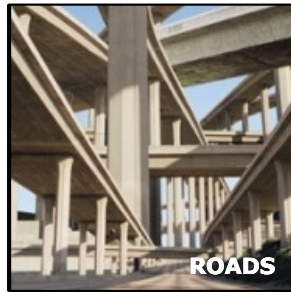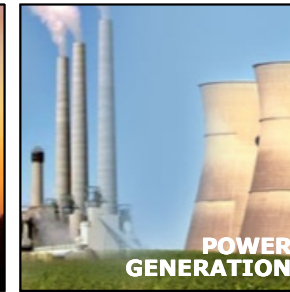# Bentley Water & Wastewater Solutions: Design Workflow Automation

Slavco Velickov, PhD
Water Industry Director, EMEA

Solutions

BRIDGES

BUILDINGS

CADASTRE AND LAND DEVELOPMENT

CAMPUSES

COMMUNICATIONS

ELECTRIC AND GAS UTILITIES

FACTORIES

METALS AND MINING

OIL AND GAS

POWER GENERATION

RAIL AND TRANSIT

ROADS

WATER AND WASTEWATER

V8i

Bentley Solutions

- Intra-operable infrastructure software portfolio
  - Multi-discipline built on a common V8i platform
  - Supports the Design-Build-Operate lifecycle
  - Encompasses the full spectrum of infrastructure

- Professional services and learning
  - Support for implementation and all change issues

- Professional communities networking
  - Local and global communication opportunities

Bentley®
Sustaining Infrastructure

Be Communities: Water and Wastewater Professional Networking
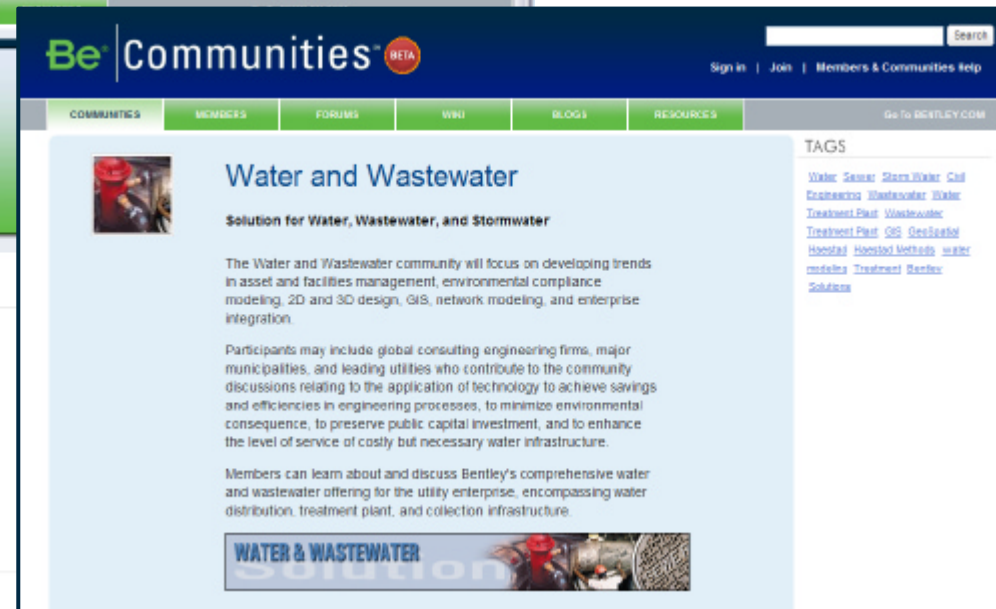
Water and Wastewater Industry Challenges

Regulatory Compliance

- Adequate Supply and Treatment capacity
- Protecting Water Quality
- Business performance

Reliability

- Consistently achieving target levels of services
- Maintaining aging infrastructure
- Avoiding failure

Financial performance

- Reducing costs while improving services
- Asset investment planning for aging infrastructure
- Aging workforce

Water and Wastewater Lifecycle

Bentley provides applications across the entire lifecycle

Water and Wastewater Product Map

Potable Water Distribution and Transmission

- WaterCAD
- WaterGEMS
- HAMMER
- Bentley Water
- Bentley Geo Web Publisher
- Bentley Expert Designer Water
- Bentley PowerMap Field

Mapping and Publishing

- Bentley Map
- Bentley Cadastre
- Bentley I/RAS B
- Bentley Descartes
- Bentley CADscript
- Bentley Geospatial Server
- Bentley Onsite
- Bentley PowerMap Field
- Bentley Geo Web Publisher
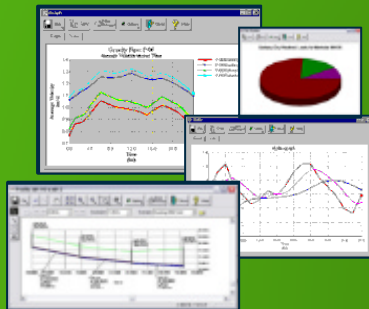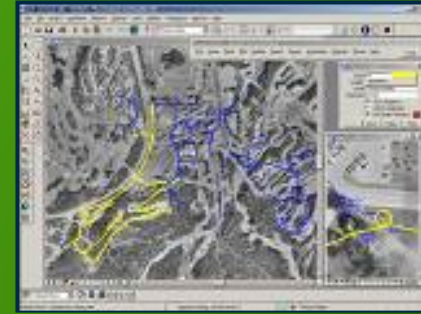
Wastewater Collection

