



# WFS and Interoperability

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# Bentley Map

Create Custom Applications using edition specific API

## Bentley Map Enterprise- Running Standalone

Bentley Map PowerView and Bentley Map Functionality

Edit Spatial Databases- Long Transaction/Time

View Oracle GeoRaster

Transform/ Edit Rasters

View Raster DEM

3D Modeling

3D Analysis/ Make Decisions

3D Texturing

Advanced CAD tools

## Bentley Map- Running Standalone or For MicroStation

Bentley Map PowerView Functionality

Edit Spatial Databases- Short transaction

2D Analysis/ Make Decisions

Advanced Interoperability

Advanced Map Finishing

Cadastral Mapping Configuration

CAD tools

## Bentley Map PowerView- Running Standalone

Mark-up/View/Edit DGN/XFM

Create Maps/Reports

View Spatial Databases

Feature Modeling

Assemble/ Integrate

View Rasters

Basic CAD tools

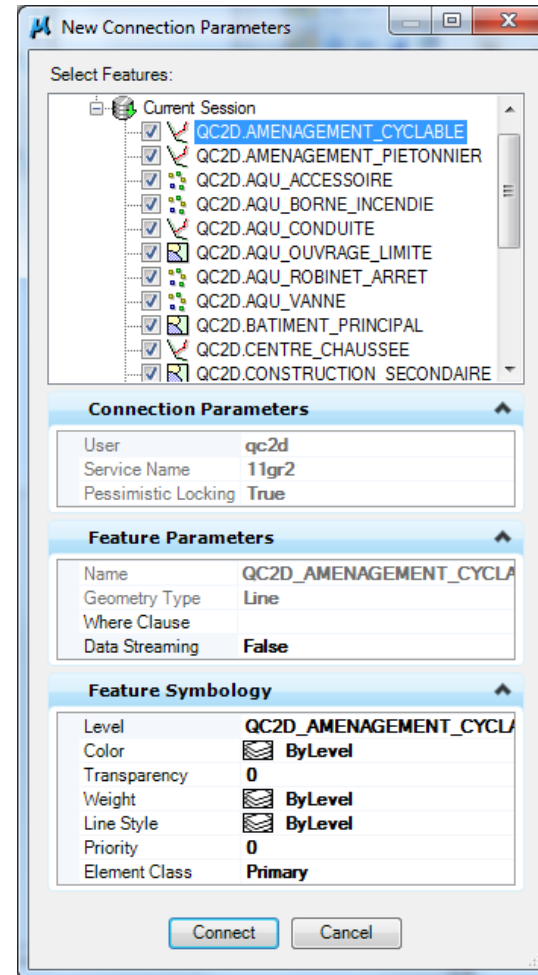
# Bentley Map V8i (SELECTseries 3) At-a-Glance

- Large Spatial Database support
  - Spatial performance
  - Accessing Millions of Rows
- Spatial Data Streaming
- SQL Server Spatial support
- Web Feature Service (WFS) client
- Survey Data Acquisition Tools
- Map Enterprise
  - Scalable Terrain Model
  - Advanced Point Cloud Tools



