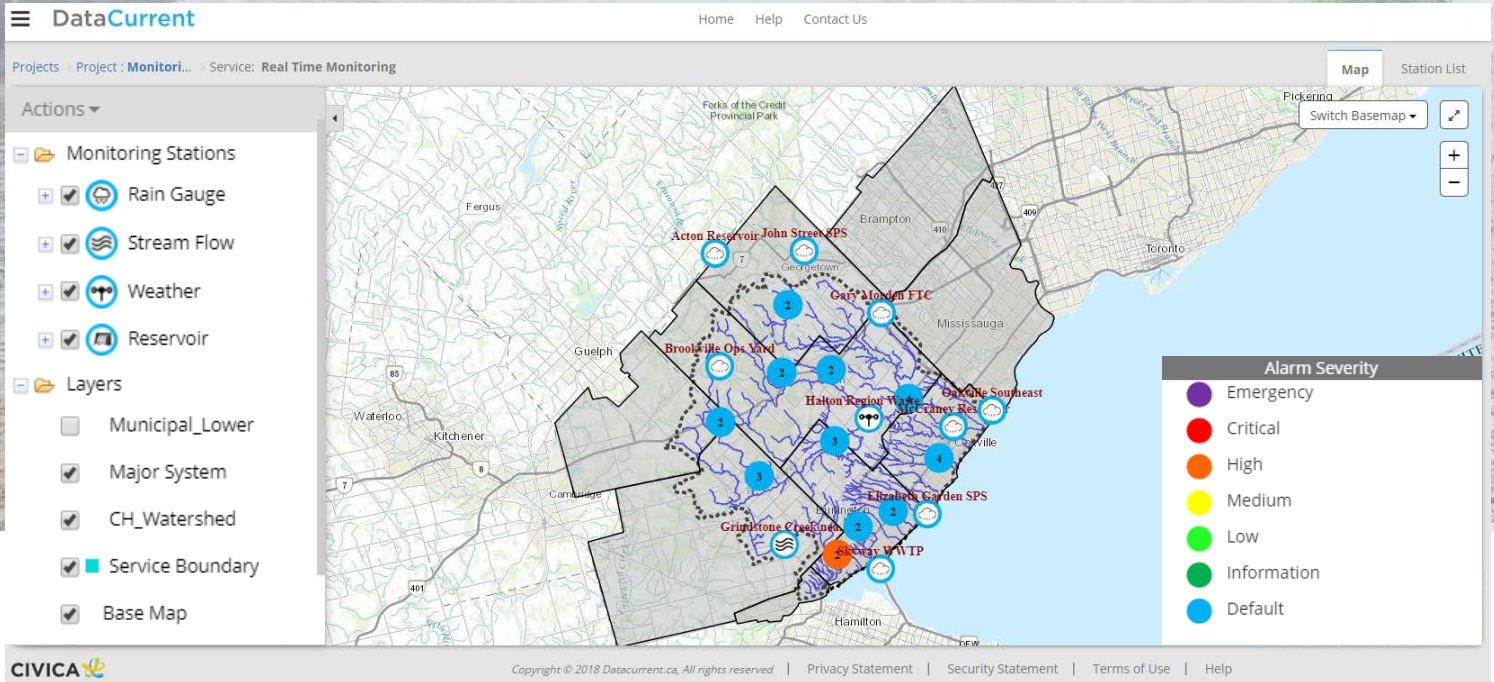


Flood Forecasting

Real-Time Flood Depth and Duration Prediction

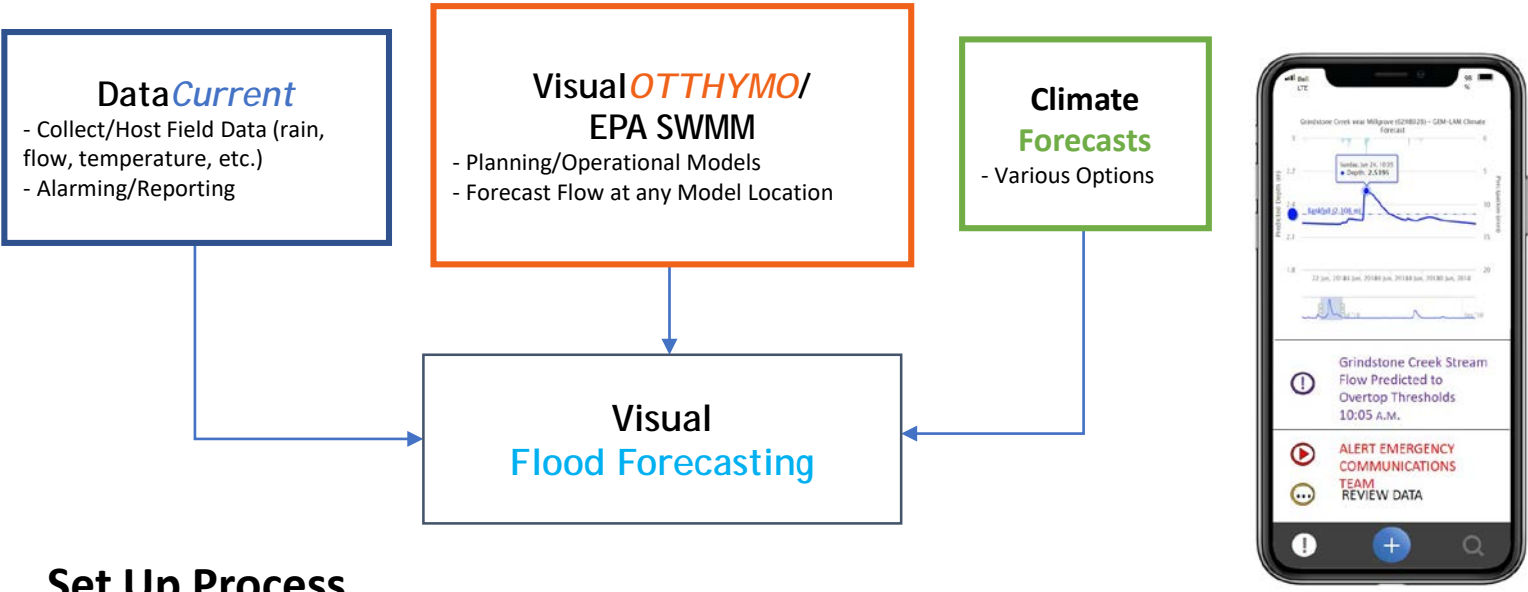
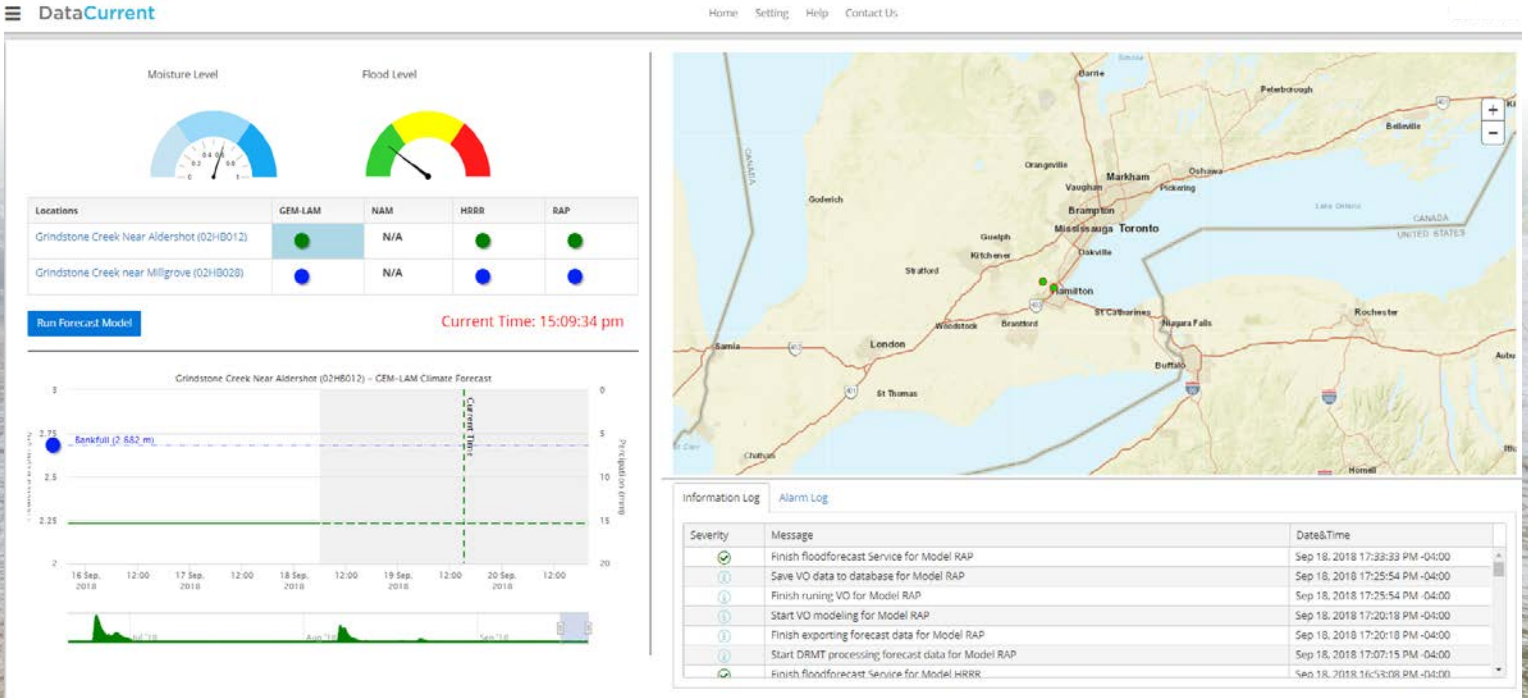
Flooding potential is a function of climate and watershed conditions. Civica's Flood Forecasting system uses the latest state-of-the-art, spatial-enabled climate forecasts plus calibrated antecedent moisture conditions and other watershed data (hydraulics and vulnerable site characteristics) to issue notices and warnings to municipal managers responsible for responding to flood events. In an era of climate change and extreme weather events, urban and rural watershed managers can have access to constant updates via web, mobile devices, and desktop apps to stay ahead of developing flood risks.



