

Realizing Efficiencies with GIS in Assessment work!

GIS Working
Group



sama

SASKATCHEWAN ASSESSMENT
MANAGEMENT AGENCY

Agenda

Who is on the Committee

What is the GIS Working Group all about?

What projects and opportunities are we currently working on

GIS Demo

Projects on the horizon

Presenters:

Cheri Marchuk, Rural Coordinator
Technical Standards & Policy

Evan Brandt, GIS Specialist
Information Services

Matthew Holmes, GIS Research
Officer
Technical Standards & Policy

What is GIS

- **Geographic Information System**

*“A computer system that captures, stores, analyzes, and displays **geographically referenced information.**”*

- Associates Information with places
- Examples:

SAMAView

- SAMAView is a GIS
- **Information** about a **Place**
- * Just released a new map version April 1st



Select a search option

Assessment ID

Search by Assessment ID

MOOSE-484706730

Property Results



Assessment ID
MOOSE-484706730

Legal Land Description
Lot 15 Block 14 Plan 101079222 Sup

Civic Address
1433 Normandy Dr

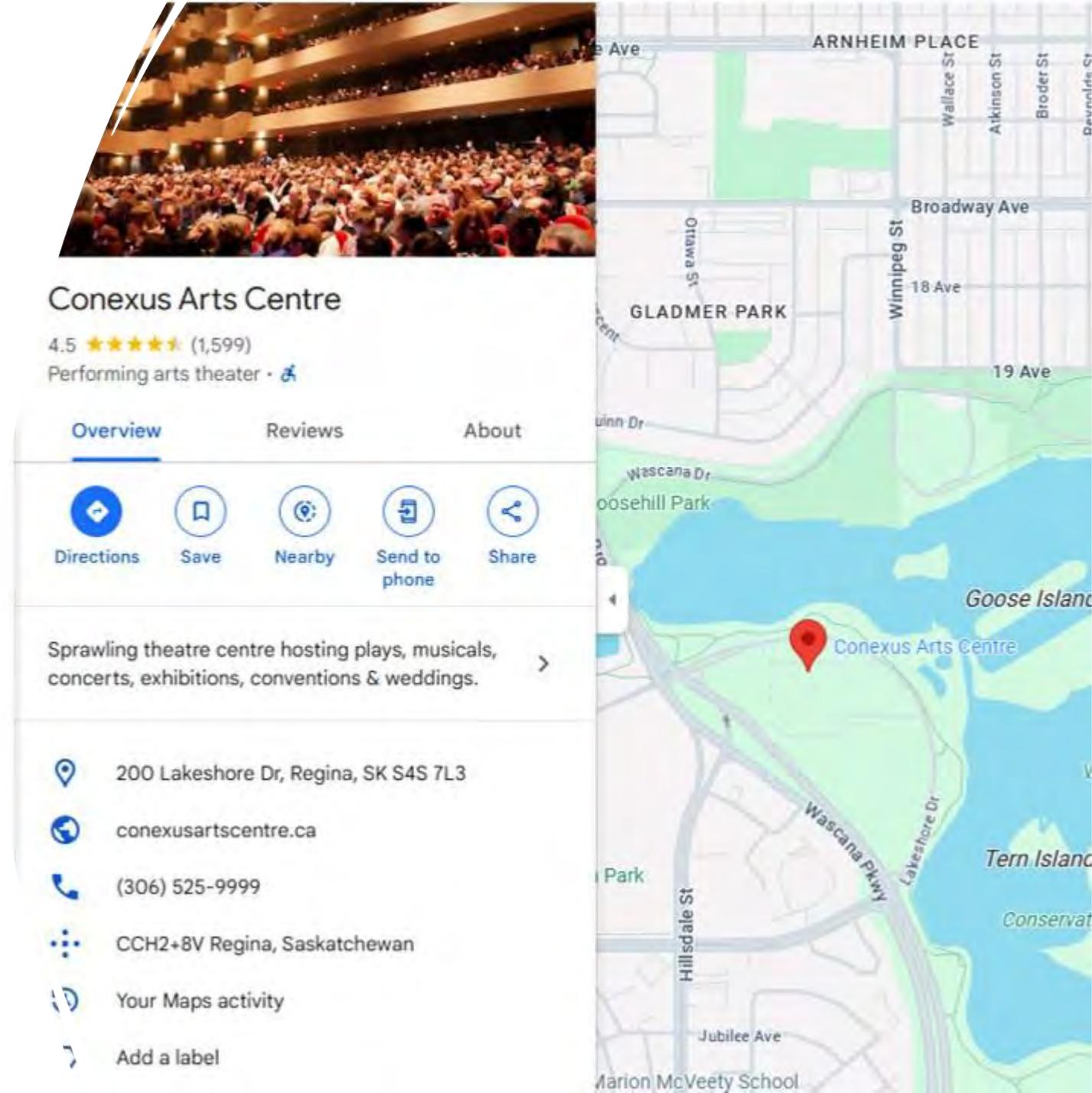
Municipality
MOOSE

Property Class

Powered by Esri

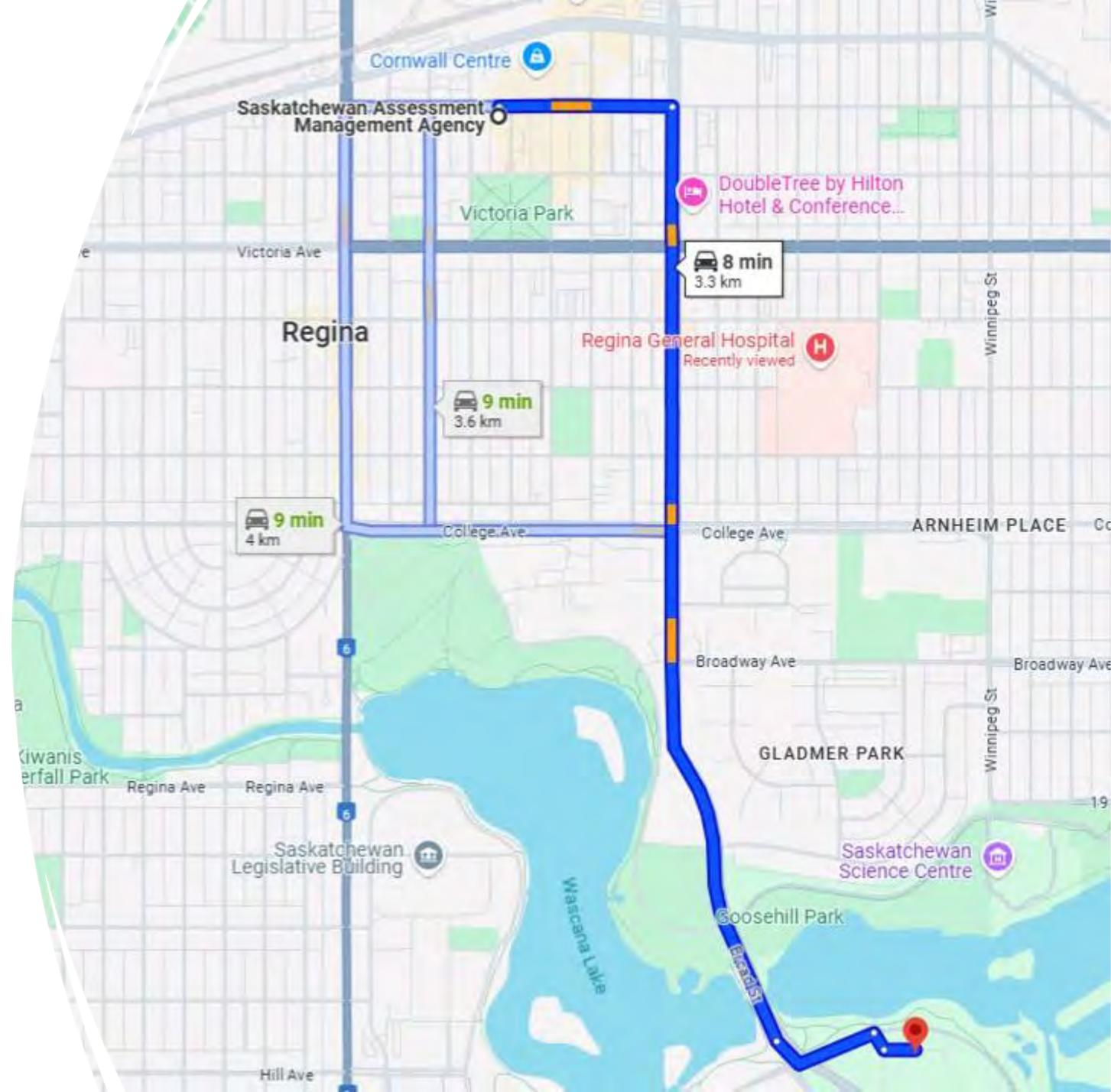
Google Maps

- Google Maps is a GIS
- **Information** about a **Place**
- Google Maps a very advanced GIS Application



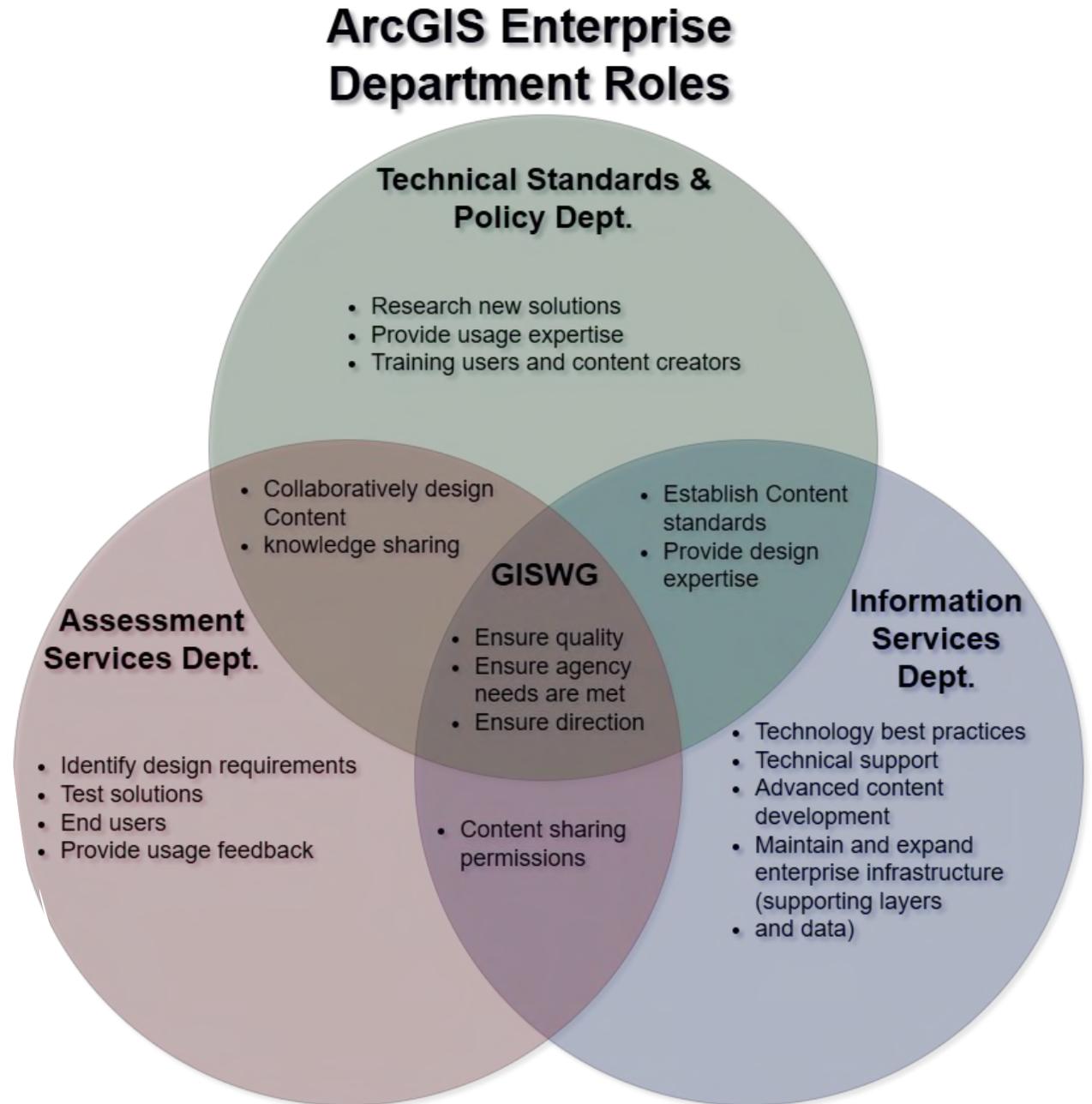
GIS Analysis

- Have you ever found directions from google maps?
- This is a form of GIS analysis
- Utilizes spatial characteristics to provide answers
- Accounts for:
 - Road length
 - Rules of travel
 - Traffic
 - Etc.



What is The GIS Working Group?

