

Asset Management

How to use AM Tools

GIS Software

OpenStreetMap

AIMNet Excel Tools

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TRACT

Project completed in partnership with



This initiative is delivered through the Municipal Asset Management Program, delivered by the Federation of Canadian Municipalities and funded by the Government of Canada

Funded By:





GIS

What is it?

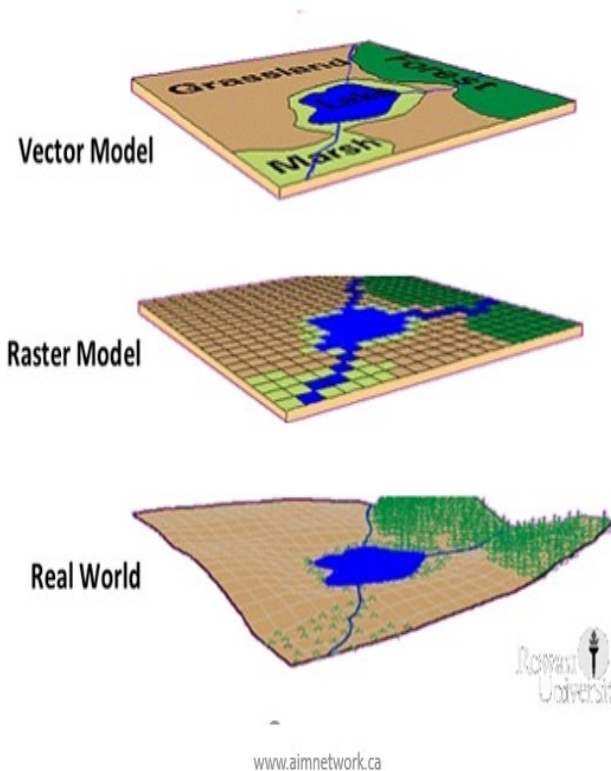
What is GIS?

- **Geographic Information Systems**
- Framework for collecting, displaying and analyzing data
- Uses real-world coordinates

2 ways to represent the world:

- Raster (Google Earth, Imagery)
- Vectors (Using points, lines, and polygons to represent features)

GIS 101 Spatial data





**GIS
Software**

QGIS

QGIS

Fully functional GIS Software

Capable handling multiple types of
GIS Data

Perform easy and complex edits to
data

Open source (FREE!)



3.22.3
3.16.16 LTR

[DISCOVER QGIS](#)

[FOR USERS](#)

[GET INVOLVED](#)

[DOCUMENTATION](#)

English ▼

3.23 frozen since 2022-01-14 12:00:00 UTC
Time until packaging 2022-02-18 12:00:00 UTC 0d 21h 50m
Time until next pointrelease 2022-02-18 12:00:00 UTC 0d 21h 50m

QGIS

A Free and Open Source Geographic Information System

QGIS 3.22 Białowieża
has been released!

New release: 3.22!
Get the [installer](#) or [packages](#) for your Operating System and read the [changelog](#).

Create, edit, visualise, analyse and publish geospatial information on Windows, Mac, Linux, BSD and mobile devices

For your desktop, server, in your web browser and as developer libraries

[Download Now](#)

[Support QGIS](#)

Which version of QGIS?

Download for Windows

QGIS in OSGeo4W (recommended for regular users):



OSGeo4W Network Installer



In the installer choose **Express Install** and select **QGIS** to install the *latest release* or **QGIS LTR** to install the *long term release*. The express installations have several optional packages including non-free software. To avoid those you have to use the **Advanced Install** and choose **qgis** and/or **qgis-ltr** in the desktop section.

CAUTION: Upgrades of old setups from OSGeo4W v1 using this repository are not supported. You need to do a fresh install or use a different directory.

CAUTION: 32 bit binaries are not produced anymore. Also Windows 7 no longer works as we are now using Python 3.9, which dropped support for it.

