INDIGENOUS SERVICES CANADA
ALBERTA REGIONAL OPERATIONS
WATER AND WASTEWATER PROGRAM

August 28, 2025

Indigenous Services Canada
Services aux Autochtones Canada

Canada

Overview

- **Who We Are**
- **Organizational Structure**
- **What We Do**
- **Saddle Lake Cree Nation API**
- **Recent and Current Projects in Saddle Lake Cree Nation**
- **Questions?**

Who We Are

The water strategy team works in partnership with First Nations in Alberta to deliver potable **water and wastewater** projects funded through the First Nations Water and Wastewater Enhanced Program (FNWWEP).

Adam Kuehnbaum
Engineering Manager

Felix Chan
Senior Engineer

Wei Ming Chew
Senior Engineer

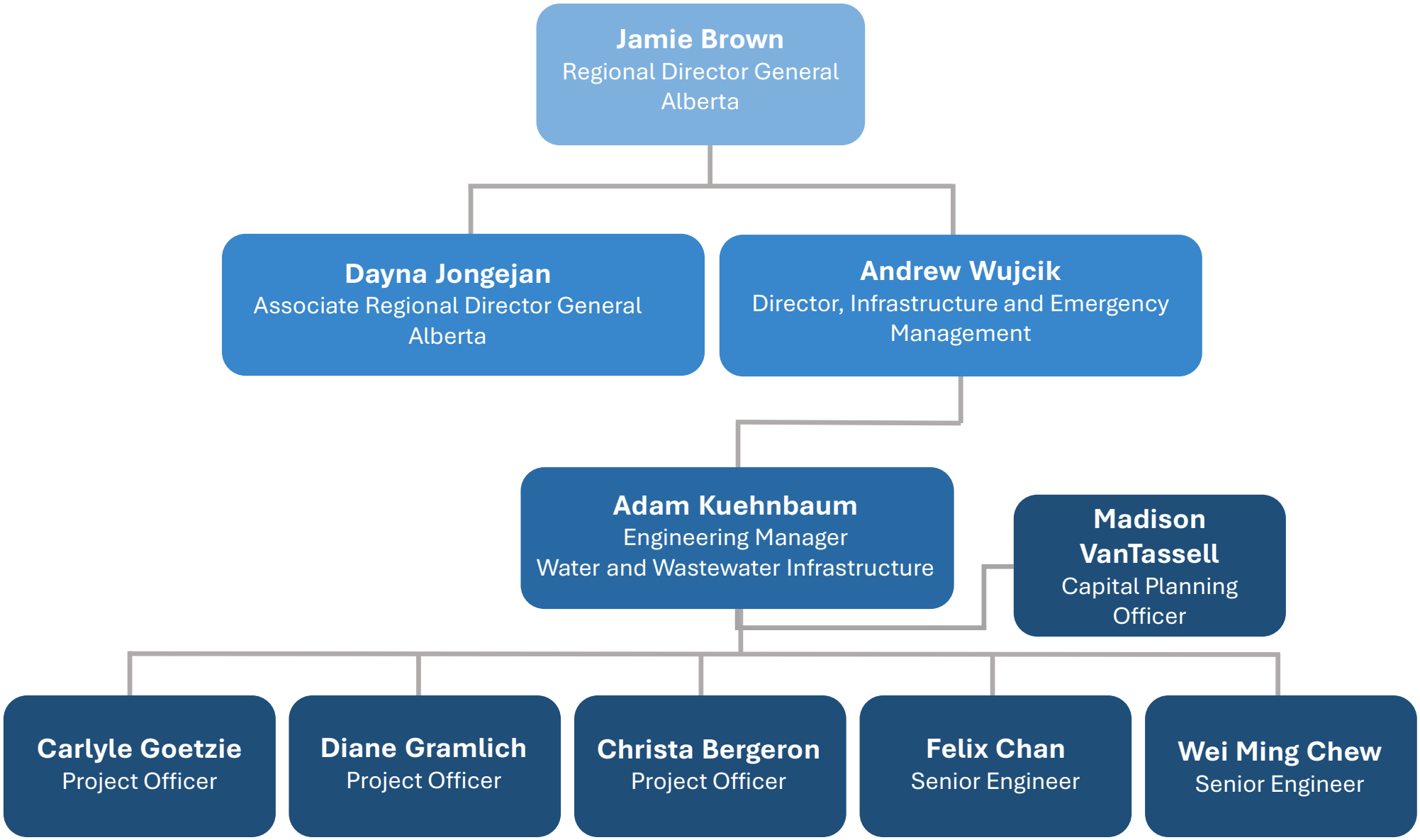
Carlyle Goetzie
Project Officer

Diane Gramlich
Project Officer

Christa Bergeron
Project Officer

Madison VanTassell
Capital Planning Officer

Organizational Structure



What We Do

Infrastructure Project Planning and Delivery

Major Capital Projects (Total Estimated Cost >$1.5M)

Feasibility Study

- Look at current conditions of water infrastructure and develop options to meet objectives.
- Options analysis must include a **life cycle cost estimate (LCC)** for each option.
  - LCC estimate must consider both the capital cost and the long-term operations and maintenance costs.
- Project Approval Request (PAR) Development.
  - Projects <$30M require review and approval within the AB Region.
  - Projects >$30M require review and approval at headquarters.

Design

- Once the PAR has been approved and funding secured, an engineering consultant is typically procured to design the recommended solution.
- ISC Environment (RO) and Public Health (FNIHB) reviews.
- TSAG involvement to provide operational recommendations
- Process typically takes **one year**.

Construction

- A project can go out to tender to procure a contractor for construction.
- Involvement of TSAG and FNIHB critical at commissioning step.
- Construction of new water and wastewater system typically takes **two years**.

What We Do

Infrastructure Project Planning and Delivery

