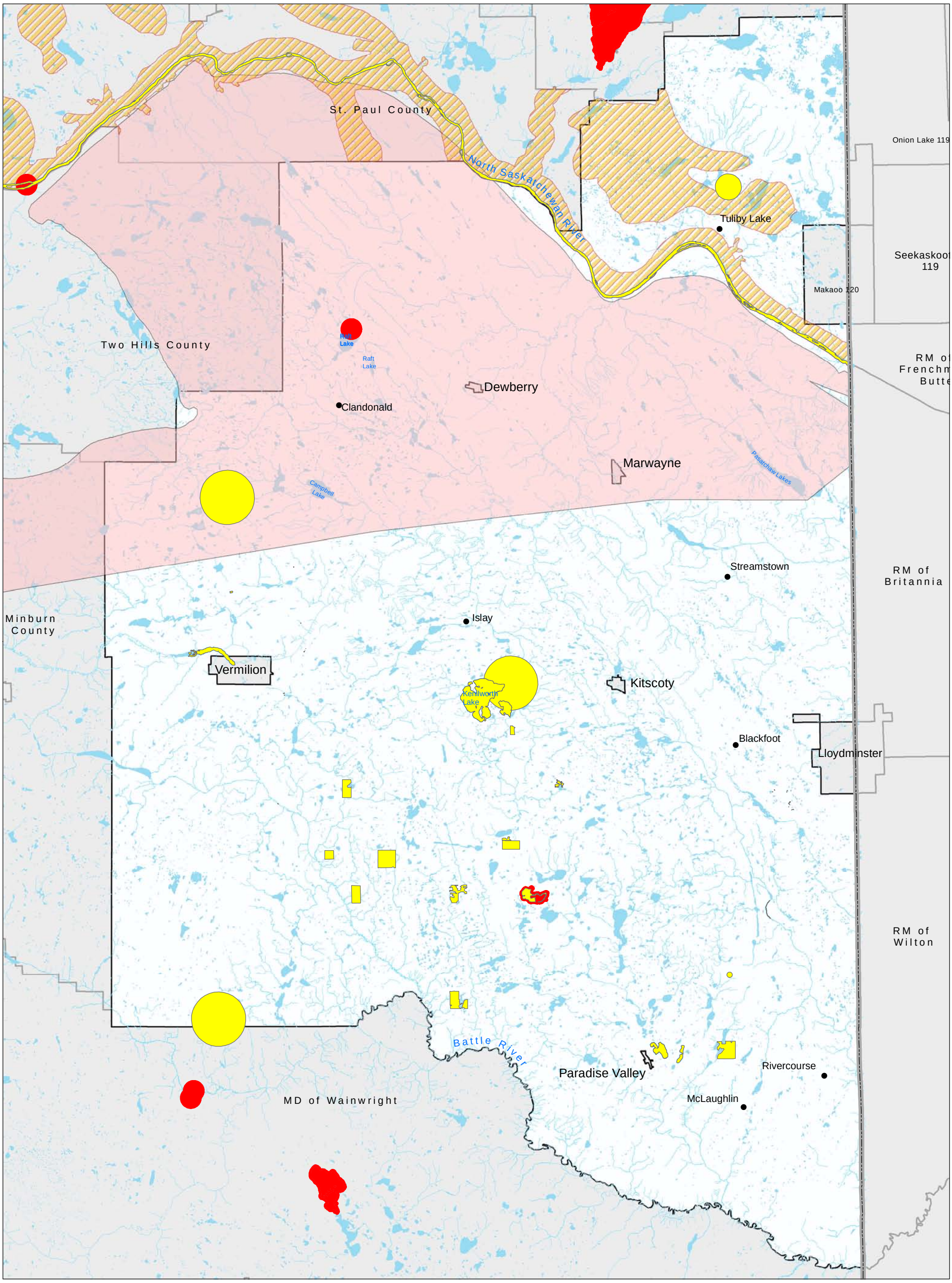
PROJECT: 12-6661 STATUS: DRAFT DATE: 1/11/2013




**County of Vermilion River**

Regional Growth Management Strategy

**Species at Risk**

Map 7

- Non-Sensitive Element Occurrences
- Piping Plover Waterbodies and Buffers/Colonial Nest Birds
- Key Wildlife and Biodiversity Zones
- Sensitive Raptor Ranges

DILLON CONSULTING

Map Data Provided By:
Vermilion River County, StatisticsCanada, Dillon Created
Element Occurences provided by Alberta Conservation Information Management System part of Alberta Tourism, Parks, and Recreation.

Map Created By: Eric Hertzman
Map Checked By: Alex Taylor
Map Projection: NAD 1983 UTM Zone 12N

File Location: G:\GIS\12XXXX Vermilion River\Map 7 Species at Risk.mxd

0 4 8 16 km

SCALE 1:340,000

PROJECT: 12-6661 STATUS: DRAFT DATE: 1/11/2013

St. Paul County
North Saskatchewan River
Onion Lake 119
Tuliby Lake
Seekaskoot 119
Makaoo 120
Two Hills County
Raft Lake
RM of Frenchman Butte
Clandonald
Dewberry
Lac Tremble Natural Area
Marwayne
Campbell Lake
Pasatchaw Lakes
Vermilion River County
Streamstown
RM of Britannia
Islay
Minburn County
Vermilion Provincial Park
Vermilion
Kitscoty
Kenilworth Lake
Blackfoot
Lloydminster
RM of Wilton
Battle River Natural Area
Battle River
Paradise Valley
Rivercourse
McLaughlin
MD of Wainwright
Oxville Natural Area

**County of Vermilion River**

Regional Growth Management Strategy

**Environmentally Significant Areas**

Map 8

| Alberta Environmentally Significant Areas (ESA) | Alberta Parks and Protected Areas |
|---|---|
| Boreal | Alberta Parks Crown Reservations |
| Grassland | Protected Areas |
| Parkland | |

DILLON CONSULTING

Map Data Provided By:
Vermilion River County, StatisticsCanada, Dillon Created ESA and Parks and Protected Area data from Alberta Tourism, Parks, and Recreation.

Map Created By: Eric Hertzman
Map Checked By: Alex Taylor
Map Projection: NAD 1983 UTM Zone 12N

File Location: G:\GIS\12XXXX Vermilion River\Map 8 Environmentally Significant Areas.mxd

