THE TOWN OF Tofield
Building the Future

AGENDA

REGULAR MEETING OF COUNCIL OF THE TOWN OF TOFIELD to be held Monday, March 24, 2025, 5:00 p.m., Town of Tofield Administration Building, Council Chambers

1. Present

2. Call to Order

"As we gather here today, we acknowledge we are on Treaty 6 Territory and the Homeland of the Métis. **We pay our respect to the First Nations and Métis ancestors of this place and reaffirm our relationship with one another**."

3. Adoption of Agenda

4. Minutes

(a) Minutes of the Regular meeting of Council of the Town of Tofield held Monday, March 10, 2025.

5. Delegation

a) 5:00 p.m. Jackie Sargent, Communication and Public Relations Advisor – Claystone Waste will be present to provide an overview.

6. Correspondence

- Letter from the Honorable Ric McIver, Minister of Municipal Affairs, regarding the *Education Property Tax (EPT).*

7. New Business

(a) Request for sponsorship from the Tofield and District Chamber of Commerce, regarding the Annual Easter Egg Hunt, to be held April 19th 2025.

(b) Stormwater Management Plan

(c) Beaver County and Town of Tofield Intermunicipal Development Plan

8. Council Reports

9. Closed Session

Section 21 – Harmful to Intergovernmental Relations - *Freedom of Information and Protection of Privacy Act*.

Section 16 – Business Interest of a Third Party - *Freedom of Information and Protection of Privacy Act*.

10. Adjournment

MINUTES OF THE REGULAR MEETING OF COUNCIL OF THE TOWN OF TOFIELD held Monday, March 10, 2025, Town of Tofield Administration Building Council Chambers

PRESENT

1. Mayor Dueck(Via TEAMS); Councillors, Tiedemann, Martineau, Conquest and Chehade; Cindy Neufeld, Chief Administrative Officer and Assistant Chief Administrative Officer Edwards.

Also Present: Kari Janzen, Tofield Mercury, Jackie Sargent, Claystone Waste Ltd (Via TEAMS) Jaylynn Umphrey, Victim Services, Ken Sawyer, Acing Detachment Commander, Tofield RCMP, Melody Littell and Doris Pindroch (5:22 p.m.) Regional Victim Serving Society

CALL TO ORDER

2. Mayor Dueck called the meeting to order at 5:00 p.m.

"As we gather here today, we acknowledge we are on Treaty 6 Territory and the Homeland of the Metis. We pay our respect to the First Nations and Metis ancestors of this place and reaffirm our relationship with one another"

ADOPTION OF AGENDA
01-03-25

3. **MOVED** by Tiedemann that the Agenda be approved as amended.

CARRIED UNANIMOUSLY

Add: 9. New Business:

d) Financial Audit letter, from Becher Munro & Company Chartered Professional Accountants.

e) Select Engineering Capital Works Tender

f) AB Munis Caucus Review.

MINUTES

02-02-25

4. (a) **MOVED** by Chehade that the Minutes of the Regular meeting of Council of the Town of Tofield held February 24, 2025, be approved as presented.

CARRIED UNANIMOUSLY

FINANCIAL

5. (a) **MOVED** by Martineau that the Monthly Financial Statement for the period ending February 28, 2025, be approved.

03-03-25 CARRIED UNANIMOUSLY

(b) **MOVED** by Chehade that the Interim Operating Budget Report be approved.

04-03-25 CARRIED UNANIMOUSLY

(c) **MOVED** by Martineau that the Open Payables for the months of January 2025 and February 2025 in the total amount of $611,804.88 be approved for payment.

05-03-25 CARRIED UNANIMOUSLY

CORRESPONDENCE

6. The following Correspondence was presented:

- Letter from the Honorable Ric McIver, Minister of Municipal Affairs, regarding the *Provincial Priorities Act*;
- Letter from the Honorable Ric McIver, Minister of Municipal Affairs, regarding Budget 2025 and;
- AB Municipalities preliminary review of Budget 2025

MOVED by Conquest that the Correspondence be received and filed.

06-03-25 CARRIED UNANIMOUSLY

UNFINISHED BUSINESS

7. (a) Letter from Community Attraction and Retention Committee (CARC) requesting waiving of the Community Hall Rental Rate.

MOVED by Martineau that fees for the Community Hall be waived for CARC for their use on March 16, 2025.

07-03-25 CARRIED UNANIMOUSLY

NEW BUSINESS

8. (a) Letter from Tofield Curling Club, requesting sponsorship for the Annual Tofield Ladies Bonspiel.

Mayor Dueck declared conflict with the requesting group.

MOVED by Conquest that Council provide a donation of $500.00 for the use of the entire Curling Club.

08-03-25 CARRIED

NEW BUSINESS

8. (b) Request for Decision – Community Hall Committee

MOVED by Dueck that Councillor Martineau and Deputy Mayor Conquest be appointed to the Community Hall Committee.

09-03-25

CARRIED UNANIMOUSLY

(c) Bylaw 1352 being a Bylaw of the Town of Tofield, in the Province of Alberta, to amend Bylaw 1330 for the Town of Tofield – Fire Protection and Emergency Management.

MOVED by Tiedemann that Bylaw 1330 be read a first time.

10-03-25

CARRIED UNANIMOUSLY

MOVED by Chehade that Bylaw 1330 be read a second time.

11-03-25

CARRIED UNANIMOUSLY

MOVED by Conquest that Bylaw 1330 be presented for third reading.

12-03-25

CARRIED UNANIMOUSLY

MOVED by Martineau that Bylaw 1330 be read a third time.

13-04-25

CARRIED UNANIMOUSLY

(d) Financial Audit letter from Becher Munro & Company Chartered Professional Accountants regarding the Audit Plan for 2025.

MOVED by Conquest to acknowledge and approve the Audit Plan for 2025; that we have policies and procedures to identify and respond to fraud; and there is no knowledge of any actual, suspected or alleged fraud, including misappropriation of assets or manipulation of financial statements.

14-03-25

CARRIED UNANIMOUSLY

NEW BUSINESS

8. (e) Letter from Select Engineering regarding Capital Works on 53rd Avenue Improvements from 48th Street to 49thStreet.

MOVED by Chehade to award Nikiforuk Construction the tender for 53rd Avenue Improvement(s) from 48th Street to 49th Street.

15-03-25

CARRIED UNANIMOUSLY

(f) Councillor Tiedemann provided information on the Alberta Municipalities Leaders Caucus Conference.

DELEGATION

9. (a) 5:22 p.m. Melody Littell and Doris Pindroch, with Eastern Alberta Regional Victim Serving Society, providing an overview of the new Provincial model, and an outline of the key steps for referral and services.

Umphrey, Littell and Pindroch left the Council Chambers at 6:21 p.m.

ADJOURNMENT

10. **MOVED** by Chehade that the meeting adjourn at 6:23 p.m.

16-03-25

CARRIED UNANIMOUSLY

_____
MAYOR

_____
CHIEF ADMINISTRATIVE OFFICER

ALBERTA
MUNICIPAL AFFAIRS
Office of the Minister
MLA, Calgary-Hays

AR118482

March 14, 2025

Dear Chief Elected Officials:

As you know, my colleague, the Honourable Nate Horner, President of Treasury Board and Minister of Finance, tabled *Budget 2025* in the Alberta Legislature on February 27. I am writing to share further information regarding *Budget 2025* as related to education property tax (EPT).

Budget 2025 takes an important step toward stabilizing operational funding for education systems across Alberta. Historically, approximately one-third of operational funding for Alberta Education came from the EPT municipalities collect from their rate payers on behalf of the province. In recent years, the proportion that EPT contributes to funding the operations of Alberta Education has decreased to less than 30 per cent. Through *Budget 2025*, the Government of Alberta is increasing the proportion of Alberta Education's operating budget covered by EPT to 31.6 per cent in 2025/2026 and back to 33 per cent in 2026/2027.

To provide Alberta's public education system with a stable and sustainable source of funding and meet the demands of increased student enrollment, EPT revenue will increase by 14 per cent from last year, to a total of $3.1 billion. This increase will be reflected on the property tax bills that municipalities send to property owners in 2025.

The Ministry of Municipal Affairs sent EPT requisitions to all municipal administrations, informing them of their share of the provincial EPT. For more information on EPT, including a fact sheet (Attachment 1) and the EPT Requisition Comparison Report (Attachment 2), please visit www.alberta.ca/property-tax and click on "Education property tax."

Municipalities across Alberta can inform residents that a portion of their property taxes goes directly to the provincial government to help pay for the operations of Alberta's education system. Many municipalities do this by adding a note to their property tax bills sent through the mail.

.../2

320 Legislature Building, 10800 - 97 Avenue, Edmonton, Alberta T5K 2B6 Canada Telephone 780-427-3744 Fax 780-422-9550

Budget 2025 is meeting the challenge of the cost of living by helping families keep more money in their pockets with lower personal income taxes and continuing investments in education and health care. I look forward to working together over the next year as we build strong and vibrant communities that make Alberta the best place in Canada to live, work, and raise a family.

Sincerely,

Ric McIver
Minister

Attachments:
1. Education Property Tax Fact Sheet (2025)
2. Education Property Tax Comparison Report (2025)

Education Property Tax

Fact Sheet

Highlights of the 2025-26 provincial education property tax

Budget 2025 will see an increase to the education property tax rates after being frozen in 2024-25. The higher rates, along with rising property values and increased development, are expected to raise the education property tax requisition from $2.7 billion in 2024-25 to $3.1 billion in 2025-26.

The share of education operating costs funded by the education property tax will increase to 31.6 per cent in 2025-26, following historic lows of about 28 per cent in 2023-24 and 29.5 per cent in 2024-25. This will enhance Alberta's ability to fund school operations, leading to better educational outcomes as student enrolment continues to grow.

Education property taxes provide a stable source of revenue and equitable funding that supports K-12 education, including teachers' salaries, textbooks and classroom resources. They are not used to fund government operations, school capital costs or teachers' pensions.

Under the provincial funding model, all education property taxes are pooled by Alberta Education through the Alberta School Foundation Fund and distributed to public and separate school boards on an equal per-student basis.

How education property tax is calculated for municipalities

All municipalities collect an equitable share of the provincial education property tax in proportion to their total taxable property assessments, which are equalized across the province. The equalization process ensures owners of properties of similar value and type across the province pay similar amounts of education property taxes. For more details on this process, refer to the Guide to Equalized Assessment (www.municipalaffairs.alberta.ca/documents/as/guide_to_equalized_assessment.pdf) on the Alberta website.

The provincial equalized assessment base used to determine education property taxes this year reflects 2023 property values.

In 2025, the education property tax will be calculated at a rate of $2.72 per $1,000 of the total residential/farmland equalized assessment value. The non-residential rate will be set at $4.00 per $1,000 of equalized assessment value. Most property owners will see a change to their education tax bill due to increasing mill rates and assessment values. Individual properties are taxed based on the local education property tax rate set by the municipality.

How much Calgary and Edmonton contribute to education property tax

Based on this formula, Calgary taxpayers will contribute $1.037 billion in education property tax in 2025. Edmonton taxpayers will contribute $575 million in education property tax in 2025. Funding for Calgary and Edmonton school boards will be based on the published profiles expected to be released by the end of March 2025.

Declaration of faith

The Canadian Constitution guarantees Roman Catholic citizens' minority rights to a separate education system. In communities with separate school jurisdictions, property owners can declare they are of the Roman Catholic faith, so their education property tax dollars can be directed to those separate school jurisdictions.

Education system benefits everyone

Alberta's education system plays a crucial role in shaping a skilled workforce, driving economic growth and fostering the social well-being of individuals and the province as a whole. It serves as a cornerstone for personal and collective prosperity, benefiting all Albertans—regardless of age, marital status or parental responsibilities.

Questions about financial assistance for seniors or the Seniors Property Tax Deferral program can be directed to the Alberta Supports Contact Centre at 1-877-644-9992 (in Edmonton - 780-644-9992).

Alberta

2025 Education Property Tax Requisition Comparison Report

Municipality	Residential / Farm Land Requisition			Non-Residential Requisition			Total Education Requisition		
	2024	2025	% Change	2024	2025	% Change	2024	2025	% Change
City									
City of Airdrie	$32,676,721	$40,805,954	25%	$7,511,823	$8,908,827	19%	$40,188,545	$49,714,781	24%
City of Beaumont	$8,754,927	$10,279,535	17%	$941,561	$1,075,964	14%	$9,696,488	$11,355,500	17%
City of Brooks	$2,922,626	$3,197,756	9%	$1,245,129	$1,331,680	7%	$4,167,755	$4,529,436	9%
City of Calgary	$662,592,617	$790,698,938	19%	$218,956,754	$246,642,379	13%	$881,549,371	$1,037,341,317	18%
City of Camrose	$5,706,740	$6,369,265	12%	$2,395,051	$2,602,544	9%	$8,101,791	$8,971,809	11%
City of Chestermere	$12,471,769	$16,199,231	30%	$898,257	$1,100,498	23%	$13,370,026	$17,299,728	29%
City of Cold Lake	$4,333,490	$4,965,053	15%	$2,250,679	$2,494,154	11%	$6,584,170	$7,459,208	13%
City of Edmonton	$376,410,720	$411,115,425	9%	$152,709,073	$164,041,580	7%	$529,119,793	$575,157,005	9%
City of Fort Saskatchewan	$10,595,208	$11,991,264	13%	$4,936,892	$5,538,948	12%	$15,532,100	$17,530,212	13%
City of Grande Prairie	$18,324,596	$20,103,995	10%	$11,818,731	$12,679,645	7%	$30,143,327	$32,783,641	9%
City of Lacombe	$4,114,518	$4,683,149	14%	$1,315,723	$1,546,049	18%	$5,430,241	$6,229,198	15%
City of Leduc	$12,014,226	$13,877,339	16%	$8,093,219	$9,565,323	18%	$20,107,445	$23,442,662	17%
City of Lethbridge	$32,216,642	$36,528,257	13%	$11,640,476	$13,377,829	15%	$43,857,118	$49,906,086	14%
City of Lloydminster	$5,541,443	$6,079,283	10%	$4,042,364	$4,433,079	10%	$9,583,808	$10,512,362	10%
City of Medicine Hat	$20,260,317	$22,491,557	11%	$6,535,656	$7,437,516	14%	$26,795,973	$29,929,073	12%
City of Red Deer	$30,998,165	$34,713,671	12%	$14,008,329	$15,291,018	9%	$45,006,494	$50,004,689	11%
City of Spruce Grove	$14,515,474	$16,553,065	14%	$4,551,525	$5,171,599	14%	$19,066,999	$21,724,664	14%
City of St. Albert	$30,468,863	$33,797,441	11%	$7,729,758	$8,571,041	11%	$38,198,621	$42,368,481	11%
City of Wetaskiwin	$2,649,107	$2,926,303	10%	$1,333,280	$1,436,688	8%	$3,982,386	$4,362,991	10%
Specialized Municipality									
Lac La Biche County	$3,402,910	$3,748,401	10%	$6,876,399	$7,598,780	11%	$10,279,309	$11,347,181	10%
Mackenzie County	$3,268,046	$3,728,460	14%	$3,460,652	$3,759,748	9%	$6,728,698	$7,488,208	11%
Municipality of Crowsnest Pass	$2,845,014	$3,415,101	20%	$652,417	$728,785	12%	$3,497,431	$4,143,885	18%
Municipality of Jasper	$2,897,656	$3,244,828	12%	$2,870,879	$3,435,565	20%	$5,768,534	$6,680,393	16%
Regional Municipality of Wood Buffalo	$25,588,211	$26,818,348	5%	$44,973,467	$49,007,432	9%	$70,561,678	$75,825,781	7%
Strathcona County	$49,559,018	$55,303,202	12%	$23,807,109	$27,576,981	16%	$73,366,127	$82,880,183	13%
Municipal District									
Athabasca County	$2,968,750	$3,314,562	12%	$2,935,244	$3,141,602	7%	$5,903,993	$6,456,165	9%
Beaver County	$2,127,932	$2,369,081	11%	$1,707,543	$1,847,370	8%	$3,835,475	$4,216,451	10%
Big Lakes County	$1,588,207	$1,819,359	15%	$3,445,321	$3,862,452	12%	$5,033,528	$5,681,811	13%
Birch Hills County	$297,581	$326,293	10%	$478,049	$478,783	0%	$775,630	$805,076	4%
Brazeau County	$2,737,950	$3,083,062	13%	$7,336,337	$8,195,680	12%	$10,074,287	$11,278,741	12%
Camrose County	$3,797,777	$4,261,631	12%	$2,090,341	$2,274,726	9%	$5,888,118	$6,536,357	11%
Cardston County	$1,685,667	$2,104,898	25%	$341,693	$386,567	13%	$2,027,360	$2,491,465	23%
Clear Hills County	$546,825	$629,296	15%	$2,559,575	$2,776,630	8%	$3,106,401	$3,405,926	10%
Clearwater County	$5,085,847	$5,911,264	16%	$14,021,592	$15,701,105	12%	$18,995,973	$21,612,368	14%
County of Barrhead No. 11	$2,124,431	$2,333,529	10%	$637,472	$775,048	22%	$2,761,903	$3,108,577	13%
County of Forty Mile No. 8	$1,326,654	$1,432,634	8%	$879,141	$885,612	1%	$2,205,795	$2,318,247	5%
County of Grande Prairie No. 1	$11,607,927	$12,861,368	11%	$14,419,704	$15,807,044	10%	$26,027,632	$28,668,412	10%
County of Minburn No. 27	$1,056,824	$1,171,345	11%	$1,367,655	$1,508,893	10%	$2,424,478	$2,680,238	11%
County of Newell	$2,636,382	$3,011,645	14%	$9,258,318	$10,054,070	9%	$11,894,699	$13,065,715	10%

Requisitions are actuals, subject to revision

2025 Education Property Tax Requisition Comparison Report

Municipality	Residential / Farm Land Requisition			Non-Residential Requisition			Total Education Requisition		
	2024	2025	% Change	2024	2025	% Change	2024	2025	% Change
County of Northern Lights	$1,163,594	$1,318,339	13%	$2,357,154	$2,465,897	5%	$3,520,748	$3,784,236	7%
County of Paintearth No. 18	$607,198	$674,528	11%	$1,518,731	$1,640,601	8%	$2,125,929	$2,315,129	9%
County of St. Paul No. 19	$2,716,097	$3,023,206	11%	$1,675,231	$1,820,102	9%	$4,391,327	$4,843,307	10%
County of Stettler No. 6	$2,178,165	$2,506,532	15%	$1,969,009	$2,155,166	9%	$4,147,174	$4,661,699	12%
County of Two Hills No. 21	$1,128,952	$1,267,303	12%	$538,400	$567,641	5%	$1,667,352	$1,834,944	10%
County of Vermilion River	$3,105,239	$3,504,031	13%	$3,607,692	$3,922,259	9%	$6,712,931	$7,426,290	11%
County of Warner No. 5	$1,377,310	$1,576,481	14%	$763,665	$831,683	9%	$2,140,976	$2,408,164	12%
County of Wetaskiwin No. 10	$5,534,040	$6,361,900	15%	$2,571,375	$2,697,651	5%	$8,105,416	$9,059,550	12%
Cypress County	$4,164,065	$4,756,597	14%	$9,165,422	$9,980,926	9%	$13,329,487	$14,737,523	11%
Flagstaff County	$1,385,419	$1,524,706	10%	$2,296,911	$2,465,257	7%	$3,682,330	$3,989,962	8%
Foothills County	$20,718,315	$24,817,686	20%	$4,016,897	$4,479,153	12%	$24,735,212	$29,296,839	18%
Kneehill County	$1,919,588	$2,234,421	16%	$3,653,309	$4,034,251	10%	$5,572,896	$6,268,673	12%
Lac Ste. Anne County	$4,767,410	$5,334,125	12%	$1,299,875	$1,435,830	10%	$6,067,284	$6,769,955	12%
Lacombe County	$5,610,186	$6,213,691	11%	$7,250,909	$7,833,466	8%	$12,861,095	$14,047,157	9%
Lamont County	$1,559,287	$1,727,462	11%	$1,763,676	$1,958,153	11%	$3,322,963	$3,685,614	11%
Leduc County	$8,159,017	$9,442,769	16%	$20,320,932	$23,628,449	16%	$28,479,949	$33,071,219	16%
Lethbridge County	$3,698,818	$4,187,551	13%	$2,643,677	$2,963,143	12%	$6,342,496	$7,150,694	13%
Mountain View County	$7,735,673	$9,098,245	18%	$6,284,415	$6,923,038	10%	$14,020,087	$16,021,283	14%
Municipal District of Acadia No. 34	$184,219	$198,106	8%	$38,429	$47,746	24%	$222,648	$245,852	10%
Municipal District of Bighorn No. 8	$1,805,415	$2,140,349	19%	$1,755,884	$2,030,637	16%	$3,561,299	$4,170,986	17%
Municipal District of Bonnyville No. 87	$5,005,435	$5,676,433	13%	$12,176,155	$13,366,783	10%	$17,181,590	$19,043,216	11%
Municipal District of Fairview No. 136	$515,720	$547,243	6%	$453,223	$504,090	11%	$968,943	$1,051,332	9%
Municipal District of Greenview No. 16	$2,854,277	$3,296,919	16%	$29,122,178	$32,658,178	12%	$31,976,455	$35,955,097	12%
Municipal District of Lesser Slave River No. 124	$1,442,011	$1,582,612	10%	$2,611,656	$3,016,477	16%	$4,053,667	$4,599,089	13%
Municipal District of Opportunity No. 17	$682,373	$734,631	8%	$8,299,570	$9,291,968	12%	$8,981,943	$10,026,599	12%
Municipal District of Peace No. 135	$487,302	$551,075	13%	$436,111	$439,013	1%	$923,413	$990,088	7%
Municipal District of Pincher Creek No. 9	$1,935,495	$2,306,550	19%	$1,234,671	$1,355,159	10%	$3,170,165	$3,661,708	16%
Municipal District of Provost No. 52	$774,826	$846,255	9%	$4,135,144	$4,529,243	10%	$4,909,970	$5,375,497	9%
Municipal District of Ranchland No. 66	$69,910	$79,213	13%	$562,190	$607,009	8%	$632,100	$686,222	9%
Municipal District of Smoky River No. 130	$627,528	$708,827	13%	$820,142	$925,736	13%	$1,447,670	$1,634,563	13%
Municipal District of Spirit River No. 133	$218,076	$247,068	13%	$436,310	$556,133	27%	$654,387	$803,201	23%
Municipal District of Taber	$2,461,834	$2,939,243	19%	$2,977,866	$3,271,695	10%	$5,439,700	$6,210,938	14%
Municipal District of Wainwright No. 61	$1,870,314	$2,036,211	9%	$4,439,583	$4,992,764	12%	$6,309,897	$7,028,975	11%
Municipal District of Willow Creek No. 26	$2,481,124	$3,018,965	22%	$1,658,119	$1,866,268	13%	$4,139,243	$4,885,234	18%
Northern Sunrise County	$626,390	$681,246	9%	$4,598,306	$4,984,628	8%	$5,224,696	$5,665,873	8%
Parkland County	$18,079,142	$20,338,767	12%	$12,638,309	$13,866,868	10%	$30,717,451	$34,205,635	11%
Ponoka County	$4,744,959	$5,612,733	18%	$3,680,077	$4,109,553	12%	$8,425,035	$9,722,286	15%
Red Deer County	$10,558,882	$12,203,080	16%	$8,991,886	$9,829,912	9%	$19,550,768	$22,032,992	13%
Rocky View County	$38,920,613	$47,862,361	23%	$23,236,941	$29,811,930	28%	$62,157,553	$77,674,291	25%
Saddle Hills County	$513,541	$657,511	28%	$6,672,392	$7,558,362	13%	$7,185,933	$8,215,873	14%
Smoky Lake County	$1,043,840	$1,209,203	16%	$1,048,058	$1,180,297	13%	$2,091,898	$2,389,500	14%
Starland County	$616,057	$713,053	16%	$1,341,942	$1,468,496	9%	$1,957,998	$2,181,548	11%
Sturgeon County	$10,951,968	$12,344,569	13%	$9,175,271	$10,047,558	10%	$20,127,239	$22,392,127	11%

Requisitions are actuals, subject to revision

2025 Education Property Tax Requisition Comparison Report

Municipality	Residential / Farm Land Requisition			Non-Residential Requisition			Total Education Requisition		
	2024	2025	% Change	2024	2025	% Change	2024	2025	% Change
Thorhild County	$1,143,781	$1,245,132	9%	$1,296,708	$1,416,297	9%	$2,440,489	$2,661,429	9%
Vulcan County	$2,024,349	$2,444,881	21%	$1,564,558	$1,747,180	12%	$3,588,907	$4,192,061	17%
Westlock County	$2,255,121	$2,557,655	13%	$564,510	$633,448	12%	$2,819,632	$3,191,102	13%
Wheatland County	$4,122,594	$4,828,880	17%	$6,645,007	$7,303,042	10%	$10,767,601	$12,131,922	13%
Woodlands County	$2,041,854	$2,309,541	13%	$3,290,161	$3,692,933	12%	$5,332,015	$6,002,475	13%
Yellowhead County	$4,577,378	$4,859,162	6%	$22,438,768	$25,332,759	13%	$27,016,146	$30,191,921	12%
Town									
Town of Athabasca	$673,705	$737,486	9%	$407,866	$427,792	5%	$1,081,571	$1,165,279	8%
Town of Banff	$5,452,073	$6,139,710	13%	$4,891,651	$7,239,681	48%	$10,343,724	$13,379,391	29%
Town of Barrhead	$974,653	$1,089,113	12%	$450,923	$495,890	10%	$1,425,576	$1,585,002	11%
Town of Bashaw	$156,921	$181,407	16%	$67,935	$80,469	18%	$224,856	$261,876	16%
Town of Bassano	$233,950	$263,839	13%	$113,893	$138,615	22%	$347,843	$402,454	16%
Town of Beaverlodge	$596,683	$648,163	9%	$244,276	$272,598	12%	$840,959	$920,760	9%
Town of Bentley	$250,394	$276,434	10%	$57,414	$59,363	3%	$307,809	$335,797	9%
Town of Blackfalds	$3,261,920	$3,712,428	14%	$611,935	$706,756	15%	$3,873,855	$4,419,184	14%
Town of Bon Accord	$385,872	$408,266	6%	$28,429	$32,741	15%	$414,300	$441,007	6%
Town of Bonnyville	$1,519,070	$1,574,566	4%	$1,317,668	$1,376,262	4%	$2,836,738	$2,950,828	4%
Town of Bow Island	$373,506	$404,338	8%	$183,991	$206,498	12%	$557,497	$610,836	10%
Town of Bowden	$271,677	$305,287	12%	$58,369	$64,180	10%	$330,046	$369,467	12%
Town of Bruderheim	$363,604	$398,261	10%	$70,745	$78,521	11%	$434,349	$476,782	10%
Town of Calmar	$618,465	$672,762	9%	$187,788	$214,536	14%	$806,253	$887,298	10%
Town of Canmore	$23,913,325	$27,778,702	16%	$6,438,454	$7,999,686	24%	$30,351,778	$35,778,387	18%
Town of Cardston	$898,811	$997,958	11%	$180,488	$214,989	19%	$1,079,299	$1,212,947	12%
Town of Carstairs	$1,910,780	$2,235,333	17%	$255,532	$284,693	11%	$2,166,312	$2,520,025	16%
Town of Castor	$162,370	$181,011	11%	$53,449	$60,928	14%	$215,819	$241,939	12%
Town of Claresholm	$1,069,376	$1,246,100	17%	$381,473	$423,148	11%	$1,450,849	$1,669,249	15%
Town of Coaldale	$2,761,332	$3,260,084	18%	$673,399	$837,833	24%	$3,434,732	$4,097,917	19%
Town of Coalhurst	$797,268	$914,316	15%	$55,482	$61,675	11%	$852,750	$975,991	14%
Town of Cochrane	$16,990,384	$21,325,962	26%	$2,577,223	$2,880,699	12%	$19,567,606	$24,206,661	24%
Town of Coronation	$142,829	$158,116	11%	$83,519	$92,592	11%	$226,348	$250,708	11%
Town of Crossfield	$1,389,235	$1,697,192	22%	$717,281	$834,122	16%	$2,106,516	$2,531,315	20%
Town of Daysland	$194,940	$216,695	11%	$28,246	$29,904	6%	$223,185	$246,599	10%
Town of Devon	$2,127,248	$2,380,509	12%	$492,293	$524,496	7%	$2,619,541	$2,905,006	11%
Town of Diamond Valley	$2,208,310	$2,764,092	25%	$316,360	$364,689	15%	$2,524,671	$3,128,780	24%
Town of Didsbury	$1,521,057	$1,737,458	14%	$307,636	$356,979	16%	$1,828,694	$2,094,437	15%
Town of Drayton Valley	$1,775,121	$2,025,777	14%	$1,714,259	$1,921,015	12%	$3,489,381	$3,946,792	13%
Town of Drumheller	$1,814,112	$2,062,736	14%	$877,638	$995,066	13%	$2,691,750	$3,057,802	14%
Town of Eckville	$247,955	$267,636	8%	$80,853	$92,285	14%	$328,809	$359,921	9%
Town of Edson	$2,243,943	$2,441,048	9%	$1,512,476	$1,669,593	10%	$3,756,419	$4,110,641	9%
Town of Elk Point	$269,770	$281,227	4%	$159,710	$170,692	7%	$429,480	$451,919	5%
Town of Fairview	$571,989	$604,192	6%	$250,629	$275,678	10%	$822,618	$879,870	7%
Town of Falher	$145,054	$157,251	8%	$100,790	$111,257	10%	$245,844	$268,508	9%
Town of Fort Macleod	$869,224	$1,017,081	17%	$526,464	$608,171	16%	$1,395,688	$1,625,252	16%

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2025 Education Property Tax Requisition Comparison Report

Municipality	Residential / Farm Land Requisition			Non-Residential Requisition			Total Education Requisition		
	2024	2025	% Change	2024	2025	% Change	2024	2025	% Change
Town of Fox Creek	$504,733	$503,588	0%	$576,444	$575,761	0%	$1,081,177	$1,079,349	0%
Town of Gibbons	$901,128	$996,373	11%	$118,711	$146,924	24%	$1,019,840	$1,143,297	12%
Town of Grimshaw	$538,354	$569,588	6%	$188,597	$181,690	-4%	$726,951	$751,279	3%
Town of Hanna	$429,952	$492,715	15%	$235,065	$252,372	7%	$665,017	$745,087	12%
Town of Hardisty	$174,968	$189,827	8%	$112,379	$117,531	5%	$287,348	$307,358	7%
Town of High Level	$647,561	$745,421	15%	$775,817	$869,788	12%	$1,423,378	$1,615,209	13%
Town of High Prairie	$463,008	$507,551	10%	$416,569	$452,358	9%	$879,577	$959,909	9%
Town of High River	$5,185,679	$6,262,867	21%	$1,258,625	$1,425,533	13%	$6,444,304	$7,688,400	19%
Town of Hinton	$2,903,719	$3,248,988	12%	$1,730,494	$1,897,036	10%	$4,634,213	$5,146,024	11%
Town of Innisfail	$2,163,212	$2,454,357	13%	$973,022	$1,061,323	9%	$3,136,234	$3,515,680	12%
Town of Irricana	$335,782	$400,812	19%	$31,470	$33,800	7%	$367,252	$434,612	18%
Town of Killam	$184,519	$201,804	9%	$87,769	$90,729	3%	$272,289	$292,534	7%
Town of Lamont	$348,707	$392,648	13%	$104,466	$109,447	5%	$453,173	$502,095	11%
Town of Legal	$316,271	$333,739	6%	$32,996	$36,812	12%	$349,267	$370,551	6%
Town of Magrath	$638,897	$744,423	17%	$62,836	$73,655	17%	$701,733	$818,079	17%
Town of Manning	$227,713	$245,891	8%	$104,782	$117,904	13%	$332,495	$363,795	9%
Town of Mayerthorpe	$198,045	$211,689	7%	$102,394	$105,880	3%	$300,440	$317,569	6%
Town of McLennan	$79,379	$86,129	9%	$36,440	$43,818	20%	$115,819	$129,947	12%
Town of Milk River	$163,614	$199,252	22%	$42,209	$48,759	16%	$205,823	$248,011	20%
Town of Millet	$515,036	$568,429	10%	$129,356	$168,955	31%	$644,392	$737,384	14%
Town of Morinville	$3,097,155	$3,500,557	13%	$694,330	$753,169	8%	$3,791,484	$4,253,725	12%
Town of Mundare	$217,819	$239,213	10%	$52,965	$56,443	7%	$270,784	$295,655	9%
Town of Nanton	$691,299	$847,683	23%	$227,315	$273,998	21%	$918,614	$1,121,681	22%
Town of Nobleford	$346,672	$414,409	20%	$146,866	$178,593	22%	$493,538	$593,002	20%
Town of Okotoks	$13,779,201	$17,010,168	23%	$2,967,871	$3,560,904	20%	$16,747,072	$20,571,072	23%
Town of Olds	$3,184,858	$3,750,666	18%	$1,465,506	$1,468,898	0%	$4,650,364	$5,219,563	12%
Town of Onoway	$216,104	$239,271	11%	$140,242	$134,295	-4%	$356,346	$373,566	5%
Town of Oyen	$180,943	$199,680	10%	$81,592	$101,503	24%	$262,536	$301,184	15%
Town of Peace River	$1,662,202	$1,750,544	5%	$1,006,007	$1,040,072	3%	$2,668,209	$2,790,616	5%
Town of Penhold	$1,021,712	$1,143,774	12%	$152,701	$180,175	18%	$1,174,413	$1,323,950	13%
Town of Picture Butte	$472,143	$557,869	18%	$151,248	$177,088	17%	$623,390	$734,957	18%
Town of Pincher Creek	$973,274	$1,189,883	22%	$469,681	$561,301	20%	$1,442,955	$1,751,185	21%
Town of Ponoka	$1,776,801	$1,986,442	12%	$725,492	$786,222	8%	$2,502,293	$2,772,664	11%
Town of Provost	$364,151	$391,494	8%	$246,407	$269,682	9%	$610,558	$661,176	8%
Town of Rainbow Lake	$40,982	$44,887	10%	$49,354	$52,583	7%	$90,336	$97,471	8%
Town of Raymond	$992,896	$1,174,077	18%	$107,995	$121,051	12%	$1,100,891	$1,295,127	18%
Town of Redcliff	$1,554,017	$1,733,801	12%	$787,411	$868,553	10%	$2,341,428	$2,602,354	11%
Town of Redwater	$534,777	$576,910	8%	$338,658	$353,488	4%	$873,435	$930,397	7%
Town of Rimbey	$613,977	$679,488	11%	$309,420	$355,264	15%	$923,397	$1,034,751	12%
Town of Rocky Mountain House	$1,808,759	$2,047,210	13%	$1,064,113	$1,167,426	10%	$2,872,872	$3,214,636	12%
Town of Sedgewick	$183,204	$198,272	8%	$69,687	$75,688	9%	$252,891	$273,960	8%
Town of Sexsmith	$681,162	$748,870	10%	$192,410	$203,172	6%	$873,572	$952,043	9%
Town of Slave Lake	$1,629,791	$1,796,707	10%	$949,735	$1,018,839	7%	$2,579,526	$2,815,547	9%
Town of Smoky Lake	$197,093	$223,157	13%	$74,691	$84,708	13%	$271,784	$307,865	13%

