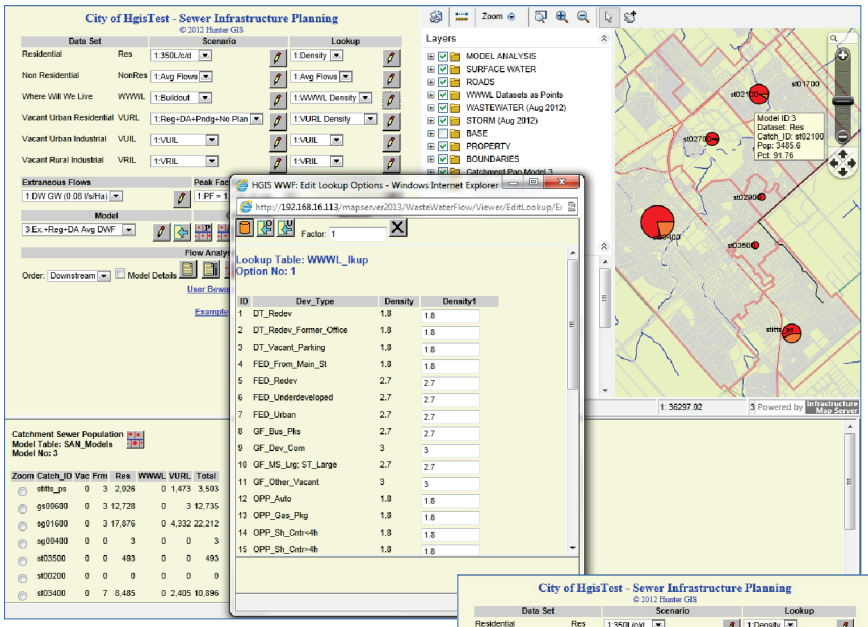
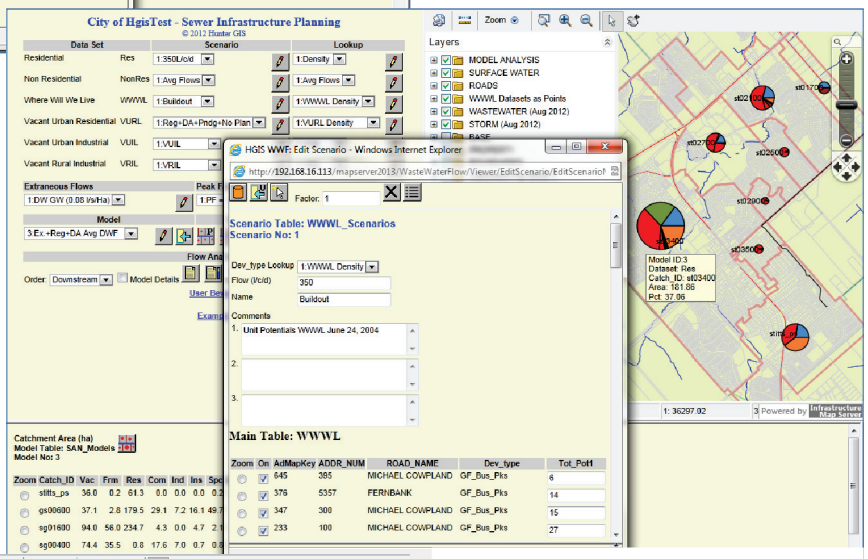
Where will we live and work?