0 4 8 16 km

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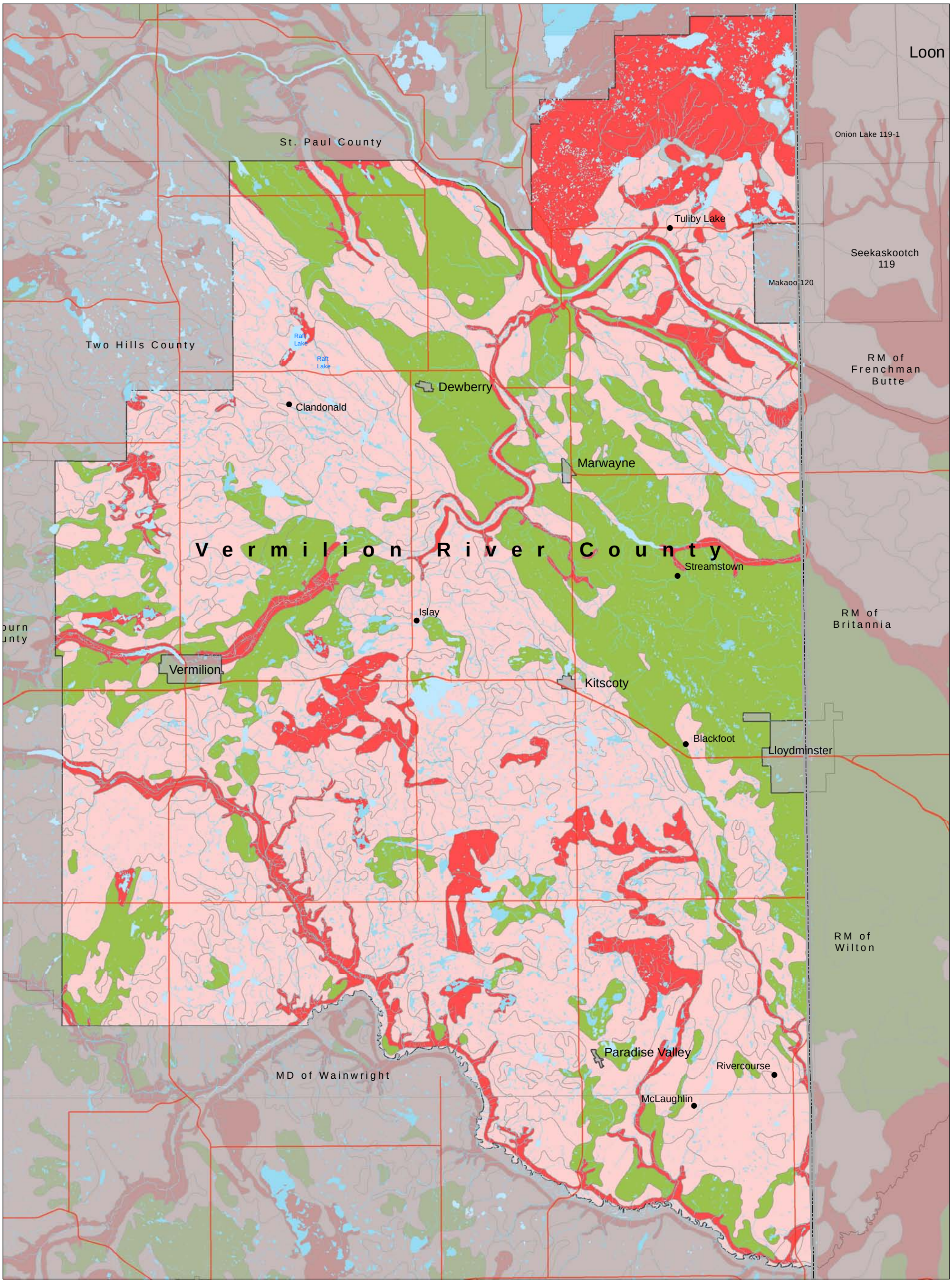
PROJECT: 12-6661 STATUS: DRAFT DATE: 1/11/2013




**County of Vermilion River**

Regional Growth Management Strategy

**Agricultural Land Capability**

Map 9

Soil Class Capabilities for Agriculture

- No or Moderate Limitations (Classes 1 and 2)
- Moderate Severe Limitations (Classes 3 and 4)
- Severe or Very Severe Limitations (Classes 5, 6, and 7)

DILLON CONSULTING

Map Data Provided By:
Vermilion River County, StatisticsCanada, Dillon Created Canadian Land Inventory.

Map Created By: Eric Hertzman
Map Checked By: Alex Taylor
Map Projection: NAD 1983 UTM Zone 12N

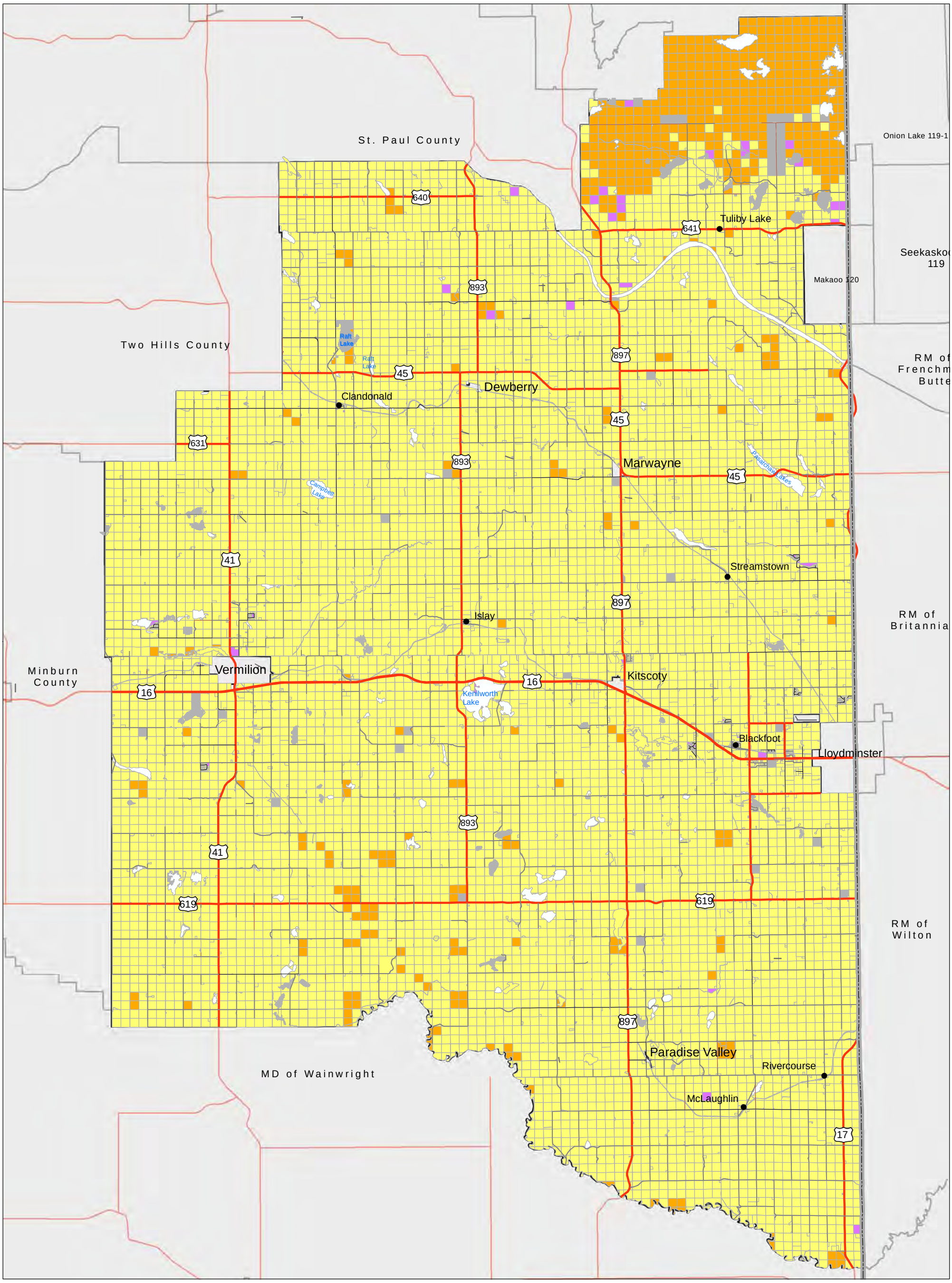
File Location: G:\GIS\12XXXX Vermilion River\Map 9 Agricultural Land Conservation.mxd

0 4 8 16 km

SCALE 1:340,000

N W E S

PROJECT: 12-6661 STATUS: DRAFT DATE: 1/11/2013




**County of Vermilion River**

Regional Growth Management Strategy

**Land Ownership**

Map 10

Parcel Ownership Status

| | | | |
|---|---|---|---|
| | County | | Unknown |
| | Crown | | |
| | Private | | |

Map Data Provided By:
Vermilion River County, StatisticsCanada, Dillon Created Element Occurences provided by Alberta Conservation Information Management System part of Alberta Tourism, Parks, and Recreation.