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Municipality	Residential / Farm Land Requisition			Non-Residential Requisition			Total Education Requisition		
	2024	2025	% Change	2024	2025	% Change	2024	2025	% Change
Town of Spirit River	$166,509	$176,441	6%	$75,363	$81,040	8%	$241,873	$257,481	6%
Town of St. Paul	$1,260,430	$1,341,698	6%	$627,699	$694,064	11%	$1,888,129	$2,035,762	8%
Town of Stavely	$141,229	$168,982	20%	$44,882	$41,993	-6%	$186,111	$210,974	13%
Town of Stettler	$1,456,021	$1,633,399	12%	$903,555	$1,034,464	14%	$2,359,576	$2,667,863	13%
Town of Stony Plain	$6,375,406	$7,276,531	14%	$1,940,532	$2,210,709	14%	$8,315,938	$9,487,240	14%
Town of Strathmore	$4,757,855	$5,848,969	23%	$1,195,802	$1,403,028	17%	$5,953,657	$7,251,997	22%
Town of Sundre	$837,834	$949,140	13%	$370,402	$384,838	4%	$1,208,236	$1,333,977	10%
Town of Swan Hills	$122,536	$137,620	12%	$111,045	$104,896	-6%	$233,581	$242,516	4%
Town of Sylvan Lake	$6,166,325	$6,809,225	10%	$1,282,671	$1,431,680	12%	$7,448,997	$8,240,905	11%
Town of Taber	$2,179,692	$2,467,407	13%	$1,012,489	$1,188,322	17%	$3,192,181	$3,655,730	15%
Town of Thorsby	$207,956	$223,229	7%	$80,840	$81,266	1%	$288,796	$304,495	5%
Town of Three Hills	$714,532	$807,504	13%	$232,148	$278,749	20%	$946,680	$1,086,252	15%
Town of Tofield	$505,708	$546,545	8%	$201,851	$220,732	9%	$707,560	$767,277	8%
Town of Trochu	$187,250	$219,112	17%	$63,669	$74,608	17%	$250,919	$293,719	17%
Town of Two Hills	$159,745	$173,598	9%	$52,490	$56,602	8%	$212,235	$230,200	8%
Town of Valleyview	$348,413	$396,108	14%	$293,412	$342,250	17%	$641,826	$738,359	15%
Town of Vauxhall	$204,637	$242,223	18%	$66,674	$80,528	21%	$271,311	$322,750	19%
Town of Vegreville	$1,270,223	$1,398,415	10%	$714,209	$784,479	10%	$1,984,432	$2,182,894	10%
Town of Vermilion	$1,048,118	$1,148,399	10%	$657,967	$722,215	10%	$1,706,085	$1,870,614	10%
Town of Viking	$181,712	$199,249	10%	$82,710	$87,407	6%	$264,422	$286,656	8%
Town of Vulcan	$506,701	$581,657	15%	$155,929	$176,348	13%	$662,630	$758,004	14%
Town of Wainwright	$1,647,086	$1,773,328	8%	$952,095	$1,028,317	8%	$2,599,181	$2,801,645	8%
Town of Wembley	$366,635	$404,951	10%	$140,603	$160,702	14%	$507,238	$565,653	12%
Town of Westlock	$1,062,898	$1,175,208	11%	$681,121	$727,190	7%	$1,744,019	$1,902,398	9%
Town of Whitecourt	$2,736,404	$2,959,682	8%	$2,275,620	$2,535,055	11%	$5,012,024	$5,494,737	10%
Village									
Alberta Beach	$460,851	$493,842	7%	$42,315	$50,665	20%	$503,166	$544,506	8%
Village of Acme	$137,589	$166,973	21%	$41,136	$48,261	17%	$178,726	$215,235	20%
Village of Alix	$157,002	$184,519	18%	$59,747	$69,550	16%	$216,748	$254,068	17%
Village of Alliance	$17,468	$18,792	8%	$10,788	$11,391	6%	$28,256	$30,183	7%
Village of Amisk	$29,421	$30,500	4%	$5,498	$6,820	24%	$34,919	$37,319	7%
Village of Andrew	$67,963	$69,512	2%	$20,820	$23,248	12%	$88,783	$92,760	4%
Village of Arrowwood	$34,108	$42,675	25%	$11,414	$14,358	26%	$45,523	$57,032	25%
Village of Barnwell	$263,431	$293,199	11%	$17,378	$19,299	11%	$280,809	$312,499	11%
Village of Barons	$47,345	$65,841	39%	$9,814	$13,829	41%	$57,159	$79,670	39%
Village of Bawlf	$84,230	$92,378	10%	$6,686	$7,387	10%	$90,916	$99,765	10%
Village of Beiseker	$204,158	$245,284	20%	$109,271	$118,304	8%	$313,430	$363,588	16%
Village of Berwyn	$73,925	$75,735	2%	$12,354	$13,080	6%	$86,279	$88,815	3%
Village of Big Valley	$57,540	$64,384	12%	$19,214	$22,565	17%	$76,754	$86,948	13%
Village of Bittern Lake	$57,647	$62,677	9%	$8,552	$9,357	9%	$66,199	$72,035	9%
Village of Boyle	$156,074	$168,100	8%	$96,197	$105,289	9%	$252,271	$273,389	8%
Village of Breton	$106,294	$121,299	14%	$41,573	$44,422	7%	$147,867	$165,721	12%
Village of Carbon	$102,293	$117,893	15%	$11,484	$12,220	6%	$113,778	$130,113	14%

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	2024	2025	% Change	2024	2025	% Change	2024	2025	% Change
Village of Carmangay	$48,404	$58,953	22%	$9,539	$11,983	26%	$57,943	$70,936	22%
Village of Champion	$59,751	$87,219	46%	$13,866	$17,077	23%	$73,617	$104,296	42%
Village of Chauvin	$40,059	$42,816	7%	$21,383	$24,237	13%	$61,443	$67,053	9%
Village of Chipman	$47,300	$51,912	10%	$16,261	$17,871	10%	$63,561	$69,783	10%
Village of Clive	$194,459	$214,050	10%	$12,322	$13,636	11%	$206,781	$227,686	10%
Village of Clyde	$77,161	$86,993	13%	$9,832	$9,822	0%	$86,993	$96,815	11%
Village of Consort	$105,248	$116,274	10%	$62,836	$70,117	12%	$168,084	$186,390	11%
Village of Coutts	$37,085	$42,040	13%	$35,530	$42,011	18%	$72,615	$84,051	16%
Village of Cowley	$43,135	$54,146	26%	$15,417	$17,089	11%	$58,553	$71,236	22%
Village of Cremona	$111,326	$122,020	10%	$26,963	$29,397	9%	$138,289	$151,416	9%
Village of Czar	$25,085	$28,713	14%	$7,748	$10,967	42%	$32,833	$39,680	21%
Village of Delburne	$206,633	$220,020	6%	$43,829	$42,883	-2%	$250,463	$262,903	5%
Village of Delia	$34,212	$39,445	15%	$12,863	$13,637	6%	$47,075	$53,082	13%
Village of Donalda	$31,630	$35,086	11%	$5,958	$6,579	10%	$37,588	$41,665	11%
Village of Donnelly	$49,360	$54,966	11%	$8,044	$8,796	9%	$57,403	$63,763	11%
Village of Duchess	$250,760	$270,911	8%	$35,705	$40,972	15%	$286,465	$311,883	9%
Village of Edberg	$20,445	$23,160	13%	$1,265	$1,514	20%	$21,711	$24,674	14%
Village of Edgerton	$63,662	$67,381	6%	$14,104	$15,890	13%	$77,766	$83,271	7%
Village of Elnora	$50,896	$60,071	18%	$10,459	$10,647	2%	$61,356	$70,718	15%
Village of Empress	$18,516	$19,581	6%	$6,651	$6,571	-1%	$25,167	$26,152	4%
Village of Foremost	$110,123	$132,442	20%	$43,240	$50,545	17%	$153,362	$182,987	19%
Village of Forestburg	$148,651	$162,777	10%	$37,102	$38,679	4%	$185,753	$201,456	8%
Village of Girouxville	$33,288	$36,433	9%	$10,115	$10,327	2%	$43,402	$46,761	8%
Village of Glendon	$92,993	$99,084	7%	$17,999	$19,290	7%	$110,993	$118,375	7%
Village of Glenwood	$75,308	$90,453	20%	$9,190	$9,732	6%	$84,497	$100,185	19%
Village of Halkirk	$14,685			$6,513			$21,198		
Village of Hay Lakes	$123,952	$139,060	12%	$7,320	$9,248	26%	$131,272	$148,308	13%
Village of Heisler	$17,266	$19,492	13%	$5,182	$5,825	12%	$22,448	$25,316	13%
Village of Hill Spring	$54,414	$60,440	11%	$4,211	$4,750	13%	$58,625	$65,190	11%
Village of Hines Creek	$34,209	$35,332	3%	$20,015	$21,640	8%	$54,224	$56,972	5%
Village of Holden	$44,248	$50,417	14%	$32,543	$34,896	7%	$76,791	$85,313	11%
Village of Hughenden	$26,637	$28,084	5%	$5,880	$6,641	13%	$32,517	$34,725	7%
Village of Hussar	$30,710	$35,112	14%	$10,012	$11,784	18%	$40,723	$46,896	15%
Village of Innisfree	$24,567	$28,117	14%	$11,944	$13,608	14%	$36,510	$41,725	14%
Village of Irma	$94,487	$103,158	9%	$28,797	$30,672	7%	$123,284	$133,830	9%
Village of Kitscoty	$211,072	$223,850	6%	$26,720	$29,034	9%	$237,792	$252,884	6%
Village of Linden	$168,416	$200,029	19%	$65,604	$71,363	9%	$234,019	$271,392	16%
Village of Lomond	$26,897	$31,081	16%	$8,775	$9,843	12%	$35,672	$40,924	15%
Village of Longview	$133,296	$157,316	18%	$48,454	$52,257	8%	$181,750	$209,574	15%
Village of Lougheed	$32,223	$34,916	8%	$18,238	$19,609	8%	$50,461	$54,525	8%
Village of Mannville	$107,608	$117,702	9%	$32,971	$35,179	7%	$140,579	$152,881	9%
Village of Marwayne	$92,007	$103,214	12%	$16,706	$19,408	16%	$108,714	$122,622	13%
Village of Milo	$23,853	$29,740	25%	$12,798	$14,627	14%	$36,651	$44,367	21%

Requisitions are actuals, subject to revision

2025 Education Property Tax Requisition Comparison Report

Municipality	Residential / Farm Land Requisition			Non-Residential Requisition			Total Education Requisition		
	2024	2025	% Change	2024	2025	% Change	2024	2025	% Change
Village of Morrin	$34,991	$39,171	12%	$4,515	$5,360	19%	$39,506	$44,531	13%
Village of Munson	$43,099	$48,199	12%	$4,950	$5,534	12%	$48,050	$53,733	12%
Village of Myrnam	$36,939	$39,970	8%	$5,457	$6,587	21%	$42,396	$46,558	10%
Village of Nampa	$57,385	$59,957	4%	$67,853	$71,282	5%	$125,238	$131,239	5%
Village of Paradise Valley	$21,596	$23,767	10%	$5,095	$5,744	13%	$26,691	$29,511	11%
Village of Rockyford	$64,255	$72,280	12%	$23,645	$26,088	10%	$87,900	$98,368	12%
Village of Rosalind	$31,128	$35,286	13%	$9,256	$10,292	11%	$40,384	$45,578	13%
Village of Rosemary	$73,179	$77,918	6%	$8,384	$10,011	19%	$81,563	$87,929	8%
Village of Rycroft	$88,634	$91,295	3%	$94,487	$99,226	5%	$183,121	$190,520	4%
Village of Ryley	$65,801	$71,484	9%	$43,682	$48,904	12%	$109,483	$120,388	10%
Village of Spring Lake	$373,548	$424,975	14%	$11,986	$13,638	14%	$385,534	$438,613	14%
Village of Standard	$80,933	$93,175	15%	$52,180	$55,237	6%	$133,113	$148,411	11%
Village of Stirling	$294,781	$346,258	17%	$14,241	$16,389	15%	$309,022	$362,647	17%
Village of Veteran	$23,395	$26,027	11%	$9,571	$10,370	8%	$32,966	$36,397	10%
Village of Vilna	$28,541	$30,806	8%	$7,727	$8,895	15%	$36,268	$39,701	9%
Village of Warburg	$122,242	$135,895	11%	$41,969	$44,792	7%	$164,211	$180,687	10%
Village of Warner	$65,587	$80,346	23%	$16,418	$20,411	24%	$82,005	$100,757	23%
Village of Waskatenau	$40,856	$43,870	7%	$6,749	$7,746	15%	$47,605	$51,617	8%
Village of Youngstown	$22,650	$24,802	10%	$7,765	$8,701	12%	$30,415	$33,503	10%
Summer Village									
Summer Village of Argentia Beach	$233,387	$266,905	14%	$1,180	$1,326	12%	$234,567	$268,232	14%
Summer Village of Betula Beach	$80,456	$96,947	20%	$215	$239	11%	$80,671	$97,187	20%
Summer Village of Birch Cove	$36,311	$41,937	15%	$207	$230	11%	$36,518	$42,167	15%
Summer Village of Birchcliff	$509,079	$572,211	12%	$7,128	$7,674	8%	$516,207	$579,885	12%
Summer Village of Bondiss	$170,894	$194,473	14%	$2,877	$3,402	18%	$173,770	$197,875	14%
Summer Village of Bonnyville Beach	$68,232	$72,907	7%	$667	$733	10%	$68,899	$73,641	7%
Summer Village of Burnstick Lake	$53,970	$76,288	41%	$131	$150	14%	$54,101	$76,437	41%
Summer Village of Castle Island	$35,579	$37,112	4%	$62	$70	13%	$35,641	$37,182	4%
Summer Village of Crystal Springs	$238,164	$267,321	12%	$1,208	$1,341	11%	$239,372	$268,662	12%
Summer Village of Ghost Lake	$126,210	$156,277	24%	$263	$282	7%	$126,472	$156,559	24%
Summer Village of Golden Days	$367,537	$419,422	14%	$3,258	$3,258	0%	$370,795	$422,680	14%
Summer Village of Grandview	$287,308	$322,822	12%	$1,076	$1,222	14%	$288,384	$324,045	12%
Summer Village of Gull Lake	$269,295	$314,039	17%	$4,504	$5,412	20%	$273,799	$319,450	17%
Summer Village of Half Moon Bay	$121,653	$130,500	7%	$157	$180	14%	$121,810	$130,680	7%
Summer Village of Horseshoe Bay	$42,270	$45,515	8%	$727	$808	11%	$42,997	$46,323	8%
Summer Village of Island Lake	$300,691	$349,645	16%	$2,611	$3,237	24%	$303,302	$352,882	16%
Summer Village of Island Lake South	$82,853	$91,599	11%	$408	$456	12%	$83,262	$92,055	11%
Summer Village of Itaska Beach	$124,501	$137,429	10%	$583	$642	10%	$125,084	$138,070	10%
Summer Village of Jarvis Bay	$490,062	$575,535	17%	$1,387	$1,558	12%	$491,449	$577,092	17%
Summer Village of Kapasiwin	$87,853	$94,742	8%	$317	$347	9%	$88,170	$95,089	8%
Summer Village of Lakeview	$46,084	$55,272	20%	$256	$292	14%	$46,340	$55,564	20%
Summer Village of Larkspur	$88,448	$98,107	11%	$220	$240	9%	$88,668	$98,346	11%
Summer Village of Ma-Me-O Beach	$272,676	$287,565	5%	$7,797	$8,247	6%	$280,473	$295,811	5%

Requisitions are actuals, subject to revision

2025 Education Property Tax Requisition Comparison Report

Municipality	Residential / Farm Land Requisition			Non-Residential Requisition			Total Education Requisition		
	2024	2025	% Change	2024	2025	% Change	2024	2025	% Change
Summer Village of Mewatha Beach	$153,698	$176,305	15%	$916	$1,152	26%	$154,614	$177,457	15%
Summer Village of Nakamun Park	$110,355	$125,086	13%	$568	$637	12%	$110,923	$125,723	13%
Summer Village of Norglenwold	$600,456	$702,346	17%	$2,192	$2,485	13%	$602,648	$704,831	17%
Summer Village of Norris Beach	$97,746	$106,415	9%	$661	$722	9%	$98,407	$107,137	9%
Summer Village of Parkland Beach	$203,204	$228,849	13%	$9,298	$10,332	11%	$212,502	$239,182	13%
Summer Village of Pelican Narrows	$138,468	$154,043	11%	$1,162	$1,279	10%	$139,630	$155,322	11%
Summer Village of Point Alison	$65,116	$69,073	6%	$289	$321	11%	$65,405	$69,394	6%
Summer Village of Poplar Bay	$266,865	$286,011	7%	$1,487	$1,644	11%	$268,352	$287,655	7%
Summer Village of Rochon Sands	$162,437	$176,078	8%	$1,677	$1,847	10%	$164,113	$177,926	8%
Summer Village of Ross Haven	$163,226	$181,804	11%	$835	$935	12%	$164,061	$182,739	11%
Summer Village of Sandy Beach	$123,810	$139,589	13%	$2,364	$2,708	15%	$126,174	$142,296	13%
Summer Village of Seba Beach	$480,197	$557,449	16%	$13,885	$15,546	12%	$494,083	$572,995	16%
Summer Village of Silver Beach	$247,016	$265,357	7%	$755	$839	11%	$247,772	$266,197	7%
Summer Village of Silver Sands	$163,468	$190,537	17%	$4,717	$5,376	14%	$168,185	$195,913	16%
Summer Village of South Baptiste	$54,415	$62,931	16%	$2,889	$3,115	8%	$57,304	$66,046	15%
Summer Village of South View	$50,810	$55,997	10%	$498	$552	11%	$51,309	$56,550	10%
Summer Village of Sunbreaker Cove	$386,984	$435,456	13%	$613	$681	11%	$387,597	$436,137	13%
Summer Village of Sundance Beach	$169,430	$187,637	11%	$327	$367	12%	$169,757	$188,004	11%
Summer Village of Sunrise Beach	$75,973	$85,126	12%	$547	$612	12%	$76,520	$85,738	12%
Summer Village of Sunset Beach	$94,310	$104,457	11%	$575	$646	12%	$94,885	$105,104	11%
Summer Village of Sunset Point	$190,911	$202,280	6%	$727	$811	12%	$191,637	$203,091	6%
Summer Village of Val Quentin	$129,824	$148,205	14%	$1,098	$1,223	11%	$130,922	$149,428	14%
Summer Village of Waiparous	$97,209	$125,505	29%	$183	$204	12%	$97,391	$125,708	29%
Summer Village of West Baptiste	$98,465	$116,564	18%	$504	$562	11%	$98,969	$117,126	18%
Summer Village of West Cove	$152,266	$163,052	7%	$793	$886	12%	$153,059	$163,939	7%
Summer Village of Whispering Hills	$126,676	$154,680	22%	$1,096	$1,890	72%	$127,772	$156,570	23%
Summer Village of White Sands	$309,431	$345,232	12%	$2,257	$2,512	11%	$311,688	$347,744	12%
Summer Village of Yellowstone	$97,654	$110,447	13%	$629	$707	12%	$98,283	$111,154	13%
Improvement District									
Improvement District No. 04 (Waterton)	$486,959	$557,367	14%	$267,914	$300,923	12%	$754,873	$858,290	14%
Improvement District No. 09 (Banff)	$311,788	$379,499	22%	$2,732,751	$3,522,788	29%	$3,044,539	$3,902,287	28%
Improvement District No. 12 (Jasper National Park)	$15,812	$18,047	14%	$215,094	$231,275	8%	$230,906	$249,323	8%
Improvement District No. 13 (Elk Island)	$956	$1,018	6%	$22,334	$23,454	5%	$23,291	$24,472	5%
Improvement District No. 24 (Wood Buffalo)	$6,267	$6,636	6%	$3,913	$4,363	11%	$10,180	$11,000	8%
Kananaskis Improvement District	$179,885	$208,069	16%	$441,342	$532,210	21%	$621,228	$740,278	19%
Special Area									
Special Areas Board	$1,589,002	$1,838,695	16%	$8,984,038	$9,707,515	8%	$10,573,040	$11,546,210	9%
Townsite									
Townsite of Redwood Meadows Administration Society	$583,080	$679,043	16%	$0	$0	0%	$583,080	$679,043	16%

Requisitions are actuals, subject to revision

From: membership@tofieldchamber.com <membership@tofieldchamber.com>
Sent: March 11, 2025 2:33 PM
To: membership@tofieldchamber.com
Subject: Annual Easter Egg Hunt

Hello Members!

I hope this message finds you well. I am reaching out on behalf of the Tofield and District Chamber of Commerce to share an exciting opportunity with you.

We are thrilled to announce that we will be hosting our annual Easter Egg Hunt on April 19, 2025, at Cookson Park and the Tofield Golden Club. At last year's event, upwards of 350 little ones attended with their families, and we anticipate a similar number of children this year.

As a valued member of our chamber, we would like to invite you to become a sponsor for this year's event. Your support will help us ensure the success of the Easter Egg Hunt and provide your business with excellent visibility and engagement opportunities within our community.

Sponsorship Benefits:

Brand Exposure: Your logo will be prominently displayed on our social media, and Gold Sponsors will have the opportunity to display their banner or logo at the event.

Networking Opportunities: Connect with other local businesses and members of your local community.

Recognition: Acknowledgment of your support during the event and in our post-event communications.

We offer various sponsorship levels to suit different budgets and marketing goals. The attached sponsorship package provides detailed information on the benefits associated with each level, and you may also visit our website at: Sponsor | Tofield and District Chamber of Commerce

Sponsor | Tofield and District Chamber of Commerce

tofieldchamber.com

We would be delighted to discuss this opportunity further and tailor a sponsorship package that matches your business objectives. If you have any questions or want to confirm your sponsorship, please contact me at membership@tofieldchamber.com.

Interested in volunteering? We'd love to have you participate! Contact our president, Greg Litwin, at greg@lorenzteam.com for more information.

Thank you for considering this opportunity to support this year's Easter Egg Hunt! We're looking forward to partnering with you to make this event a memorable success.

Warm regards,

Christina Kovalenko

Tofield and District Chamber of Commerce

Membership Director

CHAMBER OF COMMERCE

SPONSORSHIPS AVAILABLE

Easter Egg Hunt

PACKAGE ONE

Package One: $100- Your sponsorship helps covers the cost of 100 lbs of chocolate foiled eggs for the hunt! (8 available)

PACKAGE TWO

Package Two: $75 - Covers craft materials for 350 children and entertainment (6 available)

PACKAGE THREE

Package Three: $100 - Covers the cost of flyers and ad in the Tofield Mercury (2 available)

PACKAGE FOUR

Package Four: $50 - Snacks and Beverages for the event (2 available)

TOFIELD AND DISTRICT CHAMBER
OF COMMERCE PRESENTS

SATURDAY, 19TH APRIL 2025

FREE EVENT

Easter Special

PRIZES TO BE WON!

EGG HUNT

Meet The Easter Bunny

Easter egg decorating contest, Free Crafts,
Free Refreshments, Prizes to Be Won!

STARTS AT 1:30 PM UNTIL ALL EGGS ARE GONE

COOKSON PARK, TOFIELD, AB

CRAFTS AT THE COLDEN CLUB FROM 2:00 PM-3:30 PM

Tofield Stormwater Management

Final Report

Prepared by:

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Tel: 780.436.5868
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Prepared for:

Select Engineering Consultants Ltd.
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Edmonton, Alberta T5S 1E5

On behalf of:

Town of Tofield
5407 50th St
Tofield, Alberta T0B 4J0

February 24, 2025
Final Draft Report, Rev. 0

NHC Reference No. 1008689

Report prepared by:

Unsigned draft by

Micha Roemer, M.Sc, P.Eng
Project Engineer

Report reviewed by:

Unsigned draft by

C.H. (Ken) Zhao, Ph.D, P.Eng
Principal

NHC File Path: P:_Projects (Active)\1008689 Tofield Stormwater Management\06 Reporting\Final Draft Report\1008689 Tofield Stormwater Management - Final Draft Report_20250224.docx

DISCLAIMER

This report has been prepared by Northwest Hydraulic Consultants Ltd. for the benefit of Select Engineering Consultants Ltd. for specific application to the Tofield Stormwater Management Report. The information and data contained herein represent **Northwest Hydraulic Consultants Ltd.'s** best professional judgment in light of the knowledge and information available to **Northwest Hydraulic Consultants Ltd.** at the time of preparation and were prepared in accordance with generally accepted engineering and geoscience practices.

Except as required by law, this report and the information and data contained herein are to be treated as confidential and may be used and relied upon only by Select Engineering Consultants Ltd., the Town of Tofield, their officers, and employees. **Northwest Hydraulic Consultants Ltd.** denies any liability whatsoever to other parties who may obtain access to this report for any injury, loss, or damage suffered by such parties arising from their use of or reliance upon this report or any of its contents.

CREDITS AND ACKNOWLEDGEMENTS

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- Neil Renneberg, P.Eng. Senior Project Manager, Select Engineering Consultants

The following NHC personnel participated in the study:

- Ken Zhao, Ph.D., P.Eng. Principal, Northwest Hydraulic Consultants
- Micha Roemer, M.Sc., P.Eng. Project Engineer, Northwest Hydraulic Consultants
- Anjali Kuruppu, E.I.T. Engineer in Training, Northwest Hydraulic Consultants
- Jerry Yan, E.I.T. GIS Analyst, Northwest Hydraulic Consultants

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1 INTRODUCTION

1.1 Background

The town of Tofield is located approximately 45 km southeast of Edmonton, Alberta and 2 km southwest of Beaverhill Lake near the junction of Highway (Hwy) 14 and Hwy 834. The town lies within the Beaverhill Lake watershed. The current limits of the town are shown in **Figure 1**. A tributary of Beaverhill Lake, Ketchamoot Creek (also known as Katchemut Creek), flows by the town before entering the lake. A smaller tributary which is herein referred to as "Tributary 1" flows north through the town and joins Ketchamoot Creek near the north boundary of the town. A second tributary ("Tributary 2") collects runoff from the area southwest of the airport and joins Ketchamoot Creek north of the CN Railway. The total area within the town limits is approximately 863 hectares (ha) with approximately 40% of it being developed. The developed area consists primarily of residential subdivisions with some commercial and industrial areas along Hwy 14.

Surface flooding due to rainfall runoff has occurred more frequently at several locations in the town. To mitigate the flood risk and to meet existing and future servicing needs, Select Engineering Consultants Ltd. (SEC) retained Northwest Hydraulic Consultants Ltd. (NHC) on behalf of the Town to develop a stormwater management plan.

The scope of this report has been limited to a hydrotechnical assessment. It presents an evaluation of the existing stormwater drainage system capacity, identifies required drainage upgrades, and provides upgrade concepts for the Town of Tofield.

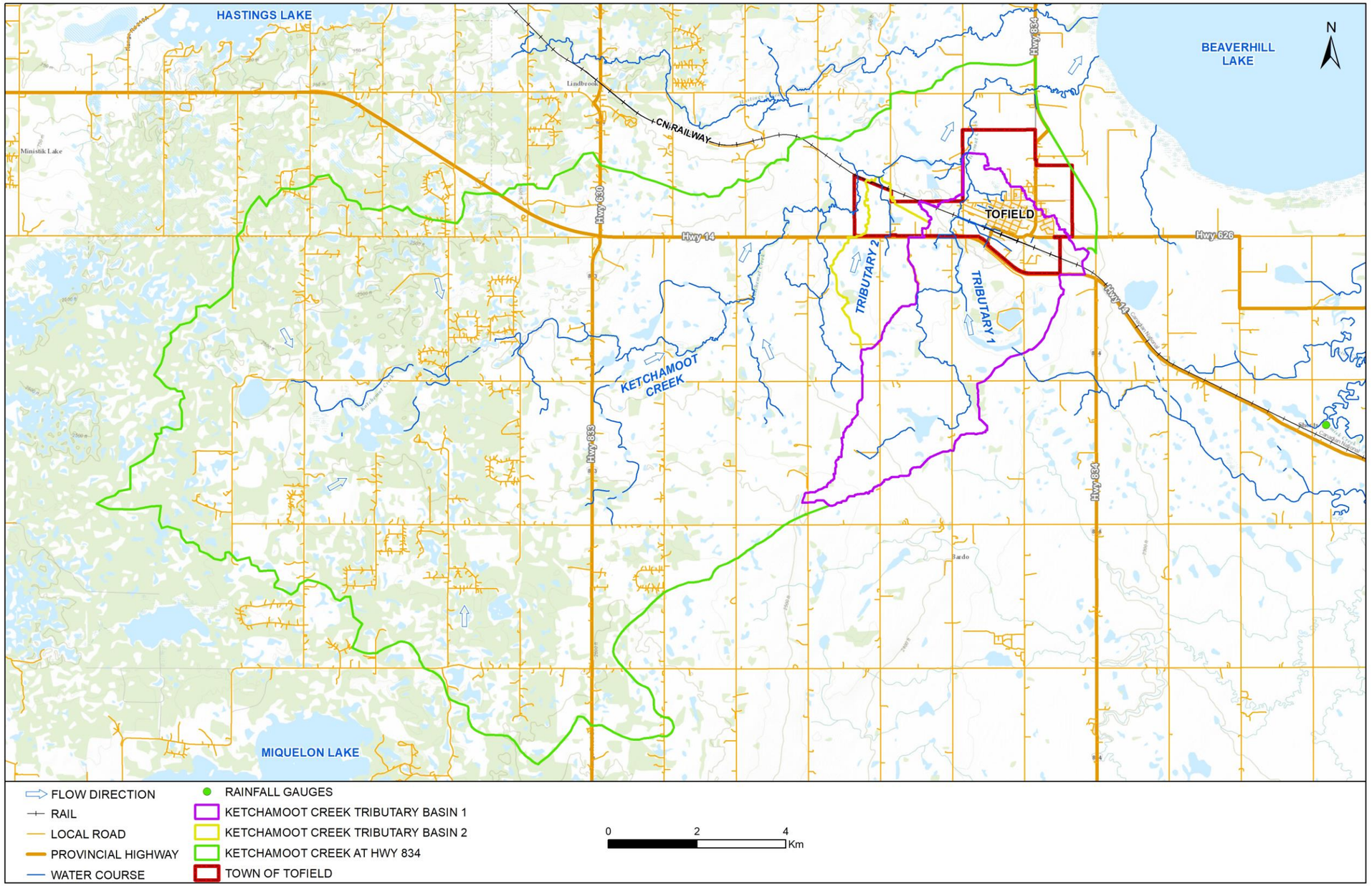


Figure 1 Project location and basin overview

1.2 Objectives and Scope

The key objectives of this study are to:

- provide a better understanding of the existing drainage system;
- develop regional and local hydrology;
- assess the capacity of the existing stormwater drainage system in the town, identify capacity constraints and issues, and determine potential flood mechanisms;
- identify upgrade requirements and recommend upgrade design options for the existing stormwater drainage system to meet the current servicing needs; and
- provide stormwater management guidance for future development.

The scope of work for this study includes:

- collection and review of available information and data;
- review and analyze hydrologic data to characterize hydrology of the study area and to guide runoff modelling;
- develop a computer model to evaluate the capacity of the existing drainage system; and
- develop a stormwater management plan to facilitate planning and implementation of drainage improvements.

This report documents the methodology undertaken by NHC, presents the results of the analyses, and summarizes the recommendations arising out of the study.

2 DATA COLLECTION AND REVIEW

The information gathered and reviewed for this study is listed below:

- Previous reports and studies
- As-built and design drawings
- Land use maps
- Meteorological data
- Survey and topographic data

2.1 Previous Report

The following reports were reviewed and where appropriate, information was used in this study:

- *Select Engineering Consultants Ltd., 2023.* Town of Tofield – 5 Year Capital Projects Report, Final Report.

The report includes a summary of the existing municipal infrastructure within the town of Tofield. The town was divided into two distinct drainage basin areas, including a smaller northeast portion of the town draining over land towards Beaverhill Lake (referred to as Beaverhill Lake Basin) and the remainder draining to Ketchamoot Creek and its tributary (Ketchamoot Basin). The Beaverhill Lake drainage basin includes the Beaverhill View Cresent development, a residential development north of 57 Avenue (Ave) and east of 47 Street (St), the Tofield Health Centre, and a small section of the Belvedere residential subdivision located in the southeast corner of the town. The Ketchamoot Creek drainage basin was subdivided into the Ketchamoot East and Industrial sub-basin, the Ketchamoot South sub-basin and the Ketchamoot north sub-basin.

The report considers that the stormwater drainage system of the town comprises a minor and a major system. The minor system includes a limited number of existing underground storm sewer mains and their associated inlets which are supposed to be designed for a 5-year rainfall event. The report includes an inventory of the storm sewer mains. Most areas of the town are serviced only with the major stormwater system that consists of roadways, drainage channels and culverts, and storage ponds. The report suggests that the major system should be designed for a 100-year rainfall event.

The capacity of the existing stormwater drainage system is unknown; however, the report mentions that there have been reported instances of flooding within the town. The report identifies seven problematic areas where flooding was observed during heavy runoff events. The seven problematic areas are shown in **Figure 2** and summarized in Table 1 below.

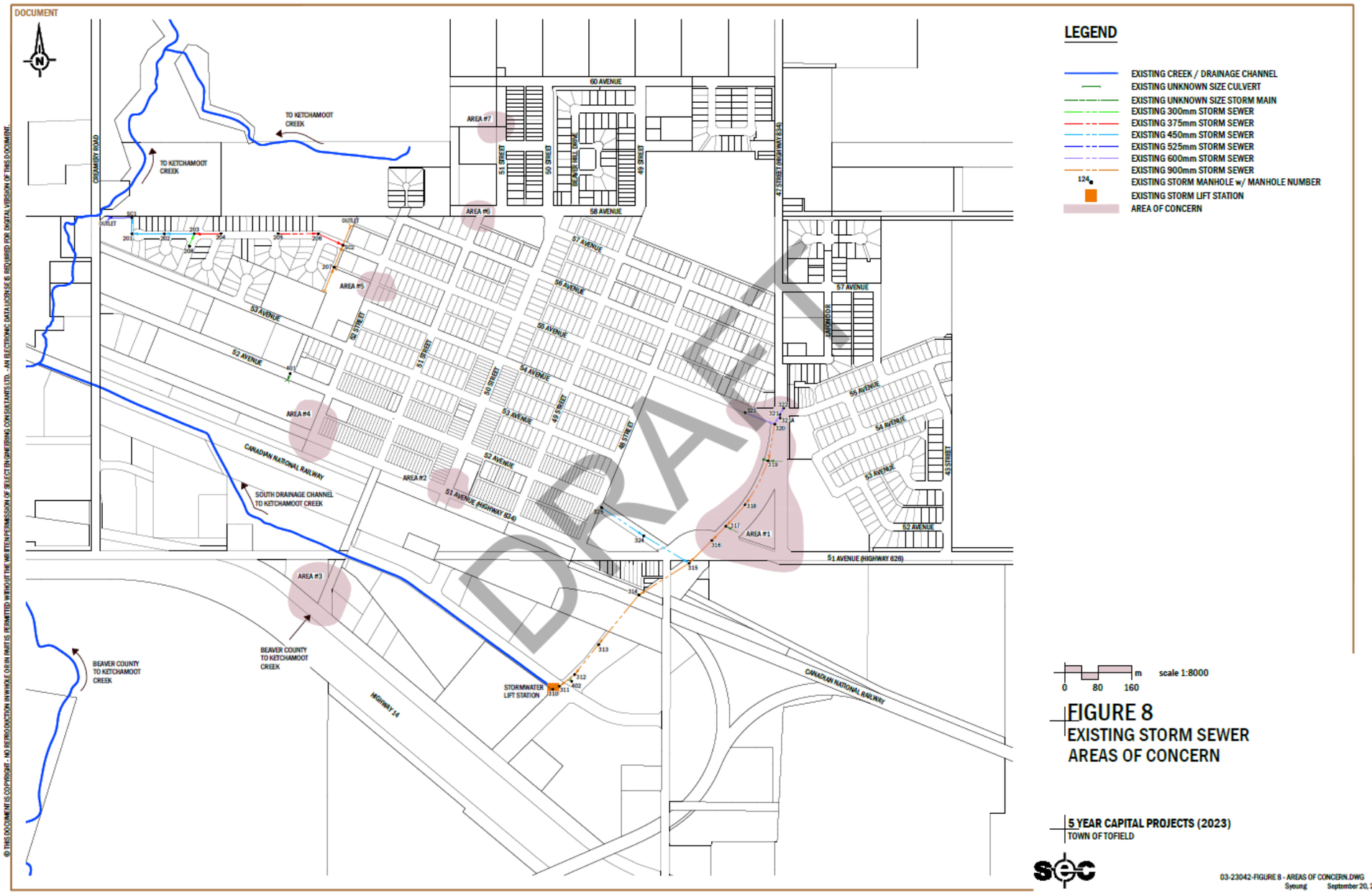


Figure 2 Identified problematic areas prone to flooding (from *SEC, 2023*)

Table 1 Summary of existing areas of concern as identified in the 2023 SEC report

Area	Location	Flooding Description
#1	47 St and 55 Ave and surrounding area	Inadequate drainage and ponding have been observed in the Ketchamoot East Industrial Sub-basin during and immediately after intense rainfall. The flood extents covered the intersection at 47 St and 55 Ave, as well as the ditches along 47 St. Furthermore, water ponds near the soccer pitches to the east, the fairgrounds to the west, and west along 55 Ave on the roadway. At times the roadway has been impassable for several hours, or potentially a full day while it can take up to several days for ponding to fully recede. Runoff in Area 1 is conveyed by the existing storm sewer pipes which have to cross the CN railway and are then pumped via a lift station into the nearby South Drainage Channel. It is noted that Public Works has used an additional portable pump previously to allow for increased capacity of the lift station. This resulted in a reduction in the overall duration of the flooding. No storage facilities are currently in place to alleviate some of the flooding in this area. The report suggests that stormwater storage, pumping capacity, and the capacity of the storm sewer piping should be reviewed while consideration should also be given to potential downstream impacts that could be caused by increased pumping capacity.
#2	50 Street and 51 Avenue	This area is prone to surface flooding and ponding from intense rainfall and seasonal snow melt events. Flood waters inundate the intersection at 50 St and 51 Ave and extend into the downstream drainage ditch. The duration of the ponding is typically short with the impacts contained within a few hours during intense rainfall events. However, snowmelt related flooding can be more prolonged due to additional drainage issues that are caused by frozen culverts and ditches which require significant effort from Public Works to mitigate and resolve. Opportunities for stormwater storage should be reviewed and considered helping mitigate rainfall-based flooding. However, the stormwater storage improvements will not solve the snow melt events which are expected to continue.
#3	51 Street and 46 Avenue	This area is located south of the Beaverhill Motel at the intersection of 51 St and 46 Ave and is part of the Ketchamoot East and Industrial Sub-basin which receives additional inflows from Beaver County upstream. During and after larger rainfall events, prolonged flooding and ponding has occurred in the low-lying land south of the motel. The drainage system is connected to the downstream South Drainage Channel. Stormwater storage should be reviewed and considered for this area.
#4	52 Street near 51 Avenue	Water pools in the corner of 52 St and 51 Ave during both intense rainfall events and prolonged durations of snowmelt. A small drainage ditch conveys runoff from the roadway south towards the CN railway tracks. The duration of the ponding can range from several hours after the rainfall event to several days during extended period of snowmelt. Stormwater storage and ditch upgrades should be considered to improve local drainage.

