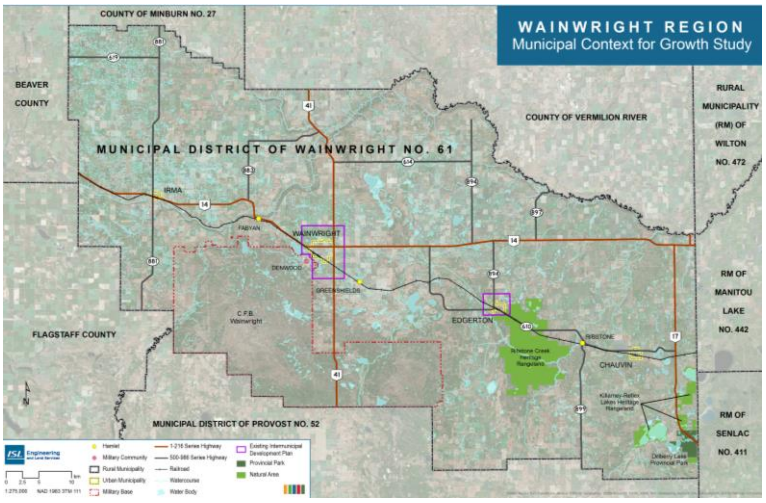

2021 Wainwright Regional Growth Study

Town of Wainwright and Municipal District of Wainwright No. 61

Final Report

November 2022

ISL Engineering and Land Services Ltd. Is an award-winning full-service consulting firm dedicated to working with all levels of government and the private sector to deliver planning and design solutions for transportation, water, and land projects.

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1.0 Introduction

1.1 Preamble

The Wainwright Region Growth Study (Growth Study) has been prepared by ISL Engineering and Land Services (ISL), Metro Economics and Nichols Applied Management for the Town of Wainwright and the Municipal District of Wainwright No. 61. The Growth Study has been prepared for two reasons – to confirm investment readiness to accommodate future projected growth within the Wainwright Region, and to inform forthcoming updates to their municipal development plans (MDPs). The main focus of this Growth Study is to project the Wainwright Region's future growth over the next 50 years, with particular focus on the Municipal District of Wainwright No. 61 (the "MD" or "MD of Wainwright") and the Town of Wainwright ("the Town"). More specifically, the Growth Study determines how much land will be required by the Town, the MD, and three nearby villages (Irma, Chauvin, and Edgerton – the "Villages" or "ICE Villages") to accommodate projected economic growth and the resulting population growth. These land requirements are compared with the current land supplies of each municipality, from which land needs are determined to accommodate 50 years of growth where necessary. To facilitate this, the Growth Study looks at both short and long-term growth objectives, the type of growth contemplated (i.e., residential, commercial, industrial, and institutional), and provides rationale for that growth. The Growth Study also presents preliminary future land use options for how to accommodate the projected growth.

To accomplish this, the Growth Study:

- Establishes study areas and a set of underlying guiding growth principles;
- Determines a regional trading area;
- Analyzes historical population growth and demographics;
- Presents three sets of future population growth projections and recommends a population growth scenario;
- Analyzes the status of the current land supplies and historical land absorption rates of the Town, the MD, and three villages;
- Analyzes the study areas from various environmental, serviceability, land use, and other perspectives to determine opportunities and constraints;
- Establishes density and other growth assumptions for the purpose of generating future land requirements;
- Generates future land requirements for residential, commercial, industrial, and institutional uses;
- Recommends growth areas to accommodate the projected growth for the five municipalities in the Region; and
- Presents preliminary optional future land use concepts for the lands within the five municipalities, including potential future expansion areas where necessary.

1.2 Regional Context

As illustrated in Figure 1, the Wainwright Region (the "Region"), located in east-central Alberta and adjacent to the Province of Saskatchewan, comprises the MD, the Town, and the three Villages. The Region is located approximately 145 km (90 mi) east by southeast of the City of Edmonton along the Highway 14 (Buffalo Trail) corridor, 44 km (27 mi) south of the City of Lloydminster via Highway 17, and 120 km (75 mi) west of the City of North Battleford in Saskatchewan.[1] The Region is bisected by the Canadian National (CN) main line, also known as the Wainwright Subdivision. This CN main line forms part of CN's transcontinental rail line and is also used by Via Rail with a station in the Town. The Battle River traverses the Region, eventually emptying into the North Saskatchewan River near North Battleford.

[1] Distances via the highway network from the corporate limits of the cities of Edmonton, Lloydminster, and North Battleford to the outer boundaries of the Municipal District of Wainwright No. 61.

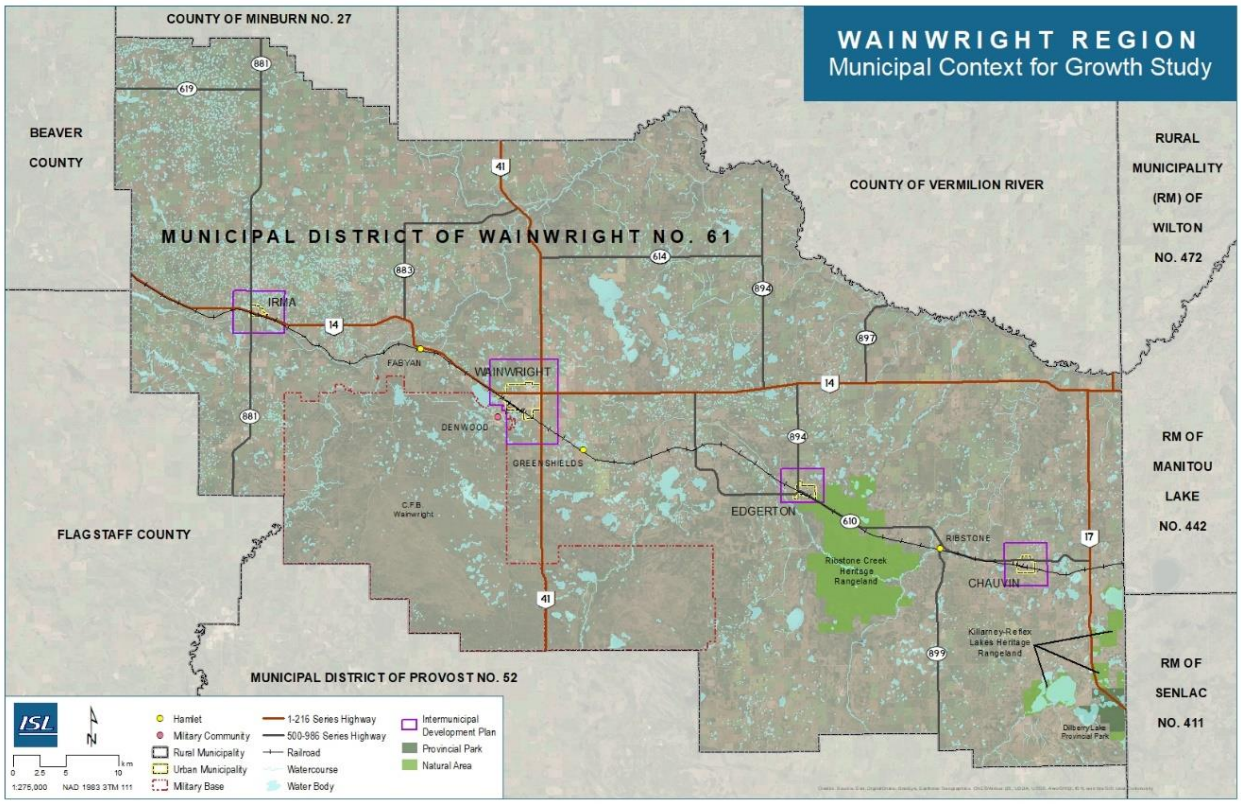


Figure 1: Wainwright Region

The Region is home to Canadian Forces Base (CFB) Wainwright, which is adjacent to the southwest boundary of the Town. As such the Region's economy is supported by military, while also driven by agriculture (both crop farming and ranching) and oil and gas activities. As the largest urban municipality in the Region, with over 6,600 residents, the Town is a regional service centre for retail, government, health, education, and industrial support services. The Town is located approximately 185 km (115 mi) east by southeast of Edmonton, 99 km (62 mi) southwest of Lloydminster, and 175 km (109 mi) west of North Battleford.[2]

The Villages are the three remaining urban municipalities in the Region, of which all are located on the CN main line. Together, they are home to nearly 1,200 people, and largely support the agricultural and oil and gas activities in the Region as well as support employment in and near the Town to varying degrees.

Edgerton is located 33 km (21 mi) southeast of the Town[3] at the intersection of Highways 610 and 894. Among the three villages, it plays the greatest bedroom community role for people employed in Wainwright based on commuter flow data from the 2016 federal census.

At the intersection of Highways 14 and 881, Irma is 26 km (16 mi) west of the Town.[3] Despite being a shorter distance away compared to Edgerton, Irma plays less of a bedroom community role to the Town based on commuter flow data from the 2016 federal census.

[2] Distances via the highway network from the corporate limits of the cities of Edmonton, Lloydminster, and North Battleford to the corporate limits of the Town of Wainwright.
[3] Distances via the highway network from the corporate limits of the villages of Irma, Chauvin, and Edgerton to the corporate limits of the Town of Wainwright.

On Highway 610, 6 km (4 mi) west of Highway 17 and 9 km (6 mi) west of Saskatchewan, Chauvin is 57 km (35 mi) southeast of the Town.[3] Due to distance, it plays an even lesser bedroom community role to the Town as confirmed by commuter flow data from the 2016 federal census.

Surrounding the Town and the Villages, the MD is home to nearly 4,300 residents living on farms, in country residential subdivisions, or in unincorporated urban communities such as Denwood within CFB Wainwright or the hamlets of Fabyan, Greenshields, or Ribstone. Denwood has an approximate population of 450 residents.

1.3 Historical Municipal Context

Wainwright was the first municipality to incorporate within the Region. It was originally incorporated as the Village of Wainwright on March 25, 1909. It was restructured as the Town of Wainwright on July 14, 1910.

In the following years, several municipal districts (MDs) – much smaller in size than the current MD – were established within the Region. Irma, Chauvin, and Edgerton were similarly incorporated as villages in the 1910s; the Village of Irma was established on May 30, 1912, the Village of Chauvin on December 30, 1912, and the Village of Edgerton on September 11, 1917.

The MD was originally formed through the amalgamation of four smaller MDs and parts of two other MDs on January 30, 1942. The four MDs that were amalgamated in their entirety were the MDs of Vale No. 392, Ribstone No. 421, Gilt Edge No. 422, and Battle River No. 423. The two MDs that were partially amalgamated were the MDs of Merton No. 451 and Grizzly Bear No. 452. At that time, the newly amalgamated MD was called the Municipal District of Wainwright No. 392. On April 1, 1945, the Municipal District of Wainwright No. 392 was renumbered as the Municipal District of Wainwright No. 61 as part of a renumbering scheme for all MDs in Alberta.

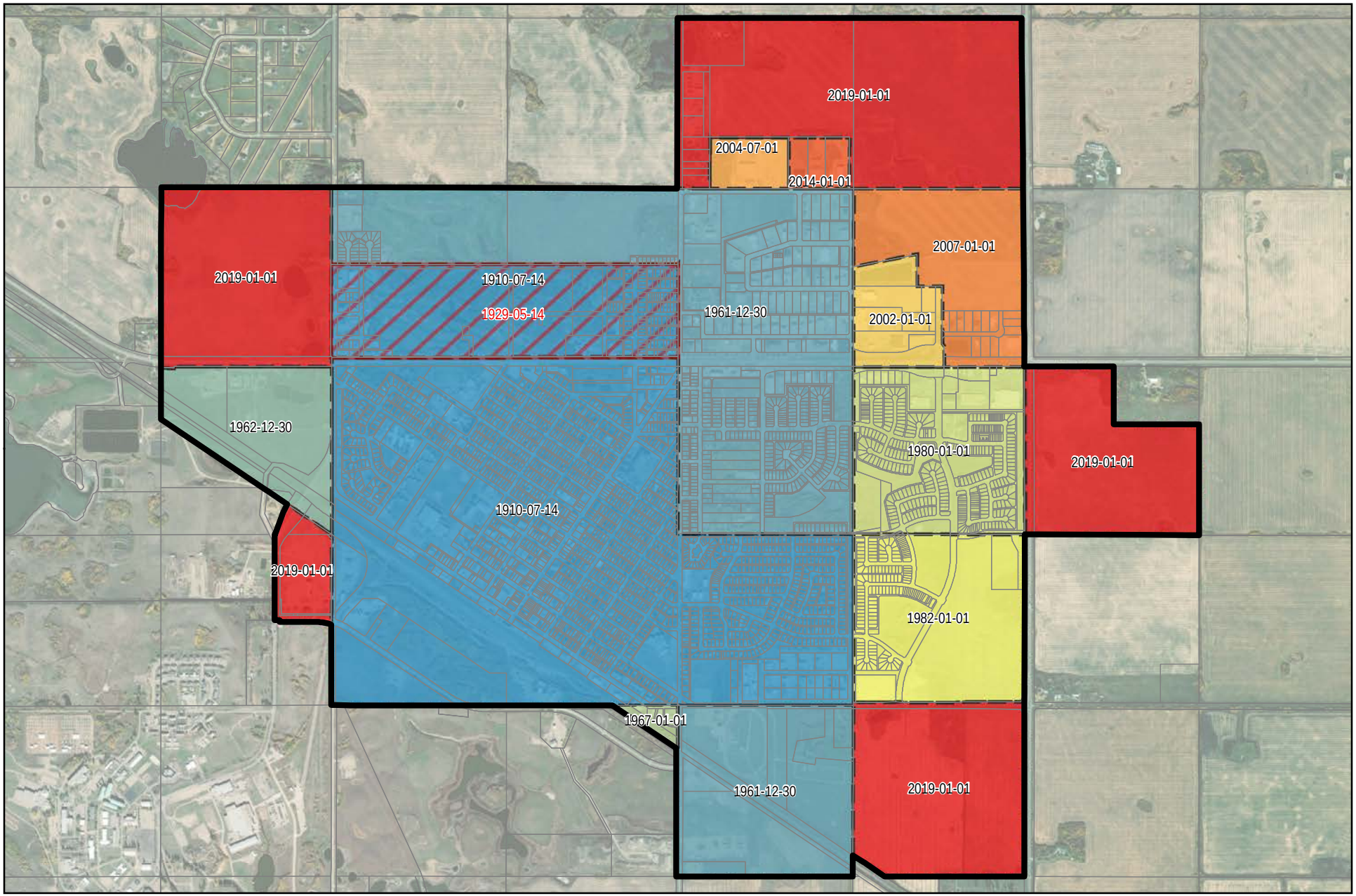
1.4 Boundary Adjustment History

As illustrated in Map 1, the Town has undergone twelve boundary adjustments since first incorporating as a village. Land was first annexed concurrent with its incorporation as a town in 1910, while a strip on the northern edge of the Town was separated in 1929. The separated lands were re-annexed from the MD in 1961 while annexing additional lands to the north, northeast, and southeast. Subsequent annexations occurred in 1962, 1967, 1980, 1982, 2002, 2004, 2007, 2014, and most recently in 2019.

Among the three villages:

- Irma has grown to its present land area through seven annexations from 1946 through to 2005;
- Chauvin has experienced only one boundary adjustment since incorporation – a separation of lands back to the MD in 1965; and
- Edgerton has annexed land on nine occasions between 1919 and 2009.

The MD has experienced several boundary alterations in its history in addition to those involving the Town and the ICE villages mentioned above. In 1954, the MD's outer boundaries were redefined through adjustments with four of its rural neighbours – the MDs of Provost No. 52 to the southeast, Flagstaff No. 62 to the southwest, Minburn No. 72 to the northwest, and Beaver No. 73 to the west. Two other adjustments involving the MD of Minburn No. 72 occurred in 1955 and 1961, while the MD annexed Camp Wainwright (now CFB Wainwright) in 1957. In 1977, two final outer boundary adjustments occurred – one involving the County of Vermilion River No. 24 to the northeast and the other involving the County of Minburn No. 27.



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Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

ISL

0 100 200 400 600 800 m

Integrated Expertise. Locally Delivered.

- Town Boundary
- Annexed Jul-14, 1910
- Annexed Dec-30, 1961
- Annexed Dec-30, 1962
- Annexed Jan-1, 1967
- Annexed Jan-1, 1980
- Annexed Jan-1, 1982
- Annexed Jan-1, 2002
- Annexed Jan-1, 2004
- Annexed Jan-1, 2007
- Annexed Jan-1, 2014
- Annexed Jan-1, 2019
- Severed May 14, 1929 ‡

† Boundary at the time of village incorporation on March 25, 1909 requires further research.
‡ Date of re-annexation requires further research.

WAINWRIGHT REGION GROWTH STUDY

MAP 1: TOWN OF WAINWRIGHT BOUNDARY ADJUSTMENT HISTORY †

1.5 Study Areas

The overarching study area analyzed within the Growth Study is the geographic entirety of the Region (i.e., all lands within the MD, the Town, and the three villages). Four smaller study areas include:

- All lands in the Town and all surrounding lands in the MD that are within the boundaries of the Town of Wainwright and the MD of Wainwright Intermunicipal Development Plan (IDP);
- All lands in the Village of Irma and all surrounding lands in the MD that are within the boundaries of the Village of Irma and the MD of Wainwright IDP;
- All lands in the Village of Edgerton and all surrounding lands in the MD that are within the boundaries of the Village of Edgerton and the MD of Wainwright IDP;
- All lands in the Village of Chauvin and all surrounding lands in the MD that are within the boundaries of the Village of Chauvin and the MD of Wainwright IDP.

1.6 Growth Principles

The Wainwright Region Growth Study for the Town and the MD will:

1. Determine long-term growth directions in a manner that is objective, technically sound, and professionally defensible through the use of a holistic, multi-disciplinary approach.
2. Foster a relationship based on mutual respect and cooperation between the Town and the MD.
3. Establish and maintain a regional focus in promoting economic development opportunities.
4. Ensure that a sustainable and diverse mix of land uses are available within the Town and MD to maintain or improve the supply of developable land.
5. Assist the Town and MD in making land use planning decisions with regards to the purchase and development of land based on a land analysis.
6. Identify servicing and infrastructure requirements to accommodate growth in the Town and MD.
7. Inform the development of, or updates to, the policies and objectives of the respective Municipal Developments Plans (MDPs) of the Town and MD.

2.0 Historical Growth and Demographics

2.1 Town of Wainwright Historical Population Growth

Table 1 illustrates the Town's historical population growth according to federal census results since 1911 (refer to the rows in grey), and municipal census results since 1953. Overall changes, average annual growth rates and average growth in people per year between federal and municipal censuses are presented. Figure 2 illustrates the Town's historical population growth since 1966. Table 2 presents the Town's growth rates over various intervals from 1971, ranging from the past 10 years to the past 50 years.

Table 1: Town of Wainwright Historical Population Growth, 1911-2021

Year	Federal Census History					Municipal Census History			
	Original Population	Revised Population[4]	Change Over Period	Avg. Annual Growth	Avg. People per Year	Population	Change Over Period	Average Annual Growth	Average People per Year
1911	788		—	—	—				
1916	818		3.8%	0.8%	6				
1921	975		19.2%	3.6%	31				
1926	1,028		5.4%	1.1%	11				
1931	1,147		11.6%	2.2%	24				
1936	1,048		-8.6%	-1.8%	-20				
1941	980		-6.5%	-1.3%	-14				
1946	1,261		28.7%	5.2%	56				
1951	1,996		58.3%	9.6%	147				
1953						2,680	—	—	—
1955						2,670	-0.4%	-0.2%	-5
1956	2,653		32.9%	5.9%	131				
1958						3,099	16.1%	5.1%	143
1959						3,260	5.2%	5.2%	161
1960									
1961	3,351		26.3%	4.8%	140	3,333	2.2%	1.1%	37
1962						3,705	11.2%	11.2%	372
1964						3,669	-1.0%	-0.5%	-18
1966	3,867		15.4%	2.9%	103				
1969						3,735	1.8%	0.4%	13
1971	3,872		0.1%	0.0%	1				
1975						3,833	2.6%	0.4%	16
1976	3,890	3,895	0.5%	0.1%	4	3,875	1.1%	1.1%	42
1978						4,024	3.8%	1.9%	75
1979						4,115	2.3%	2.3%	91
1981	4,266		9.7%	1.9%	74	4,462	8.4%	4.1%	174
1983						4,477	0.3%	0.2%	8
1984						4,597	2.7%	2.7%	120
1986	4,665		9.4%	1.8%	80	4,643	1.0%	0.5%	23

[4] The 1976 and 2016 population counts were adjusted by Statistics Canada due to a municipal boundary changes.

Year	Federal Census History					Municipal Census History			
	Original Population	Revised Population[4]	Change Over Period	Avg. Annual Growth	Avg. People per Year	Population	Change Over Period	Average Annual Growth	Average People per Year
1989						4,713	1.5%	0.5%	23
1991	4,732		1.4%	0.3%	13				
1993						4,891	3.8%	0.9%	45
1995						5,055	3.4%	1.7%	82
1996	5,079		7.3%	1.4%	69				
1998						5,219	3.2%	1.1%	55
2001	5,117		0.7%	0.1%	8				
2003						5,183	-0.7%	-0.1%	-7
2005						5,365	3.5%	1.7%	91
2006	5,426		6.0%	1.2%	62				
2008						5,775	7.6%	2.5%	137
2011	5,925		9.2%	1.8%	100				
2013						6,289	8.9%	1.7%	103
2016	6,270	6,285	5.8%	1.1%	69				
2021	6,606		5.1%	1.0%	64				

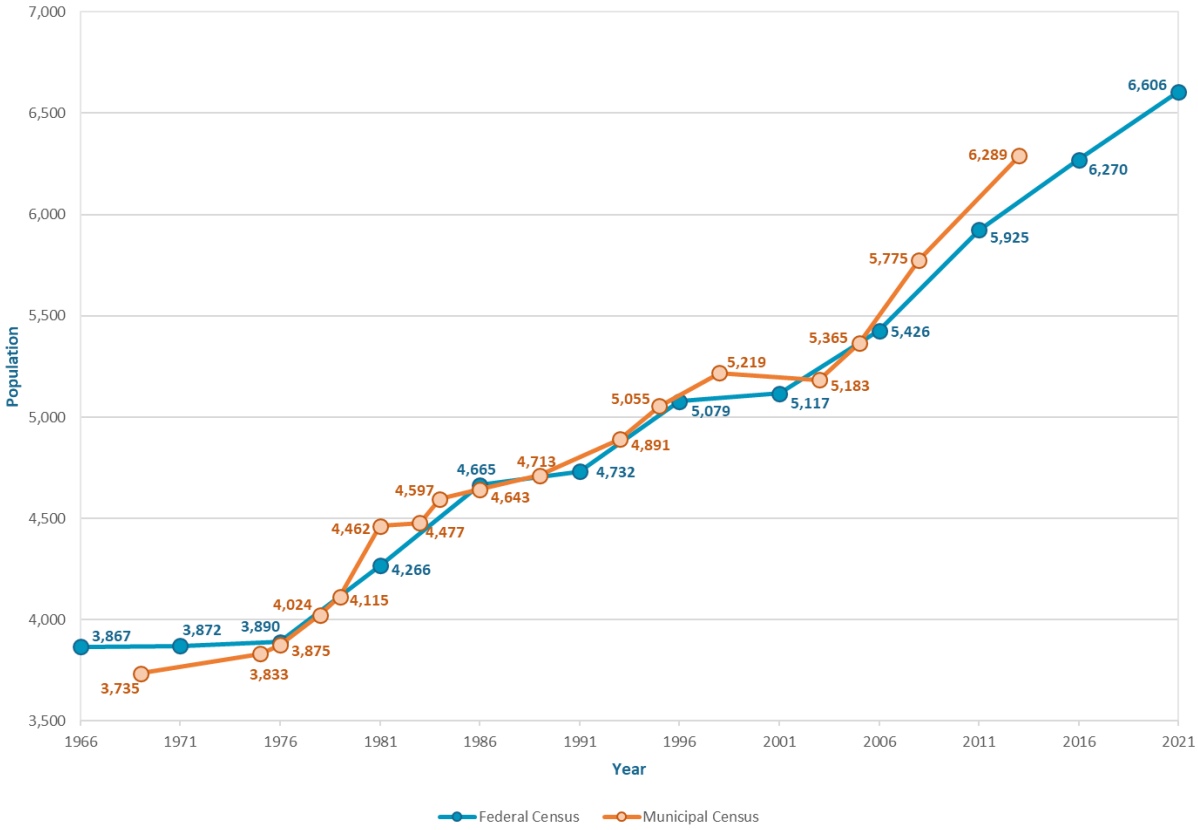


Figure 2: Town of Wainwright Historical Population Growth, 1966-2021

Table 2: Town of Wainwright Historical Population Growth Between Various Intervals, 1971-2021

Time Period	Change Over Period	Average Annual Growth	Average People per Year
50 years (1971-2021)	70.6%	1.1%	55
40 years (1981-2021)	54.9%	1.1%	59
30 years (1991-2021)	39.6%	1.1%	62
20 years (2001-2021)	29.1%	1.3%	74
10 years (2011-2021)	11.5%	1.1%	68

The following are key observations from Tables 1 and 2 and Figure 2.

- Over the course of its history, the Town has grown from a population of 788 in 1911 to 6,606 in 2021.
- The Town's population has increased by 71% over the past 50 years.

2.2 MD of Wainwright Historical Population Growth

Table 3 illustrates the MD's historical population growth according to federal census results since 1946 (refer to the rows in grey) and municipal census results since 1953. Overall changes, average annual growth rates and average growth in people per year between federal and municipal censuses are presented. Figure 3 illustrates the MD's historical population growth since 1966. Table 4 presents the MD's growth rates over various intervals from 1971, ranging from the past 10 years to the past 50 years.

Table 3: MD of Wainwright Historical Population Growth, 1921-2021

Year	Federal Census History					Municipal Census History			
	Original Population	Revised Population [5]	Change Over Period	Avg. Annual Growth	Avg. People per Year	Population	Change Over Period	Average Annual Growth	Average People per Year
1946	4,317		-28.7%	-6.5%	-347				
1951	4,690		8.6%	1.7%	75				
1953						3,852	—	—	—
1955						4,487	16.5%	7.9%	318
1956	4,481		-4.5%	-0.9%	-42	4,473	-0.3%	-0.3%	-14
1960						5,085	13.7%	3.3%	153
1961	4,847		8.2%	1.6%	73				
1966	4,454		-8.1%	-1.7%	-79				
1971	3,864		-13.2%	-2.8%	-118				
1976	3,775	3,824	-2.3%	-0.5%	-18	3,726	-26.7%	-1.9%	-85
1978						3,839	3.0%	1.5%	57
1981	3,854		2.1%	0.4%	6	3,837	-0.1%	0.0%	-1
1984						3,874	1.0%	0.3%	12
1986	3,937		2.2%	0.4%	17				
1991	3,919	3,917	-0.5%	-0.1%	-4				

[5] The 1976, 1991 and 2016 population counts were adjusted by Statistics Canada due to municipal boundary changes.

Year	Federal Census History					Municipal Census History			
	Original Population	Revised Population [5]	Change Over Period	Avg. Annual Growth	Avg. People per Year	Population	Change Over Period	Average Annual Growth	Average People per Year
1996	4,044		3.2%	0.6%	25				
2001	4,231		4.6%	0.9%	37				
2006	3,558 [6]		-15.9%	-3.4%	-135				
2007						4,113	6.2%	0.3%	10
2011	4,138		16.3%	3.1%	116				
2016	4,479	4,464	8.2%	1.6%	68				
2021	4,276		-4.2%	-0.9%	-38				

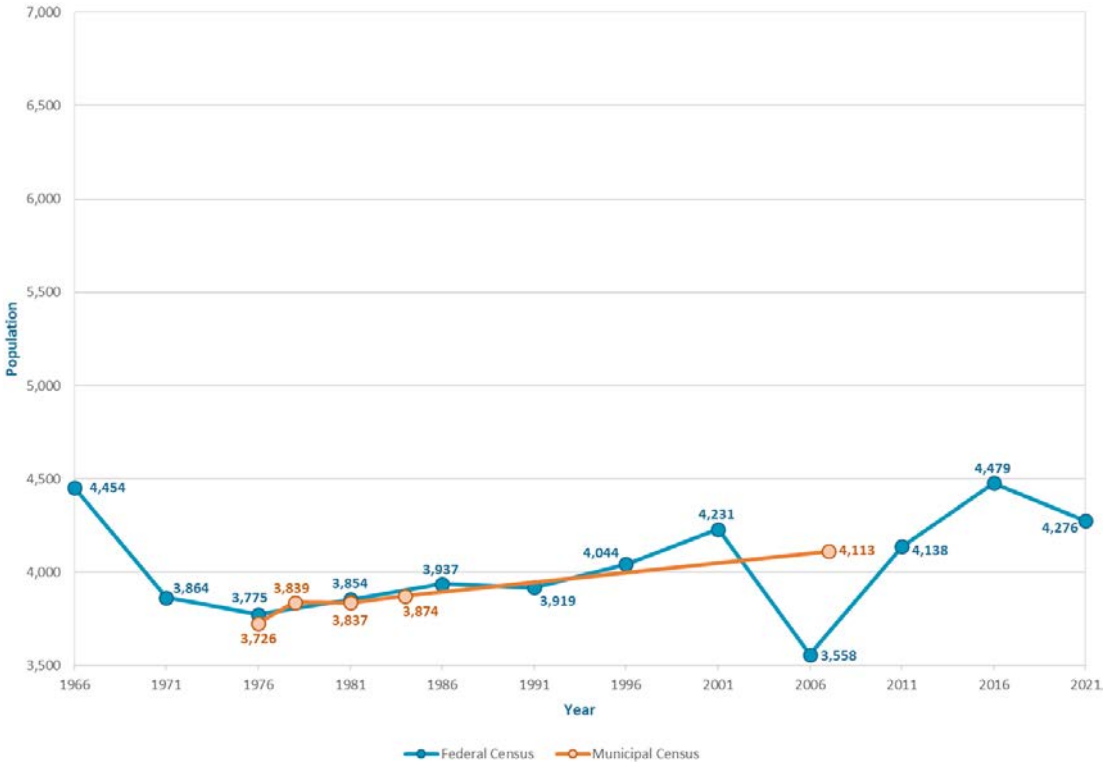


Figure 3: MD of Wainwright Historical Population Growth, 1966-2021

[6] The 2006 population count published by Statistics Canada for the MD of Wainwright No. 61 was suspected to be an undercount as a loss of 673 residents over five years since 2001 was unexpected. In turn, the MD conducted its own municipal census in 2007 and found its population had only dropped by 118 people over six years since 2001.

Table 4: MD of Wainwright Historical Population Growth between Various Intervals, 1971-2021

Time Period	Change Over Period	Average Annual Growth	Average People per Year
50 years (1971-2021)	10.7%	0.2%	8
40 years (1981-2021)	10.9%	0.3%	11
30 years (1991-2021)	9.1%	0.3%	12
20 years (2001-2021)	1.1%	0.1%	2
10 years (2011-2021)	3.3%	0.3%	14

The following are key observations from Tables 3 and 4 and Figure 3.

- Over the course of its history, the MD has grown from a population of 3,775 in 1976 to 4,276 in 2021.
- The MD's population has increased by 11% over the past 50 years.

2.3 Village of Irma Historical Population Growth

Table 5 illustrates the Village of Irma's historical population growth according to federal census results since 1916 (refer to the rows in grey) and municipal census results since 1953. Overall changes, average annual growth rates and average growth in people per year between federal and municipal censuses are presented. Figure 4 illustrates the historical population growth of Irma since 1966. Table 6 presents the Village of Irma's growth rates over various intervals from 1971, ranging from the past 10 years to the past 50 years.

Table 5: Village of Irma Historical Population Growth, 1916-2021

Year	Federal Census History					Municipal Census History			
	Original Population	Revised Population [7]	Change Over Period	Avg. Annual Growth	Avg. People per Year	Population	Change Over Period	Average Annual Growth	Average People per Year
1916	80		—	—	—				
1921	157		96.3%	14.4%	15				
1926	190		21.0%	3.9%	7				
1931	196		3.2%	0.6%	1				
1936	240		22.4%	4.1%	9				
1941	273		13.8%	2.6%	7				
1946	345		26.4%	4.8%	14				
1951	369		7.0%	1.4%	5				
1953						367	—	—	—
1955						365	-0.5%	-0.3%	-1
1956	421		14.1%	2.7%	10				
1961	425		1.0%	0.2%	1				
1963						426	16.7%	2.0%	8
1965						449	5.4%	2.7%	12
1966	430		1.2%	0.2%	1	446	-0.7%	-0.7%	-3
1967						414	-7.2%	-7.2%	-32
1971	423		-1.6%	-0.3%	-1	436	5.3%	1.3%	6

[7] The 1976 population count was adjusted by Statistics Canada due to a municipal boundary change.

Year	Federal Census History					Municipal Census History			
	Original Population	Revised Population [7]	Change Over Period	Avg. Annual Growth	Avg. People per Year	Population	Change Over Period	Average Annual Growth	Average People per Year
1976	428	432	1.2%	0.2%	1	487	11.7%	2.2%	10
1977						469	-3.7%	-3.7%	-18
1978						486	3.6%	3.6%	17
1980						500	2.9%	1.4%	7
1981	474		10.7%	2.1%	9				
1984						475	-5.0%	-1.3%	-6
1986	484		2.1%	0.4%	2				
1991	442		-8.7%	-1.8%	-8				
1996	472		6.8%	1.3%	6				
2001	435		-7.8%	-1.6%	-7				
2006	444		2.1%	0.4%	2				
2011	457		2.9%	0.6%	3				
2016	521		14.0%	2.7%	13				
2021	477		-8.4%	-1.7%	-9				

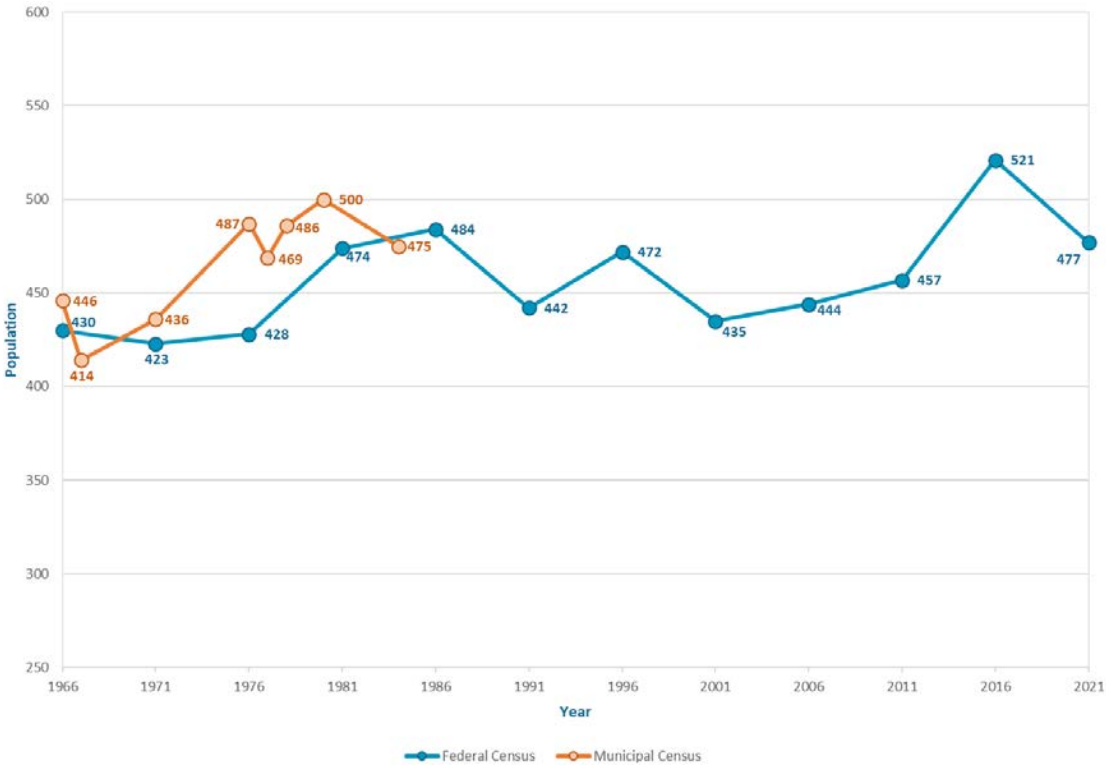


Figure 4: Village of Irma Historical Population Growth, 1966-2021

Table 6: Village of Irma Historical Population Growth between Various Intervals, 1971-2021

Time Period	Change Over Period	Average Annual Growth	Average People per Year
50 years (1971-2021)	12.8%	0.2%	1
40 years (1981-2021)	0.6%	0.0%	0
30 years (1991-2021)	7.9%	0.3%	1
20 years (2001-2021)	9.7%	0.5%	2
10 years (2011-2021)	4.4%	0.4%	2

The following are key observations from Tables 5 and 6 and Figure 4.

Over the course of its history, the Village of Irma has grown from a population of 80 in 1916 to 477 in 2021. Irma's population has increased by 13% over the past 50 years.

2.4 Village of Chauvin Historical Population Growth

Table 7 illustrates the Village of Chauvin's historical population growth according to federal census results since 1916 (refer to the rows in grey) and municipal census results since 1959. Overall changes, average annual growth rates and average growth in people per year between federal and municipal censuses are presented. Figure 5 illustrates the historical population growth of Chauvin since 1966. Table 8 presents the Village of Chauvin's growth rates over various intervals from 1971, ranging from the past 10 years to the past 50 years.

Table 7: Village of Chauvin Historical Population Growth, 1916-2021

Year	Federal Census History				Municipal Census History			
	Original Population	Change Over Period	Avg. Annual Growth	Avg. People per Year	Population	Change Over Period	Average Annual Growth	Average People per Year
1916	153	—	—	—				
1921	219	43.1%	7.4%	13				
1926	269	22.8%	4.2%	10				
1931	269	0.0%	0.0%	0				
1936	321	19.3%	3.6%	10				
1941	343	6.9%	1.3%	4				
1946	383	11.7%	2.2%	8				
1951	340	-11.2%	-2.4%	-9				
1956	353	3.8%	0.8%	3				
1959					375	—	—	—
1961	395	11.9%	2.3%	8				
1966	362	-8.4%	-1.7%	-7				
1969					392	4.5%	0.4%	2
1971	349	-3.6%	-0.7%	-3				
1975					340	-13.3%	-2.3%	-9
1976	296	-15.2%	-3.2%	-11	292	-14.1%	-14.1%	-48
1977					315	7.9%	7.9%	23

Year	Federal Census History				Municipal Census History			
	Original Population	Change Over Period	Avg. Annual Growth	Avg. People per Year	Population	Change Over Period	Average Annual Growth	Average People per Year
1978					330	4.8%	4.8%	15
1979					331	0.3%	0.3%	1
1981	298	0.7%	0.1%	0	310	-6.3%	-3.2%	-11
1982					316	1.9%	1.9%	6
1983					335	6.0%	6.0%	19
1984					350	4.5%	4.5%	15
1985					371	6.0%	6.0%	21
1986	367	23.2%	4.3%	14				
1987					385	3.8%	1.9%	7
1988					400	3.9%	3.9%	15
1991	360	-1.9%	-0.4%	-1				
1994					372	-7.0%	-1.2%	-5
1996	400	11.1%	2.1%	8	398	7.0%	3.4%	13
2001	366	-8.5%	-1.8%	-7	378	-5.0%	-1.0%	-4
2006	308	-15.8%	-3.4%	-12				
2007					321	-15.1%	-2.7%	-10
2011	334	8.4%	1.6%	5	340	5.9%	1.4%	57
2016	335	0.3%	0.1%	0	345	1.5%	0.3%	1
2021	304	-9.3%	-1.9%	-6				

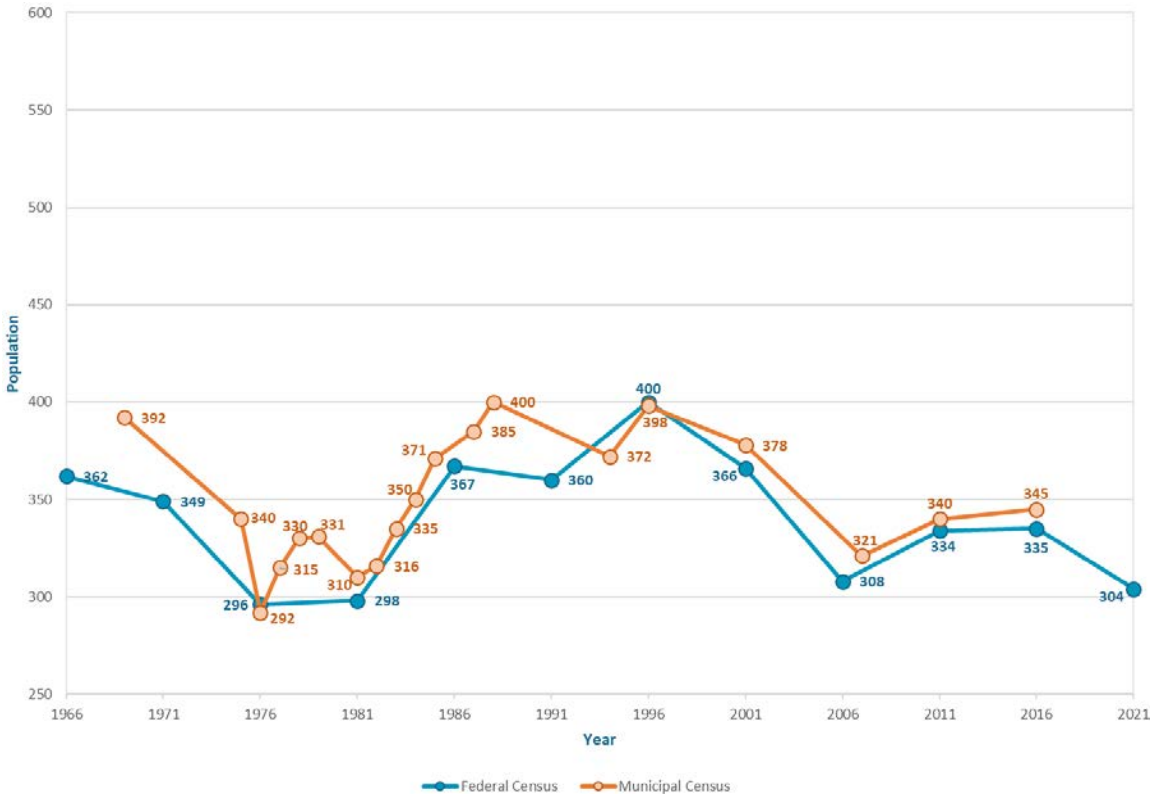


Figure 5: Village of Chauvin Historical Population Growth, 1966-2021

Table 8: Village of Chauvin Historical Population Growth between Various Intervals, 1971-2021

Time Period	Change Over Period	Average Annual Growth	Average People per Year
50 years (1971-2021)	-12.9%	-0.3%	-1
40 years (1981-2021)	2.0%	0.0%	0
30 years (1991-2021)	-15.6%	-0.6%	-2
20 years (2001-2021)	-16.9%	-0.9%	-3
10 years (2011-2021)	-9.0%	-0.9%	-3

The following are key observations from Tables 7 and 8 and Figure 5.

- Over the course of its history, the Village of Chauvin has grown from a population of 153 in 1916 to 304 in 2021.
- Chauvin's population has increased by 2% over the past 40 years.

2.5 Village of Edgerton Historical Population Growth

Table 9 illustrates the Village of Edgerton's historical population growth according to federal census results since 1921 (refer to the rows in grey) and municipal census results since 1960. Overall changes, average annual growth rates and average growth in people per year between federal and municipal censuses are presented. Figure 6 illustrates the historical population growth of Edgerton since 1966. Table 10 presents the Village of Edgerton's growth rates over various intervals from 1971, ranging from the past 10 years to the past 50 years.