- SewerCAD
- SewerGEMS
- Bentley Geo Web Publisher
- Bentley PowerMap Field
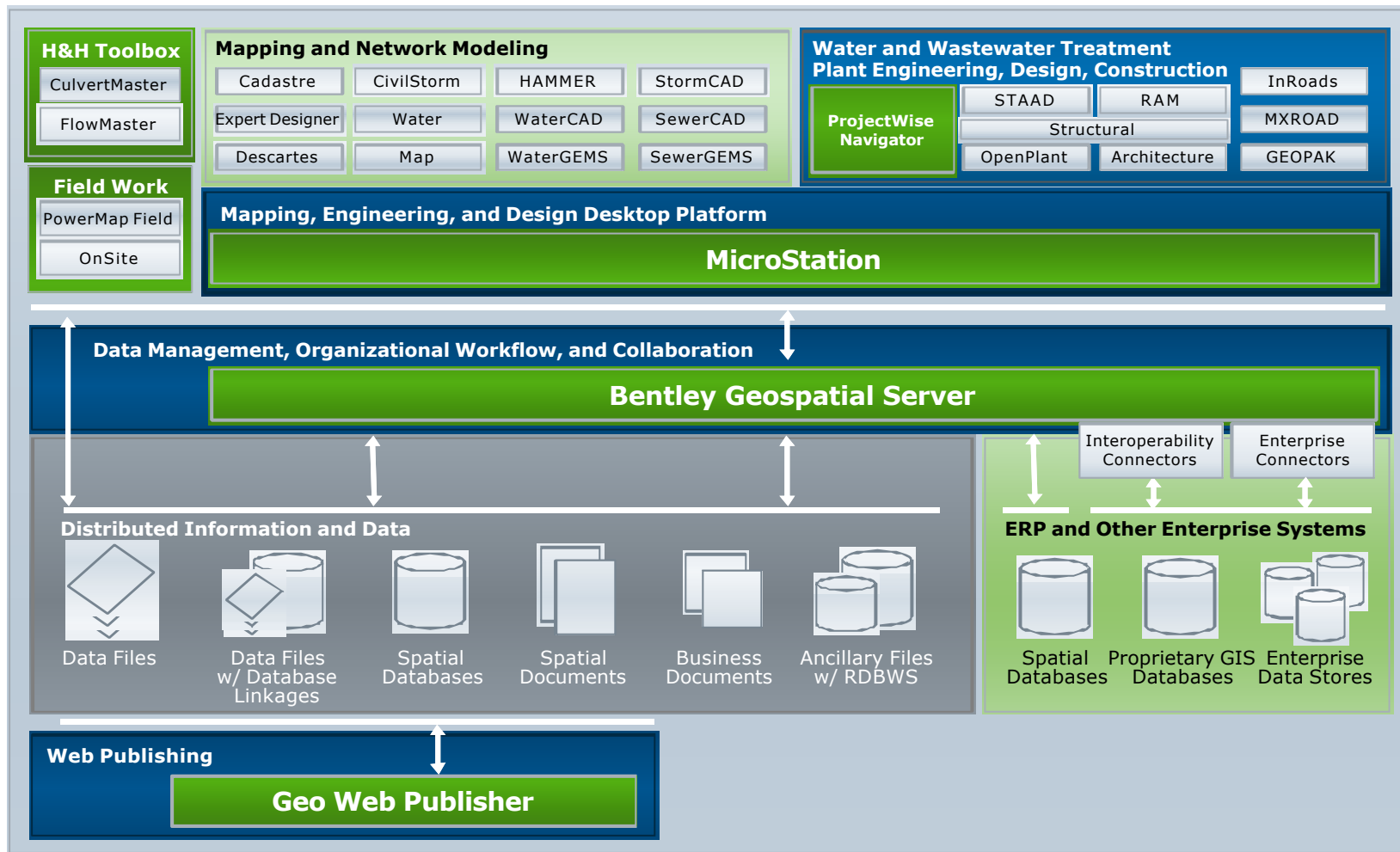- Bentley Map

Storm Systems

- StormCAD
- CivilStorm
- InRoads Storm and Sanitary
- CulvertMaster
- PondPack
- FlowMaster
- Bentley PowerCivil
- MXROAD Suite
- GEOPAK Site Suite

Water and Wastewater Treatment Plants

- Bentley PLantSpace
- AutoPLANT
- OpenPlant PowerPID
- ProjectWise Navigator
- Bentley PowerCivil
- InRoads Site Suite
- GEOPAK Site
- MXROAD Suite
- Bentley Architecture
- Bentley Structural
- RAM
- STAAD.Pro

Bentley® Sustaining Infrastructure

Water, Wastewater, and Storm

H&H Toolbox
- CulvertMaster
- FlowMaster

Mapping and Network Modeling

Cadastre	CivilStorm	HAMMER	StormCAD
Expert Designer	Water	WaterCAD	SewerCAD
Descartes	Map	WaterGEMS	SewerGEMS