Minor Capital Projects (Total Estimate Cost <$1.5M)

- Nations work with our Senior Engineer or Project Officer on options to secure funding.

What We Do

Infrastructure Project Planning and Delivery

First Nation Water and Wastewater Enhanced Program (FNWWEP)

- FNIIP projects are funded under the **FNWWEP** program

- FNWWEP program must be delivered according to the **Capital Facilities and Management Program (CFMP)**
  - CFMP is the **'rule book'** for the use of program funds
    - Outlines requirements for Feasibility Study, Design, Construction phases, PAR requirements and **procurement policies**
  - Tendering Policy
    - **Professional Services**
      - **<$100K** – **sole source** with demonstration of value for money
      - **$100K to $500K** – **invited** tender
      - **>$500K** – **open public** tender
    - **Construction Services**
      - **<$200K** – **sole source** with demonstration of value for money
      - **$200K to $1M** – **invited** tender
      - **>$1M** – **open public** tender
    - Various other thresholds depending on procurement strategy (CM, own forces)

What We Do

Annual Performance Inspections (API's)

Neegan Burnside Report

- An Initial National Assessment was completed by Neegan Burnside in **2009/10** and **2010/11**.
- A report was sent out to each First Nation.

Annual Performance Inspections

- Completed on an **annual basis**.
  - Have been led by FNTSAG since 2011/12.
  - Summary letters are sent to Chief and Council with cc to Public Works Directors annually
- API's identify risks associated with water and wastewater systems.
  - Risks are categorized under five different headings.
  - The weighted risk for each category is combined to calculate an overall risk for each system.
  - Each system is identified as a **high**, **medium**, or **low** risk system.

WATER

- Source Water – 10%
- Design – 30%
- Operations – 30%
- Reporting – 10%
- Operators – 20%

WASTEWATER

- Effluent Receiver – 20%
- Design – 25%
- Operations – 25%
- Reporting – 10%
- Operators – 20%