Table 9: Village of Edgerton Historical Population Growth, 1921-2021

Year	Federal Census History					Municipal Census History			
	Original Population	Revised Population [8]	Change Over Period	Avg. Annual Growth	Avg. People per Year	Population	Change Over Period	Average Annual Growth	Average People per Year
1921	176		—	—	—				
1926	182		3.4%	0.7%	1				
1931	189		3.8%	0.8%	1				
1936	222		17.5%	3.3%	7				
1941	258		16.2%	3.1%	7				
1946	273		5.8%	1.1%	3				
1951	309		13.2%	2.5%	7				
1956	292		-5.5%	-1.1%	-3				
1960						300	—	—	—
1961	295		1.0%	0.2%	1				
1964						311	3.7%	0.9%	3
1966	345		16.9%	3.2%	10				
1971	296		-14.2%	-3.0%	-10	296	-4.8%	-0.7%	-2
1976	324		9.5%	1.8%	6	345	16.6%	3.1%	10
1977						351	1.7%	1.7%	6
1979						363	3.4%	1.7%	6
1981	387		19.4%	3.6%	13	400	10.2%	5.0%	19
1982						384	-4.0%	-4.0%	-16
1983						389	1.3%	1.3%	5
1986	400		3.4%	0.7%	3	399	2.6%	0.8%	3
1991	353	355	-11.8%	-2.5%	-9				
1992						353	-11.5%	-2.0%	-8
1994						389	10.2%	5.0%	18
1996	372		5.4%	1.1%	4				
2001	403		8.3%	1.6%	6				
2006	373		-7.4%	-1.5%	-6				
2007						393	1.0%	0.1%	0
2011	317		-15.0%	-3.2%	-11				
2012						401	2.0%	0.4%	2
2016	384		21.1%	3.9%	13				
2017						425	6.0%	1.2%	5
2021	385		0.3%	0.1%	0				

[8] The 1991 population count was adjusted by Statistics Canada due to a municipal boundary change.

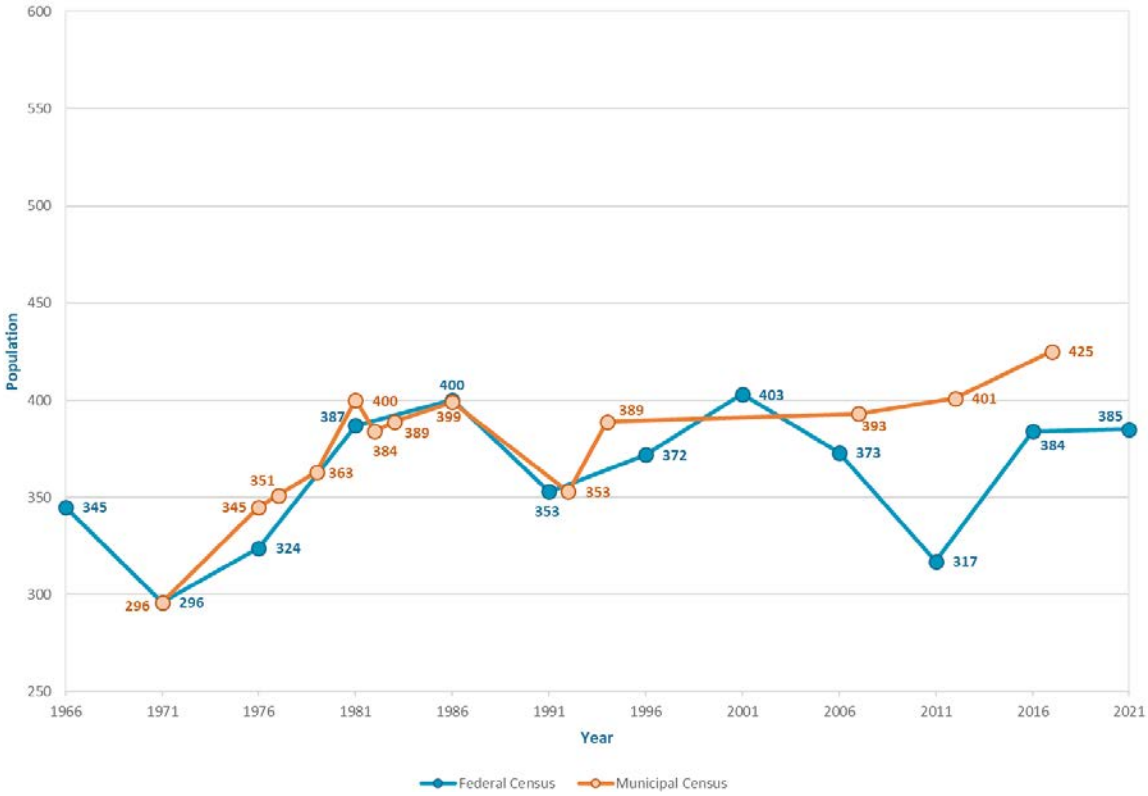


Figure 6: Village of Edgerton Historical Population Growth, 1966-2021

Table 10: Village of Edgerton Historical Population Growth between Various Intervals, 1971-2021

Time Period	Change Over Period	Average Annual Growth	Average People per Year
50 years (1971-2021)	30.1%	0.5%	2
40 years (1981-2021)	-0.5%	0.0%	0
30 years (1991-2021)	9.1%	0.3%	1
20 years (2001-2021)	-4.5%	-0.2%	-1
10 years (2011-2021)	21.5%	2.0%	7

The following are key observations from Tables 9 and 10 and Figure 6.

- Over the course of its history, the Village of Edgerton has grown from a population of 176 in 1921 to 385 in 2021.
- Edgerton's population has increased by 30% over the past 50 years.

2.6 Demographics

2.6.1 Demographic Characteristics

Table 11 presents various demographic characteristics of the Town from 2016 and compares them with the same for selected urban municipalities in east-central Alberta with population counts and roles as regional service centres like that of the Town. The same demographic characteristics of the MD are also compared.

Table 11: Municipal Comparison of Demographic Characteristics

Demographic Characteristic[9]	Town of Wainwright	Town of Stetter	Town of Vegreville	Town of St. Paul	Town of Bonnyville	MD of Wainwright
Median Age of Population	37.5	41.4	44.3	36.8	34.4	36.2
Average Family Size of Census Families	2.8	2.8	2.8	2.9	2.9	3.0
Average Persons in Private Households	2.4	2.3	2.2	2.4	2.6	2.7
Total Occupied Private Dwellings	2,520	2,415	2,430	2,250	2,105	1,460
Low Density Residential Dwellings[10]	1,985	1,950	2,025	1,740	1,820	1,375
Higher Density Residential Dwellings[11]	540	460	405	505	295	85
Percent Low Density Residential Dwellings	78.8%	80.7%	83.3%	77.3%	86.5%	94.2%
Percent Higher Density Residential Dwellings	21.4%	19.0%	16.7%	22.4%	14.0%	5.8%
Average Household Total Income in 2015 ($)	96,749	86,286	88,000	92,004	114,823	112,875

This comparison of demographic characteristics with the four other towns in east-central Alberta reveals that the Town has:

- the third-lowest median age of population (behind Bonnyville and St. Paul);
- the lowest average family size of census families (tied with Stettler and Vegreville);
- the second-highest average persons in private households (tied with St. Paul and behind Bonnyville);
- the second-lowest percentage of low density residential dwellings and therefore the second-highest percentage of high density residential dwellings (behind St. Paul); and
- the second-highest average household total income in 2015 of all private households (behind Bonnyville).

These observations are indicators that the Town is a community that has a mature population that has traditionally attracted families with reasonable incomes seeking a mix of low and higher density residential housing.

The Town's demographic characteristics appear to be most like those of Stettler and St. Paul when compared to family size, average persons per household, and proportion of low to high residential dwellings. The average household total income in Wainwright is most like St. Paul. Overall, Wainwright's demographic characteristics and proportions are most like St. Paul, with exception to Wainwright's slightly higher median age and lower average family size.

[9] The source of all demographic characteristics is the 2016 federal census as published by Statistics Canada.
[10] Consists of single detached housing, semi-detached housing and movable dwellings as defined by Statistics Canada in the 2016 federal census.
[11] Consists of all other residential housing structure types as defined by Statistics Canada in the 2016 federal census

In comparing the Town and the MD:

- the MD has a lower median age than the Town;
- the MD has a higher average family size and a higher average persons per household;
- the MD has a higher percentage of low density dwellings and therefore a lower percentage of higher density dwellings; and
- the MD has a higher average household income.

These observations suggest that higher income and larger families attracted to the Wainwright Region choose to reside in the MD rather than the Town.

2.6.2 Age and Gender

Figure 7 presents the age and gender of the Town's population in five-year cohorts based on the 2016 federal census. Figure 8 presents the same for the MD, pro-rated to the Town's pre-annexation 2016 population of 6,270.

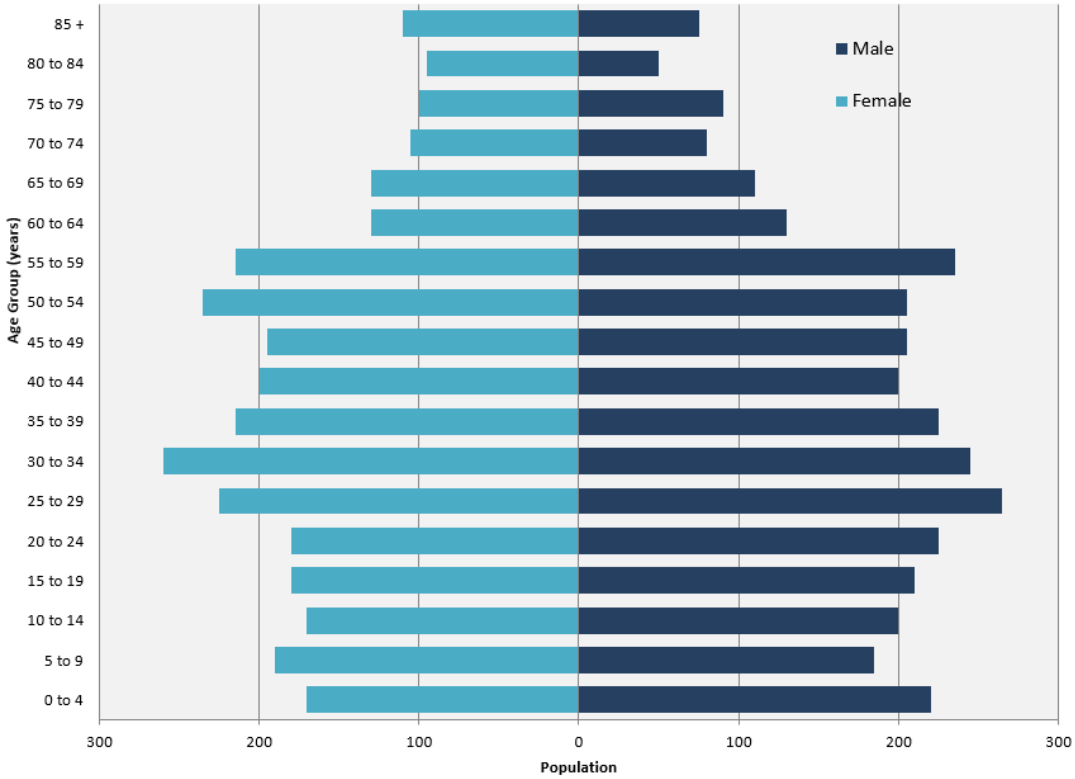


Figure 7: Age and Gender by Five Year Cohorts, Town of Wainwright

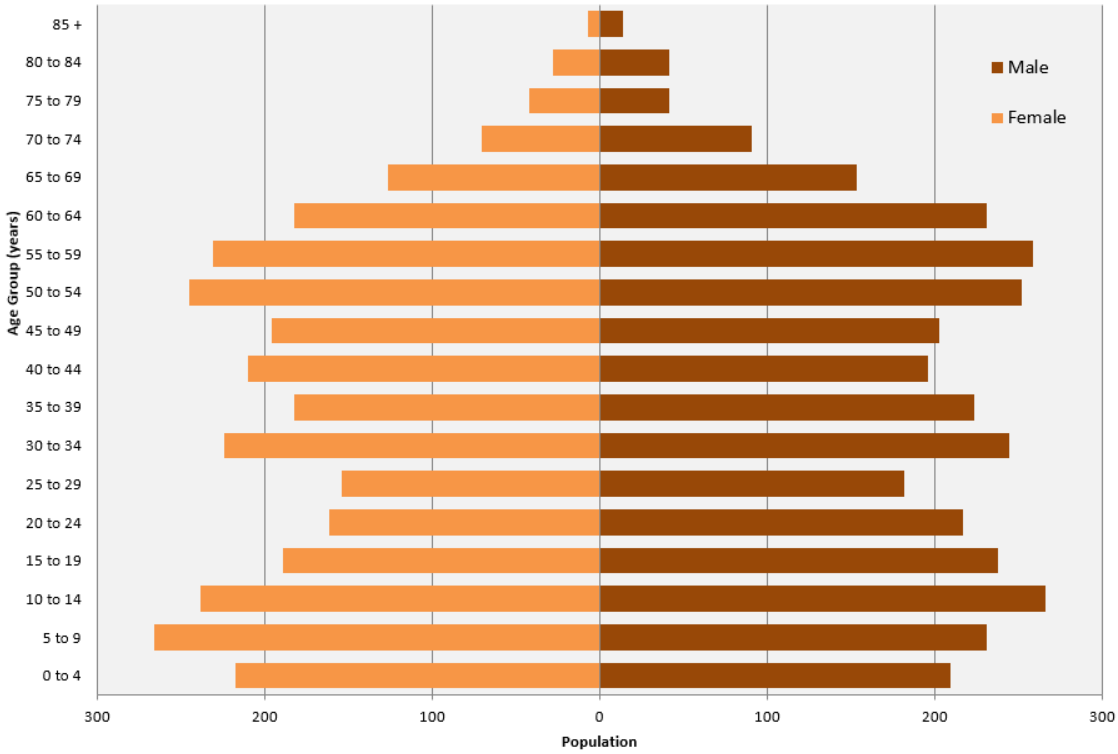


Figure 8: Age and Gender by Five Year Cohorts, MD of Wainwright

The following are key observations from Figures 7 and 8.

- The Town of Wainwright has two population bubbles – the two age cohorts between the ages of 25 through 34 and the cohorts between the ages of 50 through 59. The beehive shape characterizes a stable population that attracts mature adults, but the smaller base of the pyramid indicates a lower proportion of children and lower birth rates.
- The Town's population is fairly evenly distributed among the cohorts between the ages of 0 and 59, demonstrating a stable population with a high median age.
- The MD has a population with two significant population bubbles – the two age cohorts between ages 5 through 14, and the two cohorts between the ages of 50 and 59. The distribution of age cohorts suggests the MD attracts young to mature families with children, with a smaller population of seniors and adults 60 and over.

2.6.3 Place of Work of the Employed Labour Force

Figure 9 presents the percentages of the usual places of work for the Town's employed labour force aged 15 years or older from the 2011 National Household Survey and 2016 Census of Canada. Municipalities presented include the Town, the MD, Chauvin, Vermilion, and the MD of Provost No. 52, while an aggregation of other locations elsewhere, including Irma, Paradise Valley, and Lloydminster, is also presented.

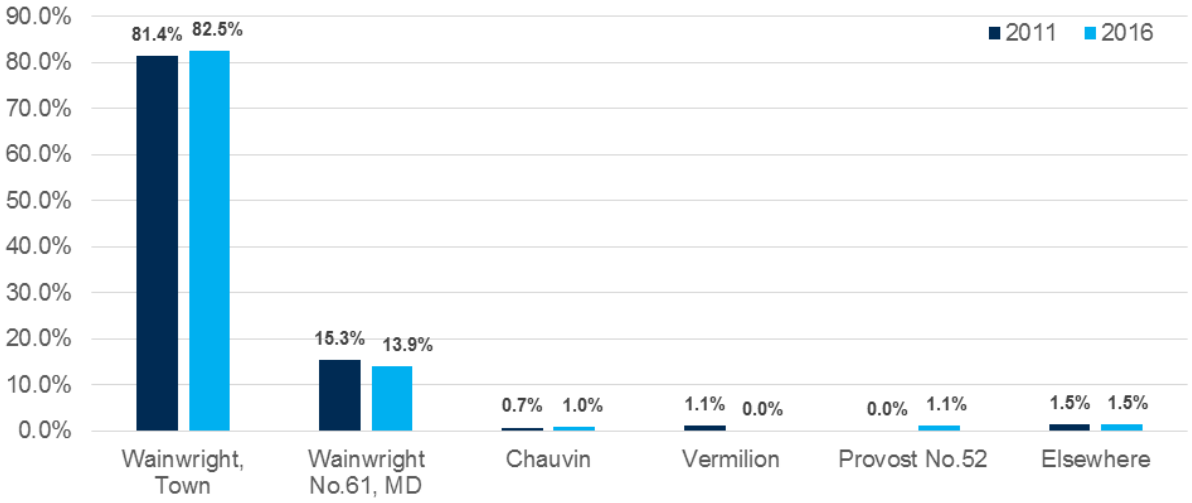


Figure 9: Place of Work for Town of Wainwright's Employed Labour Force, 2011-2016

The following are key observations from Figure 9.

- The majority of the Town of Wainwright's employed labour force works within the Town (slightly higher from 81.4% in 2011), but a significant amount of the labour force works within the MD (slightly lower than 15.3% in 2011).
- Of the Town's employed labour force that commutes to work destinations elsewhere:
  - 1.0% worked in Chauvin in 2016 (up from 0.7% in 2011);
  - 1.1% worked in the MD of Provost No. 52 in 2016 (up from 0.0% in 2011);
  - 1.5% worked elsewhere in 2016 (equal to 2011); and
  - 0.0% worked in Vermilion in 2016 (down from 1.1% in 2011).

In addition to the above observations, CFB Wainwright is one of the busiest military bases in Canada. At any given time, there are more than 1,000 regular military, reserve, and civilian workers at CFB Wainwright (main gate located adjacent to the Town's southwestern boundary). Local jobs for the military and civilian workers at CFB Wainwright help to retain the employed labour force in the Town and surrounding areas in the MD.

3.0 Population Projections

Metro Economics was retained by ISL on behalf of the Town and the MD to assess the population and employment potential over the next half century of the Wainwright Region in Alberta. Summing the 2016 federal census counts of the five municipalities presented in the previous chapter, the Region was home to 11,989 people in 2016.

Note that the projections contained herein were prepared based on the full availability of the necessary data released from the 2016 federal census. Although the first two waves of data from the 2021 federal census – population and dwelling counts and age, sex, gender, and dwelling types – were released prior to this report being published, subsequent necessary data to inform projections, was not yet released. Therefore, the projections herein remain based to the 2016 federal census results. For comparative purposes however, the initial results of the 2021 federal census indicate the population of the Wainwright Region has increased to 12,044.

3.1 Historical Population Trends in the Wainwright Region

As presented in Table 12, and further to the previous chapter, the population of the Wainwright Region increased from 9,853 in 1986 to 11,989 in 2016. This represents a 30-year gain of 2,136 people, achieving an average annual growth rate (AAGR) of 0.7 percent. As a point of reference, the population of Alberta grew at an average rate of 1.3 percent over that 30-year span.

Within the Region, the Town grew the most – by 1,605 people at an AAGR of 1.0 percent – accounting for three quarters of the population gain of the Region. The MD grew by 542 over that period at a pace of 0.4 percent per year, accounting for the remaining quarter of the Region's overall gain. The change in population of the ICE villages was minimal with Irma gaining 37 people, Edgerton losing 16 and Chauvin losing 32. The population of the three villages as a group fell by 11 over the 1986 to 2016 period.

Table 12: Total Population of the Wainwright Region by Constituent Municipality, 1986-2016

Geography	Federal Census Year							Change		
	1986	1991	1996	2001	2006	2011	2016	1986-2016	AAGR (%)	Percent Share
Town of Wainwright	4,665	4,732	5,079	5,117	5,426	5,925	6,270	1,605	1.0	75
MD of Wainwright	3,937	3,917	4,044	4,231	3,558	4,138	4,479	542	0.4	25
Village of Irma	400	355	372	403	373	317	384	-16	-0.1	-1
Village of Chauvin	367	360	400	366	308	334	335	-32	-0.3	-1
Village of Edgerton	484	442	472	435	444	457	521	37	0.2	2
Wainwright Region	**9,853**	**9,806**	**10,367**	**10,552**	**10,109**	**11,171**	**11,989**	**2,136**	**0.7**	**2**

Population growth was uneven for the Region as a whole (see Figure 10). Its total population grew between the Censuses of 1991 and 1996, 1996 and 2001, 2006 and 2011, and 2011 and 2016, but fell between the Censuses of 1986 and 1991, and 2001 and 2006. (It is noted that an undercount error was suspected in the MD's population of 2006 after which the MD conducted its own municipal census in 2008. The municipal census reported a population of 4,113 for 2008, or 555 more than the 2006 Census and closer to the 2001 to 2011 trend line.)

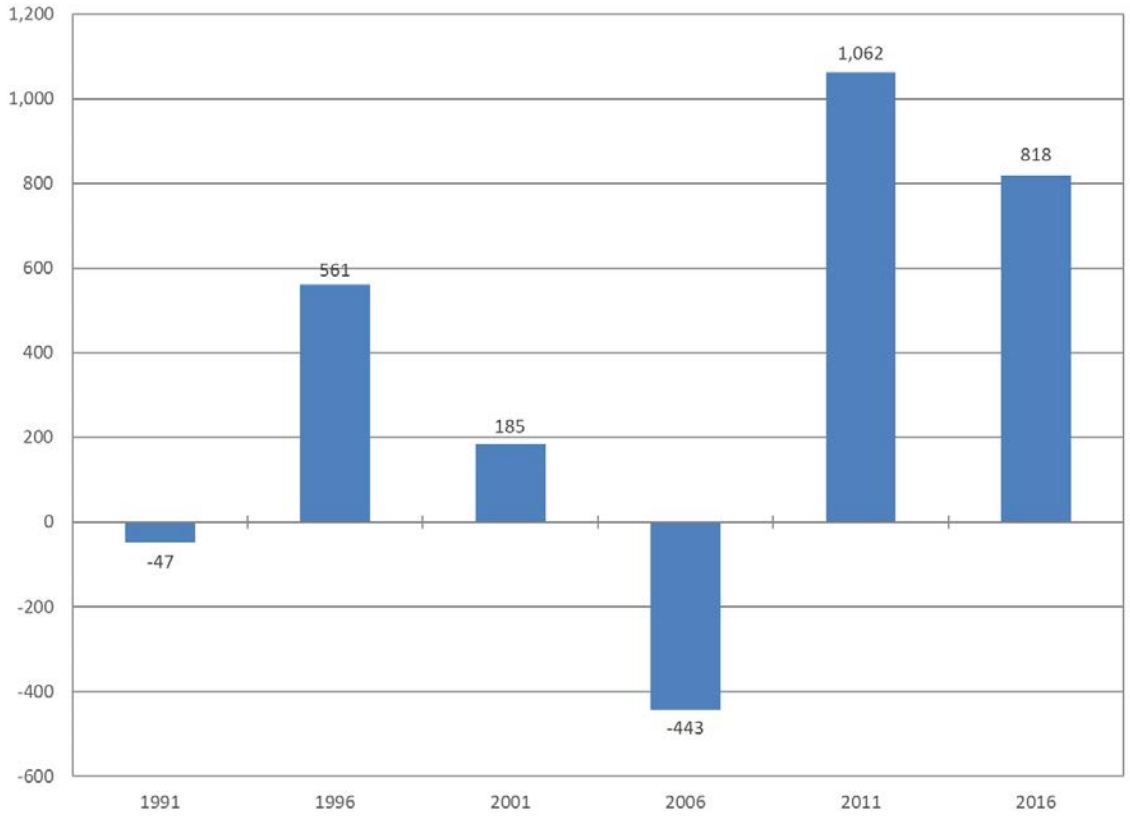


Figure 10: Total Population Growth of the Wainwright Region, 1986-2016

3.2 Assessing the Wainwright Region's Economic Base

In developing projections for population and employment of the Region, Metro Economics used its proprietary sub-provincial projection system. This system integrates expectations regarding both the economic and demographic prospects of the Region. The projections consider the potential for employment growth in those industries that define the Region's economic base, and the potential for supplying enough workers to fill those jobs.

- The potential for employment growth is assessed against the backdrop of national and provincial trends in employment by industry.
- The potential for labour force growth considers such factors as the aging-in-place of the existing population, the gradual retirement of the Baby Boom generation, and the need for new workers to replace the retiring Boomers or to fill any new jobs expected to be created.

The projection process for the Region begins with assessing the industrial components of its economic base. Metro Economics' economic base assessment (described below) led to the conclusion that the Wainwright Region is really two economic areas:

- The first area consists of the MD and the ICE villages as a group. The population of this area is scattered in low density locations and its economic base is primarily defined by agriculture (crop farming and ranching), mining (oil and gas), national defence (the Canadian Forces Base) and other government services. From this point forward this area is referred to as the "Rural Area".
- The second area consists of the Town of Wainwright itself. The Town's population is more densely concentrated than that of the District and its economic base is defined not only by agriculture, oil and gas, national defence, and other government services, but also by retail, health, and food and accommodation services.

This differentiation was quantified by drawing on 2016 federal census data regarding employment by place of work by industry (EPOW) and using a location quotient (LQ) assessment procedure. This procedure involves decomposing jobs by industry in each of the Town and the Rural Area into those that define their economic base and those that serve their local populations (Tables 13 and 14).

- Economic base (EB) jobs provide goods and services primarily to people and businesses outside of the Region.
- Community base (CB) jobs provide services primarily to local residents.

Table 13: 2016 Wainwright Region Economic Base and Community Base Jobs in the Town

	Employment Place of Work		Jobs per 1,000		Location Quotient[12]	Jobs by Type	
	Alberta	Town	Alberta	Town		Economic Base	Community Base
Total population	**4,252,879**	**6,325**	-----	-----	-----	-----	-----
Total employed by place of work (EPOW)	**2,096,125**	**3,820**	**493**	**604**		**1,506**	**2,314**
Agriculture, forestry, fishing and hunting	61,480	110	14	17	120	110	0
Mining, quarrying, and oil and gas extraction	121,155	165	28	26	92	165	0
Utilities	20,560	35	5	6	114	4	31
Construction	206,925	270	49	43	88	0	270
Manufacturing	116,795	95	27	15	55	95	0
Wholesale trade	75,650	85	18	13	76	0	85
Retail trade	232,655	790	55	125	228	444	346
Transportation and warehousing	107,485	100	25	16	63	0	100
Information and cultural industries	31,070	45	7	7	97	0	45
Finance and insurance	106,045	150	25	24	95	0	150
Professional, scientific and technical services	153,055	75	36	12	33	0	75
Other business services	84,230	75	20	12	60	0	75
Educational services	141,680	220	33	35	104	9	211
Health care and social assistance	238,130	535	56	85	151	181	354
Arts, entertainment and recreation	40,885	40	10	6	66	0	40
Accommodation and food services	141,345	335	33	53	159	125	210
Other services (except public administration)	98,315	260	23	41	178	114	146
Public administration	118,665	435	28	69	246	259	176

[12] In Tables 13 and 14, Location Quotient (LQ) is an index of the jobs per 1,000-people-ratio by industry in the selected area divided by the jobs-per-1,000-people-ratio in that industry Alberta-wide. The Town's index of 151 for health care and social assistance indicates people working in this industry are 51 percent more likely to be found in the Town than in other communities in Alberta. Therefore one-third of the health care jobs in Town (51 / 151 = 0.337, or 181 out of 535) are serving non-residents. Note that an LQ assessment is not undertaken for each of the villages due to the unreliability of the industrial details of the data at their smaller size.

Jobs are decomposed in the Town and in the Rural Area into their EB and CB parts as follows: (a) all agriculture, mining and manufacturing jobs produce primarily for markets outside the Region and hence are economic base jobs; (b) jobs in service industries that "exceed the norm per capita" primarily produce for markets outside of the Region and hence are considered to be economic base jobs producing "tradable" services.

Economic base industries are those that drive overall growth in an area:

- Agriculture, mining, and manufacturing;
- Exportable or tradable services (higher order education, health care, business services); and
- Tourism services (retail sales, accommodation, food, recreation, entertainment).

Without economic base growth in an area, overall growth of the area typically will not occur.

The overall growth process occurs as follows:

- EB growth drives employment growth;
- Employment growth necessitates population growth including workers and dependents;
- Population growth creates the need for additional community base jobs; and
- CB job growth drives the need for additional population growth.

Table 14: 2016 Wainwright Region Economic Base and Community Base Jobs in the Rural Area

	Employment Place of Work		Jobs per 1,000		Location Quotient[29]	Jobs by Type	
	Alberta	Rural Area	Alberta	Rural Area		Economic Base	Community Base
Total population	**4,252,879**	**6,325**	**-----**	**-----**	**-----**	**-----**	**-----**
Total employed by place of work (EPOW)	**2,096,125**	**1,815**	**493**	**314**		**1,089**	**726**
Agriculture, forestry, fishing, and hunting	61,480	565	14	98	677	565	0
Mining, quarrying, and oil and gas extraction	121,155	115	28	20	70	115	0
Utilities	20,560	10	5	2	36	0	10
Construction	206,925	85	49	15	30	0	85
Manufacturing	116,795	20	27	3	13	20	0
Wholesale trade	75,650	30	18	5	29	0	30
Retail trade	232,655	115	55	20	36	0	115
Transportation and warehousing	107,485	30	25	5	21	0	30
Information and cultural industries	31,070	10	7	2	24	0	10
Finance and insurance	106,045	45	25	8	31	0	45
Professional, scientific, and technical services	153,055	35	36	6	17	0	35
Other business services	84,230	20	20	3	17	0	20
Educational services	141,680	100	33	17	52	0	100
Health care and social assistance	238,130	20	56	3	6	0	20
Arts, entertainment, and recreation	40,885	10	10	2	18	0	10
Accommodation and food services	141,345	0	33	0	0	0	0
Other services (except public administration)	98,315	55	23	10	41	0	55
Public administration	118,665	550	28	95	341	389	161

In Tables 13 and 14, the "norms per capita" are developed by comparing jobs per 1,000 persons by industry in each of the Town and Rural Area to jobs per 1,000 persons by industry Alberta-wide. Where the jobs per person ratio of an area exceeds that of the province in service industries, the "excess" workers are providing services to non-residents.

For example, the Town's ratio for health and social services at 85 jobs per 1,000 people is much higher than the provincial average of 56. The difference – 29 jobs per 1,000 residents or 181 jobs out of a total of 535 jobs in health and social services in the Town – reflects services provided to people coming to the Town for such services from the Rural Area and beyond where such services are not available.

In a similar vein, there are "excess" jobs in the Town in retail trade as well as in accommodation and food, indicating the Town serves as a regional centre for these services as well.

The decomposition of jobs in Tables 13 and 14 led to two conclusions.

- The Town's economic base is defined by agriculture and mining production and by retail, health, food and accommodation, national defence, and other government services.
- The Rural Area's economic base is defined by agriculture and mining production and by national defence and other government services.

In effect the entire Region including both the Town and the Rural Area is driven by agriculture, oil and gas, national defence, and other government services. Within the Region, the Town operates as a service centre to the residents of the Region and beyond for retail, health care, and food and accommodation services.

Metro Economics' decomposition procedure suggests that national defence and other government services account for an estimated 259 jobs in the Town and 389 jobs in the Rural Area (see the economic base jobs within public administration in each economic area). Thus, national defence and other government services account for a total of 648 jobs in the Region as a whole, an estimate not far from the number of people said to be directly employed by the CFB in the Region.

3.3 Recent Trends in Alberta

Alberta's population has grown since the early 1970s at an average annual rate of 1.4 percent. Its growth has been driven primarily by the rapid expansion oil and gas exploration and production. Over that span, oil and gas activity has been buffeted about by swings in world oil prices, by shifts in national energy policies, by wavering investor support for conventional/non-conventional oil extraction, and by uncertainties regarding future pipeline capacity. As a result, though the industry expanded significantly over the long term, the pace of expansion has been anything but steady.

Figure 11 shows the annual absolute change in Alberta's total population from 1971 through to 2018 (measured against the left scale) and the annual average real world price for oil in constant 2018 US dollars (measured against the right scale). The impact of swings in the real price of world oil on the pace of population growth in Alberta is unmistakable.

Figure 11 reveals that Alberta's population growth over the 2015 to 2018 period averaged between 50,000 and 60,000 per year – at a time when world oil prices hovered between $50 and $70 – well below the population gains of 80,000 to 100,000 per year achieved in most years over the span from 2005 to 2014 – when oil prices hovered between $80 and $120.

Through most of 2018, the price of oil averaged about $70 and the province's population growth increased to more than 60,000 that year. But recently the price of oil has fallen back to below $50 and significant uncertainties remain regarding when new pipeline capacity might be expected to carry the province's output to foreign markets.

Against this backdrop, the province's reduced annual population growth since before the 2016 federal census might be expected to continue for another year or two before returning to its longer-term trend.

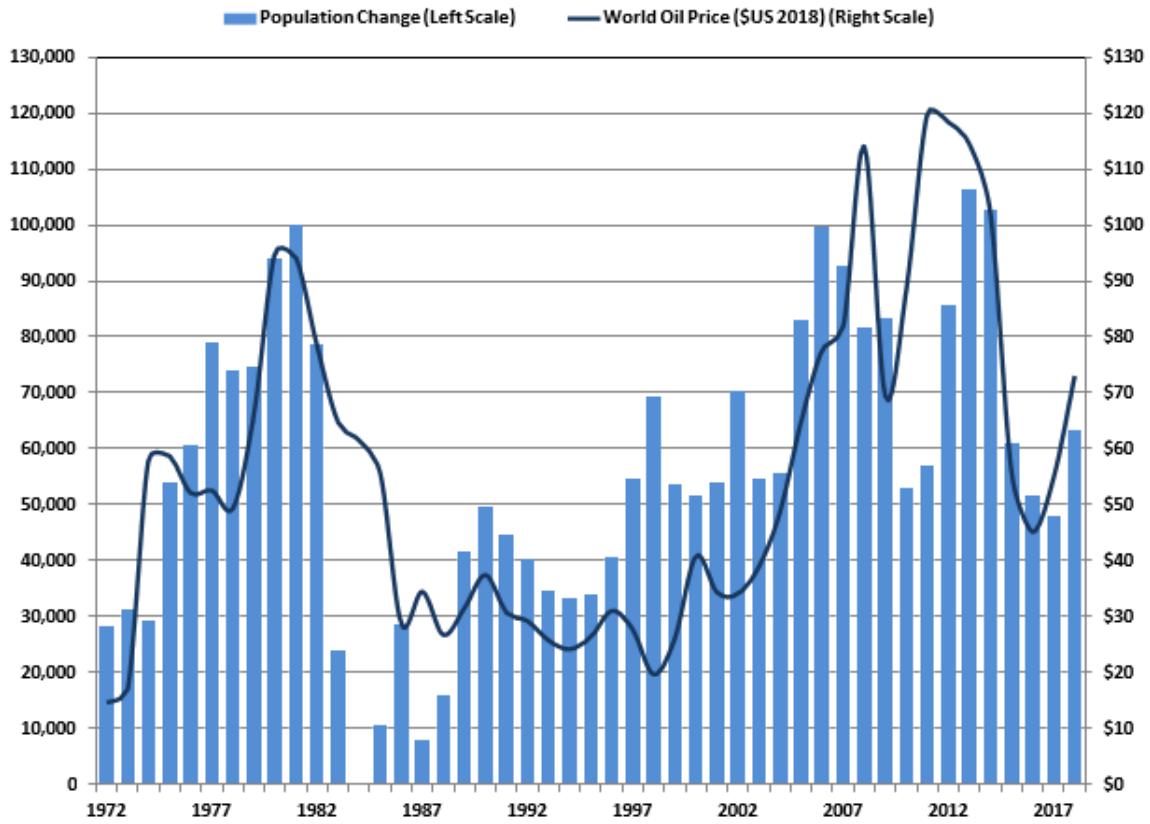


Figure 11: Annual Changes in Alberta's Population and the Real Price of Oil per Barrel ($US 2018)

3.4 Assessing the Wainwright Region's Economic and Demographic Potential

Metro Economics developed a Base Case projection for each of the Wainwright Region's two segments as follows:

- The number of economic base jobs are grown in the future in the Rural Area at the pace projected for these industries Alberta-wide;
- The number of economic base jobs are grown in the future in agriculture, mining, and manufacturing production, and in defence services in the Town also at the pace projected for these industries Alberta-wide; and
- The number of tradable services jobs are grown in the future in the Town at the pace projected for the Rural Area's population (since it is mostly the Rural Area's people that are consuming the Town's tradable services).

Figures 12 and 13 illustrate the future path projected for economic base jobs by major industry group for each of the Town and the Rural Area.

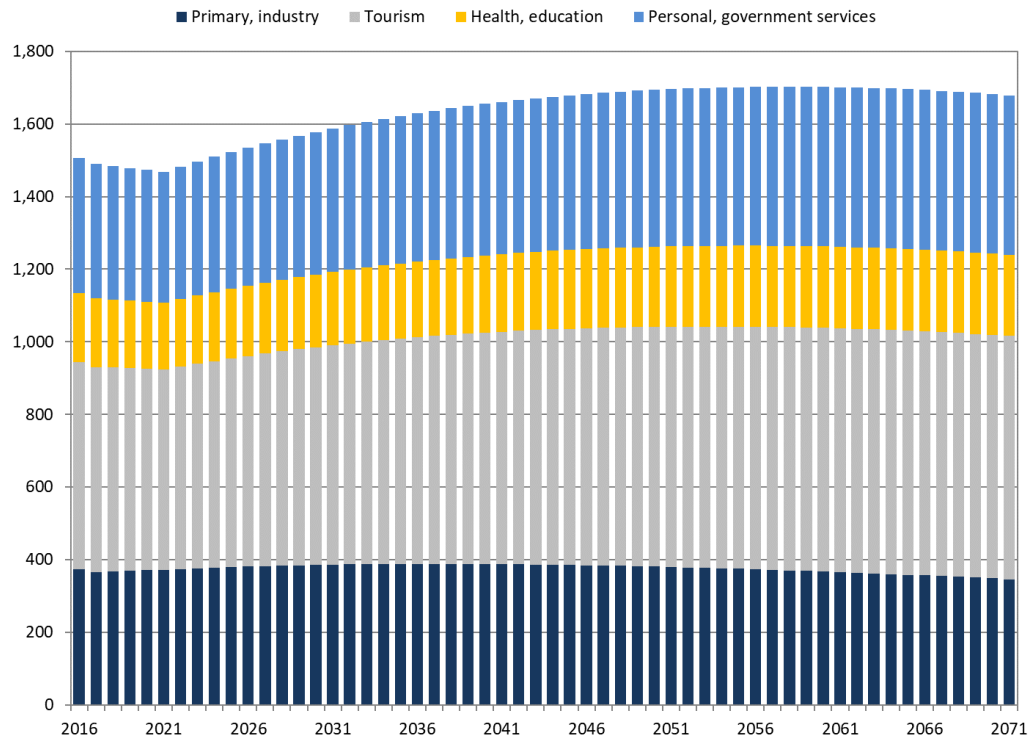


Figure 12: Projected Economic Base Jobs in Town Portion of Wainwright Region, 2016-2071

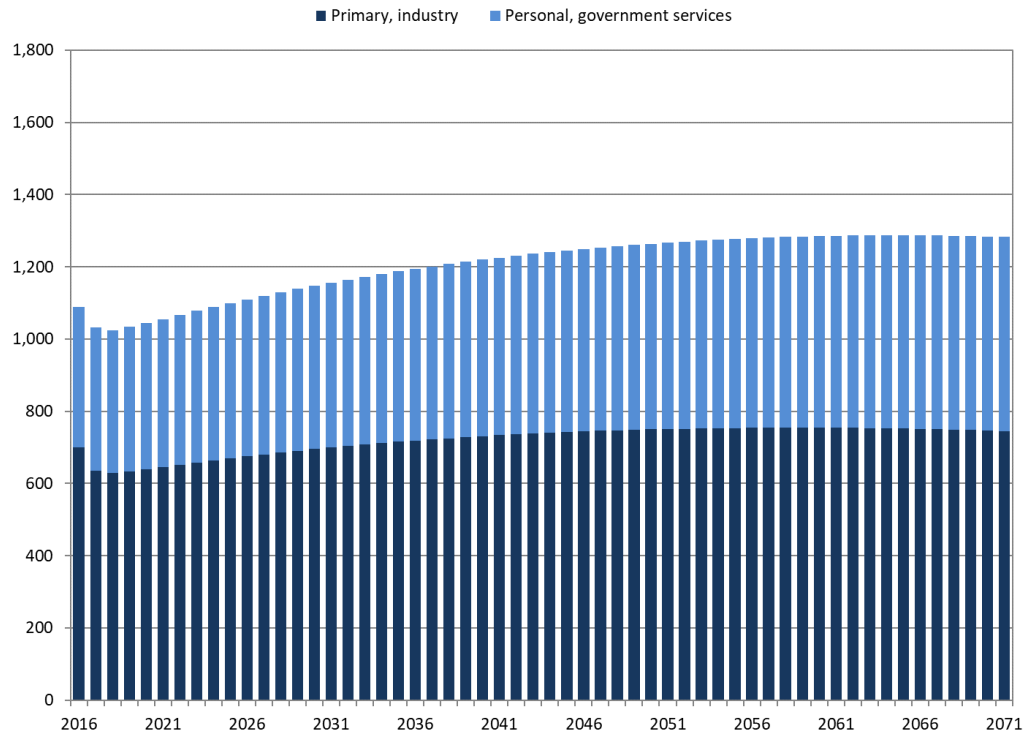


Figure 13: Projected Economic Base Jobs in Rural Area Portion of Wainwright Region, 2016-2071

3.4.1 Base, High, and Low Case Scenarios

Figures 14 and 15 (the Base Case) illustrate the future path for each the Town and Rural Area of the total population, the population 15 years of age and over, the labour force source population, the number of people employed by place of residence (POR), the number employed by place of work (POW), and the number of economic base jobs (EB) by POW.

It should be noted that in the short-term – between 2016 and 2021 – the total population of both the Town and the Rural Area is projected to decline reflecting the oil price and product transportation uncertainties that prevail at this time province-wide. Beyond 2021, however, the population of both the Town and the Rural Area in the Base Case is projected to resume growing at least through to the mid-2050s and early-2060s. Beyond that point, the populations of both are likely to stabilize as growth in economic base employment starts to gradually decline.

Figures 16 and 17 (the High Case) assume the economic base jobs of each of the Town and the Rural Area grow at a pace 0.5 percent per year faster than in the Base Case. Figures 16 and 17 illustrate the future path for each the Town and the Rural Area of the total population, the population 15 years of age and over, the labour force source population, the number of people employed by POR, the number employed by POW, and the number of economic base jobs by POW.

Figures 18 and 19 (the Low Case) assume the economic base jobs of each of the Town and the Rural Area grow at a pace 0.5 percent per year slower than in the Base Case. As in Figures 14 through 17, Figures 18 and 19 illustrate the future path for each the Town and the Rural Area of the total population, the population 15 years of age and over, the labour force source population, the number of people employed by POR, the number employed by POW, and the number of economic base jobs by POW.