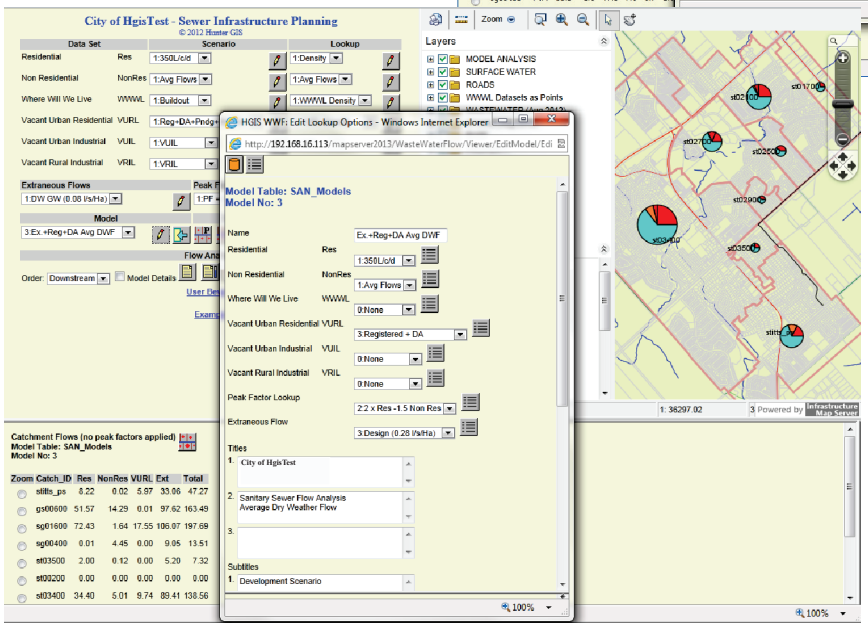
Wastewater Flow Demand



- Analyze sewage system flow performance for planning and budgetary purposes
- Identify areas of potential basement flooding
- Assist in identification of cross connections and blockages
- Integration with parcel tax assessment databases and water meter data
- Define Residential and Non-Residential (industrial, commercial, etc.) datasets containing existing or proposed development
- Set daily flow per capita rates for various datasets: Residential, Commercial, Employment, Institutional and Industrial
- Population density and daily flow lookup by property type
- Adjust unit potential and daily flow on a parcel basis

- Create topology from existing manhole and pipe referencing and assign parcels to catchment areas
- Set extraneous flow rates on a catchment basis to account for inflow and infiltration into laterals, maintenance holes and pipes
- Incorporate standards and guidelines
- Compute peak flows using constants or equations
- Summarize sewer population, area and flows by catchment, maintenance holes and reach
- Analyze pipe volume and online storage





- Analyze peak dry and wet weather flows for separated and combined sewer areas based on population and employment growth forecasts.
- Analyze 'Where will we grow, live and work?'
- Analyze land use intensification scenarios
- Assess demand for expanded sewer infrastructure
- Compute existing pipe capacity
- Graphically compare computed flows to existing pipe capacity
- Compute hydraulic grade line (HGL)
- Save model parameters and comments
- Append model details to reports
- Browser-based (MS IE, Google Chrome, Mozilla Firefox)
- Customizable templates and reports
- Developed for Esri ArcGIS Enterprise, Autodesk Infrastructure Map Server and MapGuide Open Source

Hunter GIS Solutions

esri Developer

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HUNTER GIS

Where will we grow?

Demand for Sewer Capacity

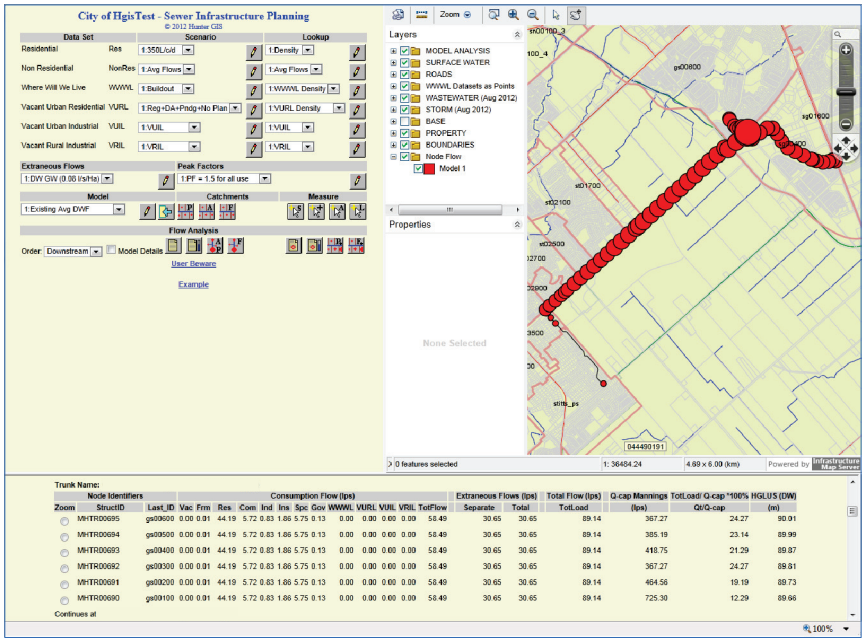
The Hunter GIS Wastewater Flow Analysis Solution enables managers and planners to evaluate the performance of a sewer network under various land development scenarios in order to determine the budget and timing of capital works to support growth and avoid basement flooding.