Standalone installers (MSI) from OSGeo4W packages (recommended for new users)

Latest release (richest on features):



QGIS Standalone Installer Version 3.24



sha256



Long term release (most stable):



QGIS Standalone Installer Version 3.22



sha256

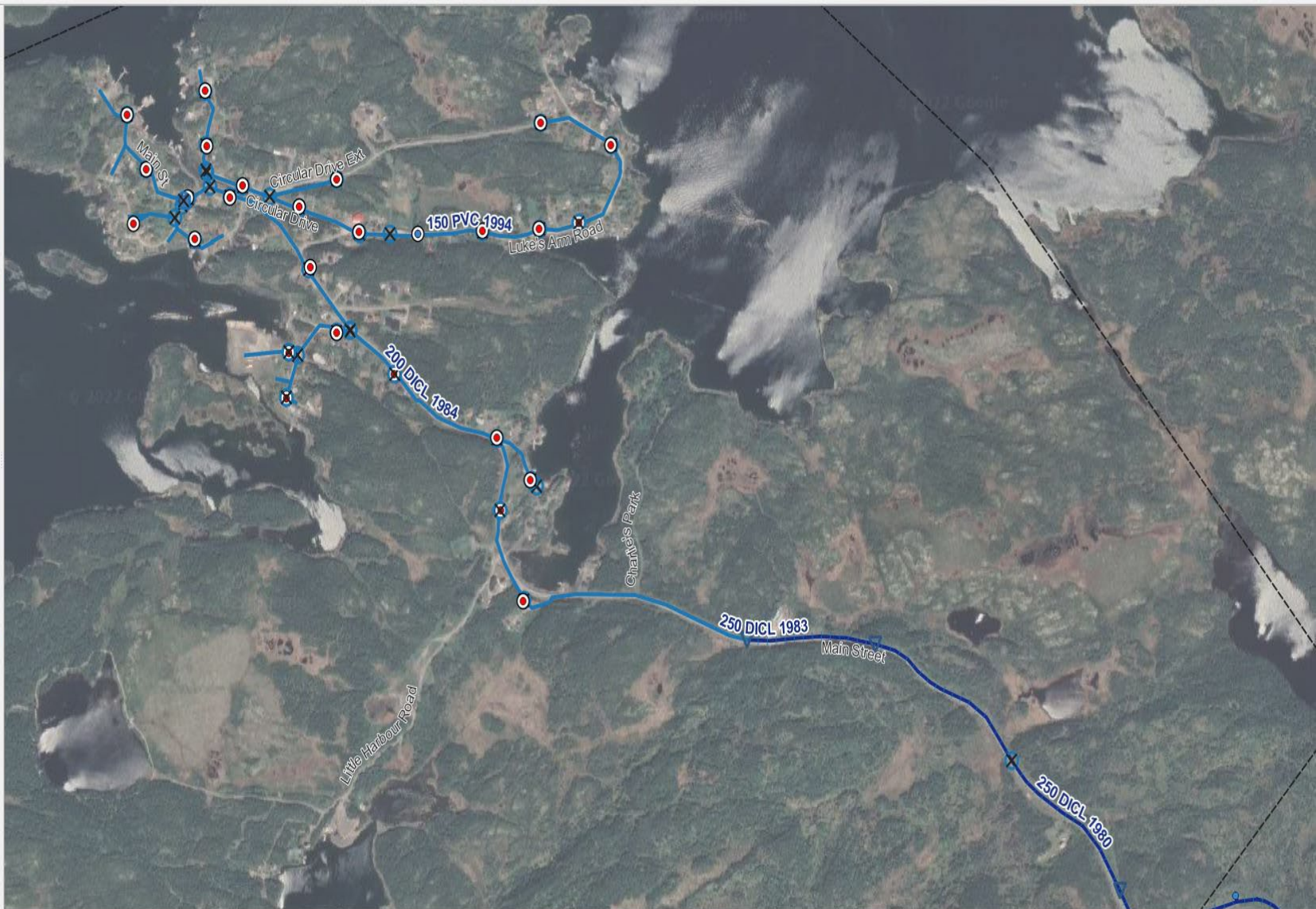


Note that the MSI installers are much bigger than the previous installers. This is because they include significant larger packages (eg. PROJ 8). The main reason for the switch to MSI were the size limits previously used NSIS has, which was blocking updates of dependencies.