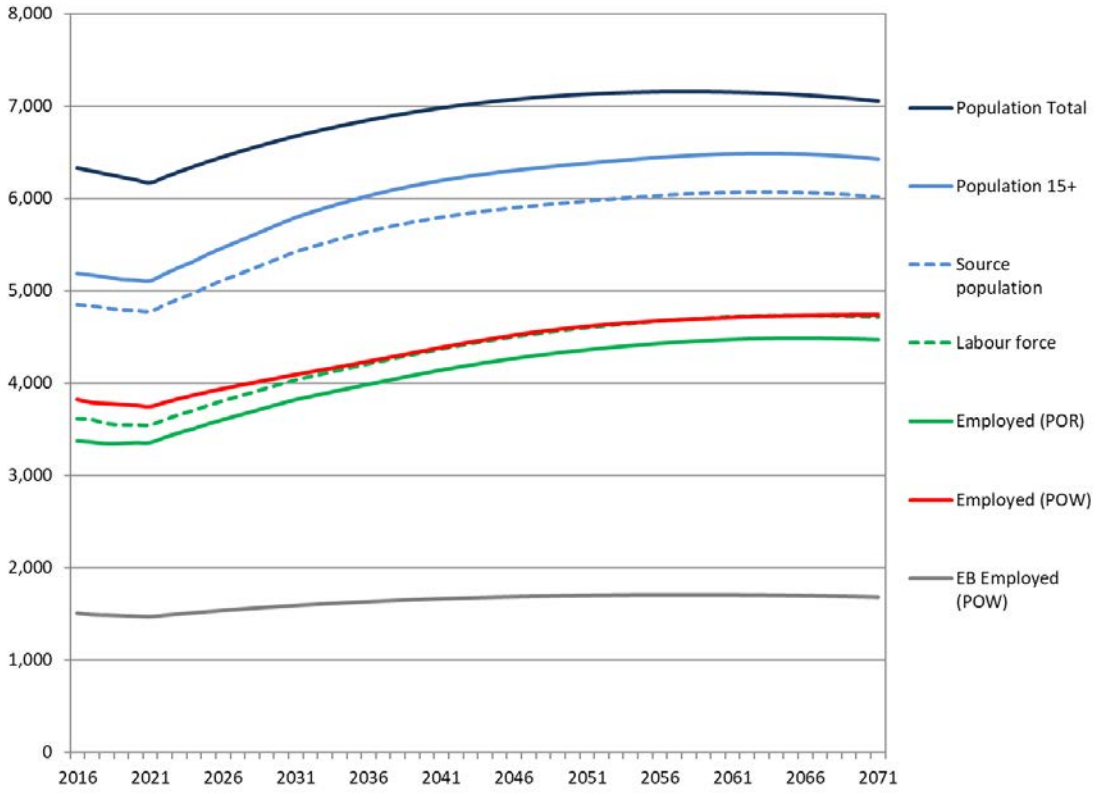


Figure 14: Base Case Projection – Population and Labour Market Activity in Town, 2016-2071

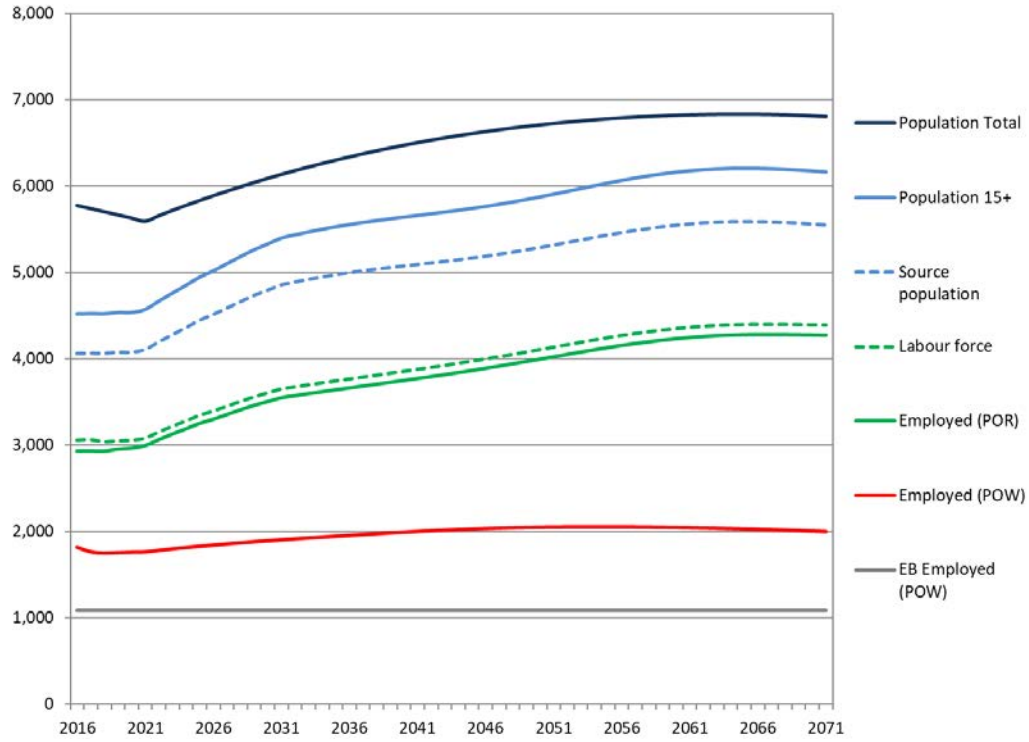


Figure 15: Base Case Projection – Population and Labour Market Activity in Rural Area, 2016-2071

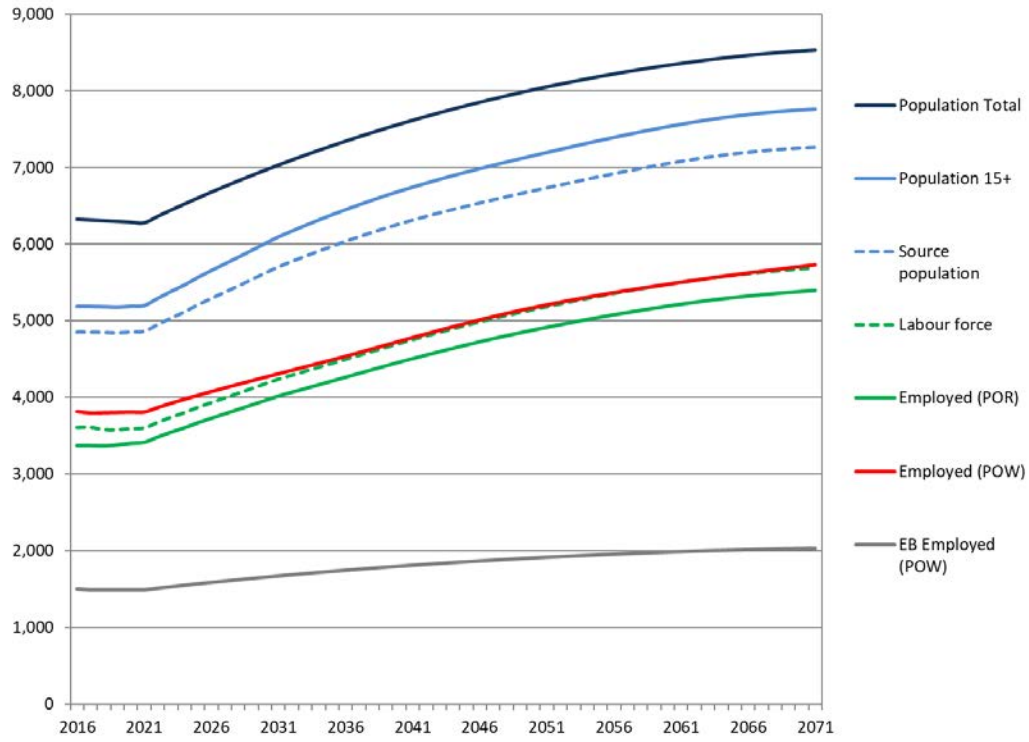


Figure 16: High Case Projection – Population and Labour Market Activity in Town, 2016-2071

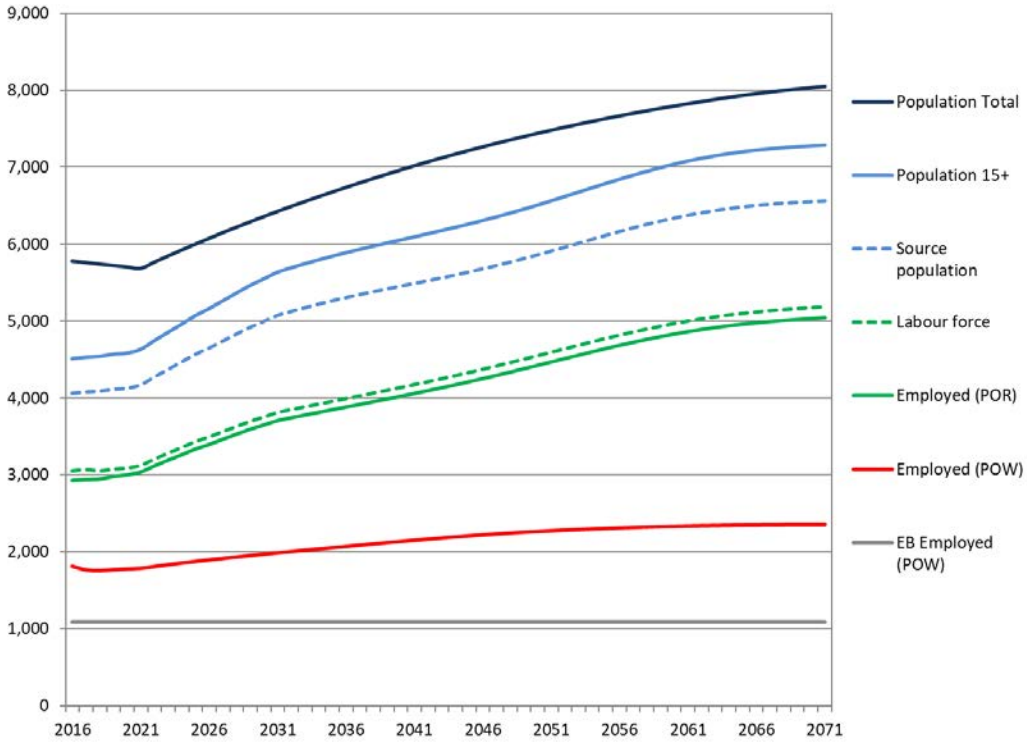


Figure 17: High Case Projection – Population and Labour Market Activity in Rural Area, 2016-2071

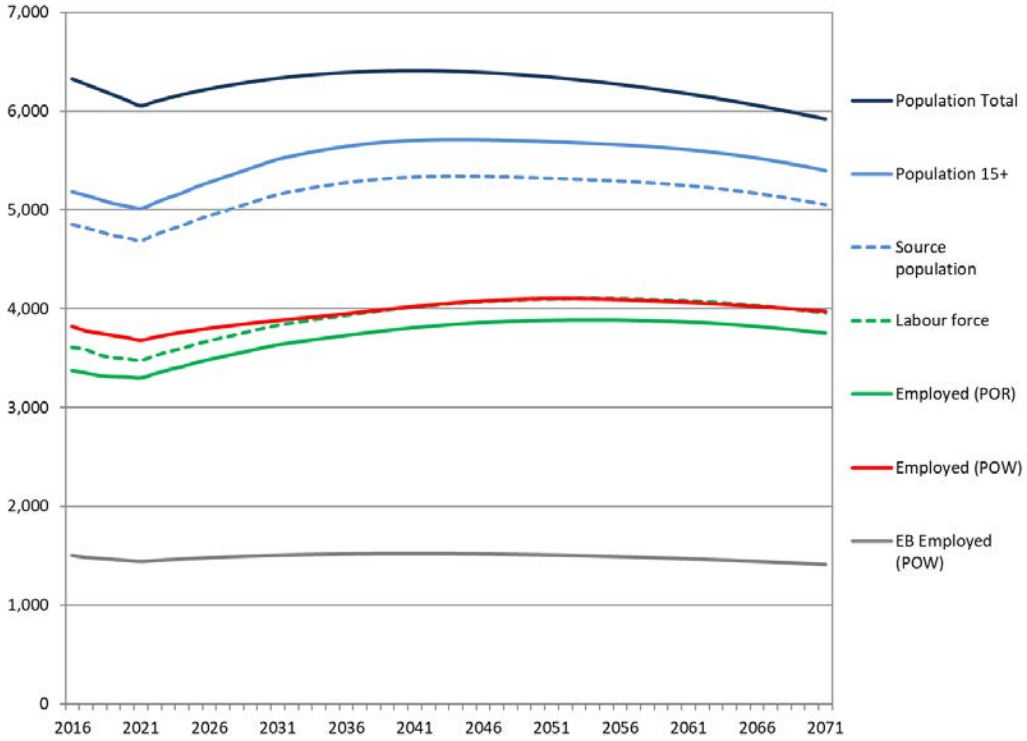


Figure 18: Low Case Projection – Population and Labour Market Activity in Town, 2016-2071

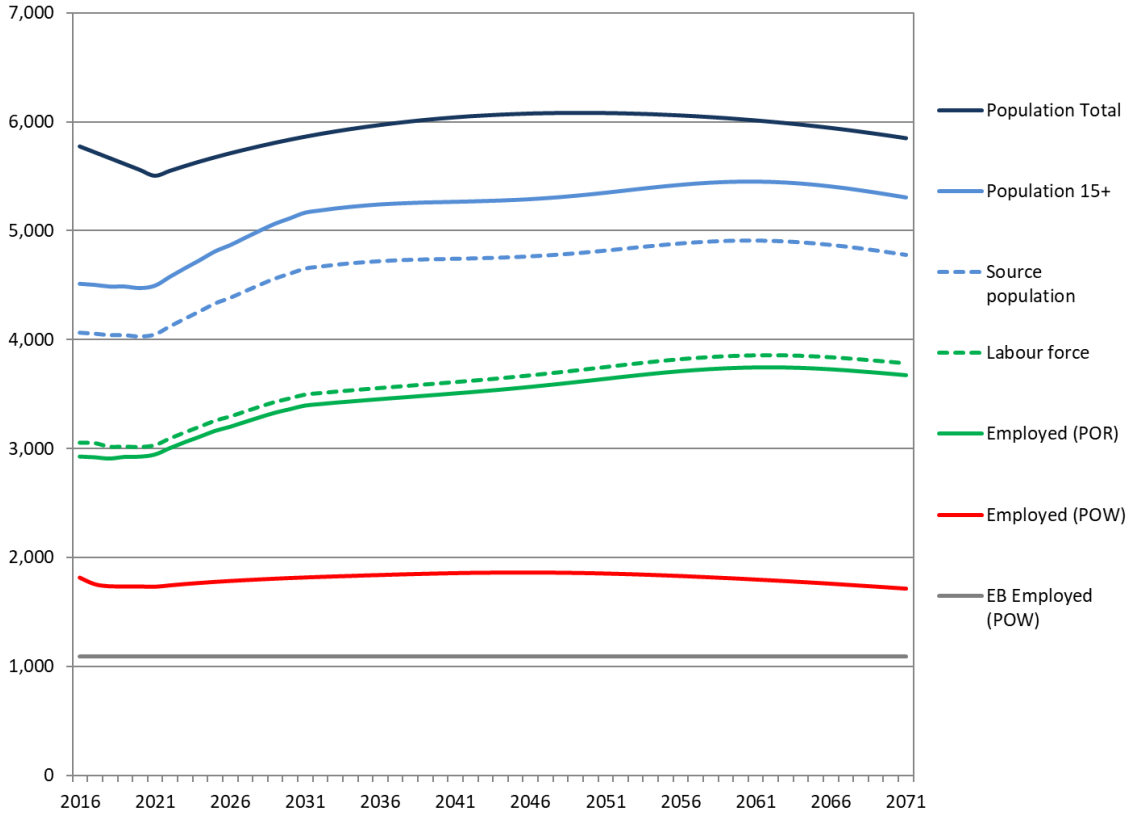


Figure 19: Low Case Projection – Population and Labour Market Activity in Rural Area, 2016-2071

3.4.2 CFB Case Scenario

Metro Economics prepared one additional "notional" alternative to the Base, High and Low Cases based on the assumption that the Canadian Forces Base in the area doubles in size by 2023. This alternative is meant to be illustrative only. Different assumptions regarding the extent and timing of the expansion can be readily tested.

In developing this alternative – the CFB Case – the number of persons employed at the base was assumed to increase by 333 in 2021, by 333 in 2022, and by 334 in 2023 for a cumulative expansion in the size of the base equivalent to 1,000 more employed. Half of the expansion was assumed to occur in the Town on a place of work basis while the other half was assumed to occur in the Rural Area. The starting point projection for this alternative was the Base Case (which is illustrated in Figures 14 and 15).

As of 2021 in the Base Case projection, the total number of economic base jobs in the Wainwright Region is projected to be about 3,000 (1,800 in the Town and 1,200 in the Rural Area). Thus, an expansion of 1,000 CFB economic base jobs in total across the two areas represents a significant economic base job gain of one-third for the Region as a whole.

Running these assumptions through each of the Town and Rural Area Base Case projections results in the CFB Case profile illustrated in Figures 20 and 21. For each, these figures illustrate the total population, the population 15 years of age and over, the labour force source population, the number of people employed by POR, the number employed by POW, and the number of economic base jobs by POW.

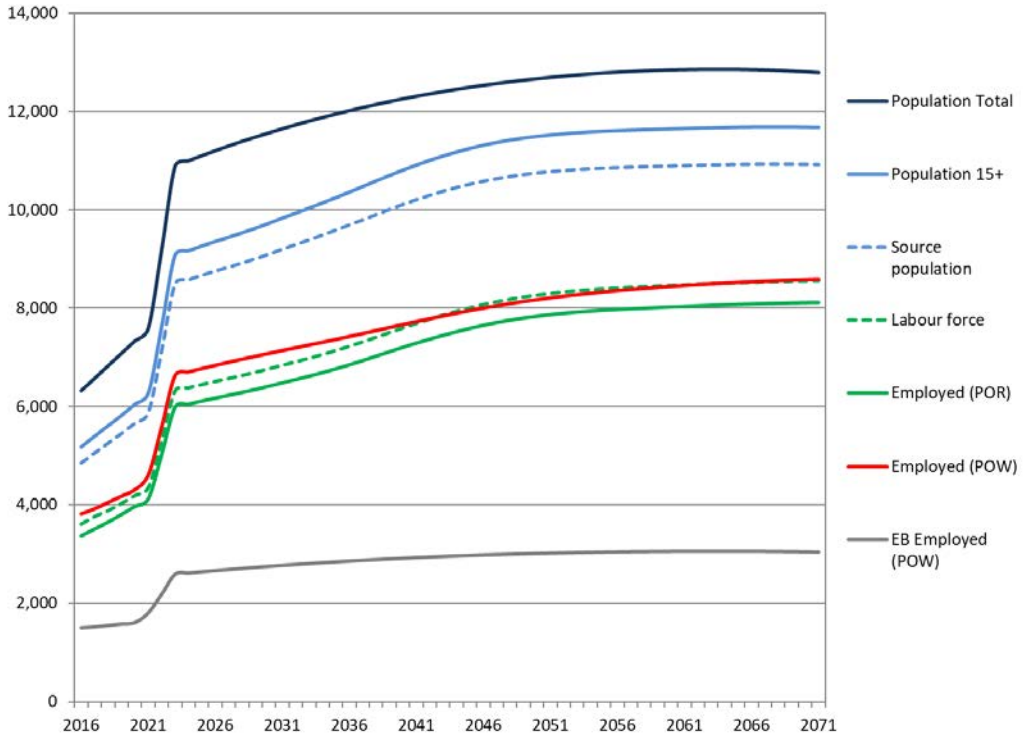


Figure 20: CFB Case Projection – Population and Labour Market Activity in Town, 2016-2071

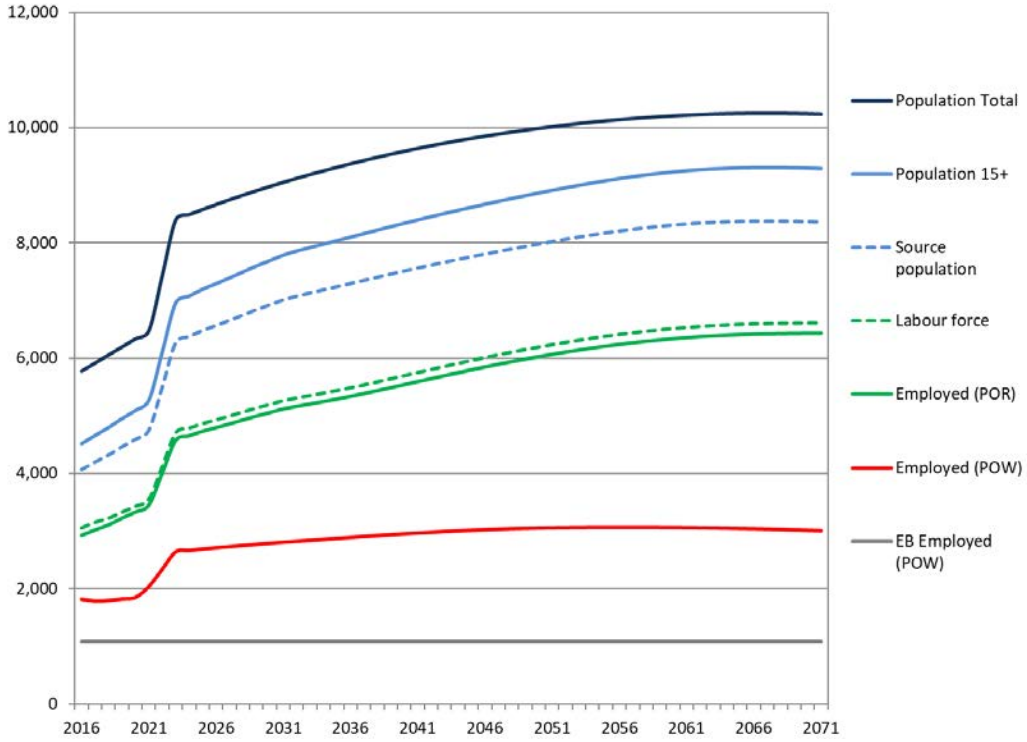


Figure 21: CFB Case Projection – Population and Labour Market Activity in Rural Area, 2016-2071

In the CFB Case, the total population of the Wainwright Region – including both the Town and the Rural Area – increases from just over 14,000 in 2021 to 19,500 by 2024. The economic base jobs of the entire Region increase from 3,000 to more than 4,000, so it is understandable that a one-third increase in population supporting jobs results in a one-third increase in the total population being supported.

As this alternative is presented for illustrative purposes only, a parsing of the gains to each of the Town and the Rural Area separately is not presented. Those gains will largely reflect the capacities of both the Town and the Rural Area to accommodate the CFB expansion itself, as well as the residential choices of the 1,000 new workers and their dependents.

Figure 22 compares the total population projections for the Wainwright Region for the four alternatives against the backdrop of population growth since 1986.

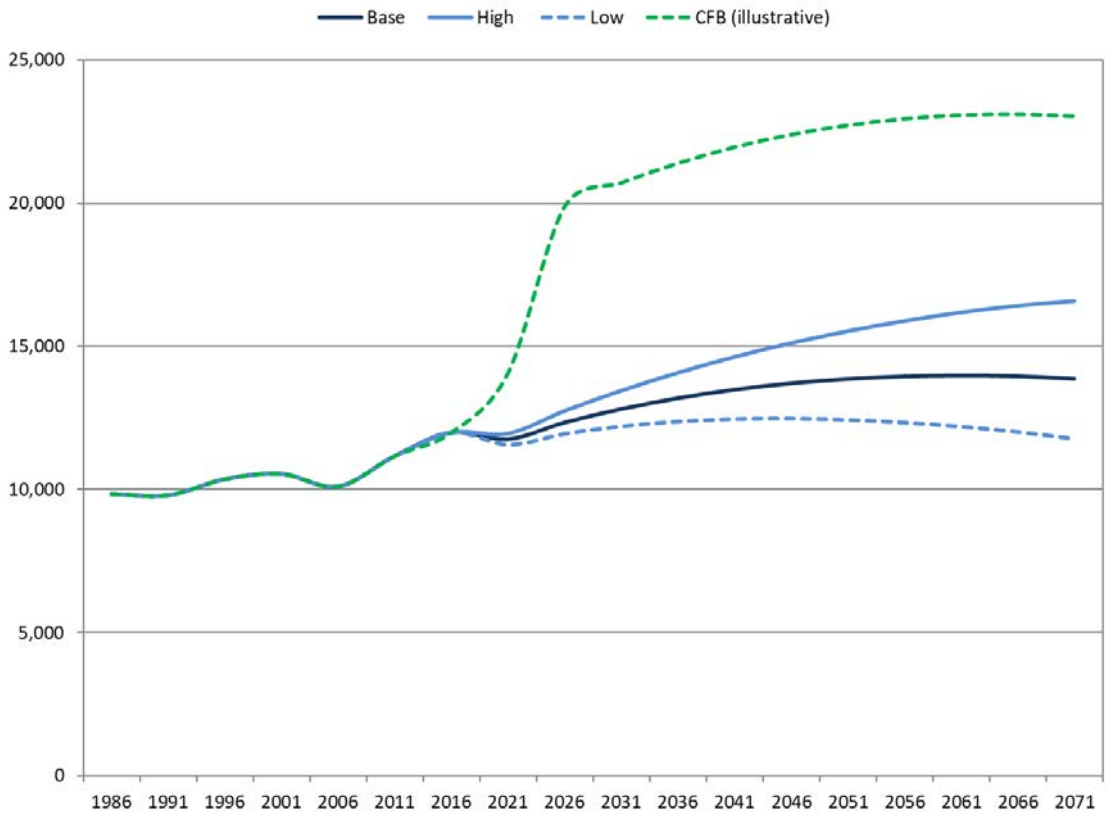


Figure 22: Historical and Projected Total Population of Wainwright Region by Scenario, 1986-2071

Table 15 details the total population projections for each of the four alternatives for each of the five municipalities comprising the Wainwright Region.

Geography	Actual	Projected											Change		
	2016	2021	2026	2031	2036	2041	2046	2051	2056	2061	2066	2071	86-16	16-46	46-71
Base Case															
Total Wainwright Region	**11,989**	**11,758**	**12,334**	**12,804**	**13,180**	**13,476**	**13,695**	**13,846**	**13,935**	**13,967**	**13,942**	**13,853**	**2,136**	**1,706**	**157**
Town of Wainwright	6,270	6,165	6,446	6,670	6,844	6,977	7,069	7,125	7,151	7,147	7,115	7,051	1,605	799	-17
MD of Wainwright No. 61	4,479	4,367	4,629	4,847	5,027	5,173	5,286	5,369	5,426	5,458	5,464	5,441	542	807	155
Irma	521	512	534	552	567	579	588	595	600	603	603	601	37	67	13
Chauvin	335	332	339	346	351	355	359	361	363	364	364	363	-32	24	5
Edgerton	384	383	386	388	391	392	394	395	395	396	396	395	-16	10	2
Rural Area (MD and ICE Villages)	**5,719**	**5,593**	**5,888**	**6,133**	**6,335**	**6,499**	**6,627**	**6,720**	**6,785**	**6,820**	**6,827**	**6,802**	**531**	**908**	**175**
Low Case															
Total Wainwright Region	**11,989**	**11,562**	**11,935**	**12,196**	**12,362**	**12,450**	**12,467**	**12,423**	**12,328**	**12,186**	**12,001**	**11,768**	**2,136**	**478**	**-699**
Town of Wainwright	6,270	6,056	6,223	6,332	6,390	6,409	6,391	6,342	6,269	6,173	6,057	5,918	1,605	121	-473
MD of Wainwright No. 61	4,479	4,290	4,473	4,608	4,704	4,766	4,797	4,801	4,781	4,740	4,679	4,596	542	318	-201
Irma	521	505	520	532	540	545	548	548	546	543	538	531	37	27	-17
Chauvin	335	329	335	339	342	343	344	344	344	343	341	338	-32	9	-6
Edgerton	384	382	384	386	387	387	388	388	388	387	386	385	-16	4	-2
Rural Area (MD and ICE Villages)	**5,719**	**5,506**	**5,712**	**5,864**	**5,972**	**6,042**	**6,077**	**6,081**	**6,059**	**6,013**	**5,944**	**5,850**	**531**	**358**	**-226**
High Case															
Total Wainwright Region	**11,989**	**11,957**	**12,751**	**13,455**	**14,079**	**14,633**	**15,115**	**15,531**	**15,888**	**16,185**	**16,421**	**16,583**	**2,136**	**3,126**	**1,468**
Town of Wainwright	6,270	6,277	6,679	7,033	7,344	7,617	7,853	8,053	8,222	8,360	8,467	8,536	1,605	1,583	684
MD of Wainwright No. 61	4,479	4,445	4,792	5,104	5,382	5,631	5,851	6,043	6,210	6,351	6,466	6,549	542	1,372	698
Irma	521	518	547	573	596	617	636	652	666	678	687	694	37	115	58
Chauvin	335	334	344	353	361	369	375	381	386	390	393	396	-32	40	20
Edgerton	384	384	388	391	395	398	400	403	405	406	408	409	-16	16	8
Rural Area (MD and ICE Villages)	**5,719**	**5,680**	**6,072**	**6,422**	**6,735**	**7,015**	**7,262**	**7,478**	**7,666**	**7,825**	**7,954**	**8,047**	**531**	**1,543**	**785**
CFB+ Case															
Total Wainwright Region	**11,989**	**14,067**	**19,876**	**20,710**	**21,397**	**21,959**	**22,396**	**22,722**	**22,948**	**23,077**	**23,111**	**23,035**	**2,136**	**10,407**	**639**
Town of Wainwright	6,270	7,591	11,209	11,658	12,023	12,317	12,541	12,702	12,808	12,860	12,860	12,800	1,605	6,271	259
MD of Wainwright No. 61	4,479	5,152	7,100	7,442	7,729	7,967	8,156	8,302	8,409	8,477	8,508	8,494	542	3,677	337
Irma	521	577	740	769	793	813	828	841	850	855	858	857	37	307	28
Chauvin	335	355	412	422	430	437	443	447	450	452	453	453	-32	108	10
Edgerton	384	392	415	419	423	426	428	430	431	432	432	432	-16	44	4
Rural Area (MD and ICE Villages)	**5,719**	**6,476**	**8,667**	**9,052**	**9,374**	**9,642**	**9,856**	**10,020**	**10,140**	**10,217**	**10,251**	**10,235**	**531**	**4,137**	**380**

3.5 Key Conclusions of Population Projections Assessment

The highlights of the projections developed for the Wainwright Region include the following:

1. Growth in the Wainwright Region in the short term will be challenged in light of the circumstances (oil prices) and issues (pipeline) faced by the province.
2. The Base Case projection suggests a future with a population growth pace that largely reflects the pace achieved in the past. This alternative will prevail if the economic base jobs in the Region keep pace with the pace expected for job growth in each industry province wide.
3. The High Case projection suggests a future with a population growth pace that improves on the pace achieved in the past. This alternative will prevail if the economic base jobs in the Region grow 0.5 percent per year faster than the pace expected for job growth in each industry province wide.
4. The Low Case projection suggests a future with a population growth pace that deteriorates from the pace achieved in the past. This alternative will prevail if the economic base jobs in the Region grow 0.5 percent per year slower than the pace expected for job growth in each industry province wide.
5. The CFB Case illustrates the extent to which expansion of CFB Wainwright would significantly impact the economy of the Region.

4.0 Retail Trade Area Review

As part of the Wainwright Region Growth Study, in support of its investment readiness purpose, the Town and the MD desired a review of Wainwright's currently defined retail trade areas. To this end, ISL engaged Nichols Applied Management (Nichols) to conduct a retail trade area study. This chapter of the Growth Study:

- provides a comprehensive inventory of the current retail offerings in the Town;
- compares the retail offerings of the Town to the inventory of offerings in competing urban centres; and
- identifies the client base currently being served by retailers in the Town and provides key demographic and socio-economic parameters of the client base.

4.1 Methods

4.1.1 Study Approach

The general aim of a retail trade study is to establish the population potentially being served by the businesses operating within a municipality. In the case of an urban centre such as Wainwright, the population travelling into the Town to access services will extend beyond its immediate borders and be shaped, in part, by transportation networks and other urban centres with competing services.

The conceptual approach to this study includes:

- Collecting of a detailed inventory of retail offerings in the Town;
- Identifying the general retail offerings of competing urban centres; and
- Delineating the current retail consumer base of the Town.

To delineate the retail base of the Town, the study team undertook an evaluation of the retail offerings of the Town relative to those in nearby urban centres – effectively optimizing consumer behaviour over travel time and retail offerings. Understanding the retail offerings of and travel times to other urban centres effectively allows for the boundaries of the retail catchment area for different retailers in the Town to be defined.

The study team also engaged with several retail businesses in the Town to gain further insight regarding their customer base, particularly where customers travel from to visit their stores.

4.1.2 Data Sources

Primary data collection using intercept surveys of retail customers in the Town was cost prohibitive. Accordingly, the study team has relied on published literature and data provided by the Town to identify the Town's retail trade customer base.

The data sources for this study include:

- business inventory data provided by the Town (2018);
- requested business count data provided by Statistics Canada (2017);
- Statistics Canada census data (2016); and
- Statistics Canada household spending data (2017).

4.2 Key Findings

4.2.1 Inventory of Wainwright Retail Offerings

The Town of Wainwright hosts approximately 80 retail stores[13] across 18 different categories (Figure 23), a full inventory of which can be found in Appendix A. As depicted in Figure 23, the most abundant retail offerings in the Town include:

- motor vehicles and parts dealers;
- clothing and accessories stores;
- furniture, home furnishings, and appliances stores; and
- grocery and specialty food stores (including convenience stores).

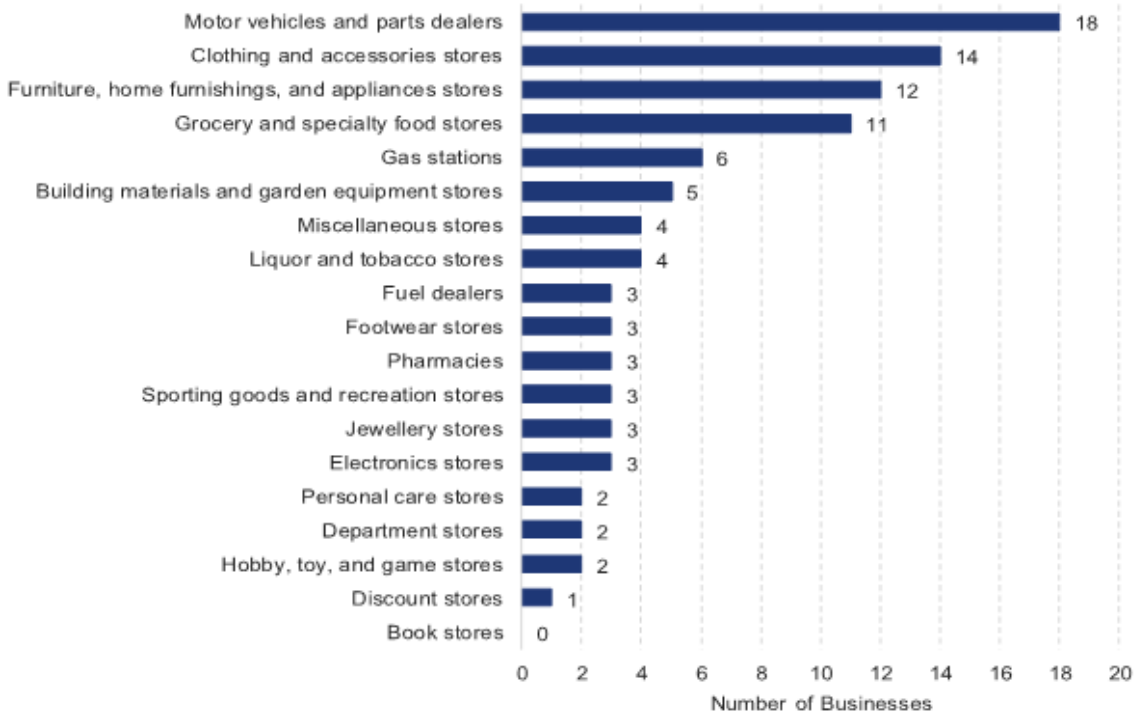


Figure 23: Wainwright Business Counts by Retail Category

Source: Town of Wainwright (2018)

The Town is also home to two major department stores, Walmart and Canadian Tire, which offer an array of general merchandise products across multiple retail categories and serve as retail destinations to people outside of the Town. There are also several niche retail stores located in the Town that attract visitors from the surrounding municipality and beyond, including:

- Globe Footwear – a footwear store that offers a selection of men's, women's, and children's shoes and accessories;
- Voilà! – a boutique home décor store;
- Crabbapples – a boutique women's clothing and accessories store; and
- Daines & Daubney – a boutique home décor and women's clothing and accessories store.

[13] Total adds up to over 80 businesses as some businesses fall under multiple retail categories (e.g. Canadian Tire offers both home furnishings and automotive goods).

4.2.2 Competing Urban Centres

The proximity of urban centres that offer plentiful retail opportunities will influence the geographic boundaries of the Town's customer base for certain retail categories. Indeed, some retail categories that invite frequent customer trips (such as groceries or gasoline) are available in smaller communities around Wainwright, and while these areas are considered in the delineation of the Town's retail trade area in Section 4.2.3, they are not evaluated in this section as major competing urban centres.

As depicted in Figure 24 below, the major competing urban centres for the Town include Lloydminster to the northeast, the Edmonton Metropolitan Region to the northwest, and Stettler to the southwest.

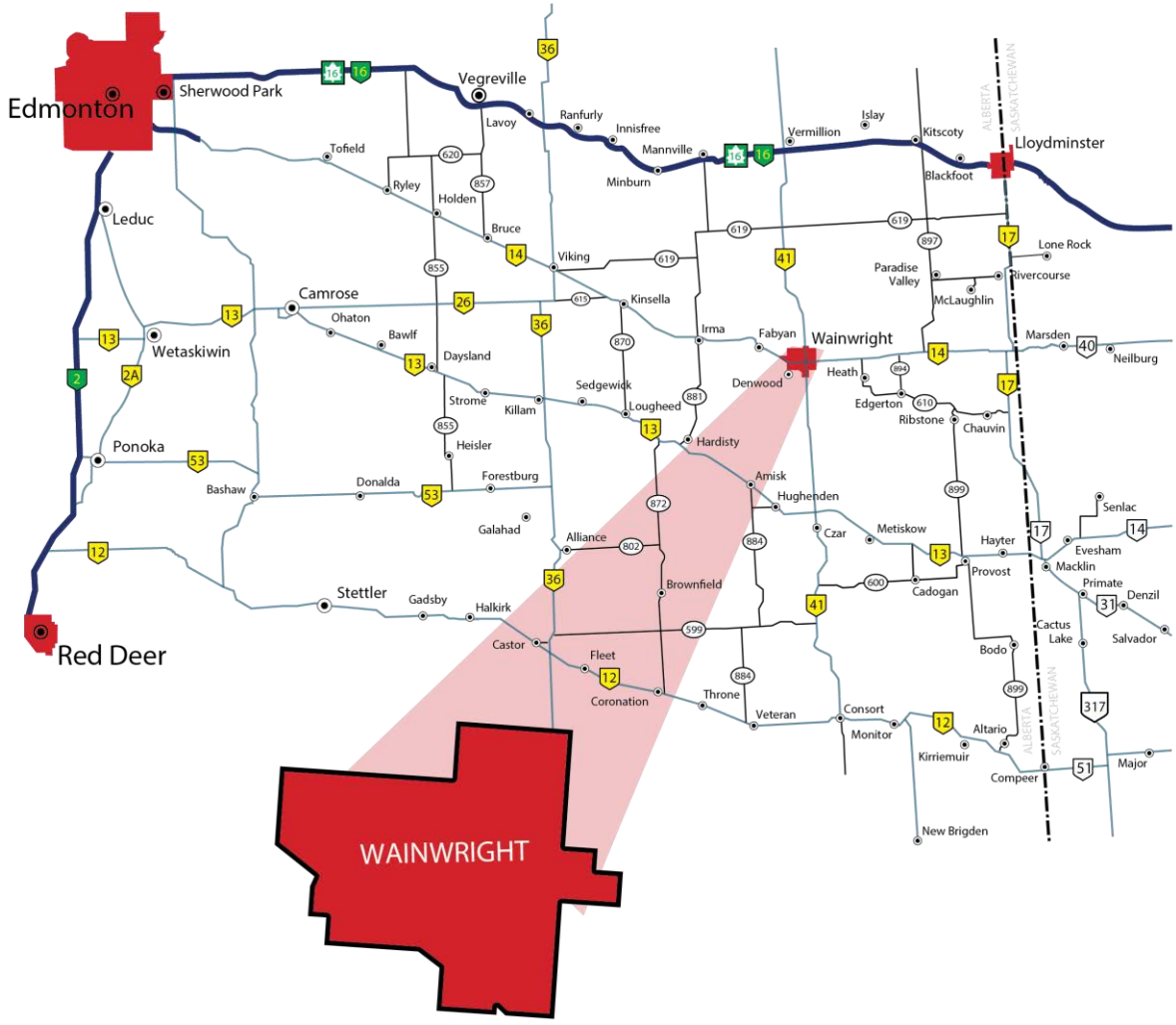


Figure 24: Map of Wainwright and Surrounding Area

Source: Town of Wainwright (2018)

Of these locations, Lloydminster is the nearest in terms of travel time (just over one hour). Both Edmonton and Stettler are over two hours away (Table 16).

Table 16: Distance and Travel Time from Wainwright to Nearby Urban Centres

Location	Driving Distance (km)	Driving Time (approx.)
Lloydminster	104	1 hour, 11 minutes
Edmonton Metropolitan Region	207	2 hours, 13 minutes
Stettler	196	2 hours, 7 minutes

Northeast: Lloydminster

The City of Lloydminster is an urban centre with a population of over 30,000, approximately 104 kilometres northeast of the Town. In the Alberta portion of Lloydminster, there are over 230 retail offerings (Figure 25).[14]

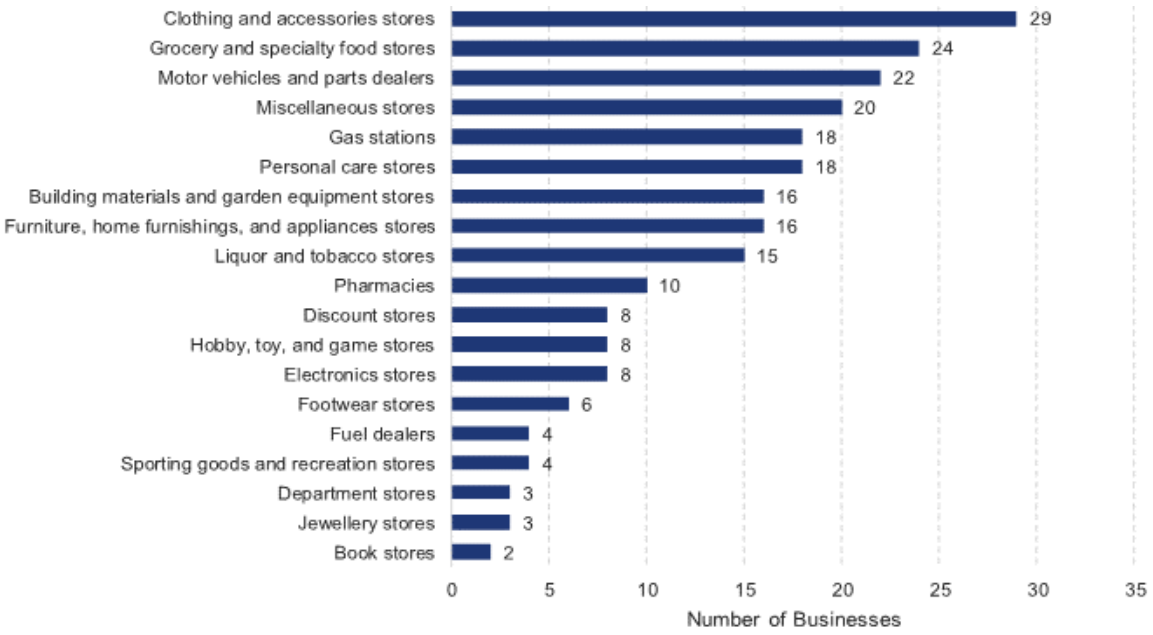


Figure 25: Lloydminster Business Counts by Retail Category

Source: Statistics Canada 2017

As depicted in Figure 25, the most abundant retail offerings in Lloydminster include:

- clothing and accessories stores;
- grocery and specialty food stores; and
- motor vehicles and part dealers.

Among the major retail offerings in Lloydminster are:

- Walmart;
- Best Buy;
- The Home Depot;
- Canadian Tire;
- Rona;
- Sport Chek; and
- Winners/Homesense.

[14] Note that this data is only for the Alberta portion of Lloydminster as data for the Saskatchewan portion were unavailable. As a result, the retail offerings presented in Figure 25 underrepresent the total in Lloydminster.

Lloydminster offers a plethora of retail opportunities, many of which are not available in the Town (e.g., The Home Depot and Sport Chek). As such, retailers in Lloydminster are:

- providing a boundary constraint to the Wainwright retail trade area with respect to overlapping offerings (i.e., Walmart, Canadian Tire, etc.), effectively dividing the customer base that resides between the two municipalities; and
- drawing customers residing within and north of the Town when it comes to certain retail amenities that are not available in Wainwright (i.e., Home Depot).