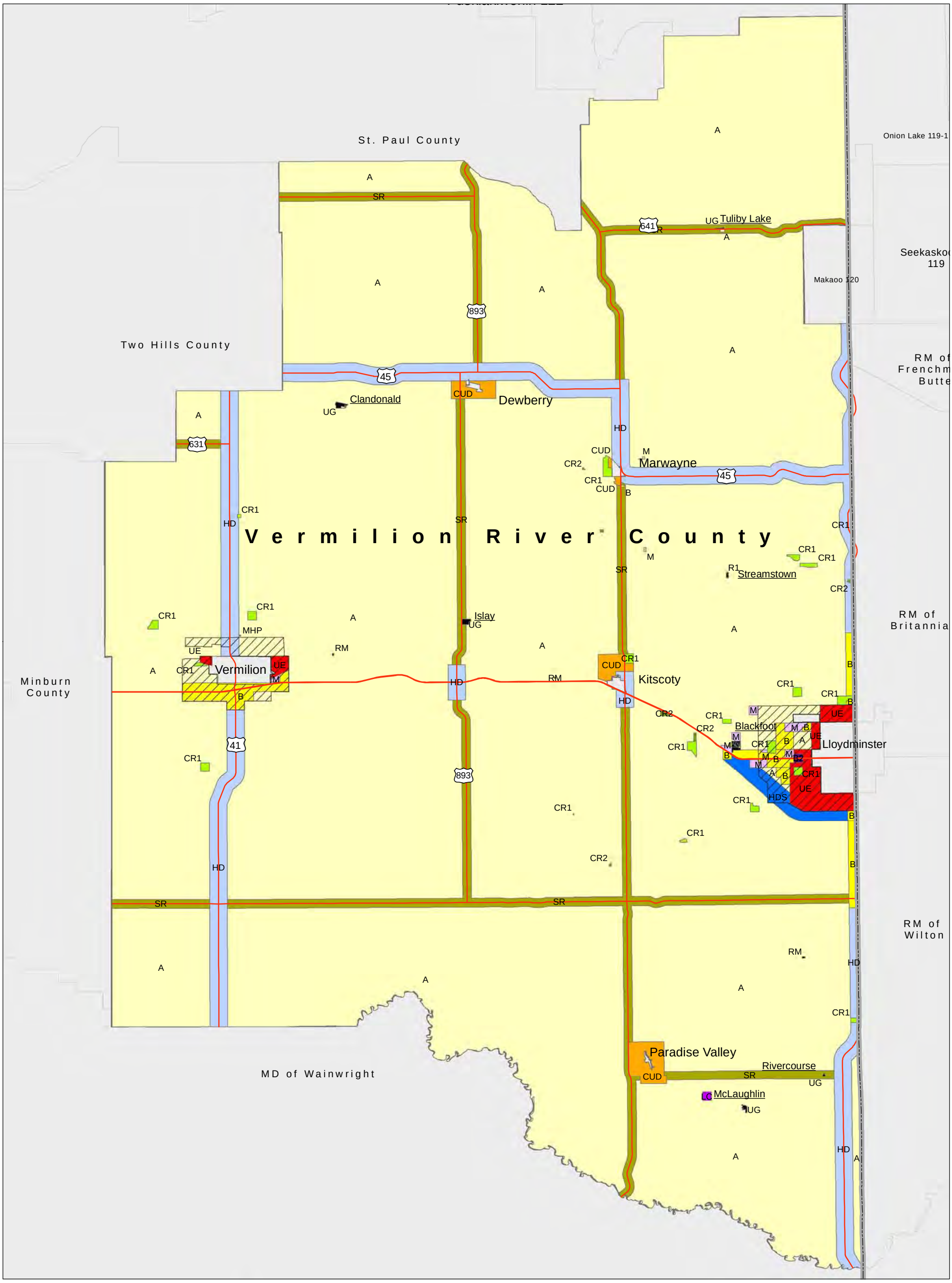
Map Created By: Eric Hertzman
Map Checked By: Alex Taylor
Map Projection: NAD 1983 UTM Zone 12N

File Location: G:\GIS\12XXXX Vermilion River\Map 10 Land Ownership.mxd

0 4 8 16 km

SCALE 1:340,000

PROJECT: 12-6661 STATUS: DRAFT DATE: 1/11/2013




**County of Vermilion River**

Regional Growth Management Strategy

**Current Land Use**

Map 11

County of Vermilion River Bylaw 07-13 - Land Use Bylaw Schedule C

| | | | | |
|---|---|---|---|---|
| Agricultural District | Controlled Urban Development District | Highway Development District | Landfill and Composting District | Mobile Home Park District |
| Business District | Country Residential One District | Highway Development Special District | Lloydminster Fringe Business District | Hamlet Specific |
| Collector Road District | Country Residential Two District | Industrial Development District | Urban Expansion District | |

Lloydminster and Vermilion Intermunicipal Development Plan

DILLON CONSULTING

Map Data Provided By:
Vermilion River County, StatisticsCanada, Dillon Created

Map Created By: Eric Hertzman
Map Checked By: Alex Taylor
Map Projection: NAD 1983 UTM Zone 12N

File Location: G:\GIS\12XXXX Vermilion River\Map 11 Current Land Use.mxd

0 5 10 20 km

SCALE 1:340,000

PROJECT: 12-6661 STATUS: DRAFT DATE: 1/11/2013

St. Paul County

Onion Lake 119-1

Tuliby Lake

Seekaskoot 119

Makaoo 120

RM of Frenchman Butte

Two Hills County

Dewberry

Clandonald

Marwayne

Vermilion River County

Streamstown

RM of Britannia

Minburn County

Islay

Kitscoty

Vermilion

Blackfoot

Lloydminster

RM of Wilton

Battle River

Paradise Valley

Rivercourse

McLaughlin

MD of Wainwright

**County of Vermilion River**

Regional Growth Management Strategy

**Future Growth Concept**

Map 1

County of VERMILION River

- Residential Growth Nodes
- Employment Growth Nodes
- Rural Community Nodes
- Potential IDP Area
- Urban Expansion (Land to be Ceded to Annexation)
- Hamlet
- Major Roads
- Minor Roads
- Areas outside the County
- IDP Areas
- Abandoned Railway
- CN (Active) Railway

DILLON CONSULTING

Map Data Provided By:
Vermilion River County, StatisticsCanada, Dillon Created
Elevation model is an approximation based on 5m contours

Map Created By: Eric Hertzman
Map Checked By: Alex Taylor
Map Projection: NAD 1983 UTM Zone 12N

File Location: G:\GIS\12XXXX Vermilion River\Final Map Sketch Up.mxd

0 5 10 20 km

N W E S

SCALE 1:340,000

PROJECT: 12-6661 STATUS: DRAFT DATE: 4/4/2013

Elk Point
St. Paul County
Unipouheos 121
Onion Lake 119-1
Loon
Seekaskootch 119
Tuliby Lake
Two Hills County
lyrnam
Makaoo
(Part) 120
Dewberry
Clandonald
Marwayne
Vermilion River County
Streamstown
Britannia No
Minburn
County
Islay
Vermilion
Mannville
Kitscoty
Lloydminster
Blackfoot
Lloydminster
Wilton No
Paradise Valley
Rivercourse
McLaughlin
M D of Wainwright
Wainwright