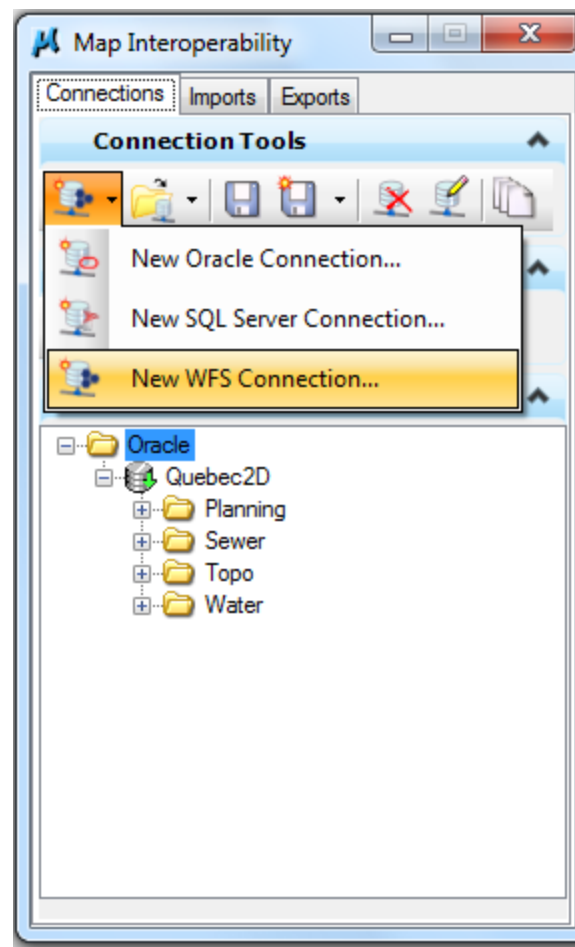
# Interoperability Improvements

- Large spatial database support
  - Spatial performance
  - Accessing Millions of Rows
- Spatial Data Streaming
- SQL Server Spatial support
- Web Feature Service (WFS) client
- Interface improvements



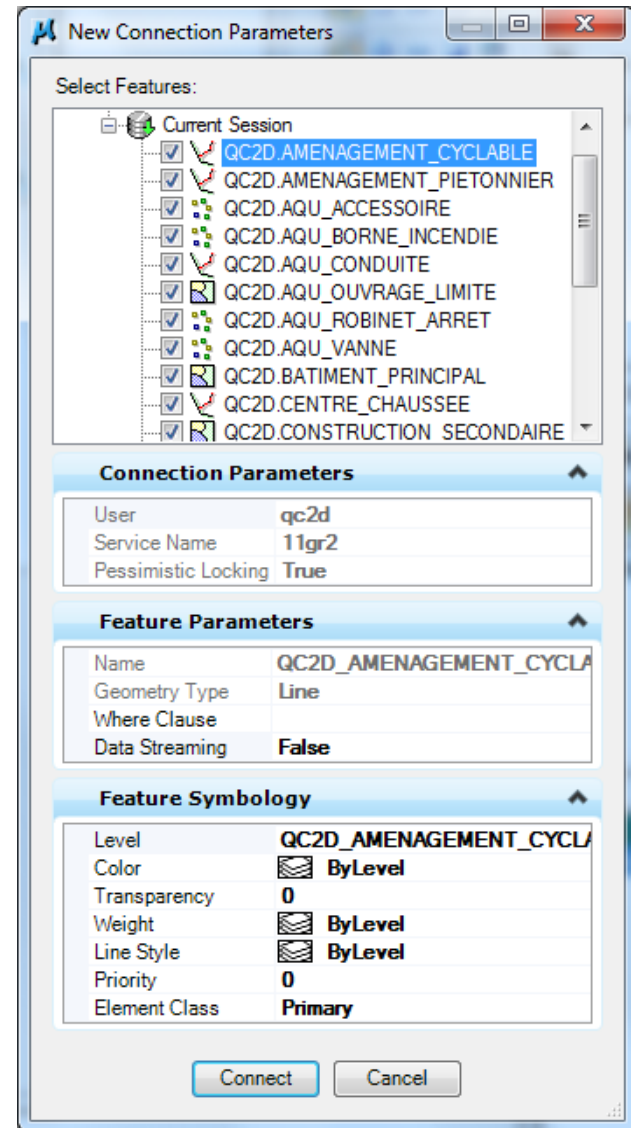
# New Interface Dialog

- Separate Connections, Import and Export tabs
- All Connection tools available on dialog
- Operation is very similar
  - Added options for Data Streaming
  - Geometry type selection when type is unclear



# Connect Dialog

- Specify connection details
  - Symbology
  - Data streaming
  - Which tables



# Database queries access database directly

- Query database directly
- Use database server processing
- Load results page at a time
- Filter, sort processed on the database server at server speeds

Search

File Tools

New Open Save

Search For: Water Mains

Where ...

equal to

Add to Search Clear

Search Summary (click an underlined value to edit)