Northwest: Edmonton Metropolitan Region

The Edmonton Metropolitan Region (EMR) is the second-largest metropolitan area in the province, trailing only the Calgary Metropolitan Region. With a population of over 1.3 million, the EMR hosts an abundant and wide variety of retail offerings that attract both residents of the EMR and the province overall. The EMR hosts over 7,500 retail stores (Figure 26) and has multiple stores across every retail category, providing diverse and competitive retail options for its customer base.

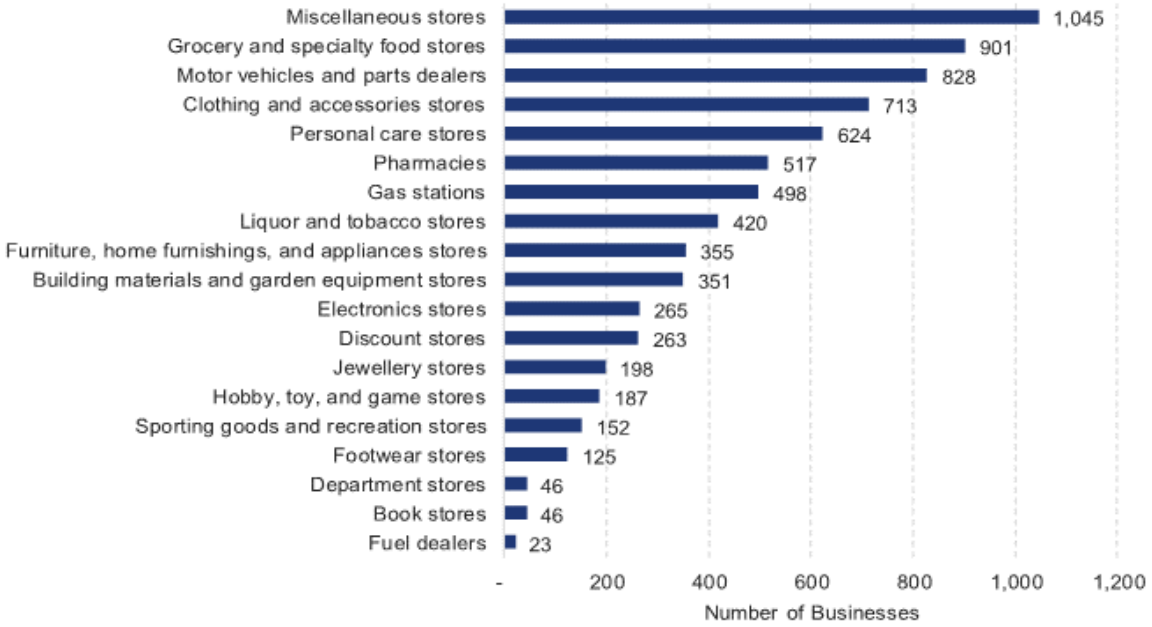


Figure 26: Edmonton Metropolitan Region Business Counts by Retail Category

Source: Statistics Canada 2017

As depicted in Figure 26, the most abundant retail offerings in the EMR include:

- miscellaneous stores (including but not limited to florists, pet supplies stores, and gift stores);
- grocery and specialty food stores; and
- motor vehicles and part dealers.

Retail offerings in the EMR range from major department stores such as Costco, The Bay, and Canadian Tire, to smaller novelty stores such as When Pigs Fly (gift and accessories store), Blush Lane Organic Market (specialty grocery store), and Gravity Pope (footwear store). The EMR also hosts a plethora of retail stores in its major shopping centres including West Edmonton Mall, currently the largest shopping mall in North America. As such, the EMR represents a significant offering of retail opportunities and will capture a considerable portion of the retail base outside of its immediate borders. Most notably, residents within the Town and surrounding area are likely to make special trips to the EMR to take advantage of its specialty offerings.

It is noted that the Town of Vegreville is also a potential competing retail location to the northwest of the Town. Although not as big at the EMR, Vegreville certainly draws some of the customer base residing north and northwest of the Town, particularly for day-to-day household items.

The City of Camrose is also a competitor for the Town's retail customers and draws some of the customer base residing west of the Town for daily retail outings. For less frequent retail outings (e.g., clothing or footwear shopping), it is expected that the EMR has a larger pull on the Town's customer base than Camrose. Given the distance between Camrose and Wainwright (approximately one and a half hours), and the fact that the EMR is only an additional 45 minutes from the Town, it is likely that customers will take the extra time to travel to the EMR to take advantage of its large retail base.

Southwest: Stettler

The Town of Stettler hosts a population of over 5,900 and a retail base of just over 100 stores (Figure 27).

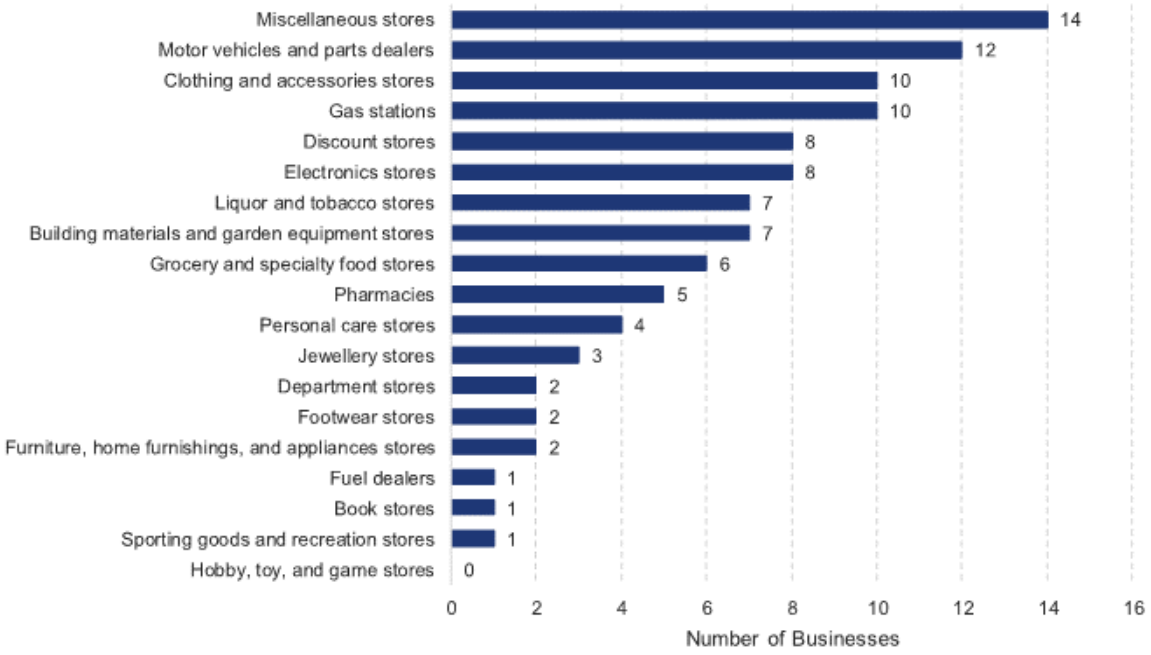


Figure 27: Stettler Business Counts by Retail Category

Source: Statistics Canada 2017

Like Wainwright, Stettler hosts several larger department stores such as Walmart and Canadian Tire, as well as some smaller specialty stores such as Dirty Road Pretty Clothing, a specialty women's clothing and accessories store. Given that both the size and variety of Stettler's retail base is comparable to that of the Town, Stettler's position as a competitive retail centre for those residing between the two locations hinges on the cost-minimizing option for residents. As such, it is likely that residents who live closer to Stettler will make frequent use of Stettler's retail offerings, while those who live closer to Wainwright will make use of Wainwright's retail offerings.

South and Southeast

Urban centres to the south and southeast of the Town are relatively less competitive in their retail offerings than those previously discussed given that they are of significant distance from Wainwright. Medicine Hat, for example, is a large urban centre directly south of Wainwright that has a large retail base (over 450 stores). However, Medicine Hat is approximately a 3.5-hour to 4-hour drive from Wainwright and the surrounding area. Saskatoon is another major urban centre located to the southeast of the Town, but like Medicine Hat, it is over a 3-hour drive from Wainwright and the surrounding area. As such, the boundary of the Wainwright retail trade area extends considerably further to the south and southeast as compared to the northern segments.

4.2.3 Wainwright Retail Trade Area

The customer base that is drawn to the retail offerings in the Town is expected to differ depending on the type of shopping being undertaken. Retail categories that are frequented more often (e.g., day-to-day items) are expected to attract a customer base that is within a reasonable driving proximity to the Town relative to competing centres with similar retail offerings. Conversely, specialty retail stores that are exclusive to the Town are expected to attract a customer base from a broader geographic region.

The study team has therefore identified two distinct retail trade areas for the Town: frequent and specialty. The retail offerings of competing urban centres described above, as well as stakeholder feedback acquired from engagement with several retailers in the Town,[15] provide the basis for the delineation of these trade areas.

Note that the retail trade area map presented below (Figure 28) also includes a 5 km "urban core" area which had a population of approximately 7,800 in 2016. The current analysis did not reveal a need to delineate between the urban core area and the frequent retail trade area and the inclusion of the urban core is strictly for comparison purposes with previous retail trade work done for the Town.

Retail Trade Area 1: Frequent

The frequent retail trade area is comprised of the customers that are making frequent trips to retail stores in the Town. Note that any retail category may be frequented by customers on a daily or weekly basis, but much of this depends on individual consumer preferences. Retail categories that are generally expected to attract frequent customers include (but are not limited to): grocery stores, liquor and tobacco stores, pharmacies, department stores, and gas stations. As these retail trips occur relatively frequently (e.g., daily or weekly), the frequent retail trade area is heavily influenced by the travel cost for the customer relative to competing urban centres.

The estimated frequent retail trade area for the Town is depicted in Figure 28 below. As shown, the area is comprised of the customer base that is up to halfway between the Town and the next available centre for frequent retail outings, namely: Lloydminster, Vermillion, Viking, Stettler, and Provost.

Retail Trade Area 2: Specialty

The specialty retail trade area is comprised of the customers that make infrequent trips to retail stores in the Town that are not available in their immediate region. As these trips are less frequent, the specialty retail trade area is larger than the frequent retail trade area, as customers are willing to travel further distances for these retail opportunities. There are several specialty retail stores in the Town that attract customers from across the province (e.g., Globe Footwear). Accordingly, the specialty retail trade area depicted in Figure 28 extends north to Vermillion, south to Consort, east into the Saskatchewan community of Neilburg, and west to Killam.

4.2.4 Additional Factors

Apart from the travel-cost minimizing behaviour of individuals seeking to access retail services, unique community amenities may draw individuals to an urban centre and, while there, these people may make incidental purchases. The Town of Wainwright recently welcomed new diagnostic imaging services to its health centre, increasing the facility's relative draw in the region.

[15] The study team engaged with Canadian Tire, Globe Footwear, Voila!, and Crabbapples.

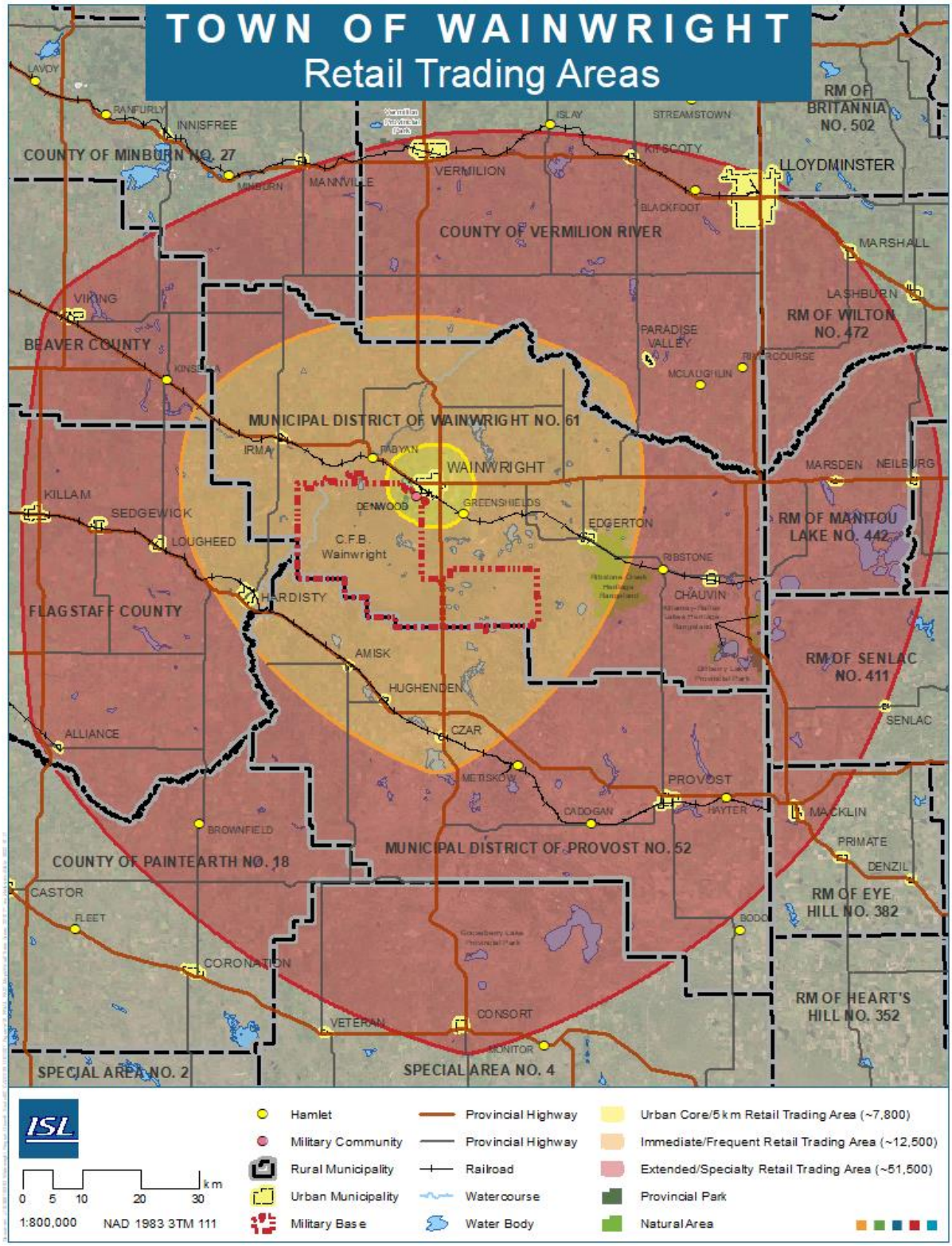


Figure 28: Town of Wainwright Retail Trade Areas

A review of the imaging services offered in the Wainwright health centre vis-à-vis other communities in or near the established frequent and specialty trade areas revealed that similar services are:

- available on the fringes of the trade area to the west (e.g., Camrose) and northeast (Lloydminster);
- at some distance directly to the north (e.g., Bonnyville);
- available at much greater distances to the south (e.g., Stettler and Drumheller).

The draw of medical services beyond the conventional trade area directly to the east is expected to be minimal given that residents of Saskatchewan will typically access health services in their home province.

In sum, the imaging services now on offer in Wainwright may draw in patients from beyond the southern boundary of the previous defined trade areas; however, the frequency of these trips and the magnitude of the incidental spending in retails stores is likely to be nominal relative to the spending by individuals and households within the defined trade areas.

4.2.5 Key Socio-Economic Characteristics of Retail Trade Areas

Retail Trade Area 1: Frequent

There are approximately 12,500 people residing in about 4,900 households the Town's frequent retail trade area. Employment in the area is relatively high, with the 2016 unemployment rate being just 6.5%, about 2.5% better than the provincial unemployment rate of 9% (Statistics Canada 2016). Although the area has a high employment rate, education levels in the area are relatively lower than the provincial average, with just 47% of the population having earned a post-secondary certificate, diploma, or degree, as compared to 55% at the provincial level (Statistics Canada 2016). Accordingly, much of the labour force in the area is concentrated in comparatively lower-wage industries, such as agriculture, retail trade, and public administration, resulting in an average household income below that of the provincial average ($102,500 versus $125,500) (Statistics Canada 2016).

According to Statistics Canada's household spending survey, households in Alberta spend approximately 28% of their income on retail expenditures (Statistics Canada 2017). Households in the frequent retail trade area are therefore estimated to spend an estimated $29,000 on retail products each year. Across the area's 4,900 households, this totals just over $140 million in retail expenditures annually, much of which is expected to occur in the Town.

Retail Trade Area 2: Specialty

There are approximately 51,500 people residing in about 19,500 households the Town's specialty retail trade area. The unemployment rate in this area is slightly higher than that of the frequent retail trade area (8.2%), and more in keeping with the provincial average of 9% (Statistics Canada 2016). The education levels in the area are slightly higher than the frequent retail trade area, with about 49% of the population having earned some level of post-secondary education (Statistics Canada 2016). With the inclusion of Lloydminster in the specialty retail trade area where over 15% of the labour force is employed in the relatively high earning oil and gas sector, the average household income in this area is almost $10,000 more than the frequent retail trade area, at about $112,000.

Retail spending by households in the specialty retail trade area is estimated to be approximately $32,000 annually. Across the 19,500 households in this area, retail spending totals almost $620 million per year. In addition to the frequent retail trade area spending, the Town will capture a relatively small share of additional spending from customers in the specialty retail trade area.

4.3 References

- Statistics Canada. 2017. *Table 11-10-0222-01, Household spending, Canada, regions, and provinces.*
- Statistics Canada. 2016. *2016 Census of the Population.*
- Statistics Canada. 2018. *Requested Business Count Data – December 2017.*
- Town of Wainwright. 2018. *Requested Business Listing Data – December 2018.*
- Town of Wainwright. 2018. *Relocation & Investment Guide.*

5.0 Land Analysis

A land supply analysis enables an understanding of how much land has been consumed by development and how much land remains for accommodating future growth within a defined area. A land supply analysis is typically undertaken to determine future land requirements and/or inform preparation of IDPs between urban and rural municipalities. It can also be used for regular growth monitoring, to inform updates to MDPs, verify a municipality has sufficient land supply to accommodate projected growth, and market availability of lands for economic development purposes.

For the Wainwright Region Growth Study, a land supply analysis was undertaken for the dual purpose of informing updates to MDPs for the Town and the MD, and to confirm the extent to which the Town, the MD, and the ICE villages are ready for economic investment. This chapter presents the land supply status of the Town, the three ICE villages, and the MD, as well as the results of historical absorption analyses for each.

For this Growth Study, **absorbed land supply** is defined as lands zoned under the land use bylaw (LUB) and subdivided for development. Meanwhile, **unabsorbed or available land supply** is defined as lands not yet zoned and/or subdivided for development. Land use assignments for unabsorbed land supply are based on LUB districting, approved area structure plan (ASP) land use designations, and future land use identified in the MDPs and IDPs, etc.

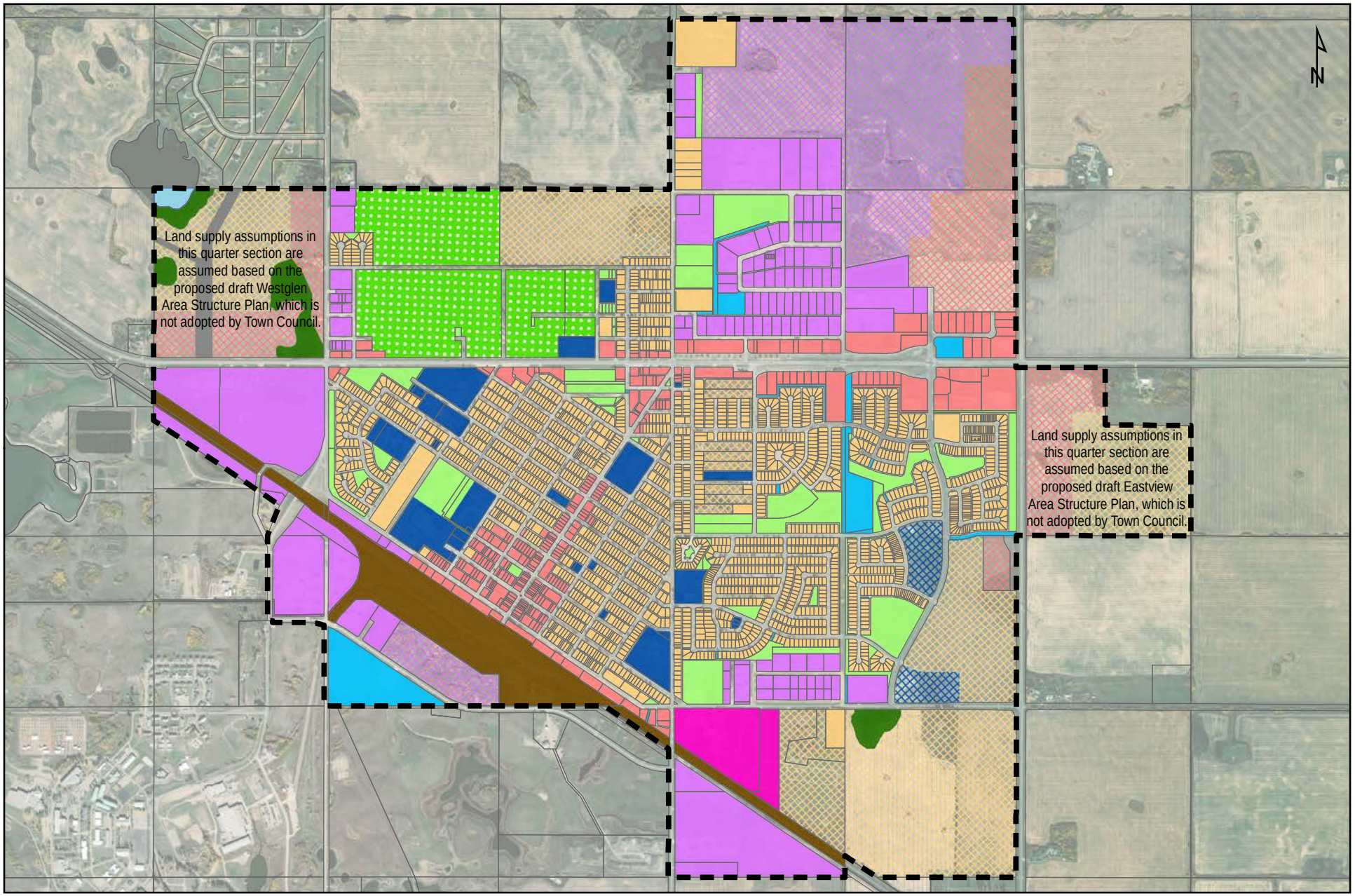
5.1 Town of Wainwright Land Supply Status

The Town of Wainwright's current land base amounts to 1238.1 hectares (ha), which includes those lands annexed by the Town on January 1, 2019. As summarized in Table 17 and illustrated in Map 2, 145.2 ha (11.7%) of the Town's land base is unavailable or undevelopable, while 697.3 ha (56.3%) of its land base was absorbed as of late 2018. As shown in Tables 17 and 18, this includes lands consumed for:

- unavailable or undevelopable land uses (e.g., environmental reserve, golf course, railway, etc.)
- the four core land uses (residential, commercial, industrial, and institutional); and
- developable overhead land uses (parks and open space, public utilities, and circulation).

Table 17: Town of Wainwright's Gross Developable Land Supply

Land Use	Town of Wainwright	
	Area (ha)	%
Environmental Reserve	12.6	1.0
Exhibition Grounds	15.8	1.3
Golf Course	65.5	5.3
Hydrology	1.5	0.1
Pipeline	6.2	0.5
Railway	43.6	3.5
Total Undevelopable and Unavailable Lands	**145.2**	**11.7**
Gross Absorbed Land Supply (see Table 18)	**697.3**	**56.3**
Gross Unabsorbed Land Supply (see Tables 18 and 19)	**395.6**	**32.0**
Gross Developable Land Supply	**1,092.9**	**88.3**
Gross Area	**1,238.1**	**100.0**



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Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

Absorbed Land

- Residential Urban
- Commercial
- Industrial
- Institutional
- Public Utility
- Parks and Open Space
- Golf Course
- Railway
- Pipeline
- Exhibition Grounds
- Hydrological
- Environmental

Unabsorbed Land

- Residential
- Commercial
- Industrial
- Institutional

0 100 200 400 600 800 m

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MAP 2: TOWN OF WAINWRIGHT LAND SUPPLY STATUS

Table 18: Town of Wainwright's Breakdown of Absorbed Land Supply

Land Use	Town of Wainwright	
	Area (ha)	%
Residential	180.7	16.5
Commercial	62.7	5.7
Industrial	157.9	14.4
Institutional	32.0	2.9
Total Net Developable Core Land Uses	**433.3**	**39.6**
Parks and Open Space	55.9	5.1
Public Utility	21.9	2.0
Circulation	186.2	17.0
Total Net Developable Overhead Land Uses	**264.0**	**24.2**
Gross Absorbed Land Supply	**697.3**	**63.8**
Gross Unabsorbed Land Supply (see Table 19)	**395.6**	**36.2**
Gross Developable Land Supply	**1,092.9**	**100.0**

As presented in Table 17, the amount of gross developable land within the current Town limits that were unabsorbed and available for future development as of late 2018 totaled 395.6 ha, or 36.2% of the Town's total land base. In Table 19, this gross unabsorbed land supply breaks down as 194.1 ha for residential, 83.7 ha for commercial, 107.6 ha for industrial and 10.1 ha for institutional.

Also, in Table 19, by subtracting an assumed 40% of the gross unabsorbed residential lands for developable overheads, the net amount of land available for residential within the current Town limits is 116.5 ha. By subtracting 30% of the gross unabsorbed commercial, industrial, and institutional lands for developable overheads, the net amount of commercial, industrial, and institutional lands available within the Town are 58.6 ha, 75.3 ha, and 7.1 ha respectively.

Table 19: Town of Wainwright's Breakdown of Unabsorbed Land Supply

Land Use	Town of Wainwright			
	Gross Area (ha)	%	Net Area (ha)	%
Residential	194.1	49.1	116.5	29.4
Commercial	83.7	21.2	58.6	14.8
Industrial	107.6	27.2	75.3	19.0
Institutional	10.1	2.6	7.1	1.8
Net Unabsorbed Land Supply	**—**	**—**	**257.5**	**65.1**
Estimated Developable Overheads	**—**	**—**	**138.1**	**34.9**
Gross Unabsorbed Land Supply	**395.6**	**100.0**	**395.6**	**100.0**

It should be noted that the gross amount of land remaining for institutional development is understated at 10.1 ha. Future lands for institutional uses are not often made available until the subdivision stage. As institutional uses are often located adjacent to all the three other core land uses, the Town's residential, commercial, and industrial land supplies can be reasonably expected to provide additional institutional land supply at the various subdivision stages over time for uses such as fire halls, community centres, schools, and churches.

5.2 Town of Wainwright Historical Land Absorption Analysis

An historical land absorption analysis enables an understanding of how land has been consumed through the plan registration process over a certain period. Extrapolation of the results allows the estimation of the earliest time in which all available lands could be absorbed under two key assumptions – that there will be flexibility of land use among the Town's remaining available lands (unlike the situation in Section 4.2 above, which is based on current available land supply by land use), and that all owners of the available lands will participate in development. For this Growth Study, Wainwright's historical land absorption analysis was undertaken by calculating the total area of all plans registered over the past 40 years in 5-year intervals.

As illustrated in Map 3 and presented in Table 20, the average amount of lands absorbed annually between 2014 and 2018 was 6.0 ha, while the annual average between 1979 and 2018 was a roughly comparable 6.5 ha. With a gross available land supply of 428.8 ha (Table 19), it could take over 60 years to absorb these lands through plan registration based on the assumption of an average annual absorption of 6.5 ha of land.

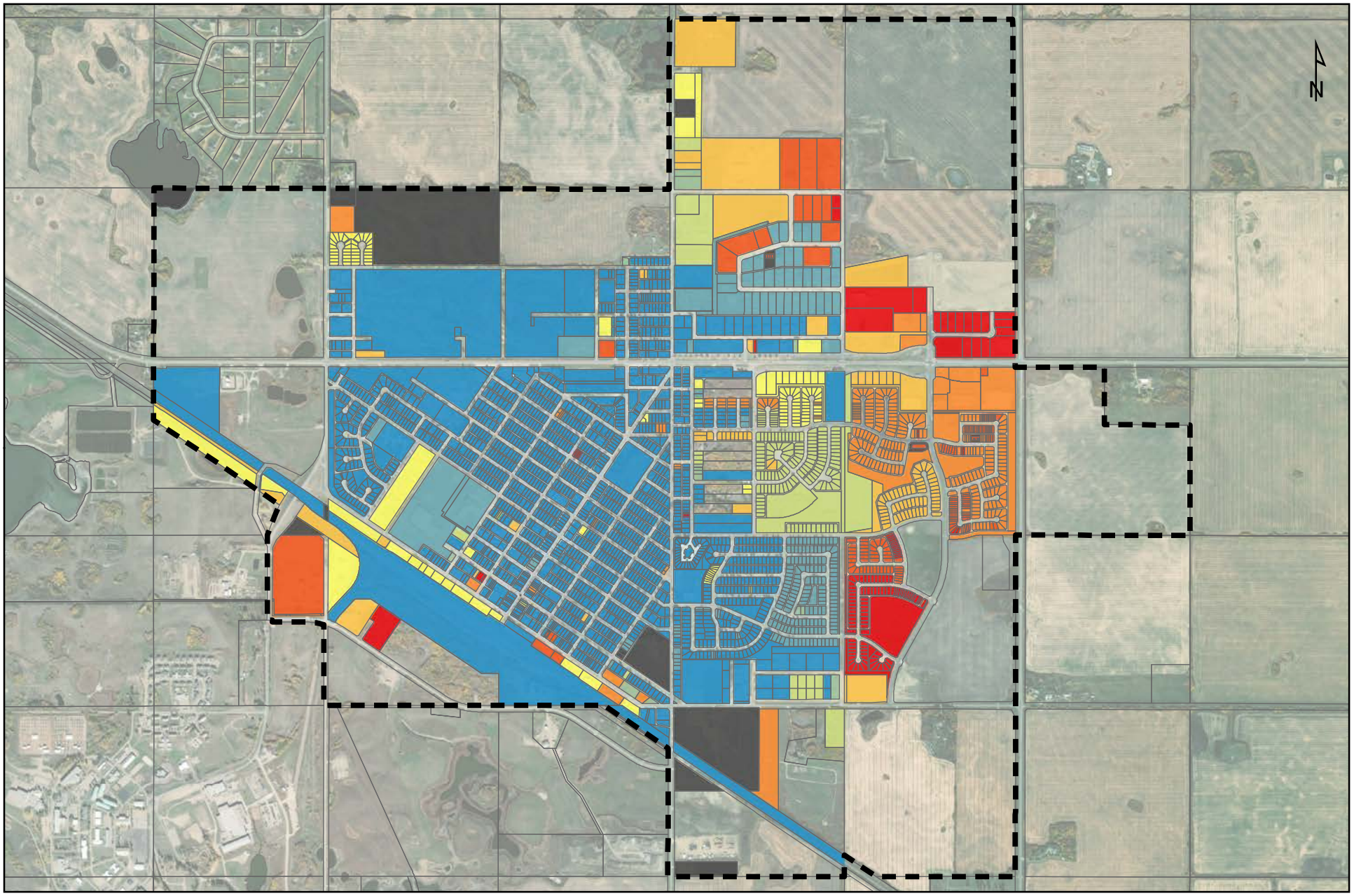
Table 20: Town of Wainwright's Historical Land Absorption since 1979

Time Period	Area (ha)	Area (ha) per Year
1979 to 1983	46.0	9.2
1984 to 1988	3.0	0.6
1989 to 1993	32.8	6.6
1994 to 1998	30.9	6.2
1999 to 2003	43.2	8.6
2004 to 2008	42.7	8.5
2009 to 2013	31.0	6.2
2014 to 2018	29.9	6.0
1979 to 2018	**259.6**	**6.5**

5.3 MD of Wainwright Land Supply Status

The MD of Wainwright's current land base amounts to 426,576.9 ha. As summarized in Table 21 and illustrated in Map 4, 74,696.0 ha (17.5%) of the MD's land base is unavailable or undevelopable, while 350,384.2 ha (82.1%) of its land base was absorbed as of late 2018. As shown in Tables 21 and 22, this includes lands consumed for:

- unavailable or undevelopable land uses (e.g., airport, CFB Wainwright, etc.)
- the core land uses (residential, commercial, industrial, institutional, hamlet, and agricultural); and
- developable overhead land uses (parks and open space, public utilities, and circulation).



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Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

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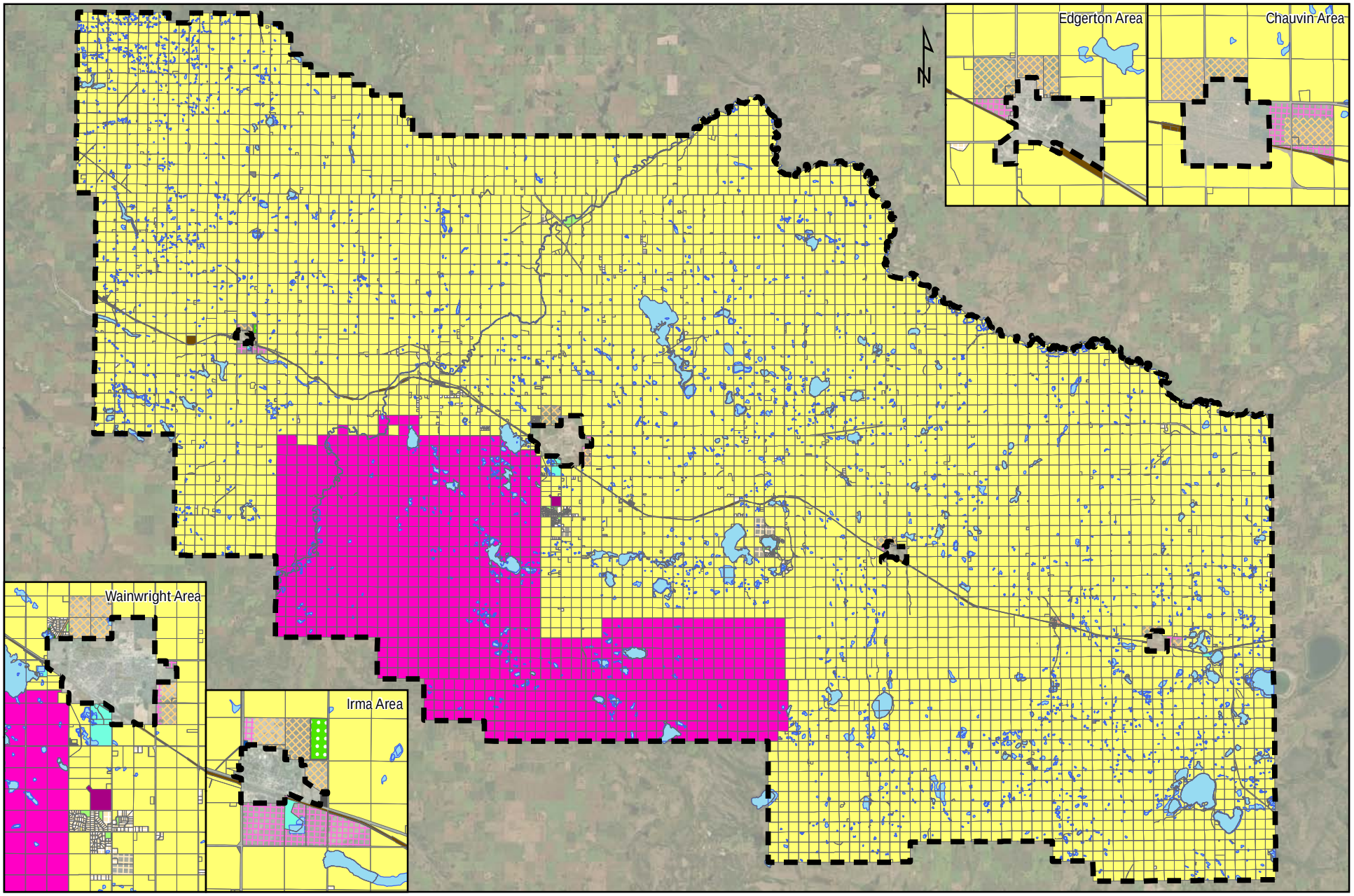
MAP 3: TOWN OF WAINWRIGHT HISTORICAL LAND ABSORPTION



Absorbed Land

- Agricultural/Rural
- Country Residential
- Hamlet
- Industrial
- Institutional
- Public Utility
- Parks and Open Space
- Golf Course
- Environmental
- Pipeline
- Railway
- Airport
- Resource Extraction
- Cemetery
- CFB Wainwright
- Hydrological

Unabsorbed Land

- Country Residential
- Residential Urban
- Hamlet
- Mixed Commercial/Industrial

0 1 2 4 6 8 km

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MAP 4: MD OF WAINWRIGHT LAND SUPPLY STATUS

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Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

Table 21: MD of Wainwright's Gross Developable Land Supply

Land Use	MD of Wainwright	
	Area (ha)	%
Airport	67.3	0.0
Cemetery	3.1	0.0
CFB Wainwright	58,272.4	13.7
Environmental	6.7	0.0
Golf Course	25.1	0.0
Hydrology	15,620.0	3.7
Oil and Gas	77.4	0.0
Pipeline	59.0	0.0
Railway	565.0	0.1
Total Undevelopable and Unavailable Lands	**74,696.0**	**17.5**
Gross Absorbed Land Supply (see Table 18)	**350,384.2**	**82.1**
Gross Unabsorbed Land Supply (see Tables 18 and 19)	**1496.7**	**0.4**
Gross Developable Land Supply	**351,880.9**	**82.5**
Gross Area	**426,576.9**	**100.0**

Table 22: MD of Wainwright's Breakdown of Absorbed Land Supply

Land Use	MD of Wainwright	
	Area (ha)	%
Residential	174.3	16.1
Commercial	62.7	5.8
Industrial	157.9	14.6
Institutional	32.0	3.0
Hamlet	47.9	0.0
Agricultural	337,782.2	96.0
Total Net Developable Core Land Uses	**338,870.7**	**96.3**
Parks and Open Space	132.4	0.0
Public Utility	164.6	0.0
Circulation	11,216.4	3.2
Total Net Developable Overhead Land Uses	**11,513.5**	**3.3**
Gross Absorbed Land Supply	**350,384.2**	**99.6**
Gross Unabsorbed Land Supply (see Table 19)	**1,496.7**	**0.4**
Gross Developable Land Supply	**351,880.9**	**100.0**

As presented in Table 21, the amount of gross developable land within the MD that were unabsorbed and available for future development as of late 2018 totaled 1496.7 ha, or 0.4% of the MD's total land base. In Table 23, this gross unabsorbed land supply breaks down as 1,060.3 ha for residential, 138.4 ha for commercial, 138.4 ha for industrial and 0.0 ha for institutional.

Also, in Table 23, by subtracting an assumed 30% of the gross unabsorbed residential lands for developable overheads, the net amount of land available for residential within the MD is 742.2 ha. By subtracting 30% of the gross unabsorbed commercial, industrial, and institutional lands for developable overheads, the net amount of commercial, industrial, and institutional lands available are 96.9 ha, 96.9 ha, and 0.0 ha respectively.

Table 23: MD of Wainwright's Breakdown of Unabsorbed Land Supply

Land Use	MD of Wainwright			
	Gross Area (ha)	%	Net Area (ha)	%
Residential	1,060.3	70.8	742.2	49.6
Commercial	138.4	9.2	96.9	6.5
Industrial	138.4	9.2	96.9	6.5
Institutional	0.0	0.0	0.0	0.0
Hamlet	29.0	1.9	20.3	1.4
Controlled Urban	130.5	8.7	91.4	6.1
Net Unabsorbed Land Supply	**—**	**—**	**1,047.7**	**70.0**
Estimated Developable Overheads	**—**	**—**	**449.0**	**30.0**
Gross Unabsorbed Land Supply	**1,496.7**	**100.0**	**1,496.7**	**100.0**

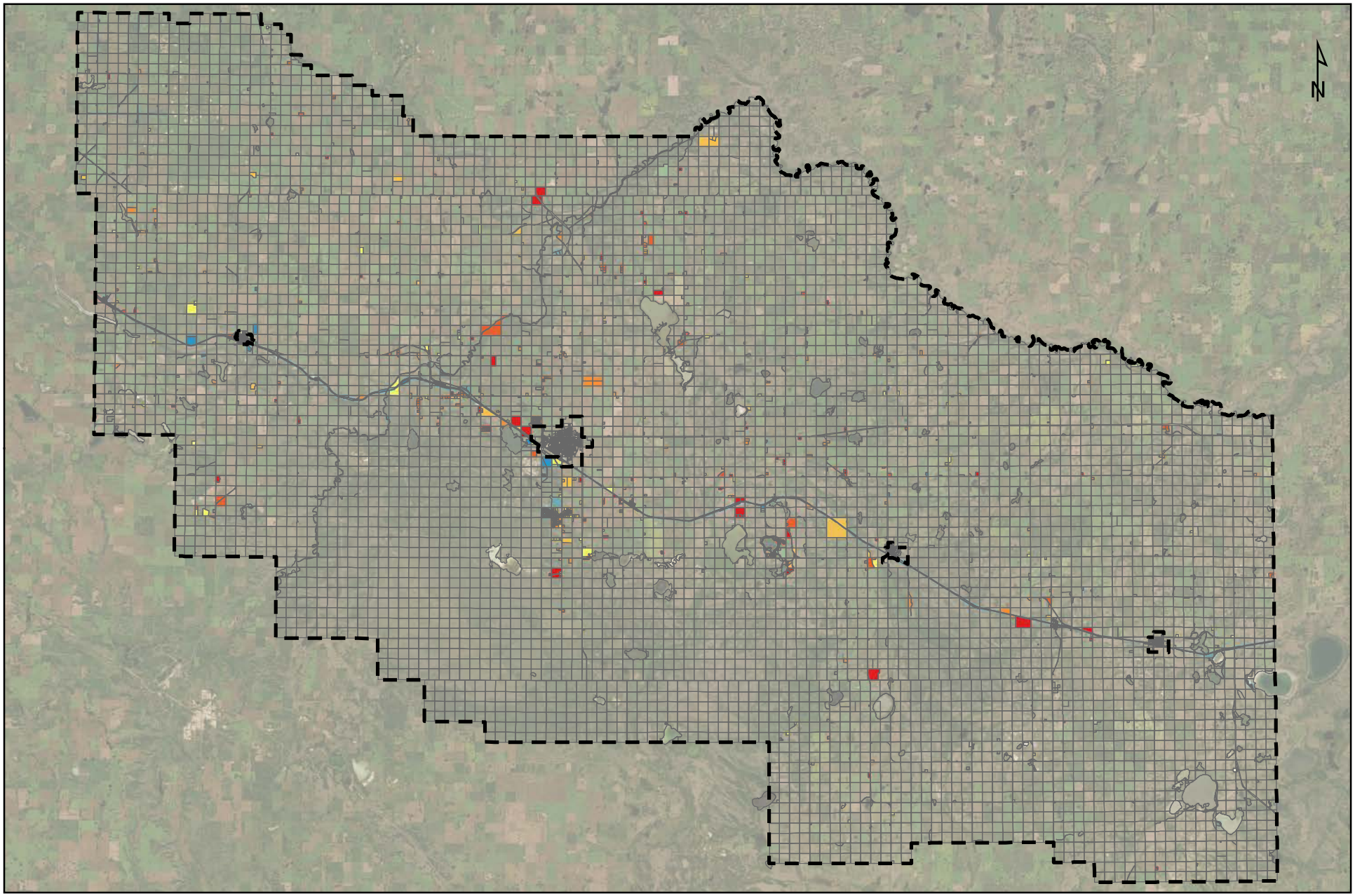
It should be noted that the amount of land remaining for institutional development is understated at 0.0 ha. Future lands for institutional uses are not often made available until the subdivision stage. As institutional uses are often located adjacent to all the three other core land uses, the MD's residential, commercial, and industrial land supplies can be reasonably expected to provide additional institutional land supply at the various subdivision stages over time for uses such as fire halls, community centres, schools, and churches.