- Working groups relax hierarchy to allow people to solve problems across organizational units
- Freedom to collaborate
- Play into strengths
- Identify the ways GIS can create value for the agency and its stakeholders



Implementation of SAMA's GIS Vision

- **Goal #1- Build and Maintain Reliable GIS Data**
- **Goal #2- Make GIS Data Accessible**
- **Goal #3- Integrate GIS Functionality with Existing Systems**
- **Goal #4- Train, Educate and Inform Staff**
- **Goal #5- Implement and Optimize GIS Governance Model**
- **Goal #6- Expand and Maintain Enterprise Infrastructure**



GIS for Assessment

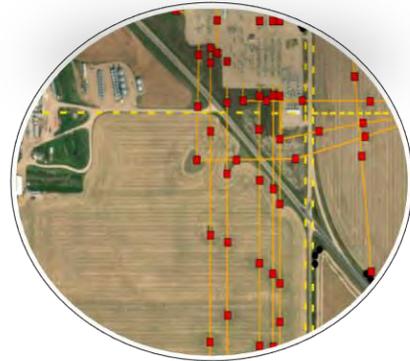
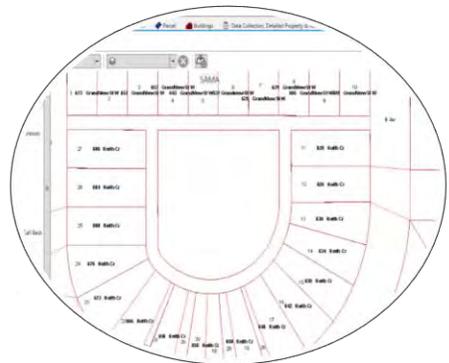
Parcel Management Field Operations Valuation Analysis Public Relations

Quality control

Parcel Editing

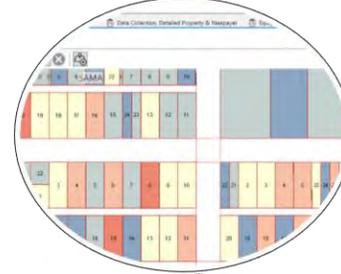
Map production

Address Management

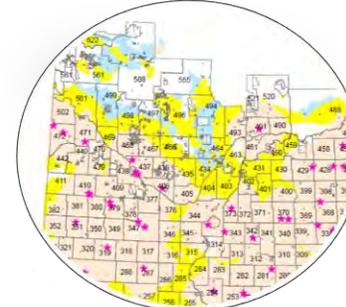


Mobile Access to view and Edit

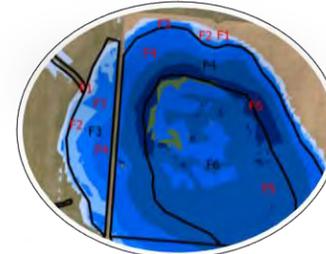
Cama visualization



Spatial analysis



Analytics-remote sensing



Integrated GIS Analysis Through portal APPS



SAMAVIEW

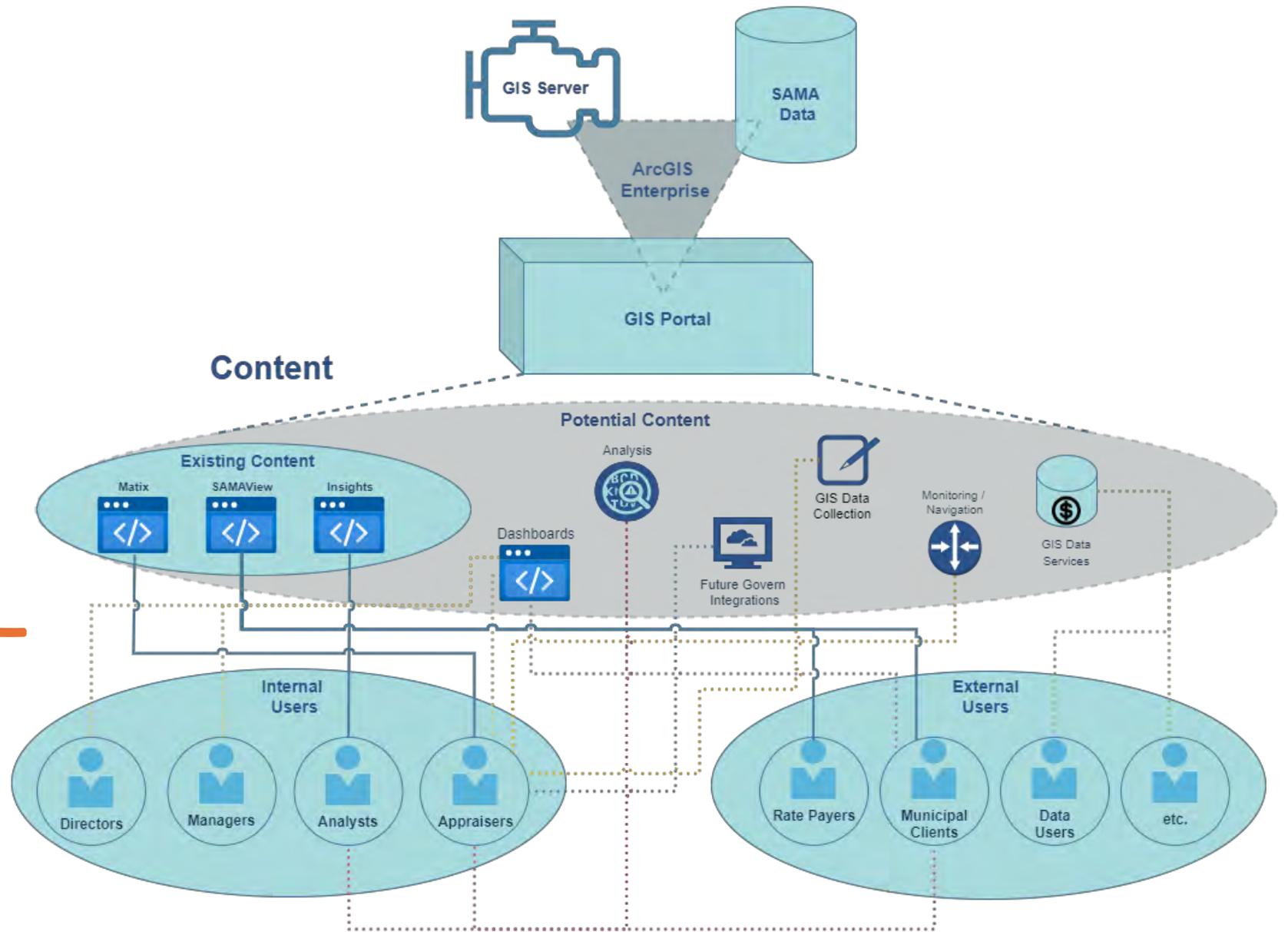
GIS Success Stories



**Don't confuse
activity with
accomplishment.**

**HAVE A PLAN FOR
SUCCESS!**

Portal Based GIS



Enterprise GIS Benefits

Portal Applications

- Web Maps
- Dashboards
- Experiences

The dashboard displays the following data:

- Provincial - 2025 Reinspection Complete:** 78%
- Region - 2025 Reinspection Complete:** 90%
- Jurisdiction - 2025 Reinspection Complete:** Selection required on one or more elements

The map shows a geographical area with a red grid overlay, representing jurisdictional boundaries. Labels on the map include Buffalo Narrows, Cold Lake, Beaver, Prince Albert National Park, North Battleford, and South Saskatchewan. Jurisdiction codes such as 930DO, 840BE, 950IL, 810LA, 770PE, 960GR, 800WE, 740LO, 720NI, 710CA, and 750CA are visible.