Water and Wastewater Treatment Plant Engineering, Design, Construction

ProjectWise Navigator

STAAD	RAM
Structural	
OpenPlant	Architecture

- InRoads
- MXROAD
- GEOPAK

Field Work
- PowerMap Field
- OnSite

Mapping, Engineering, and Design Desktop Platform

MicroStation

Data Management, Organizational Workflow, and Collaboration

Bentley Geospatial Server

Distributed Information and Data

Data Files

Data Files w/ Database Linkages

Spatial Databases

Spatial Documents

Business Documents

Ancillary Files w/ RDBWS

Interoperability Connectors

Enterprise Connectors

ERP and Other Enterprise Systems

Spatial Databases

Proprietary GIS Databases

Enterprise Data Stores

Web Publishing

Geo Web Publisher

Bentley® Sustaining Infrastructure

Water and Wastewater Solution V8*i*

WaterGEMS delivers advanced functionality for GIS and model synchronization

Bentley Water includes enhanced reports, queries, multi-workflows and enterprise stores

WaterGEMS and **HAMMER** feature native support for Oracle spatial data model

StormCAD features seamless integration with GEOPAK and Bentley PowerCivil

WaterGEMS advances leakage calibration for locating leaks and quantifying background water losses

Bentley Expert Designer Water supports high productivity design and dynamic cost estimating for potable water networks

ProjectWise features significant performance improvements and linear reference system-based storage

Bentley®
Sustaining Infrastructure

Bentley Civil and Haestad Integration
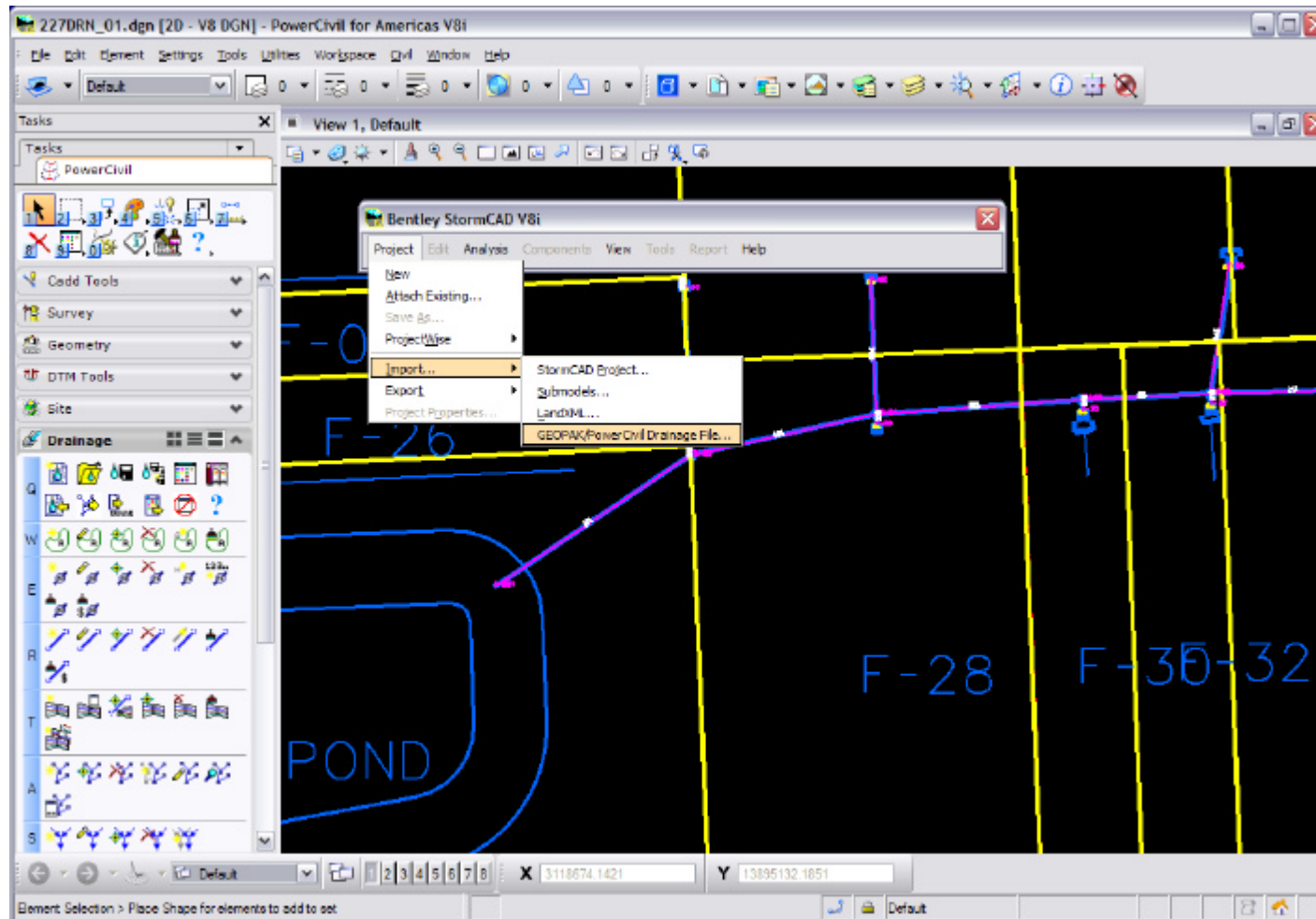
Available now:

- **StormCAD <-> GEOPAK**: Import and export GEOPAK drainage project in StormCAD

- **StormCAD <-> PowerCivil V8i**: Import and export PowerCivil Drainage project in StormCAD

- **StormCAD <-> InRoads**: Import and export InRoads Storm & Sanitary projects in StormCAD

- **StormCAD <-> MXRoad**: Import and export Land XML files. 3D visualisation

- **PondPack <-> InRoads**: Import InRoads pond definitions into PondPack

Coming soon:

Early 2010

- **CivilStorm <-> InRoads**: Import and export InRoads Storm & Sanitary projects in CivilStorm

The future

- Full integration - Hydraulics & Hydrology calculations in Bentley Civil applications will be performed by 'Haestad' solvers.