5.4 MD of Wainwright Historical Land Absorption Analysis

As illustrated in Map 5 and presented in Table 24, the average amount of lands absorbed annually between 2014 and 2018 was 201.9 ha, while the annual average between 1979 and 2018 was slightly lower at 118.5 ha. With a gross available land supply of 1496.7 ha (Table 23), it could take less than 10 years to absorb these lands through plan registration based on the assumption of an average annual absorption of 118.5 ha of land.

Table 24: MD of Wainwright's Historical Land Absorption since 1979

Time Period	Area (ha)	Area (ha) per Year
1979 to 1983	257.3	51.5
1984 to 1988	211.6	42.3
1989 to 1993	191.7	38.3
1994 to 1998	601.1	120.2
1999 to 2003	898.3	179.7
2004 to 2008	754.9	151.0
2009 to 2013	816.8	163.4
2014 to 2018	1,009.3	201.9
1979 to 2018	**4,741.0**	**118.5**



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MAP 5: MD OF WAINWRIGHT HISTORICAL LAND ABSORPTION

5.5 Village of Irma Land Supply Status

The Village of Irma's current land base amounts to 124.6 ha. As summarized in Table 25 and illustrated in Map 6, 10.1 ha (8.1%) of the Village's land base is unavailable or undevelopable, while 88.1 ha (70.7%) of its land base was absorbed as of late 2018. As shown in Tables 25 and 26, this includes lands consumed for:

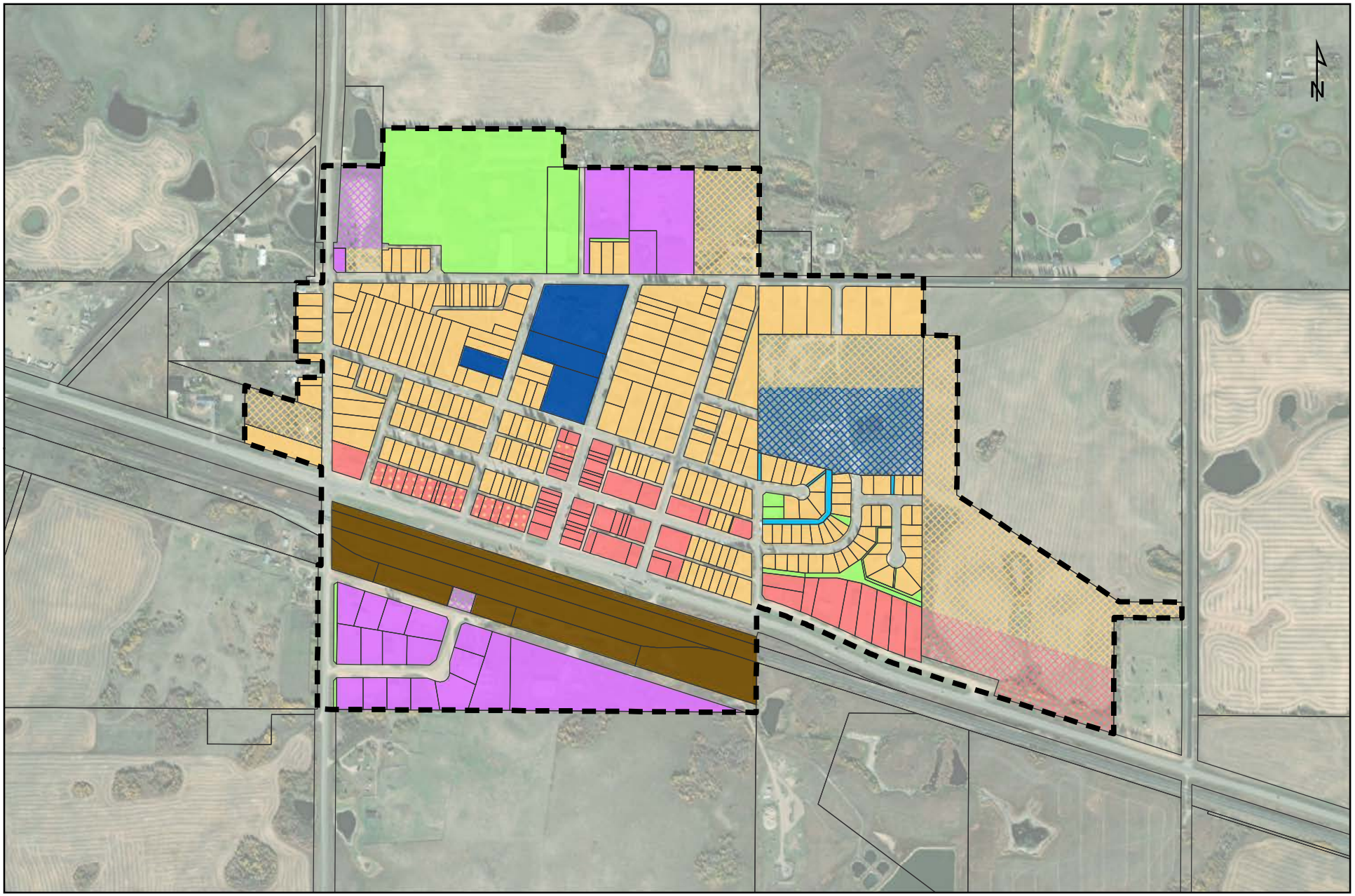
- unavailable or undevelopable land uses (e.g., railway)
- the four core land uses (residential, commercial, industrial, and institutional); and
- developable overhead land uses (parks and open space, public utilities, and circulation).

Table 25: Village of Irma's Gross Developable Land Supply

Land Use	Village of Irma	
	Area (ha)	%
Railway	10.1	8.1
Total Undevelopable and Unavailable Lands	**10.1**	**8.1**
Gross Absorbed Land Supply (see Table 26)	**88.1**	**70.7**
Gross Unabsorbed Land Supply (see Tables 26 and 27)	**26.4**	**21.2**
Gross Developable Land Supply	**114.6**	**92.0**
Gross Area	**124.6**	**100.0**

Table 26: Village of Irma's Breakdown of Absorbed Land Supply

Land Use	Village of Irma	
	Area (ha)	%
Residential	30.7	26.8
Commercial	7.2	6.3
Industrial	12.2	10.6
Institutional	3.6	3.1
Total Net Developable Core Land Uses	**53.8**	**46.9**
Parks and Open Space	10.2	8.9
Public Utility	0.3	0.3
Circulation	23.8	20.8
Total Net Developable Overhead Land Uses	**34.3**	**29.9**
Gross Absorbed Land Supply	**88.1**	**76.9**
Gross Unabsorbed Land Supply (see Table 19)	**26.4**	**23.0**
Gross Developable Land Supply	**114.6**	**100.0**



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Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

Absorbed Land

- Residential Urban
- Mixed Residential/Commercial
- Commercial
- Industrial
- Institutional
- Public Utility
- Parks and Open Space
- Railway

Unabsorbed Land

- Residential
- Commercial
- Industrial
- Institutional

0 50 100 200 300 m

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MAP 6: VILLAGE OF IRMA LAND SUPPLY STATUS

As presented in Table 25, the amount of gross developable land within the current Village limits that were unabsorbed and available for future development as of late 2018 totaled 26.4 ha, or 23.0% of the Village's total land base. In Table 27, this gross unabsorbed land supply breaks down as 16.1 ha for residential, 4.0 ha for commercial, 1.5 ha for industrial and 4.8 ha for institutional.

Also, in Table 27, by subtracting an assumed 35% of the gross unabsorbed residential lands for developable overheads, the net amount of land available for residential within the current Village limits is 10.5 ha. By subtracting 30% of the gross unabsorbed commercial, industrial, and institutional lands for developable overheads, the net amount of commercial, industrial, and institutional lands available within the Village are 2.8 ha, 1.1 ha, and 3.4 ha respectively.

Table 27: Village of Irma's Breakdown of Unabsorbed Land Supply

Land Use	Village of Irma			
	Gross Area (ha)	%	Net Area (ha)	%
Residential	16.1	61.0	10.5	39.8
Commercial	4.0	15.1	2.8	10.6
Industrial	1.5	5.7	1.1	4.2
Institutional	4.8	18.2	3.4	12.9
Net Unabsorbed Land Supply	**—**	**—**	**17.8**	**67.4**
Estimated Developable Overheads	**—**	**—**	**8.6**	**32.6**
Gross Unabsorbed Land Supply	**26.4**	**100.0**	**26.4**	**100.0**

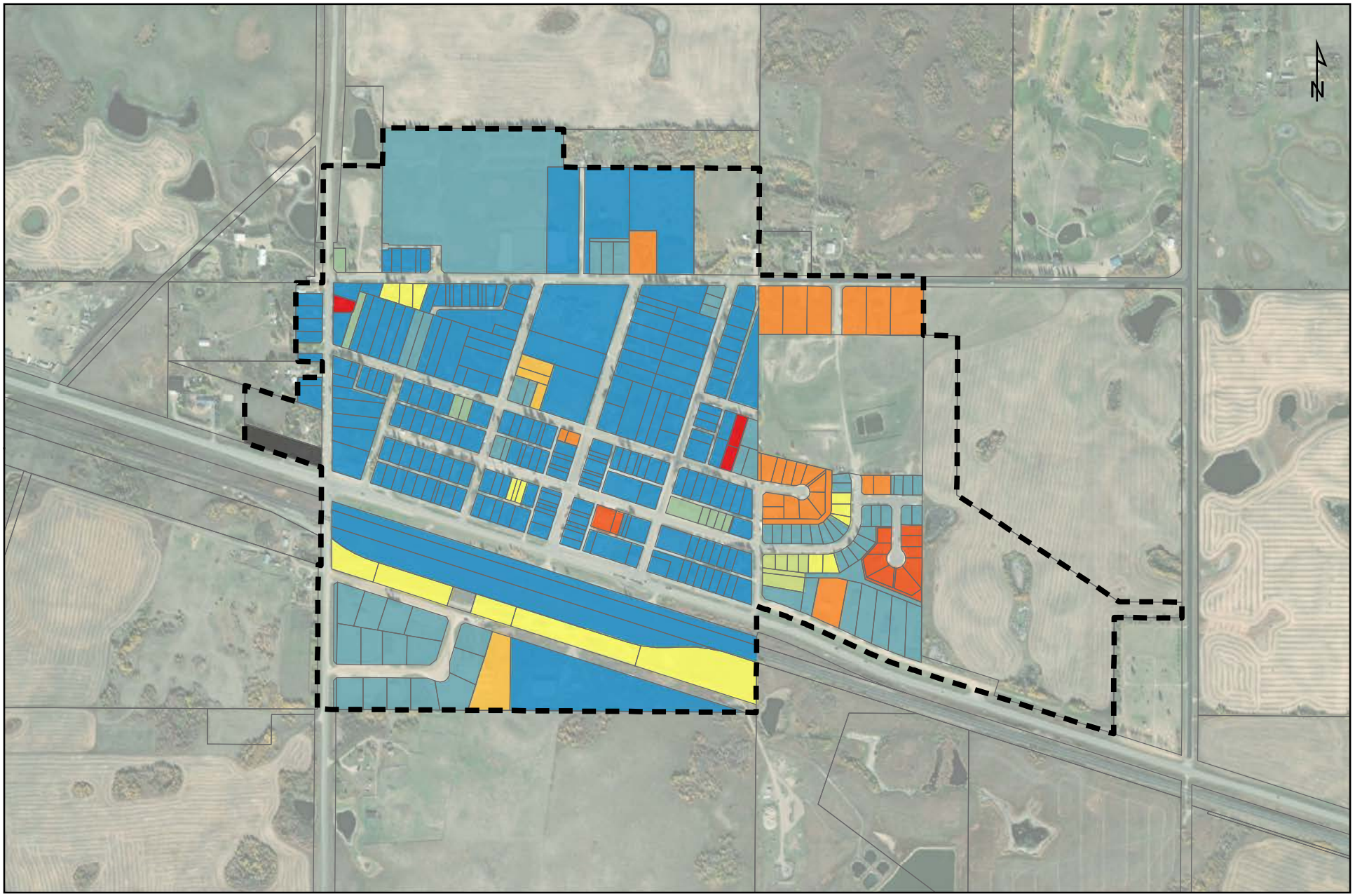
It should be noted that the gross amount of land remaining for institutional development is understated at 4.8 ha. Future lands for institutional uses are not often made available until the subdivision stage. As institutional uses are often located adjacent to all the three other core land uses, the Village's residential, commercial, and industrial land supplies can be reasonably expected to provide additional institutional land supply at the various subdivision stages over time for uses such as fire halls, community centres, schools, and churches.

5.6 Village of Irma Historical Land Absorption Analysis

As illustrated in Map 7 and presented in Table 28, the average amount of lands absorbed annually between 2014 and 2018 was 0.1 ha, while the annual average between 1979 and 2018 was 0.8 ha. With a gross available land supply of 26.4 ha (Table 27), it could take over 30 years to absorb these lands through plan registration based on the assumption of an average annual absorption of 0.8 ha of land.

Table 28: Village of Irma's Historical Land Absorption since 1979

Time Period	Area (ha)	Area (ha) per Year
1979 to 1983	18.5	3.7
1984 to 1988	0.8	0.2
1989 to 1993	0.5	0.1
1994 to 1998	4.5	0.9
1999 to 2003	1.2	0.2
2004 to 2008	5.2	1.0
2009 to 2013	1.3	0.3
2014 to 2018	0.4	0.1
1979 to 2018	**32.4**	**0.8**



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MAP 7: VILLAGE OF IRMA HISTORICAL LAND ABSORPTION

5.7 Village of Chauvin Land Supply Status

The Village of Chauvin's current land base amounts to 229.8 ha. As summarized in Table 29 and illustrated in Map 8, 17.9 ha (7.8%) of the Village's land base is unavailable or undevelopable, while 77.7 ha (33.8%) of its land base was absorbed as of late 2018. As shown in Tables 29 and 30, this includes lands consumed for:

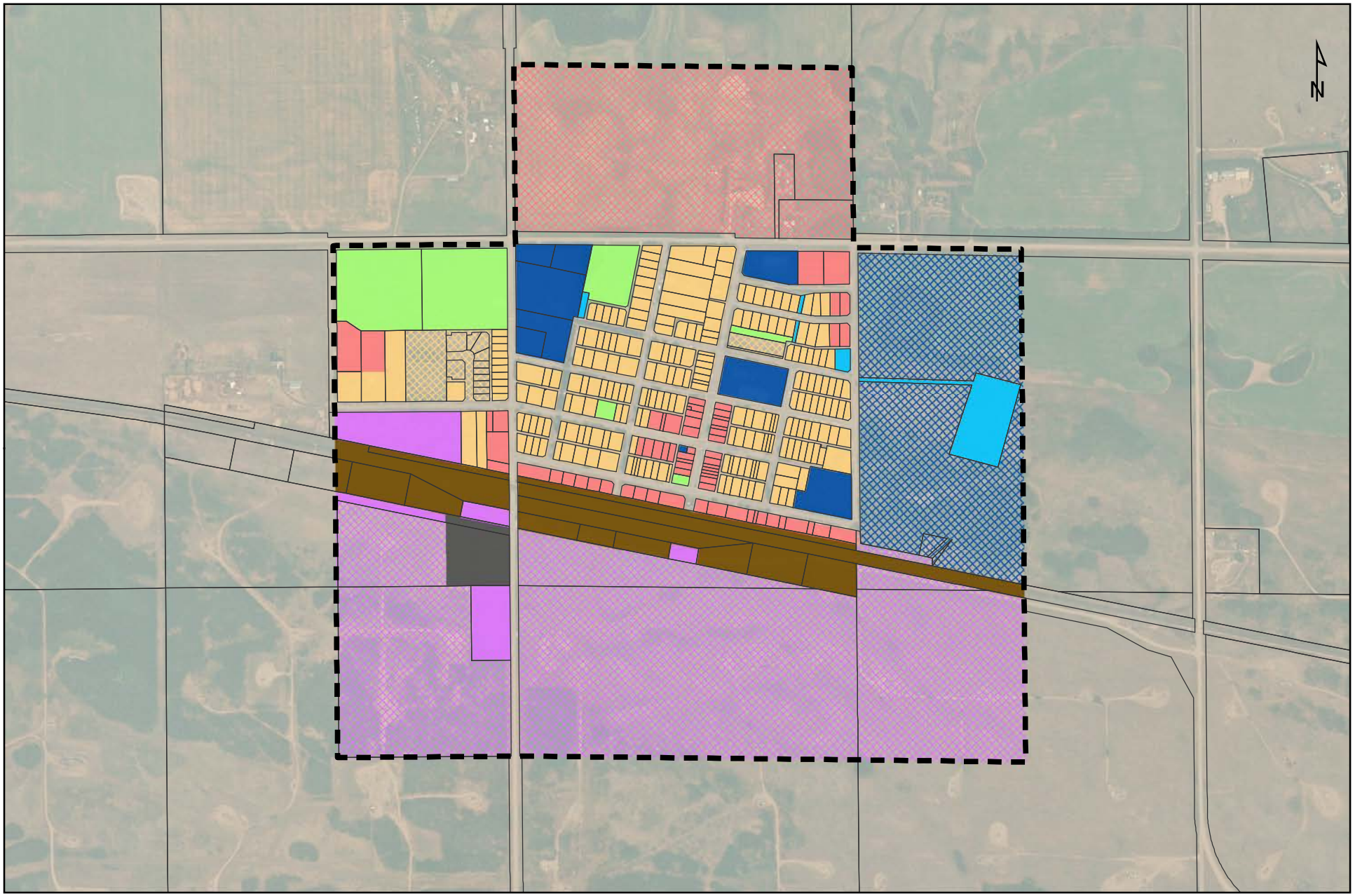
- unavailable or undevelopable land uses (e.g., cemetery, railway)
- the four core land uses (residential, commercial, industrial, and institutional); and
- developable overhead land uses (parks and open space, public utilities, and circulation).

Table 29: Village of Chauvin's Gross Developable Land Supply

Land Use	Village of Chauvin	
	Area (ha)	%
Cemetery	2.3	1.0
Railway	15.6	6.8
Total Undevelopable and Unavailable Lands	**17.9**	**7.8**
Gross Absorbed Land Supply (see Table 18)	**77.7**	**33.8**
Gross Unabsorbed Land Supply (see Tables 18 and 19)	**134.2**	**58.4**
Gross Developable Land Supply	**211.9**	**92.2**
Gross Area	**229.8**	**100.0**

Table 30: Village or Chauvin's Breakdown of Absorbed Land Supply

Land Use	Village of Chauvin	
	Area (ha)	%
Residential	23.0	10.9
Commercial	7.7	3.6
Industrial	5.7	2.7
Institutional	7.5	3.5
Total Net Developable Core Land Uses	**44.0**	**20.8**
Parks and Open Space	9.6	4.5
Public Utility	2.9	1.4
Circulation	21.1	10.0
Total Net Developable Overhead Land Uses	**33.8**	**16.0**
Gross Absorbed Land Supply	**77.7**	**36.7**
Gross Unabsorbed Land Supply (see Table 19)	**134.2**	**63.3**
Gross Developable Land Supply	**211.9**	**100.0**



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Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

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MAP 8: VILLAGE OF CHAUVIN LAND SUPPLY STATUS

As presented in Table 29, the amount of gross developable land within the current Village limits that were unabsorbed and available for future development as of late 2018 totaled 134.2 ha, or 58.4% of the Village's total land base. In Table 31, this gross unabsorbed land supply breaks down as 3.7 ha for residential, 31.7 ha for commercial, 73.1 ha for industrial and 25.6 ha for institutional.

Also, in Table 31, by subtracting an assumed 35% of the gross unabsorbed residential lands for developable overheads, the net amount of land available for residential within the current Village limits is 2.4 ha. By subtracting 30% of the gross unabsorbed commercial, industrial, and institutional lands for developable overheads, the net amount of commercial, industrial, and institutional lands available within the Village are 22.2 ha, 51.2 ha, and 17.9 ha respectively.

Table 31: Village of Chauvin's Breakdown of Unabsorbed Land Supply

Land Use	Village of Chauvin			
	Gross Area (ha)	%	Net Area (ha)	%
Residential	3.7	2.8	2.4	2.0
Commercial	31.7	23.6	22.2	16.5
Industrial	73.1	54.5	51.2	38.2
Institutional	25.6	19.1	17.9	13.3
Net Unabsorbed Land Supply	**—**	**—**	**93.7**	**69.8**
Estimated Developable Overheads	**—**	**—**	**40.5**	**30.2**
Gross Unabsorbed Land Supply	**134.2**	**100.0**	**134.2**	**100.0**

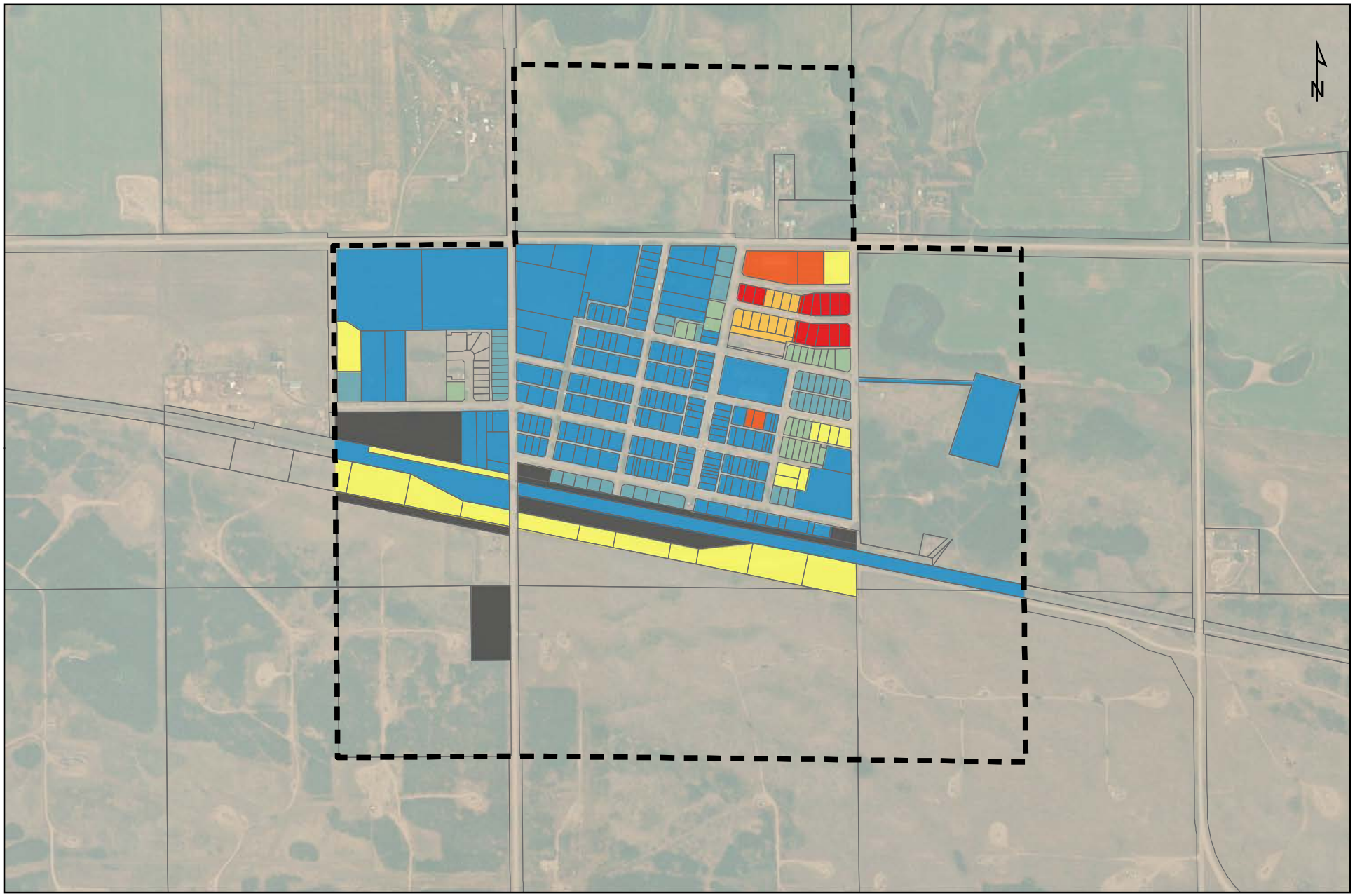
It should be noted that the gross amount of land remaining for institutional development could be understated at 25.6 ha. Future lands for institutional uses are not often made available until the subdivision stage. As institutional uses are often located adjacent to all the three other core land uses, the Village's residential, commercial, and industrial land supplies can be reasonably expected to provide additional institutional land supply at the various subdivision stages over time for uses such as fire halls, community centres, schools, and churches.

5.8 Village of Chauvin Historical Land Absorption Analysis

As illustrated in Map 9 and presented in Table 32, the average amount of lands absorbed annually between 2014 and 2018 was 0.3 ha, while the annual average between 1979 and 2018 was a roughly comparable 0.5 ha. With a gross available land supply of 133.6 ha (Table 23), it could take over 200 years to absorb these lands through plan registration based on the assumption of an average annual absorption of 0.5 ha of land.

Table 32: Village of Chauvin's Historical Land Absorption since 1979

Time Period	Area (ha)	Area (ha) per Year
1979 to 1983	4.3	0.9
1984 to 1988	2.4	0.5
1989 to 1993	0.0	0.0
1994 to 1998	9.3	1.9
1999 to 2003	1.2	0.2
2004 to 2008	0.0	0.0
2009 to 2013	1.6	0.3
2014 to 2018	1.6	0.3
1979 to 2018	**20.4**	**0.5**



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MAP 9: VILLAGE OF CHAUVIN HISTORICAL LAND ABSORPTION

5.9 Village of Edgerton Land Supply Status

The Village of Edgerton's current land base amounts to 200.7 ha. As summarized in Table 33 and illustrated in Map 10, 33.7 ha (16.8%) of the Village's land base is unavailable or undevelopable, while 83.0 ha (41.4%) of its land base was absorbed as of late 2018. As shown in Tables 33 and 34, this includes lands consumed for:

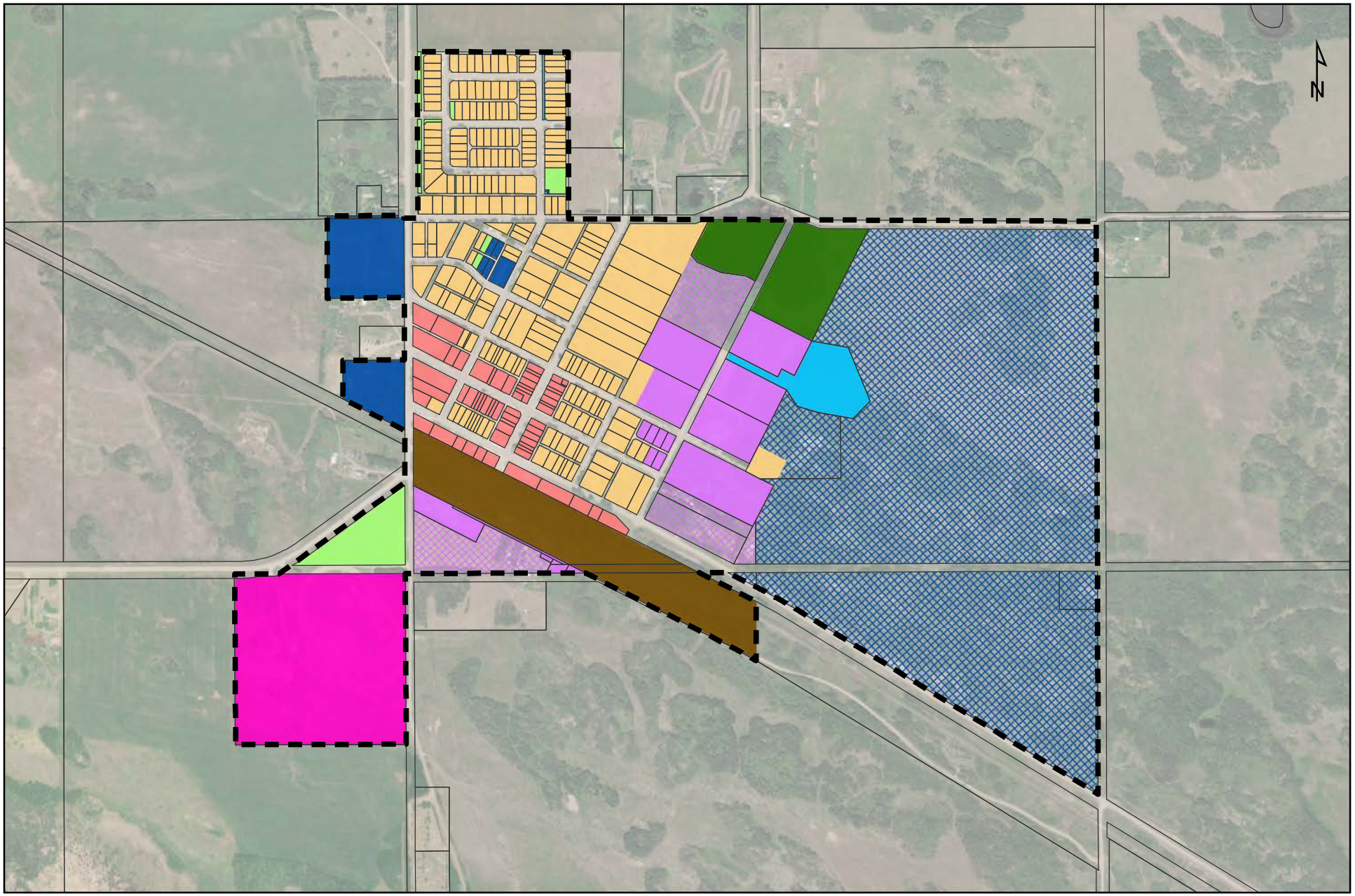
- unavailable or undevelopable land uses (e.g., environmental reserve, exhibition grounds, railway)
- the four core land uses (residential, commercial, industrial, and institutional); and
- developable overhead land uses (parks and open space, public utilities, and circulation).

Table 33: Village of Edgerton's Gross Developable Land Supply

Land Use	Village of Edgerton	
	Area (ha)	%
Environmental Reserve	6.4	3.2
Exhibition Grounds	16.2	8.1
Railway	11.1	5.5
Total Undevelopable and Unavailable Lands	**33.7**	**16.8**
Gross Absorbed Land Supply (see Table 18)	**83.0**	**41.4**
Gross Unabsorbed Land Supply (see Tables 18 and 19)	**84.1**	**41.9**
Gross Developable Land Supply	**167.1**	**83.3**
Gross Area	**200.7**	**100.0**

Table 34: Village or Edgerton's Breakdown of Absorbed Land Supply

Land Use	Village of Edgerton	
	Area (ha)	%
Residential	29.0	17.4
Commercial	5.9	3.5
Industrial	12.3	7.4
Institutional	5.9	3.5
Total Net Developable Core Land Uses	**53.1**	**31.8**
Parks and Open Space	3.3	2.0
Public Utility	2.9	1.7
Circulation	23.7	14.2
Total Net Developable Overhead Land Uses	**29.9**	**17.9**
Gross Absorbed Land Supply	**83.0**	**49.7**
Gross Unabsorbed Land Supply (see Table 19)	**84.1**	**50.3**
Gross Developable Land Supply	**167.1**	**100.0**



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Absorbed Land

- Residential Urban
- Commercial
- Industrial
- Institutional
- Public Utility
- Parks and Open Space
- Environmental
- Railway
- Exhibition Grounds

Unabsorbed Land

- Residential
- Commercial
- Industrial
- Institutional

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MAP 10: VILLAGE OF EDGERTON LAND SUPPLY STATUS

As presented in Table 33, the amount of gross developable land within the current Village limits that were unabsorbed and available for future development as of late 2018 totaled 84.1 ha, or 41.9% of the Village's total land base. In Table 35, this gross unabsorbed land supply breaks down as 8.3 ha for industrial and 75.9 ha for institutional. Unlike Wainwright, Irma, and Chauvin, the Village of Edgerton has no unabsorbed land supply for future residential or commercial growth.

Also, in Table 35, by subtracting an assumed 30% of the gross unabsorbed industrial and institutional lands for developable overheads, the net amount of industrial and institutional lands available within the Village are 5.8 ha, and 53.1 ha respectively.

Table 35: Village of Edgerton's Breakdown of Unabsorbed Land Supply

Land Use	Village of Edgerton			
	Gross Area (ha)	%	Net Area (ha)	%
Residential	0.0	0.0	0.0	0.0
Commercial	0.0	0.0	0.0	0.0
Industrial	8.3	9.9	5.8	6.9
Institutional	75.9	90.1	53.1	63.1
Net Unabsorbed Land Supply	**—**	**—**	**58.9**	**70.0**
Estimated Developable Overheads	**—**	**—**	**25.2**	**30.0**
Gross Unabsorbed Land Supply	**84.1**	**100.0**	**84.1**	**100.0**

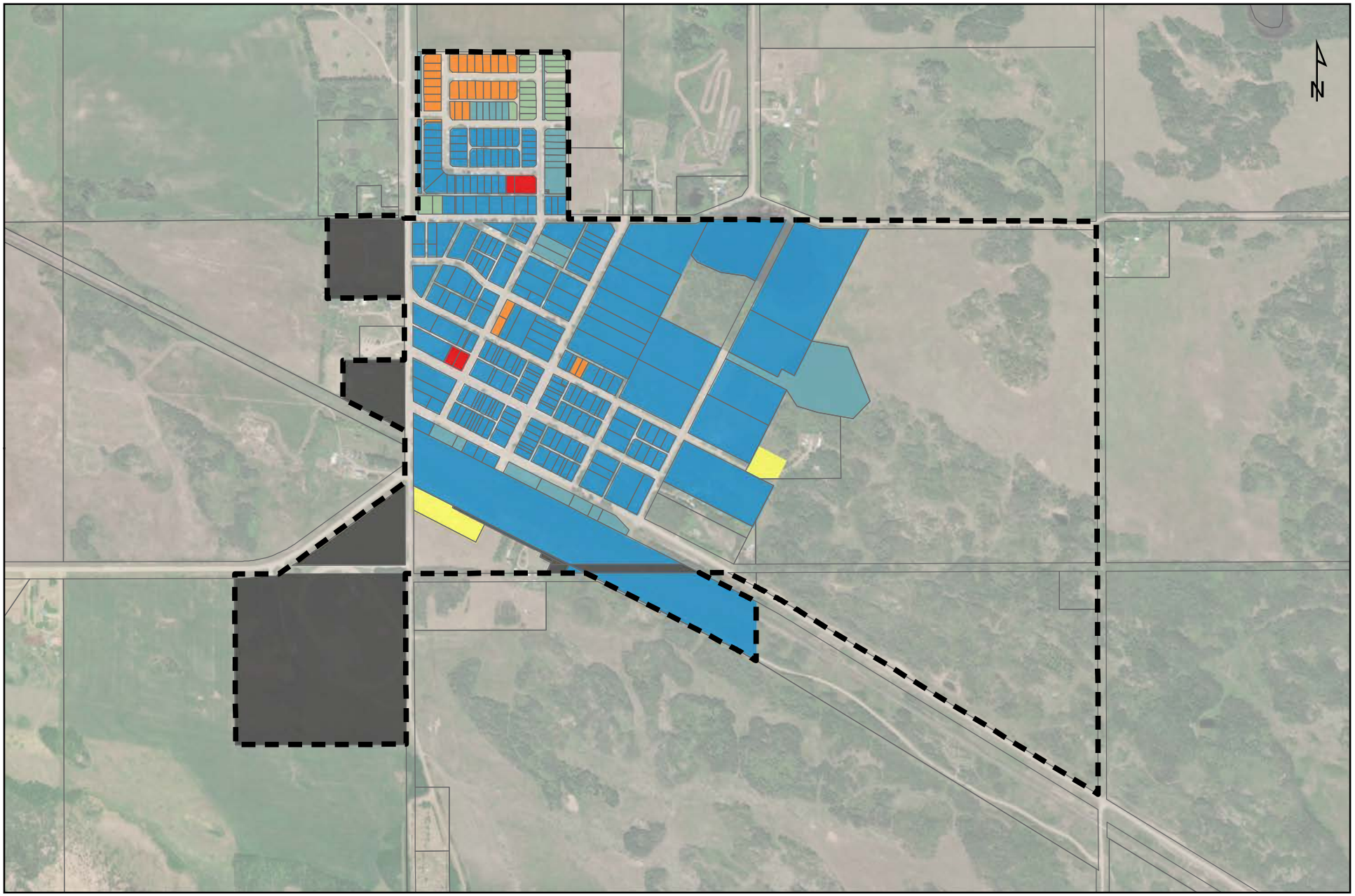
Under normal circumstances, it would be noted that the gross amount of land remaining for institutional development is understated at 75.9 ha. However, Edgerton's unabsorbed institutional land supply is proportionally greater than those of Wainwright, Irma, and Chauvin by a significant margin. Further, it is observed that Edgerton has no unabsorbed land supply for future residential and commercial growth in its Village limits. It is unclear why the Village of Edgerton has designated a significant amount of lands for future institutional development within its MDP and yet no lands for future residential or commercial development. One theory on the former is legislated development setbacks from a former nuisance land use (lagoon or landfill).

5.10 Village of Edgerton Historical Land Absorption Analysis

As illustrated in Map 11 and presented in Table 36, the average amount of lands absorbed annually between 2014 and 2018 was 0.1 ha, while the annual average between 1979 and 2018 was a roughly comparable 0.3 ha. With a gross available land supply of 100.3 ha (Table 23), it could take over 300 years to absorb these lands through plan registration based on the assumption of an average annual absorption of 0.3 ha of land.

Table 36: Village of Edgerton's Historical Land Absorption since 1979

Time Period	Area (ha)	Area (ha) per Year
1979 to 1983	5.8	1.2
1984 to 1988	1.5	0.3
1989 to 1993	0.0	0.0
1994 to 1998	1.4	0.3
1999 to 2003	0.0	0.0
2004 to 2008	2.4	0.5
2009 to 2013	0.0	0.0
2014 to 2018	0.5	0.1
1979 to 2018	**11.6**	**0.3**



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MAP 11: VILLAGE OF EDGERTON HISTORICAL LAND ABSORPTION

6.0 Growth Assumptions

6.1 Residential Intensification Allowance

For this Growth Study, it is assumed that 4% of the future population growth in all five municipalities will be accommodated through intensification activities such as infill and redevelopment. This percentage is based on historical rates observed in the Town by representatives of the Town. It should be noted however that redevelopment activities will displace existing lower intensity land uses. That is, a family renting an older house will be displaced elsewhere for the landowner to redevelop the property with a semi-detached dwelling. Similarly, the businesses leasing space in an underutilized commercial building will be displaced elsewhere for the landowner to redevelop the property with an apartment building. Intensification opportunities and constraints within the Town are discussed in Section 8.7.

6.2 Residential Land Requirements

For estimating the amount of lands required for future residential development, the current relationships between population and absorbed residential lands are assumed to remain constant after removing the portion of growth to be accommodated by intensification. For example, in the Base Case (medium) scenario, the Town grows by 832 people from 6,261 in 2016 to 7,093 in 2021. Of this growth, 33 people (4%) would be accommodated through intensification while 799 people would be accommodated through consumption of unabsorbed residential land supply. With the Town having 180.7 ha of net absorbed residential lands that accommodates its population of 6,261, growth of 799 people would generate 23.1 ha of additional net absorbed residential lands.

6.3 Commercial Land Requirements

For estimating the amount of lands required for future commercial development, the current relationships between absorbed residential lands and absorbed commercial lands are assumed to remain constant. For example, if a municipality has 100 ha of net absorbed residential lands and 30 ha of net absorbed commercial lands, it is assumed that for every 1.0 ha of additional net absorbed residential lands required there would be an associated requirement for 0.3 ha of net absorbed commercial lands. By virtue of the residential intensification allowance reducing residential land requirements by 4%, a commensurate intensification assumption for future commercial land requirements is embedded in the Growth Study's land requirements methodology.

6.4 Industrial Land Requirements

For estimating the amount of lands required for future industrial development, the current relationships between absorbed residential lands and absorbed industrial lands are assumed to remain constant. For example, if a municipality has 100 ha of net absorbed residential lands and 40 ha of net absorbed industrial lands, it is assumed that for every 1.0 ha of additional net absorbed residential lands required there would be an associated requirement for 0.4 ha of net absorbed industrial lands. By virtue of the residential intensification allowance reducing residential land requirements by 4%, a commensurate intensification assumption for future industrial land requirements is embedded in the Growth Study's land requirements methodology.

6.5 Institutional Land Requirements

For estimating the amount of lands required for future institutional development, the current relationships between absorbed residential lands and absorbed institutional lands are assumed to remain constant. For example, if a municipality has 100 ha of net absorbed residential lands and 10 ha of net absorbed institutional lands, it is assumed that for every 1.0 ha of additional net absorbed residential lands required there would be an associated requirement for 0.1 ha of net absorbed institutional lands. By virtue of the residential intensification allowance reducing residential land requirements by 4%, a commensurate intensification assumption for future institutional land requirements is embedded in the Growth Study's land requirements methodology.

6.6 Net Developable Overheads

Net developable overheads are land uses required to support or service residential, commercial, industrial, and institutional development, including parks and open space (inclusive of municipal reserve), public utilities (stormwater management facilities, lift stations, etc.) and circulation (local roads, collector roads, lanes, and walkways). The Municipal Government Act (MGA) allows for the maximum dedication of developable lands for these overheads to be 40% – comprising 10% municipal reserve and 30% public utilities and circulation.

Net Developable Overheads for Residential Areas

For this Growth Study, it is assumed that 40% of the Town's gross developable land requirements for future residential growth will accommodate the necessary net developable overheads. This 40% deduction assumes 10% for parks and open space, 10% for public utilities and 20% for circulation. The 40% was selected by the Town based on its increased need for public utilities, specifically stormwater management facilities, moving forward.

For the MD, it is assumed that 30% of their gross developable land requirements for future residential growth will accommodate the necessary net developable overheads. This 30% deduction assumes 10% for parks and open space, 5% for public utilities and 15% for circulation. This assumption is based on typical land dedication requirements for rural residential areas observed in ASPs adopted by rural municipalities throughout Alberta.

For the Villages, it is assumed that 35% of their gross developable land requirements for future residential growth will accommodate the necessary net developable overheads. This 35% deduction assumes 10% for parks and open space, 5% for public utilities and 20% for circulation. This assumption is based on typical land dedication requirements for urban residential areas observed in ASPs adopted by urban municipalities throughout Alberta.

Net Developable Overheads for Non-Residential Areas

For this Growth Study, it is assumed that 30% of the Town's gross developable land requirements for future non-residential (commercial, industrial, and institutional) growth will accommodate the necessary net developable overheads. The same is also assumed for the MD and the Villages. This 30% deduction assumes 10% for parks and open space, 5% for public utilities and 15% for circulation. This assumption is based on typical land dedication requirements for non-residential areas observed in ASPs adopted by municipalities throughout Alberta.

6.7 Market Allowance

When determining land requirements to accommodate projected residential, commercial, and industrial growth, ultimately there will be lands within future growth areas in which development will not occur within the horizon of a forecast period. In recognition of this, it is appropriate to apply a market allowance as an overhead that:

- recognizes that some land within future growth areas will not develop within the horizon of the Growth Study (e.g., landowners either will not develop or sell to developers, whether they own full quarter sections or smaller parcels); and
- encourages fair market competition among developers that are participating in development.

For this Growth Study, a market allowance of 20% is applied to the gross residential, commercial, and industrial land requirements for all five municipalities. The assumption of 20% was selected as the Wainwright Region is removed from metropolitan influences and economic activities. The Wainwright Region therefore has milder market forces that result in a greater proportion of landowners being unmotivated to participate in development. For comparison, the City of Edmonton used a market allowance assumption of 5% in its growth study whereas growth studies for other metropolitan communities such as Beaumont, Fort Saskatchewan, Spruce Grove, and St. Albert and more remote regional service centres such as Cold Lake and Lloydminster used 10% market allowance assumptions.

Although a 50-year horizon should facilitate one ownership change for each parcel of land within the future growth areas, there is no guarantee a new buyer will be motivated to develop. Further, ownership changes in the near term of lands not expected to be developed until the later years of the Growth Study may result in some lands having multiple changes in ownership prior to development.

7.0 Land Requirements

7.1 Town of Wainwright Land Requirements

Table 37 presents the order of magnitude land requirements of the Town across all four population growth scenarios in 10-year and 25-year increments. Bolded figures indicate where future land requirements meet or exceed the Town's unabsorbed land supplies.