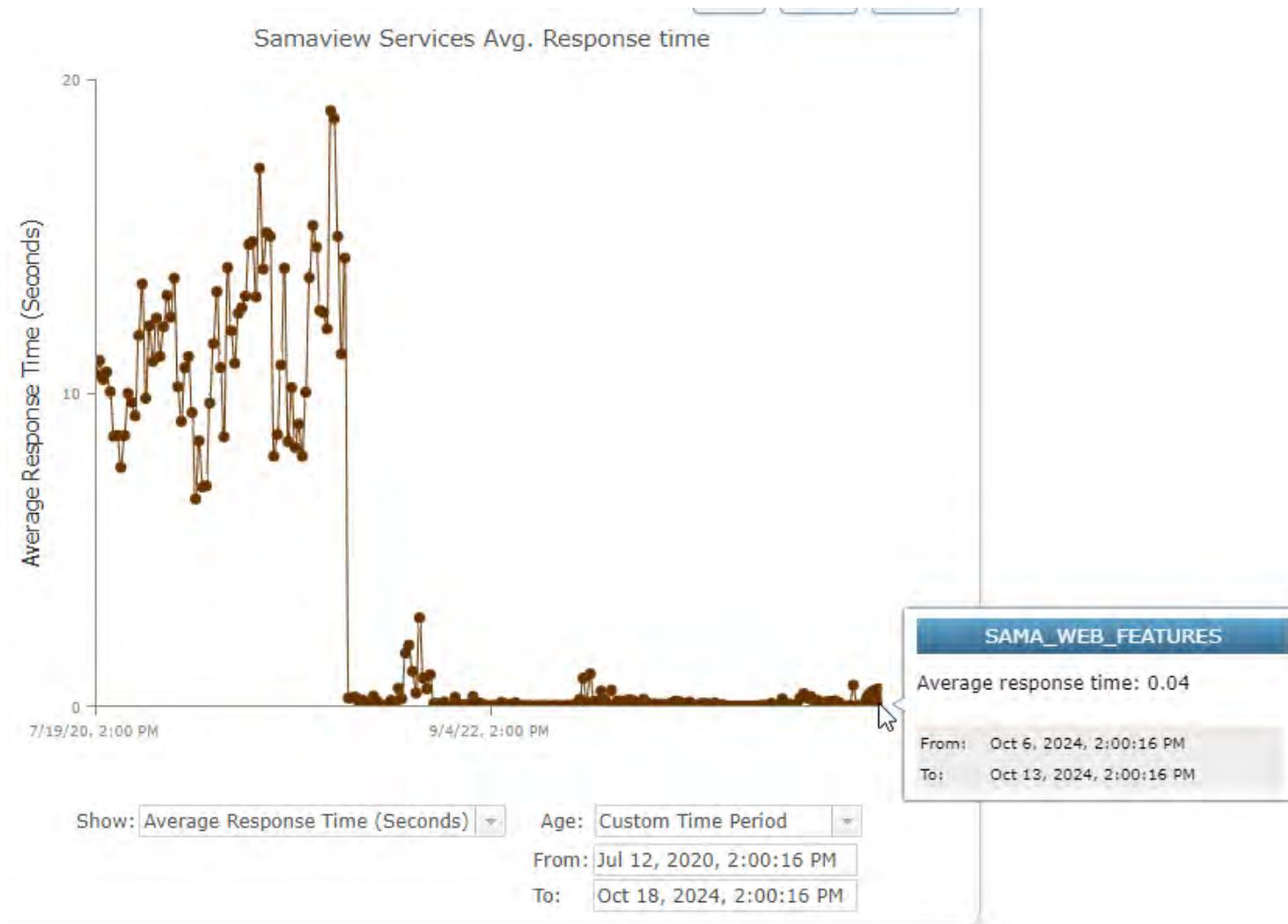
The bar chart shows the count of jurisdictions for different roll statuses in 2024:

Roll Status	Count of Jurisdiction
2024 - Roll Confirmed	~250
2024 - Maintenance	~50
2024 - Supp...	~20

Navigation tabs at the bottom include Provincial Roll Status and Region Roll Status.