- Users will move directly from StormCAD/CivilStorm/PondPack to their Bentley Civil application and back.

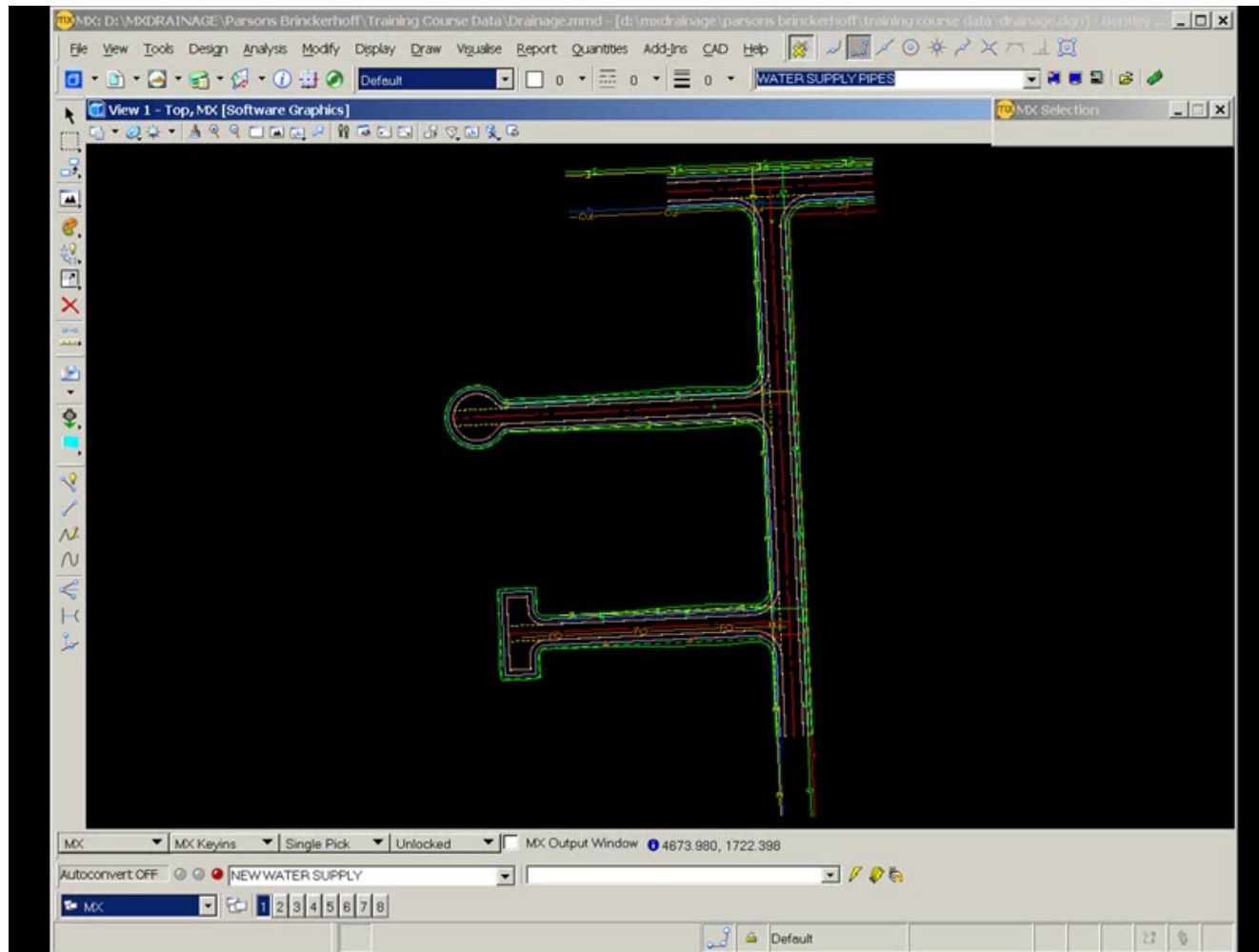- Potential to support 'Haestad' water and sanitary sewer solvers in Bentley Civil applications as well