Annual Performance Inspection Results

Saddle Lake Cree Nation Water System

Saddle Lake Cree Nation (462) – System Number 6765

Water Risk Levels								
FISCAL YEAR	**Low (1 - 4.0)**	**Med (4.1 – 7.0)**	**High (7.1 – 10.0)**	**Source 10%**	**Design 30%**	**Operation 30%**	**Reporting 10%**	**Operators 20%**
2024/2025	**2.45**			**3.0**	**1.5**	**1.0**	**4.0**	**5.0**
2023/2024	2.45			3.0	2.5	1.0	4.0	3.5
2022/2023	1.7			3.0	1.0	1.0	1.0	3.5
2021/2022	2.15			3.0	2.5	1.0	1.0	3.5
2019/2020	2.35			4.0	2.5	1.0	1.0	4.0
2018/2019	2.7			6.0	2.5	1.5	2.0	3.5
2017/2018	2.6			6.0	2.5	1.5	2.0	3.0
2016/2017	2.85			6.0	2.5	2.0	2.0	3.5
2015/2016	2.85			7.0	2.5	2.0	1.0	3.5
2014/2015			8.0	7.0	2.5	8.0	1.0	5.5
2013/2014	3.9			9.0	2.0	4.0	2.0	5.0
2012/2013	3.6			9.0	4.0	4.0	1.0	1.0
2011/2012								
2010/2011			8.0	10.0	8.0	8.0	1.0	1.0

Annual Performance Inspection Results

Saddle Lake Cree Nation Wastewater System

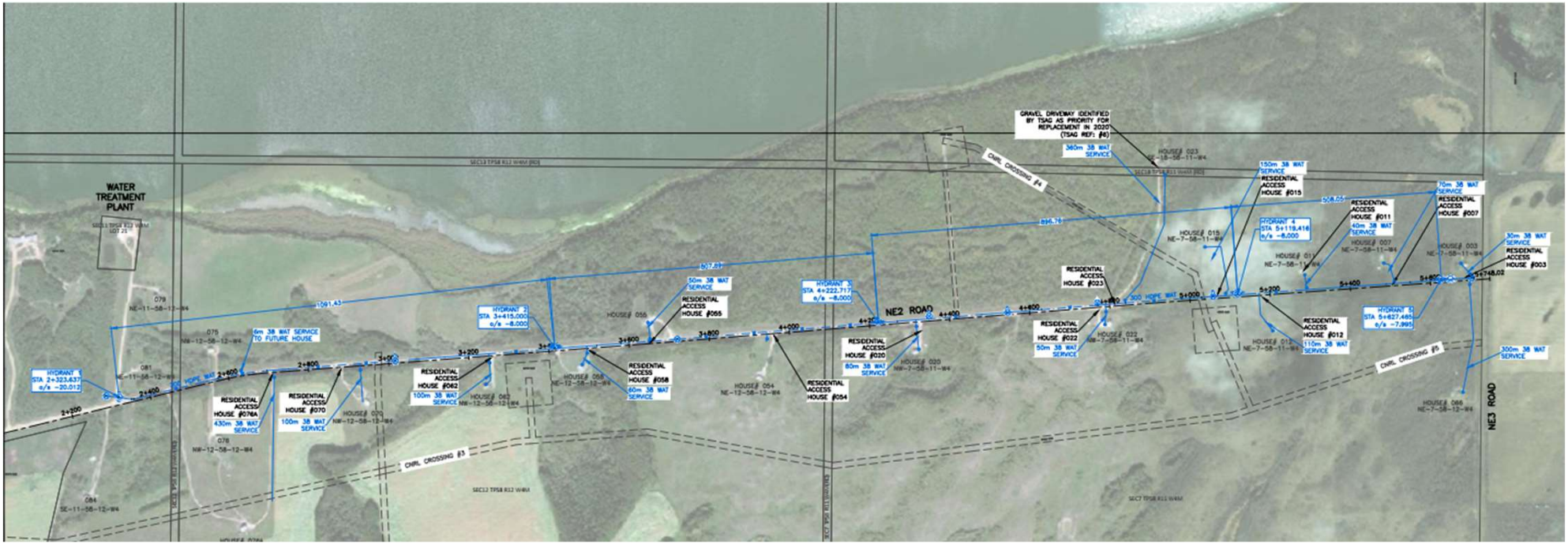
Saddle Lake Cree Nation (462) – System Number 7515