Area	Location	Flooding Description
#5	52 Street near 54 Avenue	Area #5 is located at 52 St and near 54 Ave where flooding and ponding can occur during intense rainfall events and prolonged durations of snowmelt. Roadway runoff is directed into a drainage ditch which discharges into the storm sewer system. The periods of floodings are typically short during rainfall events but can be prolonged during periods of frequent rainfall. The inlet and piping capacity of the existing sewer pipe system should be reviewed and stormwater storage options should be considered to help improve local drainage.
#6	51 Street and 58 Avenue	This area is located at the intersection of 51 St and 58 Ave and is part of the Ketchamoot North sub-basin. During larger rainfall events and prolonged durations of snowmelt flooding and ponding has occurred. The local roadway drainage system is connected to a ditch that takes runoff east towards Ketchamoot Creek. A ditch cleanout and conveyance capacity should be reviewed and considered to improve local drainage.
#7	51 Street near Sunshine Villa	Water pools on the roadway of 51 St during both intense rainfall events and prolonged durations of snowmelt. A small drainage ditch conveys roadway runoff into a marsh. The duration of the ponding can range from several hours after the rainfall event to several days during extended period of snowmelt. Stormwater storage and ditch upgrades should be considered to improve local drainage.

Some flood mitigation concepts are identified in the report, including stormwater retention facilities, conveyance capacity upgrades, etc.

- *Austrom Consulting Ltd., 2021. Town of Tofield Municipal Development Plan.*

The municipal development plan (MDP) is intended to guide future growth and development within the town of Tofield. A map is included in the report which highlights development opportunities within the town including the areas west of the airport, north and northeast of the town and south of the CN Railway. Furthermore, the existing and future land uses are shown on a map prepared by SEC and dated March 16, 2020. In section 16, the report states that the use of right-of-way for water conveyance must be designed for to accommodate a 100-year storm and not adversely affect traffic. Should the road right-of-way not be able to accommodate the 100-year storm, on-site storm water ponds will be required. Storm water storage or retention is not allowed within road right-of-way. Under section 18.3 of the report, it is indicated that the Town will not permit development in areas prone to flooding.

- *UMA / AECOM., 2008. Northeast Tofield Area Structure Plan – Town of Tofield, Haltek Developments Inc.*

The purpose of this report is to provide a land use framework for a future residential development in the north-eastern part of Tofield which includes approximately 33 ha of land. In Section 5.3 (Stormwater Management System) the report mentions that a separate stormwater management report has been completed and submitted to Alberta Environment for their approval; included in the stormwater management concept is a small existing pond to provide water quality enhancement and aesthetics while the stormwater runoff will be drained overland to Beaverhill Lake (which was referred to in the document as Bruderheim Lake).

Table 2 provides a summary of available drawings provided by SEC for the existing stormwater drainage structures in the Town of Tofield.

Table 2 Summary of drawings for existing drainage structures

Title	Format	Location	Source/Designer	Date
Existing Minor Storm Sewer System	PDF	Covers the entire Town of Tofield	Selected Engineering Consulting Ltd.	Sept 20, 2023
Overall Existing Culverts	PDF	Covers the entire Town of Tofield	Selected Engineering Consulting Ltd.	May 17, 2024
Ketchamoot Development Inc. Ketchamoot Plains Construction Drawings	PDF	Ketchamoot Plains	Stantec	August, 2008

2.2 Land Use Map

A land use plan dated August 12, 2022 was provided by SEC (**Appendix A**). This plan is likely an update to the land use map included the Town's 2021 Municipal Development Plan. This new plan was used in this study.

2.3 Flood Photos

Heavy rainfall storms occurred on August 4, 2017 and July 24, 2023 and resulted in significant surface flooding in the town of Tofield. SEC provided photos taken during these events which are included in **Appendix B**.

2.4 Climate Data

Climate data used for this study include:

- Intensity-Duration-Frequency (IDF) data for the City of Edmonton,
- Canadian Historical Weather Radar Images for Carvel (near Edmonton) from Environment Canada (EC),
- Long-duration IDF data for the Elk Island and Vegreville climate stations from EC,
- Hourly precipitation data for Elk Island from August 2017 and July 2023 from Alberta Agriculture and EC respectively.

2.5 Survey and Topographical Data

A site visit was undertaken on June 12, 2024, by NHC engineers. The objectives of the site visit were to gain an understanding of the existing drainage pattern and problems, and to inspect important drainage features within the study area. **Appendix C** includes the field investigation photos. NHC recorded diameters and types of existing culverts that were accessible during the site visit. Where survey data of these culverts were not available, NHC's measurements were used in this study.

Following the site visit, SEC conducted surveys of drainage channel cross sections and culverts per a survey plan prepared by NHC. The following survey data were then provided by SEC:

- 10 cross sections for the Tributary 1 within the study area,
- 12 cross sections along a drainage ditch referred to as "South Drainage Channel" (**Figure 3**) flowing between Hwy 14 and CN Railway within the town limits,
- 9 cross sections along a drainage ditch running north of the CN Railway which is herein referred to as "CN North Ditch" (**Figure 3**),
- 13 cross-sections along the Hwy 834 drainage ditches near the Tofield Cemetery,
- culverts on the Tributary 1 within the Town and Tributary 2 at the CN Railway crossing,
- culverts along the CN North Ditch crossing 56 Street and 51 Street,
- culverts along the South Drainage Channel, and
- culverts crossing Hwy 834 alignment between Township Rd 512 and Hwy 626.

In addition, SEC provided survey information collected on April 12, 2023 that includes rim elevations, depths and pipe diameters for some of the manholes and catch-basins located along the storm sewers in the Sub-basin 4. It was noted that some depths and pipe sizes were not available due to standing water in the sewers.

NHC acquired Airborne LiDAR digital elevation model (DEM) data with a 1-m resolution from AltaLIS. The data were collected in 2014. The data cover the town and some downstream areas.

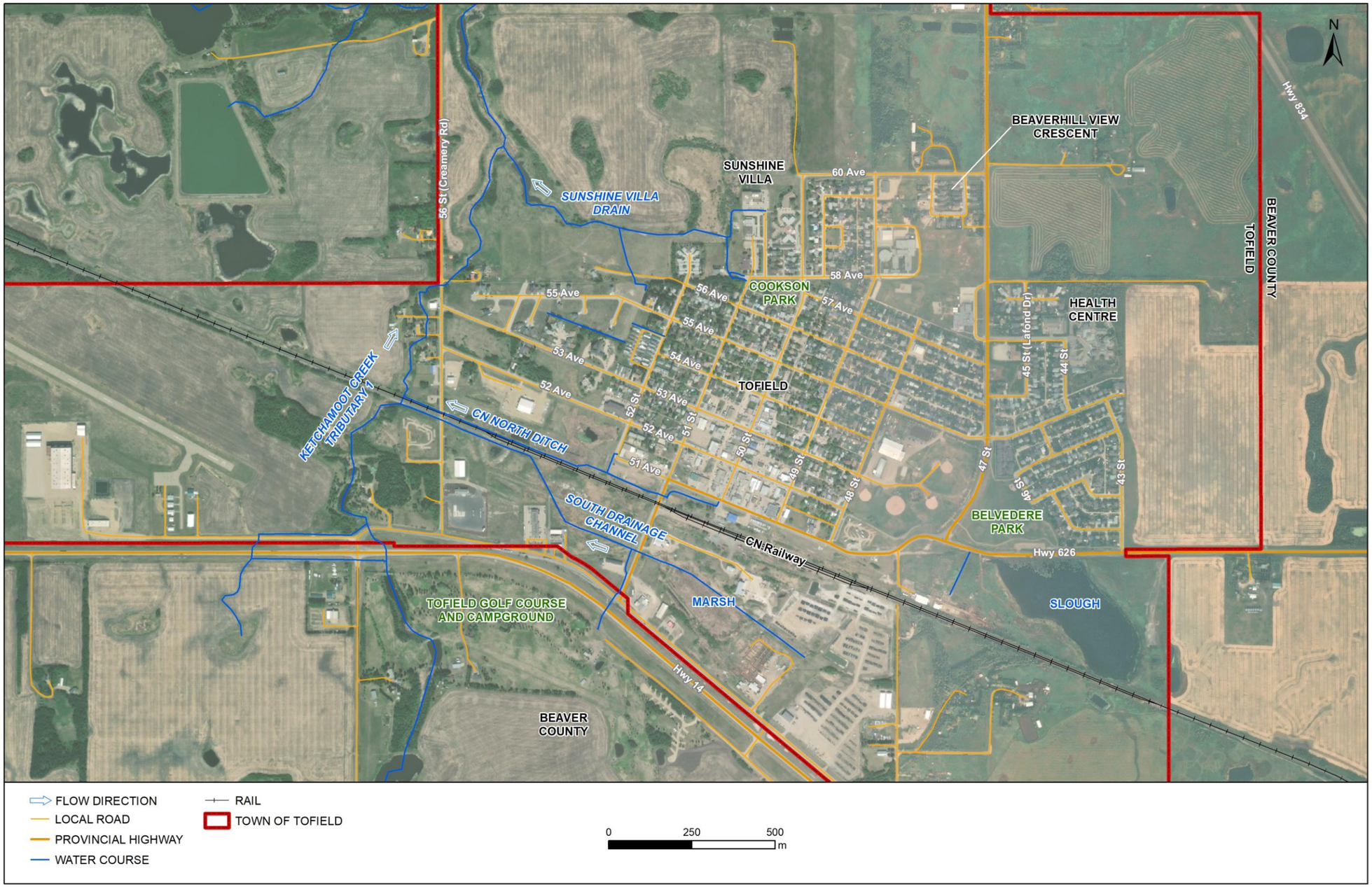


Figure 3 Existing water courses within the town of Tofield

3 EXISTING DRAINAGE SYSTEM

3.1 Existing Drainage Patterns

As shown in **Figure 1**, Ketchamoot Creek flows generally in a northeasterly direction, passing the northwest corner of the town of Tofield before discharging into Beaverhill Lake. A tributary of Ketchamoot Creek (Tributary 1) generally flows north across Hwy 14 from the Tofield Golf Course and Campground. After crossing the highway, Tributary 1 continues northward through the town. It joins Ketchamoot Creek in the SW ¼ of Section 12-51-19-W4M (**Figure 4**). While the town is located within the Kechamoot Creek basin, the majority of the runoff from the town drains into the Tributary 1 first. A smaller area within the town boundary is drained by the Tributary 2 which is located west of the Tofield Airport as shown in **Figure 1**.

Catchment areas of the Ketchamoot Creek and its tributaries and the surrounding area were delineated based on the available high resolution LiDAR data from AltaLIS and medium resolution DEM data from Natural Resources Canada (NRCAN).

Figure 4 shows the sub-basins of Ketchamoot Creek and its tributaries that drain across the town. Ten of the delineated sub-basins discharge to the Tributary 1 while five other sub-basins discharge directly to the Ketchamoot Creek main stem. Tributary 2 consists of one single sub-basin. Areas of these sub-basins and outlet locations are summarized in Table 3**.**

Table 3 Summary of catchment areas

Basin	Name (NHC)	Outlet Location	Local Catchment Area (ha)
Tributary 1	Sub-basin 1	Marsh west of Sunshine Villa	51.2
	Sub-basin 2	Outfalls at Creamery Rd and 55 Ave	36.6
	Sub-basin 3	Confluence with Tributary 1 west of 56 St	34.9
	Sub-basin 4	Lift station upstream of the South Drainage Channel	113.7
	Sub-basin 5	Confluence with Tributary 1 west of 56 St	124.8
	Sub-basin 6	Culvert under Hwy 14, south of the Beaverhill Motel	149.6
	Sub-basin 7	Culvert under Hwy 14, north of the Golf Course	1,439.7
	Sub-basin 8	Culvert under CN Railway	47.3
	Sub-basin 9	Culvert under Creamery Rd	18.8
	Sub-basin 10	Tributary 1 at the confluence with Ketchamoot Creek	48.2
Tributary 2	Sub-basin 11	Culvert under CN Railway, Northwest of the airport	450.2
Ketchamoot Creek	Sub-basin 12	Culvert under the lagoon access road	32.8
	Sub-basin 13	Marsh at the corner of Range Rd 192 and the CN Railway	24.9
	Sub-basin 14	Ketchamoot Cr upstream of CN Railway	65.7
	Sub-basin 15	Culvert under CN Railway at west town boundary	14,767.3
	Sub-basin 16	Confluence with Ketchamoot Cr at Hwy 834	466.0

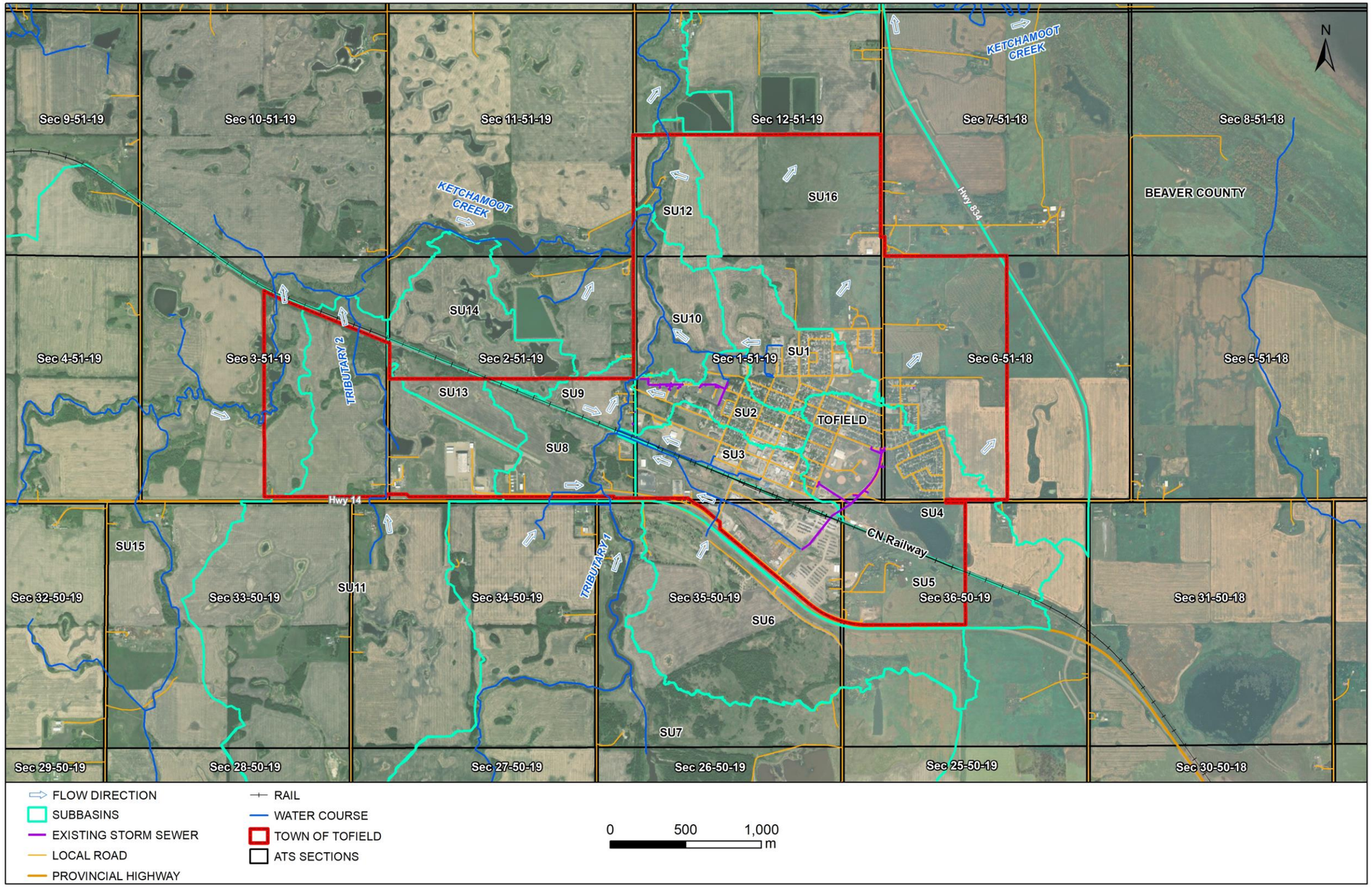


Figure 4 Sub-basin areas and existing drainage features

Tributary 1

Sub-Basin 1

Sub-basin 1 has a total area of 51.2 ha as shown in **Figure 5.** It comprises mainly low-density residential area north of 55 Ave as well as public services such as the Tofield School, the Tofield Lodge, two churches and the Sunshine Villa. Runoff within the developed areas is intercepted by gutters or ditches flowing along roadways and ultimately drains into a marsh behind the Sunshine Villa building. The marsh discharges to the Tributary 1 via a poorly defined channel, referred to as the Sunshine Villa Drain herein.

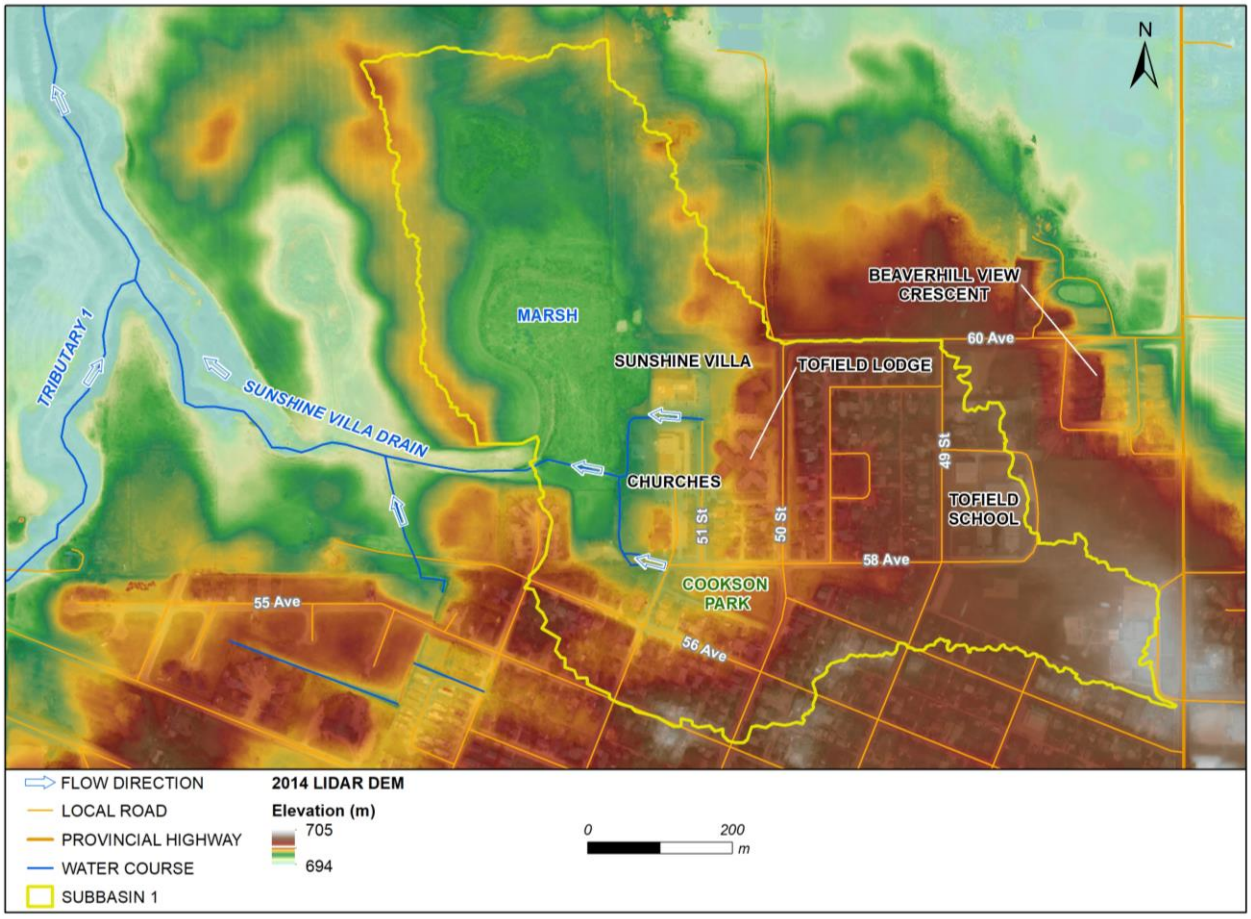


Figure 5 Sub-basin 1 existing drainage pattern

Sub-Basin 2

Sub-basin 2 is serviced by both minor and major drainage systems with an estimated total area of 36.6 ha as shown in **Figure 6**. This sub-basin consists of low-density residential, medium density residential and modular home residential areas. Runoff from the eastern portion of the sub-basin is conveyed by gutters and curbs towards 52 St and then discharges to a small drainage channel. The 92 m long drainage channel connects to the minor drainage system which also receives runoff from several catch-basins located along 53 St, 55 Ave and 52B St. This minor system discharges into a drainage channel just north of 55 Ave which crosses a driveway with a small 300 mm CSP culvert and continues northwestward where it joins the Sunshine Villa Drain. A second minor drainage system receives runoff from the development located along Ketchamoot Dr, 54 St and 56 St. The system discharges directly into the Tributary 1 just east of 56 St.

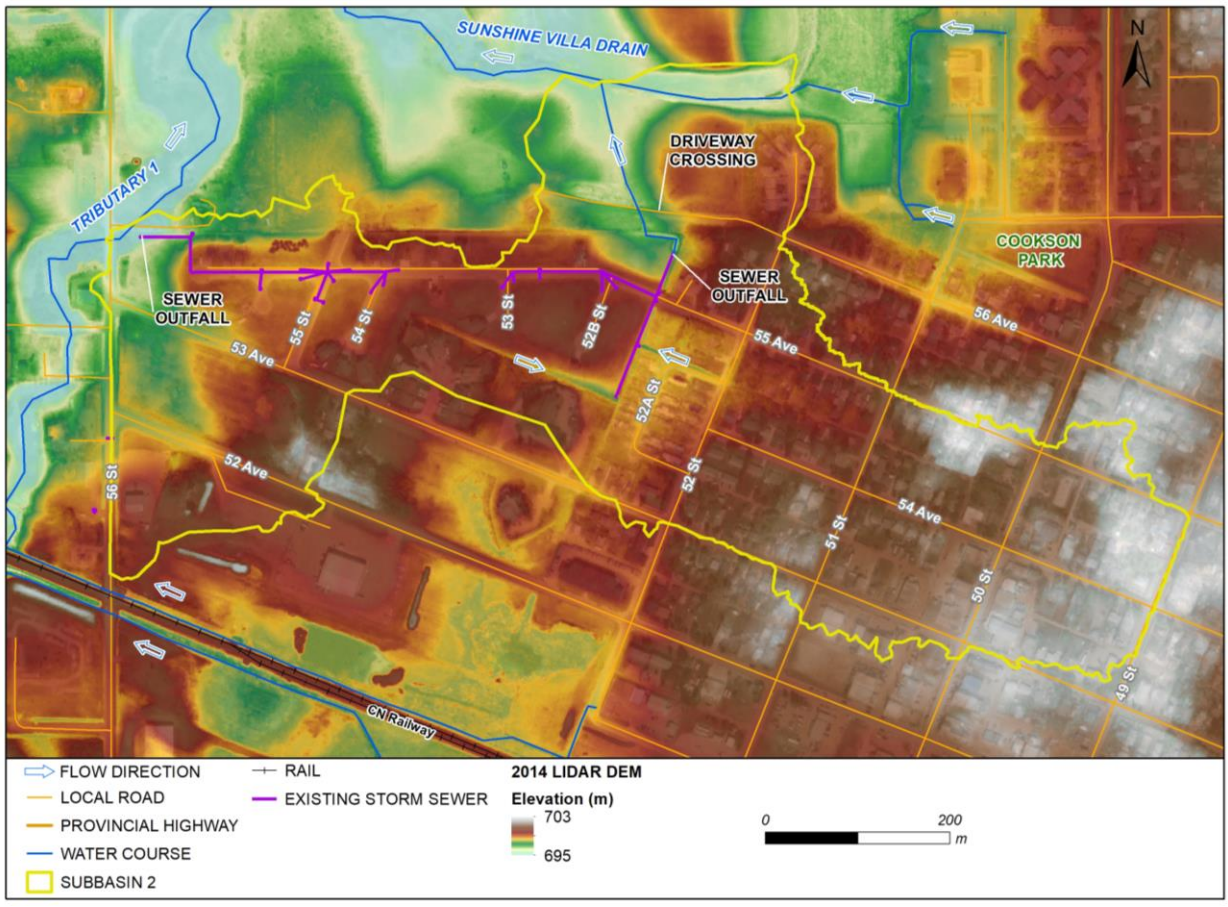


Figure 6 Sub-basin 2 existing drainage pattern

Sub-Basin 3

The landuse within Sub-basin 3 consists of general and service commercial, medium density residential, recreation downtown and commercial areas. The total catchment area for Sub-basin 3 has been estimated as 34.9 ha as shown in **Figure 7**. The CN North Ditch runs westward along the northside of the CN Railway tracks and collects inflows from the surrounding areas including roadway runoff from 52 Ave and 51 Ave. The ditch crosses 56 St approximately 100 m upstream of its confluence with the Tributary 1. The area immediately north of the drainage ditch between 56 St and 51 St is marshy and provides some storage during flood events.

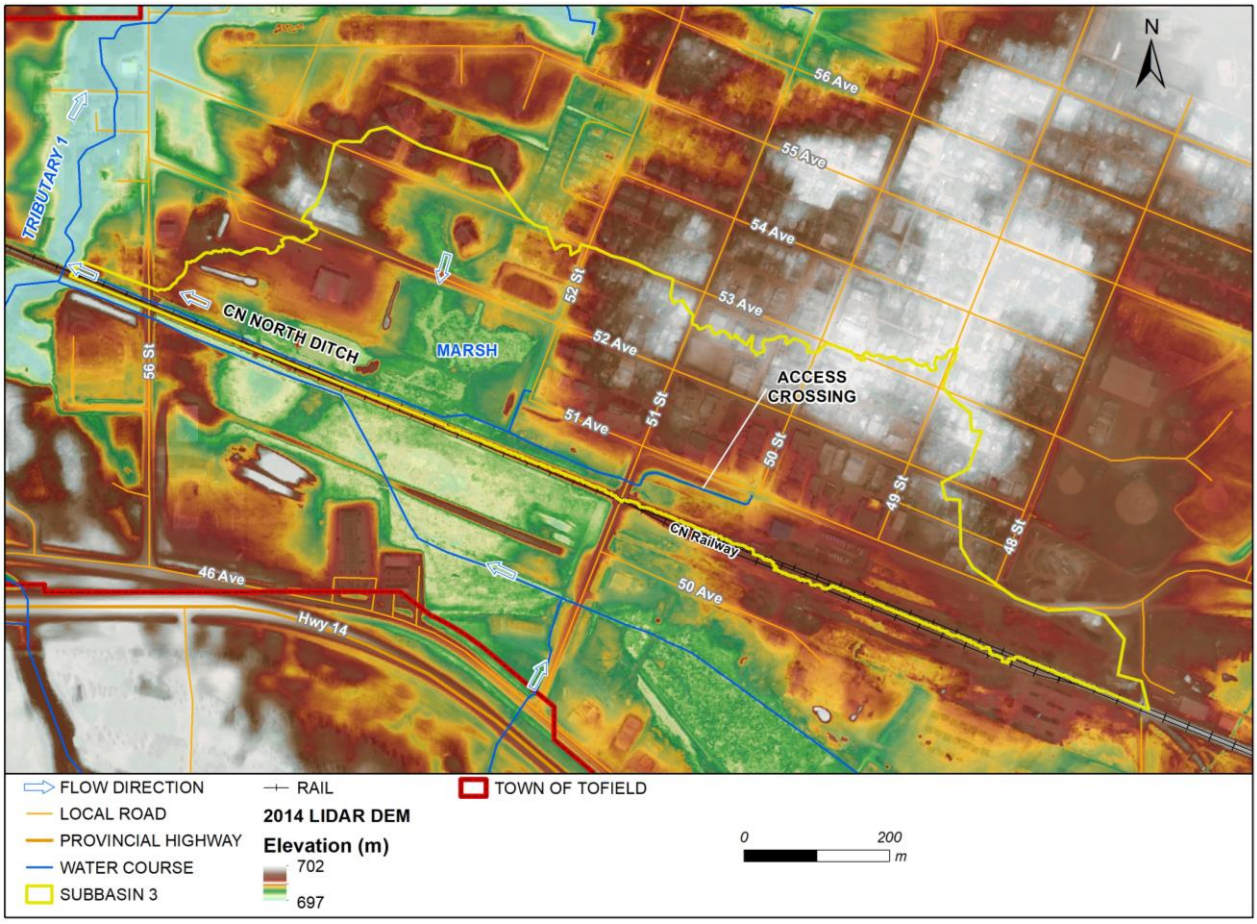


Figure 7 Sub-basin 3 existing drainage pattern

Sub-Basin 4 and 5

Sub-basins 4 and 5 comprise a relatively large drainage area of approximately 113.7 ha and 124.8 ha, respectively, within the town as shown in **Figure 8**. Surface runoff from mostly residential and recreational areas is collected by a minor drainage system within Sub-basin 4. Several catch-basins are located at the intersections of 47 St and 55 Ave, 47 ST (Hwy 626) and 51 Ave and 48 St and 52 Ave. The minor drainage system receives additional inflows through

several inlet pipes which are located within the 47 St east and west roadway ditches adjacent to the baseball and soccer fields. NHC identified additional catch-basins at the end of 56 Ave just west of 47 St **(Figure C.4.-7)** and at the east end of Lafond Dr **(Figure C.4.-8).** However, it is unclear how these catch-basins are connected to the minor drainage system. At the downstream end, a lift station pumps flows from the minor system into a drainage ditch which is also referred to as the "South Drainage Channel" which runs in westerly direction. The linear drainage channel conveys runoff through several marshes within the industrial area of Tofield and eventually discharges into the Tributary 1, 120 m downstream of 56 St. The South Drainage Channel receives additional inflows from the adjacent Beaver County to the south via open channel drainage (Sub-basin 6).

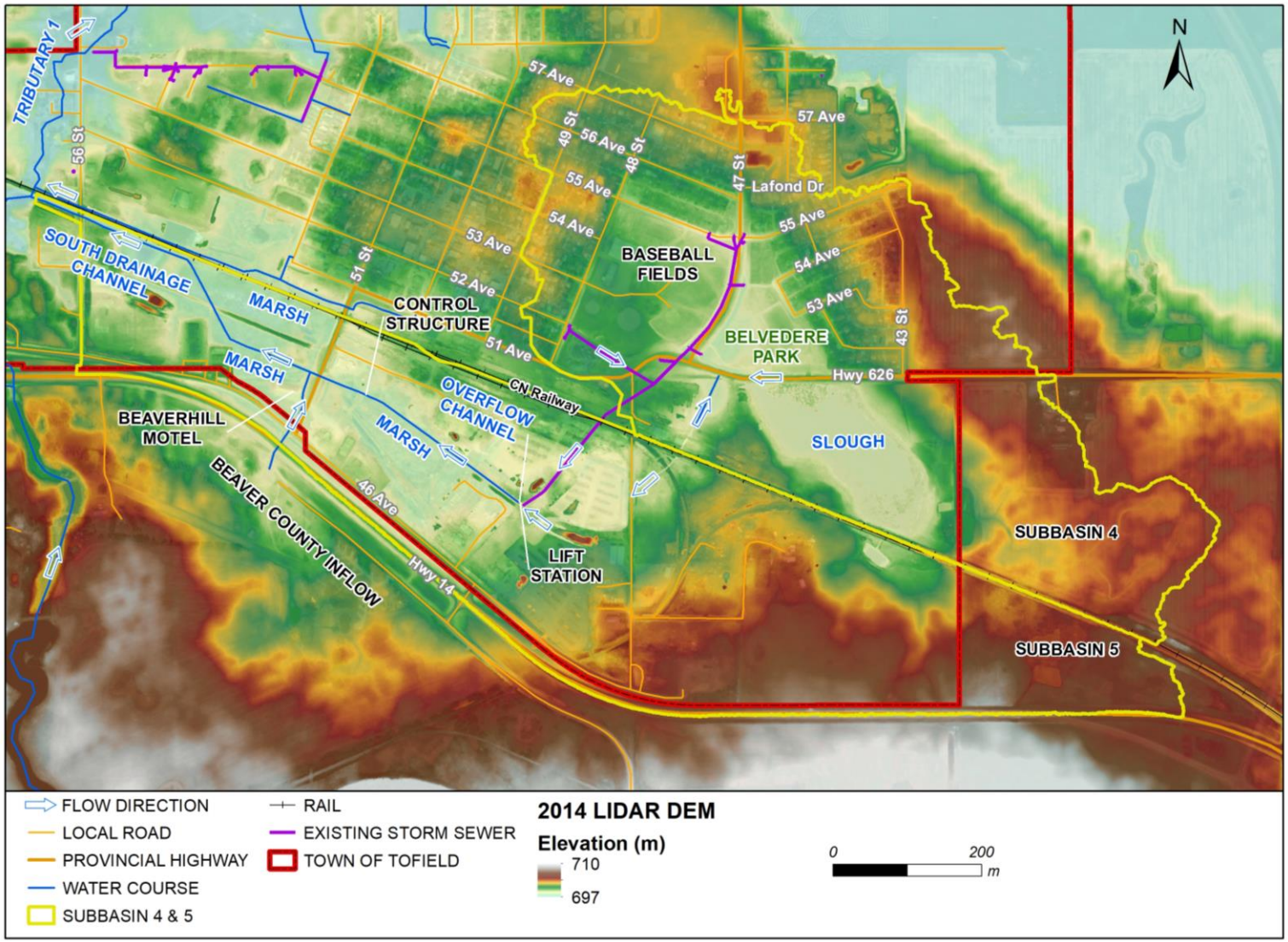


Figure 8 Sub-basins 4 and 5 existing drainage pattern

Sub-Basin 6

Sub-basin 6 is located outside of the Tofield town boundary and within Beaver County where it includes a portion of the Tofield Golf Course and Campground. The sub-basin borders a number of abandoned mine pits to the south, Hwy 14 to the north and the Tributary 1 to the west. Runoff is directed towards a small ditch that begins near the Tofield Golf Course and Campground. From there it crosses Hwy 14 and 46 Ave and continuous northward where it ultimately discharges into the South Drainage Channel. The sub-basin is displayed in **Figure 9** and consists mainly of undeveloped rural area except for the Tofield Golf Course and Campground.