**County of Vermilion River**

Regional Growth Management Strategy

**Recent Development (2010 - 2012)**

Figure 12

| Total Non-Residential Permits (Proportional Circles) | | Total Residential Permits | | |
|---|---|---|---|---|
| • | 1 | | 1 | 4 - 5 |
| ● | 5 | | 2 | 6 - 33 |
| ● | 10 | | 3 | |

DILLON CONSULTING

Map Data Provided By:
Vermilion River County, StatisticsCanada, Dillon Created

Map Created By: Eric Hertzman
Map Checked By: Alex Taylor
Map Projection: NAD 1983 UTM Zone 12N

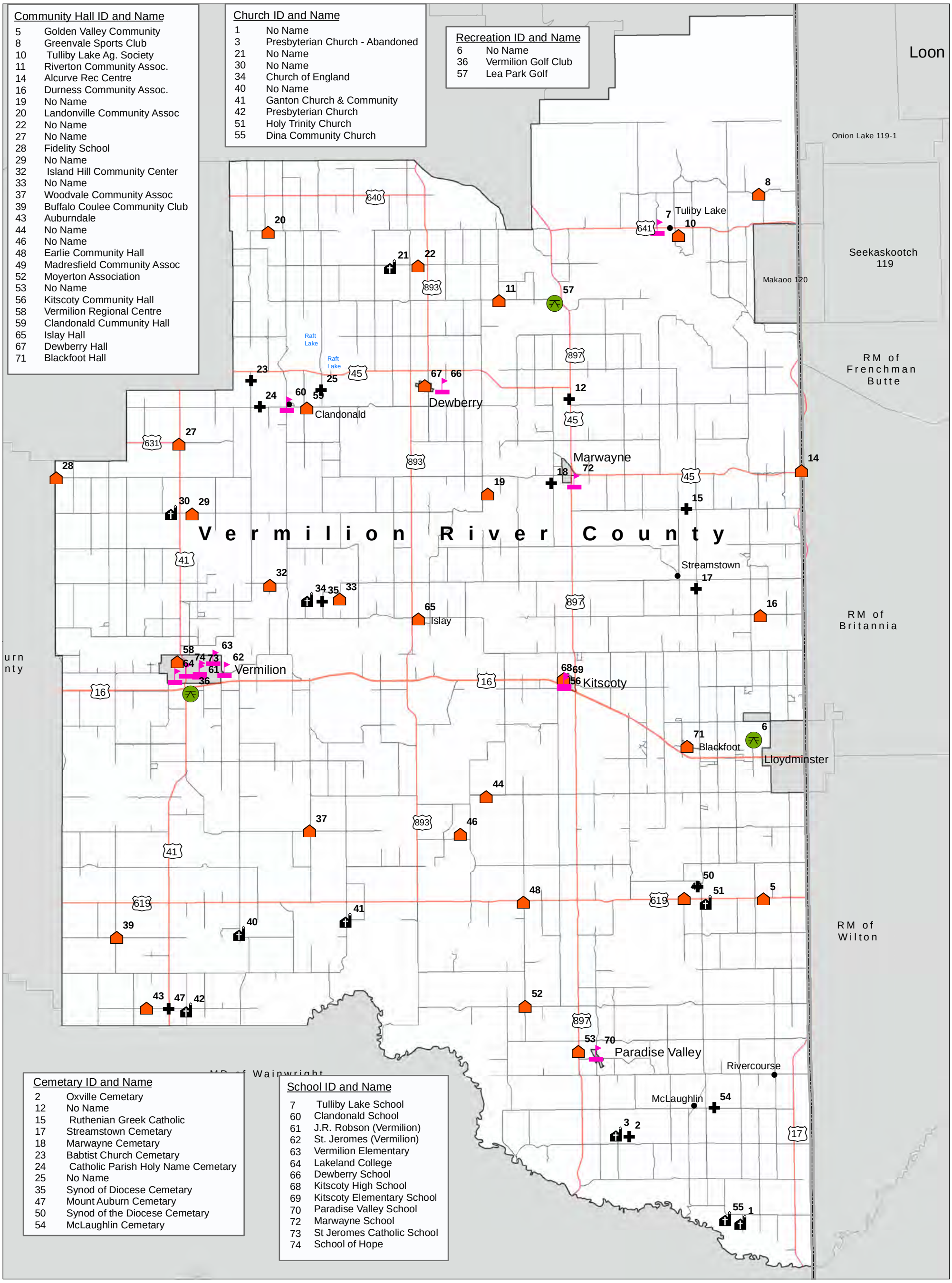
0 5 10 20 km

SCALE 1:340,000

N W E S

PROJECT: 12-6661 STATUS: DRAFT DATE: 1/11/2013

File Location: G:\GIS\12XXXX Vermilion River\Map 12 Recent Development (2010 - 2012).mxd




**County of Vermilion River**

Regional Growth Management Strategy

**Community Facilities**

Map 13

Community Facilities

Cemetary | Church | Community Hall | Recreation | School

Map Data Provided By:
Vermilion River County, StatisticsCanada, Dillon Created.

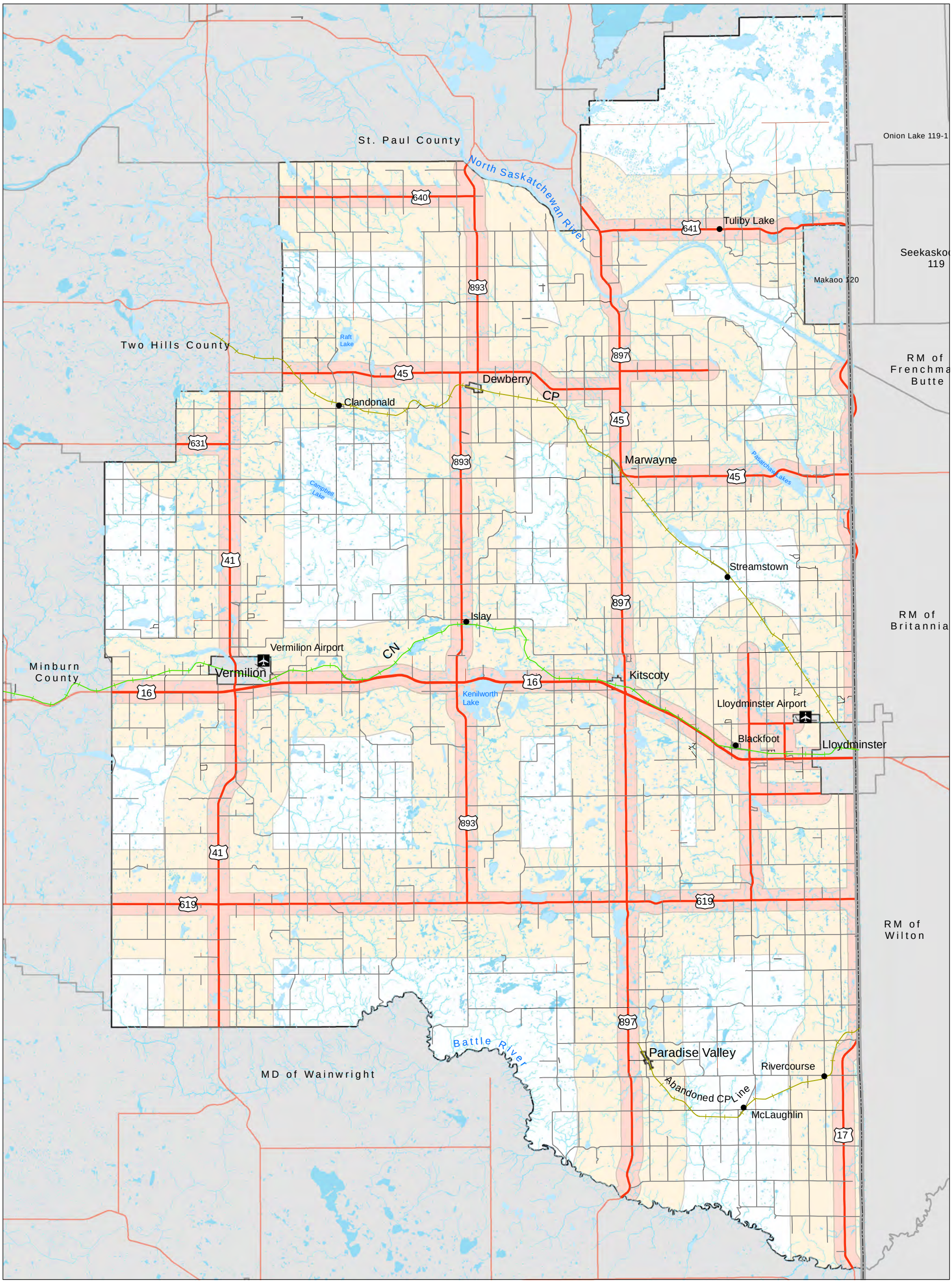
Map Created By: Eric Hertzman
Map Checked By: Alex Taylor
Map Projection: NAD 1983 UTM Zone 12N