Wastewater Risk Levels								
FISCAL YEAR	**Low (1 – 4.0)**	**Med (4.1 – 7.0)**	**High (7.1 – 10.0)**	**Receiver 20%**	**Design 25%**	**Operation 25%**	**Reporting 10%**	**Operators 20%**
2024/2025			**7.35**	**7.0**	**7.5**	**9.5**	**6.0**	**5.5**
2023/2024		5.5		7.0	3.0	7.0	6.0	5.0
2022/2023		5.25		7.0	3.0	6.0	6.0	5.0
2021/2022		4.75		7.0	1.0	6.0	6.0	5.0
2019/2020		4.65		7.0	1.0	6.0	6.0	4.5
2018/2019		5.18		7.0	1.0	6.5	6.0	6.5
2017/2018		4.4		7.0	1.0	1.0	5.0	5.0
2016/2017		5.98		7.0	5.5	8.0	5.0	3.5
2015/2016			7.6	7.0	6.5	9.5	8.0	7.0
2014/2015		4.6		7.0	4.5	6.0	1.0	2.5
2013/2014	4.0			5.0	2.0	6.0	2.0	4.0
2012/2013			7.3	5.0	5.0	9.0	8.0	10.0
2011/2012								
2010/2011		4.5		5.0	5.0	8.0	1.0	1.0

Projects in Saddle Lake Cree Nation

Water Distribution Expansion Phase 1

- Expansion of the water distribution system along NE2 Road and 16 homes tied into the waterline.
- Project completed in 2024.



Projects in Saddle Lake Cree Nation

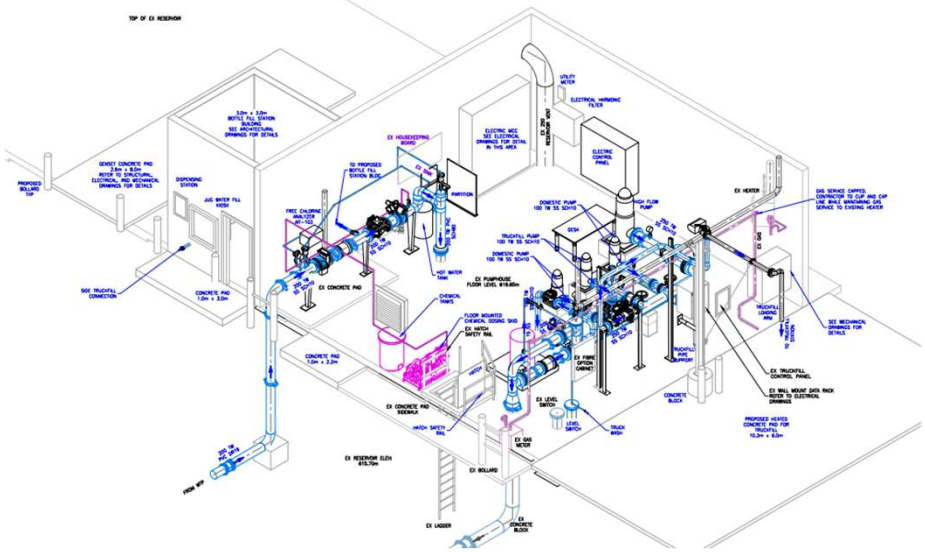
Water Treatment Plant Optimization and Capacity Building

- This dual project focused on developing batch mode of the WTP to minimize overproduction while also addressing various needs at the WTP such as inspection of valves and their repairs, addressing leaks at flanged connections, pump inspection and repairs, SCADA computer replacement, post-contactor tank repairs, etc.
- This includes separate funding for Capacity Building.