Group Ungroup Edit

Search for items of type "Water Mains" (including these properties where Diametre is less than or equal to '150')

Data Browser

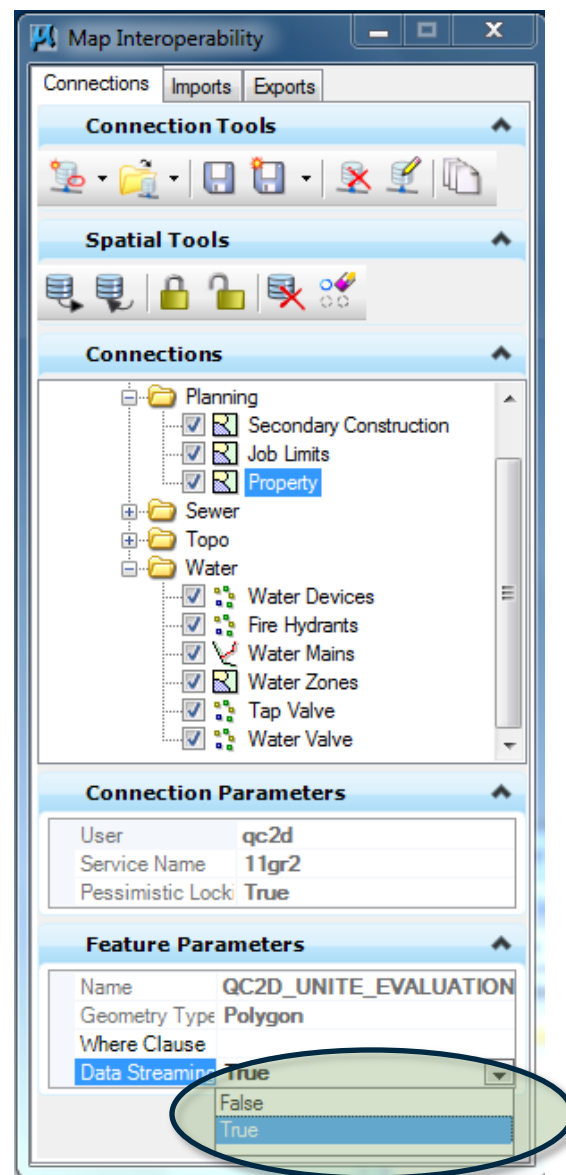
| Chloration | Diametre | Enabled | Protection | Source | Type Eau |
|------------|----------|---------|------------|--------|----------|
|            | 150      |         |            |        | POT      |
|            | 50       |         |            |        | POT      |
|            | 0        |         |            |        | POT      |
|            | 0        |         |            |        | POT      |
|            | 38       |         |            |        | POT      |
|            | 0        |         |            |        | POT      |
|            | 0        |         |            |        | POT      |