Layers

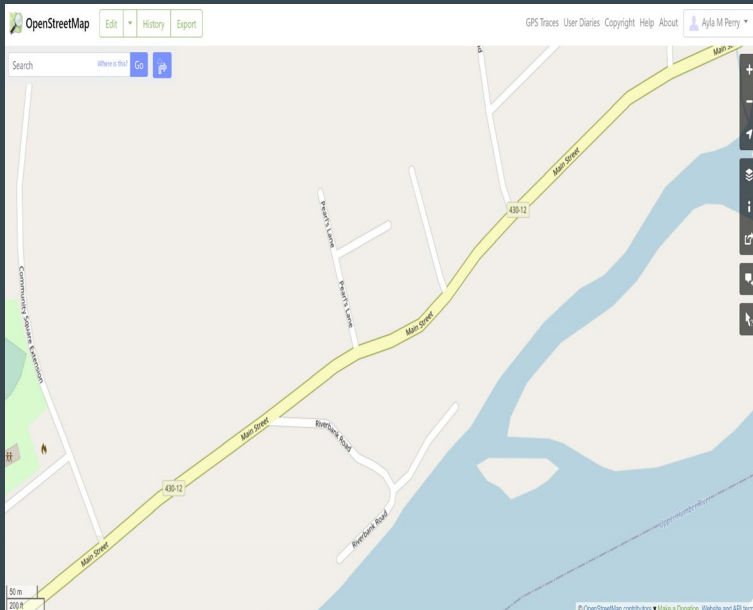
- ☒ Infrastructure
 - ☐ CapitalProjects
 - ☐ aimsoir
 - ☐ bldg_footprint
 - ☒ Potable Water Supply
 - ☐ Grid
 - ☒ -PWS-PT
 - ☒ Air Pressure Re
 - ☒ Blow Off Valve
 - ☒ Booster Station
 - ☒ Clean Out
 - ☒ Corporate Stop
 - ☒ Curb Stop
 - ☒ Gate Valve
 - ☒ Hydrant
 - ☒ Pressure Reduc
 - ☒ Fitting
 - ☒ Well
 - ☒ Source
 - ☒ Flow Meter
 - ☒ Ball Valve
 - ☒ Pump
 - ☒ Water Storage
 - ☒ Vacuum chlorin
 - ☒ -PWS-LH
 - ☒ Main
 - ☒ Transmission Main
 - ☐ Connection
 - ☐ Storm Water Collection
 - ☐ Waste Water Collection
 - ☐ Transportation
 - ☒ Background



The background of the image is split into two main colors: a dark charcoal grey on the left and a medium blue on the right. A diagonal line separates the two. A dark grey arrow points from the left towards the right, containing the text 'OpenStreetMap'. A horizontal dark grey bar is positioned in the middle of the image, containing the text 'Openstreetmap.org'.

OpenStreetMap

Openstreetmap.org



OpenStreetMap (OSM)

Add/Edit Roads (names, length, material, width, speed limit)

Add/Edit Facilities (municipal vs private, civic addresses, playgrounds, parks)

Not compatible for adding underground water and sewer lines

Account needed to add and edit features

Public



OpenStreetMap

Edit



History

Export

[GPS Traces](#) [User Diaries](#) [Copyright](#) [Help](#) [About](#)

Ayla M Perry ▾

Search

[Where is this?](#)

Go



Edit feature

Feature Type



Town Hall



Fields

Name 🗑️ ℹ️

CBS Town Hall +

Operator ℹ️

Unknown

Type ℹ️

village, city, town...