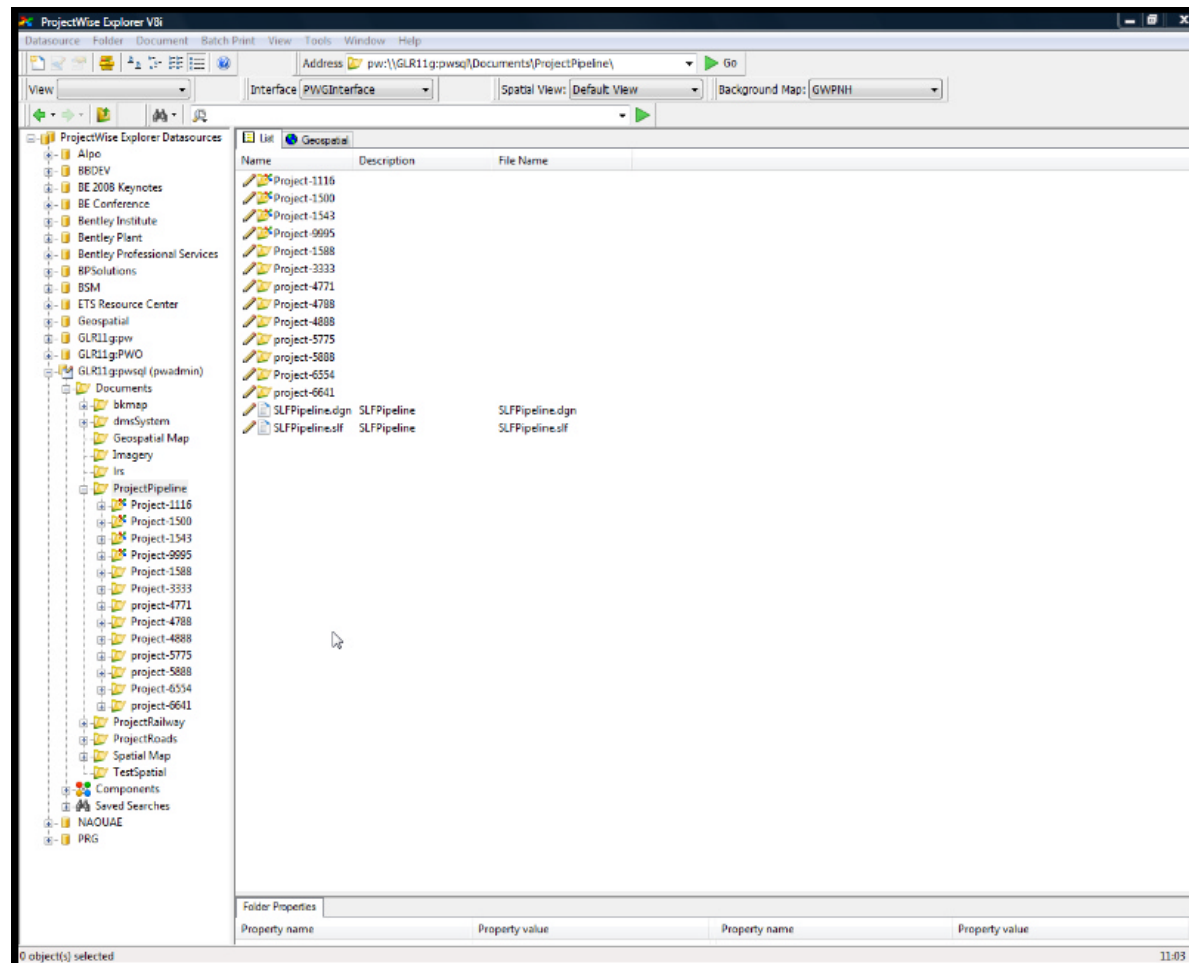# AVI: Geo-coordinated modeling using Bentley WaterGEMS V8*i* & Google Earth