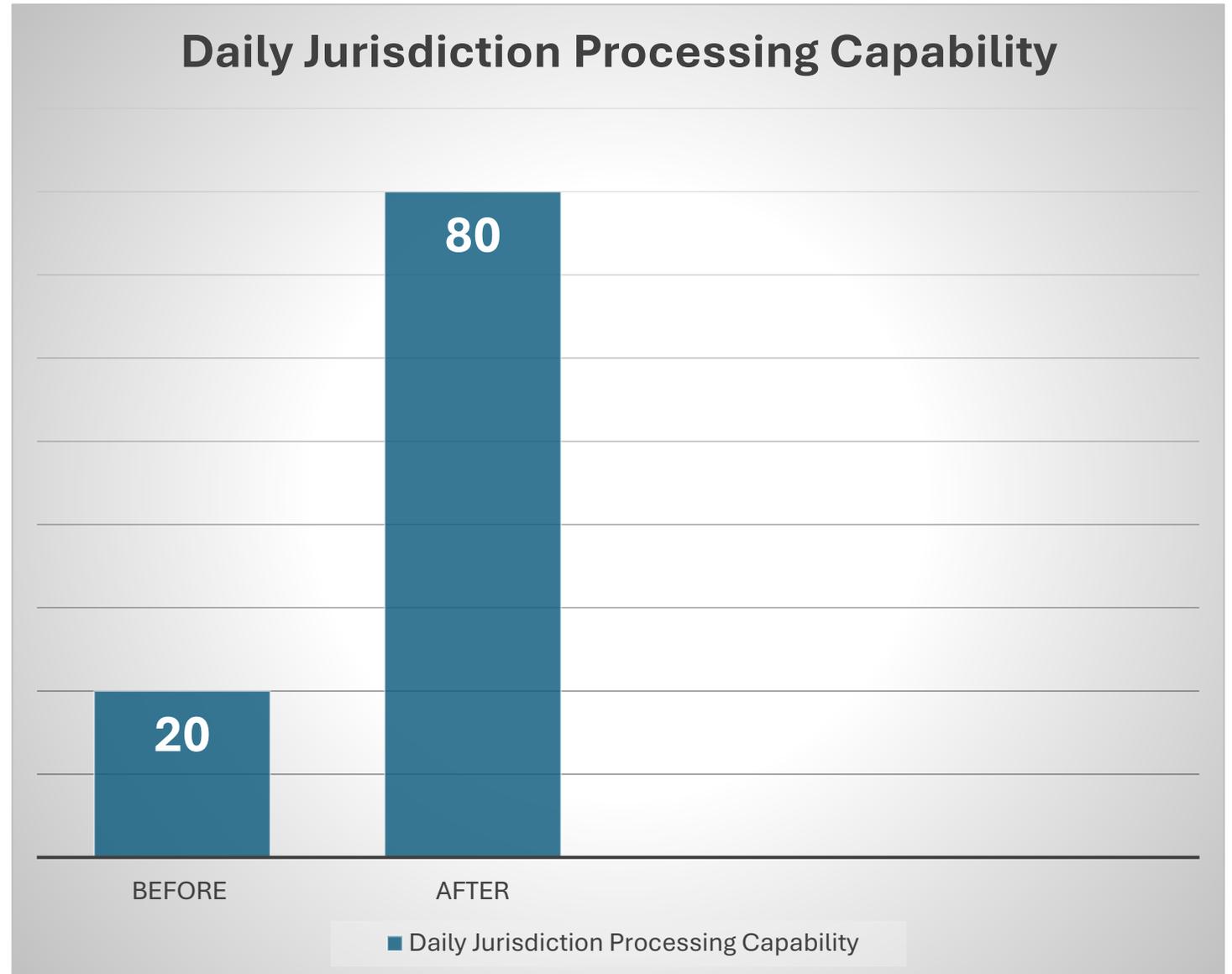
Look-up on SAMAView

- **Search times have been reduced by 99.8%**
- October 2021
Average Search times
18 Seconds
- October 2024
Average Search times
0.04 Second

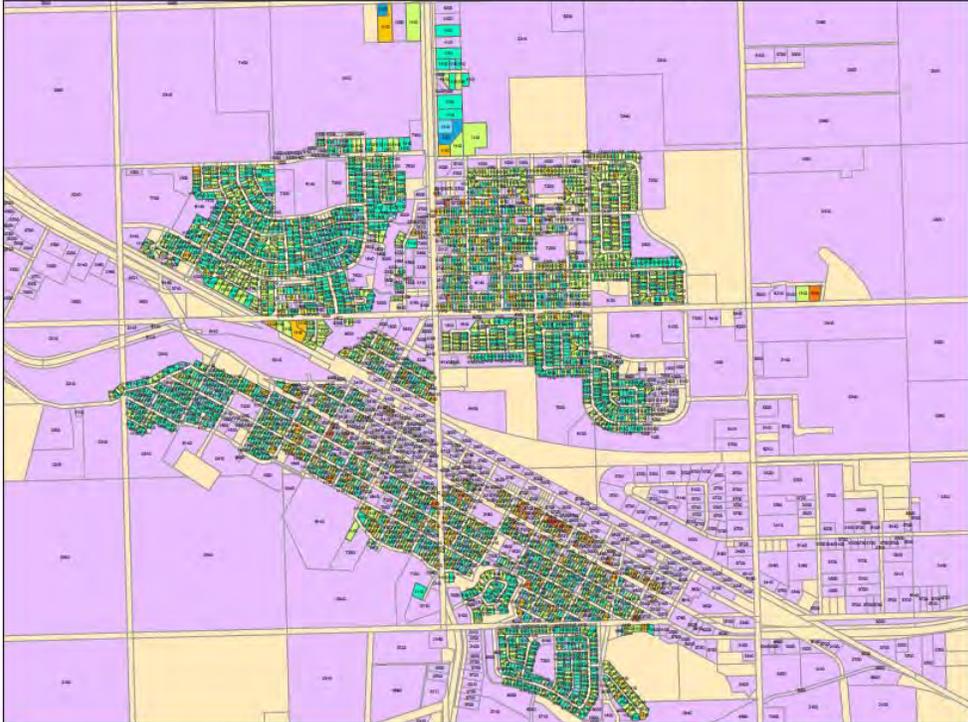


Samaview Jurisdiction Update Process

- We can process **Four times as many jurisdictions each night**



Value Shifts for Estevan based on the 2006 Cost Model
and the 2009 MRA Model. RatioSTD= (MRA Value/CostValue)/Mean of Ratio.
Mean is 1.2571.

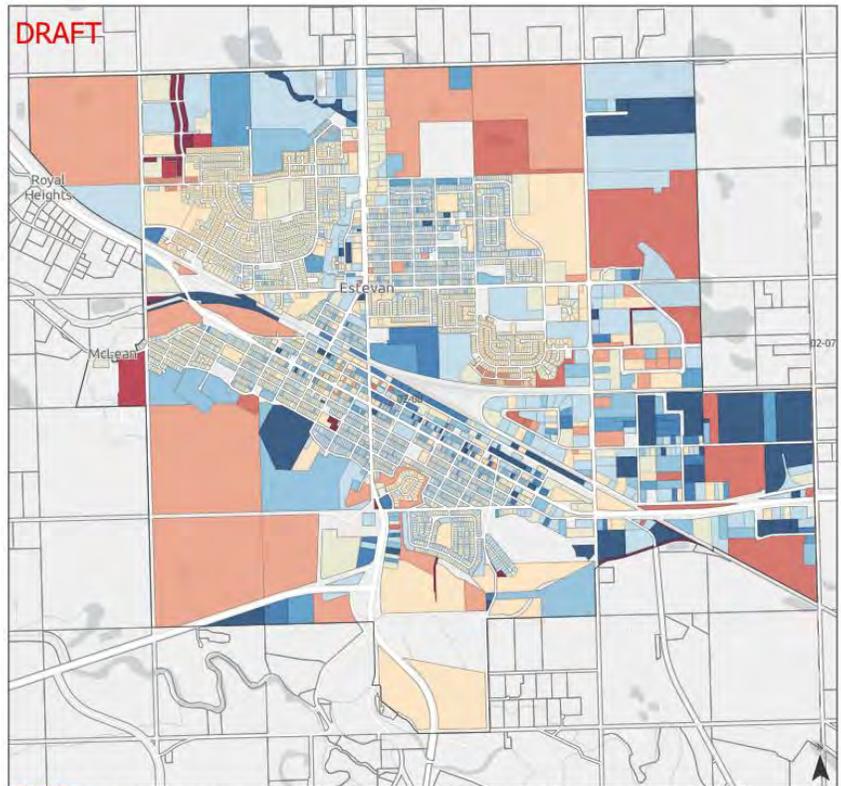


- Legend**
- Estevan**
- BaseLayer.RatioSTD**
- 0.43 - 0.54
 - 0.55 - 0.69
 - 0.70 - 0.84
 - 0.85 - 0.99
 - 1.00 - 1.15
 - 1.16 - 1.30
 - 1.31 - 1.45
 - 1.46 - 1.60
 - 1.61 - 7.10
 - ASSESSMENT
 - ISC Surface

Lowest and highest values reported
are actual ratioSTD values.