File Location: G:\GIS\12XXXX Vermilion River\Map 13 Community Facilities.mxd

0 4 8 16 km

SCALE 1:340,000

PROJECT: 12-6661 STATUS: DRAFT DATE: 2/20/2013




**County of Vermilion River**

Regional Growth Management Strategy

**Transportation Network**

Map 14

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| ● | Hamlet | | Gravel Roads | | Canadian Pacific Track | | 1km buffer from Paved Roads |
| ✈ | Airports | | Undeveloped Roads | | Canadian National Track | | 5km buffer from Paved Roads |
| | Asphalt Roads | | Other | | | | |

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Map Data Provided By:
Vermilion River County, StatisticsCanada, Dillon Created Element Occurences provided by Alberta Conservation Information Management System part of Alberta Tourism, Parks, and Recreation.

Map Created By: Eric Hertzman
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Map Projection: NAD 1983 UTM Zone 12N

File Location: G:\GIS\12XXXX Vermilion River\Map 14 Transporation Network.mxd

0 4 8 16 km

SCALE 1:340,000

PROJECT: 12-6661 STATUS: DRAFT DATE: 2/20/2013

Blackfoot

SCALE: 1:4,509

0 50 100 200 Meters

55 Avenue

54 Ave Close

Rge 21

53 Ave Close

53 Avenue

52 Avenue

51 Avenue

52 Street

51 Street

54 Street

56 Street

57 Street

CN Active

Railway (50) Ave

Blackfoot Rd

McLaughlin

SCALE: 1:4,509

0 50 100 200 Meters

3 Street

ThiStreet

First Avenue

Second Avenue

Second Street

3 Street

Rge 20A

Fourth Street

Fifth Street

CP Abandoned

ThiStreet

First Street

Twp 464

Rge 21

**County of Vermilion River**

Regional Growth Management Strategy

**Underground Infrastructure**

Blackfoot and McLaughlin

Map 15

| | | | |
|---|---|---|---|
| Fire Hydrants | Water Services | Sewer Manholes | Sewer Services |
| Water Supply Well | Water Pressure Mains | Sewer Gravity Mains | Sewer Lagoons |
| Water Valves | Water Facilities | Sewer Pressure Mains | Sewer Lift Stations |

DILLON CONSULTING

Map Data Provided By:
Vermilion River County, StatisticsCanada, Dillon Created CanVec.

Map Created By: Eric Hertzman
Map Checked By: Alex Taylor
Map Projection: NAD 1983 UTM Zone 12N

N W E S

PROJECT: 12-6661 STATUS: DRAFT DATE: 1/11/2013

File Location: G:\GIS\12XXXX Vermilion River\Map 15 Blackfoot and McLaughlin Underground Infrastructure1.mxd

## Clandonald

SCALE: 1:8,000

0 50 100 200 Meters

Railway Avenue West
CP Abandoned
Railway Avenue East
First Street West
Centre Street
First Street East
2 Street East
First Avenue
Rge 55
Second Avenue
2 Street East
Fourth Street East
Twp 532

## Islay

SCALE: 1:8,000

0 75 150 300 Meters

Twp 512
53 Street
50 Street
50 Avenue
52 Street
51 Street
49 Street
49 Avenue
CN Active
Hwy 893

**County of Vermilion River**

Regional Growth Management Strategy

**Underground Infrastructure**

Clandonald and Islay

Map 16

| | | | |
|---|---|---|---|
| Fire Hydrants | Water Services | Sewer Manholes | Sewer Services |
| Water Supply Well | Water Pressure Mains | Sewer Gravity Mains | Sewer Lagoons |
| Water Valves | Water Facilities | Sewer Pressure Mains | Sewer Lift Stations |

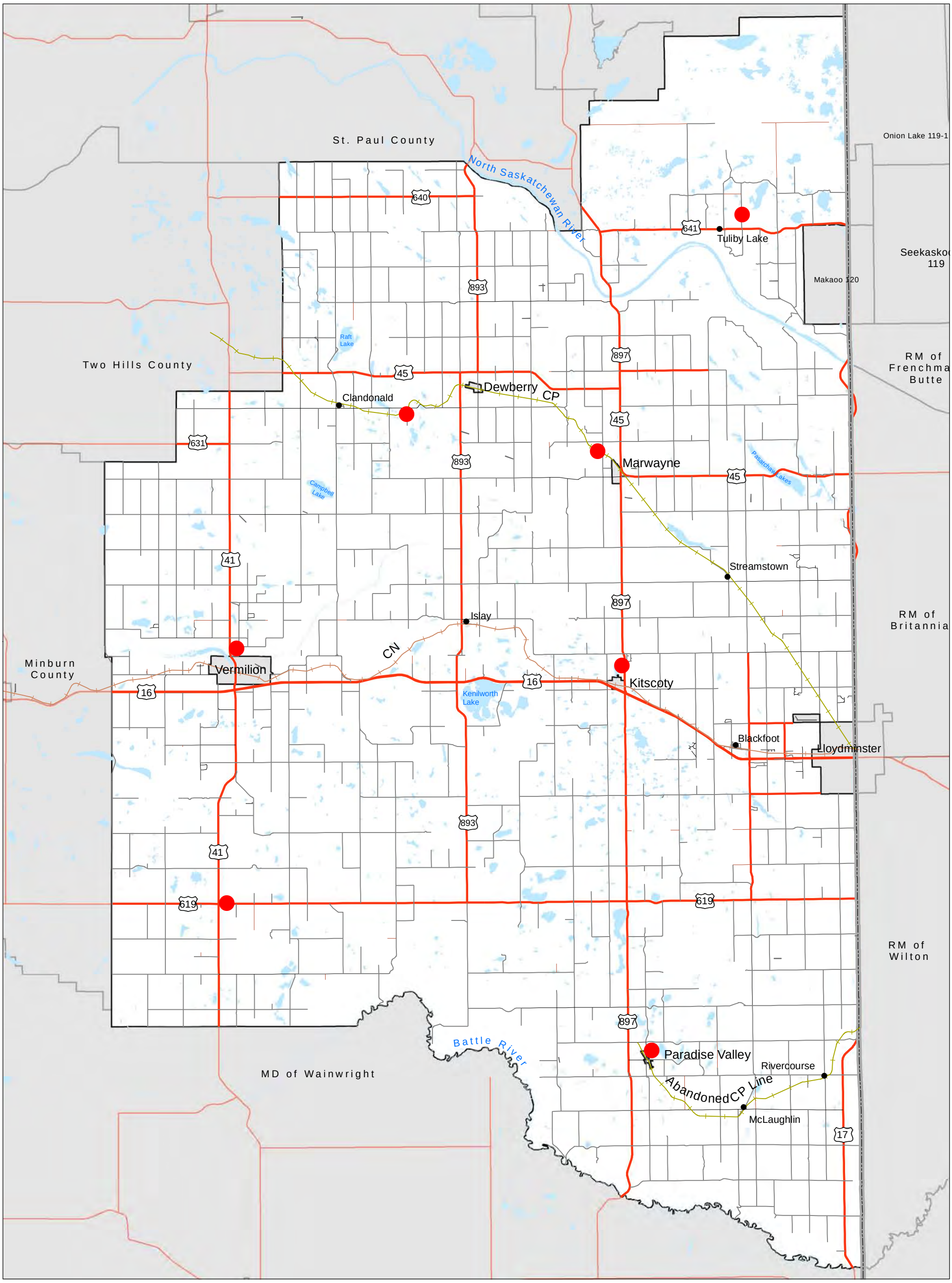
Map Data Provided By:
Vermilion River County, StatisticsCanada, Dillon Created CanVec.