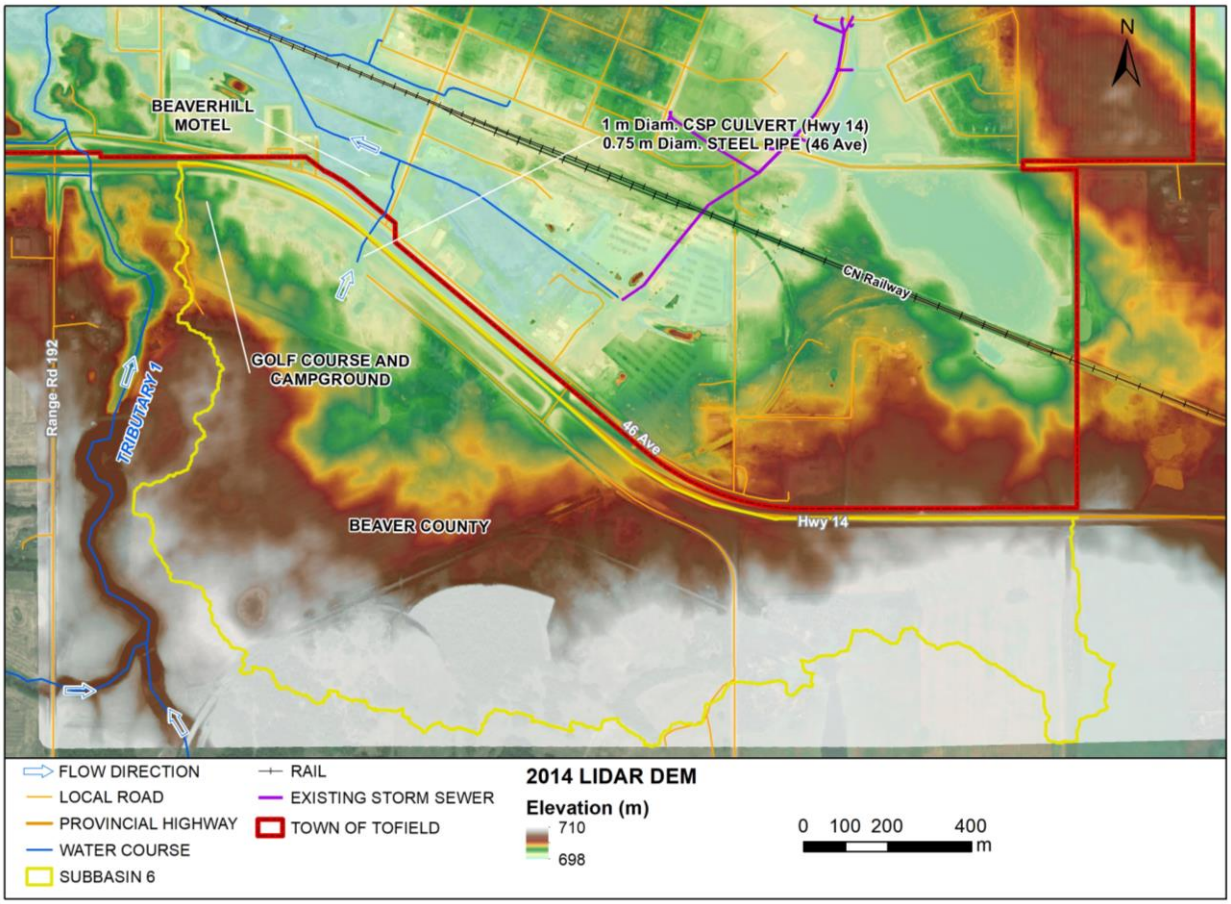


Figure 9 Sub-basin 6 – existing drainage pattern

Sub-Basin 7 to 10

Sub-basin 7 includes an area of approximately 1,440 ha within the Tributary 1 basin and consists mainly of undeveloped rural area. A few smaller reservoirs are located along this portion of the

Tributary 1 which provide some storage during larger flood events. The sub-basin receives inflows from a portion of the Tofield Colf Course and Campground with flows being intercepted by the Hwy 14 south ditch. A 1,000 mm CSP culvert is located under Hwy 14 which conveys runoff northward across the town boundary. A second 1,000 mm CSP culvert is located under 46 Ave a short distance downstream.

Sub-basins 8 includes a portion of the Tofield Airport in the southwest as well as agricultural fields and treed areas adjacent to the Tributary 1 within the town boundary. Some low-density residential areas are also located along the east boundary of the sub-basin. A 1,000 mm CSP culvert is located under the CN Railway and controls outflows at this location of the Tributary 1.

Sub-basin 9 to the north receives local runoff from mainly undeveloped land and low-density residential area which ultimately drains into the Tributary 1 locally. At the downstream end of Sub-basin 9, a 1,000 mm CSP culvert is located under Creamery Rd and controls the outflows.

Sub-basin 10 is mostly undeveloped and covers a portion of the Sunshine Villa Drain catchment as well as the Tributary 1 to its confluence with the Ketchamoot Creek in the north.

Tributary 2

Sub-basin 11

Sub-basin 11 has an estimated catchment area of 450.2 ha. A small creek which is referred to herein as Tributary 2 receives runoff from the adjacent catchment and crosses the CN Railway tracks a short distance upstream of its confluence with the Ketchamoot Creek. The rail crossing consists of a single 750 mm diameter culvert. The creek is connected to several marshes that collect runoff from a portion of the Tofield Airport and Beaver County to the south. Based on the August 12, 2022 landuse map from SEC, the mostly rural area around the Tofield Airport may be changed in the future to Medium Industrial landuse.

Ketchamoot Creek

Sub-basin 12 to 16

Sub-basin 12 is a relatively small sub-basin of the larger Ketchamoot Creek which extends from the Tributary 1 confluence upstream to the Lagoon Access Road downstream where a 1,600 mm CSP culvert and a 1,400 mm CSP culvert convey runoff under the road. The Lagoon Access Road is located just upstream of the town boundary. This area is classified as Urban Reserve on the August 12, 2022 landuse map from SEC.

Runoff within the Sub-basin 13 is directed into a small marsh located at the corner of Range Road 192 and the CN Railway. It is unclear if culverts are installed under the railway tracks or Range Road 192 to drain the marsh into the Tributary 2 in the west or Ketchamoot Creek in the north. Based on the August 12, 2022 landuse map from SEC, the lower half of this area may be changed in the future to medium industrial landuse.

As shown in **Figure 4**, Ketchamoot Creek enters the township boundary in the west and continues northward where it crosses the CN Railway tracks at the outlet of Sub-basin 15. The creek crossing consists of a single 2,000 mm diameter culvert. Along its drainage course between the west and north town boundaries, Ketchamoot Creek receives local inflows from Sub-basins 14 which is bounded by the CN Railway to the south, a Lagoon in the east and Range Road 192 in the west. Only a small portion of this sub-basin is located within the town boundary.

Sub-basin 16 drains towards the Ketchamoot Creek in the northeast with flows being intercepted by Hwy 834 as shown in **Figure 4**. The sub-basin consists mainly of undeveloped rural area except for the developments of Beaverhill View Cresent, the residential development north of 57 Ave and east of 47 St, the Tofield Health Centre, as well as a small section of the Belvedere residential subdivision which is located in the southeast corner of the town. These more densely developed areas include low-density and medium-density residential and public services land uses. A review of available topographic information would indicate that prior to the construction of Hwy 834, some runoff would have drained directly towards the Beaverhill Lake in the northeast.

3.2 Existing Drainage Infrastructure

Most of the developed area within the town limits is located east of 56 Street between the highway and 60 Avenue. The existing stormwater drainage system of the Town is illustrated in **Figure 4**. Key drainage structures are described as follows:

A man-made drainage channel, referred to herein as CN North Ditch, extends from the intersection of 50 St and 51 Ave upstream where it receives runoff from Sub-basin 3. The ditch flows in a northwesterly direction between 51 Ave and the CN railway tracks and ultimately drains into the Tributary 1. Standing water and dense vegetation has been noticed during the site visit within the upper reach of the channel just downstream of the timber pedestrian bridge. Two smaller CSP culverts at an access crossing approximately 75 m downstream of the pedestrian bridge and at 51 St create bottle necks within the drainage system and ultimately contribute to the flooding within the upper reach. Furthermore, the portion of the ditch between 51 St and 56 St is in places poorly defined and connected to a larger marshy area. The channel

capacity and flow depth are limited within this reach which results in frequent overtopping of the north channel bank and water spilling into the adjacent marsh. Road crossings along the ditch within the town limits include:

- 51 Ave sidewalk: a Timber Pedestrian bridge (**Figure C.3.-2**)
- Field Access (south of 51 Ave): a 750 mm CSP culvert (**Figure C.3.-4**)
- 51 St: a 600 mm CSP culvert (**Figure C.3.-5**)
- 56 St: a 750 mm CSP culvert **(Figure C.3.-9)**

The South Drainage Channel receives its inflows on the upstream end from Sub-basin 4 which includes a large area of the Tofield residential area, the soccer and baseball fields, and the industrial area. The ditch flows in a northwesterly direction between 46 Ave and the CN railway tracks and ultimately drains into the Tributary 1 (**Figure 8**). There is a minor storm sewer system running from the Tofield baseball and soccer fields at the intersection of 47 St and 55 Ave to the area northeast of the Stockyards Veterinary Services. It discharges into the South Drainage Channel via a lift station (shown in **Figure 8**) located north of 46 Ave and west of 47 St. This minor storm sewer system, consist of 450 mm, 600 mm and 900 mm storm sewer pipes as well as 18 manholes and 1 lift station according to the October 13, 2023, 5 Year Capital Project Report from SEC. A small retention pond has been constructed near the lift station, however, based on our discussions with the client, we understand that it is not part of the minor drainage system. A small 450 mm precast concrete pipe **(Figure C.4.-12)** was observed during the site visit which appears to be connected to a manhole located approximately 50 m upstream of the lift station which connects to the adjacent retention pond. The concrete pipe connects to a 60 m long overflow channel that appears to divert flows from the retention pond into the South Drainage Channel. The existing lift station consists of a 3 phase, 5 horsepower pump. However, further information of the pump related to its capacity are unknown. For this assessment it has been assumed that the pump capacity would be limited to 0.045 m^3/s which is typical for other 5 horsepower pumps.

Additionally, a slough is located south of Hwy 626 which connects to the north highway ditch and ultimately the minor drainage system via a 800 mm diameter CSP culvert (see **Figure 8**). The purpose of this slough is not clear; however, it appears to receive runoff from the area south of the CN railway tracks.

The South Drainage Channel reach downstream of the lift station is a mostly linear channel with a vegetated main channel and overbanks. The channel runs through the Tofield Nature's Marsh which provides habitat for migratory birds. A 1,000 mm diameter CSP culvert equipped with a box inlet on the upstream side controls water levels within the marsh (**Figure C.4.-13 and 14**). Road crossings along the South Drainage Channel within the town limits include:

- Nature's Marsh trail crossing and outlet control structure: a 1000 mm CSP Culvert with box inlet. (**Figures C.4.-13, 14 and 15)**

- 51 St: a 750 mm Steel Pipe Culvert (**Figure C.4.-16)**
- Access Road: a 600 mm CSP Culvert (**Figure C.4.-17)**)
- 56 St / Creamery Rd: 750 mm Steel and CSP Pipe Culvert (**Figure C.4.-19 and 20**)

The South Drainage Channel receives additional inflows downstream of 51 St where a small ditch **(Figure C.4.-18)** conveys runoff from the east portion of the Tofield Golf Course and Campground in Beaver County (Sub-basin 6) through a series of culverts under Hwy 14 and 46 Ave. The lower reach of the South Drainage Channel runs along the south side of the CN railway tracks. A long culvert has been installed at the downstream end of the drain which conveys flows from upstream of 56 St into the Tributary 1. Signs of channel erosion and bank slumping have been noticed upstream of 56 St (**Figure C.1.-19**).

Two additional minor storm sewer systems are located within Sub-basin 2. The east storm sewer system collects surface runoff conveyed by roadways which include 53 St, 52N St, 52A St and a portion of 55 Ave. The east storm sewer system outlets into a drainage channel that continues northward where it joins the Sunshine Villa drainage channel (**Figure 6**). During the site visit, it has been noticed that water is ponding within the upstream reach of the drainage channel between the outfall and the downstream located access road crossing which consists of a small 300 mm CSP culvert (**Figures C.2.-5 to 8**).

The minor storm sewer system to the west receives roadway runoff from the residential developments along 54 St, Ketchamoot Dr, 56 St and 55 Ave. The system discharges to the Tributary 1 through an outfall located east of 56 St (**Figures C.2.-9**).

4 HISTORY OF FLOODING

A heavy rainstorm occurred on July 24, 2023 and resulted in significant surface flooding in some areas of the Town of Tofield, including the intersections at 55 Ave and 47 St, 52 A St and 52 St, 52 St and 51 Ave, 51 Ave and 50th St, and 51 St and 58 Ave. Additionally, the flood inundated a large area of the soccer field in Belvedere Park. Flooding was also reported along 51 St, south of the Beaverhill Motel and at the Tofield Cemetery west of Hwy 834. Refer to **Figure 2** for the flooded areas mentioned above within the Tofield town boundary.

The rainstorm event on August 4, 2017 was another reported flood event which affected the area adjacent to 47 St between 55 Ave and Hwy 834 in the town.

The Town provided photos taken during these flood events, which are shown in **Appendix B**.

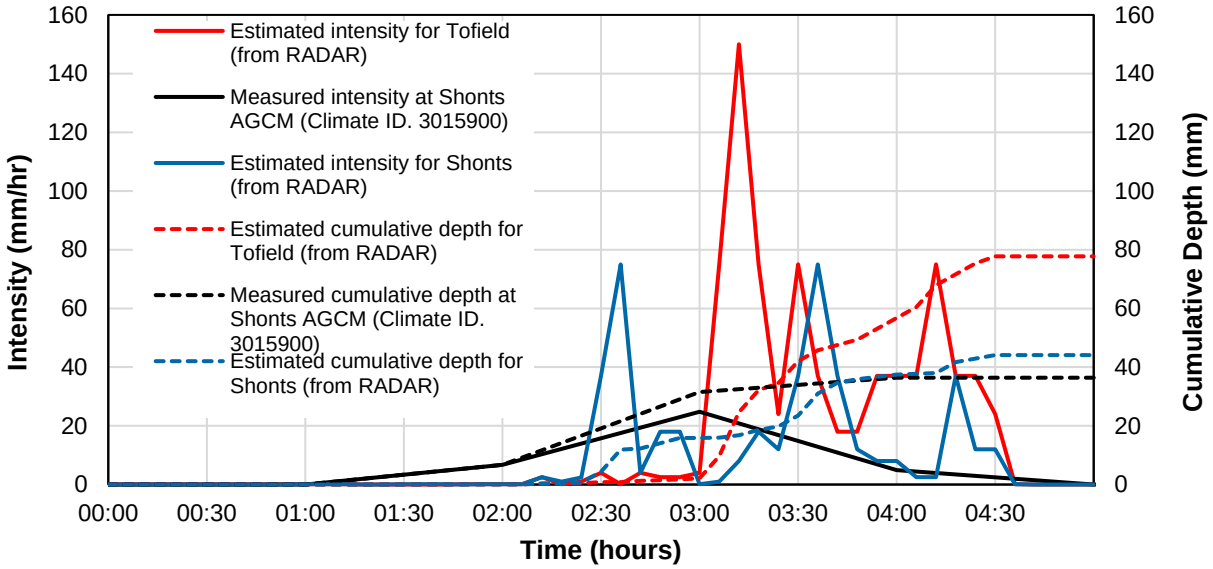
Precipitation data were not available at the town of Tofield. Hourly precipitation data for the Shonts AGCM weather station (Climate ID. 3015900) were reviewed. This station is located approximately 9 km southeast of Tofield. It is the nearest weather station that provides hourly precipitation data. The data show that the July 2023 storm event began at the hour 01:00 on the

24th and had a peak intensity of about 24.8 mm/hour and a duration of 4 hours. The recorded total rainfall depth of the event was only 36.4 mm. As discussed later, the design rainfall intensity-duration-frequency (IDF) values for the City of Edmonton could be applied to Tofield. When comparing to the IDF values, the July 2023 storm event as observed at Shonts would be close to a 5-year event, which appears to be much smaller than the perceived magnitude at Tofield. NHC then obtained and reviewed the PRECIP-ET weather radar data from Environment Canada.

The radar data used for this assessment were images at a 6-minute time step for the day of 24 July 2023. The images showed that the storm consisted of multiple cells, two of which had their centres pass over the Town of Tofield. The radar images were digitized to provide estimates of the rainfall amounts at the Town as well as over the Shonts climate station. The results are illustrated in **Figure 10**. The rainfall depths and intensities estimated for Shonts from the radar data are close to the gauge data. The radar data indicate that approximately 40 mm of rain fell over the Town of Tofield over 30 minutes between 3:00 and 3:30 on 24 July, 2023. Shortly after, another 25 mm of rain fell over the Town area over an hour between 4:00 and 5:00. The total rainfall depth over the 4-hour duration of the storm was approximately 77 mm. No rain fell over the Town for the remainder of the day.

Radar imagery was also assessed for the August 4, 2017 event, available at a 10-minute time step. The radar images were digitized both over the Town of Tofield and the Camrose climate station (Climate ID. 3011240), which observed more rainfall than the climate station at Shonts. The results are provided in **Figure 11**. The rainfall depths and intensities estimated at Camrose was similar to what was measured in the gauge data. Unlike in the July 2023 event, this event was a long-duration event and lasted for almost the entire day, with the highest intensities observed between 14:00 and 16:00.

The estimated 1-hour, 2-hour, 3-hour and 4-hour maximum rainfall depths at Tofield during this event are 51.3 mm, 76.0 mm, 77.7 mm and 77.8 mm, respectively. The 1-hour and 4-hour values are slightly smaller than the corresponding 100-year values from the Edmonton IDF curves, while the 2-hour and 3-hour values are greater than the 100-year values.



Notes:

1. Digitization from pixels is based on area-averaged values and may not accurately represent the exact location.

Figure 10 July 24, 2023 rainfall event

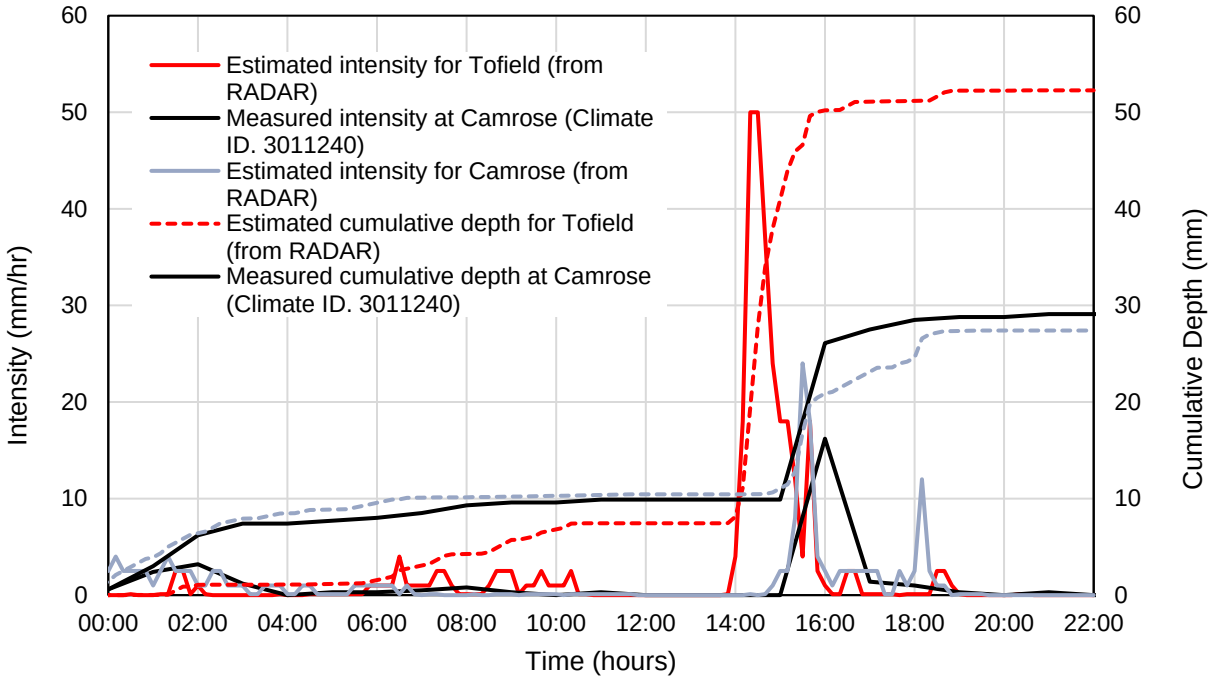


Figure 11 August 4, 2017 rainfall event

5 SWMM MODEL DEVELOPMENT

A computational model was developed using the PCSWMM software with the USEPA SWMM5 (version 5.2.4) engine to simulate key stormwater drainage system components of the Town of Tofield. The model included major storm sewer pipes, ponds, culverts, channels and roadways that function as conveyance elements of the existing drainage system. Configuration of the model is illustrated in **Figure 12**. The model was developed to the level of detail required to assess the capacity of the existing drainage system and to evaluate improvement options and future stormwater management concepts.

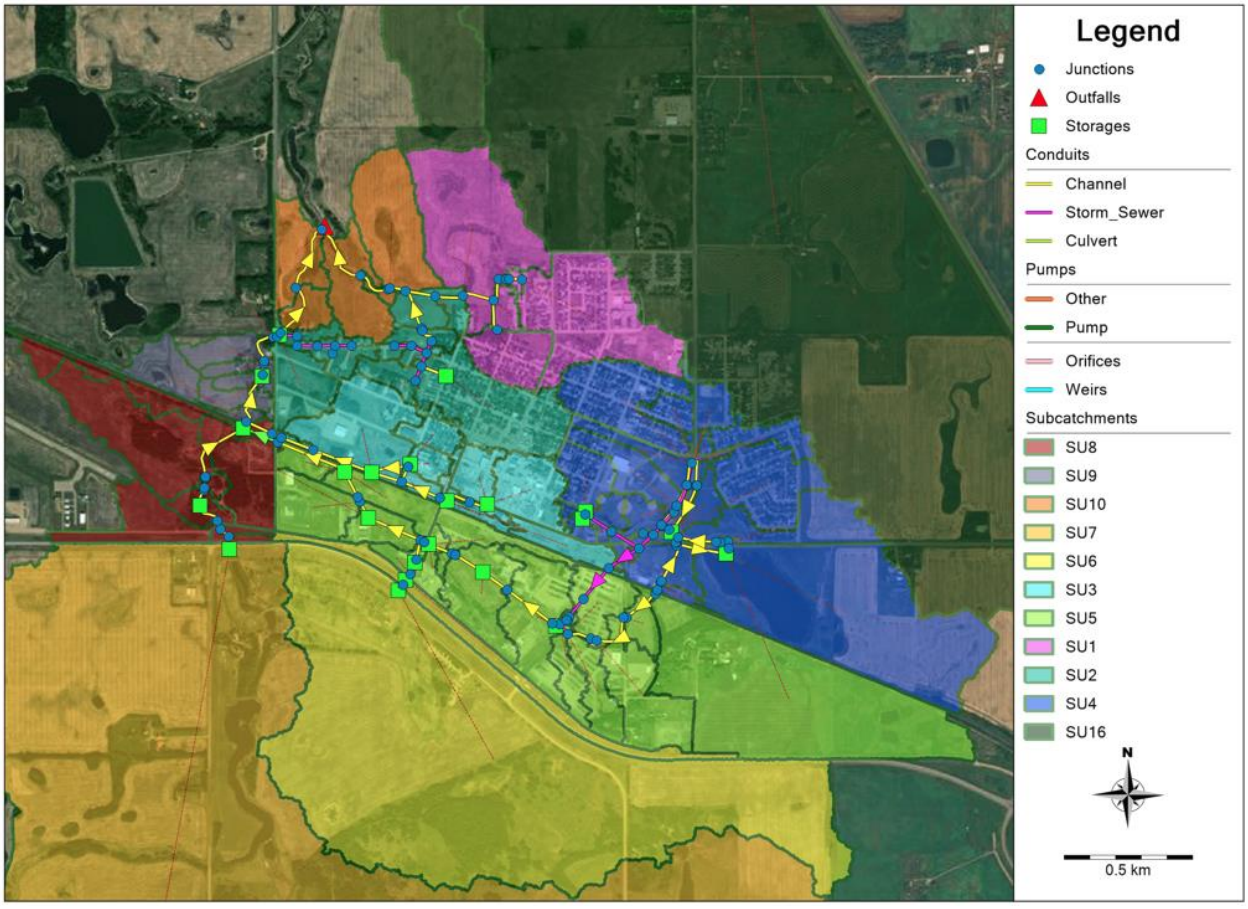


Figure 12 Tofield drainage system PCSWMM model layout

5.1 SWMM Model Parameters

The sub-basins described in Section 3.1 were further discretized into smaller sub-catchments based on the available design drawings, LiDAR data, land use map, and available aerial/satellite imagery. Average surface slopes of the sub-catchments were estimated using PCSWMM from the LiDAR DEM.

The model used the percent impervious values for different land use types included in **Table 4**. They represent typical values reported in the literature with judgements based on recent aerial/satellite imagery for the Tofield area. These values were used to determine composite impervious values for sub-catchments in the model. Other hydrologic parameters used in the model are summarized in **Table 5**. The adopted Manning's roughness values for storm pipes and drainage ditches/swales are summarized **Table 6**.

Table 4 Percent impervious values for existing land use

Land Use	Zoning [1]	Percent Impervious
Recreational	P-R	10%
Urban Reserve	UR	50%
Commercial and Business	C-DC, C-SC, C-GC, C-HC	90%
Industrial District	B-I, M-I	80%
Modular Home Residential	R-MH	40%
Low Density Residential District	R-LD	40%
Medium Density Residential District	R-MD	50%
Water Surface	-	100%
Natural and Agricultural Areas	-	2%

Note: (1) See **Appendix A** for description.

Table 5 Adopted hydrologic parameter values for modelling

Parameter		Value
Ground slope		Varies*
Manning's roughness for pervious area		0.15
Manning's roughness for impervious area		0.015
Depression storage on pervious area (mm)		5
Depression storage on impervious area (mm)		2
Horton infiltration model parameters (for pervious areas)	Max. infiltration rate (mm/hour)	50
	Min. infiltration rate (mm/hour)	3.5
	Decay constant (1/hour)	4
	Drying time (days)	7

**Average Surface Slope was estimated using PCSMM's Slope From DEM tool.*

Table 6 Adopted Manning's roughness values for conveyance elements

Conveyance Element	Manning's Roughness
Concrete pipe (CONC)	0.015
Corrugated metal pipe (CSP/CMP)	0.024
PVC pipe	0.010
Steel pipe	0.012
Ditch/Swale	0.040

Free flow outfall boundary conditions have been applied at the downstream end of the Ketchamoot Creek tributary and at the confluence of the Ketchamoot Creek with the Hwy 834 east and west drains.

5.2 Other Modelling Assumptions

Sizes, types and lengths of storm pipes and ditches used in the model were based on the available information including the as-built/design drawings, the survey data provided by SEC, the LiDAR data and the culvert types and sizes measured during NHC's site inspection. For pipes whose types or sizes were missing, it was assumed that they were the same as upstream and/or downstream pipes. Note several modelling assumptions had to be made for the sewer system and lift station within Sub-basin 4 due to the limited survey data available. Where required, irregular ditch cross-sections have been converted to simpler trapezoidal or triangular shapes with similar geometries to reduce flow oscillation within the model. Note, while entry and exit losses have been considered for individual culvert crossings, no energy losses for manhole, junctions or bends have been included as part of the preliminary modelling.

The model also included ditches that would convey surface runoff or overflows from surcharged manholes during severe rainfall events. Additionally, roadway type weirs have been assigned to culvert crossing locations where roadway overtopping is a concern.

A total of 19 area-storage curves were developed from the available survey and LiDAR data for areas within the model that provide significant storage volume. The volumetric properties of each storage unit have been described by a table of surface area versus height.

5.3 Design Storm Events

A complete set of rainfall intensity-duration-frequency (IDF) data is required for the stormwater assessment and drainage design. Rainfall observation data required to develop the IDF values are not available at Tofield.

The IDF_CC Tool (version 7.5) developed at the Western University (https://www.idf-cc-uwo.ca) was used to estimate IDF values for Tofield. IDF_CC is a publicly available web-based tool to update and adapt local extreme rainfall statistics to climate change. It allows the development of IDF curves for ungauged locations in Canada based on regional historical data as well as for projected future conditions under climate change scenarios. IDF estimates for Tofield were obtained for both historical and future conditions. The estimates for the historical condition appear to be generally lower than those from the published IDF curves for some regional climate stations (e.g., the Edmonton International Airport station and the City of Edmonton). To account for impacts of climate change, the IDF estimates for the Shared Socioeconomic Pathways (SSP) 5-8.5 (high emission) scenario were considered. This set of IDF estimates was compared with the IDF curves for the city of Edmonton (EPCOR, 2022). As illustrated in **Figure 13**, the future 5-year IDF curve from the IDF_CC Tool is similar to Edmonton's 5-year curve with the values for longer durations being slightly higher (up to 13%), while the future 100-year IDF curve is lower than Edmonton's 100-year IDF curve by up to 25%.

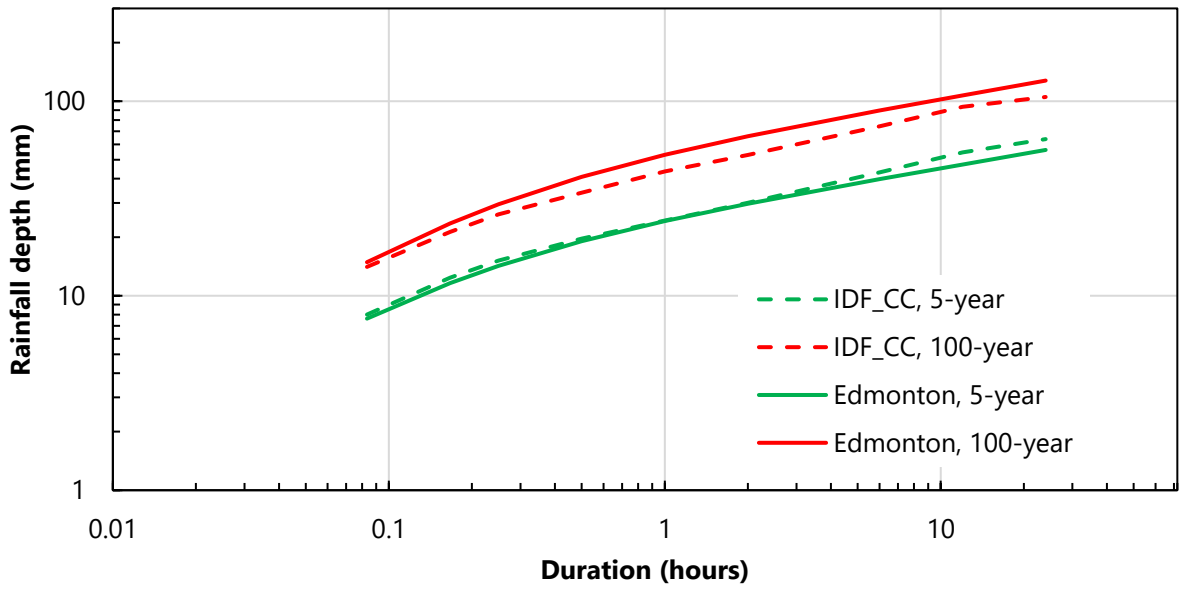


Figure 13 Comparison of IDF_CC future climate IDF with Edmonton IDF curves

The Edmonton IDF curves were developed from relatively long records and representative of the upper bound of the data from 11 rain gauges around the city of Edmonton. This data set has

been adopted by the City of Edmonton and other municipalities in the region. From the comparison with the IDF_CC Tool results discussed above, the Edmonton IDF values appear to be conservatively high while reasonable when potential impacts of climate change are considered. As such, the Edmonton IDF data have been adopted for the Town of Tofield in this study. The data are summarized in Table 7.

Table 7 Design rainfall intensity-duration-frequency values adopted for Tofield

Duration	Rainfall Intensity (mm/hr)					
	2-year	5-year	10-year	25-year	50-year	100-year
5 min	67.8	91.5	109.9	135.0	155.1	178.5
10 min	50.0	69.7	85.1	105.9	122.1	141.3
15 min	40.3	57.0	70.2	88.0	101.8	118.2
20 min	34.1	48.7	60.2	75.7	87.9	102.3
25 min	29.8	42.7	52.9	66.8	77.7	90.7
30 min	26.5	38.2	47.4	60.0	69.9	81.7
35 min	24.0	34.6	43.1	54.5	63.7	74.6
40 min	22.0	31.8	39.5	50.1	58.6	68.7
45 min	20.3	29.4	36.6	46.4	54.4	63.8
50 min	18.9	27.4	34.1	43.3	50.8	59.7
55 min	17.8	25.7	32.0	40.6	47.7	56.1
1 hr	16.7	24.2	30.1	38.3	45.0	53.0
2 hr	10.3	14.9	18.4	23.4	27.8	33.0
3 hr	7.7	11.1	13.7	17.4	20.8	24.8
4 hr	6.2	9.0	11.0	14.0	16.8	20.1
6 hr	4.6	6.6	8.1	10.3	12.4	14.9
12 hr	2.8	3.9	4.8	6.0	7.4	8.9
24 hr	1.7	2.3	2.8	3.5	4.4	5.3

The conveyance capacities of the drainage system of the Town of Tofield were evaluated for the 4-hour and 24-hour design rainfall for return periods between 2 and 100-years. The modified Chicago distribution and Huff distribution were used for the 4 hour and 24 hour events, respectively.

5.4 Model Validation: Simulation of July 24, 2023 Event

Model calibration cannot be performed as there are no flow monitoring data or high water mark records. The July 24, 2023 storm event was simulated to check the reasonableness of the SWMM model for the Town of Tofield. The rainfall intensity time series estimated from the PRECIP-ET radar data (**Figure 10**) was input to the model based on a 5-minute time step. The modelled flood depths through the Town are shown in **Figure 14**. The model results indicate that most of the roadways, storm sewers and open channels in the town were carrying significant surface runoff during the July 24, 2024 event. At the intersection of 55 Ave and 47 St, a maximum computed hydraulic head of approximately 699.45 m has been estimated. The model indicates that this peak would have occurred shortly after the second peak on July 24, 2023 at 4:24 am. A hydraulic head of 699.2 m was estimated for 9:25 am which appears to be consistent with the situation illustrated by the flood photos in **Figure B.2.-6, B.2.-8 and B.2.-9** (**Appendix B**) which were taken at this time. Additionally, a computed hydraulic head of 699.2 m has been estimated for the adjacent Belvedere Park soccer field area which is represented as a storage node within the model with an estimated flood depth of 1.5 m at 9:25 am. Available videos from CTV and Global News taken on the day after the storm (July 25, 2023) would indicate that the water level would have been close to 699.17 m in the early morning after the storm on the following day of the flood event which is consistent with the modelling.

A computed hydraulic head of 698.29 m has been estimated at the intersection of 52 St and 51 Ave for July 24, 2023 at 9:10 am. This estimate is slightly lower than the flood extends displayed in **Figure B.2.-2** (**Appendix B**). The model computed a maximum flood depth of 0.41 m at the intersection where water is shown to overtop the curb and spill into the adjacent field.

As shown on **Figures B.2.-5 and B.2.-6** (**Appendix B**) the field area south of the motel was inundated during the July 24 flood event. The water level elevation at the time the photographs were taken has been approximated as 698.50 m which compares closely to the modeled flood level of 698.56 m at that time.