Projects in Saddle Lake Cree Nation

Core Area Pumphouse Upgrades

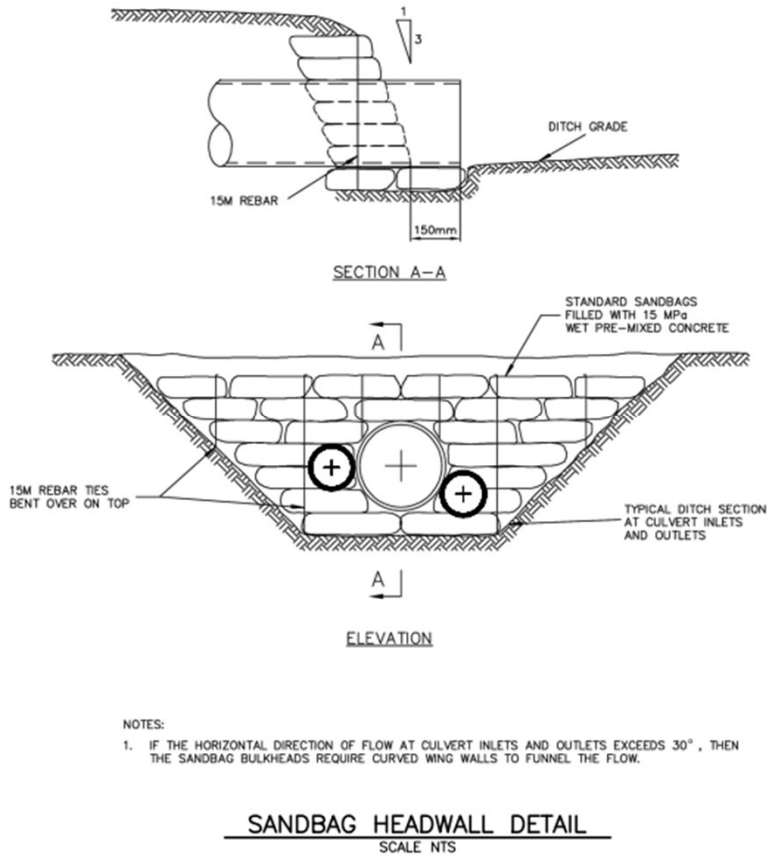
- Reconfiguration of the Core Area Pumphouse fill and discharge system with new piping, as well as electrical and instrumentation and a backup power generator at this location.
- Included a new high flow pump at the Water Treatment Plant to ensure fire flow capacity for the new 40 Acre development as well as a new bottle (blue jug) fill station at the Core Area Pumphouse.