Table 37: Town of Wainwright's Future Land Requirements

Land Supply/Requirement	Area (gross developable hectares)		
	Residential[16]	Commercial	Industrial
In-Boundary Unabsorbed Land Supply	204.3	83.7	107.6
Low Case Scenario			
10-Year Land Requirements	3.5	0.9	2.3
20-Year Land Requirements	11.6	3.1	7.7
25-Year Land Requirements	11.8	3.1	7.9
30-Year Land Requirements	9.9	2.6	6.6
40-Year Land Requirements	1.0	0.3	0.7
50-Year Land Requirements	-13.4	-3.5	-8.9
Base Case Scenario			
10-Year Land Requirements	17.5	4.6	11.7
20-Year Land Requirements	40.0	10.6	26.6
25-Year Land Requirements	47.3	12.5	31.4
30-Year Land Requirements	52.1	13.7	34.6
40-Year Land Requirements	55.7	14.7	37.0
50-Year Land Requirements	52.0	13.7	34.5
High Case Scenario			
10-Year Land Requirements	32.2	8.5	21.4
20-Year Land Requirements	71.4	18.8	47.5
25-Year Land Requirements	87.4	23.1	58.1
30-Year Land Requirements	101.1	26.7	67.2
40-Year Land Requirements	122.5	32.3	81.4
50-Year Land Requirements	136.0	35.9	90.4
CFB Case Scenario			
10-Year Land Requirements	**261.3**	68.9	**173.7**
20-Year Land Requirements	**304.3**	80.3	**202.3**
25-Year Land Requirements	**319.5**	**84.3**	**212.4**
30-Year Land Requirements	**330.8**	**87.3**	**219.9**
40-Year Land Requirements	**343.6**	**90.6**	**228.4**
50-Year Land Requirements	**344.0**	**90.7**	**228.7**

[16] Residential includes all associated institutional land requirements.

As presented in Table 37, Wainwright has sufficient residential, commercial, industrial, and institutional (embedded in residential) land supply to accommodate 50 years of growth across the Low Case, Base Case, and High Case population growth scenarios. Should the Government of Canada decide to double the number of jobs at CFB Wainwright, the Town would require additional residential and industrial land supply within approximately 10 years and additional commercial land supply within approximately 25 years. Overall, the Town's 50-year land requirements under the CFB Case exceed its current land supply by approximately 268 ha. Fortunately, the Town and MD proactively adopted an IDP in 2019 that identifies 6.2 quarter sections of land (400 ha) that could sufficiently accommodate future residential, commercial, and light industrial growth beyond the Town's current boundary under the CFB Case.

7.2 Municipal District of Wainwright Land Requirements

Table 38 presents the order of magnitude land requirements of the MD across all four population growth scenarios in 10-year and 25-year increments. Bolded figures indicate where future land requirements meet or exceed the MD's unabsorbed land supplies.

Table 38: Municipal District of Wainwright's Future Land Requirements

Land Supply/Requirement	Area (gross developable hectares)		
	Residential[17]	Commercial	Industrial
In-Boundary Unabsorbed Land Supply	1,089.3	138.4	138.4
Low Case Scenario			
10-Year Land Requirements	8.7	2.1	5.2
20-Year Land Requirements	25.9	6.1	15.4
25-Year Land Requirements	28.5	6.7	16.9
30-Year Land Requirements	28.5	6.7	16.9
40-Year Land Requirements	24.2	5.7	14.4
50-Year Land Requirements	14.0	3.3	8.3
Base Case Scenario			
10-Year Land Requirements	20.0	4.7	11.9
20-Year Land Requirements	52.3	12.3	31.0
25-Year Land Requirements	60.3	14.2	35.8
30-Year Land Requirements	66.2	15.6	39.3
40-Year Land Requirements	72.4	17.1	43.0
50-Year Land Requirements	71.3	16.8	42.3
High Case Scenario			
10-Year Land Requirements	31.5	7.4	18.7
20-Year Land Requirements	81.8	19.3	48.6
25-Year Land Requirements	97.8	23.1	58.1
30-Year Land Requirements	111.3	26.2	66.1
40-Year Land Requirements	133.2	31.4	79.1
50-Year Land Requirements	146.7	34.6	87.1

[17] Residential includes country residential, hamlet residential, and all associated institutional land requirements.

Land Supply/Requirement	Area (gross developable hectares)		
	Residential[17]	Commercial	Industrial
CFB Case Scenario			
10-Year Land Requirements	168.4	39.7	100.0
20-Year Land Requirements	218.0	51.4	129.4
25-Year Land Requirements	230.1	54.2	136.6
30-Year Land Requirements	240.6	56.7	**142.8**
40-Year Land Requirements	251.9	59.4	**149.5**
50-Year Land Requirements	253.5	59.8	**150.5**

As presented in Table 38, the MD has sufficient residential, commercial, and institutional (embedded in residential) land supply to accommodate 50 years of growth across the Low Case, Base Case, and High Case population growth scenarios. Should the Government of Canada decide to double the number of jobs at CFB Wainwright, the MD would require additional industrial land supply within approximately 30 years. To accommodate, the MD could consider designating additional lands for future industrial development within its MDP.

7.3 Village of Irma Land Requirements

Table 39 presents the order of magnitude land requirements of the Village of Irma across all four population growth scenarios in 10-year and 25-year increments. Bolded figures indicate where future land requirements meet or exceed Irma's unabsorbed land supplies.

Table 39: Village of Irma's Future Land Requirements

Land Supply/Requirement	Area (gross developable hectares)		
	Residential[18]	Commercial	Industrial
In-Boundary Unabsorbed Land Supply	20.9	4.0	1.5
Low Case Scenario			
10-Year Land Requirements	1.2	0.2	0.4
20-Year Land Requirements	3.5	0.7	1.2
25-Year Land Requirements	3.9	0.8	1.3
30-Year Land Requirements	3.9	0.8	1.3
40-Year Land Requirements	3.3	0.7	1.1
50-Year Land Requirements	1.9	0.4	0.6
Base Case Scenario			
10-Year Land Requirements	2.7	0.5	0.9
20-Year Land Requirements	7.1	1.4	**2.4**
25-Year Land Requirements	8.2	1.6	**2.8**
30-Year Land Requirements	9.0	1.8	**3.0**
40-Year Land Requirements	9.8	2.0	**3.3**
50-Year Land Requirements	9.7	1.9	**3.3**

[18] Residential includes all associated institutional land requirements.

Land Supply/Requirement	Area (gross developable hectares)		
	Residential[18]	Commercial	Industrial
High Case Scenario			
10-Year Land Requirements	4.3	0.9	1.5
20-Year Land Requirements	11.1	2.2	**3.8**
25-Year Land Requirements	13.3	2.7	**4.5**
30-Year Land Requirements	15.1	3.0	**5.1**
40-Year Land Requirements	18.1	3.6	**6.1**
50-Year Land Requirements	19.9	4.0	**6.8**
CFB Case Scenario			
10-Year Land Requirements	**22.8**	**4.6**	**7.7**
20-Year Land Requirements	**29.6**	**5.9**	**10.0**
25-Year Land Requirements	**31.2**	**6.3**	**10.6**
30-Year Land Requirements	**32.6**	**6.6**	**11.1**
40-Year Land Requirements	**34.2**	**6.9**	**11.6**
50-Year Land Requirements	**34.4**	**6.9**	**11.7**

As presented in Table 39, Irma has sufficient residential, commercial, industrial, and institutional (embedded in residential) land supply to accommodate 50 years of growth in the Low Case and Base Case population growth scenarios. It may have industrial land requirements within approximately 20 years and 10 years under Base Case and High Case population growth scenarios respectively. Should the Government of Canada decide to double the number of jobs at CFB Wainwright, Irma would require additional land supply across all land use categories within approximately 10 years.

Overall, Irma's 50-year land requirements under the CFB Case exceed its current land supply by approximately 27 ha (or nearly half a quarter section). Fortunately, the MD and the Village of Irma proactively adopted an IDP in 2019 that identifies approximately 4 quarter sections of land that could sufficiently accommodate future residential, commercial, and industrial growth beyond Irma's current boundary under the CFB Case.

7.4 Village of Chauvin Land Requirements

Table 40 presents the order of magnitude land requirements of the Village of Chauvin across all four population growth scenarios in 10-year and 25-year increments. Bolded figures indicate where future land requirements meet or exceed Chauvin's unabsorbed land supplies.

Table 40: Village of Chauvin's Future Land Requirements

Land Supply/Requirement	Area (gross developable hectares)		
	Residential[19]	Commercial	Industrial
In-Boundary Unabsorbed Land Supply	29.3	31.7	73.1
Low Case Scenario			
10-Year Land Requirements	1.0	0.2	0.2
20-Year Land Requirements	1.6	0.4	0.3

[19] Residential includes all associated institutional land requirements.

Land Supply/Requirement	Area (gross developable hectares)		
	Residential[19]	Commercial	Industrial
25-Year Land Requirements	1.8	0.4	0.3
30-Year Land Requirements	1.8	0.4	0.3
40-Year Land Requirements	1.6	0.4	0.3
50-Year Land Requirements	0.8	0.2	0.2
Base Case Scenario			
10-Year Land Requirements	1.9	0.5	0.3
20-Year Land Requirements	3.3	0.8	0.6
25-Year Land Requirements	3.8	1.0	0.7
30-Year Land Requirements	4.2	1.0	0.8
40-Year Land Requirements	4.6	1.1	0.8
50-Year Land Requirements	4.5	1.1	0.8
High Case Scenario			
10-Year Land Requirements	2.8	0.7	0.5
20-Year Land Requirements	5.3	1.3	1.0
25-Year Land Requirements	6.2	1.5	1.1
30-Year Land Requirements	7.1	1.8	1.3
40-Year Land Requirements	8.5	2.1	1.6
50-Year Land Requirements	9.4	2.3	1.7
CFB Case Scenario			
10-Year Land Requirements	11.8	2.9	2.2
20-Year Land Requirements	14.0	3.5	2.6
25-Year Land Requirements	14.9	3.7	2.7
30-Year Land Requirements	15.5	3.9	2.8
40-Year Land Requirements	16.3	4.1	3.0
50-Year Land Requirements	16.4	4.1	3.0

As presented in Table 40, Chauvin has sufficient residential, commercial, industrial, and institutional (embedded in residential) land supply to accommodate 50 years of growth in all four population growth scenarios – the Low Case, the Base Case, the High Case, and CFB Case.

Although Chauvin has sufficient land supply within its current boundary to accommodate future growth, the MD and the Village of Chauvin proactively adopted an IDP in 2019 that identifies over 3 quarter sections of land that could accommodate unanticipated future residential, commercial, and industrial growth beyond Chauvin's current boundary under the CFB Case.

7.5 Village of Edgerton Land Requirements

Table 41 presents the order of magnitude land requirements of the Village of Edgerton across all four population growth scenarios in 10-year and 25-year increments. Bolded figures indicate where future land requirements meet or exceed Edgerton's unabsorbed land supplies.

Table 41: Village of Edgerton's Future Land Requirements

Land Supply/Requirement	Area (gross developable hectares)			
	Residential	Commercial	Industrial	Institutional
In-Boundary Unabsorbed Land Supply	0.0	0.0	8.3	75.9
Low Case Scenario				
10-Year Land Requirements	**0.4**	**0.1**	0.1	0.1
20-Year Land Requirements	**0.5**	**0.1**	0.2	0.1
25-Year Land Requirements	**0.6**	**0.1**	0.3	0.1
30-Year Land Requirements	**0.6**	**0.1**	0.3	0.1
40-Year Land Requirements	**0.5**	**0.1**	0.2	0.1
50-Year Land Requirements	**0.2**	**0.0**	0.1	0.0
Medium Case Scenario				
10-Year Land Requirements	**0.7**	**0.1**	0.3	0.1
20-Year Land Requirements	**1.2**	**0.2**	0.5	0.2
25-Year Land Requirements	**1.4**	**0.3**	0.5	0.2
30-Year Land Requirements	**1.5**	**0.3**	0.6	0.2
40-Year Land Requirements	**1.6**	**0.3**	0.6	0.3
50-Year Land Requirements	**1.6**	**0.3**	0.6	0.3
High Case Scenario				
10-Year Land Requirements	**0.9**	**0.2**	0.4	0.1
20-Year Land Requirements	**1.9**	**0.4**	0.7	0.3
25-Year Land Requirements	**2.1**	**0.4**	0.8	0.3
30-Year Land Requirements	**2.5**	**0.5**	1.0	0.4
40-Year Land Requirements	**2.9**	**0.6**	1.2	0.5
50-Year Land Requirements	**3.4**	**0.6**	1.3	0.5
CFB Case Scenario				
10-Year Land Requirements	**4.2**	**0.8**	1.7	0.7
20-Year Land Requirements	**5.2**	**1.0**	2.0	0.8
25-Year Land Requirements	**5.4**	**1.0**	2.1	0.9
30-Year Land Requirements	**5.7**	**1.1**	2.2	0.9
40-Year Land Requirements	**6.0**	**1.1**	2.3	0.9
50-Year Land Requirements	**6.0**	**1.1**	2.3	0.9

As presented in Table 41, Edgerton has sufficient industrial and institutional land supply to accommodate 50 years of growth in all four population growth scenarios – the Low Case, the Base Case, the High Case, and CFB Case. At present, Edgerton has no residential or commercial land supply to accommodate future growth.

Overall, Irma's combined 50-year residential and commercial land requirements under the CFB Case exceed its current land supply by 7.1 ha (or one-tenth of a quarter section). Fortunately, the MD and the Village of Edgerton proactively adopted an IDP in 2019 that identifies over 2 quarter sections of land that could sufficiently accommodate future residential and commercial growth beyond Edgerton's current boundary under the CFB Case. The Village of Edgerton could also investigate whether portions of its 75.9 ha of institutional land supply within its current boundaries could be reallocated to accommodate future residential and/or commercial growth.

8.0 Study Area Analysis

8.1 Topography

The topography of the study area is illustrated in Map 12. The terrain is generally quite gentle and slopes from a peak of 720 m elevation just north of town, down towards to west, south and east. The vast majority of the Town of Wainwright is at approximately 670 to 690 m elevation. At the west of the study area, the shores of Bushy Head Lake are particularly low lying, at approximately 655 m.

8.2 Watercourses

Map 13 illustrates the watercourses that are present within the study area. Watercourse delineations are from the GeoGratis National Hydro Network published by Natural Resources Canada.

There two significant unnamed watercourses that flow through the study area. One drains the lands in the Town immediately southwest of the intersection of Highway 14 and Highway 41, carrying water to wetlands and a small recurring lake to the southwest. The other watercourse runs from wetlands to the north of Town to a permanent lake at its northwest corner.

8.3 Wetlands

Map 13 also illustrates the four types of wetlands within the study area. Those within the Town of Wainwright were determined by desktop wetland delineation. Those beyond the town are indicated according to AESRD's Alberta Merged Wetland Inventory (AMWI). The types include swamps, marshes, fens and shallow open water.

The majority of marshlands identified are within the undeveloped lands in the northeast, east and southeast limits of the Town. The majority of swamps are located within the north, northwest, southwest and southern limits. There are large fen areas to the north and southwest of the Town, associated with watercourses mentioned earlier. Shallow open water is scattered around waterbodies in the north, northwest and south of the Town.

There are comparatively few wetland areas identified in the southeast and northeast portion of the study area.

The desktop assessment of wetlands within the Town boundaries identified five wetlands (identified in Map 13), totaling 13.62 hectares, which may be crown claimable under the Public Lands Act. Should infilling of these five wetlands be desired in the future, an assessment of permanence and a formal determination of crown claimable status should be conducted and submitted to Alberta Environment and Parks' Water Boundaries Group for assessment at least one year prior to considering development.

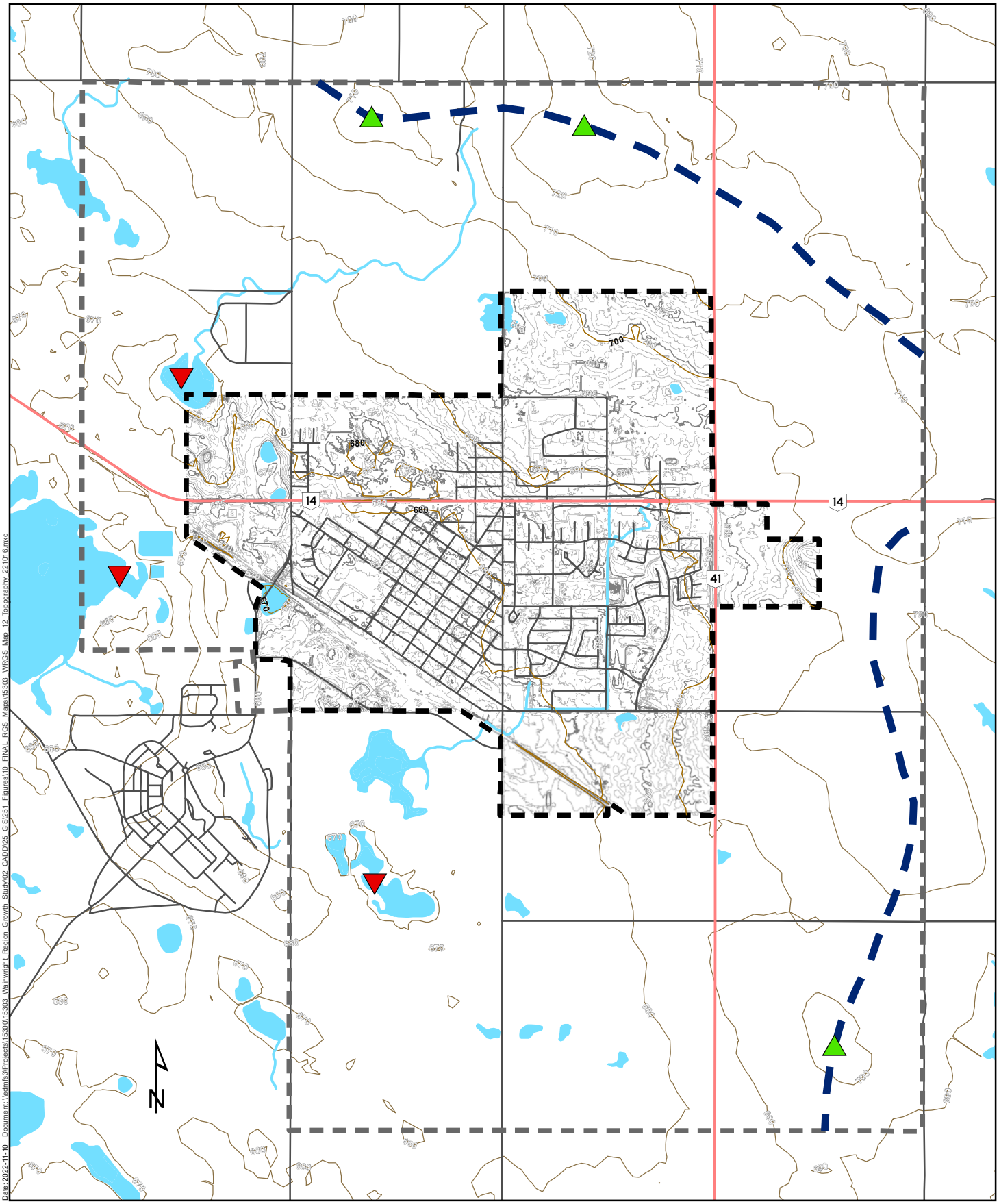
AMWI Disclaimer

Note that the AMWI was stitched together from multiple sources by AESRD. As such, the methodologies and levels of detail may vary from source to source.

The wetlands from the AMWI – i.e., in the areas outside of the Town boundaries—should therefore only be considered a high-level overview of potential wetlands within the study area. A desktop review of wetlands present within the Town portion of the study area is presented in Appendix A.

8.4 Soils

Map 14 illustrates the soil capability for agriculture from the Canadian Land Inventory (CLI) for the Town of Wainwright and the balance of the study area. The types of soils present include Classes 2, 3, and 5. Table 42 provides definitions and descriptions of each soil class from Agriculture and Agri-Food Canada where available.



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ISL

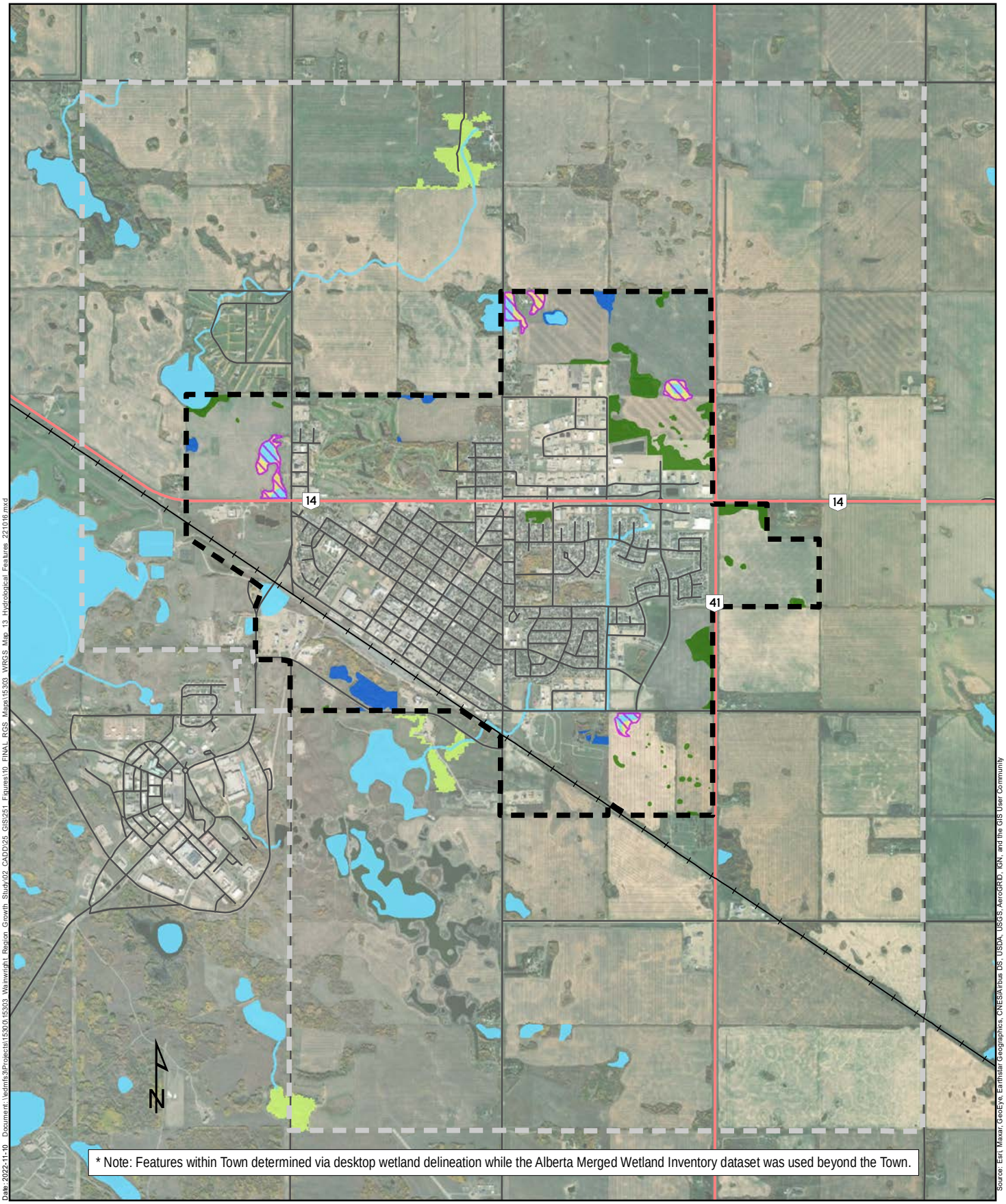
0 250 500 1,000 1,500 m

CANA83-3TM114 1:40,000

Study Area
Town Boundary
Railroad
Highway
Road
Watercourse
Water Body
Drainage Divide
High Point
Low Point
10 m Contour
5 m Contour
1 m Contour

WAINWRIGHT REGION GROWTH STUDY

MAP 12: TOPOGRAPHY



ISL

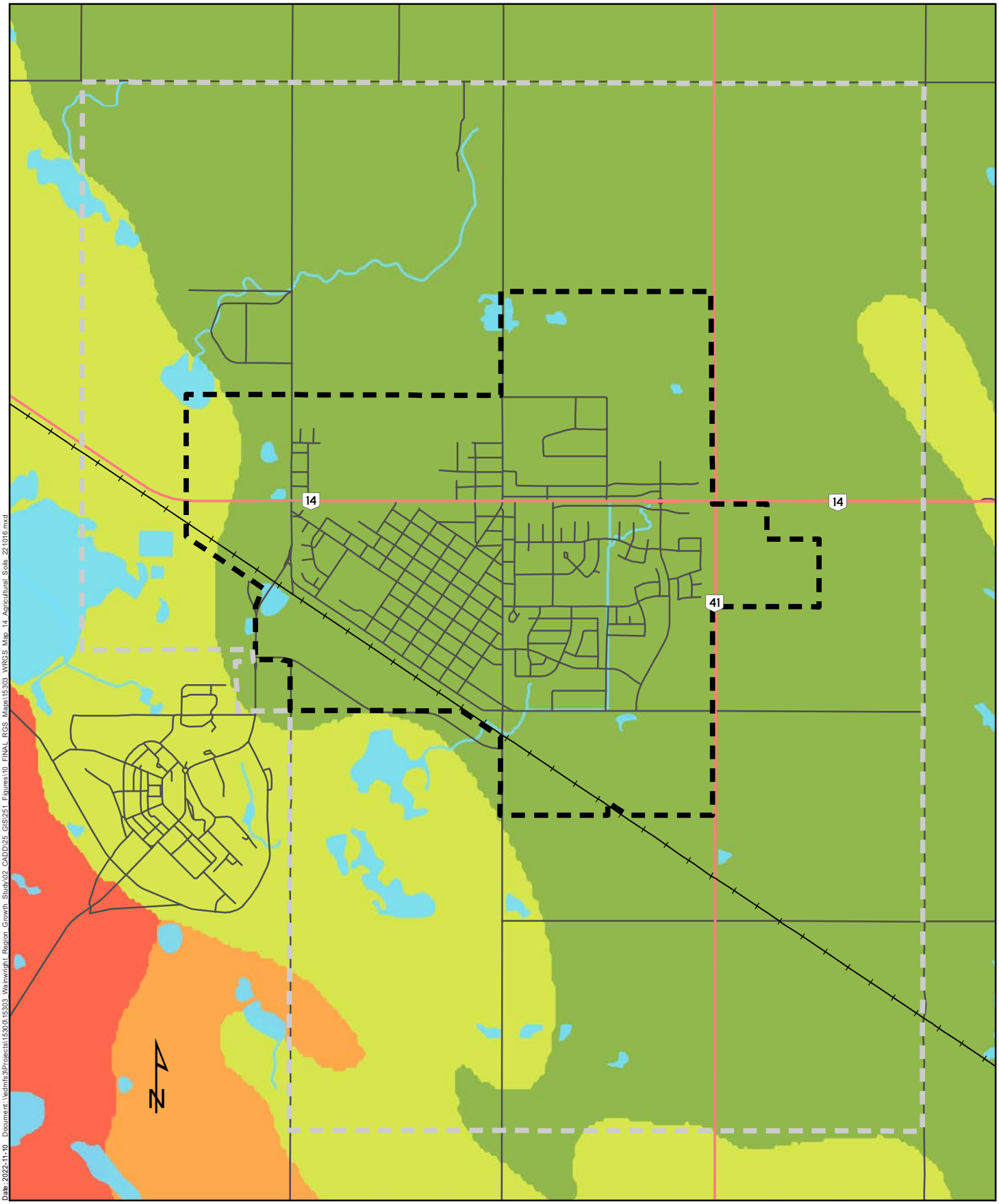
Study Area
Town Boundary
Railroad
Highway
Road
Watercourse
Water Body
Swamp*
Marsh*
Fen*
Shallow Open Water*
Crown Claimable

0 250 500 1,000 1,500 m

CANA83-3TM114 1:40,000

WAINWRIGHT REGION GROWTH STUDY

MAP 13: HYDROLOGICAL FEATURES AND WETLANDS



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ISL

Study Area
Town Boundary
Railroad
Highway
Road
Watercourse
Water Body
CLI Class 2
CLI Class 3
CLI Class 5
CLI Class 6

0 250 500 1,000 1,500 m

CANA83-3TM114 1:40,000

WAINWRIGHT REGION GROWTH STUDY

MAP 14: AGRICULTURAL SOILS

Table 42: Land Capability Classes for Agriculture

Class	Definition	Description
1	No significant limitations	Soils in this class have no significant limitations in use for crops.
2	Moderate limitations; moderate conservation practices required	Soils in this class have moderate limitations that restrict the range of crops or require moderate conservation practices.
3	Moderately severe limitations; range of crops restricted or special conservation practices required	Soils in this class have moderately severe limitations that restrict the range of crops or require special conservation practices.
4	Severe limitations	Soils in this class have severe limitations that restrict the range of crops or require special conservation practices.
5	Forage crops – improvement practices feasible	Soils in this class gave very severe limitations that restrict their capability in producing perennial forage crops, and improvement practices are feasible.
6	Forage crops – improvement practices are not feasible	Soils in this class are capable only of producing perennial forage crops, and improvement practices are not feasible.
7	No capability for arable culture or permanent pasture	Soils in this class have no capacity for arable culture or permanent pasture.
8	Unclassified areas	Unclassified
O	Organic soils	Organic Soils (not placed in capability classes).
W	Water	

Source: ISO 19131 Canadian Land Inventory (CLI) – Data Product Specification and Overview Of Classification Methodology for Determining Land Capability For Agriculture

As illustrated in Map 14, the highest rated (Class 2) soil dominates the study area, as well as much of the Town of Wainwright proper. Class 3 soils are present in the western and northeastern portions of the study area. There is a small sector of Class 5 soils in the southwest.

Table 43 presents a summary of the soil types within the study area broken down by municipality, while observations arising out of the table are provided below.

Table 43: Land Capability Classes for Agriculture Breakdown

CLI Class	Town of Wainwright		MD of Wainwright		Total	
	Ha	%	Ha	%	Ha	%
1	-	-	-	-	-	-
2	1,195.6	96.6	2,583.7	74.9	3,779.3	80.7
3	42.4	3.4	837.6	24.3	880.0	18.8
4	-	-	-	-	-	-
5	-	-	26.5	0.8	26.5	0.5
6	-	-	-	-	-	-
0	-	-	-	-	-	-
Total	**1,238.1**	**100.0**	**3,447.8**	**100.0**	**4,685.8**	**100.0**

The following are key observations from Map 14 and Table 43.

- Of the total study area, 80.7% is Class 2, while 19.3% is lower class soils (Classes 3, 4, 5, 6 and O).
- Of the Class 2 soils in the study area, 68.4% or 2,584 ha are located within the MD of Wainwright while 31.6% or 1,196 ha are located within the Town of Wainwright.
- Of the 907 ha of lower class soils in the study area, 95.3% or 864 ha are located in the MD's portion of the study area.

8.5 Municipal Servicing Considerations

The study area has been divided into two sub-areas for the purpose of the municipal servicing considerations analysis as illustrated in Map 15. The inner study area includes all those unabsorbed lands within the Town's boundary. The outer study area includes all those lands within the MD's portion of the study area beyond Wainwright's boundary.

Existing Servicing

According to the 'Town of Wainwright Water Supply System Study' (Morrison Hershfield, July 2003), the Town's water supply is serviced by the Betty Lake Water Treatment Plant (WTP). The WTP, which is beyond the outer study area approximately 10 km west of Wainwright, provides water to both the Town and CFB Wainwright. There are two reservoirs within the Town – the North Reservoir and the Central Reservoir. Water is supplied to the North Reservoir via a 400 mm diameter transmission main, and the Central Reservoir is then supplied from the North Reservoir. Aside from the water main between CFB Wainwright and the Town, no municipal water servicing is present within the outer study area. The water supply system, including the locations of the reservoirs and the alignments of mains, is shown in Map 16. The Town's water distribution system is supplied through two pressure zones that operate from the North Reservoir.

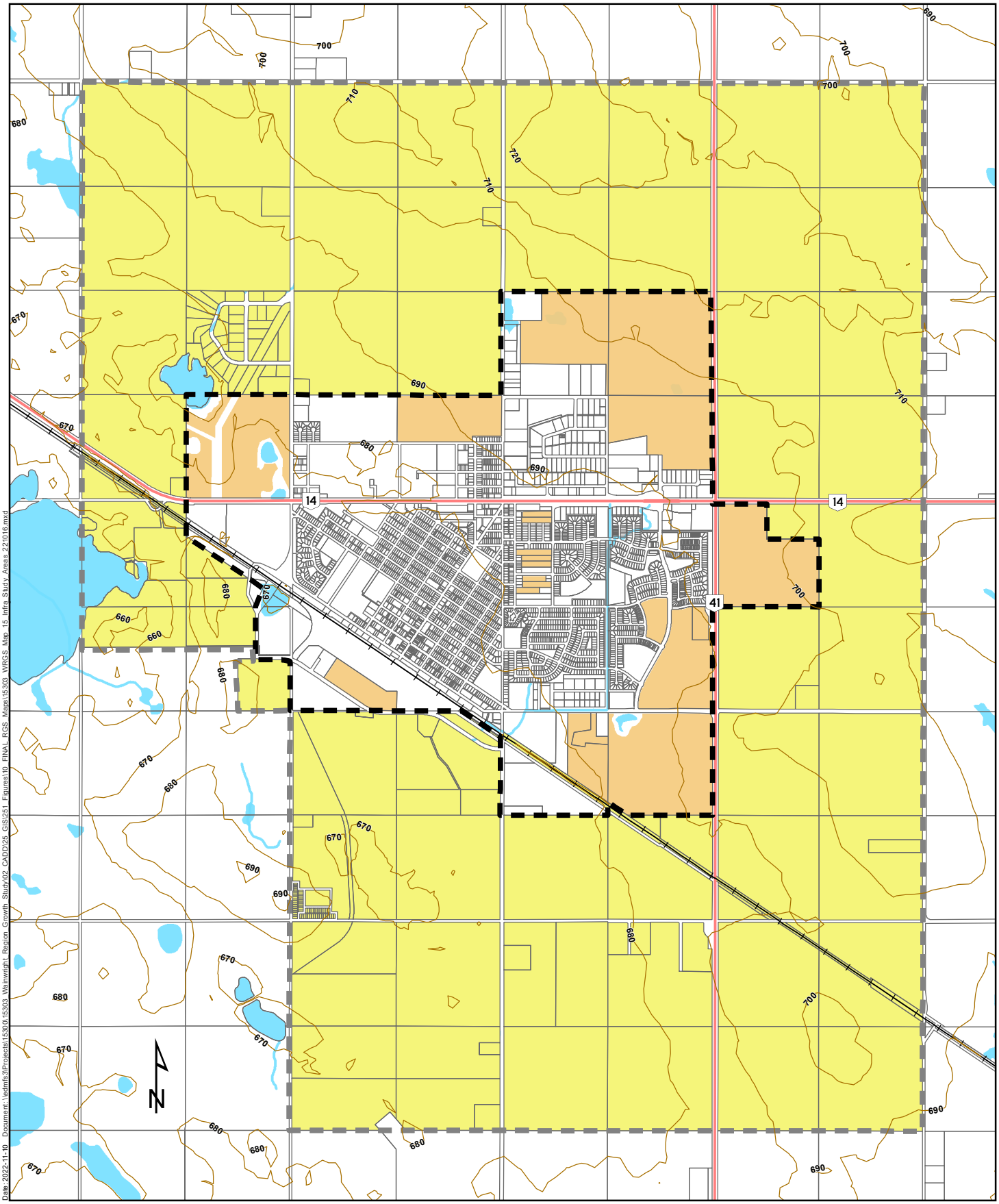
The Town's wastewater collection system consists largely of gravity systems that discharge to the lagoon system in the outer study area to the west of Wainwright. There is a small lift station servicing the southeast portion of the Town, also conveying flows to the lagoon system. Aside from the sanitary main that discharges into the lagoon system west of the Town, no municipal wastewater servicing is present within the outer study area. The wastewater collection and lagoon system are shown in Map 17.

Stormwater discharge is largely managed through ditches and culverts within the study area with newer areas discharging to localized storm ponds. The topography is such that major flow is generally to a storm pond to the southwest of the Town. Aside from this storm pond and other smaller ponds to the west of the Town, no municipal stormwater servicing is present within the outer study area except for ditching systems. Map 18 shows the existing stormwater infrastructure including mains and storm ponds.

Future Servicing

A desktop analysis utilizing 5 m and 10 m contours was undertaken to determine an approximate gravity utility servicing area for wastewater and stormwater purposes. Wastewater discharge to the existing Town system was assumed when determining the serviceability of the lands, while adjacent ditches and watercourses were assumed for stormwater servicing.

Generally, the elevation of the Town ranges from 705-710 m above sea level (ASL) in the northeast to 670-680 m ASL in the southwest as illustrated in Map 12. The highest point in the outer study area lies to the north of the Town at 710 720 m ASL. Another high point, at approximately 700 m ASL is near the southeast corner of the study area. As a result, nearly the entire outer study area generally drains from the north and east to the south and west, while the northeast and southeast corners of the study area drain away from Wainwright to the northeast and east respectively. Low points are to the south of the Town and east of Denwood and to the immediate northwest of the Town. The study area's lowest point is the shore of Bushy Head Lake to the west of Wainwright.



Study Area
Town Boundary
Railroad
Highway
Watercourse
Water Body
Inner Study Area (Unabsorbed Land)
Outer Study Area

0 250 500 1,000 1,500 m
CANA83-3TM114 1:40,000

WAINWRIGHT REGION GROWTH STUDY

MAP 15:
MUNICIPAL SERVICING STUDY AREAS

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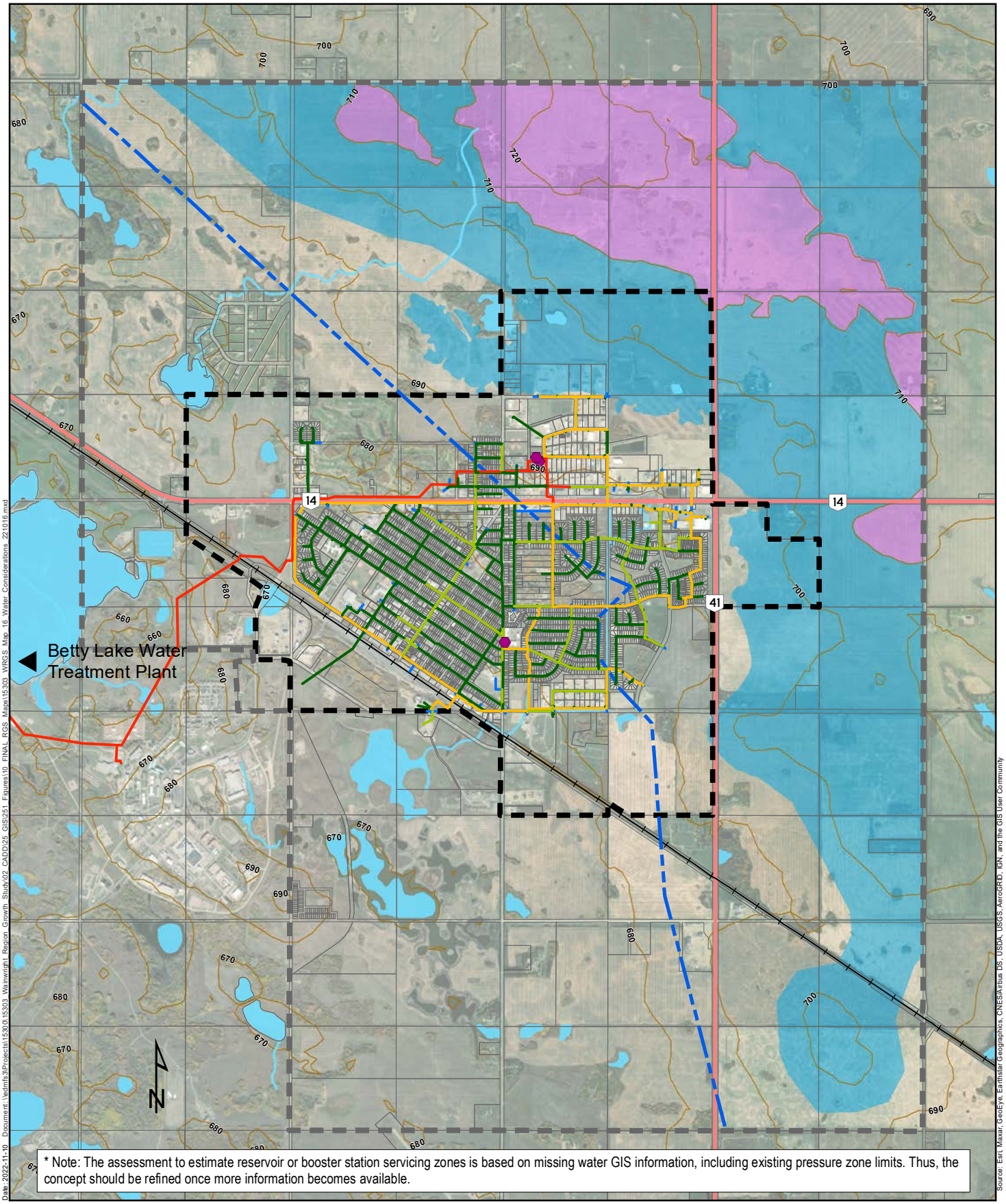

* Note: The assessment to estimate reservoir or booster station servicing zones is based on missing water GIS information, including existing pressure zone limits. Thus, the concept should be refined once more information becomes available.

Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

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ISL

0 250 500 1,000 1,500 m

CANA83-3TM114 1:40,000

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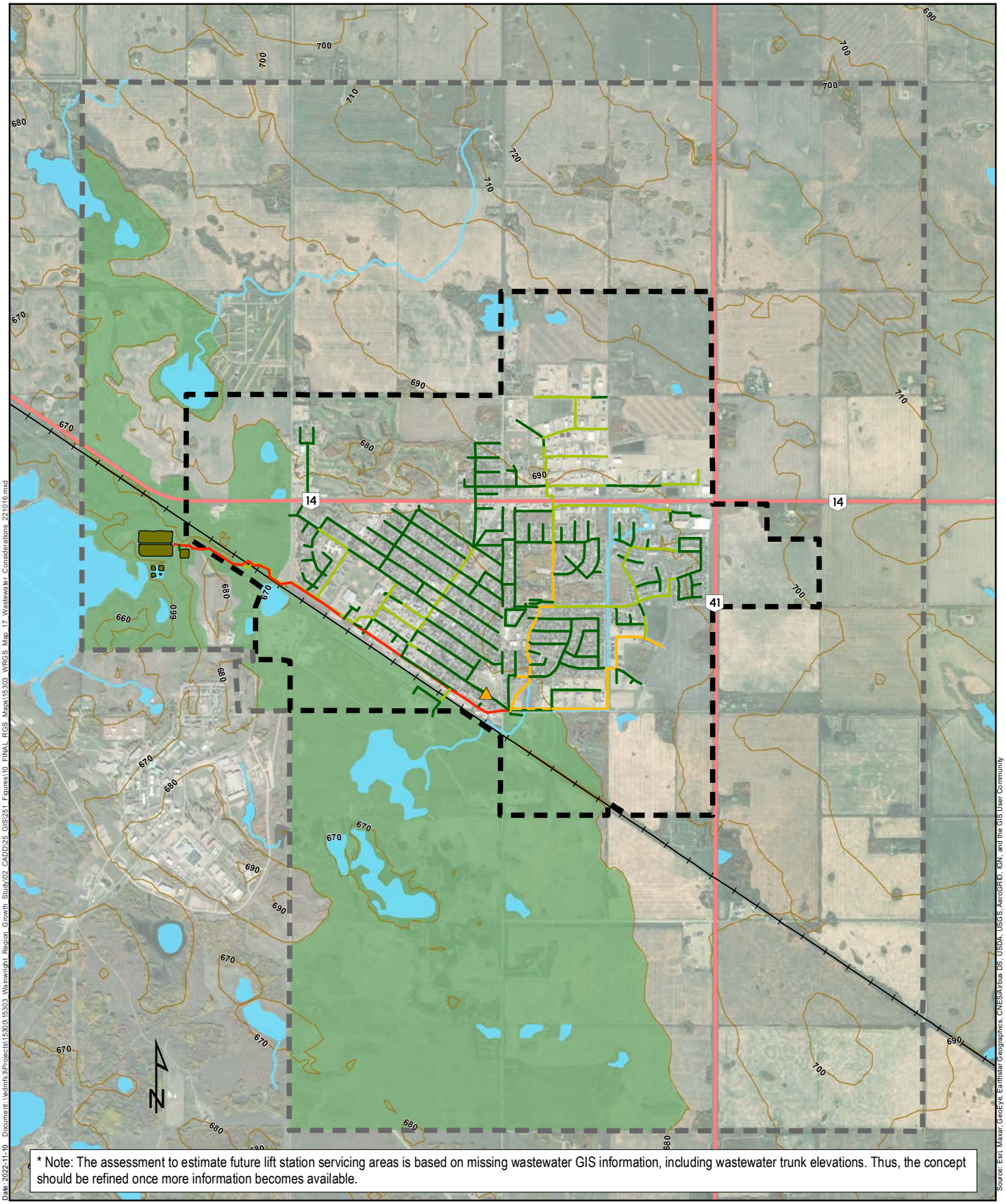
- Study Area
- Town Boundary
- Watercourse
- Water Body
- 10 m Contour
- ≤150 mm Water Main
- 200-250 mm Water Main
- 300-350 mm Water Main
- 400 mm Water Main
- Unknown Water Main
- Reservoir
- Existing Pressure Zone Boundary (Approximate)
- Reservoir or Booster Station Potentially Required*
- Reservoir or Booster Station Required*

WAINWRIGHT REGION GROWTH STUDY

MAP 16: WATER INFRASTRUCTURE CONSIDERATIONS



ISL

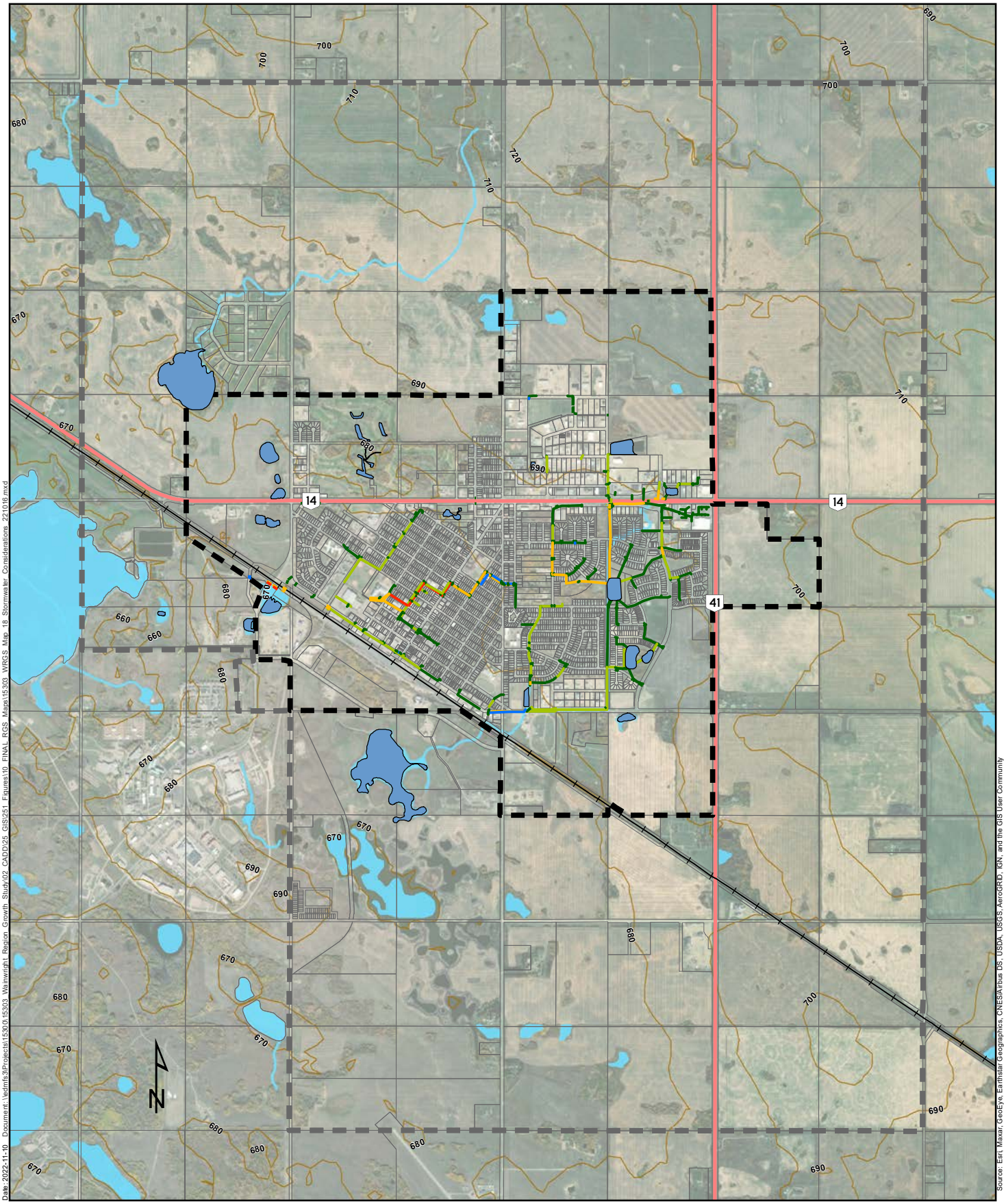
Study Area
Town Boundary
Watercourse
Water Body
10 m Contour
Lift Station
≤200 mm Sanitary Main
250-375 mm Sanitary Main
400-450 mm Sanitary Main
600 mm Sanitary Main
Lagoon
Future Lift Station Servicing Area*

0 250 500 1,000 1,500 m

CANA83-3TM114 1:40,000

WAINWRIGHT REGION GROWTH STUDY

MAP 17: WASTEWATER INFRASTRUCTURE CONSIDERATIONS



WAINWRIGHT REGION GROWTH STUDY

MAP 18: STORMWATER INFRASTRUCTURE CONSIDERATIONS

The lagoon system, just beyond the Town's boundary in the outer study area to the west, is at an elevation of about 665 m ASL. Wastewater servicing for most of the inner study area to the existing lagoon is therefore feasible. The exception is in the southeast portion of the Town that is currently serviced by a lift station. To service the entire study area, the lagoon requires additional capacity. There appears to be space available for expansion of the lagoon system, whilst still maintaining the required 300 m setback from residential areas and other sensitive uses. Lands below approximately 680 m ASL would need to be serviced with a lift station (elevation depends on proximity to the lagoon system).

Water supply to the entire study area is assumed to be feasible via the supply from the Betty Lake WTP. The existing North and Central Reservoirs are at approximate elevations of 690 m ASL and 680 m ASL respectively. The reservoirs will be able to service future growth within the Town's current boundaries below 695 m ASL. An additional reservoir or booster station will be needed to service the northeast parts of the study area, as the elevations range from 700-705 m ASL. If growth is substantial additional reservoir capacity will be needed and the existing WTP may need to be expanded.

Stormwater servicing is possible for all lands in the inner and outer study areas. They can be serviced by gravity to the various creeks and wetlands in the area. Development to the south can use the existing flow routes. Typically, one stormwater management facility is required per quarter section for management of quality and quantity of stormwater.

8.6 Transportation Considerations

A transportation considerations analysis provides a desktop overview of future growth areas with a focus on transportation infrastructure. Existing and future conditions are presented followed by a discussion on the serviceability of the growth areas. For this transportation considerations analysis, a set of zones comprising the Town's future growth areas were established as shown in Figure 29.

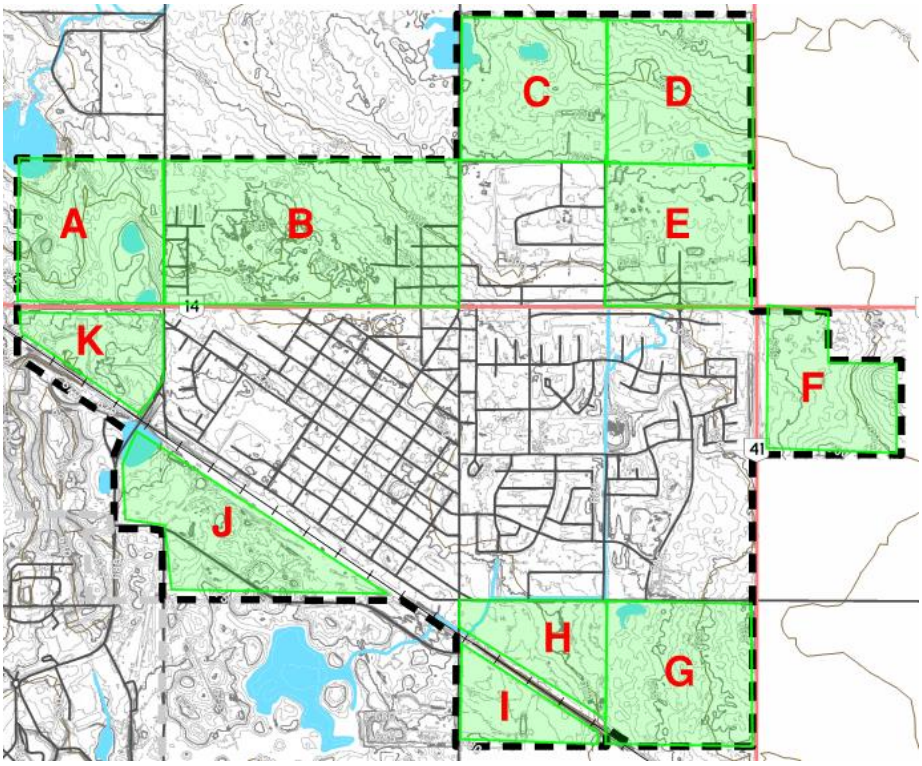


Figure 29: Transportation Analysis Zones

8.6.1 Existing Conditions

Rail

As illustrated in Map 19, the CN main line, known as the Wainwright Subdivision, bisects the southwest portion of the Town. The rail line is a single-track east of the station lands and a double-track to the west. A spur line from the station lands connects to CFB Wainwright to the south. The Wainwright train station includes a rail yard and services passenger (VIA Rail) and freight rail.

Rail crossings include a grade separated overpass along 1 Street and an at grade crossing with flashing bells and gates along 14 Street. Based on the Canadian Grade Crossing Inventory, accessed February 2021 and last modified September 2020, an average of 27 trains and 1,132 vehicles cross the 14 Street rail crossing daily. The presence of an existing grade separated crossing within the Town eliminates the risk in the benefiting areas of increased wait times for emergency response due to trains blocking the crossings.

High Load and Trade Corridors

High load corridors are highways capable of accommodating loads up to 9 m high, made possible by raised overhead utility lines. Alberta Transportation (AT) classifies Highway 14 that bisects the northern portion of Wainwright as a high load corridor.

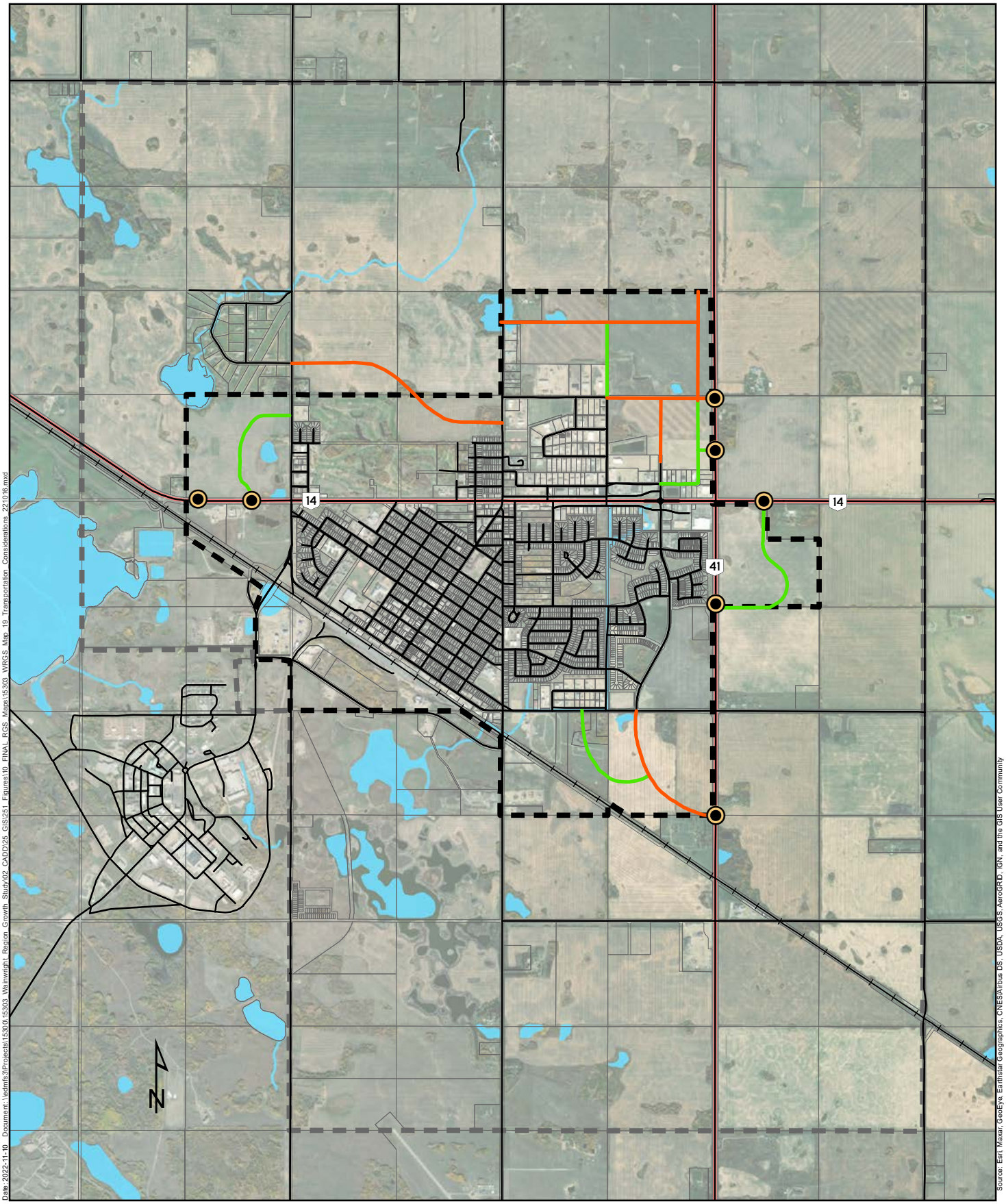
The Town and the MD are part of the Eastern Alberta Trade Corridor (EATC), which is linked to the Edmonton-Calgary corridor to the west via Highway 14, and Alberta's natural resources to the north and the United States and Mexico to the south. Highway 41 is a central north-south spine through the EATC, which bisects the MD and skirts much of the Town's eastern boundary.

Existing Roadways

AT's Roadside Management Classification Map identifies the types of highways under its jurisdiction, such as Highway 14 and Highway 41. AT's highway classifications are provided in Table 44.

Table 44: Summary of AT Highway Classifications

Highway Class	Traffic Volume	Access	Intersection Spacing
Freeway	Typically more than 10,000 vehicles per day	Limited to interchange locations	1,600 – 3,200 m
Multi-lane divided highway	Typically more than 10,000 vehicles per day	Generally limited to intersections with arterial and collector roads. This category includes expressways.	1,600 m
Major two-lane highway	Typically more than 1,000 vehicles per day	Generally located at intersections with collector roads	400 m
Minor two-lane highway	Typically less than 1,000 vehicles per day	Should be limited to one access per quarter section	200 m



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Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

ISL

Study Area
Town Boundary
Watercourse
Water Body
Railroad

Existing Road
Highway
Potential Future Arterial Road
Potential Future Collector Road
Potential Future Highway Access

0 250 500 1,000 1,500 m

CANA83-3TM114 1:40,000

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MAP 19: TRANSPORTATION CONSIDERATIONS

Several of the Town's existing roadways may be leveraged to support future growth. Key roadways that connect to the analysis zones are discussed below.

- **Highway 14 (Poundmaker Trail/14 Avenue):** This is a paved two-lane rural undivided roadway classified as a major two-lane highway by AT. The highway bisects the northern portion of the Town. It provides access to Edmonton to the west and Saskatchewan to the east, at which point it becomes Highway 40. The highway has a posted speed of 60 km/h within the Town boundary, 80 km/h at both approaches to the Town, and 100 km/h beyond. The average annual daily traffic (AADT) volumes on Highway 14 are 2,550 east of Highway 41, 3,910 between 1 Street and Highway 41, and 2,750 west of 1 Street based on AT's online traffic data. Accesses on Highway 14 must be spaced a minimum of 400 m based on AT's specifications for major two-lane highways.
- **Highway 41 (Buffalo Trail):** This is a paved two-lane rural undivided roadway classified as a major two-lane highway by AT. As it skirts much of the Town's eastern boundary, this north-south corridor has a posted speed of 100 km/h. The AADT volume on Highway 41 is approximately 1,400 based on AT's online traffic data. Accesses on Highway 41 must be spaced a minimum of 400 m based on AT's specifications for major two-lane highways.
- **1 Avenue:** This is a paved two-lane undivided arterial at predominantly rural standards that generally travels east-west between Highway 41 to the east and 1 Street to the west. The posted speed along the corridor is 50 km/h. This roadway provides access to the southern portion of Wainwright's downtown, the railway station, stampede grounds, and southern residential areas. Based on the existing adjacent land uses, the AADT volumes are assumed to be moderate.
- **14 Street (Range Road 65):** A north-south two-lane paved undivided arterial roadway bisecting the Town. It is at an urban standard between 1 Avenue and Highway 14 but at rural standards south of 1 Avenue and north of Highway 14. The roadway becomes Range Road 65 outside of Wainwright's boundaries. The posted speed along the corridor is 50 km/h within the Town and 80 km/h otherwise. 14 Street is the primary north-south arterial within Wainwright and assumed to have relatively high AADT volumes when compared to the other roadways. 14 Street includes a rail crossing with flashing bells and gates.
- **1 Street (Buffalo Road/Range Road 70):** This is a north-south arterial skirting much of the western boundary of Wainwright. As Buffalo Road, it provides access to CFB Wainwright to the south. 1 Street exists as a paved two-lane rural arterial roadway with a posted speed of 50 km/h within the Town and 80 km/h otherwise. The corridor does not provide access to many adjacent existing land uses and is assumed to have a relatively low AADT volumes. 1 Street includes a grade separated rail crossing of the CN rail line.
- **4 Avenue South:** This is a two-lane paved rural collector roadway in the southwest portion of the Town that parallels the rail line to the north. The roadway connects to 1 Street to the west and 14 Street to the east and has a posted speed of 60 km/h. The corridor does not provide access to many adjacent existing land uses and is assumed to have a relatively low AADT volumes.
- **23 Avenue:** This is a two-lane unpaved arterial roadway that partially developed with curb and gutter. It runs east-west between 14 Street to the west and 23 Street to the east, approximately 800 m north of Highway 14. 23 Avenue provides access to the Town's northern industrial area and soccer fields with a portion of the roadway designated as a playground area and a speed limit of 50 km/h. Current AADT volumes are assumed to be low.
- **27 Street:** This is a two-lane paved urban arterial roadway running north-south from 1 Avenue to the south to beyond Highway 14 to the north. It primarily provides access to residential areas south of Highway 14 as well as commercial areas on either side of Highway 14. The posted speed limit is 50 km/h. Current AADT volumes are assumed to be moderate.

8.6.2 Future Conditions

Wainwright's future transportation network is guided by and outlined in several planning documents. The Town's MDP includes several transportation policies related to growth. These include:

- Develop a transportation master plan to guide future expansion of the local transportation network;
- Develop a walking trails master plan to guide the development to the local trail, sidewalk, and pathway systems;
- Support active transportation;
- Maintain and enhance a safe and efficient highway network; and
- Ensure all new road construction complies with municipal standards.

The Town's current MDP does not illustrate future arterial roadways. However, its previous MDP depicted five future roads as summarized below, which are illustrated in Map 19.

- **New east-west arterial:** This is an arterial roadway starting at Range Road 70 (1 Street) north of the Town's boundary and Zone B, then curving southward into Zone B terminating at 14 Street within the Town.
- **23 Avenue:** This is an east-west extension of the 23 Avenue arterial between 23 Street to the west and Highway 41 to the east.
- **27 Street:** This is a north-south extension of 27 Street in two locations. In the northeast portion of the Town, it will be extended northwest from its current terminus north of 15 Avenue to the future extension of 23 Avenue described above. In the southeast portion of the Town, it will be extended southward from 1 Avenue and curve to the southeast to intersect with Highway 14 at the quarter section line.
- **New southeast collector roadway:** This will be a collector roadway looping from 1 Avenue to the southward 27 Street extension described above.
- **New 8 Avenue collector roadway:** This was planned to be a collector roadway connection from 27 Street to Highway 41 at the quarter section line midway between 1 Avenue to the south and Highway 14 to the north. Town representatives have indicated that this roadway connection may be abandoned.

Concept plans and ASPs include more detailed depictions of the Town's potential future roadway network in specific areas. The proposed transportation network from these documents is summarized below, which are illustrated in Map 19.

- **Westglen ASP (Zone A):** This ASP for the recently annexed quarter section in the northwest corner of the Town identifies a future collector and numerous local roadways. The collector is planned to start at Highway 14, approximately 300 m west of 1 Street, meandering and terminating at 1 Street, approximately 650 m north of Highway 14.
- **Industrial Park ASP (Zones C, D, and E):** This ASP guides the future industrial and commercial development of nearly three quarter sections in the northeast corner of the Town. Like the previous ASP, it identifies the eastward extension of 23 Avenue from 23 Street to Highway 41 and a second east-west arterial that parallels it approximately 600 m to the north from 14 Street (Range Road 65) to Highway 41. It also identifies the northward extensions of 27 Street to 23 Avenue and 23 Street to the new east-west arterial. Collector and local roadways are also identified. Two accesses to Highway 41 are proposed including an all-directional intersection at 23 Avenue and a right-in/right-out intersection to the south, approximately midway between 23 Avenue and Highway 14. In general, these proposed accesses are planned to be a minimum of 400 m apart and compliant with the highway access management requirements for major two-lane highways.
- **Eastview ASP (Zone F):** This ASP for the recently annexed lands east of Highway 41 and south of Highway 14 identifies a future collector and numerous local roadways. The collector is planned to start at Highway 14, approximately 400 m east of Highway 41, meandering and terminating at Highway 41 opposite the potential future 8 Avenue collector at the quarter section line.

No specific transportation plans at the concept plan or ASP levels have been developed that affected Zones G through K based on the information available from the Town.

8.6.3 Serviceability Discussion

In consideration of the existing and future transportation conditions above, numerous opportunities and constraints have emerged and are detailed below.

Opportunities

- **Existing plans:** Most of the analysis zones have existing transportation plans that can be leveraged in future development.
- **High load corridor:** As part of the Eastern Alberta Trade Corridor, the Town is in a strategic location for industrial land uses. This can be leveraged further by providing accommodations, amenities, and services for truck drivers.
- **Rail:** The Town's strategic location along the CN main line increases the attractiveness of the southern zones to industrial developers.

Constraints

- **Highways:** Additional accesses onto the highways will require coordination with AT.
  - A Highway 14 Access Management Study is currently ongoing to review and address safety issues along the highway within the Town. This includes:
    - A new roundabout at 1 Street;
    - Converting 2 Street to right-in/right-out;
    - Closing and consolidating commercial accesses along the corridor;
    - Intersection upgrades at 18 Street (improving the offset, converting to a roundabout, or signalization); and
    - A new roundabout or signalization at 23 Street.
  - The highway network partitions the Town and makes crosstown travel more challenging, particularly for pedestrians and cyclists.
- **Rail:** Increased traffic or changes at the existing 14 Street crossing of the rail line may require approval from CN. A requirement for a grade separated crossing at 14 Street is not anticipated based on the current traffic volume, although this may need to be reviewed in the future. Future development in Zones I and J should be accessed from 1 Street, 4 Avenue South, and 14 Street to negate the need for any new rail crossings.

Zones I, J and K

Zones I through K are intended for industrial land uses, which require minimal additional transportation infrastructure. No needs for additional rail crossings are anticipated to service these zones.

Remaining Zones

The existing transportation infrastructure can be leveraged to effectively service the remaining Zones A through H, using the policies and concepts in the Town's planning documents as a guide for future development. Of the remaining zones, Zone B is anticipated to be the most serviceable as some transportation infrastructure already exists within it. Conversely, Zone F is anticipated to be the most challenging to service as there is no existing access and requires AT to grant approved of at least one of the two planned highway accesses. Zone E is intended to include two new accesses onto Highway 41, which may be challenging to achieve through AT. Regardless, the zone could rely on the existing accesses on Highway 14 at 23 Street and 27 Street.

8.6.4 Summary

Wainwright has significant growth potential due to its location along CN's main line at the intersection of two major highways. Existing and planned transportation infrastructure is anticipated to support the Town's future growth. While no zones are anticipated to be exceedingly difficult to service, some were found to be more serviceable than others. The most to least serviceable analysis zones in terms of transportation infrastructure are as follows.

1. **Zones I, J, and K:** These zones are intended for industrial use and can rely primarily on the existing infrastructure with minimal additions required. The rail crossings at 1 Street and 14 Street are anticipated to be sufficient to service these zones and therefore no new crossings are required. Additionally, 14 Street is not anticipated to warrant a grade separated crossing due to development of lands within Zones I and J. Further study and collaboration with CN may be required at the approvals stage depending on the scope of any proposed development.
2. **Zone B:** This zone has some existing transportation infrastructure that can be built onto and does not require an additional highway access.
3. **Zones A, C, G, and H:** These zones do not include existing transportation infrastructure however are anticipated to be able to be supported by municipal roadways with direct access to the highway network.
4. **Zone E:** Current plans for this zone include two new highway accesses. Should AT not approve one or both new highway accesses, future development in this zone may be supported by the existing accesses on Highway 14.
5. **Zone D:** This zone is generally reliant on the prior development of Zones E and/or C as it has no existing transportation infrastructure.
6. **Zone F:** This zone has no existing transportation infrastructure. Future development of these lands requires AT's approval of a minimum of one of the two planned highway accesses.

Any future accesses onto Highway 14 and 41 must comply with AT's access management guidelines for multi-lane highways and be spaced a minimum of 400 m from existing accesses.

8.7 Land Use Considerations

As illustrated on Map 20, the largest concentration of existing development in the study area beyond the Town is a multi-parcel country residential subdivision adjacent to the northwest corner of the Town. It features 34 country residential parcels, a municipal reserve parcel, a public utility lot, and two lots to protect a pipeline right-of-way.

Approximately 800 m south of the southeast corner of the Town there are two rural industrial developments. They are opposite to each other on the northeast and southwest corners of the intersection of Highway 41 and Township Road 444. The development on the northeast corner is adjacent to the CN main line.

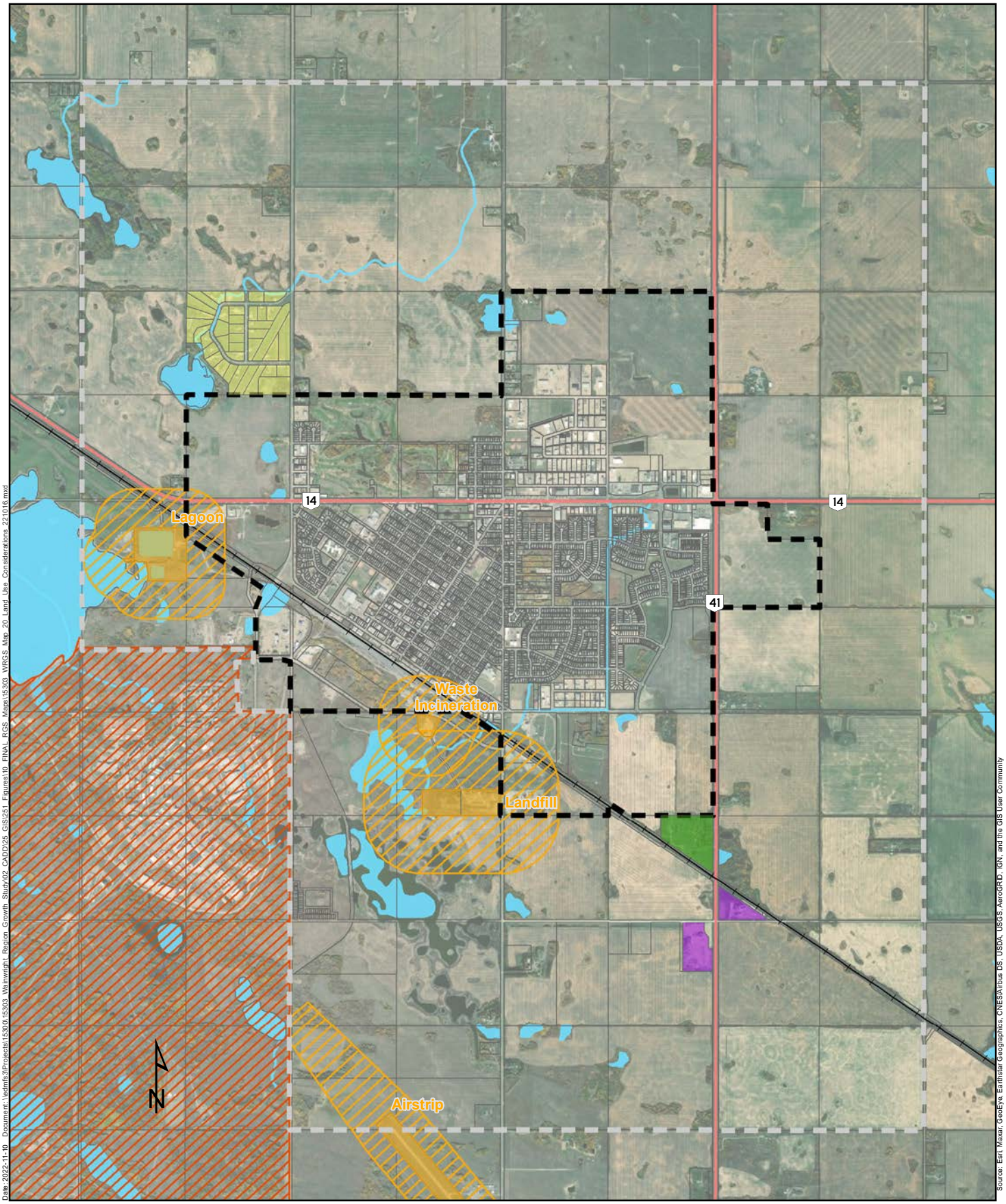
The Wainwright Cemetery is adjacent to the Town's southeast corner. It is west of Highway 41 and north of the CN main line.

Numerous nuisance land uses along with their associated setbacks are within the study area. These include:

- the Town's lagoon system adjacent to the Town's western boundary, south of the CN main line, and east of Marshy Head Lake;
- a waste incineration site on the south side of 4 Avenue South operated by the Wainwright Regional Waste to Energy Authority (WRWEA);
- a landfill further south of 4 Avenue South and west of 14 Street (Range Road 65) that is also operated by the WRWEA; and
- the northernmost portion of the Wainwright Aerodrome's airstrip, which encroaches the southern boundary of the study area, approximately 3,000 metres south of the Town boundary between Range Road 65 (14 Street) and Range Road 70 (1 Street).

Setbacks applied to the lagoon system, waste incinerator site, and the landfill are 300 m in accordance with the Matters Relating to Subdivision and Development Regulation. The setback associated with the airstrip features height restrictions associated with the safe operation of the airstrip.

The balance of the study area is predominantly under agricultural production with natural areas including wetlands and water bodies scattered throughout, but primarily in the western portion of the study area. CFB Wainwright is located directly to southwest of the study area. The built-up portion of the base is west of 1 Street (Range Road 70) and south of 4 Avenue South and features the military community of Denwood.



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Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

ISL

0 250 500 1,000 1,500 m

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- Study Area
- Town Boundary
- Railroad
- Highway
- CFB Wainwright
- Country Residential
- Rural Industrial
- Cemetery
- Nuisance Land Use
- Nuisance Land Use Setback

WAINWRIGHT REGION GROWTH STUDY

MAP 20: LAND USE CONSIDERATIONS

8.8 Ownership and Fragmentation

8.8.1 Ownership

Map 21 illustrates the status of parcels by ownership type within the Town and study area.

Most land in the study area is under private ownership. Municipal land holdings include:

- the cemetery to the southeast;
- the aerodrome to the far south;
- the incinerator, landfill, and surrounding lands south of 4 Avenue South, west of Range Road 65 (14 Street), north of Township Road 444, and east of Range Road 70 (1 Street);
- the Town's lagoon system to the west, including adjacent lands to the south and northwest on the shore of Marshy Head Lake; and
- three parcels within or adjacent to the country residential subdivision adjacent to the northwest corner of the Town.

Crown ownership within the study area is limited to the water body at the northwest corner of the Town and a portion of the landfill. The Crown also owns the lands on CFB Wainwright adjacent to the southwest boundary of the study area.

8.8.2 Fragmentation

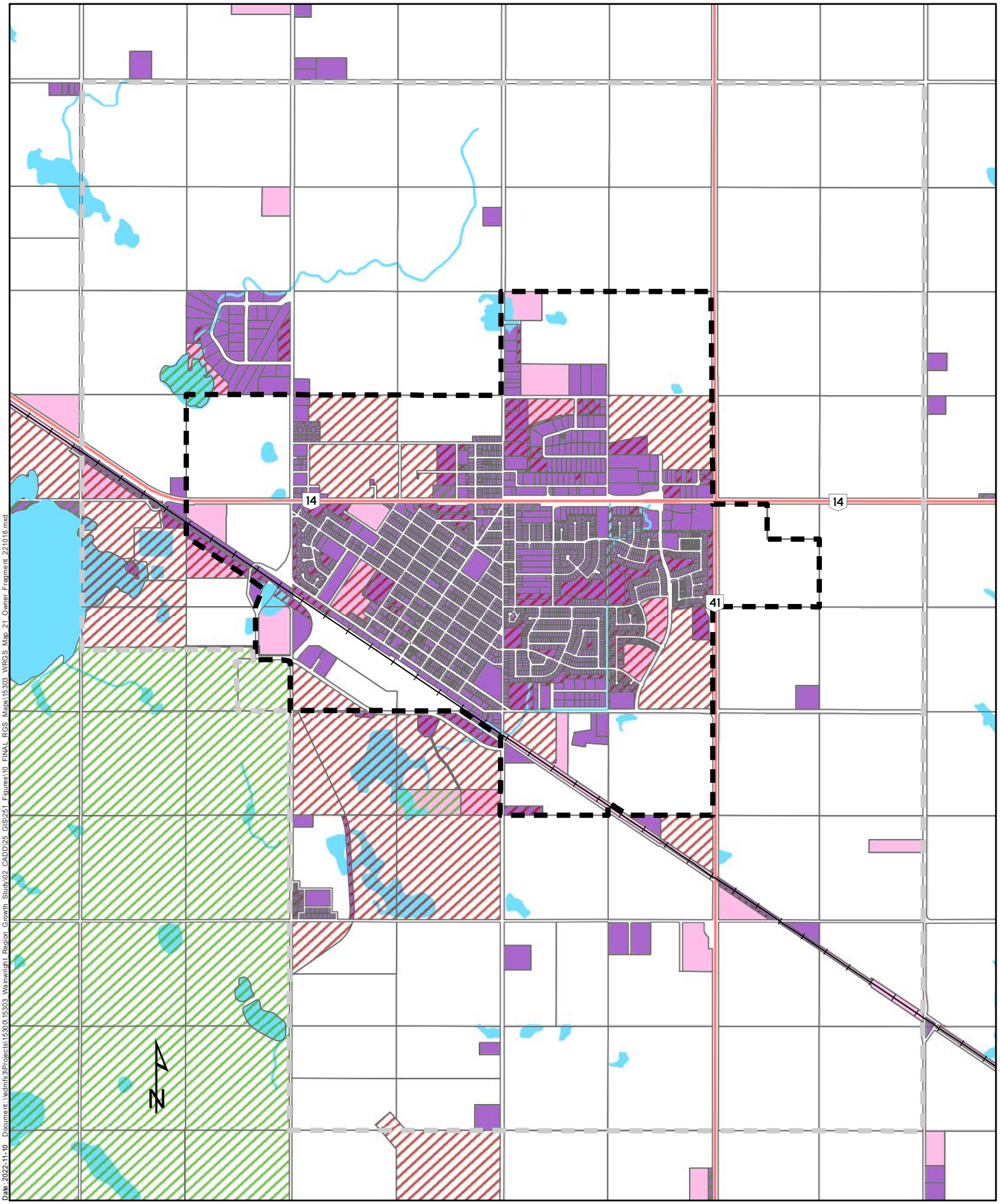
Map 21 also illustrates those parcels within the study area that are fragmented due to past subdivision activity. Concentrations of parcels that are less than 4 ha (10 ac) in size, and between 4 ha (10 ac) and 10 ha (25 ac) are identified. Parcels that are less than 10 ha (25 ac) in size can be more difficult to assemble and incorporate into greenfield subdivision planning. Urban expansion is more suited to sites consisting of unsubdivided or larger parcels as they are easier to assemble and therefore coordinate new development more efficiently.

Other than the multi-parcel country residential subdivision adjacent to the northwest corner of the Town and an undeveloped subdivision at the northeast corner of the intersection of Range Road 70 (1 Street) and Township Road 444, there are no significant concentrations of fragmented parcels in the study area (beyond the Town boundary). The few fragmented parcels identified in Map 21 are scattered throughout the study area and seem to be mostly associated with farmstead subdivisions.

8.9 Intensification Opportunities and Constraints

To assess future growth opportunities for the Town, it is not only a matter of exploring urban expansion on greenfield sites within the Town as well as beyond the Town if necessary. The potential for intensification must also be considered as future growth can also be accommodated through infill and redevelopment. The concept of residential intensification was introduced in Section 6.1.1.

Generally, when an urban municipality has housing stock and commercial buildings that exceed 50-60 years of age, pressures to tear down and replace said developments become more attractive, especially on parcels where the condition of the housing stock or commercial buildings has deteriorated over time. The 2016 federal census determined that the Town had 540 occupied private dwellings that were constructed prior to 1961. This represents 18.5% of the Town's 2021 total private dwelling count of 2,914. Also, as settlement of Wainwright began before incorporation as a village in 1909, the dwellings constructed prior to 1961 can range from 60 to 112 years old at minimum. Most of these dwellings are anticipated to be in the most mature portion of the Town – more specifically northeast of the rail line within Wainwright's downtown core and in an area extending to approximately 15 Street to the east, 18 Avenue to the north, and 1 Street to the northwest.



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Study Area
Town Boundary
Railroad
Highway
Watercourse
Water Body
Crown Land
Municipal Land
< 4 ha Parcel
4 to 10 ha Parcel
> 10 ha Parcel

0 250 500 1,000 1,500 m
CANA83-3TM114 1:40,000

WAINWRIGHT REGION GROWTH STUDY

MAP 21: OWNERSHIP AND FRAGMENTATION

A high-level review of the Town based on Google Earth imagery indicates that there are numerous vacant and underutilized parcels within the most mature portion of the Town as described above, which are in addition to parcels with dwellings that are 60 years of age or older. The mature portion of the Town therefore presents the greatest potential for intensification. One example with significant intensification potential is the site occupied by the Wainwright Health Centre. Upon the Town receiving a commitment from the provincial government to construct a replacement health centre on an earmarked greenfield site, planning can commence for the redevelopment of this site with a focus on residential intensification. This is a similar approach as was taken in Fort Saskatchewan following the construction of its replacement hospital. Other significant intensification opportunities may also be present for:

- multi-unit residential or commercial/light industrial at a vacant site on 15 Avenue between 14 Street and 15 Street;
- residential with commercial frontage north of Highway 14, west of 10A Street, south of 18 Avenue, and west of the golf course/9 Street; and
- industrial/commercial throughout the linear corridor east of 1 Street and west of 14 Street between 1 Avenue and the rail line.

The high-level review using aerial imagery reveals another potential intensification opportunity just outside the most mature portion of the Town. Eight linear lots in the area east of 15 Street, north of 8 Avenue, west of 18 Street, and south of Highway 14 are obvious intensification opportunities. However, they have been previously deemed greenfield in nature through the land supply analysis presented in Section 5.1. More specifically, the eight lots are deemed unabsorbed residential lands in Map 2.

A significant constraint to any intensification opportunity, particularly residential, is that it is highly dependent on compatibility with neighbouring land uses. Intensification opportunities in established low density residential neighbourhoods would be evaluated on their individual merits.

Another significant constraint to intensification is potential environmental contamination. Sites previously developed as gas bars, service stations, industrial uses, etc. may have contaminated soils that prevent redevelopment for residential or even new commercial/industrial uses until such time as the contamination is remediated to acceptable levels. Sites adjacent to rail lines and properties with contamination may also be contaminated due to subsurface migration through soils. Environmental site assessments with associated testing and remediation as necessary are critical to determining the intensification potential of sites within and adjacent to existing or past commercial, industrial, and rail activities.

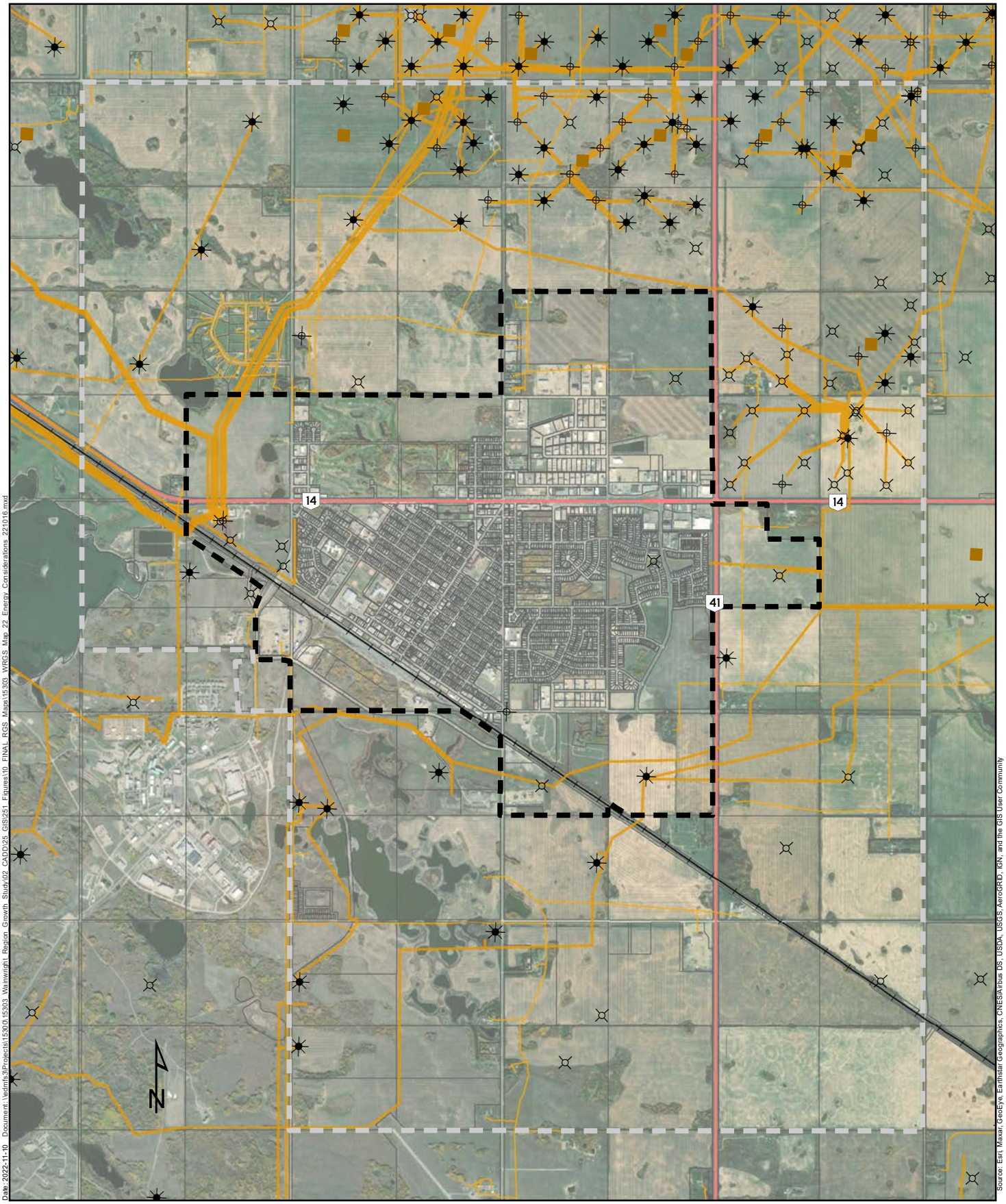
8.10 Energy Considerations

The Wainwright Region has significant oil and gas resources. Evidence of this is reflected by the prevalence of energy infrastructure in the study area. Map 22 illustrates the locations of three types of wells (abandoned, flowing/pumping/suspected, and other), facilities (such as batteries and similar infrastructure) and pipelines, all of which are scattered throughout the study area. The largest concentrations of wells are on the section of land at the northeast corner of Highway 41 and Highway 14, and in the north-central and northeast portions of the study area. A pipeline corridor with numerous parallel pipelines traverses the northwest portion of the study area from the oil and gas development in the west portion of the Town between Highway 14 and the CN main line. This corridor is fed by two pipeline corridors that traverse the western portion of the study area, one south of Highway 14 and the CN main line, and another north of Highway 41 by approximately 500 m.