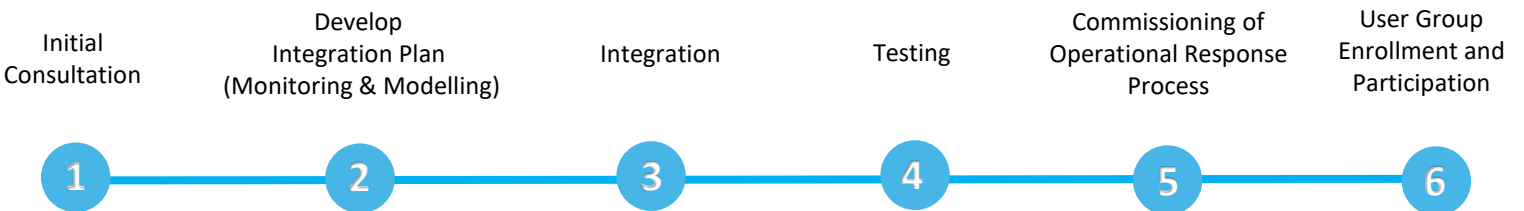
Benefits

- Easy set up
- Unlimited forecast locations
- State-of-the-art climate models
- Site-specific water level predictions based on hydraulic data
- Minimized response time
- Flexible communication channels
- Dam operation rules included
- Record keeping and reporting
- Free initial consultation

- **SIMPLE, SECURE, POWERFUL, SELF-LEARNING.** Combines global climate models and radar, with real measured data and calibrated industry-standard hydrologic models. Uses past data to correct future forecast and provide confidence intervals.
- **WEB-BASED & MOBILE APPS** for 24/7 access.
- **LINKS TO EXISTING WATERSHED INFORMATION**, such as digital maps, monitored data, structures, vulnerable population, and at risk assets.
- **RECOGNIZED GLOBAL & REGIONAL FORECAST MODELS** link directly to calibrated hydrologic models to output accurate predictions (GEM-LAM, NAM, HRRR, RAP).
- **INDUSTRY STANDARD HYDROLOGIC MODELS.** Integrates calibrated, continuously updated hydrologic model, the same model used for planning and operations.
- **CONTINUOUS UPDATES** on current watershed conditions and predicted weather. Receive water levels, flow, potential flooding locations and extents, and planned response options.
- **COMMUNICATE CURRENT AND PREDICTED INFORMATION** through automated SMS/phone/email alarms, reports, site photos and videos, and dedicated mobile application.



Set Up Process



- **ASP.NET MVC** - Web Interface
- **ASP.NET Web API** – Access to the database
- **Windows Service** – Alarm Messaging (email and SMS)

- **Azure App Service, SQL Server and Virtual Machine (cloud)** – Hosting web application, database and window service
- **C#** – Web Interface and Windows Service
- **Angular JS** – Web Interface