Projects in Saddle Lake Cree Nation

Core Area Pumphouse Outfall and Servicing Upgrades

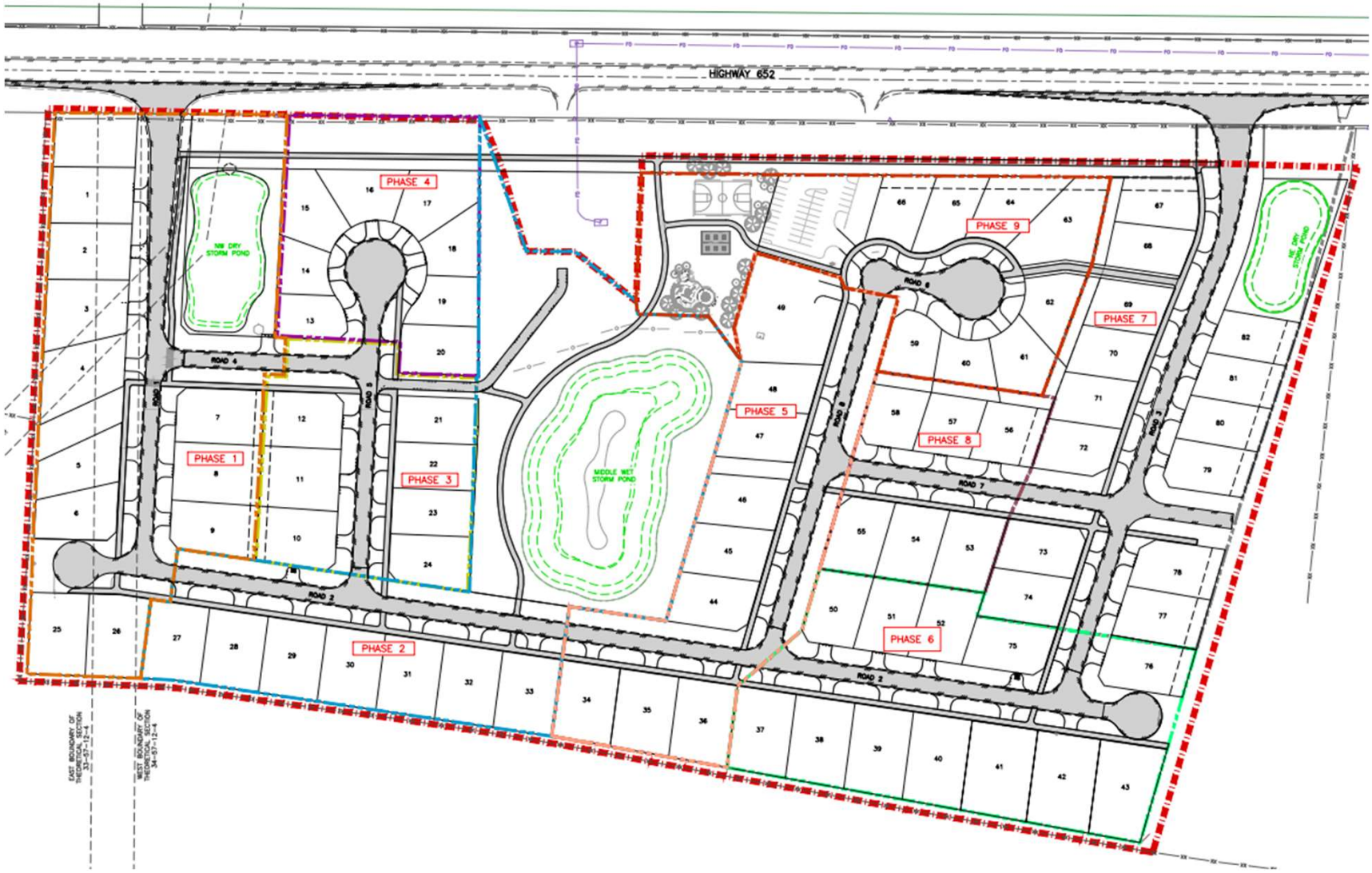
- The Core Area Pumphouse has an overflow discharge line from the water reservoir towards the creek which has broken piping and has been eroding the soils in the area.
- This project would reroute the sanitary service to discharge into the sanitary line and reinstates the outfall location as well as some drainage system improvements, surface works and a sanitary sewer connection repairs for the Portage College site.



Projects in Saddle Lake Cree Nation

40 Acres Development

- Support for Phases 1 to 4 for underground water and wastewater utilities as well as offsite piping to connect the 40 Acre development to the existing water and wastewater infrastructure.



Projects in Saddle Lake Cree Nation

Housing Lift Station Repairs

- Perform assessment and repairs on the Housing Lift Station including a dye program to determine any potential leaks in the forcemain.
- The dye program confirmed there does not appear to be a leak into the creek and the station is operating as intended.
- A new panel was installed as well as a new blower heater and light fixture.