Map Created By: Eric Hertzman
Map Checked By: Alex Taylor
Map Projection: NAD 1983 UTM Zone 12N

N W E S

PROJECT: 12-6661 STATUS: DRAFT DATE: 1/11/2013

File Location: G:\GIS\12XXXX Vermilion River\Map 16 Clandonald and Islay Underground Infrastructure.mxd




**County of Vermilion River**

Regional Growth Management Strategy

**Solid Waste Management**

Map 17

● Solid Waste Sites

DILLON CONSULTING

Map Data Provided By:
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Map Created By: Eric Hertzman
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Map Projection: NAD 1983 UTM Zone 12N

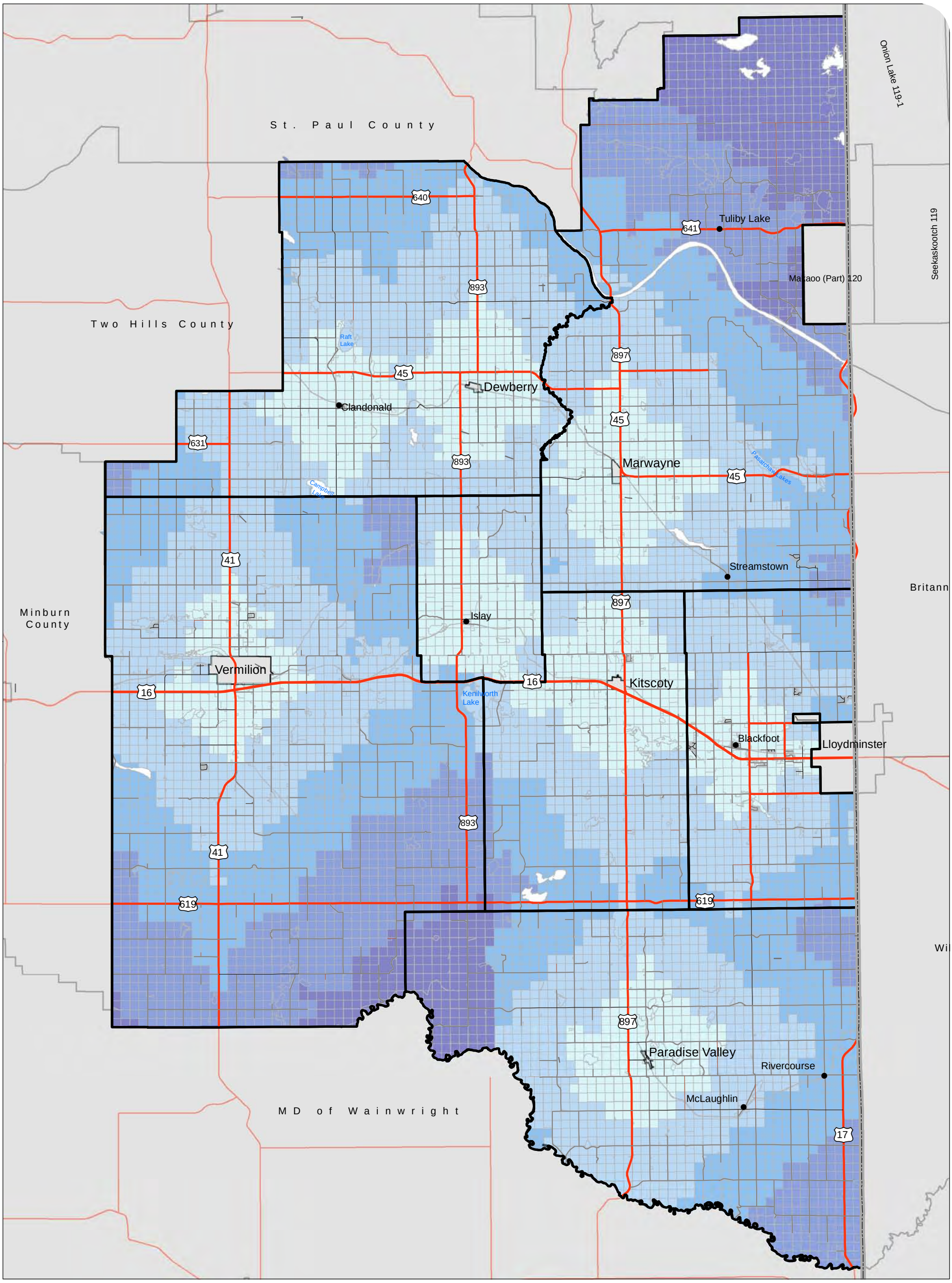
File Location: G:\GIS\12XXXX Vermilion River\Map 17 Solid Waste Management.mxd

0 4 8 N 16 km

SCALE 1:340,000

W E S

PROJECT: 12-6661 STATUS: DRAFT DATE: 1/11/2013




**County of Vermilion River**

Regional Growth Management Strategy

**Emergency Response - Fire Times**

Map 18

Fire Response Times (Minutes to each Parcel)

| | |
|---|---|
| 0.01 - 6.0 | 18.0 - 26.0 |
| 6.0 - 12.0 | 26.0 - 41.0 |
| 12.0 - 18.0 | Fire Districts |

Map Data Provided By:
Vermilion River County, StatisticsCanada, Dillon Created

Map Created By: Eric Hertzman
Map Checked By: Alex Taylor
Map Projection: NAD 1983 UTM Zone 12N

File Location: G:\GIS\12XXXX Vermilion River\Map 18 Emergency Service Fire.mxd

0 4 8 16 km

SCALE 1:340,000

PROJECT: 12-6661 STATUS: DRAFT DATE: 1/11/2013

St. Paul County

Two Hills County

Minburn County

M D of Wainwright

Onion Lake 119-1

Seekaskootch 119

Britann

Wi

Tuliby Lake

Mattaoo (Part) 120

Dewberry

Clandonald

Marwayne

Streamstown

Islay

Vermilion

Kitscoty

Blackfoot

Lloydminster

Paradise Valley

Rivercourse

McLaughlin

Raft Lake

Campbell Lake

Kenilworth Lake

Pasatchaw Lakes

640

641

893

897

45

631

41

16

619

17

**County of Vermilion River**

Regional Growth Management Strategy

**Emergency Response Rescue Times**

Map 19

Rescue Response Times (Minutes to each Parcel)

| | |
|---|---|
| 0.01 - 7.0 | 16.0 - 22.0 |
| 7.0 - 11.0 | 22.0 - 41.0 |
| 11.0 - 16.0 | Rescue Districts |