A video from CTV news shows the intersection of 50 St and 51 Ave on the morning after the rainstorm with flood waters encroaching up to the Tofield Shopping Centre sign across from the Dollar Store. Form the LiDAR data a corresponding flood level of 699.18 m was approximated which is only slightly higher than the simulated hydraulic head of 699.06 m at 5:30 am.

Figure B.2.-10 to 18 show the flooding at the Tofield Municipal Cemetery north of town. Based on the simulated maximum computed hydraulic head of 678.64 m a portion of the southeast corner of the cemetery would have been flooded which agrees with the flooding extends shown in the photographs. Furthermore, the modelling also indicates that the upstream side of the

existing culvert under Hwy 834 was submerged which is similar to the flood conditions shown in **Figure B.2.2-18**.

In summary, the model results for the July 24, 2023 flood event were generally consistent with the information gathered from the Town.

Figure 14 Model results – July 24, 2023 storm event.

6 EXISTING DRAINAGE SYSTEM ASSESSMENT

6.1 Criteria for Assessing the Existing System

The existing stormwater drainage system for the Town of Tofield could be divided into a minor system and major system. The minor system includes all storm pipes, while the major system includes the overland drainage features (roadways, ditches, culverts, etc.), and the existing storm pond and marsh areas. Generally, a minor system is designed for frequent rainfall runoff events and a major system conveys excessive flows during major events when the capacity of the minor system is exhausted. As described in **Section 3.2**, only some areas of the town have the minor system while the remainder is serviced by the major system for both frequent and major runoff events. In the case of the Sub-basin 4, the storm sewers and lift station should be considered as part of the major system as there are no other overland drainage routes. Additionally, the storm sewer system in Sub-basin 2 between 52 St and 53 St provides the only drainage route to the receiving Sunshine Villa Drain downstream and should therefore also be considered as part of the major system. In Alberta, the minor system is usually designed for a 2 or 5-year event and the major system is usually expected to provide the capacity for major events of up to a 100-year return period. Accordingly, the following criteria have been adopted in this study for the assessments of the existing system and improvement options:

- All pipes of the minor system should provide a 2-year conveyance capacity. The pipe may be surcharged for a 5-year event but the surcharge level should be below the ground. Where dual drainage is not available and pipes are the sole conveyance element, a higher standard should be considered (e.g. 100-year event).
- The conveyance elements of the major system should provide the capacity for a 100-year event with surface flood depths no more than 0.15 m above grade.
- Existing culverts should provide a ratio where the headwater measured to the invert divided by the culvert diameter is equal or smaller than 2.5. Further, the headwater should not be higher than the lowest part of the roadway shoulder.
- A minimum culvert size of 600 mm diameter for approach culverts and 800 mm for centreline crossings should be used.

The adopted design storm events include the 4 hour modified Chicago storms and 24 hour Huff storms for the City of Edmonton (2024).

6.2 Minor System

As described in **Section 3.2**, storm pipes that are considered as the minor system exist at 55 Ave west of 52 St in Sub-basin 2, while the storm pipes at 47 St near the soccer field serve Sub-basin 4 for both minor and major storm events (see **Figure 2** and **Figure 4** for their locations). These pipe systems were assessed for the 2, 5, and 10-year 4-hour Chicago design storms. Modelling results are shown in **Figure 15** through **Figure 17.**

The two small storm networks within Sub-basin 2 can convey runoff from the 2-year design event with slightly surcharging one storm sewer pipe at 52 B St and 55 Ave. For the 5 and 10-year events, more pipes were surcharged but the hydraulic grade line (HGL) elevations were below the ground (i.e., no surface flooding). So, these existing storm pipes are likely able to provide a service level greater than 5 years. However, it should be noted that surface flooding would occur at 52 St and near 54 Ave (problematic area #5) even during the 2-year event. Flooding at this location is due to backwater from the ditch that drains runoff from 52 St to the pipe system to the west. This ditch is also assessed for major storm events later.

The storm sewer network in Sub-basin 4 is able to accommodate runoff for the 2-year design storm; however, all pipes would be surcharged as the conveyance capacity of the system is limited by the existing pump capacity. Minor surface flooding would occur in the soccer field near 55 Ave during the 5-year event. For the 10-year event, more locations along this storm line would be flooded including the soccer filed (problematic area #1), 48 St and 52 Ave, and some locations south of the CN Railway tracks. This system is further assessed for major storm events later.

The modelling results also indicate that flooding would occur at the following locations during the minor events evaluated:

- 51 Ave and 50 St (problematic area #2)
- 51 Ave and 52 St (problematic area #4)
- 58 Ave west of 51 St (problematic area #6)
- 51 St near Sunshine Villa (problematic area #7)

Similar to the problematic area #5 (52 St near 54 Ave), these areas are drained by relatively small, shallow ditches. Flood depths in these areas are not significant during the minor storm events. They are further assessed in the next section as part of the major systems.

Figure 15 Modelling results for the 2-year design storm event

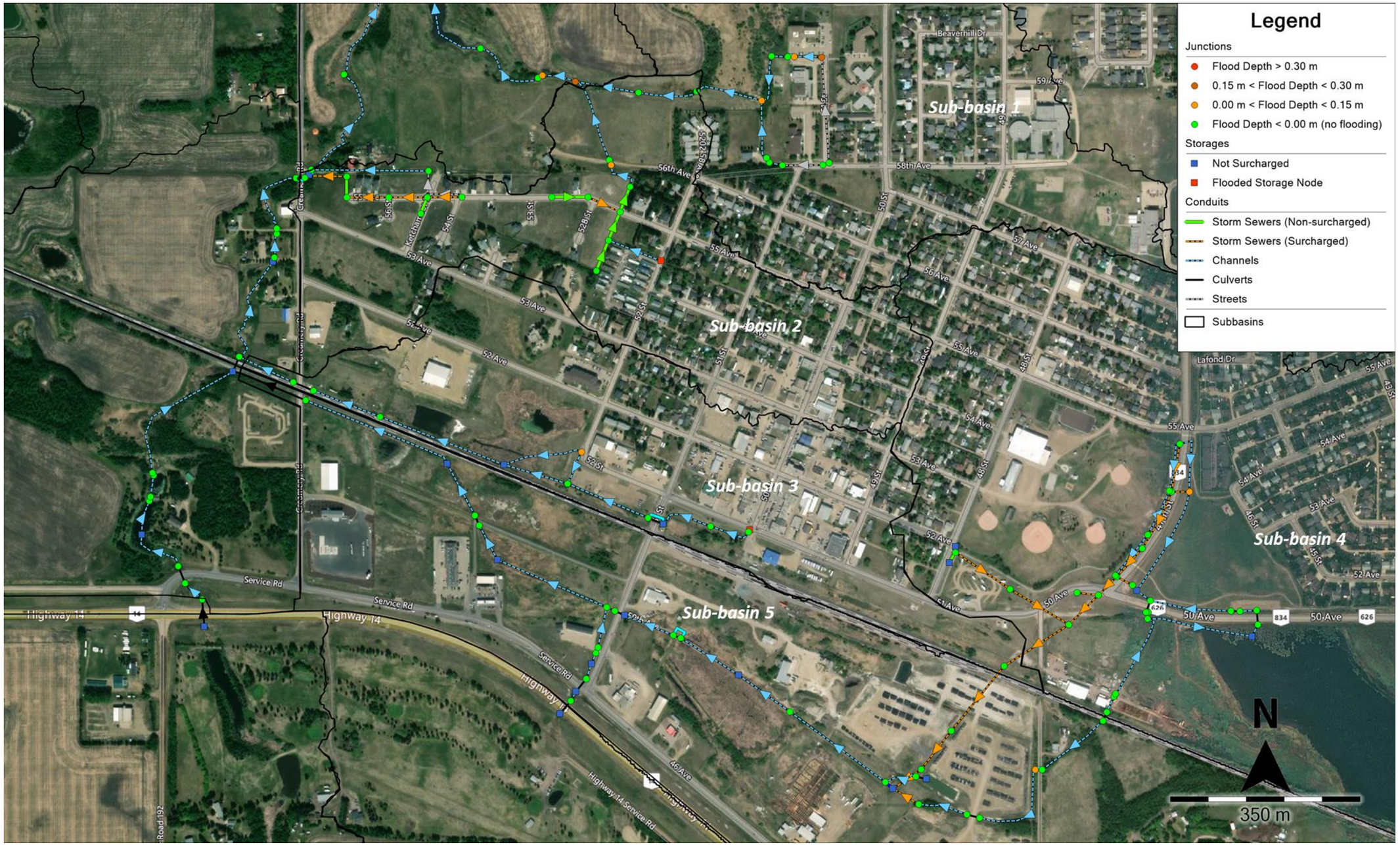


Figure 16 Modelling Results for the 5-year design storm event

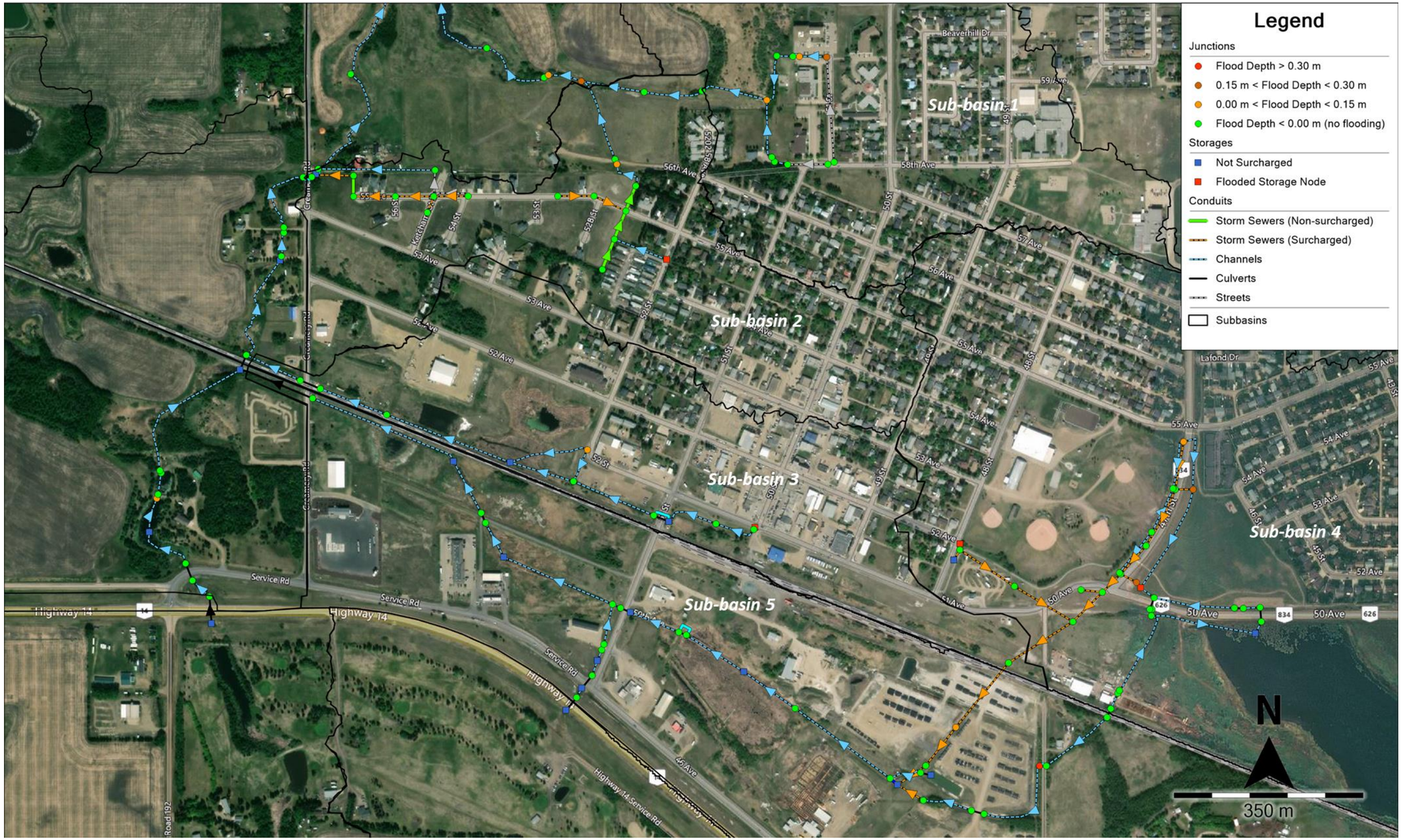


Figure 17 Modelling Results for the 10-year design storm event

6.3 Major System

The 100-year 4-hour and 24-hour design storms were modelled to assess the capacity of the existing major system. Usually, the 4-hour design storm governs the peak runoff discharge and is used to evaluate the conveyance capacity of the system, while the 24-hour design storm is often used to evaluate the storage capacity of the system. The modelling results are shown in **Figure 18** and **Figure 19** and are discussed as follows.

6.3.1 Sub-basin 1

A relatively large amount of runoff is conveyed by roadways towards the small drainage ditch south of Sunshine Villa at the north end of 51 St (problematic area #7). Runoff enters the ditch via two curb cuts on 51 St (**Figure C.1.-3 and 4**). For both the 100-year 4-hour and 24-hour design events, this area would be flooded. The modelled flood depth for the 4-hour design event is greater due to the higher peak runoff discharge and reaches 0.39 m.

The ditch flowing north from 58 Ave west of 51 St receives runoff from the area south of 58 Ave (**Figure C1.1.-1**). For the 100-year 4-hour event, backwater from this ditch would cause flooding on 58 Ave (problematic area #6) with a depth up to 0.2 m. The problematic area #6 (**Figure 2**) is located immediately east of this location. The modelling results show no flooding in this area during the 100-year 24-hour design event. Flooding in this area is due to the inadequate capacity of the existing 750 mm culvert for the local access road crossing west of 51 St and overgrown vegetation in the ditch. The culvert appeared to be partially blocked by vegetation and debris as observed during the site inspection, which may have resulted in greater flood depths on 58 Ave during the historical storm events than the modelled.

6.3.2 Sub-basin 2

The ditch flowing west from 52 St along 52A St (near 54 Ave) discharges to the storm sewer line that flows north. As mentioned in Section 6.2, the area at the ditch inlet (problematic area #5) would be flooded even during the 2-year event because the ditch is too shallow and relatively small (**Figure C.2.-1**). The modelled flood depths for this area are 0.61 m and 0.46 m for the 100-year 4-hour and 24-hour design events.

Minor street flooding would occur on 55 Ave near 54 St during the 100-year 4-hour storm event. The modelled flood depths are smaller than 0.15 m and acceptable.

Figure 18 Modelling results for the 100-year 4-hour storm event

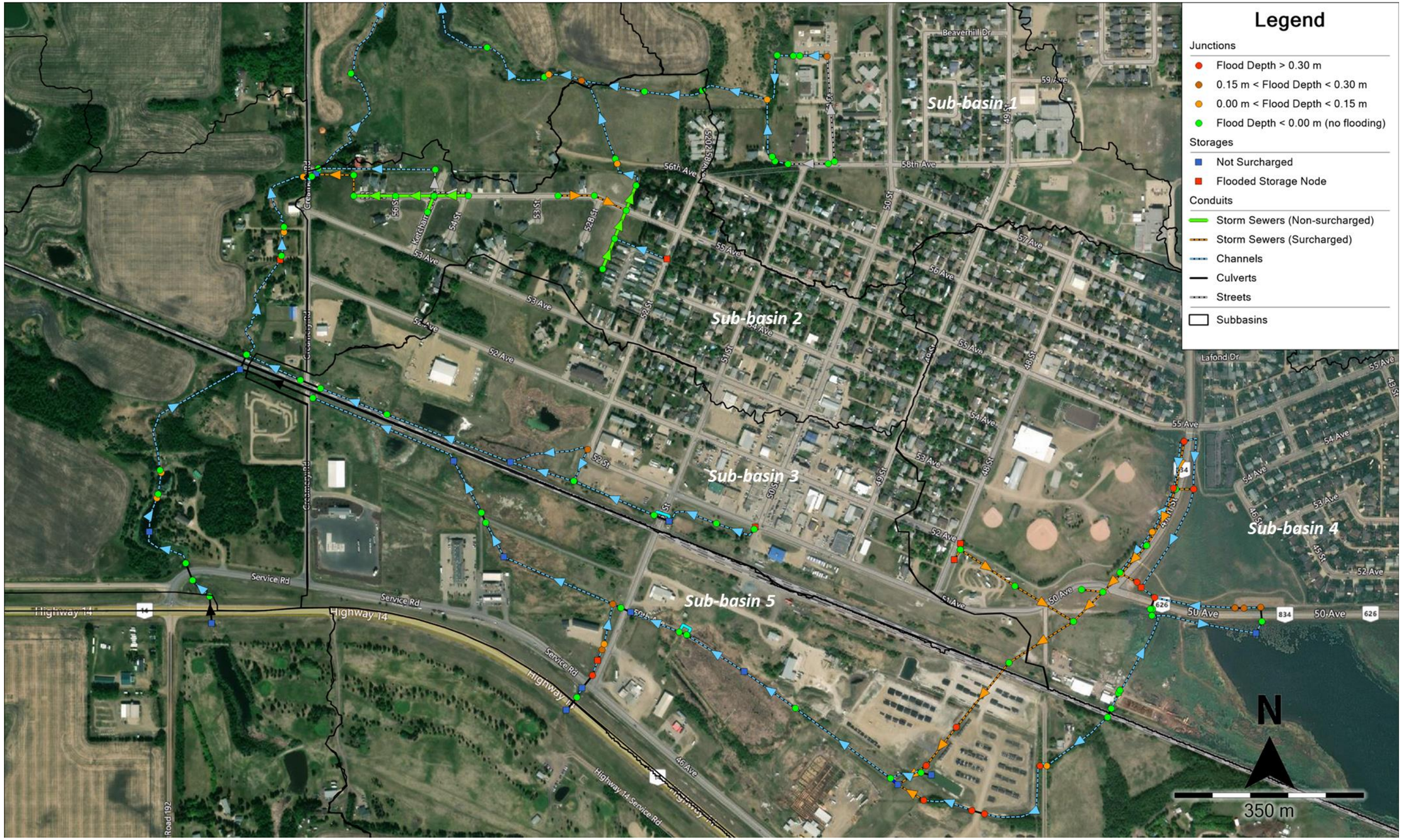


Figure 19 Modelling results for the 100-year 24-hour storm event

6.3.3 Sub-basin 3

Flooding would occur on 51 Ave at 50 St intersection (problematic area #2) and at 52 St (problematic area #4) during the 100-year storm events.

Runoff from 51 Ave near 50 St (problematic area #2) drains via a curb cut (**Figure C.3.-1 Appendix B)** to a ditch that flows west towards a marsh located between the CN Railway and 52 Ave near 52 St. There is a local 750 mm CSP culvert crossing located approximately 80 m downstream of the curb cut. Further downstream, the ditch crosses 51 St via a 600 mm CSP culvert. The modelled flood depths at 51 Ave and 50 St are 0.69 m and 0.35 m for both the 100-year 4-hour and 24-hour events. Flooding is likely due to the ditch capacity and backwater from downstream culvert crossings. Note that the culvert for the 51 St crossing was surcharged by 0.64 m during the 100-year 4-hour event.

Flood levels at 51 Ave and 52 St (problematic area #4) are controlled by backwater from the CN North Ditch. The modelled flood depths on the street are greater than 0.2 m for both design events. The model may have slightly underestimated the flood depth as the available topographic data are inadequate to accurately determine the control elevation for outflows from the marsh to the CN North Ditch. **Figure 20** shows the CN North Ditch channel profile based on available survey and LiDAR data. Also included in **Figure 20** is the channel profile from the intersection of 52 St and 51 Ave to the CN North Ditch. The elevation difference between the problematic area #4 and CN ditch invert upstream of the Creamery Road crossing is less than 0.5 m. This section of the CN ditch is poorly drained due to its flat grade and debris (as observed during the site inspection). The modelled flood levels upstream of the 750 mm culvert at Creamery Rd (56 St) are nearly the same as those at 52 St. The marsh drains to the CN ditch; however, the outlet is not well defined. So, it is clear that the prolonged flooding on 52 St experienced during the July 2023 event was due to backwater from the CN ditch and the marsh area.

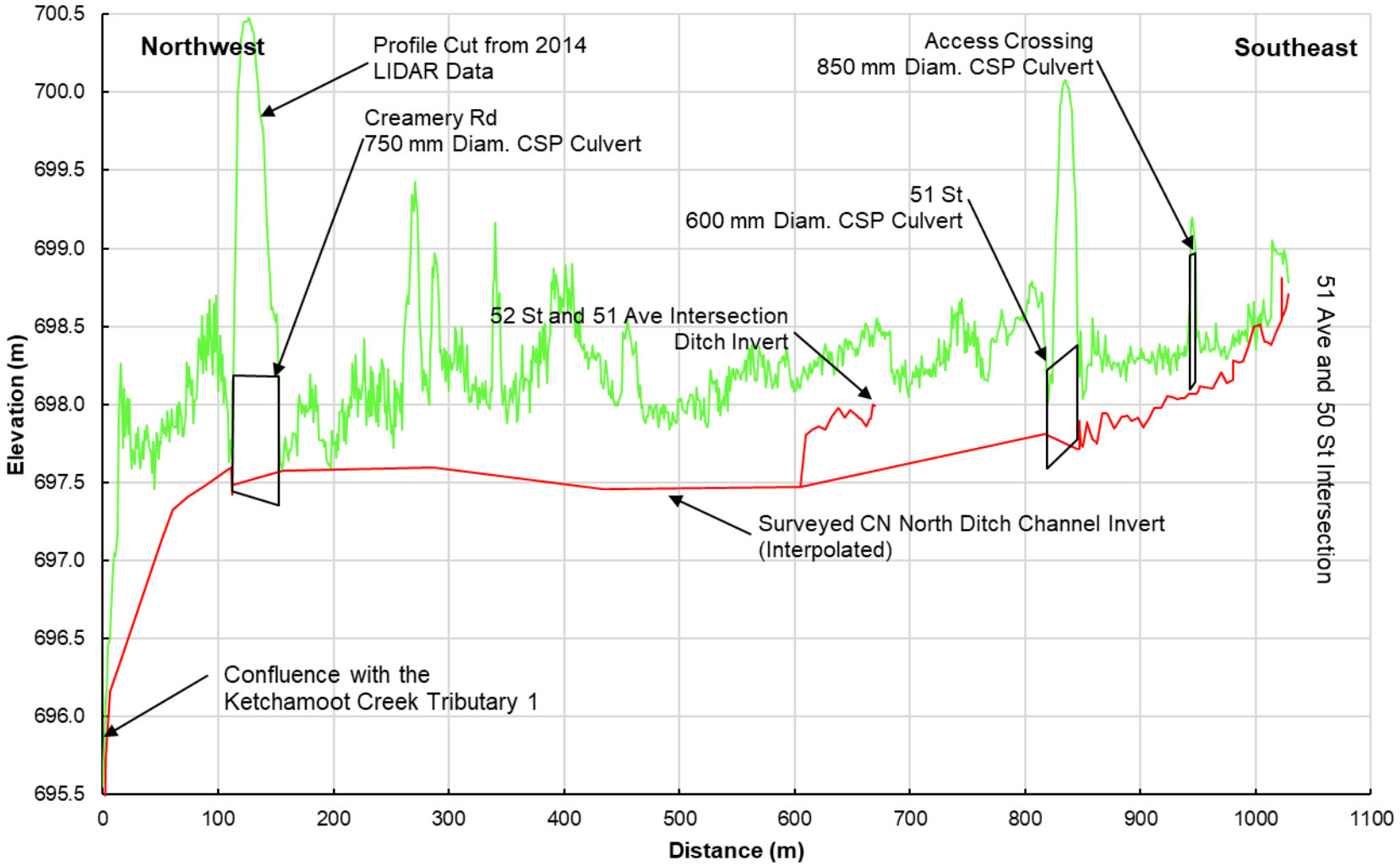


Figure 20 CN North Ditch Profile.

6.3.4 Sub-basin 4

As previously mentioned, drainage of Sub-basin 4 relies on the existing storm sewer line along 47 St which runs across the CN Railway tracks and discharges to the South Drainage Channel in Sub-basin 5. This storm line would be surcharged during the 2-year storm event. The modeling results indicate that surface flooding would occur along 47 St between 51 Ave and 55 Ave (problematic area #1) for the 100-year storm events. Water would back from the storm line into the adjacent roadway ditches, baseball field, and the soccer fields, as experienced in July 2023. The 100-year 24-hour design event would result in the most severe flooding condition due to its greater runoff volume. The computed maximum water depth in the soccer field for this event is more than one meter. The majority of the soccer field would be flooded. The baseball field and 55 Ave near 47 St would also be flooded. The flood level in this area is governed by the pump capacity of the existing lift station at the downstream end of this storm line. Note that this assessment assumed a maximum pump capacity of 0.045 m^3/s for the lift station. It would take several weeks to drain the soccer field at this rate.

In Sub-basin 4, the 100-year design storms would also result in flooding with the maximum flood depth greater than 0.3 m at 48 St and 52 Ave.

6.3.5 Sub-basin 5

In this sub-basin, the 47 St storm sewer line runs across the CN Railway and the storage yards to the south before discharging to the South Drainage Channel via the lift station. For the 100-year design events, this section of the storm line would be surcharged with the hydraulic grade line (HGL) being more than 0.3 m higher than the ground elevation.

A ditch flows from the east of the storm sewer line between the storage yards and likely discharges to the lift station via a long pipe. This ditch receives runoff from the adjacent storage yards and an area east of 47A St and south of the CN Railway. During the 100-year storm events, flooding would occur at the two culvert crossings for this ditch and at the inlet of the pipe that connects the ditch to the lift station.

The South Drainage Channel downstream of the lift station flows west through the Nature's Marsh, which could significantly attenuate the flow. Downstream of the marsh, the drainage channel continues to the west and ultimately discharges to Tributary 1 immediately south of the CN Railway after crossing Creamery Rd (50 St). This channel is able to convey the 100-year runoff with no flooding, although the culverts at the 51 St crossing and at the downstream walking path crossing (located approximately 300 m west of 51 St) would be surcharged.

The west roadside ditch along 51 St discharges to the South Drainage Channel immediately north of the Beaverhill Motel. The area at the motel (problematic area #3) is relatively low, and the culvert for the approach is unable to pass the 100-year peak flows. So, the area would be inundated by overflows from the ditch. The flood level is also likely affected by backwater from the South Drainage Channel. The modelled flood level is up to 698.6 m, or about 0.2 m higher than the parking area in front of the motel.

6.3.6 Existing Retention Pond Adjacent to the Lift Station (Sub-basin 5)

Preliminary modelling of the existing retention pond adjacent to the lift station in Sub-basin 5 was performed based on the limited available information. It has been assumed that the retention pond receives runoff from the adjacent storage yard with a total drainage area of 5.6 ha.

For the 100-year 24-hour storm event, the modeled pond level is about 0.25 m below the top of the pond (elevation 699.0 m estimated based on limited survey data from SEC). However, the pond would be overtopped during the 100-year 4-hour event.

Note that this assessment is based on limited information as the Town does not have any records of this pond. It is recommended that a survey of this pond be conducted, and a more detailed assessment be performed to confirm its purpose and capacity.

6.3.7 Tofield Cemetery

Separate PCSWMM modelling was undertaken to assess the existing drainage conditions at the Tofield Cemetery located to the northeast of the town.

Hwy 834 has been realigned in 2023. The new highway road is now located to the west of the town. It runs northwest after crossing Hwy 626 and then turns north at the Tofield Cemetery (**Figures C.5. -1 to C.5.-5**). This new highway alignment forms the east boundary of Sub-basin 16 as shown in **Figure 4**. Prior to construction of the new highway, Sub-basin 16 generally drains northeast to Beaverhill Lake. The new highway road has altered the drainage pattern. It would intercept runoff from Sub-basin 16. The runoff would generally flow northwest along the highway to the cemetery. As shown in **Figure 21**, a 750 mm culvert crosses the highway near the cemetery. It would convey a portion of the runoff from Sub-basin 16 across the highway, and from there, the runoff will flow in the east ditch of the highway north to Ketchamoot Creek. A significant portion of the runoff from Sub-basin 16 would flow north along the west side of the highway. After passing the cemetery, the runoff will be conveyed by a newly excavated ditch that flows north to Ketchamoot Creek. The southeast corner of the cemetery is relatively low and is prone to flooding. The modelled flood levels at this location are 678.65 m and 678.75 m for

the 100-year 4-hour and 24-hour storms, respectively. The southeast corner of the cemetery (denoted as low-lying area in **Figure 21**) would be flooded.

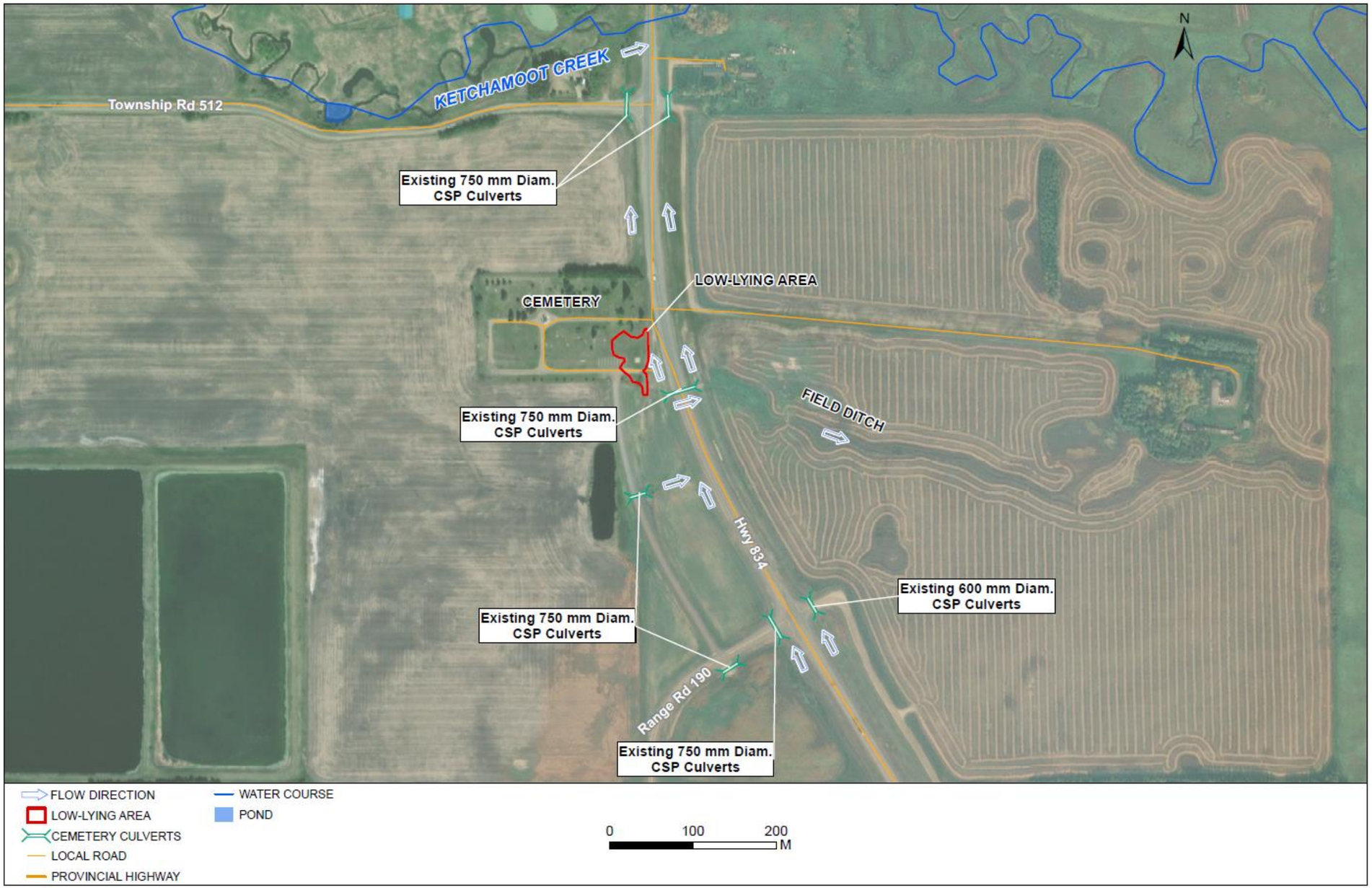


Figure 21 Drainage features near Tofield Cemetery

6.3.8 Summary

The existing storm sewer pipes in Sub-basin 2 generally have a service level greater than 5 years. The storm sewer pipes along 47 St near the soccer field in Sub-basin 4, however, would be surcharged during the 2-year design storm event. During the 100-year event, backwater from these pipes would result in significant flooding around the soccer field.

Modelling results confirm that the seven problematic areas identified by SEC (2023) are prone to surface flooding. Flooding in the problematic area #1 is due to lacking overland drainage outlets and the limited capacity of the existing storm sewer system. Flooding in the other six areas is generally due to inadequate ditch capacities and backwater from downstream channels and culverts. In addition, flooding would occur at 48 St and 52 Ave and the Tofield Cemetery during the 100-year design storm events. For the convene

Drainage improvements to reduce the risk of flooding in these areas are required.

7 STORMWATER MASTER DRAINAGE PLAN

7.1 Maximum Allowable Discharge

The town of Tofield is located in the lower portion of the Ketchamoot Creek basin. The creek is not gauged. As such, a regional analysis is required to estimate the 100-year pre-development runoff rate for this area. As part of the Camrose Flood Hazard Study, NHC (2020) developed a regional flood frequency curve, which can be applied to the Ketchamoot Creek basin. Based on this regional curve, the 100-year unit peak discharge rate for an ungauged area in this region cold be expressed as:

$$q_{100-yr} = 7.6A^{-0.35} \qquad \text{(Equation 1)}$$

where $q_{100\text{-}yr}$ is the 100-year unit runoff rate (L/s/ha), and A is the basin area (km^2).

The footprint of the town is approximately 8.6 km^2. The majority of the area drains through Tributary 1 of Ketchamoot Creek. The total drainage area of this tributary is approximately 20.7 km^2. For these areas sizes (8 and 21 km^2), the predevelopment runoff rates estimated from Equation 1 are 3.6 L/s/ha and 2.6 L/s/ha, respectively. Using a lower allowable discharge would reduce the risk of downstream flooding. Accordingly, NHC recommends that 2.6 L/s/ha be adopted as the maximum allowable discharge rate for future developments.

7.2 General Design Criteria

As discussed above, it is recommended that the minor system be designed with no surcharging during the 2-year design storm and no surface flooding during the 5-year design storm. The major system should generally provide the 100-year service level. Stormwater management design shall follow the Standards and Guidelines for Municipal Waterworks, Wastewater and Storm Drainage Systems (2013).

Stormwater management facilities (SWMFs) should be provided for future development. The following design criteria are recommended:

- SWMFs should be designed as wet ponds.
- SWMFs shall be designed to manage surface runoff for rainfall events of up to the 100-year return period between the normal water level (NWL) and the design high water level (HWL).
- The maximum outflow discharge from a SWMF shall be limited to a maximum of 2.6 L/s/ha.
- SWMFs utilizing gravity outlets should provide a 0.5 m freeboard between the HWL and top of pond and be designed with an emergency spillway.
- A 1.0 m freeboard from the HWL to top of pond should be considered if an emergency spillway cannot be provided.
- SWMF design shall follow the standards and guidelines of the Province of Alberta, including removal of 85% of sediments with particle size of 75 µm or greater.
- Potential environmental and wildlife impacts on existing wetlands and receiving natural waterbodies shall be assessed by qualified environmental and aquatic specialists.

Where new storm sewers are installed, the following criteria must be considered:

- Storm sewer pipes shall be designed to convey the design flow when flowing full with the hydraulic grade-line at the pipe crown. Crown elevations should match at manhole junctions.
- Storm sewer flow velocities shall be no less than 0.60 m/s when flowing full.
- The minimum pipe diameter shall be 300 mm with a minimum depth of cover to the pipe crown of at least 1.2 m.

7.3 Recommended Improvements to Existing System

Based on the modeling results of the existing system capacity and the above-mentioned design criteria, recommended improvements to the existing stormwater drainage systems are summarized in the following sections. The minor systems in Sub-basin 2 do not require upgrades as they can provide a service level greater than 5 years. All proposed improvements are intended to mitigate the risk of flooding in the identified problematic areas for the 100-year design storm event.