Projects in Saddle Lake Cree Nation

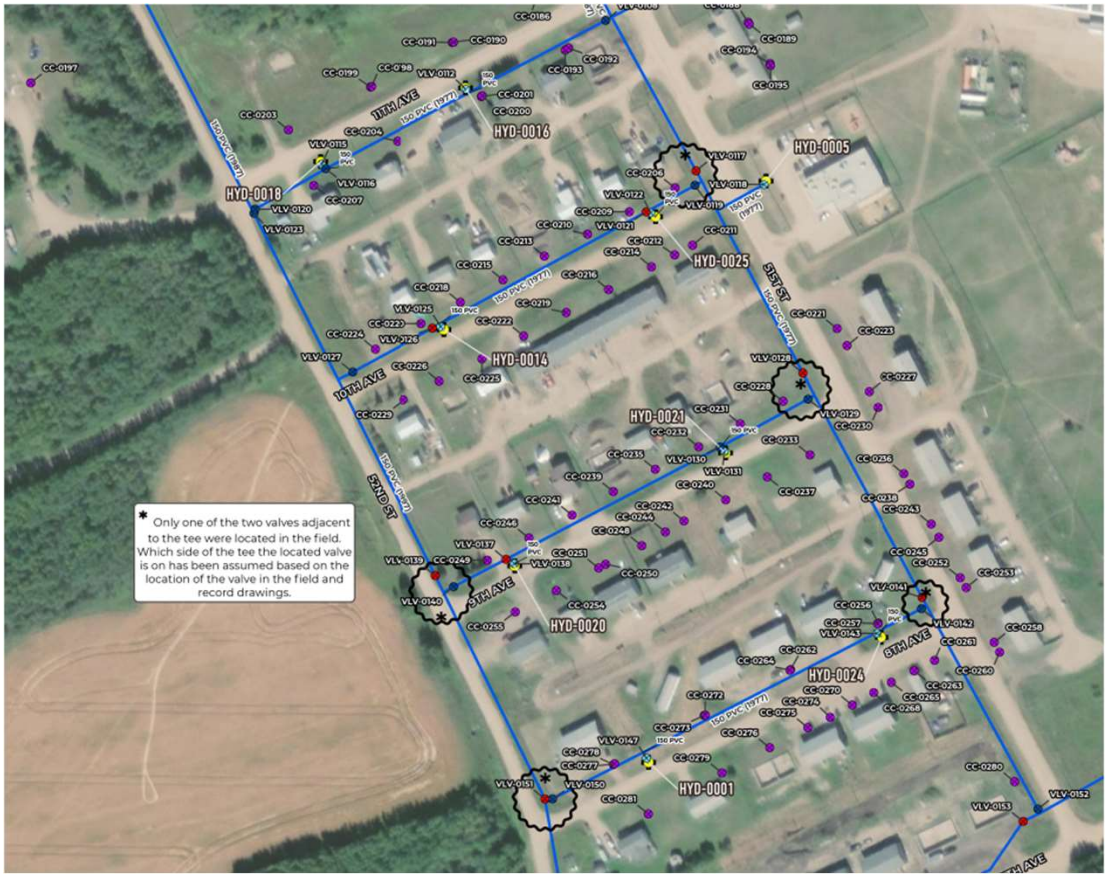
Residuals at the WTP

- Desludging of the backwash ponds at the WTP included clean up and removal of debris in the area

Projects in Saddle Lake Cree Nation

Distribution System Improvements

- This project included digitizing the water distribution system into a GIS map.
- Assessments and repairs were completed on hydrants and valves based on work orders.



Projects in Saddle Lake Cree Nation

Wastewater Feasibility Study

- Background and needs assessment completed including assessments of all decentralized systems.
- To ensure the right system is built for the Nation's growth an understanding of the growth is required. The study was paused and work on repairing existing systems was prioritized until a Land Use Plan or Community Development Plan can inform the feasibility study.