*Adapted from Information Services Corporation of Saskatchewan, Saskatchewan Cultural Database
Reproduced with the permission of Statistics Canada. Source: Geography Division, Statistics
Canada, 2005. Based on the IPPO, 82-000-1002/0002*

DRAFT



- ESTEVAN**
- Municipality Boundary
 - Township Range
- 2024-2025 Ratio**
- >3 (18)
 - 2.1 - 3.0 (4)
 - 1.51 - 2.0 (18)
 - 1.251 - 1.5 (117)
 - 1.11 - 1.25 (571)
 - 1.0 - 1.1 (1817)
 - 0.91 - 1.0 (1281)
 - 0.81 - 0.9 (254)
 - 0.751 - 0.8 (42)
 - 0.71 - 0.75 (64)
 - <0.7 (68)



Credits: Adapted from ISC Information Services Corporation of Saskatchewan, Land Registry, Esri Canada, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, NRCan, Parks Canada. This map is the property of the Saskatchewan Assessment Management Agency and is not to be shared or reproduced without written permission. This map is for the illustration of assessment changes between years and is subject to change.
Date created: 9/30/2024

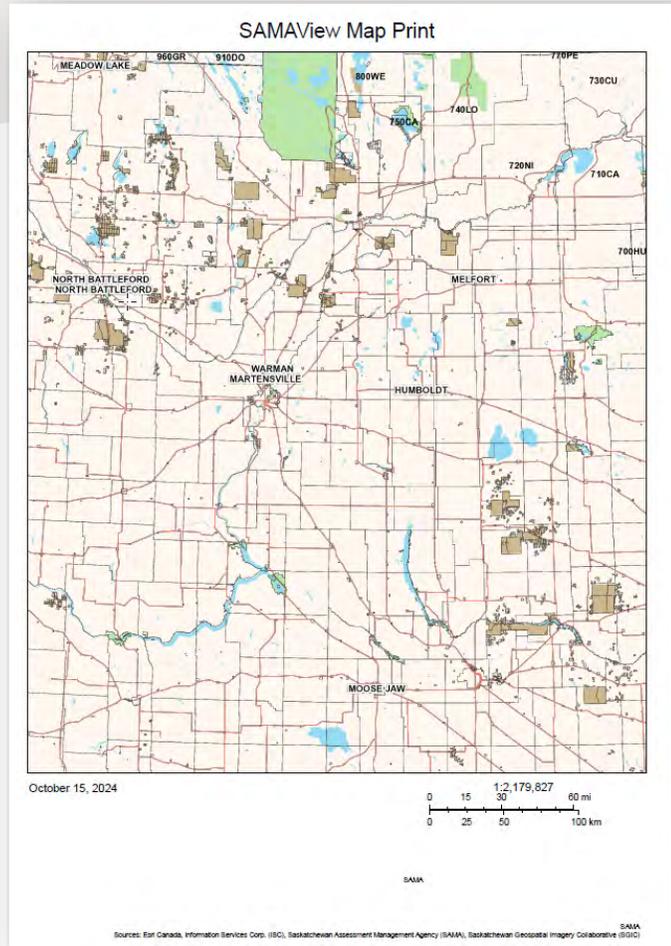
0 295 590 1,180
Metres

Then

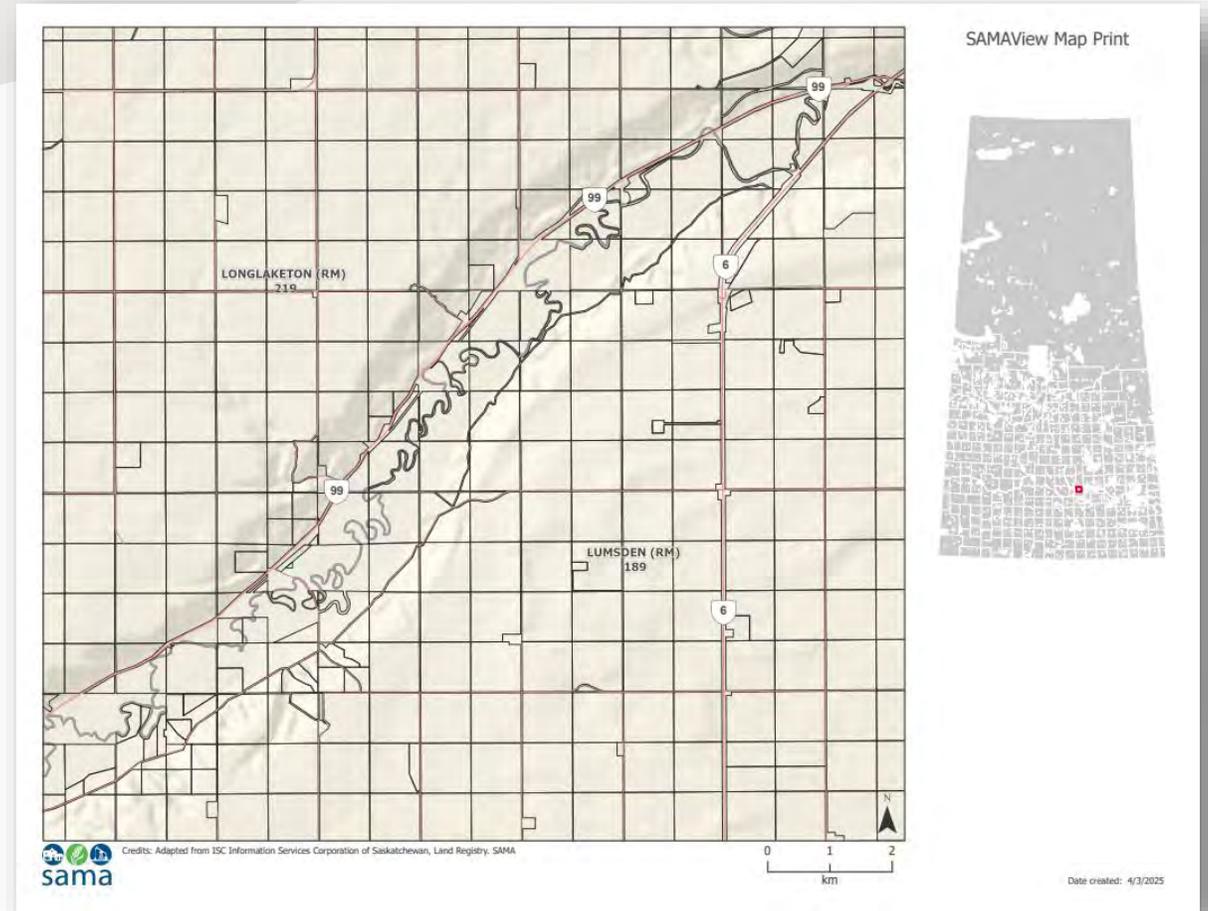
Now

Multiple Regression Analysis and Trend Maps

SAMAView PDFs



Old SAMAView PDF

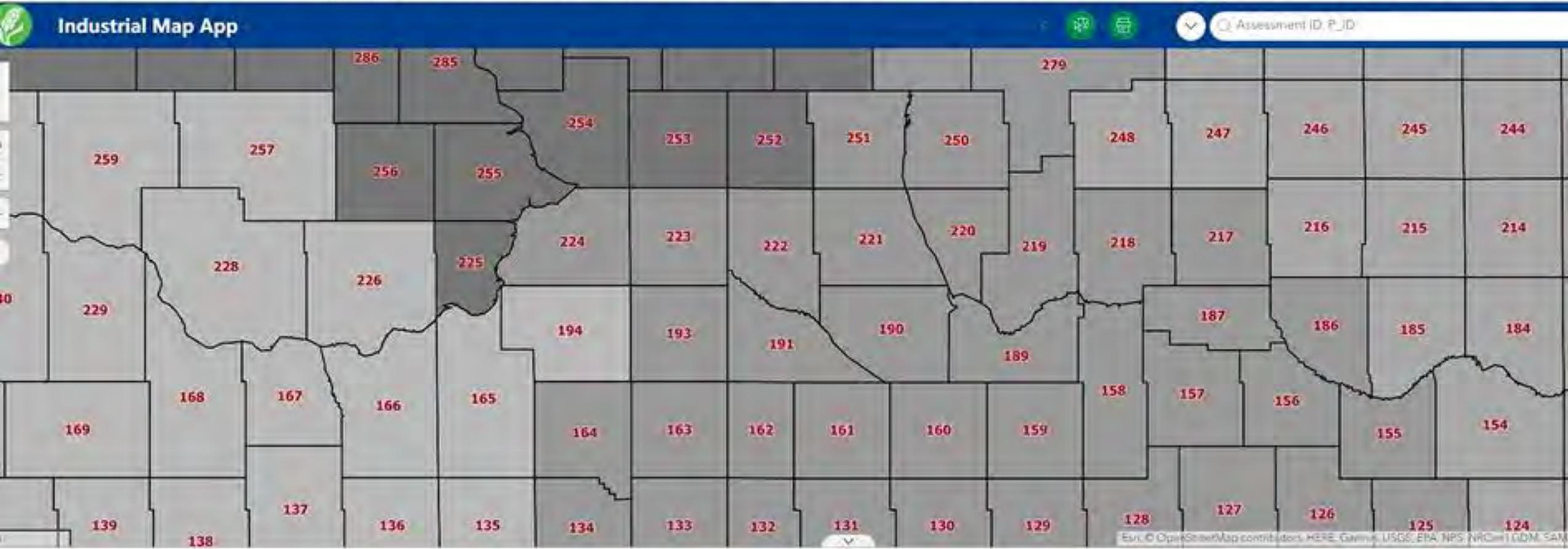


New SAMAView PDF

Opportunities on the Horizon

4-year Strategic Planning 2025-2028

Initiative: Upgrade to ESRI 11.3						Status: Approved	
Business Capability	Information Technology						
Description:	To maintain Esri support our ArcGIS enterprise installation must be upgraded to the next long term service release version. This project will be very similar to the last upgrade completed in 2023. The upgrade must be performed on our development and staging environments, and our processes applications and workflows must be evaluated to identify any incompatibilities in our GIS infrastructure. These issues must be addressed before we can perform the upgrade on production.						