DILLON CONSULTING

Map Data Provided By:
Vermilion River County, StatisticsCanada, Dillon Created

Map Created By: Eric Hertzman
Map Checked By: Alex Taylor
Map Projection: NAD 1983 UTM Zone 12N

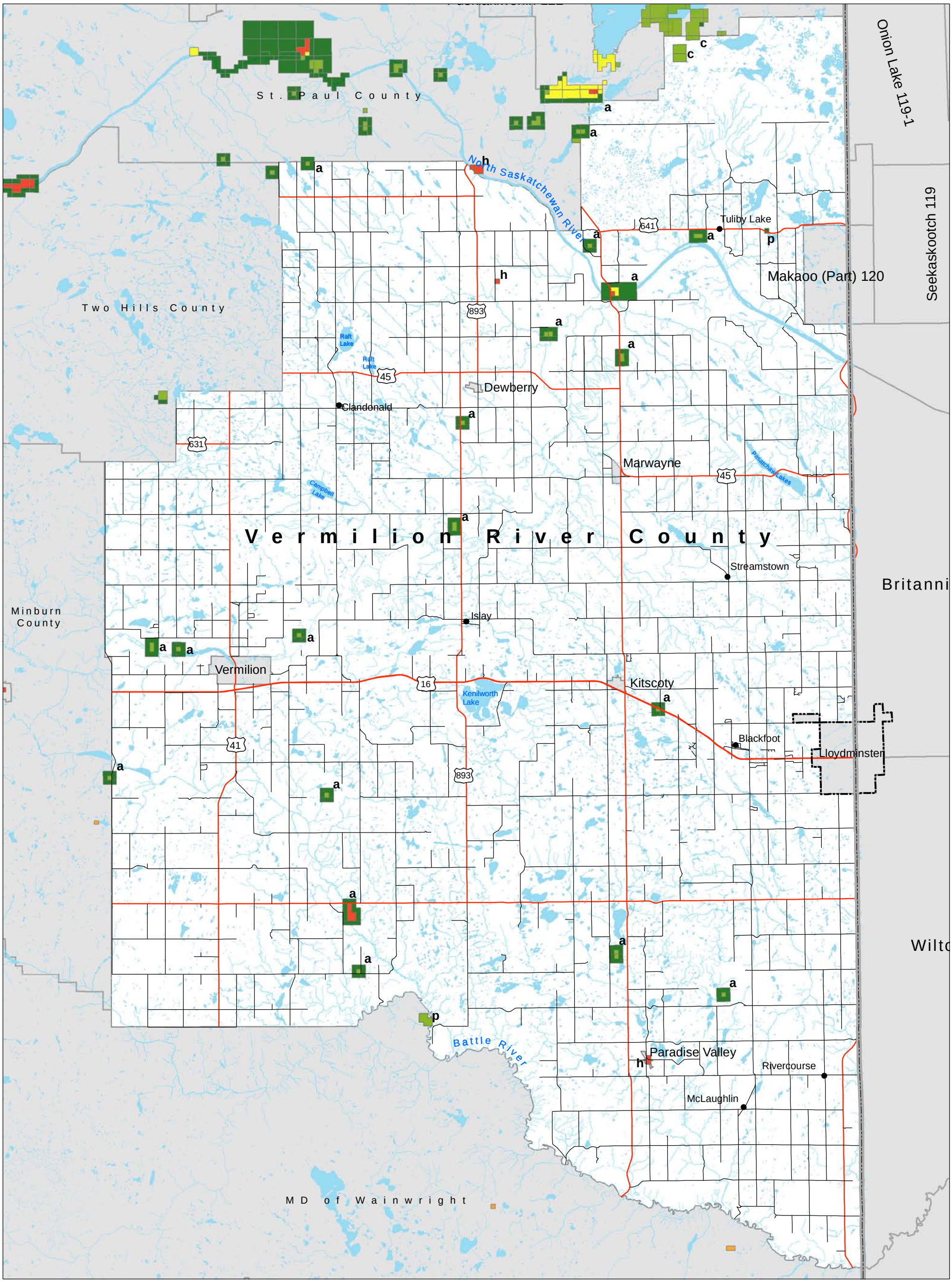
File Location: G:\GIS\12XXXX Vermilion River\Map 19 Emergency Service Rescue.mxd

0 4 8 N 16 km

W E S

SCALE 1:340,000

PROJECT: 12-6661 STATUS: DRAFT DATE: 1/11/2013




**County of Vermilion River**

Regional Growth Management Strategy

**Historical Resources**

Map 20

| Historic Resources Ranking | | Historic Resources Type | | | |
|---|---|---|---|---|---|
| HRV 1 - Highest Historic Value | HRV 4 - Moderate Historic Value | a | Archaeological | h | Historic |
| HRV 2 - High Historic Value | HRV 5 - Possible Historic Value | c | Cultural | n | Natural |
| HRV 3 - Significant Historic Value | | gl | Geological | p | Palaeontological |

DILLON CONSULTING

Map Data Provided By:
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Map Created By: Eric Hertzman
Map Checked By: Alex Taylor
Map Projection: NAD 1983 UTM Zone 12N

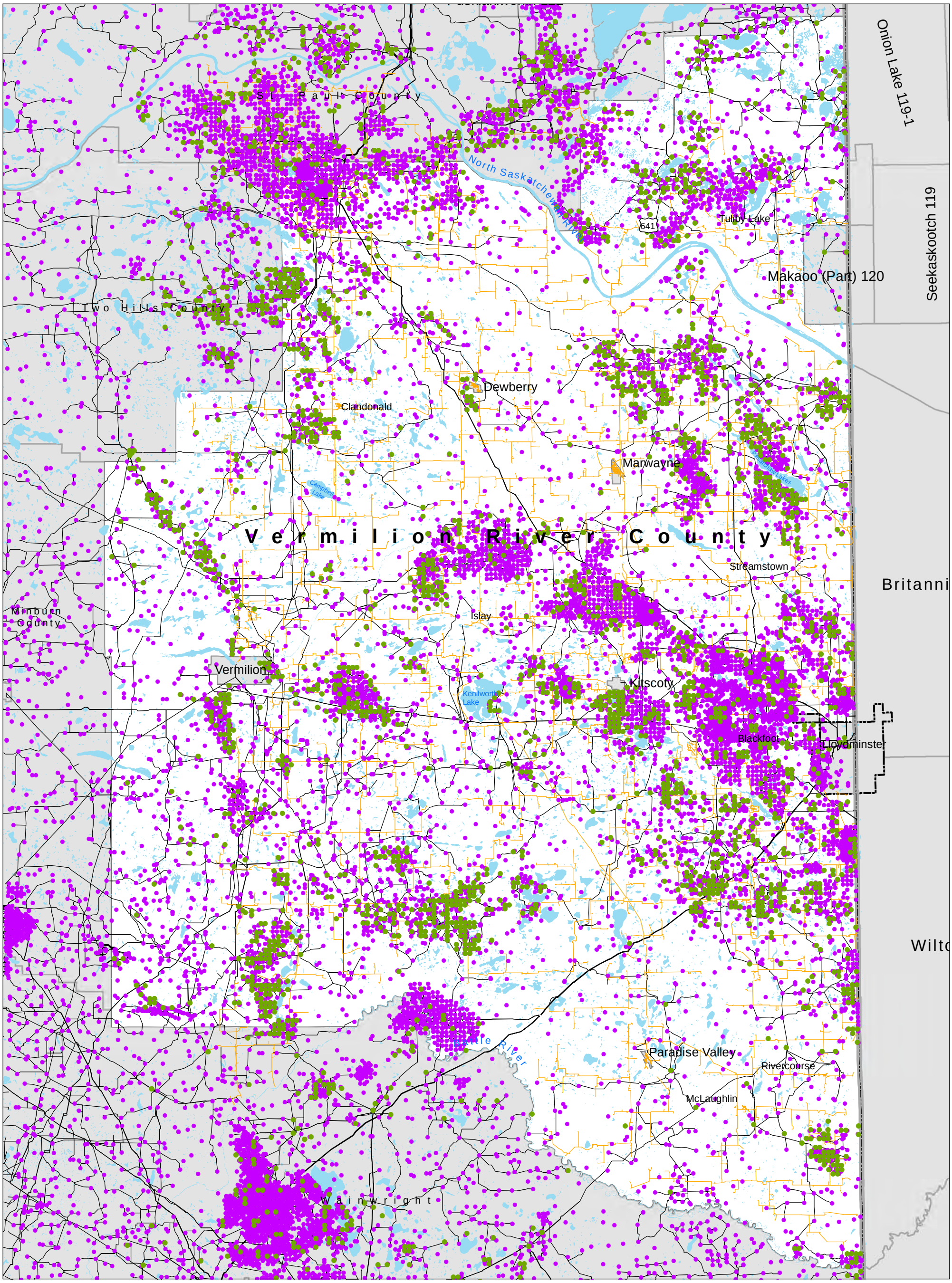
File Location: G:\GIS\12XXXX Vermilion River\Map 20 Historical Resources.mxd