Projects in Saddle Lake Cree Nation

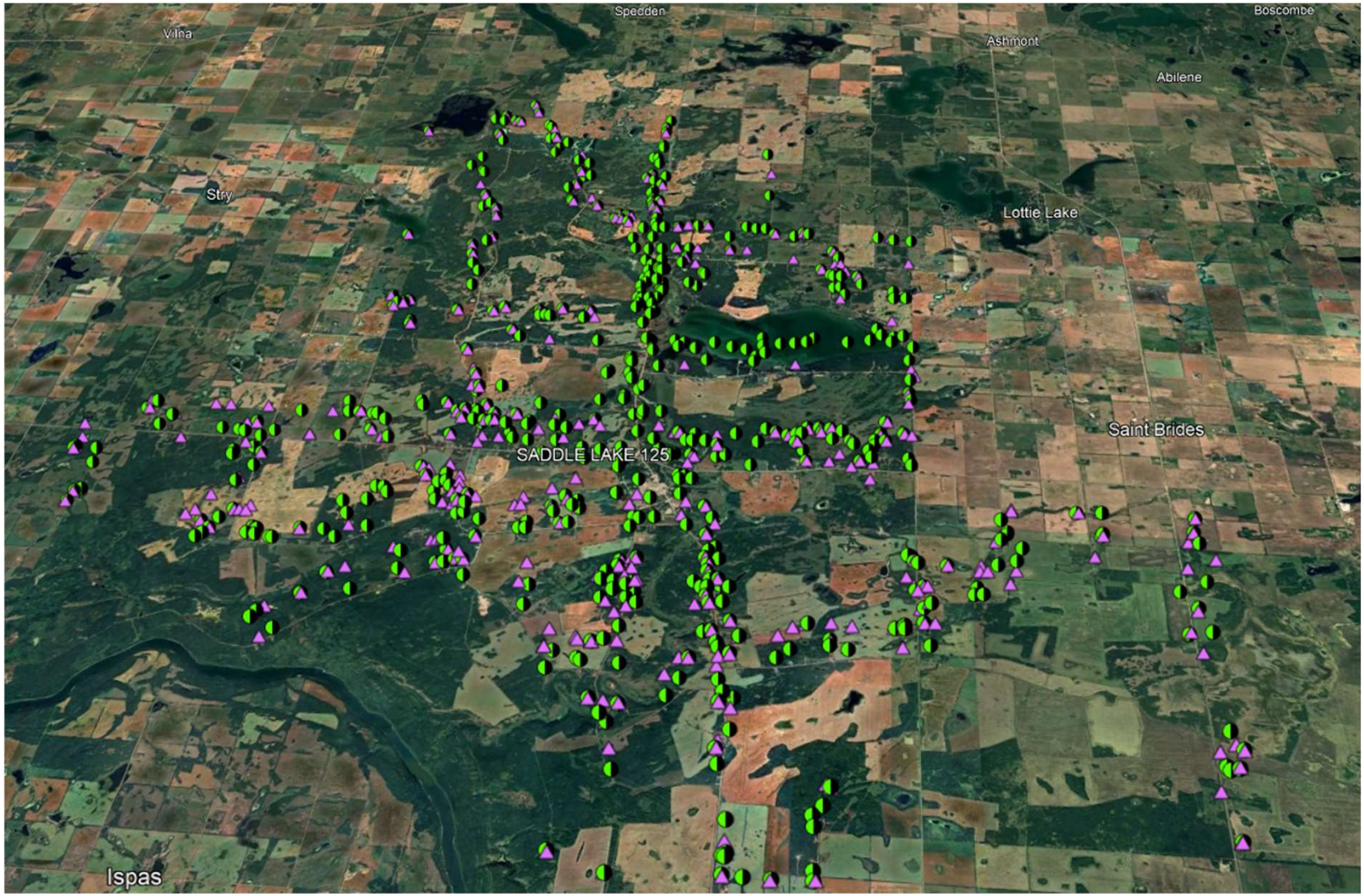
Wastewater Treatment Repairs

- The current wastewater facility was confirmed to have a leak and to address environmental concerns this project is being fast tracked for completion this fall.
- This also includes repairs of the sanitary service at the Fire Hall.

Projects in Saddle Lake Cree Nation

Decentralized System Repairs and Replacements

- Funding was provided to assist with repairs and replacements on septic tanks and cisterns which had failed.



Projects in Saddle Lake Cree Nation

Overview of Funding from Water & Wastewater on Projects in Recent Years

FNIIP - Project Name	Funded to Date	
Core Area Pumphouse outfall	$	71,254.00
Capacity Building - Capital	$	1,550,000.00
Capacity Building W & WW - O&M	$	393,000.00
Water System Repairs – Core Area Pumphouse Upgrades	$	3,468,745.00
Waterline Expansion Phase 1	$	3,198,405.00
Septic Replacements	$	300,000.00
Cistern Cleaning	$	380,675.00
Wastewater Feasibility Study	$	665,933.00
Housing Lift Station Project	$	135,000.00
Distribution Improvements	$	640,000.00
WTP Backwash Ponds	$	620,000.00
40 Acre Development (Phase 1 and 2)	$	3,200,000.00
40 Acre Development (Phase 3 and 4)	$	892,000.00
Lagoon Repairs	$	127,245.00
Total	**$**	**15,642,257.00**