Address 🗑️ ℹ️

11 Remembrance Square Unit

Conception Bay South Province A1W 3J1

Building 🗑️ ℹ️

yes

Website 🗑️ ℹ️

<https://www.conceptionbaysouth.ca/>

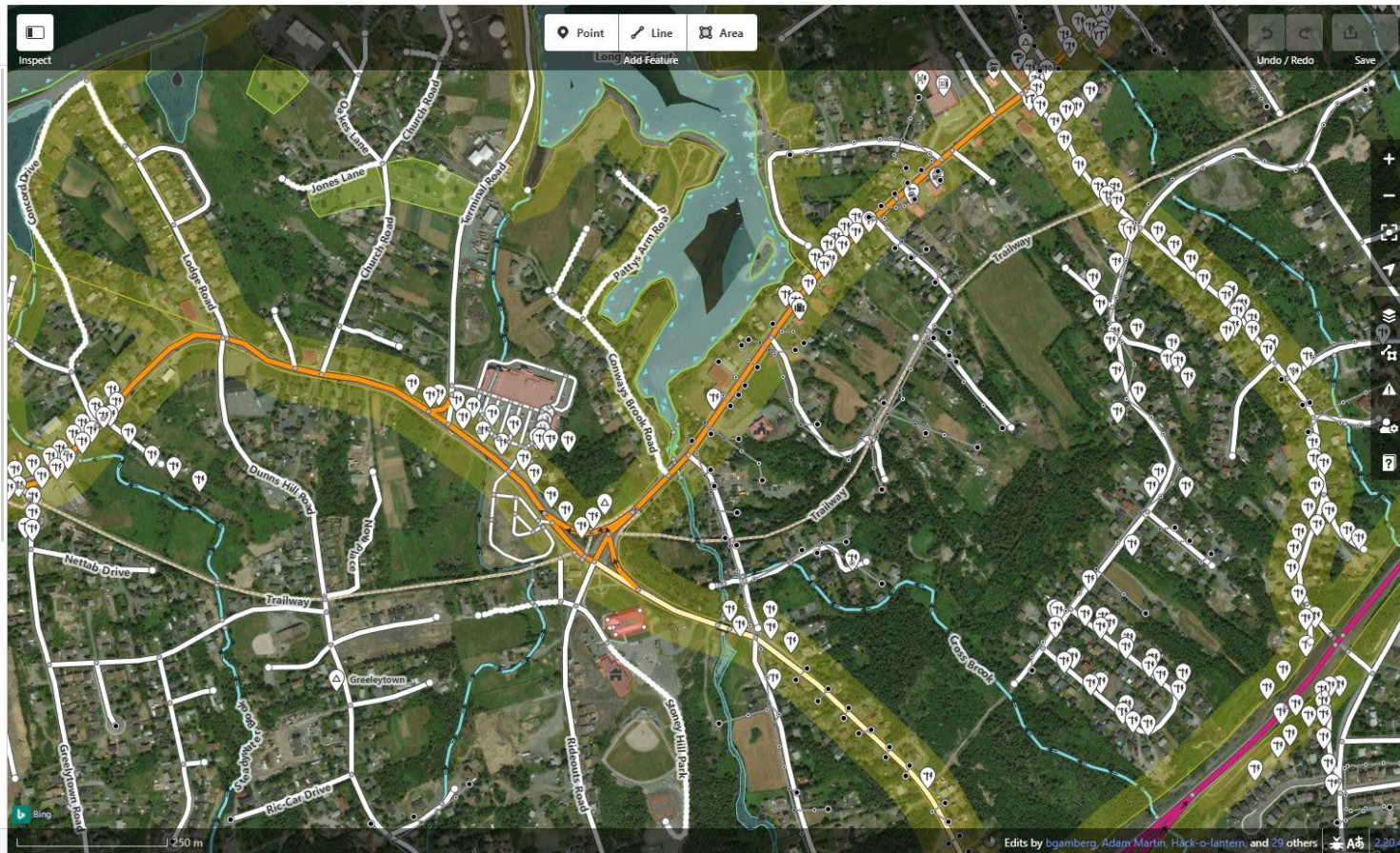
Add field: Baby Nursing Area, Description, Email...