Recommendations	Performing the upgrade on development and performing the testing work before the project will allow IS to make a more accurate timeline estimate. There is even a chance the initiative may not require a project structure, and could then be split across several opportunities						
Divisions Required:	ASD	TSP	IS	Finance	HR		
	X	X	X				
Resources	Financial			Effort			
	<ul style="list-style-type: none"> No Additional financial resources required 			<ul style="list-style-type: none"> IS perform upgrade and repair incompatible business processes and applications TSP testing/repair TSP managed portal content ASD testing 			
Initiative Type	IS Project		Required Completion Date		2027		
Priority	High		Ideal Completion Date		2025 -2026		
Value Added	<ul style="list-style-type: none"> Generally, security to good functioning software Keeps us in compatibility (sync with integration of other systems) Keeps SAMA in ESRI Support 						



OBJECTID	P_ID	A_ID	OBJECTID	P_ID	A_ID	APPRAISED VALUE	APPRAISED VALUE_02	Appraised Value
512020078								1,280,000
3104556	138-870318699	14679	3104556	138-870318699	814200.000000	667400.000000	1,220,000	
530052740	171-870929299	77056	530052740	171-870929299	127600.000000	100600.000000	1,270,000	
202709903	352-880734301	56269	202709903	352-880734301	1020000.000000	964300.000000	1,060,000	
100055034	231-030215450	70034	100055034	231-030215450	31000.000000	13600.000000	1,510,000	