7.3.1 Problematic Area #1

Flooding in the problematic area #1is due to the limited capacity of the existing storm sewer pipes along 47 St near the soccer field and the lift station at its downstream end located south of the CN Railway tracks. SEC (2023) provides a preliminary mitigation concept for this area, which is to construct a stormwater management facility (SWMF) near the lift station between the storage yards south of the CN Railway. NHC evaluated this concept for the 100-year design storm. The modelling results indicate that this concept requires a live storage volume of about 42,000 m^3 between elevations 696.2 m and 698.1 m, upsizing the 900 mm storm sewers south of 50 Ave (with a total length of approximately 527 m) to 1200 mm pipes, and upgrading the lift station. The footprint of the SWMF would be 2.8 ha or greater (depending on the side slopes), which does not appear to be feasible given the limited available space between the existing storage yards. NHC recommends an alternative concept consisting of the components listed below and illustrated in **Figure 22**.

- Construct a SWMF (SWMF #1) south of CN Railway and east of 47A St, which is assumed to be a dry pond with the following design parameters:
    - Bottom elevation: 696.0 m
    - Design highwater level (HWL): 698.0 m
    - Top elevation: 700.0 m (existing ground)
    - Live storage volume between the bottom and HWL: 42,000 m^3
    - Side slope: 3H:1V
    - Bottom area: 20,300 m^2
    - Surface aera at HWL: 24,000 m^2
    - Surface area at the pond top: 28,000 m^2
- Install a new manhole on the existing storm sewer line immediately south of the CN Railway. The invert elevation of the new manhole would be approximately 694.84 m.

- Install a 222 m long, 900-mm-diameter storm sewer to connect the proposed SWMF to the existing storm sewer line. The new storm sewer should tie to the new manhole (invert elevation 694.84 m). It should be designed to divert flows from the manhole to the SWMF #1 when the storm sewer line is surcharged and discharge the SWMF back when the HGL of the storm sewer recedes. The inverts of the new sewer should be at Elev. 695.84 m at the new manhole and Elev. 696.0 m at the SWMF.
- Upgrade the lift station by replacing the pump with a Grindex Magnum L pump, which has a maximum capacity of 0.34 m^3/s. The lift station shall be operated with an automatic controller. Note that the total drainage area for this lift station is about 167 ha, and the recommend pumping capacity is equivalent to 2.0 L/s/ha, which is smaller than the allowable discharge rate (2.6 L/s/ha) discussed in Section 7.1. An operational plan for the lift station should be developed during the design stage. The operational plan should allow for multi-stage pumping such that smaller pumping rates are used for more frequent storm events (e.g., 5 to 10-year events), while pumping at the full capacity (0.34 m^3/s) is activated only for extreme events (e.g., a 50-year or greater storm event).
- Install two 600 mm CSP culverts to drain the soccer field south across 50 Ave. The north (upstream) and south (downstream) inverts of the culverts are assumed to be at Elev. 697.70 m and 697.65 m, respectively.
- Regrade the ditch south of 50 Ave to flow south. The ditch shall convey flows from the new culverts to the proposed SWMF. A 1,000 mm culvert will be required for the CN Railway crossing.

The proposed improvements described herein are based on modelling results and are designed to minimize the flood extent and to reduce flood depths in the problematic area #1 to be smaller than 0.3 m during the 100-year design storm events. The modelling results indicate that, with the proposed improvements, there would be no flooding in this area during the 100-year 24-hour storm event. Flooding (with a maximum flood depth of 0.4 m) would occur at the 55 Ave and 47 St intersection during the 100-year 4-hour storm event; however, the duration of flooding would be reduced to a few hours (in comparison with several weeks under the existing condition). The 100-year 24-hour event is the governing design event for the proposed SWMF.

While the proposed pump rate (0.34 m^3/s) is smaller than the estimated pre-development rate, it is a significant increase from the pump rate of the existing system. With the proposed improvements along the South Drainage Channel for the problematic areas #2, #3 and #4 described in the following sections, downstream impacts due to the increased discharge are expected to be insignificant. However, both hydrotechnical and environmental impacts to the Tofield Nature's Marsh should be further assessed with more detailed investigations at the design stage. The Town may consider using a smaller pump rate; however, that will require a larger SWMF and increase the drawdown time. Such alternatives may be explored during the design stage. An example is provided herein: to achieve a similar level of mitigation for the

problematic area #1 with a pump rate of 0.17 m^3/s (50% of the proposed rate), the size (surface area) of SWMF #1 will need to be increased by approximately 30% (increasing the footprint from 2.8 ha to 3.6 ha), which would be difficult to achieve given the limited available land size. In addition, the drawdown time of the pond will increase significantly (from 4 days to 9 days for the 100-year 24-hour design event).

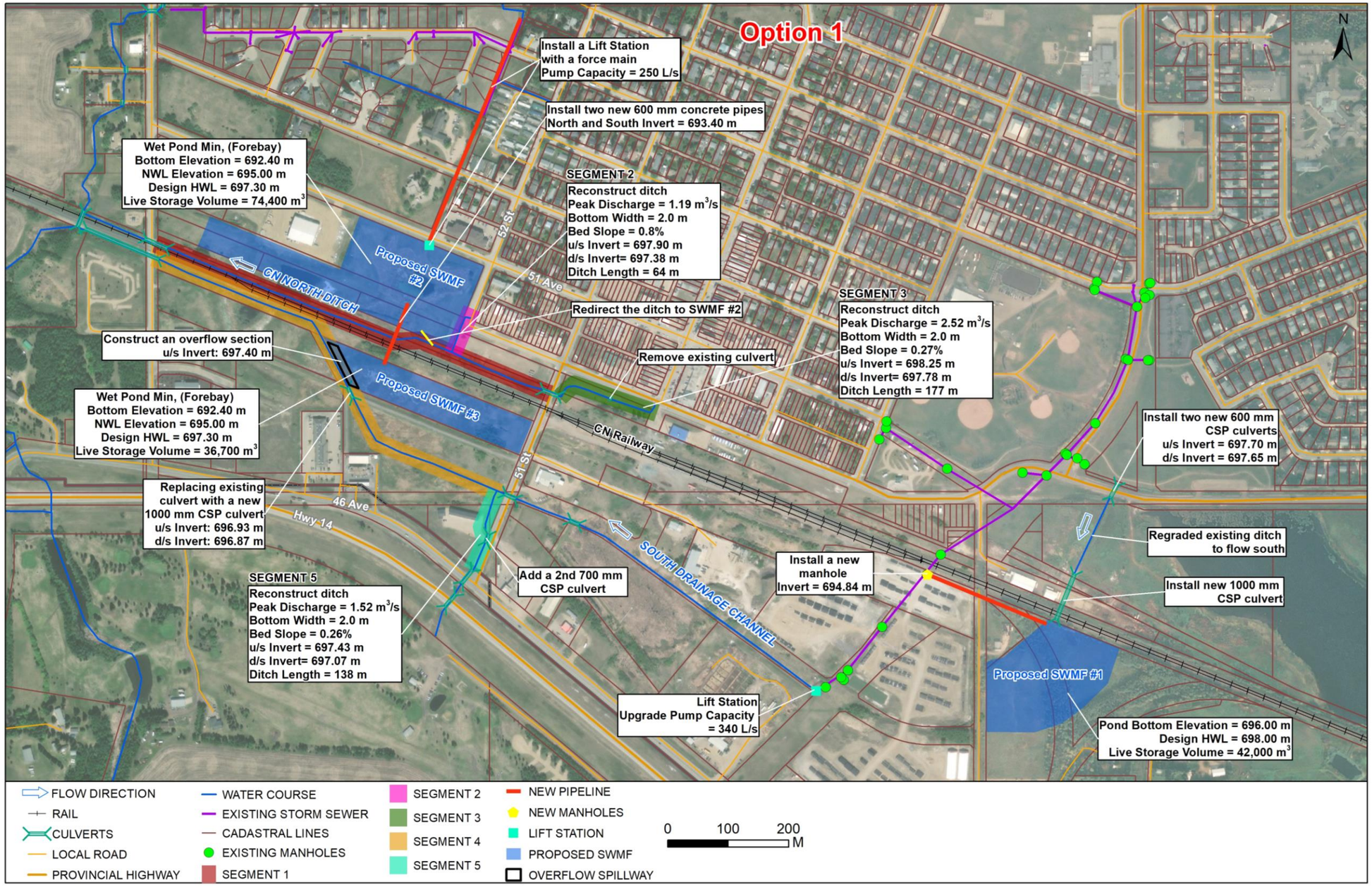


Figure 22 Proposed drainage improvements based on Option 1 for Problematic Areas 1, 2, 3 and 4

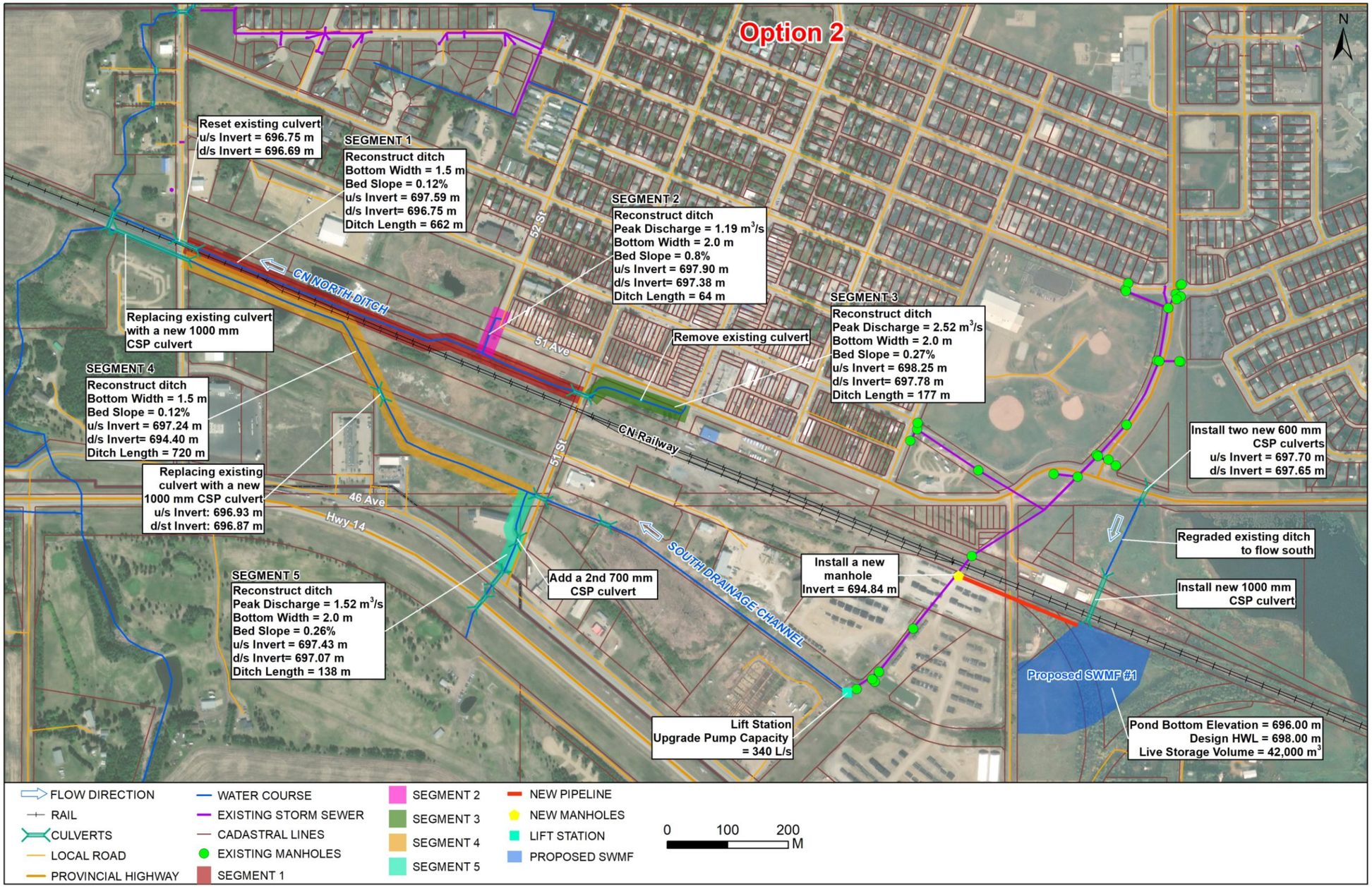


Figure 23 Proposed drainage improvements based on Option 2 for Problematic Areas 1, 2, 3 and 4

7.3.2 Problematic Areas #2, #3 and #4

Flooding at the problematic area #2 (51 Ave and 50 St) and #4 (51 Ave and 52 St) are due primarily to inadequate conveyance capacities of the downstream ditches and culverts that drain to the CN North Ditch. Flooding at the problematic area #3 (Beaverhill Motel) is due to the inadequate capacity of the ditch along 51 St and backwater from the South Drainage Channel. The estimated peak discharge for the tributary ditch is 1.36 m^3/s during the 100-year 4-hour design event.

SEC (2023) provides a preliminary mitigation concept to reduce the risk of flooding in these areas, which is to construct two SWMFs as shown in **Figure 22**, including SWMF #2 located at the existing wetland north of the CN Railway and west of 52 St and SWMF #3 located south of the CN Railway and west of 51 St. The two SWMFs are connected and discharged to the north via a lift station and a force main. This mitigation concept is referred to Option 1 herein. NHC evaluated this option for the 100-year 24-hour and 4-hour design storms using the SWMM model. Based on the modelling results, a conceptual design for this option is provided as illustrated in **Figure 22** and summarized below:

Option 1:

- Construct a SWMF (SWMF #2) between the CN Railway and 52 Ave, and west of 52 St. The SWMF should be a wet pond with the following design parameters determined from modelling:
    - Bottom elevation: 692.4 m
    - Normal (permanent) water level (NWL): 695.0 m (to provide a permanent pond depth, to accommodate the proposed equalization pipes connecting SWMFs #2 and #3 and to collect sediment)
    - Design highwater level (HWL): 697.3 m
    - Minimum top elevation 698.0 m
    - Live storage volume between the NWL and HWL: 74,400 m^3
    - Side slope: 5H:1V
    - Bottom area: 20,000 m^2
    - Surface area at NWL: 28,500 m^2
    - Surface area at HWL: 37,100 m^2
    - Surface area at the top: 40,000 m^2
- Install a lift station at the north side of SWMF#2 with a force main (approximately 440 m long) discharging to the north. The lift station consists of an automatic pump with a capacity of 0.25 m^3/s. The force main should discharge to a ditch north of 56 Ave.

- Improve the existing drainage ditch/channel from the 51 Ave and 50 St intersection to SWMF#2 as illustrated in **Figure 22**. The channel should be directed to SWMF#2. It is assumed that the channel downstream of 51 Ave and 52 St will be 2.0 m wide at the bottom, with 3H:1V side slopes and a 0.8% longitudinal slope. The ditch upstream of 51 St should have a bottom width of 2.0 m, side slopes of 2H:1V and a longitudinal slope of 0.27%. The upstream invert of the ditch near 50 St should be at Elev. 698.25 m (or 0.4 m lower than the curb cut), and the downstream invert elevation at 51 St should be 697.78 m. The local access culvert in this ditch should be removed.
- Construct a SWMF (SWMF #3) south of the CN Railway and north of the gas station access road. The SWMF is assumed to be a wet pond with the following design parameters:
    - Bottom elevation: 692.4 m
    - NWL: 695.0 m (to provide a permanent pond depth, to accommodate the proposed equalization pipes connecting SWMFs #2 and #3 and to collect sediment)
    - Design HWL: 697.3 m
    - Minimum top elevation 697.8 m
    - Live storage volume between the NWL and HWL: 36,700 m^3
    - Side slope: 5H:1V
    - Bottom area: 6,000 m^2
    - Surface area at NWL: 12,430 m^2
    - Surface area at HWL: 19,250 m^2
    - Surface area at the top: 21,000 m^2
- Install two 600-mm-diameter concrete equalization pipes across the CN Railway to connect SWMFs #2 and #3. It is assumed that the pipe inverts will be at El. 693.4 m and pipe lengths not greater than 80 m.
- Create a rock-armored overflow section in the right (east) bank of the existing South Drainage Channel to divert a portion of the flow to SWMF #3. The crest elevation of this overflow section is assumed to be 697.4 m (about 0.3 m lower than the existing top of bank). This overflow section is designed to spill to SWMF#3 with discharges up to 1.3 m^3/s and a total volume of 122,000 m^3 during the 100-year 24-hour design storm event.
- Regrade the 51 St roadside ditch from 46 Ave to its confluence with the South Drainage Channel. The new ditch should have a 2 m bottom width, 3H:1V side slopes and a 0.26% longitudinal slope with the upstream invert (near 46 Ave) at Elev. 697.43 m and downstream invert at Elev. 697.07 m.

- Add a 700 mm CSP culvert at the Beaverhill Motel access crossing.
- Replace the existing 600 mm diameter culvert for the walking path crossing (located approximately 300 m west of 51 St) with a 1,000 mm diameter CSP.

In addition to Option 1, NHC evaluated an alternative (Option 2) to improve drainage conditions for the problematic areas #2, #3, and #4. This option involves drainage channel improvements without SWMFs. The channel improvements include those identified for Option 1 plus regrade the CN north and south ditches as required. This option is illustrated in **Figure 23** and summarized as follows:

Option 2:

- Regrade the 51 St roadside ditch from 46 Ave to its confluence with the South Drainage Channel. The new ditch should have a 2 m bottom width, 3H:1V side slopes and a 0.26% longitudinal slope with the upstream invert (near 46 Ave) at Elev. 697.43 m and downstream invert at Elev. 697.07 m.
- Regrade the channel from 51 St to Creamery Rd (including the CN north ditch). The regraded channel should have a minimum bottom width of 1.5 m, bank slopes of 3H:1V and a minimum longitudinal slope of 0.12%.
- Lower the existing 750 mm diameter CSP culvert crossing Creamery Rd by about 0.7 m with the upstream (east) and downstream (west) inverts at Elev. 696.75 m and 696.69 m, respectively.
- Regrade the ditch from 51 Ave and 52 St to the CN North Ditch. The new ditch should have a 2.0 m bottom width, 3H:1V side slopes and a 0.8% longitudinal slope.
- Regrade the 51 St roadside ditch from 46 Ave to its confluence with the South Drainage Channel. The new ditch should have a 2 m bottom width, 3H:1V side slopes and a 0.26% longitudinal slope with the upstream invert (near 46 Ave) at Elev. 697.43 m and downstream invert at Elev. 697.07 m.
- Add a 700 mm CSP culvert at the Beaverhill Motel access crossing.
- Regrade the South Drainage Channel from 51 St to Creamery Road (including the CN south ditch). The regraded channel should have a minimum bottom width of 1.5 m, 3H:1V side slopes and a 0.12% longitudinal slope with a bottom elevation of 697.24 m at 51 St and 696.40 m at Creamery Road.
- Replace the existing 600 mm diameter culvert for the walking path crossing (located approximately 300 m west of 51 St) with a 1000 mm diameter CSP.
- Replace the existing 700 mm diameter culvert under Creamery Road with a 1000 mm diameter CSP culvert.

Based on modelling results for the 100-year 24-hour and 4-hour design storm events, both options would provide flood relief for the problematic areas #2, #3, and #4. With the proposed

SWMFs, Option 1 is expected to be more resilient. It would reduce downstream flood peaks and lower the risk of flooding for the downstream areas including the properties located along the creek north of the CN Railway and west of Creamery Road (Tributary 1). This will largely mitigate impacts of increased flows due to the proposed mitigation measure for the problematic area #1 (the increased pumping rate). However, the required sizes of SWMFs #2 and #3 are significant, and it could be difficult to design and construct these SWMFs at the specified locations given the limited space and existing structures. Further investigation on the constructability of these SWMFs will be necessary. A detailed hydraulic analysis is required at the design stage to ensure the functionality of this SWMF system.

Option 2 appears to be simpler as it avoids construction of the SWMFs and lift station, and the flow direction generally follows the existing drainage pattern. However, both construction and maintenance of this option can be challenging as the existing CN Ditch has relatively steep bank slopes that are subject to erosion and has experienced issues of debris. The available space for the proposed channel improvements is limited. Modifications to the CN ditches will require CN's approval. The main disadvantage of Option 2 is that the peak discharges through the South Drainage Channel would increase noticeably. This impact would extend to Tributary 1 north of the CN Railway and west of Creamery Road. Flow increases in the creek due to Option 2 are not expected to be significant because flood flows from the upper reach of the creek are much larger. However, some properties located along this creek reach are already subject to creek flooding because they are likely located on the floodplain. Increased CN ditch flows due to Option 2 impose negative impacts on this area.

7.3.3 Problematic Area #5

Flooding on 52 St in this area is due to the inadequate capacity of the ditch from the street to the existing storm sewer to the west. For the 100-year 4-hour design event, the peak discharge for this ditch is 2.3 m^3/s. To mitigate flooding in this area, NHC recommends lowering the upstream invert of the ditch to Elev. 697.96 m (approximately 0.5 m lower than the curb cut on 52 St) and replace the ditch with a concrete swale (**Figure 24**). This would eliminate the flooding issue on 52 St.

In addition, the undersized 300 mm CSP culvert downstream under the driveway access road (56 Ave) is to be replaced with a 750 mm diameter CSP culvert and an overflow section in the roadway (Alternative 1). The increased culvert size provides additional flow capacity while the roadway overflow would convey flows in excess of the 2-year event. Alternatively, three 900 mm diameter CSP culverts, roadway raising and additional channel regrading could be considered to accommodate the larger flows if roadway overtopping is not permissible (Alternative 2).

Furthermore, it should be noted that the peak runoff rate downstream of the minor system increases from 1.6 m^3/s under existing conditions to 2.2 m^3/s (Alternative 1) and 2.5 m^3/s (Alternative 2) with the upgrades at the 100-year 4-hour event. This is largely due to the improved drainage capacity of the added concrete swale, the upsizing of the downstream

culvert and the potentially added pumping inflows from SWMFs #2 and #3. Note the peak flow depth in the small ditch upstream (south) of the minor drainage system would increase from 0.58 m to 1.26 m with the proposed upgrades. More detailed modelling and surveys of this area should be completed as part of the detailed design phase to determine if this level of flooding is acceptable without impacting surrounding properties.

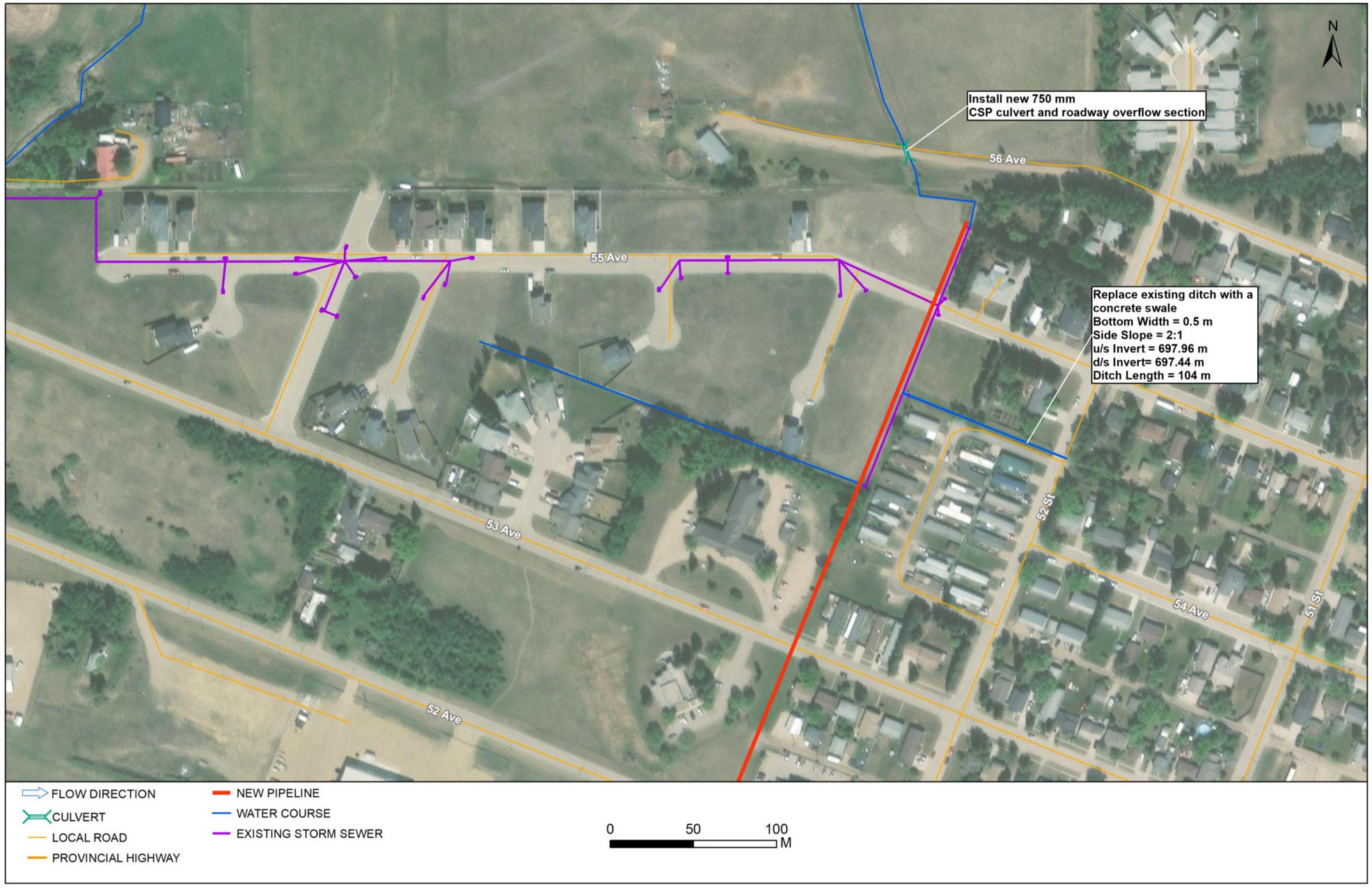


Figure 24 Proposed drainage improvements for Problematic Area 5

7.3.4 Problematic Areas #6 and #7

Both areas are within Sub-basin 1 on the drainage paths towards the marsh area immediately west of Sunshine Villa. As discussed in Section 6.3.1, flooding in these two areas is due to backwater from downstream ditches and culverts. The 100-year 4-hour design storm governs the peak discharges and consequently the mitigation design for these two areas. Proposed improvements for these two areas are illustrated in **Figure 25**.

For the problematic area #6, the estimated design discharge for the 100-year 4-hour design storm is 1.65 m^3/s. The recommended improvements include:

- Replace the existing culvert (which has been assumed as a 600 mm CSP) crossing the local access road west of 51 St with two 800 mm diameter CSP culverts.
- Regrade the ditch north of the access road that flows towards the marsh area to the north. The regarded ditch should have a 2.0 m bottom width, 3H:1V side slopes and a 0.9% longitudinal slope with the upstream invert (at the local access road) at Elev. 696.90 m and downstream invert at El. 695.85 m. The ditch should be maintained regularly, and vegetation overgrowth should be avoided.

For the problematic area #7, the following drainage upgrades are recommended (see **Figure 25**):

- Regrade the Sunshine Villa Drain for a length of approximately 606 m downstream from Sunshine Villa. The regraded channel should have a longitudinal slope of 0.45%. The channel bottom width should be 2.0 m between STA 0+00 and STA 4+18 and 1.5 m between STA 4+18 to STA 6+06. The side slopes of the channel should be 3H:1V.
- Replace the existing ditch through Sunshine Villa with a concrete swale and remove the existing culvert for the access between Sunshine Villa and the daycare. The upstream invert of the swale (at 51 St) should be at El. 696.90 m (0.2 m lower than the existing ditch invert).

These improvements would reduce the flood depth on 51 St to 0.16 m (i.e., 0.24 m lower than that for the existing condition) during the 100-year 4-hour design event. However, it should be noted that the simulated peak runoff rate downstream of the field crossing increases from 6.00 m^3/s under existing conditions to 6.15 m^3/s with the proposed upgrades at the 100-year 4-hour event.

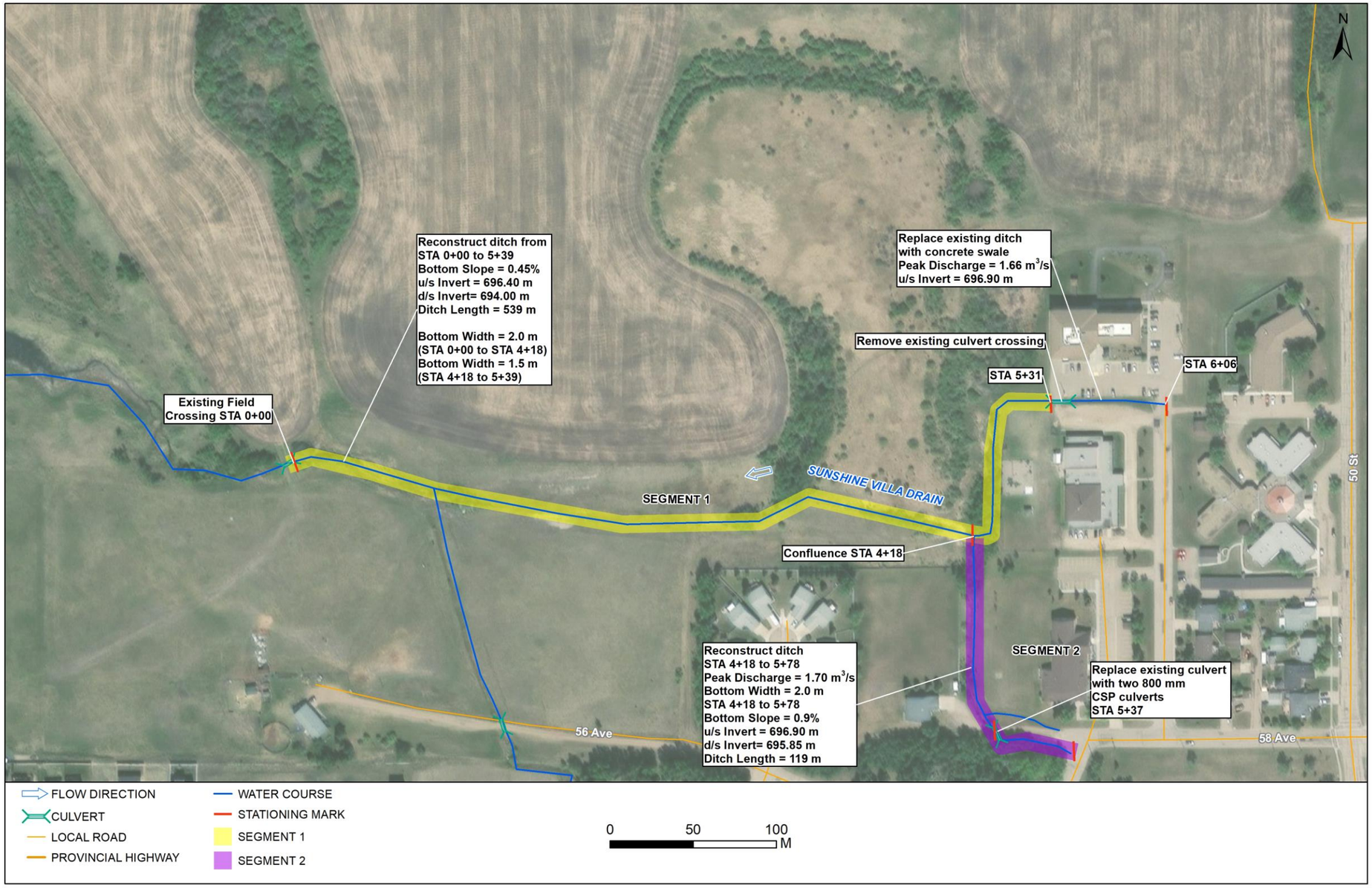


Figure 25 Proposed drainage improvements for Problematic Areas 6 and 7

7.3.5 Tofield Cemetery

The following drainage improvements are recommended to reduce the risk of flooding at the Tofield Cemetery (see **Figure 26**):

- Replace the existing 750 mm diameter CSP culvert under Township Rd 512 with two 900 mm diameter CSP culverts. The upstream and downstream inverts of the culverts should be embedded a minimum of 0.1 m below the existing ground with the culvert inverts set at Elev. 677.08 m and Elev. 676.76 m, respectively.
- Regrade the land along the south boundary of the cemetery to ensure positive drainage towards the highway ditch.

The proposed upgrades will reduce the maximum water level adjacent to the cemetery to El. 678.07 m for the 100-year 4-hour design event (0.6 m lower that for the existing condition). The area within cemetery to be impacted by this flood level would be minimal with a flood depth smaller than 0.15 m. If required, a small berm could be constructed at the southeast corner of the cemetery to prevent flooding and provide an additional freeboard.

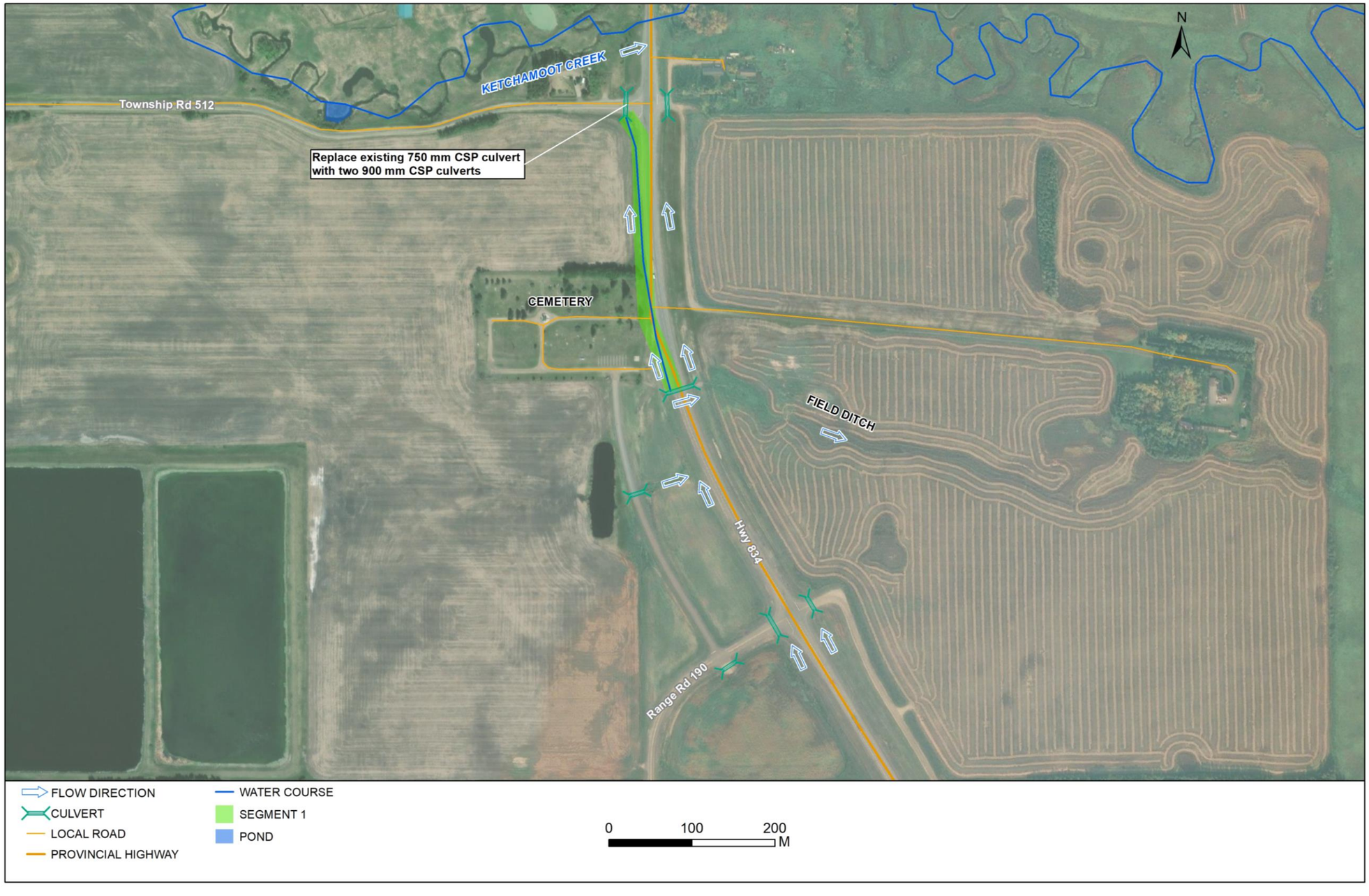


Figure 26 Proposed drainage improvements for the Tofield Cemetery Area

APPENDIX A

LANDUSE MAP

A.1. Town of Tofield Landuse Map (August 12, 2022)

Lagoon

Lagoon

300m Lagoon Setback

UR

UR

Transfer Station

300m Transfer Station Setback

UR

UR

UR

300m Former Landfill Setback

P-S

R-LD

R-LD

P-S

P-R

P-R

P-S

M-I

UR

R-LD

R-LD

R-LD

R-LD

R-LD

P-U

C-SC

M-I

UR

C-GC

C-GC

P-R

R-LD

A

B-I

R-LD

C-HC

P-U

UR

R-LD

C-HC

P-U

P-S

C-SC

P-U

C-SC

B-I

UR

LEGEND

- Airport (A)
- Business Industrial (B-I)
- Medium Industrial (M-I)
- Downtown Commercial (C-DC)
- Service Commercial (C-SC)
- General Commercial (C-GC)
- Highway Commercial (C-HC)
- Low Density Residential (R-LD)
- Medium Density Residential (R-MD)
- Modular Home Residential (R-MH)
- Recreation (P-R)
- Public Services (P-S)
- Public Utility (P-U)
- Urban Reserve (UR)

N

SCALE 1:7500
24 x 36 Page

0 75 150 225 m

LAND USE MAP

THE TOWN OF TOFIELD

AUG 12, 2022

File Name: 03-19032-01-P0001

Name / Plot Date: MBoomer July 29, 2024

APPENDIX B
FLOOD EVENT PHOTOS

Figure B.1.-1: 55 Ave and 47 St Intersection - looking west towards the Tofield baseball field (August 4, 2017).