Setback requirements from facilities and wells are established by the Alberta Energy Regulator (AER) as follows:

- 5 m from abandoned wells (excluding sour gas) with reclamation certified status or reclamation exempt status;
- 100 m from all other wells (excluding sour gas), including abandoned wells that do not yet have reclamation certified status or reclamation exempt status;
- Equal to the distance of the pipeline right-of-way for pipelines (excluding sour gas); and
- 100 m (Level 1), 500 m (Level 2), and 1,500 m (Level 3) from sour gas wells, pipelines, and facilities.

In addition, in accordance with advice from AER, all pipelines without existing registered right-of-way plans are assumed to require 15 m rights-of-way to protect these facilities.



Study Area
Town Boundary
Low Pressure Pipeline
High Pressure Pipeline
Oil and Gas Facility
Abandoned Well
Flowing, Pumping or Suspended Well
Other Well

0 250 500 1,000 1,500 m
CANA83-3TM114 1:40,000

Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

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WAINWRIGHT REGION GROWTH STUDY

MAP 22: ENERGY INFRASTRUCTURE CONSIDERATIONS

9.0 Future Growth Options

As presented in Section 7.1, the Town has a sufficient land supply to accommodate 50 years of growth across the Low Case, Base Case, and High Case population growth scenarios, but will require additional lands in the event of a possible substantial increase in the size of CFB Wainwright (i.e., the alternative CFB Case population growth scenario that features an increase of 1,000 jobs on the base). In response to the demonstrated needs of the Town and the MD within their interface area across the four population growth scenarios, four alternative growth options described below were developed for review and consideration:

- Current Wainwright IDP Option;
- Planning for the CFB Option;
- Joint Regional Industrial Option; and
- Rural Growth Option.

In general terms, these options focus only on those portions of the intermunicipal fringe area surrounding the Town where the highest levels of growth activity are anticipated to occur for both the Town and the MD. Also, all these options assume that the MD will also capture growth beyond its four IDP boundaries while the three villages will either capture growth within their boundaries or within future growth directions outside their current boundaries as identified in their IDPs with the MD (see Maps 23 to 25).

9.1 Current Wainwright IDP Option

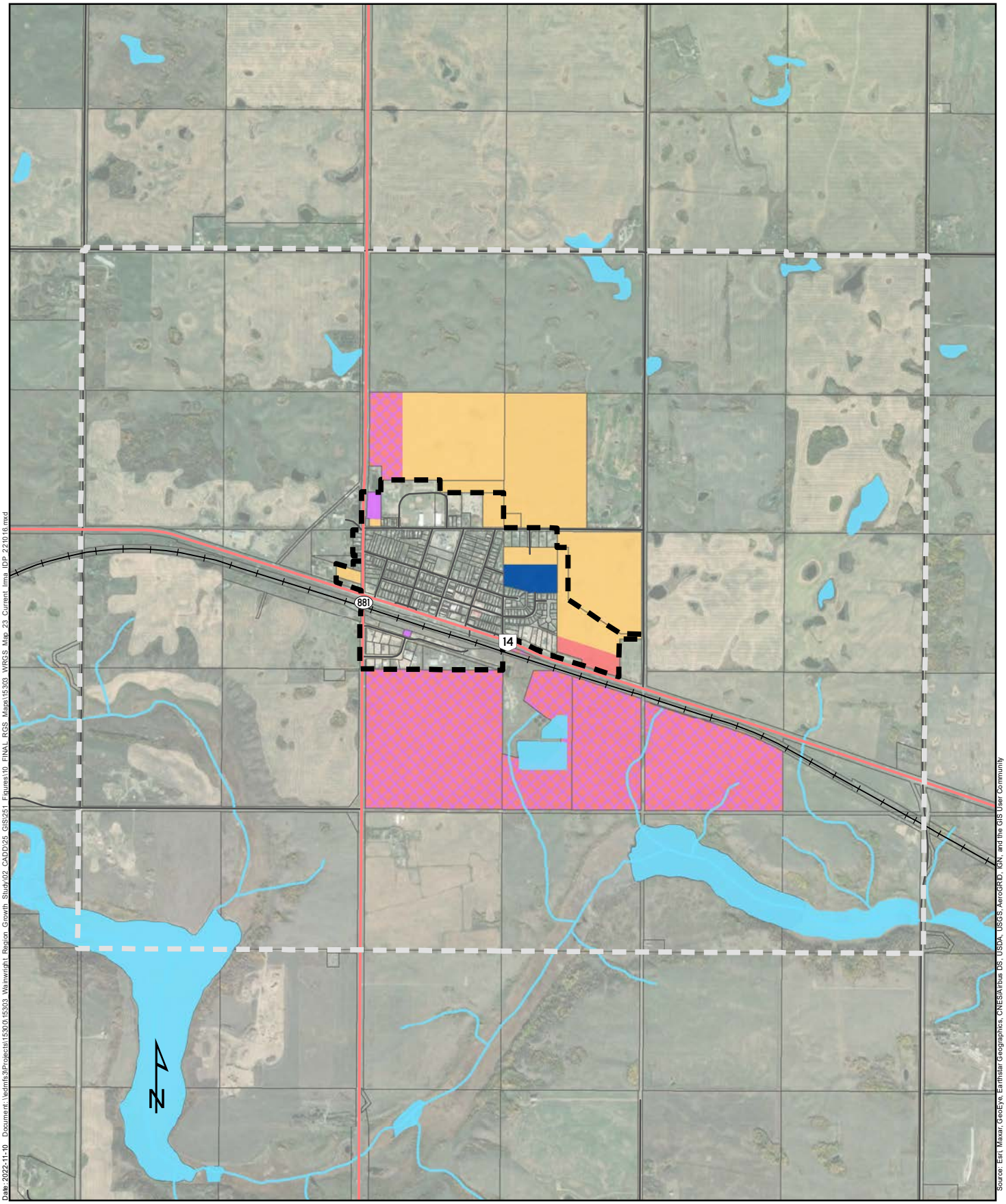
The Current IDP Option, which applies to the Low Case, Base Case, and High Case population growth scenarios, represents the status quo in that it adheres to the future growth directions contained in the current IDP as approved by the Town and MD. In this option, as shown in Map 26, future urban residential growth is proposed to be accommodated in four quarter sections adjacent to the Town's north boundary west of 14 Street/Range Road 65 to the north of the golf course, and two quarter sections to the east along Highway 41 (Buffalo Trail). Lands to accommodate future commercial/light industrial development are proposed along the Highway 41 (Buffalo Trail) frontage of the two easterly quarters.

9.2 Planning for the CFB Case Option

The Planning for the CFB Case Option, which applies to only the CFB Case population growth scenario, is a 50-year urban-focused revisitation of the growth directions outlined in the IDP based on the assumption that CFB Wainwright undergoes a significant expansion at some point in the 50-year time horizon. As shown in Map 27, a half-section of future urban industrial land is identified on the north boundary of the Town east of 14 Street/Range Road 65 and a partial quarter section on the west end of the Town adjacent to the base. In this option, future urban residential lands are reduced to include the half section to the east as shown in the Current Wainwright IDP Option, and a remnant quarter to the west, north of the CN rail line. Limited additional commercial growth areas are provided outside of Town limits to the east and west as the estimated land requirements provided in Section 7.1 indicates only a modest deficiency of commercial land for the Town under the CFB Case population growth scenario.

9.3 Joint Regional Industrial Option

The Joint Regional Industrial Option, which applies to the Low Case, Base Case, and High Case population growth scenarios, is premised on an opportunity to focus future development based on promoting economic development for the mutual benefit of both the Town and MD. As shown on Map 28, it replaces conventional urban residential and industrial growth areas with the notion of a joint regional industrial park of approximately 3.5 quarters located to the southeast of the Town adjacent to the CN rail line and Highway 41 (Buffalo Trail). This option introduces the concept of facilitating future industrial development in which the Town and MD would share both the tax revenues generated in the area, as well as any associated capital and operating costs. This option assumes that all urban growth within the 50-year horizon would be accommodated within the Town's current boundaries.



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Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

IDP Boundary
Village Boundary

Residential Urban
Commercial
Commercial/Industrial

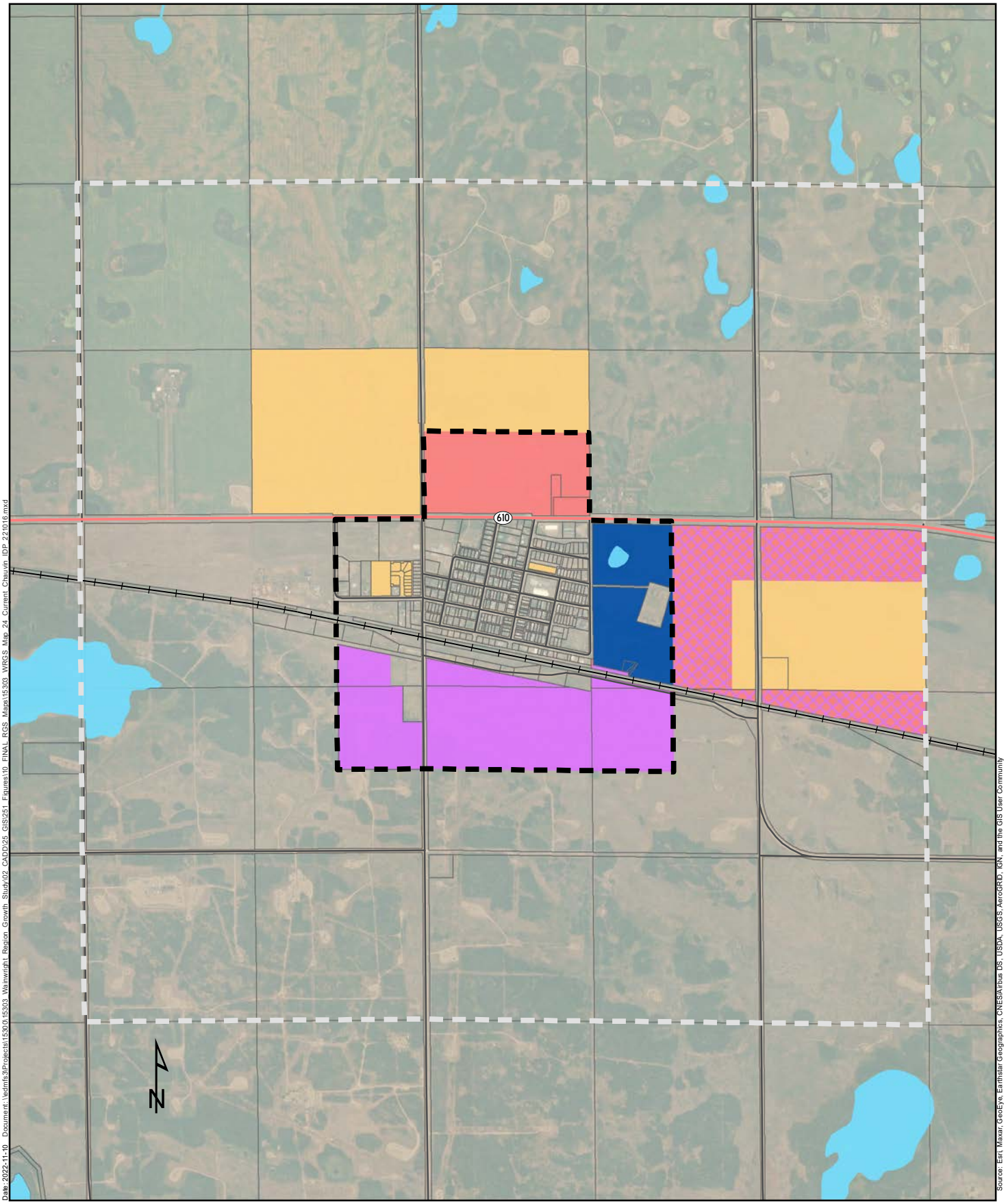
Industrial Urban
Institutional

0 200 400 800 1,200 m

CANA83-3TM114 1:30,000

WAINWRIGHT REGION GROWTH STUDY

MAP 23: CURRENT IRMA IDP GROWTH AREAS



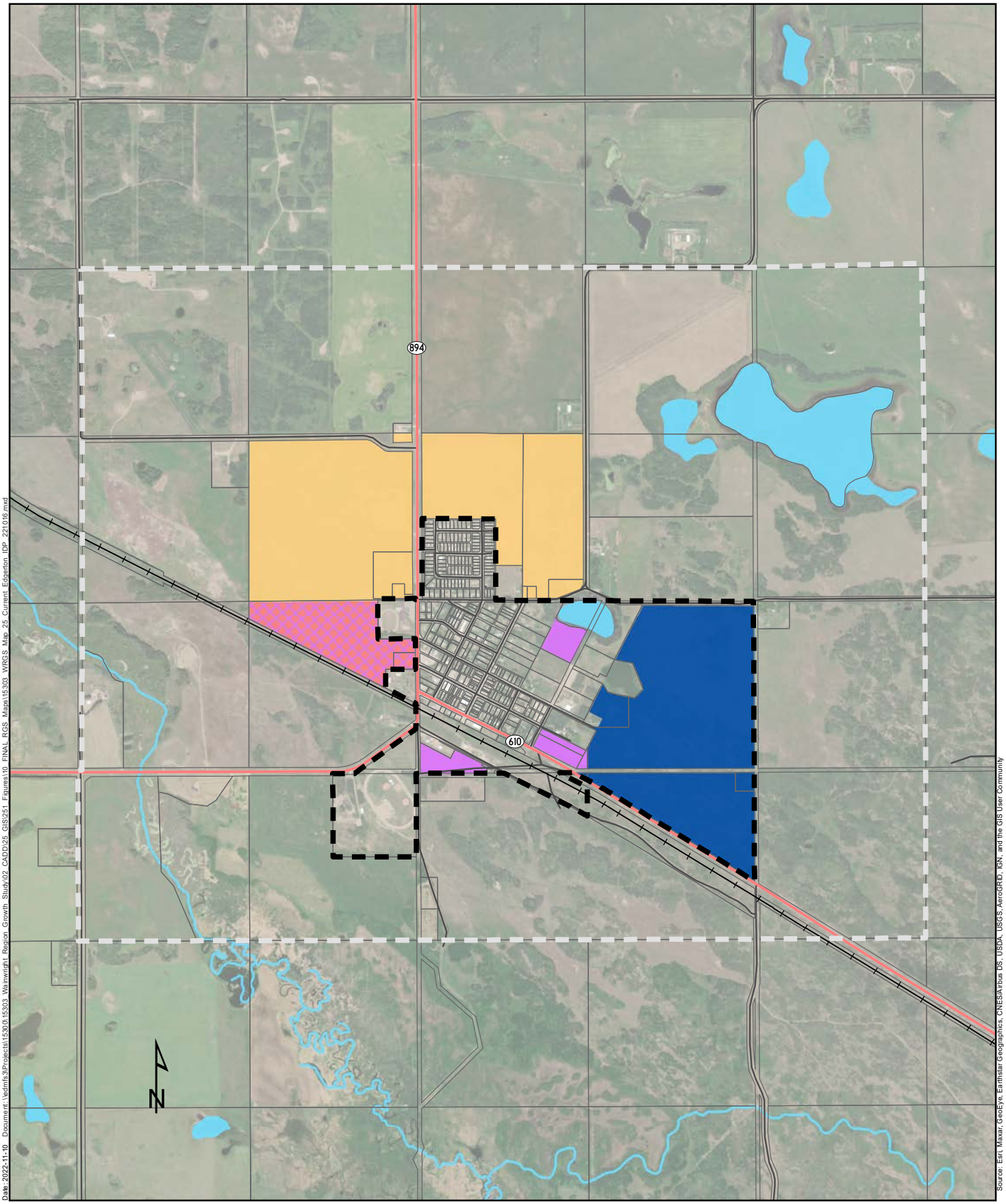
IDP Boundary
Village Boundary
Residential Urban
Commercial
Commercial/Industrial
Industrial Urban
Institutional

0 125 250 500 750 1,000 m
CANA83-3TM114 1:25,000

WAINWRIGHT REGION GROWTH STUDY

MAP 24: CURRENT CHAUVIN IDP GROWTH AREAS

Integrated Expertise. Locally Delivered.



IDP Boundary
Village Boundary
Residential Urban
Commercial
Commercial/Industrial
Industrial Urban
Institutional

0 125 250 500 750 1,000 m

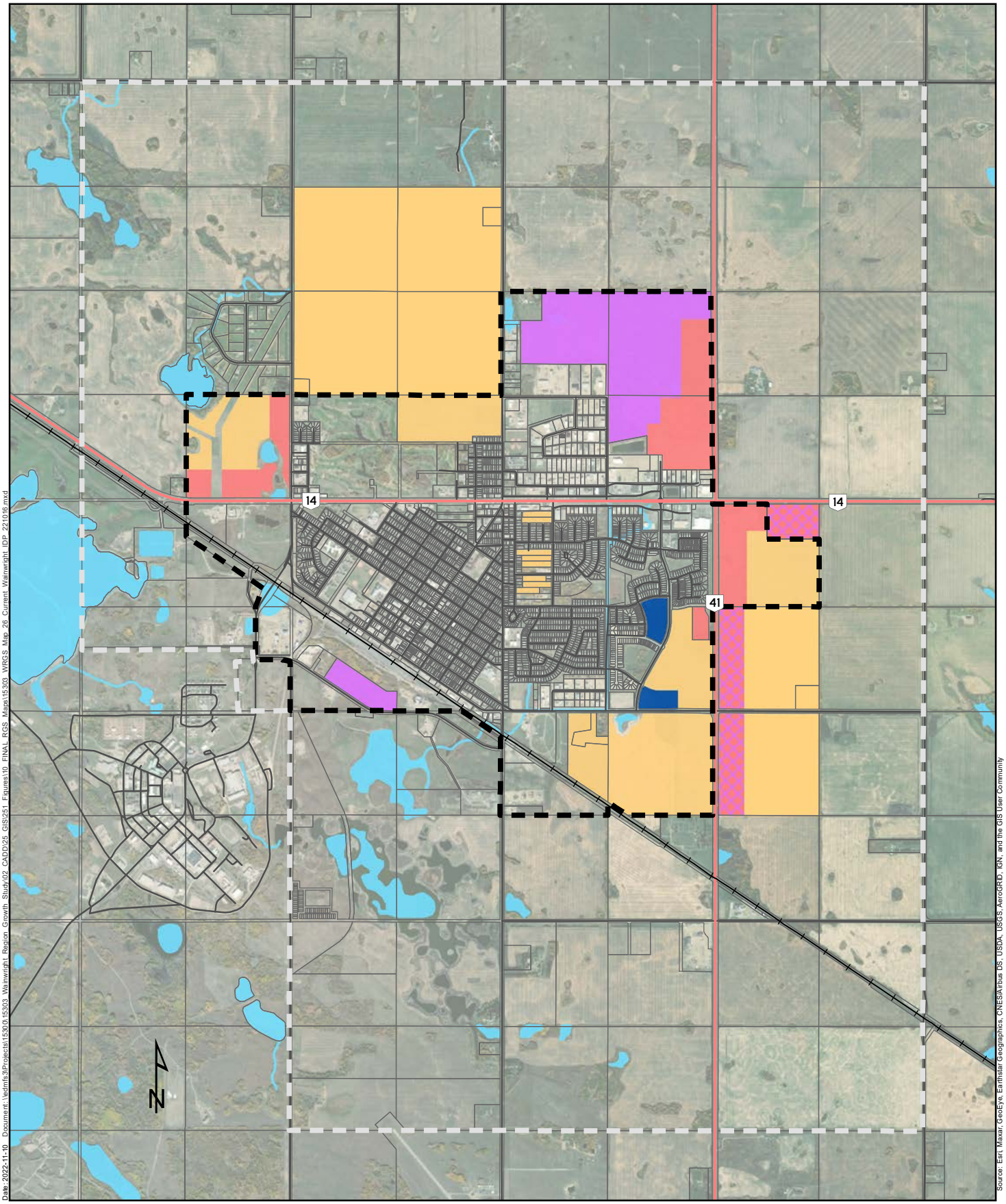
CANA83-3TM114

1:25,000

WAINWRIGHT REGION GROWTH STUDY

MAP 25: CURRENT EDGERTON IDP GROWTH AREAS

Integrated Expertise. Locally Delivered.



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Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

ISL

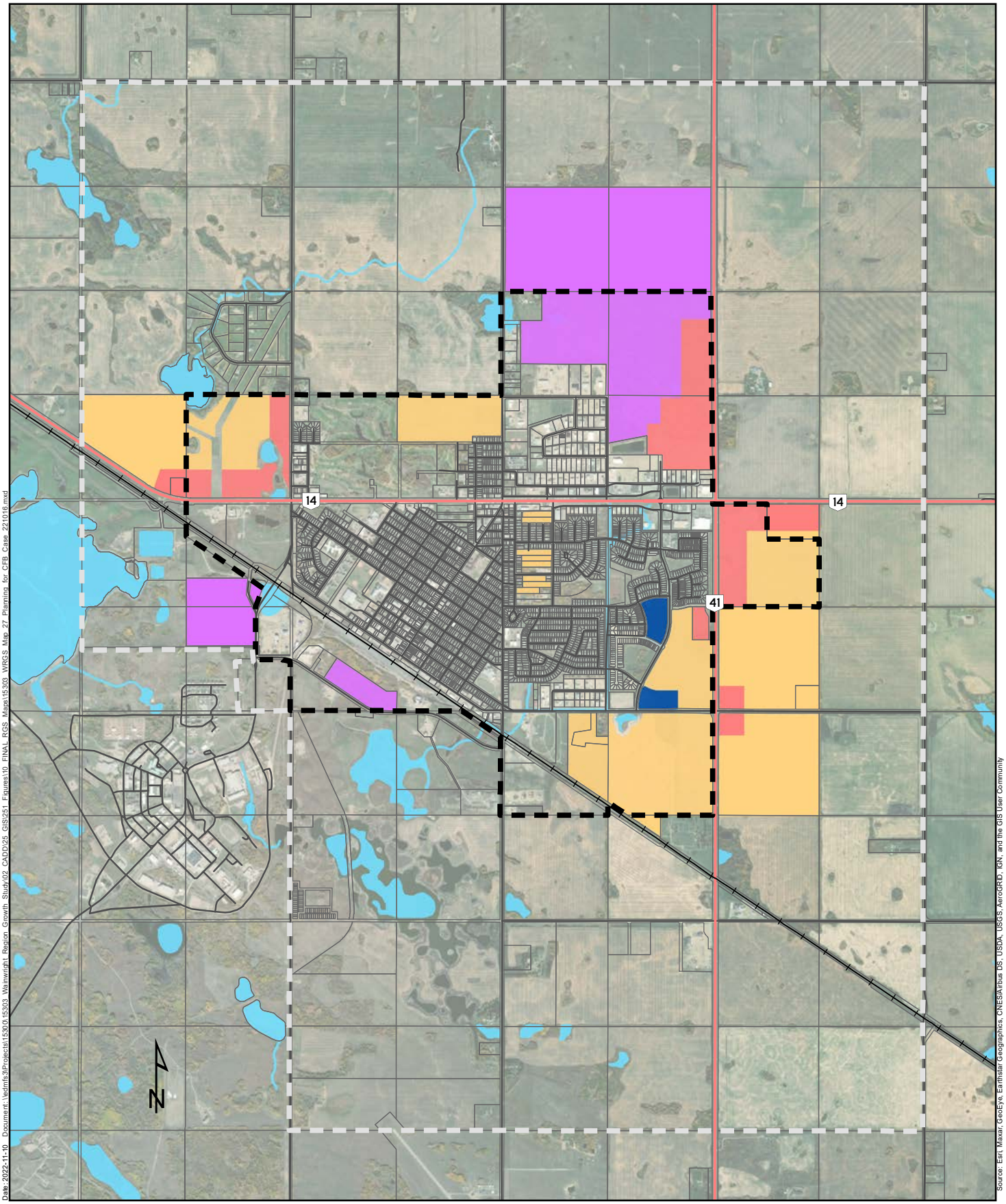
Study Area
Town Boundary
Residential Urban
Commercial
Commercial/Light Industrial
Industrial Urban
Institutional

0 250 500 1,000 1,500 m

CANA83-3TM114 1:40,000

WAINWRIGHT REGION GROWTH STUDY

MAP 26: CURRENT WAINWRIGHT IDP OPTION



Study Area
Town Boundary
Residential Urban
Commercial
Industrial Urban
Institutional

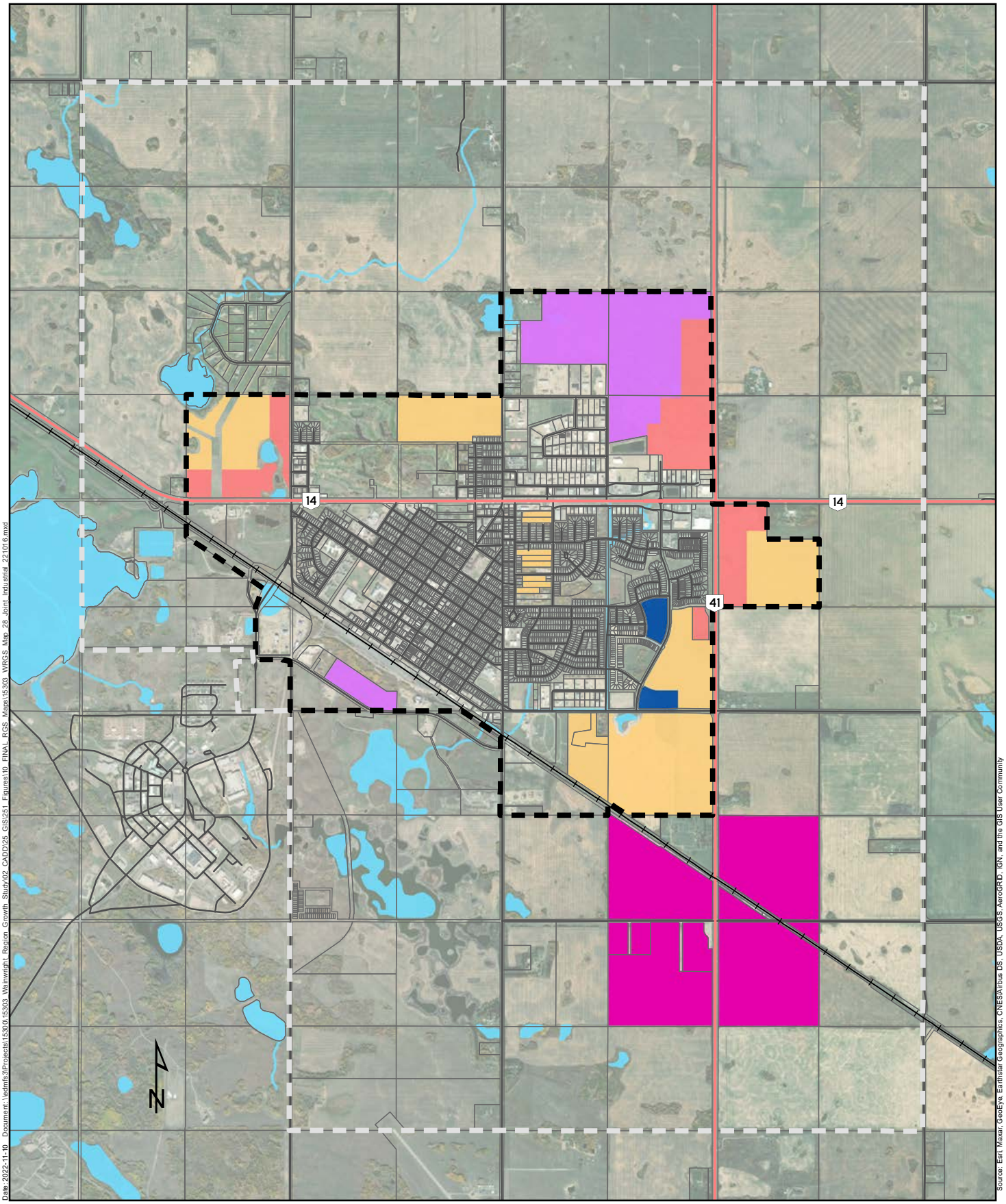
0 250 500 1,000 1,500 m

CANA83-3TM114 1:40,000

Integrated Expertise. Locally Delivered.

WAINWRIGHT REGION GROWTH STUDY

MAP 27: PLANNING FOR THE CFB CASE OPTION



Study Area
Town Boundary
Residential Urban
Commercial
Industrial Urban
Industrial Regional
Institutional

0 250 500 1,000 1,500 m

CANA83-3TM114 1:40,000

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MAP 28: JOINT REGIONAL INDUSTRIAL OPTION

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9.4 Rural Growth Option

The Rural Growth Option introduces the concept of enhanced rural development within the IDP area to allow the MD to capture future growth. This option proposes rural residential growth areas totaling seven quarter sections on Class 3 soils and/or in proximity to existing country residential development and the golf course. This option also introduces the potential for unserviced rural industrial development on three quarters, preferably adjacent to the CN rail line and/or a provincial highway. The lands identified can be scaled to meet the applicable population growth scenario (Low, Base, High, and CFB) that is ultimately selected. As was the case with the Joint Regional Industrial Option, this option assumes that all urban growth within the 50-year horizon would be accommodated within the Town's current boundaries. It is also assumed, along with the other three options presented, that the MD will also capture growth beyond the IDP boundary.

10.0 Summary and Conclusions

1. In the last 50 years, the Town of Wainwright's population has increased at an average annual rate of 1.1%, from 3,872 in 1971 to 6,606 in 2021. For comparison, the MD of Wainwright increased at an annual rate of 0.2%, the Village of Edgerton at 0.5%, and the Village of Irma at 0.2%. The Village of Chauvin experienced a slight population decrease during that same 50-year period – an average annual rate of 0.3%.
2. At its 2021 population of 6,606, the Town has grown by 39.5% over the previous 30 years since recording a population of 4,732 in the 1991 federal census. During this time, the MD's and Edgerton's growth were both 9.1% while Irma's growth was 7.9% and Chauvin's growth was -15.6%.
3. The Town's historical population growth pattern over the past 50 years is primarily reflective of its continued role as a regional commercial service centre and as the main beneficiary of economic activity generated by CFB Wainwright.
4. This Growth Study presents four sets of population growth scenarios – Low, Base, High, and CFB cases – to estimate potential future growth in the Wainwright region over the next 50 years. These alternatives are based on varying assumptions respecting population, job growth, and place of work. The alternative CFB Case is a notional scenario that assumes a doubling in size of CFB Wainwright within the 50-year horizon.
5. The 50-year population projections resulted in a diversity of potential population figures ranging from:
   a. 5,918 for the Town, 4,596 for the MD, 531 for Irma, 338 for Chauvin, and 385 for Edgerton (11,768 for the Region) in the Low Case;
   b. 7,051 for the Town, 5,441 for the MD, 601 for Irma, 363 for Chauvin, and 395 for Edgerton (13,853 for the Region) in the Base Scenario;
   c. 8,536 for the Town, 6,549 for the MD, 694 for Irma, 396 for Chauvin, and 409 for Edgerton (16,583 for the Region) in the High Scenario; and
   d. 12,800 for the Town, 8,494 for the MD, 857 for Irma, 453 for Chauvin, and 432 for Edgerton (20,035 for the Region) in the CFB Case.
6. The retail trade area for frequent visits to the Town is approximately 12,500 people while the retail trade areas for specialty visits is approximately 51,500 people.
7. In terms of unabsorbed gross developable land supplies:
   a. the Town has 194.1 ha for urban residential, 83.7 ha for commercial, 107.6 ha for industrial, and 10.1 ha for institutional (395.6 ha total);
   b. the MD has 1,060.3 ha for rural residential, 138.4 ha for commercial, 138.4 ha for industrial, 29.0 ha for hamlet residential, and 130.5 ha for controlled urban residential (1,496.7 ha total);
   c. Irma has 16.1 ha for urban residential, 4.0 ha for commercial, 1.5 ha for industrial, and 4.8 ha for institutional (26.4 ha total);
   d. Chauvin has 3.7 ha for urban residential, 31.7 ha for commercial, 73.16 ha for industrial, and 25.6 ha for institutional (134.2 ha total); and
   e. Edgerton has none for urban residential, none for commercial, 8.3 ha for industrial, and 75.9 ha for institutional (84.1 ha total).
8. In the 40-year period between 1979 and 2018 inclusive, the total amount of lands consumed through the plan registration process in:
   a. the Town amounted to 259.6 ha, or 6.5 ha of land consumed per year;
   b. the MD amounted to 4,741.0 ha, or 118.5 ha of land consumed per year;
   c. Irma amounted to 32.4 ha, or 0.8 ha of land consumed per year;
   d. Chauvin amounted to 20.4 ha, or 0.5 ha of land consumed per year; and
   e. Edgerton amounted to 11.6 ha, or 0.3 ha of land consumed per year.
9. For the Town, if the average annual absorption rate of 6.5 ha of land is maintained, and with 395.6 ha of lands available to accommodate future growth, it could take over 60 years to absorb these lands through the plan registration process (e.g., subdivision plans, road plans, etc.). The equivalent estimates for the other municipalities in the region are less than 10 years for the MD (assuming 118.5 ha per year), over 30 years for Irma (assuming 0.8 ha per year), over 200 years for Chauvin (assuming 0.5 ha per year), and over 300 years for Edgerton (assuming 0.3 ha per year).

10. The Town has sufficient residential, commercial, industrial, and institutional (embedded in residential) land supply to accommodate 50 years of growth across the Low Case, Base Case, and High Case population growth scenarios. The Town's 50-year land requirements under the CFB Case exceed its current land supply by approximately 268 ha.
11. The MD has sufficient residential, commercial, and institutional (embedded in residential) land supply to accommodate 50 years of growth across the Low Case, Base Case, and High Case population growth scenarios. Under the CFB Case, the MD would require additional industrial land supply within approximately 30 years.
12. The Village of Irma has sufficient residential, commercial, and institutional (embedded in residential) land supply to accommodate 50 years of growth across the in the Low Case, Base Case, and High Case population growth scenarios. It may have industrial land requirements within approximately 20 years and 10 years under Base Case and High Case population growth scenarios respectively and would require additional land supply across all land use categories within approximately 10 years under the CFB Case.
13. The Village of Chauvin has sufficient residential, commercial, industrial, and institutional (embedded in residential) land supply to accommodate 50 years of growth in all four population growth scenarios – the Low Case, the Base Case, the High Case, and the CFB Case.
14. The Village of Edgerton has sufficient industrial and institutional land supply to accommodate 50 years of growth in all four population growth scenarios – the Low Case, the Base Case, the High Case, and the CFB Case. At present, Edgerton has no residential or commercial land supply to accommodate future growth.
15. In response to the demonstrated growth needs of the Town and the MD within their interface area, four alternative future growth options were developed – a Current Wainwright IDP Option, a Planning for the CFB Case Option, a Rural Growth Option, and a Joint Regional Industrial Option.
16. The Current Wainwright IDP Option reflects the future growth directions contained in the current IDP as approved by the Town and MD in 2019. In this option, future urban residential growth is proposed to be accommodated in four quarter sections adjacent to the Town's northern boundary north of the golf course, and two quarter sections to the east. Lands to accommodate future commercial/light industrial development are proposed along the frontage of the two easterly quarters.
17. The Planning for the CFB Case Option revisits the growth directions outlined in the IDP based on the assumption that CFB Wainwright undergoes a significant expansion at some point in the 50-year time horizon. In this option, a half-section of future urban industrial land is identified on the north boundary of the Town and a partial quarter section on the west end of the Town adjacent to the base. Future urban residential lands are reduced to include the half section to the east as shown in the Current Wainwright IDP Option, and a remnant quarter to the west. Limited additional commercial growth areas are provided outside of Town limits to the east and west as most of the Town's commercial land requirements can be addressed within its current boundary.
18. The Joint Regional Industrial Option focuses future development based on promoting economic development for the mutual benefit of both the Town and MD. It replaces conventional urban residential and industrial growth areas with a joint regional industrial park of approximately 3.5 quarters to the southeast of the Town to leverage rail and highway access opportunities. This option introduces a concept of facilitating future industrial development in which the Town and MD would share both the tax revenues generated in the area, as well as any associated capital and operating costs.
19. The Rural Growth Option introduces the concept of enhanced rural development within the IDP area to allow the MD to capture future growth. This option proposes rural residential growth areas on seven quarters with poorer agricultural soils and/or in proximity to existing country residential development and the golf course. It also introduces the potential for unserviced rural industrial development on quarters adjacent to the CN rail line and/or a provincial highway.
20. All the alternative future growth options assume that the MD will also capture growth beyond its four IDP boundaries while the three villages will either capture growth within their boundaries or within future growth directions outside their current boundaries as identified in their IDPs with the MD.

APPENDIX A

2019 Town of Wainwright Retail Offerings Inventory

	Business Name	Retail Category 1	Retail Category 2	Retail Category 3
1	3rd Ave Second Hand	Clothing and accessories stores		
2	7-Eleven Canada, Inc.	Grocery and specialty food stores		
3	Alberta Adventure Divers	Sporting goods and recreation stores	Clothing and accessories stores	
4	Anna's Restaurant & Esso	Gas stations	Grocery and specialty food stores	
5	Armstrongs Clothing & Sports	Sporting goods and recreation stores		
6	Armstrong's Furniture & Appliances	Furniture, home furnishings, and appliances stores		
7	Beyond A Beaten Path	Furniture, home furnishings, and appliances stores		
8	Canadian Tire	Department stores		
9	Carpets West	Furniture, home furnishings, and appliances stores		
10	Cornerstone Co-Op Food Store	Grocery and specialty food stores		
11	Cornerstone Co-Op Gas Bar/Car Wash	Gas stations	Grocery and specialty food stores	
12	Cornerstone Co-Op Liquor	Liquor and tobacco stores		
13	Cornerstone Co-Op Lumber	Building materials and garden equipment stores		
14	Crabbapples	Clothing and accessories stores		
15	Crescent Auto			
16	Daines & Daubney	Furniture, home furnishings, and appliances stores	Clothing and accessories stores	
17	Darwin's No Frills	Grocery and specialty food stores		
18	Denwood Motors (1993) Ltd	Motor vehicles and parts dealers		
19	Don's Speed Parts	Motor vehicles and parts dealers		
20	Eagle Lock & Glass	Motor vehicles and parts dealers		
21	Fas Gas - Hwy 14 Corner Store	Gas stations	Grocery and specialty food stores	

	Business Name	Retail Category 1	Retail Category 2	Retail Category 3
22	Fountain Tire	Motor vehicles and parts dealers		
23	Freestyle Vapes Inc.	Liquor and tobacco stores		
24	Front Porch Mercantile	Furniture, home furnishings, and appliances stores	Clothing and accessories stores	
25	Georges Furniture	Furniture, home furnishings, and appliances stores		
26	Gibson's Hardware Ltd.	Building materials and garden equipment stores		
27	Globe Footwear Ltd.	Footwear stores		
28	Hako-Oja-Studio & Custom Framing	Furniture, home furnishings, and appliances stores		
29	Hi-Way Service 86	Gas stations	Grocery and specialty food stores	
30	Husky Travel Center	Gas stations	Grocery and specialty food stores	
31	Hwy 14 Corner Store	Grocery and specialty food stores		
32	I Want That Stuff	Hobby, toy, and game stores		
33	Ignite Distribution Ltd	Motor vehicles and parts dealers		
34	Integra Tire Wainwright Ltd	Motor vehicles and parts dealers		
35	J.D. Barber Equipment Ltd.	Motor vehicles and parts dealers		
36	Kay's Clothing	Clothing and accessories stores		
37	Lakeland Communications	Electronics stores		
38	Mark's Work Wearhouse	Clothing and accessories stores	Footwear stores	
39	McRae Floorcovering	Furniture, home furnishings, and appliances stores		
40	Meatco Sales Ltd.	Grocery and specialty food stores		
41	Merli's Peace of Mind	Personal care stores		
42	Mid-West Auto Supply Wainwright	Motor vehicles and parts dealers		
43	No Frills Gas Bar	Gas stations	Grocery and specialty food stores	

	Business Name	Retail Category 1	Retail Category 2	Retail Category 3
44	Norris Ford Sales Ltd	Motor vehicles and parts dealers		
45	Northern Trailer & Truck Sales	Motor vehicles and parts dealers		
46	Oj's Leisure Products	Motor vehicles and parts dealers		
47	Ok Tire Wainwright	Motor vehicles and parts dealers		
48	Optifuel Nutrition	Personal care stores		
49	Pauls Trailers & Truck Outfitting	Motor vehicles and parts dealers		
50	Pet Valu	Miscellaneous stores		
51	Pilot Propane	Fuel dealers		
52	Pioker's Accessory Installations	Motor vehicles and parts dealers		
53	Quintastic's Office Supplies & Services	Miscellaneous stores		
54	R.G.B. Classic Motorcycles Ltd.	Motor vehicles and parts dealers		
55	Rain Dog Skate Shop	Clothing and accessories stores	Footwear stores	Sporting goods and recreation stores
56	Rexall/Pharm Plus Pharmacies #7516	Pharmacies		
57	Sobeys Liquor Wainwright	Liquor and tobacco stores		
58	Sproutsnjabbers Clothing Company	Clothing and accessories stores		
59	Suzanne's & Jenny's	Clothing and accessories stores		
60	T Shirts Plus Wainwright	Clothing and accessories stores		
61	Tenth Street Menswear	Clothing and accessories stores		
62	The Brick	Furniture, home furnishings, and appliances stores	Electronics stores	
63	The Iron Raven	Furniture, home furnishings, and appliances stores		
64	The Source	Electronics stores		
65	Toys & Treasures Ltd.	Hobby, toy, and game stores		

	Business Name	Retail Category 1	Retail Category 2	Retail Category 3
66	Treadpro Wainwright	Motor vehicles and parts dealers		
67	United Farmers of Alberta	Fuel dealers		
68	Vision Glass & Door	Miscellaneous stores		
69	Voila!	Furniture, home furnishings, and appliances stores	Clothing and accessories stores	Jewellery stores
70	Wainalta Motors Ltd.	Motor vehicles and parts dealers		
71	Wainwright Auto Supply (1988)	Motor vehicles and parts dealers		
72	Wainwright Flower Cart Ltd.	Miscellaneous stores		
73	Wainwright Jewellers	Jewellery stores		
74	Wainwright Liquor & Cold Beer Store	Liquor and tobacco stores		
75	Wainwright Lumber	Building materials and garden equipment stores		
76	Wainwright Value Drug Mart	Pharmacies		
77	Walmart	Department stores		
78	Warehouse One - The Jean Store	Clothing and accessories stores		
79	Willerton Ski-Doo and Golf Cart Ltd.	Motor vehicles and parts dealers		
80	Your Dollar Store with More	Discount stores		