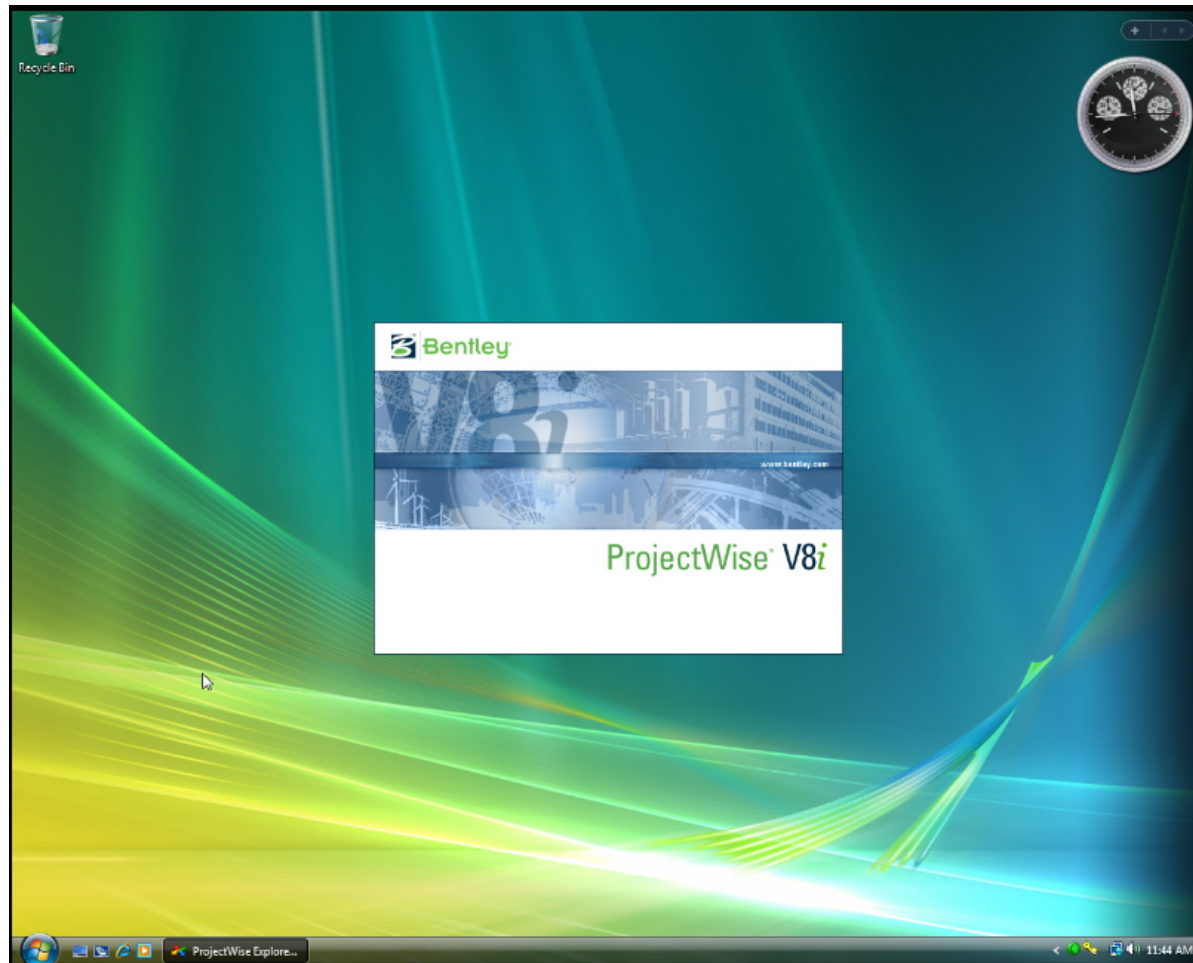
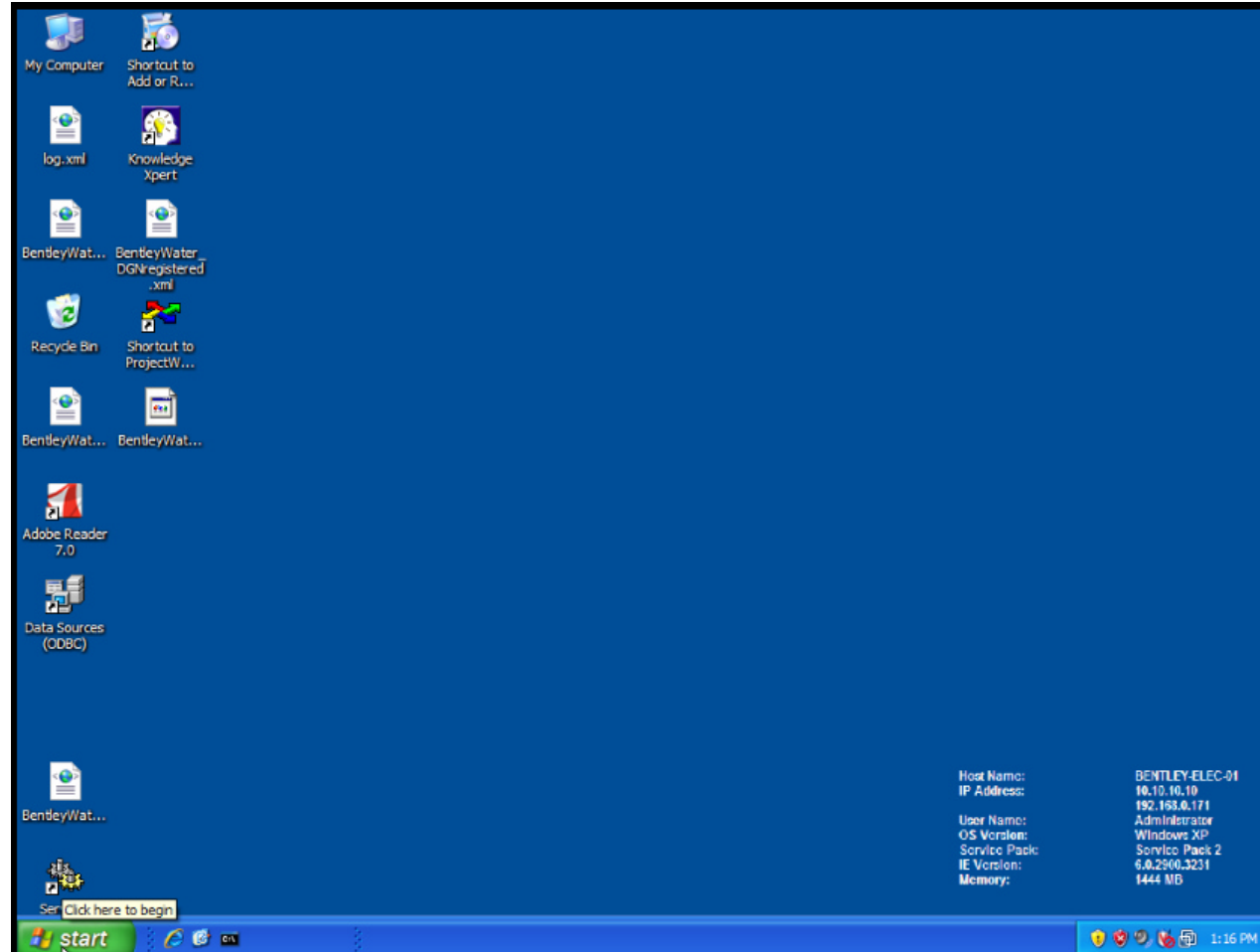# AVI: StormCAD V8*i* and PowerCivil single DGN workflow