Figure B.1.-2: 55 Ave and 47 St Intersection - looking west along 55 Ave (August 4, 2017).

Figure B.1.-3: 55 Ave and 47 St Intersection - looking south along 47 St (August 4, 2017).

Figure B.1.-4: 55 Ave and 47 St Intersection - looking west towards the baseball field (August 4, 2017).

Figure B.1.-5: 51 Ave and 47 St Intersection – looking northwest towards the baseball field (August 4, 2017).

Figure B.1.-6: Belvedere Park – looking northwest towards the soccer field (August 4, 2017).

Figure B.1.-7: 51 Ave– looking northwest towards the soccer field (August 4, 2017).

Figure B.1.-8: 51 Ave– looking north towards the soccer field (August 4, 2017).

Figure B.2.-1: Backyards along the Ketchamoot Creek Tributary west of 56 St (July 24, 2023).

Figure B.2.-2: 51 Ave and 52 St Intersection – Looking south (July 24, 2023).

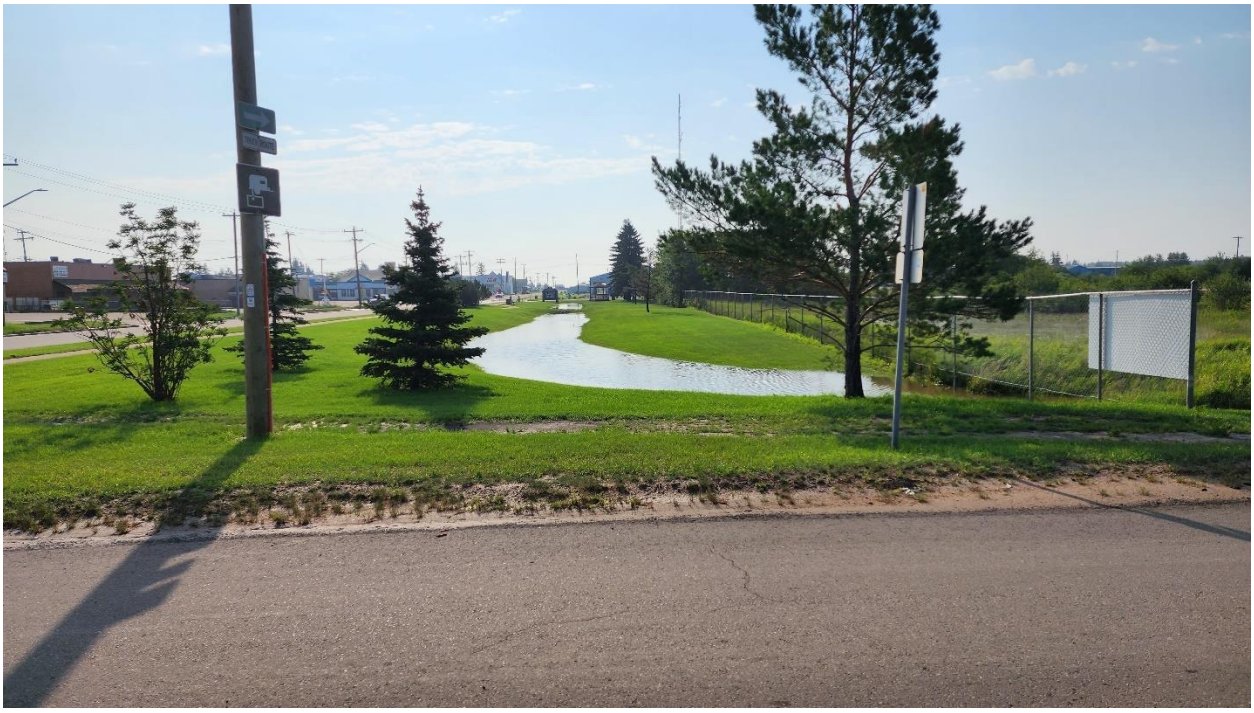


Figure B.2.-3: 51 Ave and 51 St Intersection – Looking east towards the North Drainage Channel (July 24, 2023).

Figure B.2.-4: 46 Ave and 51 St Intersection – Looking south towards 46 Ave (July 24, 2023).

Figure B.2.-5: 51 St at Tofield Motel– Looking west (July 24, 2023).

Figure B.2.-6: 55 Ave and 47 St Intersection – Looking northwest (July 24, 2023).

Figure B.2.-7: 55 Ave and 47 St Intersection – Looking southwest towards the baseball field (July 24, 2023).

Figure B.2.-8: 55 Ave and 47 St Intersection – Looking west along 55 Ave (July 24, 2023).

Figure B.2.-9: 55 Ave and 47 St Intersection – Looking west along 55 Ave (July 24, 2023).

Figure B.2.-10: Tofield Cemetery Service Road – Looking north towards the Cemetery (July 24, 2023).

Figure B.2.-11: Tofield Cemetery Service Road – Looking north towards the Cemetery (July 24, 2023).

Figure B.2.-12: Tofield Cemetery Service Road – Looking south (July 24, 2023).

Figure B.2.-13: Tofield Cemetery Service Road – Looking south (July 24, 2023).

Figure B.2.-14: Hwy 834 and Range Rd 190 Intersection – Looking southwest (July 24, 2023).

Figure B.2.-15: Hwy 834 and Range Rd 190 Intersection – Looking southwest (July 24, 2023).

Figure B.2.-16: Hwy 834 West Ditch – Looking north towards the Tofield Cemetery (July 24, 2023).

Figure B.2.-17: Hwy 834 East Ditch – Looking east (July 24, 2023).

Figure B.2.-18: Hwy 834 West Ditch – Looking west (July 24, 2023).

Figure B.2.-19: Hwy 834 at Ketchamoot Creek (July 24, 2023).

APPENDIX C

SITE VISIT PHOTOS (JUNE 12, 2024)

Sub-Basin 1

Figure C.1.-1: Drainage ditch at the intersection of 58 Ave and 51 St – looking west.

Figure C.1.-2: 51 St east curb near Sunshine Villa – looking south.

Figure C.1.-3: 51 St curb outlet upstream of the Sunshine Villa drainage ditch– looking northwest.

Figure C.1.-4: 51 St curb outlet upstream of the Sunshine Villa drainage ditch– looking west.

Figure C.1.-5: 51 Sunshine Villa drainage ditch access crossing north of the Sunshine Daycare.

Figure C.1.-6: 51 Marsh downstream of the Sunshine Villa drainage ditch.

Sub-Basin 2

Figure C.2.-1: Curb outlet at the intersection of 52 St and 52A St – looking west.

Figure C.2.-2: Drainage ditch at the intersection of 52 St and 52A St – looking west.

Figure C.2.-3: Storm sewer inlet south of 55 Ave and west of 52A St.

Figure C.2.-4: Catch-basin inlet at 55 Ave – looking west.

Figure C.2.-5: Storm sewer outfall north of 55 Ave – looking south.

Figure C.2.-6: Storm sewer outfall north of 55 Ave – looking north.

Figure C.2.-7: Drainage ditch downstream of the storm sewer outfall – looking northwest.

Figure C.2.-8: Access Rd crossing downstream of the storm sewer outfall.

Figure C.2.-9: Storm sewer outfall at the Ketchamoot Creek Tributary and 56 St – looking east.

Figure C.2.-10: Ketchamoot Creek Tributary downstream of 56 St – looking northeast.

Sub-Basin 3

Figure C.3.-1: Curb outlet upstream of the North Drainage Channel at the intersection with 51 Ave and 50 St – looking north.

Figure C.3.-2: North Drainage Channel downstream of pedestrian bridge at the intersection with 51 Ave and 50 St – looking northeast.

Figure C.3.-3: North Drainage Channel downstream of pedestrian bridge at the intersection with 51 Ave and 50 St – looking west.

Figure C.3.-4: Field access crossing (south of 51 Ave) – looking west.

Figure C.3.-5: North Drainage Channel downstream of 51 St – looking west.

Figure C.3.-6: Curb outlet at the intersection of 51 Ave and 52 St – looking south.

Figure C.3.-7: North Drainage Channel downstream of 51 St – looking west.

Figure C.3.-8: Marshy area adjacent to the North Drainage Channel – looking west.

Figure C.3.-9: North Drainage Channel downstream of 56 St – looking west.

Sub-Basin 4

Figure C.4.-1: Tofield Pond south of the soccer fields and Hwy 626.

Figure C.4.-2: Partially buried and damaged through-grate culvert at Hwy 626 near the intersection with 47 St.

Figure C.4.-3: Storm sewer inlet at the east corner of Hwy 626 and 47 St – looking north.

Figure C.4.-4: Storm sewer inlet at the east corner of Hwy 626 and 47 St – looking east.

Figure C.4.-5: Storm sewer inlet along the 47 St east ditch – looking west.

Figure C.4.-6: 55 Ave and 47 St intersection – looking west along 55 Ave.

Figure C.4.-7: Catch-basin inlet at 56 Ave – looking east towards 47 St.

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Sub-Basin 5

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BEAVER COUNTY

The Town of Tofield

Honour the Past, Build the Future

Beaver County and Town of Tofield Intermunicipal Development Plan

Beaver County Bylaw 19-1077
Town of Tofield Bylaw 1311

November 2019 - FINAL

ISL

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A. INTRODUCTION

A.1.1 PURPOSE OF THE PLAN

The Municipal Government Act (MGA) requires all municipalities to adopt an intermunicipal development plan (IDP) and an intermunicipal collaboration framework (ICF) with each of its municipal neighbours. The IDP and ICF reflect mutual agreements on growth and shared services between two or more municipalities.

This IDP, adopted by bylaw, identifies a 50-year development strategy between the Town of Tofield and Beaver County. An IDP is a collaborative plan that is intended to address the long-term growth and development of lands that are of joint interest to the municipalities, in a coordinated fashion, and to promote regional partnerships. Matters of interest include land use, transportation, servicing, future growth, economic development, environmental matters, and intermunicipal programs.

The ICF, to which this IDP will be appended, will be created by a separate bylaw, in accordance with Section 708.3(1) of the MGA.

A.1.2 ENABLING LEGISLATION

This IDP has been prepared in accordance with Section 631(2) of the MGA, which states that an IDP:

- must address:
  - the future land use within the area,
  - the manner of and the proposals for future development in the area,
  - the provision of transportation systems for the area, either generally or specifically,
  - the co-ordination of intermunicipal programs relating to the physical, social and economic development of the area,
  - environmental matters within the area, either generally or specifically, and
  - any other matter related to the physical, social or economic development of the area that the councils consider necessary; and
- must include:
  - a procedure to be used to resolve or attempt to resolve any conflict between the municipalities that have adopted the plan,
  - a procedure to be used, by one or more municipalities, to amend or repeal the plan; and
  - provisions relating to the administration of the plan.

This IDP also meets the requirements of the Provincial Land Use Policies to encourage cooperative approaches to managing growth and development:

> *"To foster cooperation and coordination between neighbouring municipalities and between municipalities and provincial departments and other jurisdictions in addressing planning issues and in implementing plans and strategies".*

A.1.3 MUNICIPAL HISTORY AND CONTEXT

Beaver County was originally incorporated as the Municipal District (MD) of Ryley No. 480 on February 1, 1943 through the amalgamation of:

- a part of the MD of Iron Creek No. 455;
- a part of the MD of Parkland No. 456;
- a part of the MD of Patricia No. 485;
- a part of the MD of Beaver Lake No. 486; and
- the MD of Cornhill No. 487.[1]

[1] Source: Alberta Municipal Affairs, Municipal Boundary Document Search (2019)

Shortly after the amalgamation, the MD of Ryley No. 480 changed its name to the MD of Beaver No. 480 on March 31, 1943.[2] Two years later, the Province of Alberta renumbered the MD of Beaver No. 480 to the MD of Beaver No. 73 on April 1, 1945.[3]

On January 1, 1958, the MD of Beaver No. 73 became a county, incorporating under the name of the County of Beaver No. 9.[4] Its name was changed to Beaver County on July 1, 1999.[5]

Today, Beaver County is 36 km (22 mi) southeast of the City of Edmonton[6] bisected by approximately 105 km (65 mi) segments of the Canadian National (CN) mainline and Highway 14 (Poundmaker Trail). It has an area of 3,544 km² (1,368 mi²), surrounds four urban municipalities – the towns of Tofield and Viking and the villages of Holden and Ryley – and has jurisdiction over two small hamlets – Bruce and Kinsella.[7] Beaver County recorded a population of 5,905 in 2016 Census of Canada.[8] Table 1 presents the full population history of Beaver County since its incorporation, derived from both federal and municipal censuses.

Table 1: Beaver County Population History

Year	Federal Census[9]				Municipal Census[10]		
	Original Population	Adjusted Population[11]	Percentage Change	Avg. Annual Growth Rate	Population	Percentage Change	Avg. Annual Growth Rate
1941	8,912						
1951	7,202						
1956	6,883						
1961	6,476						
1966	6,009						
1971	5,238						
1976	4,946	4,922			4,865	—	—
1979					4,950	1.7%	0.6%
1981	5,347	5,350	—	—			
1986	5,400	5,399	1.0%	0.2%			
1991	5,430		0.6%	0.1%			
1996	5,659		4.2%	0.8%			
2001	5,644		-0.3%	-0.1%			
2006	5,676		0.6%	0.1%			
2009					5,630	13.7%	0.4%
2011	5,689		0.2%	0.0%			
2016	5,905		3.8%	0.7%			

Tofield is located 47 km (29 mi) southeast of the City of Edmonton[12] along the CN mainline and at the intersection of Highways 14, 834, and 626. Tofield was incorporated as a village on September 9, 1907, and as a town on September 9, 1909.[13] Tofield initially annexed land in 1913. After withdrawals of land in 1919 and 1921,

[2] Ibid
[3] Ibid
[4] Ibid
[5] Ibid
[6] Source: Google Earth (2019, measured from Edmonton's municipal boundary at the intersection of Highways 14 and 216)
[7] Source: Alberta Municipal Affairs, Municipal Profiles (2019)
[8] Source: Statistics Canada (2016)
[9] Source: Statistics Canada (1941-2016)
[10] Source: Alberta Municipal Affairs, Population Lists (1960-2018)
[11] Population adjustments due to municipal boundary changes occurring between federal censuses.
[12] Source: Google Earth (2019, measured from Edmonton's municipal boundary at the intersection of Highways 14 and 216)
[13] Source: Alberta Municipal Affairs, Municipal Boundary Document Search (2019)

the Town of Tofield has annexed additional lands from Beaver County on at least six occasions, most recently in 2010.[13] Today, the Town of Tofield has jurisdiction over 9.04 km² (3.49 mi²) of land[14] and recorded a population of 2,081 in 2018.[15] Table 2 presents the full population history of the Town of Tofield since its incorporation, derived from both federal and municipal censuses.

Table 2: Town of Tofield Population History, 1911-2016

Year	Federal Census				Municipal Census		
	Original Population	Adjusted Population[16]	Percentage Change	Avg. Annual Growth Rate	Population	Percentage Change	Avg. Annual Growth Rate
1911	586						
1916	455		—	—			
1921	500		9.9%	1.9%			
1926	506		1.2%	0.2%			
1931	497		-1.8%	-0.4%			
1936	544		9.5%	1.8%			
1941	551		1.3%	0.3%			
1946	608		10.3%	2.0%			
1951	692		13.8%	2.6%			
1956	800		15.6%	2.9%			
1960					837	—	
1961	905		13.1%	2.5%	871	4.1%	4.1%
1962					907	4.1%	4.1%
1963					905	-0.2%	-0.2%
1964					997	10.2%	10.2%
1965					1,009	1.2%	1.2%
1966	952		5.2%	1.0%			
1970					1,035	2.6%	0.5%
1971	924		-2.9%	-0.6%			
1972					1,078	4.2%	2.1%
1976	1,120		21.2%	3.9%	1,101	2.1%	0.5%
1978					1,369	24.3%	11.5%
1980					1,440	5.2%	2.6%
1981	1,504		34.3%	6.1%			
1982					1,560	8.3%	4.1%
1986	1,483	1,484	-1.4%	-0.3%			
1989					1,542	-1.2%	-0.2%
1991	1,620		9.2%	1.8%			
1994					1,660	7.7%	1.5%
1996	1,726		6.5%	1.3%			
2001	1,818		5.3%	1.0%			
2006	1,876		3.2%	0.6%			
2011	2,182		16.3%	3.1%			
2016[17]	2,081		-4.6%	-0.9%			

[14] Source: Alberta Municipal Affairs, Municipal Profiles (2019)
[15] Source: Statistics Canada (2016)
[16] Population adjustments due to municipal boundary changes occurring between federal censuses.
[17] The 2016 federal census population is suspected of being an undercount due to the observations from the Town of Tofield's dwelling history. Statistics Canada counted 878 total private dwellings in 2011 yet only counted 864 in 2016, 14 less than counted in 2016. Based on the amount of dwelling unit starts recorded by the Town between 2011 and 2016 (26), it is likely that Statistics Canada missed counting 40 dwellings in the 2016 census, thus undercounting Tofield's population in 2016. After factoring in estimated missing 40 dwellings, Tofield's actual 2016 population is estimated to be higher at 2,178.

A.1.4 PLAN HISTORY AND CONTEXT

Beaver County (the "County") and the Town of Tofield (the "Town") adopted their original IDP in 2008. Only one amendment to the IDP has been adopted during the lifespan of the original IDP – an amendment in 2018 to update mapping to reflect Tofield's 2010 annexation. In 2017, extensive amendments to the MGA came into force. Among these amendments were requirements for neighbouring municipalities to enter into mandatory ICFs and IDPs. The content requirements of IDPs were also expanded so that they also address transportation matters, intermunicipal programs, and environmental matters. In response to the MGA amendments, the County and the Town initiated its first formal update to the IDP in 2018 (the "Project"), coinciding with preparation of their new mandatory ICF.

In this Project, the County and the Town agreed to undertake the process for preparing and adopting, by bylaw, an updated IDP that will address the principles, policies and considerations outlined in this document. The County and the Town recognize that both municipalities are equals and have the right to accommodate growth and development. The County and the Town adopted the original IDP to establish a framework for managing growth for both municipalities. In addition to meeting all requirements of the recently amended MGA, the intent of this updated IDP is to build on the established land use patterns and continue efforts to promote development of employment areas, residential neighbourhoods, major institutions, and public recreation and open space in a flexible, orderly and sustainable manner.

The County and the Town will, through this IDP, coordinate development opportunities in the short-term and long-term to ensure that landowners and the Beaver Region[18] capitalize on economic development opportunities including accommodating demand for housing supply. This strategy is aimed at preserving economic development opportunities around major transportation corridors, such as Highways 14, 834, and 626.

The updated IDP responds to the Town's desire to maintain a 20-year land supply within its municipal boundaries and identifies a 50-year land supply requirement in the IDP area. This strategy underscores mutual acknowledgement of both the County Council and the Town Council that there are opportunities for both municipalities to provide areas of future development, local services, housing, and employment.

The IDP, associated ICF, and any various cost sharing agreements together form the basis of cooperative effort between the County and the Town to work together to serve the needs of their communities. Nothing contained within this IDP is intended to nor shall be interpreted as fettering either council's discretion.

A.1.5 PLAN CONSISTENCY

The IDP is consistent with the municipal development plans (MDPs) adopted by the County and the Town. In accordance with section 638(1) of the MGA, should a conflict or inconsistency occur in relation to the development of the land identified within the IDP area and an MDP, area structure plan (ASP) or area redevelopment plan (ARP), the IDP is the superseding bylaw to the extent of the conflict or inconsistency.

A.1.6 INTERPRETATION

The IDP policies contain "shall", "must", "will", "should", and "may" statements. All instances of the words "shall", "must" or "will" in policy are mandatory requirements to implement this IDP and achieve a desired result. All instances of the word "should" are directive, encouraging a strongly preferred action in a policy. The term "may" is discretionary indicating that interpretation is dependent on the particular circumstances where it is not practical or reasonable to apply the policy.

All words and expressions have the meanings per the MGA, the MDPs adopted by the County and the Town, and the land use bylaws (LUBs) adopted by the County and the Town, unless otherwise defined in this IDP.

[18] The Beaver Region is defined as the sum of Beaver County and the four urban municipalities that it surrounds – the towns of Tofield and Viking and the villages of Holden and Ryley.

A.1.7 LIST OF ACRONYMS

The following is a list of acronyms introduced and used within the IDP.

AAGR	average annual growth rate
ARP	area redevelopment plan
ASP	area structure plan
AT	Alberta Transportation
CAO	chief administrative officer
CFO	confined feeding operation
CN	Canadian National
H14RWSC	Highway 14 Regional Water Services Commission
ICF	intermunicipal collaboration framework
IDP	intermunicipal development plan
IMC	Intermunicipal Committee
ISDAB	Intermunicipal Subdivision and Development Appeal Board
LUB	land use bylaw
MD	municipal district
MDP	municipal development plan
MGA	Municipal Government Act
MGB	Municipal Government Board
MR	municipal reserve

B. POLICY FRAMEWORK

B.1.1 PLAN OBJECTIVES

Based on a review of background and technical information and input from the Intermunicipal Committee (IMC), objectives for the IDP were developed. The objectives are to:

1. Identify a Short-Term Growth Area adjacent to the Town that will be protected for the future short-term growth needs of the Town as and when required;
2. Identify the Long-Term Growth Area, which applies to lands that will be protected for the long-term growth of the Town, while ensuring appropriate uses may be developed in advance of future annexation;
3. Identify the County Development Area, which applies to lands in close proximity to the Town that are not identified for ultimate Town expansion, and that can be developed for either serviced or unserviced rural uses;
4. Develop land use policies to provide for and support economic development that will benefit the two municipalities economically and socially;
5. Develop a plan for the provision of utility corridors to provide for future growth and development of the IDP area, and to ensure oil and gas development and pipelines do not inhibit or restrict the future development of the Beaver Region;
6. Coordinate effective transportation systems and protection of required land for future road and trail network developments;
7. Develop land use policies to ensure that future sites for schools and recreation areas are protected;
8. Identify and protect physical features and environmentally sensitive areas;
9. Ensure effective referral mechanisms and dispute resolution mechanisms; and
10. Provide processes for the administration and implementation of the IDP.

B.1.2 FUTURE GROWTH PROJECTIONS

In consideration of the population growth projections published in the Beaver County Intermunicipal Development Plan Updates Discussion Paper, May 2019 (the "Discussion Paper"), the County and the Town opted to select a medium scenario[19] featuring application of an average annual growth rate (AAGR) of 0.5% and 1.4% respectively over a 50-year horizon ending in 2068. The outcome of these projections for the County and the Town are presented in Table 3 on the following page.

Under the medium scenario, an AAGR of 1.4% in relation to the unabsorbed lands within the Town presented in the Discussion Paper yields no residential or industrial land requirements by the 50-year horizon of 2068, and a modest requirement for 13.6 ha of commercial land at the 50-year mark. However, in recognition that urban municipalities sometimes require annexation to overcome landowners within their current boundaries that are not motivated to participate in development, a short-term growth area will be identified in this IDP to accommodate 20 to 50 years of growth.

[19] Population projections were developed for Beaver County and each urban municipality for which an IDP is prepared (Holden, Ryley, Tofield, and Viking). Each municipality selected which of a low, medium, or high growth scenario would be applied for their municipality. Beaver County selected a low growth scenario for use in each IDP except for a medium growth scenario for use with the Tofield IDP as more growth is anticipated in the western portion of Beaver County.

Table 3: IDP Population Growth Projections, 2016-2068

Year	Year Count	Beaver County	Town of Tofield
2016	-2	5,905	2,081
2017	-1	5,935	2,110
2018	0	5,964	2,140
2023	5	6,115	2,294
2028	10	6,269	2,459
2033	15	6,428	2,636
2038	20	6,590	2,826
2043	25	6,756	3,029
2048	30	6,927	3,247
2053	35	7,102	3,481
2058	40	7,281	3,731
2063	45	7,465	4,000
2068	50	7,653	4,288

B.1.3 PLAN AREA

The County and the Town agree that establishing a plan area is important to support future growth and development that is mutually beneficial to both municipalities. The policies direct strategic coordination of land use, transportation and services to maintain a 20-year land supply within the Town, while accommodating growth in the IDP area over the next 50 years to meet the objectives of this plan.

The IDP area consists of 2,361 ha (5,833 ac) of land. As shown in **Map 1: Plan Area and Growth Directions**, the IDP area consists of:

- a Short-Term Growth Area adjacent to the Town boundary that is identified primarily for urban residential development and in which applications and information are circulated between the two municipalities;
- a Long-Term Growth Area identified for ultimate long-term growth by the Town and in which applications and information are circulated between the two municipalities; and
- a County Development Area that provides opportunities to maintain rural development areas in which agricultural, rural commercial/industrial, and country residential opportunities may be pursued.

The land uses within the IDP direct future urban residential development in the Short-Term Growth Area northwest of the Town on portions of SW and SE 11, NW 2, and NE 2, and to the east of the Town on portions of SW 7, NE 6, and SE 6. Parks and Open Space are also identified north of the Town on portions of NW 12, NE 12, and SE 11. Commercial is identified on the portion of NE 36 that is between Highway 14 and the CN mainline, and along the future Highway 834 bypass on portions of NE 36, SE 6, SW 7, NW 7, and NE 12 The vast majority of the balance of the IDP area is designated for agricultural uses as illustrated in **Map 2 – Future Land Use Concept**. Among the minority of the balance is two existing country residential lots in NW 34.

B.1.4 SHORT-TERM GROWTH AREA

As the medium population growth scenario selected by the County and the Town does not yield any land requirements in the Town over the next 20 years, it is recognized that landowners within the Town may not be motivated to participate in development while growth pressures are being experienced. Therefore, a Short-Term Growth Area has been identified for lands northwest, north, northeast, and east adjacent to the current municipal boundaries of the Town to accommodate between 20 and 50 years of potential growth. The Short-Term Growth Area provides for a logical extension of primarily future urban residential, commercial and industrial development and identifies where it is anticipated the Town will focus future urban growth and pursue annexation if necessary in the short-term. In this area, protecting the development of lands for future urban uses is a priority.

B.1.5 LONG-TERM GROWTH AREA

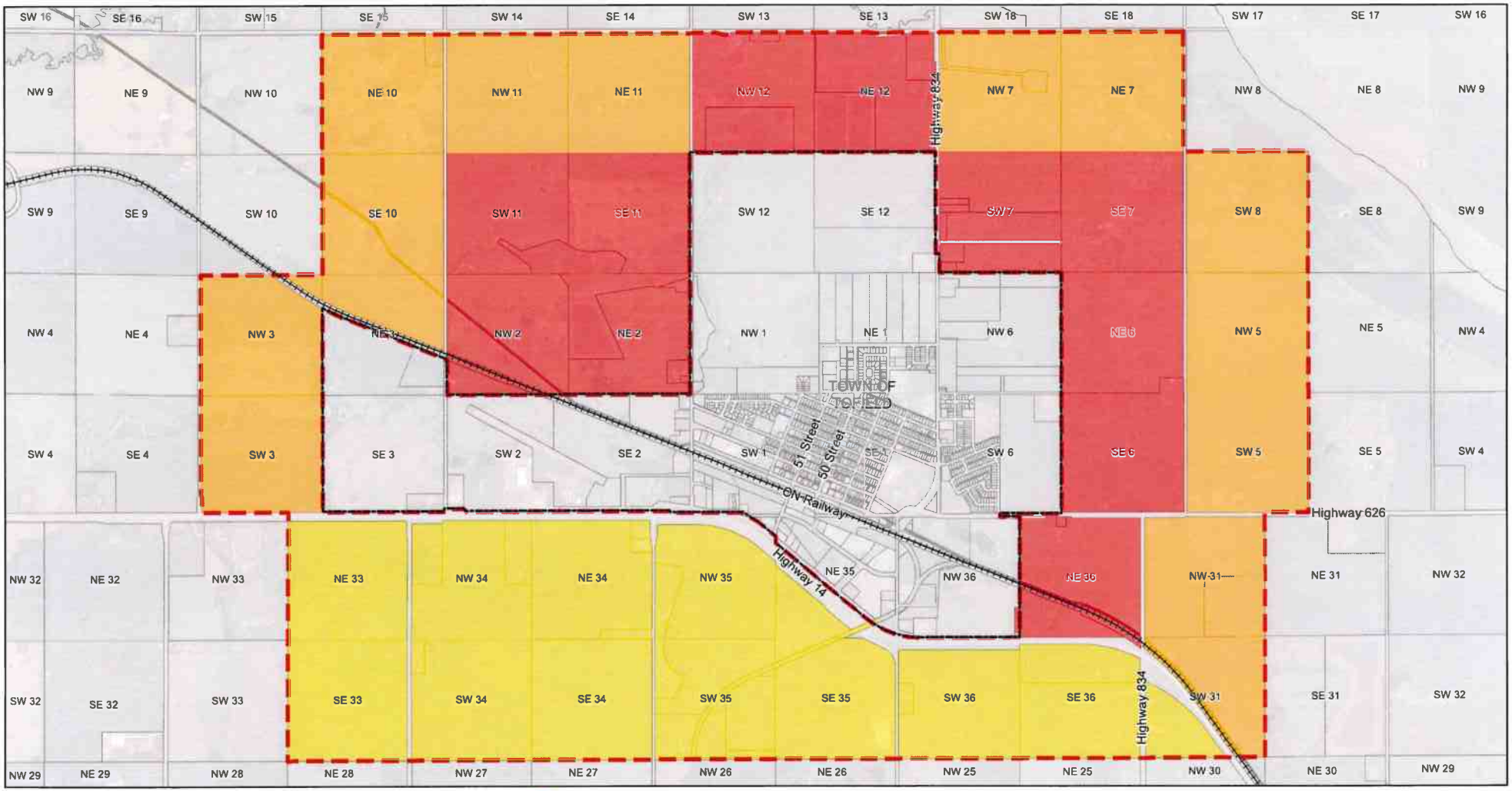
Although the medium population growth scenario selected by the County and the Town does not yield any land requirements for residential or industrial and only modest commercial requirements in the Town over the next 50 years, thirteen quarter sections are designated as Long-Term Growth Area. Identification of these lands is intended to protect future long-term growth areas for the ultimate growth of the Town beyond 50 years or if actual growth exceeds the selected medium scenario, while still permitting compatible development to occur in coordination with the County.

B.1.6 COUNTY DEVELOPMENT AREA

Within the IDP, just under twelve quarter sections are designated as County Development Area, which are intended for the continued development of rural purposes as either serviced or unserviced developments that will operate unencumbered. The County Development Area policies are intended to minimize the potential conflicts between the pre-existing uses and future development within the IDP area.

B.1.7 JOINT DEVELOPMENT AREA

At this time, the County and the Town have not designated lands for a Joint Development Area. If opportunities arise in the future, the County and the Town may pursue opportunities for future industrial and commercial development to occur in close proximity to the Town, but without the subject lands being annexed by the Town. Joint Development Areas may be used to facilitate development in the IDP area that is cooperative and coordinated between the County and the Town and offers both municipalities a share of the associated revenues and costs.



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ISL

Town
IDP Boundary
Parcel

Short-Term Growth Area
Long-Term Growth Area
County Development Area

1:25,000

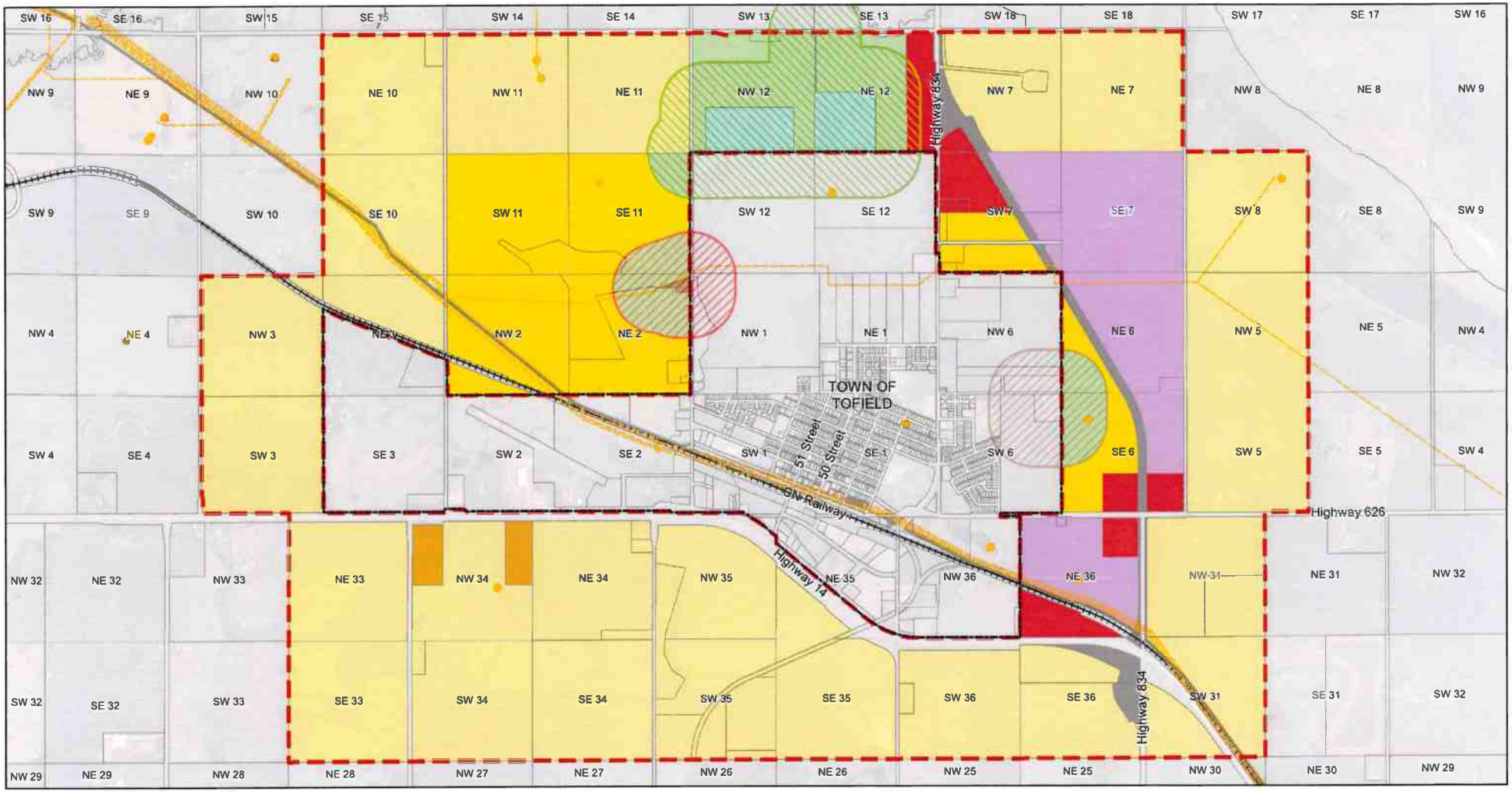
0 0.25 0.5 1 1.5 km

BEAVER COUNTY

Tofield

TOWN OF TOFIELD / BEAVER COUNTY: INTERMUNICIPAL DEVELOPMENT PLAN

MAP 1: PLAN AREA AND GROWTH DIRECTIONS



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ISL

N

1:25,000

0 150 300 600 900 1,200 1,500 m

- Agricultural
- Urban Residential
- Country Residential
- Commercial
- Industrial
- Public Utility
- Parks and Open Space
- Future Highway 834
- Transfer Station
- Town
- IDP Boundary
- Parcel
- 300 m Transfer Station Setback
- 300 m Landfill Setback
- 300 m Lagoon Setback
- Oil and Gas Facility †
- Oil and Gas Well †
- Pipeline †

† Alignment and location of pipelines, wells, and facilities are conceptual and subject to confirmation

BEAVER COUNTY

Tofield

TOWN OF TOFIELD / BEAVER COUNTY INTERMUNICIPAL DEVELOPMENT PLAN

MAP 2 FUTURE LAND USE CONCEPT

C. LAND USE POLICIES

C.1.1 AGRICULTURE

The IDP area designates 1,509 ha (3,728 ac) of land as Agriculture. Protection of agricultural lands and encouragement of a diversity of agricultural activities is important for the County and the Town. Where possible, prime agricultural land located within the IDP area shall be protected, and the premature development of existing agricultural land should be avoided.