Row: 1 of approx. 21358

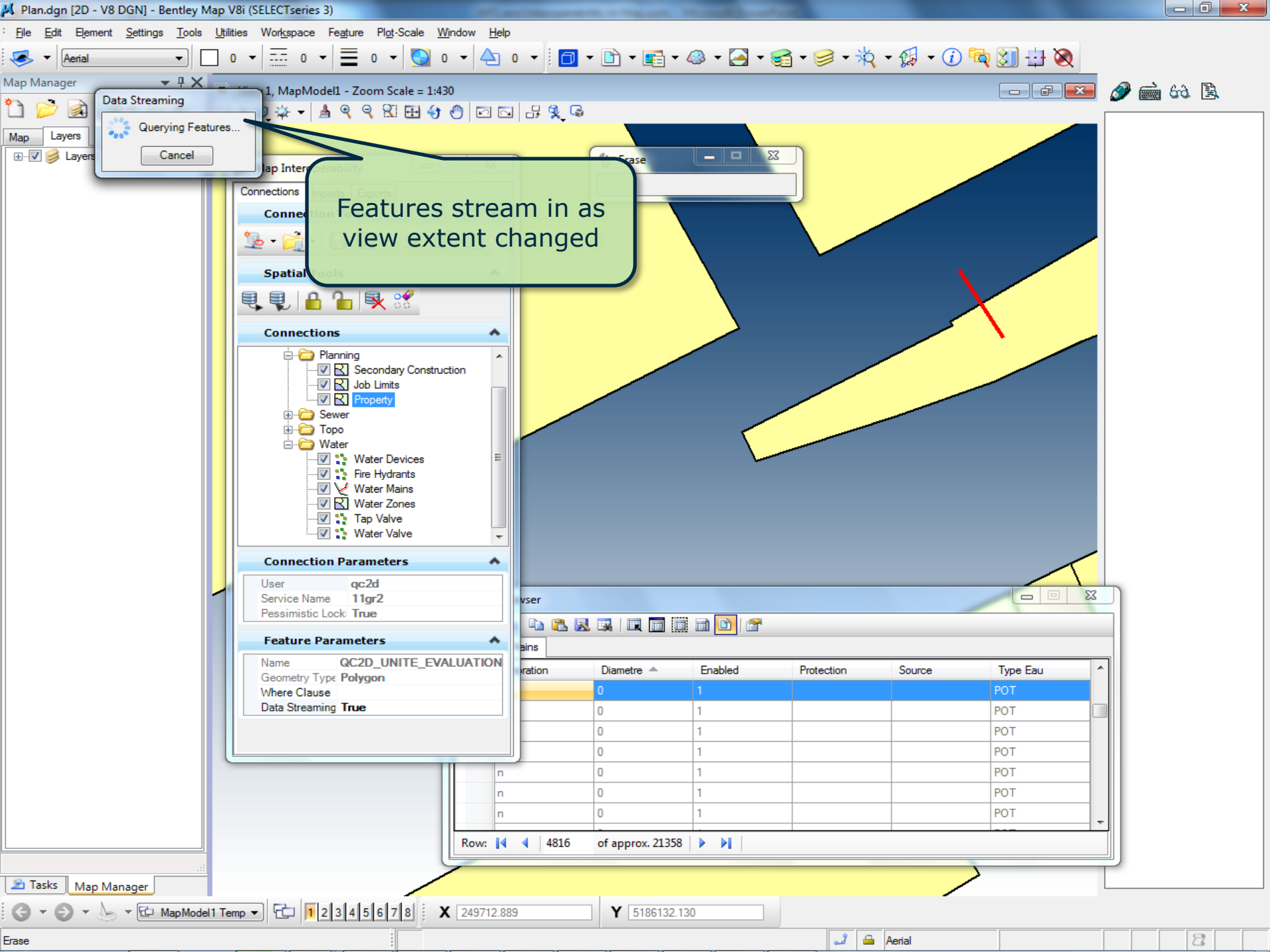
Millions of records can be accessed

# Spatial Data Streaming

- Optional on each feature
- Pan and zoom cause new data to be streamed into the view
- Toggle on and off with Connections dialog







Data Streaming

Querying Features...

Cancel

Features stream in as view extent changed

Connections

- Planning
  - Secondary Construction
  - Job Limits
  - Property
- Sewer
- Topo
- Water
  - Water Devices
  - Fire Hydrants
  - Water Mains
  - Water Zones
  - Tap Valve
  - Water Valve