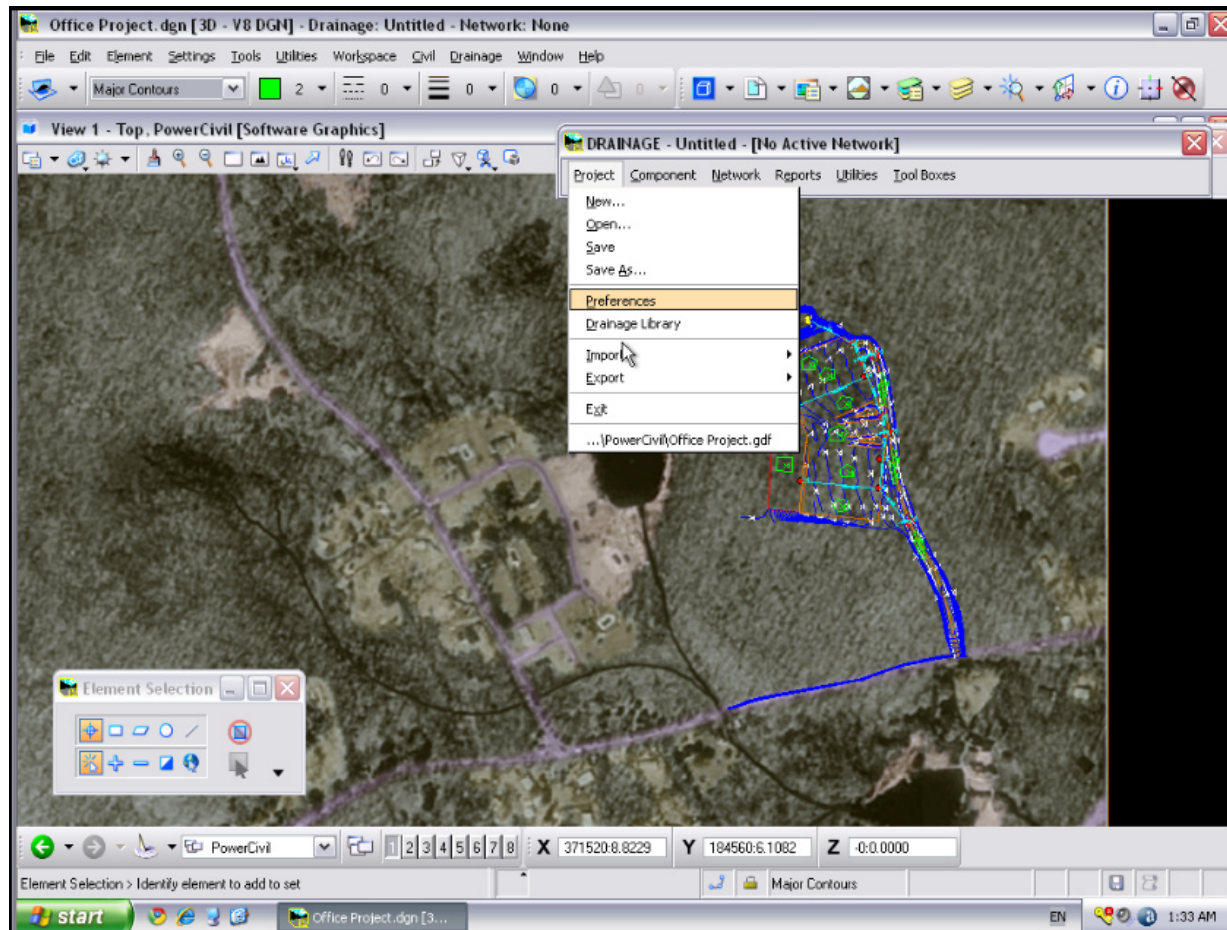
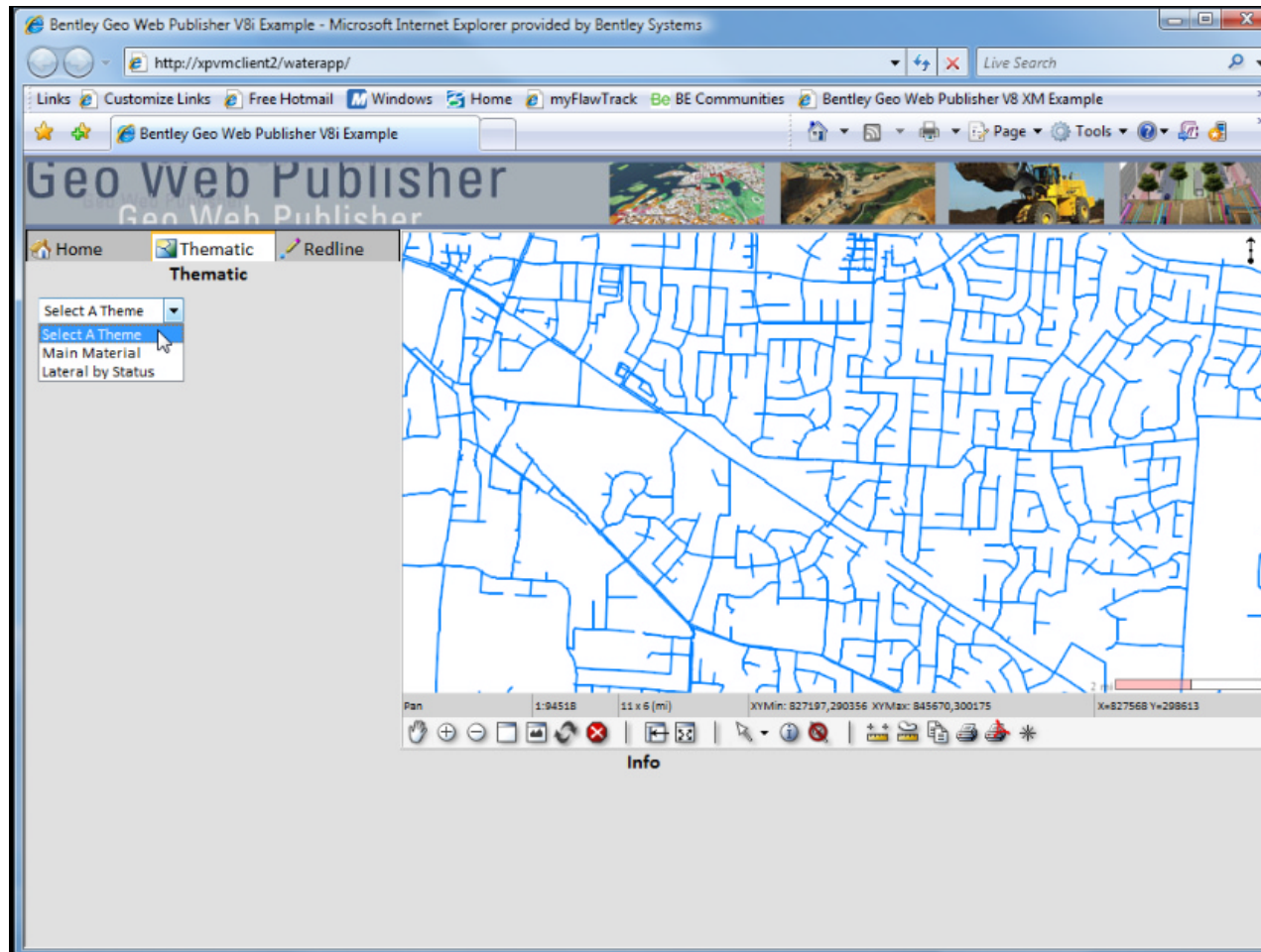# AVI: StormCAD V8*i* and MX workflow integration