0 5 10 20 km

SCALE 1:340,000

N W E S

PROJECT: 12-6661 STATUS: DRAFT DATE: 1/11/2013




**County of Vermilion River**

Regional Growth Management Strategy

**Oil and Gas**

Map 21

| | | | |
|---|---|---|---|
| ● | Facilities | — | Gas Lines |
| ● | Wells | — | Pipelines |

DILLON CONSULTING

Map Data Provided By:
Vermilion River County, StatisticsCanada, Dillon Created

Map Created By: Eric Hertzman
Map Checked By: Alex Taylor
Map Projection: NAD 1983 UTM Zone 12N

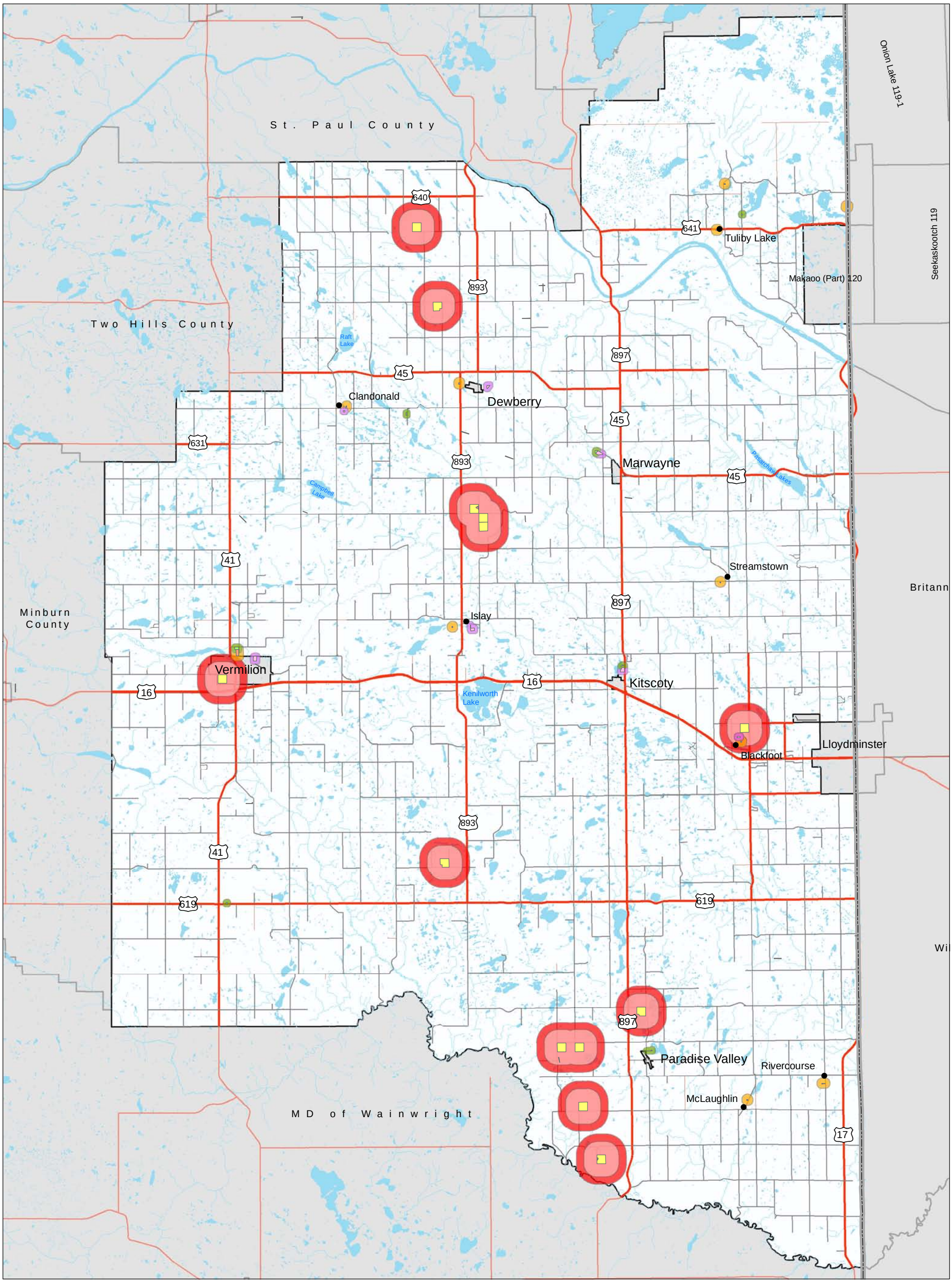
File Location: G:\GIS\12XXXX Vermilion River\Map 21 Oil and Gas Infrastructure.mxd

0 5 10 20 km

SCALE 1:340,000

N W E S

PROJECT: 12-6661 STATUS: DRAFT DATE: 1/11/2013




**County of Vermilion River**

Regional Growth Management Strategy

**Human Built Constraints**

Map 22

| Human Built Constraints | | Confined Feeding Operations Distance Separation | Other Distance Separation |
|---|---|---|---|
| Confined Feeding Operations | Transfer Station | Confined Feeding Suburban (1200m) | Landfill (450m) |
| Landfill | | Confined Feeding Urban (1900m) | Sewage Lagoon (300m) |
| Sewage Lagoon | | | Transfer Station (300m) |

Map Data Provided By:
Vermilion River County, StatisticsCanada, Dillon Created Element Occurences provided by Alberta Conservation Information Management System part of Alberta Tourism, Parks, and Recreation.

Map Created By: Eric Hertzman
Map Checked By: Alex Taylor
Map Projection: NAD 1983 UTM Zone 12N

File Location: G:\GIS\12XXXX Vermilion River\Map 22 Other Human Built Constraints.mxd

0 4 8 16 km

SCALE 1:340,000

N W E S

PROJECT: 12-6661 STATUS: DRAFT DATE: 1/11/2013