Tags (8)

addr:city Conception Bay So... 🗑️ ℹ️

addr:housenumber 11 🗑️ ℹ️

[View on openstreetmap.org](https://openstreetmap.org)













Edits by bgamberg, Adam Martin, Hack-o-lantern, and 29 others 2,204

**AIM
Network**




Excel Tools


Fleet and Facility Tool

Version 6.0

AutoSave ☐ Off     AIMSOIR 6.0_Fleet&Facilities_Beta.xlsm Ayla Perry      

File Home Insert Draw Page Layout Formulas Data Review View Developer New Tab Help Acrobat Comments Share


19   






 **AIMSOIR**

Add Facility

Add Fleet

Compile


Database **Main** Asset Valuation 

Ready  Display Settings    -  + 115%

Fleet and Facility Tool

Version 6.0

Condition		Consequence of Failure	
1	Excellent	1	Minor
2	Good	2	Moderate
3	Fair	3	Significant
4	Poor	4	Major
5	Very Poor	5	Catastrophic

Municipal Office	
Stormwater_Collection	
Pumping Station	

Delete this sheet

Data Entry Table														
Level 2 Group Elements	Type	Description	Lookup	Quantity	Unit	Rate	Replacement Cost	Life Expectancy (Yrs.)	Annual Maintenance Cost	Condition	Consequence of Failure	Reference	Risk Management Strategy	
Foundations	Standard		Standard Foundations_Standard		SF	\$ 20.00	\$ -	100						
	Standard		Special Foundations_Standard		SF	\$ 8.50	\$ -	100						
	Standard		Slab on Grade_Standard		SF	\$ 9.00	\$ -	100						
Basement Construction	Standard		Basement Excavation_Standard		CF	\$ 7.00	\$ -	100						
	Standard		Basement Walls_Standard		SF	\$ 50.00	\$ -	80						
Superstructure	Standard		Floor Construction_Standard		SF	\$ 17.00	\$ -	75						
	Standard		Roof Construction_Standard		SF	\$ 20.00	\$ -	75						
Exterior Closure	Standard		Exterior Walls_Standard		SF	\$ 65.00	\$ -	50						
	Standard		Exterior Windows_Standard		SF	\$ 40.00	\$ -	40						
	Standard		Exterior Doors_Standard		SF	\$ 7.00	\$ -	20						
Roofing	Standard		Roof Coverings_Standard		SF	\$ 15.00	\$ -	25						
	Standard		Roof Openings_Standard		SF	\$ 25.00	\$ -	25						
Interior Construction	Standard		Partitions_Standard		SF	\$ 30.00	\$ -	50						
	Standard		Interior Doors_Standard		SF	\$ 7.00	\$ -	50						
	Standard		Specialties_Standard		SF	\$ 25.00	\$ -	50						
Staircases	Standard		Stair Construction_Standard		SF	\$ 20.00	\$ -	40						
	Standard		Stair Finishes_Standard		SF	\$ 10.00	\$ -	20						
Interior Finishes	Standard		Wall Finishes_Standard		SF	\$ 4.00	\$ -	20						
	Standard		Floor Finishes_Standard		SF	\$ 4.00	\$ -	20						
	Standard		Ceiling Finishes_Standard		SF	\$ 3.00	\$ -	20						
Conveying Systems	Standard		Elevators_Standard		#	\$ 80,000.00	\$ -	20						
	Standard		Escalators & Moving Walks_Standard		#	\$ 100,000.00	\$ -	20						
	Standard		Material Handling Systems_Standard		#	\$ 50,000.00	\$ -	20						
Plumbing	Standard		Plumbing Fixtures_Standard		#	\$ 2,250.00	\$ -	40						
	Standard		Domestic Water Distribution_Standard		SF	\$ 2.00	\$ -	40						
	Standard		Sanitary Waste_Standard		SF	\$ 2.00	\$ -	40						
	Standard		Rain Water Drainage_Standard		SF	\$ 2.00	\$ -	40						
	Standard		Special Plumbing Systems_Standard		SF	\$ 25.00	\$ -	40						
HVAC	Standard		Energy Supply_Standard		SF	\$ 4.00	\$ -	15						
	Standard		Heat Generating Systems_Standard		SF	\$ 4.00	\$ -	15						