AVI: Introduction to ProjectWise V8*i* Linear Reference System

AVI: Introducing Expert Designer for Water V8*i*

AVI: Geo Web Publisher V8*i* workflows based on Bentley Water V8*i*

Why Bentley?

Software portfolio breadth and depth

- Spanning the water, wastewater, stormwater and AEC industries

Your trusted business partner, committed to solving engineering problems worldwide

- Innovative subscription programs:
  - Enterprise License Subscription
  - Municipal License Subscription

- Continuous investment into R&D (more than $100 M in 2009)

Integrated and interoperable software products
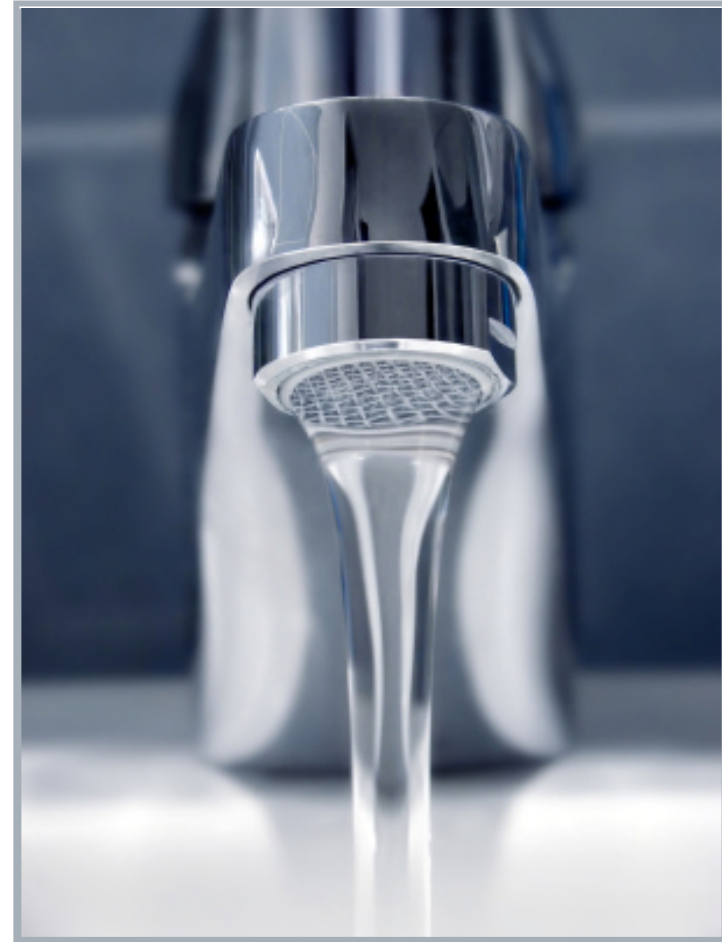
Thank you

Contact information

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- **www.bentley.com/water**