Industrial Map App Non-Well Sites

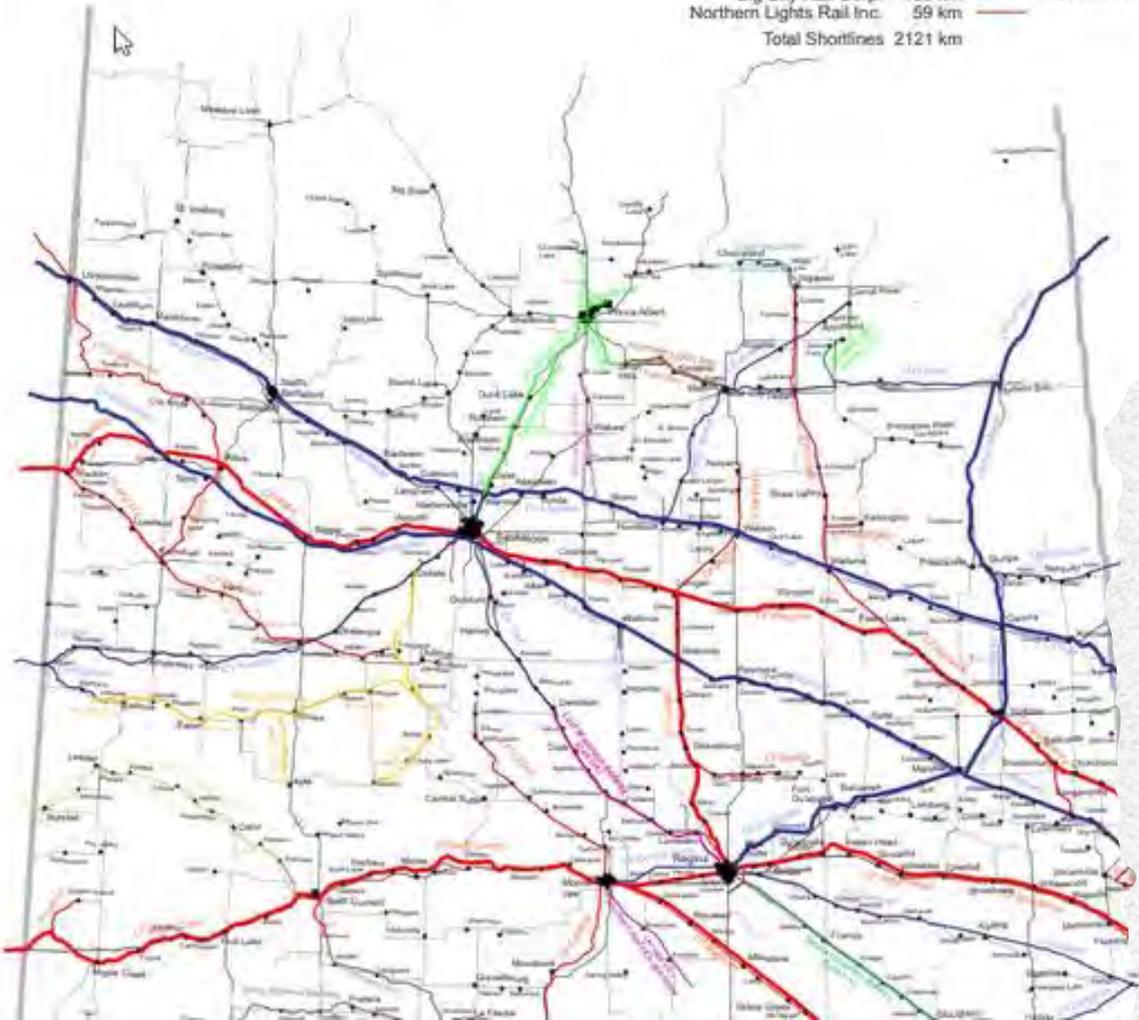


Ministry of
Highways and
Infrastructure

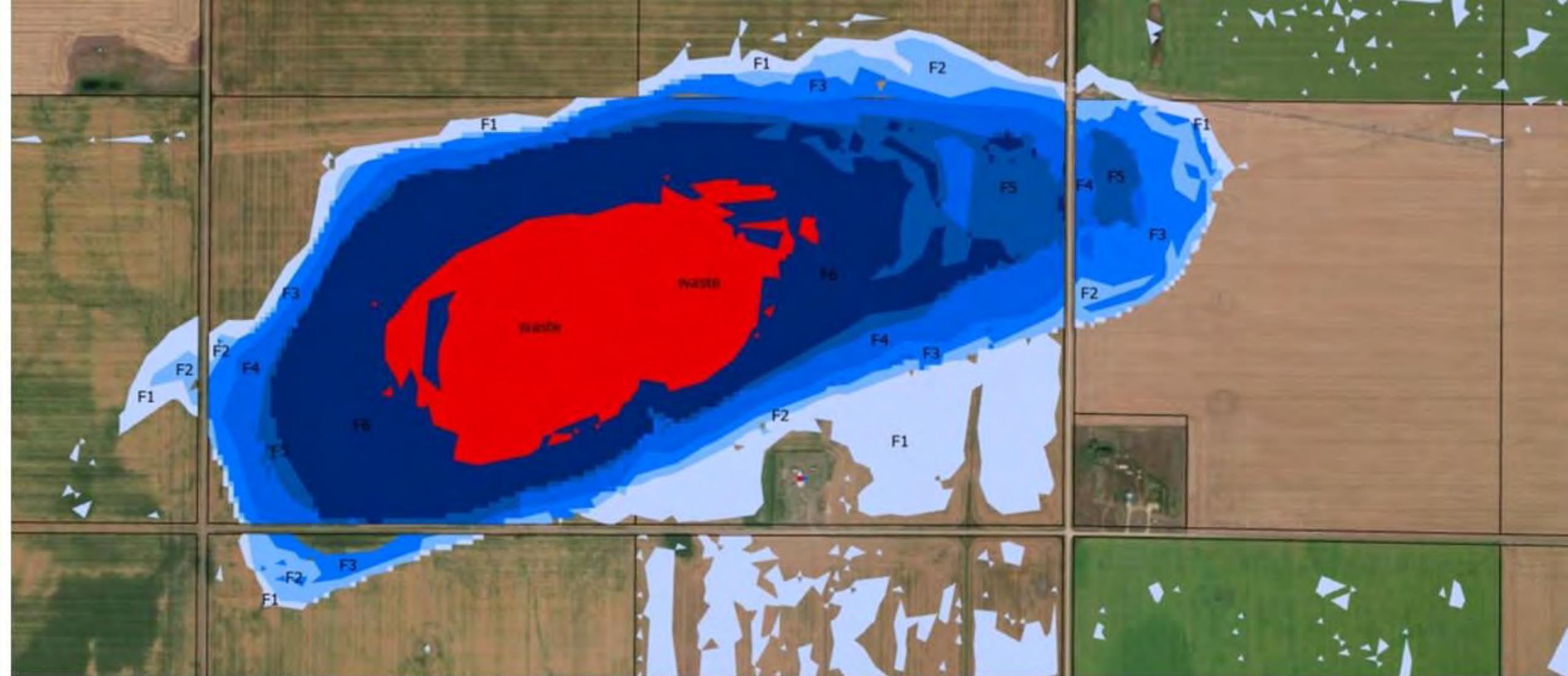
Saskatchewan Rail Network

- CN Main Lines 1-888-888-5909
- CN Branch Lines 1-888-888-5909
- CP Main Lines 1-888-333-6370
- CP Branch Lines 1-888-333-6370
- Pavements
- Thin Membrane Surface

Southern Rails Cooperative	71 km	1-306-868-4435
Carlton Trail Railway	186 km	1-306-763-9474
Red Coat Road and Rail	115 km	1-306-459-2544
Great Western Railway	507 km	1-306-297-2777
Thunder Rail	31 km	1-306-769-8383
Wheatland Railway	74 km	1-306-422-5401
Fife Lake Railway	97 km	1-306-297-2777
Torch River Rail	45 km	1-306-276-9434
Great Sandhills Railway	196 km	1-306-628-4774
Last Mountain Railway	136 km	1-306-529-6766
Stewart Southern Railway	132 km	1-306-722-7712
Long Creek Railroad	66 km	1-306-471-7791
Big Sky Rail Corp.	406 km	1-306-529-6766
Northern Lights Rail Inc.	59 km	1-306-529-6766
Total Shortlines	2121 km	



Industrial Railway



Flooding Decision Support Tool DEMO



Questions