Connection Parameters

User qc2d  
Service Name 11gr2  
Pessimistic Lock True

Feature Parameters

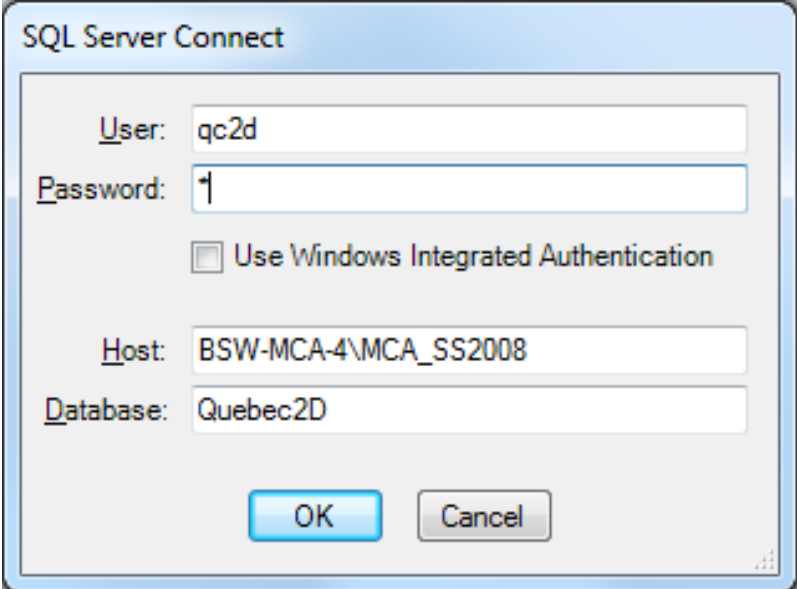
Name QC2D\_UNITE\_EVALUATION  
Geometry Type Polygon  
Where Clause  
Data Streaming True

| Iteration | Diametre | Enabled | Protection | Source | Type Eau |
|-----------|----------|---------|------------|--------|----------|
|           | 0        | 1       |            |        | POT      |
|           | 0        | 1       |            |        | POT      |
|           | 0        | 1       |            |        | POT      |
|           | 0        | 1       |            |        | POT      |
| n         | 0        | 1       |            |        | POT      |
| n         | 0        | 1       |            |        | POT      |
| n         | 0        | 1       |            |        | POT      |

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# SQL Server Spatial Support

- Essentially the same features as Oracle Spatial
  - No 3D models
  - No long term transactions
  - No topology
- Must set a primary key (Identity type)
- Spatial index not required but improves performance



SQL Server Connect

User: qc2d

Password: |

Use Windows Integrated Authentication

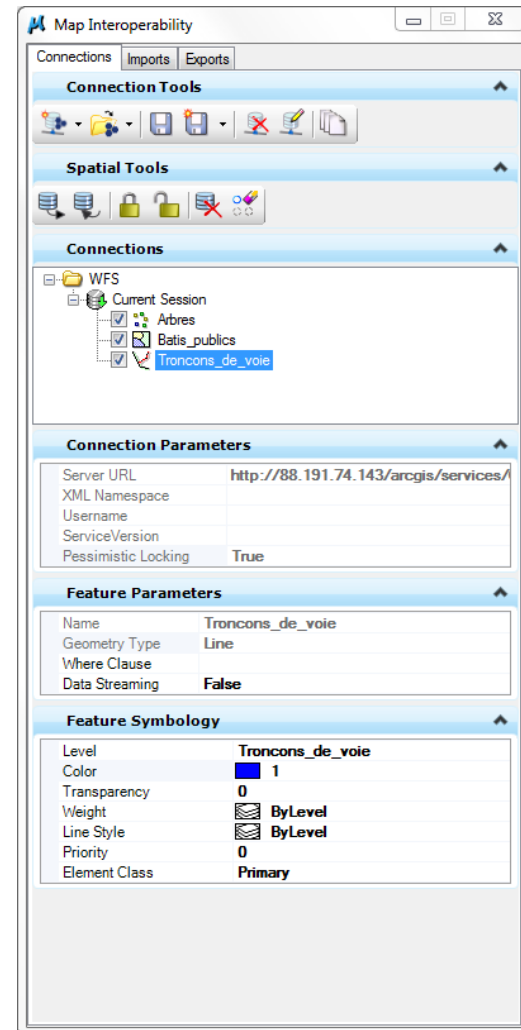
Host: BSW-MCA-4\MCA\_SS2008

Database: Quebec2D

OK Cancel

# WFS support

- Support for versions 1.0.0 and 1.1.0
- Operation the same as other spatial sources
- Query (read) only
- Create graphical source in GSA
- Assign symbology in ad-hoc connection



# Demonstration

- Access WFS data source
  - <http://88.191.74.143/arcgis/services/OpenDataReines/MapServer/WFSServer?service=wfs&request=getcapabilities>
- Access Oracle Spatial
  - Query of database
  - Spatial Data Streaming