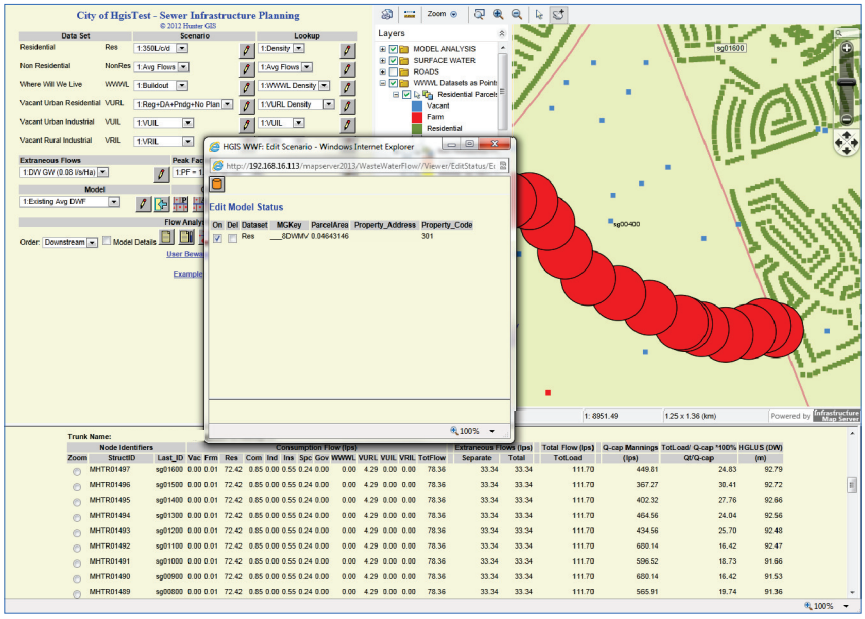
The solution revolves around a topological sewer network, catchment basins, and parcels defining residential and non-residential developments, both existing and proposed. The parcels are assigned to catchment basins, which in turn are associated with a node on the sewer network. The flow emanating from a parcel may be adjusted to account for changes in density or type of development.

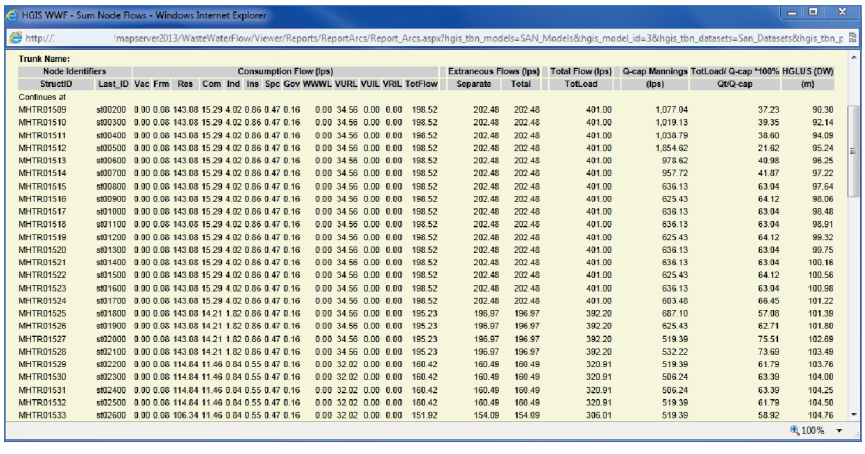
Extraneous flow factors are assigned to catchment areas to reflect inflow and infiltration into manholes and pipes. Peak factors may be applied as a constant or an equation. The sewer population, area and flows are reported on a catchment, node and reach basis. The hydraulic grade line (HGL) is computed for each pipe segment.

The solution is designed to permit the specification of a series of development scenarios for each dataset, thereby allowing the user to track the performance of the sewer system as the catchment areas are built-out. Model parameters are saved to permit subsequent runs.

The Wastewater Flow Analysis Solution consists of a suite of database tables and ASP.NET templates that may be customized to suit the particular requirements of a municipality. The solution is currently available for MapGuide Open Source and Autodesk Infrastructure Map Server.







Autodesk
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