1. Lands within the IDP area have been identified as County Development Area as depicted in **Map 1: Plan Area and Growth Directions**. These lands are not identified for future Town expansion and can be developed as either serviced or unserviced developments to accommodate primarily agricultural and/or recreation uses.
2. Existing agricultural operations shall be allowed to continue unencumbered. Where the Town annexes agricultural lands, the Town will support the continuation of existing agricultural uses, until such time as the land is converted to an urban use.
3. Unless otherwise provided in this Plan, the County's MDP and LUB shall apply regarding the use and development of agricultural land.
4. Development should be encouraged to expand in areas that would minimize the removal of higher quality agricultural land, regionally significant resources, and environmentally sensitive areas within the IDP area, to avoid premature development of existing agricultural land. Land should continue to be used for agricultural purposes until the land is required for other purposes.
5. The development of new Confined Feeding Operations (CFOs) shall not be supported within the IDP area. New or expanded CFOs requiring registration or approvals and manure storage facilities requiring authorization under the Agricultural Operations Practices Act shall not be allowed within the County Development Area.
6. Farmstead subdivisions will be permitted within the Short-Term Growth Area pursuant to the County's MDP. An ASP may be required for any multi-lot subdivisions in the Short-Term Growth Area.
7. A multi-lot subdivision shall be considered to be any subdivision that will create four or more lots on a quarter section.
8. When a subdivision application triggers the dedication of municipal reserve (MR), the balance of the MR may be deferred, through the registration of a deferred reserve caveat, to ensure that the MR is available for use by the Town following annexation for future parks and open space development.

C.1.2 RESIDENTIAL DEVELOPMENT

The IDP designates 269 ha (665 ac) of land for Urban Residential development and two parcels for Country Residential development amounting to 16 ha (38 ac). Existing residential uses will remain in the long-term. It is assumed that some additional residential development will occur over the next 50 years and beyond, subject to statutory plans, policies, and regulations in effect at the time, both within the County and within the Town via future annexation.

1. The Short-Term Growth Area identified in **Map 1: Plan Area and Growth Directions** includes areas designated for Urban Residential in **Map 2: Future Land Use Concept**. This will be the primary location for urban residential expansion and serve as the priority area for future annexation by the Town.
2. The planning process in the Short-Term Growth Area will be a cooperative effort between the County and the Town. Developers will be required to work with the County and the Town planning departments to ensure that any proposed development is compatible with the future growth patterns of the Town.
3. The County agrees that all development within the Short-Term Growth Area will be planned to minimize the impact on the growth of the Town.

4. In considering subdivision and development permit applications in the Long-Term Growth Area, the County Subdivision and Development Authority will ensure the proposed development is compatible with the adjacent existing and planned uses within the Town and Short-Term Growth Area. In considering subdivision and development permit applications in the County Development Area, the County Subdivision and Development Authority will ensure the proposed development is compatible with the adjacent existing and planned uses within the Long-Term Growth Area.
5. All country residential subdivision applications shall meet the intent of the County's MDP and LUB, and provide assessments, such as groundwater supply assessment, a geotechnical assessment indicating the suitability of the subject lands to accommodate sanitary systems, a stormwater management plan, and/or a biophysical/wetland assessment, if necessary.
6. An ASP or outline plan may be required for any new multi-lot country residential subdivision proposed within the IDP area.
7. Future country residential development should be developed in cluster form to minimize fragmentation of higher quality agricultural lands.
8. In considering all subdivision and development proposals, the County Subdivision and Development Authority will ensure the proposed subdivision and/or development conforms to the intent of the **Map 2: Future Land Use Concept** and the land use policies contained herein.
9. The Urban Residential area identified in **Map 2: Future Land Use Concept** shall be used predominantly for this purpose over the short-term. Agricultural, recreation, parks and open space, commercial, public utility, and industrial uses may also be present in accordance with a more detailed land use concept within an ASP or outline plan. Unless otherwise agreed to in writing between the County and the Town, the Development Authority, when reviewing a subdivision and development within the Short-Term Growth Area that proposes development intensification greater than a first parcel out subdivision and/or a farmstead separation, must consider including conditions designed to be compatible with the development regulations and intent of the equivalent or nearest intended district within the Town's LUB, as amended.

C.1.3 INDUSTRIAL AND COMMERCIAL DEVELOPMENT

The IDP area designates 248 ha (614 ac) of land to accommodate future industrial and commercial development along Highway 14 and the Highway 834 realignment. These lands are anticipated to accommodate non-residential development over the next 50 years and beyond as the economy grows. Both the County and the Town recognize the important role industrial and commercial development have in supporting the local and regional economy. Current estimates of commercial and industrial land requirements indicate that there is only modest need for additional commercial lands outside of the Town's current land supply in the 50-year horizon. However, future industrial and commercial development may be provided in the future for the lands adjacent to or with easy access to major highways and the CN mainline, which represent a logical extension of existing industrial and commercial development within the Town boundary.

1. In addition to the proposed commercial lands designated on **Map 2: Future Land Use Concept**, future industrial and commercial areas shall be identified on the basis of local site conditions and be located adjacent to provincial highways or existing municipal roadways as identified in **Map 3: Transportation Network**.
2. If not already discretionary in the County's Agricultural District, all industrial and commercial subdivision applications shall meet the location and technical requirements of the County's MDP and LUB prior to being rezoned to the applicable land use district if required.
3. Industrial and commercial development may be serviced by municipal water or wastewater subject to Policy E.1.1.
4. Industrial and commercial development shall maintain a high aesthetic standard in design and construction for developments located along highways, major roads, and the interface with the Town and adjacent to any residential development.

5. A landscaped or treed buffer and/or fencing shall be provided along the boundaries of industrial and commercial lots that are located adjacent to existing and planned future residential uses. All future development shall ensure that relevant LUB setbacks are maintained between industrial/commercial uses and existing and planned future residential uses.

C.1.4 NATURAL ENVIRONMENT AND OPEN SPACE

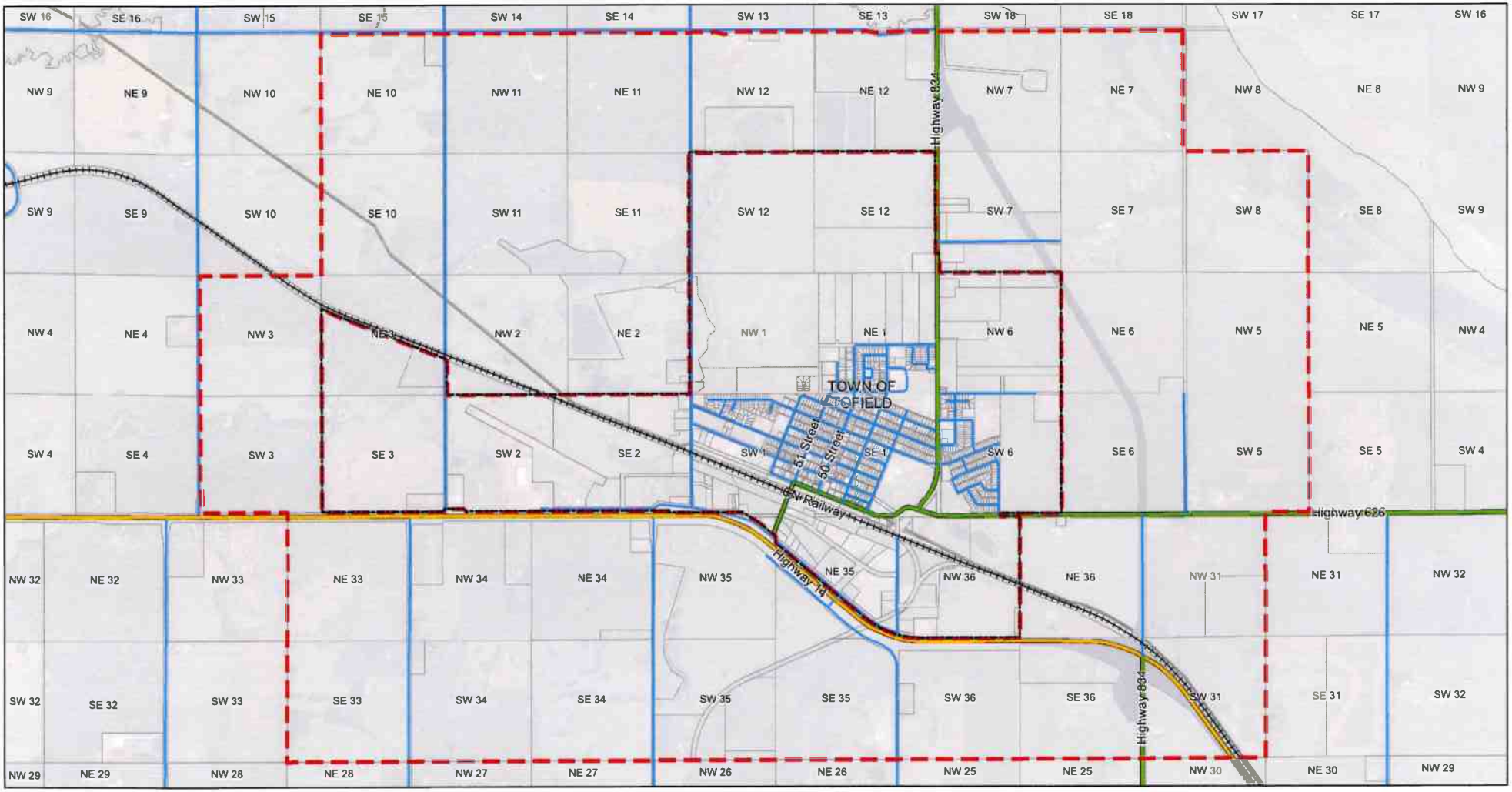
The IDP area designates 132 ha (327 ac) of land as parks and open space, which may function as future parks and trails. These areas not only provide amenity areas and destinations for local residents and visitors, but also provide a habitat to a diversity of plants and animal species, and may serve an essential stormwater management function.

1. At the time of subdivision, the County or the Town may acquire environmentally significant areas, critical natural linkages, wildlife corridors, and buffer zones in the IDP area through the application of reserves, in accordance with the MGA.
2. During the subdivision approval process, a strip of land dedicated as environmental reserve, not less than 6.0 m in width, shall be provided adjacent to the bed and shore of any body of water.
3. The County and the Town shall explore the development of trail networks in the IDP area that connect between the Town and external features and key points of interest.
4. MR dedication shall be provided in accordance with the MGA. Lands dedicated as MR may be used for the development of future parks and trail networks.
5. The County and the Town should collaborate and coordinate with partners, including landowners, developers and other stakeholders, such as provincial government departments and non-profit organizations, to encourage the restoration or enhancement of natural areas.
6. When a subdivision application triggers the dedication of MR, the balance of the MR shall be deferred if applicable, through the registration of a deferred reserve caveat to ensure that the MR is available for use by the Town following annexation for future parks and open space development.

D. TRANSPORTATION SYSTEMS

The IDP area contains an existing network of provincial highways – by series administered by Alberta Transportation (AT) – and municipal roadways that allow access to and from existing and proposed development in the County and the Town. Provincial highways facilitate a significant amount of long distance or inter-regional travel and are the responsibility of AT. These include Highway 14, which is classified as major two-lane highway, and Highways 834 and 626, which are classified as minor two-lane highways by AT. Municipal roadways include all roads that are the responsibility of either the County or the Town.

1. The County and the Town acknowledge that future development within the IDP area is dependent on access to provincial highways or municipal roadways, and the County and the Town agree to work together to ensure the corridors for these facilities are protected. The IDP recognizes future plans to upgrade highways within the IDP area, including the realignment of Highway 834 from north of Tofield to Highway 14 southeast of Tofield.
2. The municipalities shall provide each other with advance notice of proposed major transportation infrastructure projects or initiatives to facilitate collaboration and coordinated planning.
3. The County and the Town will work together to ensure a safe and efficient transportation network is developed and maintained to service the residents and businesses within the IDP area.
4. The County and the Town will also cooperate on the development of all future transportation master plans.
5. The County and the Town should support the efficient use of transportation infrastructure by directing new development to locate along or connect to existing transportation facilities identified in **Map 3: Transportation Network**.
6. Future subdivision and development proposals adjacent to provincial highways and/or municipal roadways shall provide adequate setbacks for future road right-of-way for widening and/or upgrades, to the satisfaction of Alberta Transportation and/or the Development Authority.
7. As a condition of development approval in the Short-Term Growth Area, all internal local roadways shall be developed to Town standards.



Integrated Expertise. Locally Delivered.

ISL

Town
IDP Boundary
Parcel

Provincial Highway, 1-216 Series
Provincial Highways, 500-986 Series
Municipal Roadway

Railway
Proposed Highway 834 Bypass Alignment †

1:25,000

0 0.25 0.5 1 1.5 km

† Based on the Highway 834 Realignment - Tofield Bypass (2013) provided by Alberta Transportation.

BEAVER COUNTY

Tofield

TOWN OF TOFIELD / BEAVER COUNTY: INTERMUNICIPAL DEVELOPMENT PLAN

MAP 3: TRANSPORTATION NETWORK

E. UTILITIES

Utility servicing includes providing potable water, the conveyance of wastewater, the management and conveyance of stormwater and the provision of shallow utilities including natural gas, power and communications. A majority of the IDP area is unserviced with respect to water and wastewater or serviced to rural standards for the other utilities.

E.1.1 WATER AND WASTEWATER POLICIES

1. The County and the Town acknowledge that future development within the IDP area is dependent on access to water and wastewater services, and the County and the Town agree to work together to ensure the corridors for pipes for water and wastewater services are protected where required.
2. If requested by the developer, the County agrees to provide new commercial, industrial, multi-lot residential or multi-unit residential developments in the Short-Term Growth Area the option to connect to water and wastewater services to the same standards as the Town and connected to the Town's systems.
3. The County and Town agree that all development requesting wastewater services within the Short-Term Growth Area will be permitted to connect to the Town's wastewater system based on conditions of a joint servicing memorandum of agreement, and subject to the joint servicing memorandum of agreement being executed.
4. For developments located within the Short-Term Growth Area or Long-Term Growth Area requiring or proposed to require water and wastewater services from the Town and/or Highway 14 Regional Water Services Commission (H14RWSC), the County will submit the relevant portions of the development agreement, including full details on the water and wastewater servicing standards and anticipated volumes, for review and approval by the Town and/or H14RWSC prior to the County finalizing its review and issuing its approval.
5. The County agrees that all multi-lot subdivisions within the Short-Term Growth Area may be serviced with water and wastewater services from the Town.
6. No development of a school, hospital, food establishment or residential use shall be allowed within 300 metres of a wastewater treatment plant (lagoon).

E.1.2 STORMWATER MANAGEMENT POLICIES

1. The County and the Town should collaborate to undertake drainage and stormwater management studies for the IDP area, in order to ensure that future development does not further impact stormwater management issues within the Town.
2. The municipalities shall share information respecting relevant and known stormwater issues.
3. Best practices, such as low impact development, should be considered for the implementation of stormwater management in all new developments.
4. New developments, including both urban and rural development, shall be designed so that adjacent lands are not negatively impacted by altered drainage patterns or stormwater run-off.

E.1.3 OIL AND GAS INFRASTRUCTURE

1. The County and the Town acknowledge that the oil and gas industry has played an integral part in the development of the region. The County and the Town will work with the oil and gas industry to ensure that the orderly development of the IDP area is not unduly restricted by the development of oil and gas infrastructure, including pipelines, as conceptually illustrated in **Map 2: Future Land Use Concept**.
2. Both municipalities shall endeavour to ensure that project proponents / developers have the awareness and the means to educate themselves as to the restrictions regarding the use of land within pipeline right-of-ways.
3. As part of plan preparation at all stages, applicants shall identify the location of all pipeline systems within the plan area and include contact information for the relevant pipeline systems operator.

4. The Town and County should, as part of the subdivision and development application referral process, refer applications to the pipeline systems operator when a proposed development is located within 200 metres of a pipeline or associated infrastructure.
5. The proponents / developers shall contact the pipeline systems operator prior to finalizing development plans and filing a statutory plan, land use concept plan, subdivision, or development application located within 200 metres of a pipeline or associated infrastructure.

E.1.4 WASTE MANAGEMENT

1. The County and the Town and shall ensure that all subdivision and development proposed within 450 m of the working area of an operating landfill, or 300 m of the disposal area of an operating or non-operating landfill shall comply with the provisions and setbacks of the Subdivision and Development Regulation.

F. INTERMUNICIPAL PROGRAMS

An IDP enables municipalities to collaborate on, among other things, identification of future land uses and location of future transportation and utility systems. IDPs are also required to address coordination of physical, social, and economic intermunicipal programs. Although the details relating to the provision of services are addressed in the ICF, the following policies address the sharing or division of service provision in general:

1. The municipalities have agreed to work together to promote and support economic development that is good for both municipalities. Land use policies will be developed that will support and encourage a cooperative effort in support of economic development.
2. The County and the Town may identify Joint Development Areas, as required, to provide an opportunity for future industrial and commercial development to occur in close proximity to the Town, but without the subject lands being annexed by the Town. Future Joint Development Areas may be used to facilitate development in the IDP area that is cooperative and coordinated between the County and the Town and offers both municipalities a share of the associated revenues and costs.
3. The County and the Town support the continued use of intermunicipal agreements identified in the ICF as a means of delivering social services in a cooperative manner to maximize available resources.

G. PLAN ADOPTION, AMENDMENT, REVIEW AND REPEAL

G.1.1 PLAN ADOPTION

1. The IDP shall be adopted by bylaw by the County and the Town in accordance with the MGA.
2. The Town's adopting bylaw will specify that although the Town adopts the policies and objectives of the IDP, the Town has no legal jurisdiction for lands in the IDP area as these lands are outside of the boundaries of the Town.
3. Any amendments to the MDPs, applicable ASPs, and LUBs of the County and the Town required to implement the policies of the IDP should occur simultaneously with the adoption of the plan.

G.1.2 APPROVING AUTHORITIES

1. In the hierarchy of statutory plans, the IDP shall take precedence over the municipal statutory plans and documents.
2. The County shall be responsible for the administration and decisions on all statutory plans, LUBs, and amendments thereto for lands within the plan area.

G.1.3 PLAN AMENDMENTS

1. An amendment to this IDP may be proposed by either municipality.
2. An amendment to the IDP proposed by a landowner shall be made to the municipality in which the subject land is located.
3. An amendment to this IDP has no effect unless adopted by both municipalities by bylaw following a joint public hearing in accordance with the MGA.

G.1.4 PLAN REVIEW

1. A formal review of this IDP shall be undertaken every 5 years or sooner if circumstances warrant by the IMC, which will prepare recommendations for consideration by the municipal councils.
2. Annual monitoring (e.g. review of subdivision/permit activity, approval history, appeals, referral responses) should be undertaken by the municipalities to ensure that the IDP is working as intended.

G.1.5 REPEALING THE PLAN

1. Repeal of the IDP shall only be allowed if it is to be replaced by a new plan.

H. ADMINISTRATIVE ROLES AND RESPONSIBILITIES

H.1.1 SUBDIVISION AND DEVELOPMENT PERMIT APPLICATIONS

1. Development permit and subdivision applications are to be processed and decided on by the Approving Authority of the municipality within which the application is located.

H.1.2 INTERMUNICIPAL SUBDIVISION AND DEVELOPMENT APPEAL BOARD

1. Beaver County, the towns of Tofield and Viking and the villages of Holden and Ryley have entered into an agreement to form an Intermunicipal Subdivision and Development Appeal Board (ISDAB) that deals with all subdivisions and development appeals within the IDP area.

2. All appeals of developments and subdivisions within the IDP area will be considered by the ISDAB.

H.1.3 STATUTORY PLAN AND LAND USE BYLAW ADOPTION AND AMENDMENTS

1. The adoption of, or amendments to, a statutory plan (MDP, ASP, ARP) or a LUB shall be processed and decided upon by the Approving Authority of the municipality in which the plan or bylaw is located.

H.1.4 INTERMUNICIPAL COMMITTEE (IMC)

1. The IMC is hereby established to facilitate communication and discussion on areas of mutual interest or concern between the municipalities. The IMC is a recommending body and has no authority for formal decision-making.
2. The IMC shall meet on an as required basis and will develop recommendations to the councils on all matters of strategic direction and cooperation affecting land use and services shared by the two municipalities.
3. The IMC shall consist of four elected members (two from each municipality).
4. The responsibilities of the IMC are to:
   a. meet as required to discuss the emergent issues of mutual concern/interest;
   b. monitor progress and implementation of the IDP;
   c. review and discuss proposed IDP amendments and repeal notices;
   d. review and discuss proposed annexations;
   e. share and review information relating to proposed major and/or potentially contentious applications in the IDP area;
   f. oversee review and update of the IDP; and
   g. meet annually to discuss joint projects that could be undertaken by the municipalities.
5. The chief administrative officers (CAOs) of each municipality will be responsible to develop agendas and recommendations on all matters. The CAOs will be responsible for forwarding all recommendations from the IMC to their respective councils.
6. Further to Article 3.4 of the ICF agreement, either municipality, by giving sufficient notice as set out in the ICF, may trigger the requirement for the IMC to hold a meeting. Meeting requests shall be directed to the CAO for their respective municipality.

H.1.5 REFERRALS AND COMMUNICATIONS

Open communication between the County and the Town will be critical to the success of the IDP. To this end, this section addresses matters associated with the exchange of development applications and the sharing of information between the municipalities.

1. The Short-Term Growth Area is those lands within the County identified in **Map 1: Plan Area and Growth Directions**. These lands are intended to delineate the potential areas for the growth of the Town over the next 20 to 50 years, while still permitting compatible development to occur.
2. The Long-Term Growth Area is those lands within the County identified in **Map 1: Plan Area and Growth Directions**. These lands are intended to delineate the ultimate potential areas for the eventual growth of the Town, while still permitting compatible development to occur.
3. The Town shall refer the following applications to the County for review and comment:
   a. new statutory plans and amendments;
   b. new LUBs and amendments;
   c. subdivision applications if the application affects land within 100 m of the municipal boundary; and
   d. non-residential development permits if the application affects land within 100 m of the municipal boundary.
4. The County shall refer the following applications in the IDP area to the Town for review and comment:
   a. new statutory plans and amendments;
   b. new LUBs and amendments;
   c. subdivision applications; and
   d. discretionary development permit applications.
5. The municipalities shall circulate all non-statutory master plans (e.g. transportation, recreation, stormwater management and utilities) applicable in the IDP area for information and comment.
6. The municipalities shall establish a process for landowner circulation across municipal boundaries (i.e. applications that require adjacent landowner notification) in cases where the subject lands abut a municipal boundary.
7. When circulating an application in accordance with H.1.5.2 or H.1.5.3, the responding municipality shall provide comments within 14 days for subdivision and development permit applications, and within 30 days for other applications.

I. ANNEXATION

The following policies are provided to help ensure that the process of annexing land from the County to the Town, when warranted to facilitate urban growth, proceeds in an orderly and timely manner.

I.1.1 PREPARATION AND REVIEW OF ANNEXATION PROPOSALS

1. The Town shall follow the annexation process outlined in the MGA.
2. The Town shall share growth and development information with the County on a regular basis so that both municipalities are aware of the extent of any future annexation requirements, and the potential timing of an annexation application.
3. Annexation applications shall strive to achieve all of the following:
   a. conformity with the IDP and Town MDP;
   b. be limited only to those lands identified as Short-Term Growth Area;
   c. be supported by a growth study that uses mutually agreed-upon land consumption rates and population growth and demonstrates the need for annexation;
   d. consensual agreement from affected landowners;
   e. logical extension of existing development and infrastructure; and
   f. be supported by a financial impact assessment of the proposed annexation that investigates the impacts of annexation on the affected landowners, the Town, and the County to ensure the associated costs are understood, confirms the Town is able to absorb the costs of the lands proposed to be annexed, and that both municipalities remain viable.
4. Prior to the notice being filed with the Municipal Government Board (MGB), the proposed annexation application shall be:
   a. referred to the County for comment; and
   b. reviewed by the IMC.
5. All annexation applications should follow legal boundaries to avoid land titles being split by the new municipal boundary.
6. Following annexation, the IDP as well as the MDPs and LUBs adopted by the County and the Town shall be amended as required to reflect:
   a. the change in municipal boundaries;
   b. any applicable requirements contained in the annexation order; and
   c. any other matters requiring adjustment as a result of the annexation as deemed necessary and agreed to by the County and the Town.

I.1.2 TRIGGERS FOR ANNEXATION

The purpose of this set of policies is to describe the circumstances under which annexation would be warranted.

1. Annexation by the Town may be supported in the following circumstances:
   a. In order to accommodate the Town's need for land to facilitate future growth, in which case the following shall apply:
      i. When annexation is requested by a landowner/developer, which may be supported by the County and the Town provided that the application is consistent with the policies of the IDP. If the land proposed for annexation is located outside the Short-Term Growth Area, the proposed annexation shall not be considered unless the IDP is amended accordingly.
      ii. In cases where the boundary of a Short-Term Growth Area is defined by the right-of-way of a proposed highway realignment, annexation may be triggered when the highway is constructed subject to I.1.1.3.

iii. In cases where new development and an extension of water and wastewater municipal servicing is proposed within the Short-Term Growth Area.

iv. The annexation process may be initiated by the Town through the preparation of a Growth Study and in accordance with the MGA.

2. The County recognizes and agrees that the Town may need additional land to grow in the future and will support annexations that will provide for at least 20 years of projected growth within the boundaries of the Town. Future urban expansion and annexation will be supported on lands if they:
   a. are suited to urban uses and servicing;
   b. align with growth staging in the Town's MDP; and
   c. are identified for expansion and annexation in this plan.
3. The County and the Town will endeavour to reach an intermunicipal agreement on the annexation prior to submitting a formal annexation application to the MGB.

J. DISPUTE RESOLUTION PROCESS

J.1.1 APPLICABILITY

1. The dispute resolution process may only be initiated by County Council or Town Council.
2. A dispute relating to the IDP may be triggered in the following circumstances:
   a. lack of agreement on proposed amendments to the IDP;
   b. lack of agreement on any proposed statutory plan, LUB or amendment thereto either located within or affecting the IDP area; or
   c. lack of agreement on an interpretation of this IDP.

   Lack of agreement pursuant to J.1.1.2.a or J.1.1.2.b is defined as a statutory plan, LUB or amendment thereto that is given first reading, and which the other Council deems to be inconsistent with the policies of this IDP or detrimental to their planning interests as a municipality.
3. Beyond those matters listed in J.1.1.2, the dispute resolution process does not apply to other matters that fall under the jurisdiction of the ISDAB or the MGB, nor does it allow a municipality to appeal a subdivision approval. Rather, these other matters can only be disputed by way of appeal to the appropriate approving authority or appeal board that deals with that issue.

J.1.2 PROCESS

Land use disputes between municipalities may occur from time to time. In an effort to resolve issues and avoid an appeal to the MGB, the following local dispute resolution process shall be followed, per section 690 of the MGA.

1. Either municipality's council may initiate the dispute resolution process, as depicted in **Figure 1: IDP Dispute Resolution Process**. A dispute may be initiated by a lack of agreement on an amendment to this IDP, or the proposed adoption or amendment of a statutory plan or LUB that has been given first reading but believed to be inconsistent with this IDP.
2. The dispute resolution process shall not apply to matters under jurisdiction of the ISDAB or the MGB. Any other appeal shall be made to the appropriate approving authority or appeal board that deals with that issue.
3. The identification of a dispute, notification of the dispute to the other municipality, and the desire to proceed through the dispute resolution process may occur at any time prior to second reading of the bylaw.
4. In the event the dispute resolution process is initiated, the municipality having authority over the matter shall not give any further approval until the dispute has been resolved or a mediation process has been concluded.
5. Once either municipality has received written notice of a dispute, the resolution process must be initiated within 14 calendar days of the date the written notice was received.
6. Upon receipt of notice of a dispute, the CAO of each municipality will meet in an attempt to resolve the issue. In the event a resolution is not achieved within 30 days of the first meeting of the CAOs, either municipality may refer the dispute to the IMC.
7. The IMC will convene to consider and attempt to resolve the dispute. In the event a resolution is not achieved within 30 days of the first meeting of the IMC, either municipality may refer the dispute to mediation. The mediation must occur as soon as possible after second reading of the bylaw.
8. Both municipalities agree to adopt the model dispute resolution provisions as set out in the Intermunicipal Collaboration Framework Regulation with the exception of the costs of mediation/arbitration which shall be based on a pro-rated population basis using the Beaver County population from the Recreation Service Area around the Town of Tofield. For greater certainty this means the Beaver County portion would be 62.4% and the Town of Tofield 37.6% (based on 2016 census data).[20] These percentage amounts will remain for the Term of the Agreement. The mediation process shall be concluded in 30 days of the first meeting with the mediator. The mediator shall present a written recommendation to both councils.

[20] Source: Beaver County 2018 Operating Funding for Recreation (Shared Servicing Agreements), based on 2016 federal census population counts of 2,081 for the Town of Tofield and 3,451 for the surrounding portion of Beaver County.

9. In the event the mediation process is not pursued or does not resolve the dispute, the municipality may proceed to adopt the bylaw in accordance with the MGA, and the other municipality will have the right to appeal to the MGB per section 690 of the MGA.

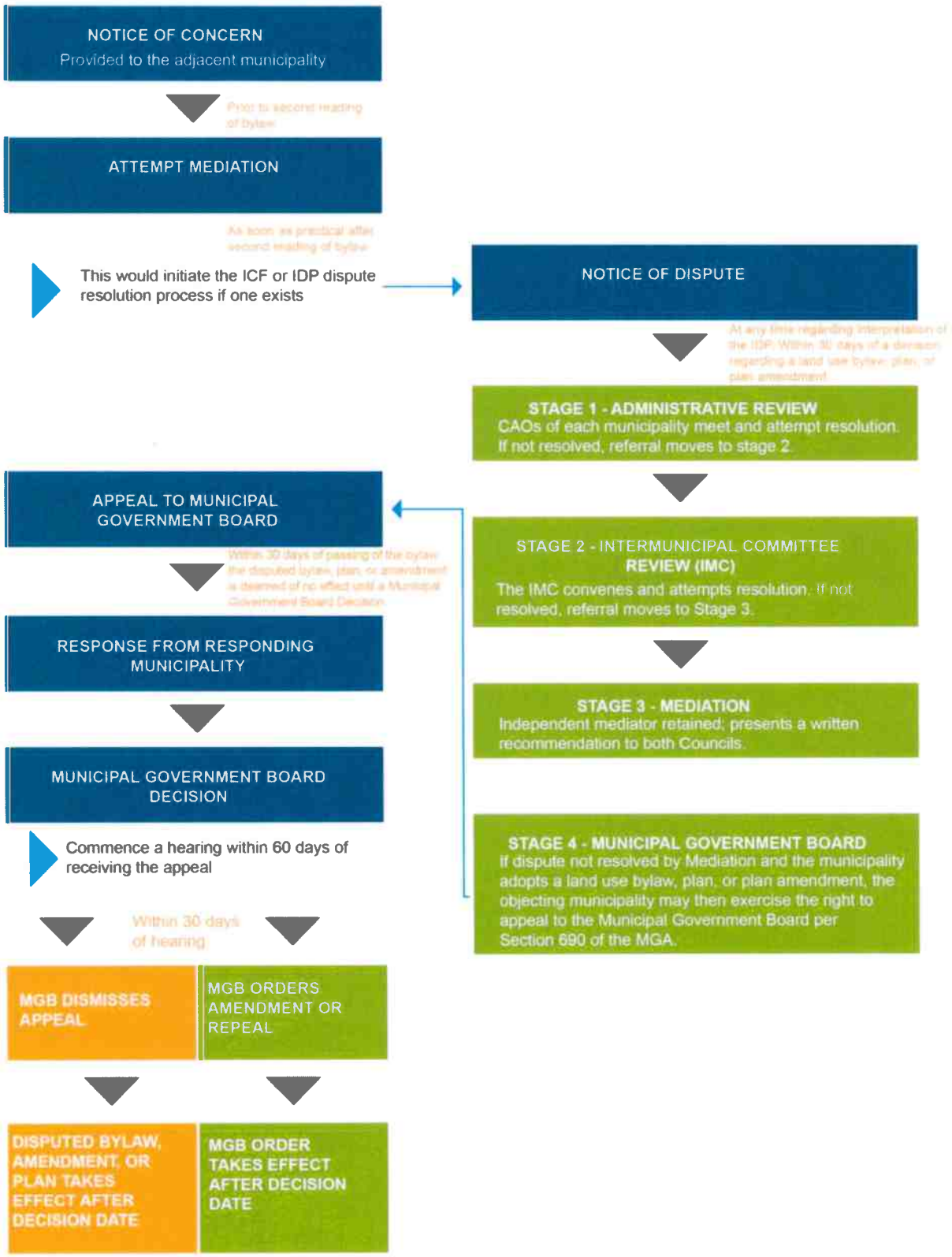


Figure 1: IDP Dispute Resolution Process

Round Table Report – Mayor Dueck, – January 28, 2025 – March 24, 2025

My activities and commitments since the January 27, 2025.

Weekly discussions with administration on any items that may arise and cheque signing.

Jan 28 - Beaver Foundation Regular Meeting

Feb 4 - BESC Policy Committee Meeting

Feb 10 - Regular Council Meeting

Feb 12 - BESC Regular Meeting

Feb 13 - Joint Council Meeting

Feb 24 - Budget and Regular Council Meeting

Feb 25 - Beaver Foundation Regular Meeting

Mar 10 - Regular Council Meeting

Mar 12 - BESC Regular Meeting

Hopefully spring is right around the corner resulting in milder temperatures and less snow removal. However, there is likely to be one more big heavy wet snowfall just to remind us that oldman winter has the power. It will be great to see all the resident clean up there properties, the ball diamonds and soccer fields getting busy with youth and adults enjoying the outdoors.

I for one will be enjoying the walking trails in the sunshine and lack of ice/snow, but it was very much appreciated how well the walking trails are maintained by the Operations Department.

Respectfully submitted Deb Dueck

Council Activities Mar 20/25

Norm Martineau

DATE	ITEM	NOTES
Feb 24/25	Reg Council	
Feb 25/25	CARC	
Feb 27/25	Hwy 14	CAO Interm
Feb 27/25	BEMS	Sign cheques
Mar 4/25	BEMS	Sign cheques
Mar 5/25	Hwy 14	CAO Interm
Mar 10/25	Budget	
Mar 10/25	Reg Council	
Mar 11/25	BEMS	Sign cheques
Mar 19/25	Council	CAO
Mar 20/25	Hwy 14	Meeting with Claystone
Mar 20/25	Hwy 14	
Mar 20/25	BEMS	Sign cheques