Capital Inventory Tool

Version 7.0



AIM Network Capital Planning Tool

This tool is a data storage and reporting tool that has been developed to help municipalities make informed asset management decisions and communicate those decisions to staff, municipal councils and local residents

What do you want to do today?

I want to...	User Guide Reference	I want to...	User Guide Reference
View My Inventory	View my data in the inventory spreadsheet. Data is locked for editing. Remember, you can change the columns that you see using the button that says "Change My Column View" button. Section 2	Edit Asset Risk Values	Assign projects to assets to group them into combined capital cost items. Note that this is convenient to do in GIS! Section 4
Edit My Inventory	View my data, but unlock the spreadsheet first so I can edit the information. Section 2.2	Export Data or Reports	Export Preliminary State of Infrastructure Reports Export Refined State of Infrastructure Reports Export Data to Excel, CSV or GIS Section 2.6
Import Data	Import data from GIS, an external spreadsheet or the fleet and facilities tool Section 2.4	Assign Projects	Assign projects to assets to group them into combined capital cost items. Note that this is convenient to do in GIS! Section 5
Run Calculations	Run calculations to generate Preliminary State of Infrastructure Reports, Refined State of infrastructure Reports and Pro-Forma Budgets. Section 2.5	View My Budget	View my pro-forma budget for 5-year capital planning. Section 6
View My Risk Profile	Edit my risk profile and view view my risk based projections. If you want to change your risk profile, you have to Toggle Edit Mode to unlock the sheets Section 4		

ADMINISTRATIVE CONTROLS

- [Change Column](#)
- [Clear Inventory](#)
- [UNLOCK: Toggle Edit Mode](#)
- [Validate Inventory](#)
- [Edit Financial Parameter](#)
- [Edit My Background Data](#)

Level of Service Assessment Tool



Levels of Service

Last Updated: July 30, 2021

TOWN NAME

Community Infrastructure Service Delivery Goals:

- Comply with all legislative requirements.
- Provide capacity, quality, and reliability expected by Council and residents.
- Ensure the safety of services and infrastructure.
- Comply with the Municipal Plan

Introduction

Purpose:

This template acts as a customizable tool to help smaller municipalities communicate with Councils, stakeholders, and residents about:

- The services and levels of service the community currently provides;
- Any gaps that may exist between the current status and that which is either required, desired or expected; and
- Actions or estimated cost to close gaps.

This template is a customizable tool focused primarily on external levels of service (i.e. regulatory and customer LoS) but also provides opportunities for documentation of internal (technical) levels of service.

The completed template will provide a documented set of levels of service for each service area that is commonly understood by staff, council, and the community.

Process:

The process involves:

- Documenting current services and current levels of services;
- Identifying potential gaps between current LoS and that required by legislation;
- Identifying potential gaps between current LoS and that desired or expected by customers; and
- Identifying actions and estimated costs to meet regulatory requirements or customer expectations.

Introduction

Services and Assets

Describing Levels of Service

Reporting Out



Resources

- QGIS <https://www.qgis.org/en/site/> and Guides/Documentation: <https://www.qgis.org/en/docs/index.html>
- OpenStreetMap <https://www.openstreetmap.org/> and Help: <https://www.openstreetmap.org/help>
- AIMNet Tools <https://www.aimnetwork.ca/aimnetsolution> and Contact: <https://www.aimnetwork.ca/contact>