

# WISKI | Water Resources Data Management

develop a comprehensive understanding of your water data

Data analytics platform reveals actionable insights in water systems with modern interface, proven tools, flexibility, and industry expertise.

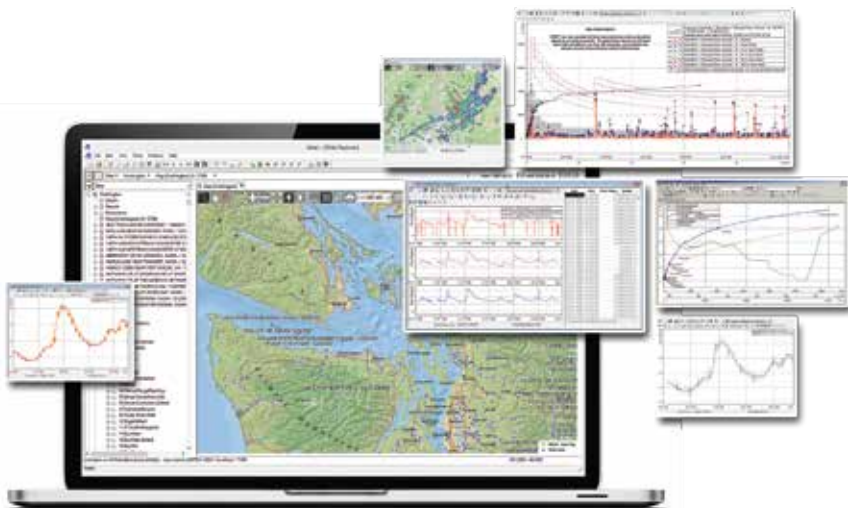
**WISKI\*** (Water Information Systems KISTERS) represents more than 25 years of experience developing software solutions for the water industry. Advanced technology enables time and cost savings in addition to decision support as high-quality data are processed by powerful statistical, analytical modeling and visualization tools.

## Applications

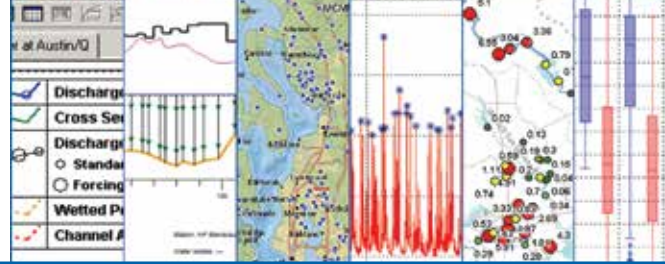
- Dam Safety and Hydropower Operations
- Drought Analysis and Planning
- Ecology and Environmental Impact
- Flood Management and Alarming
- Groundwater Construction and Production
- Irrigation and Water Distribution
- Meteorology and Climatology
- Surface Water Management
- Drinking Water, Wastewater and Recycled Water
- Water Quality Monitoring

## Specific Capabilities

- ✓ Automated Data Collection: Telemetry & Importing
- ✓ Discharge Measurement Analysis
- ✓ Rating Curve Development
- ✓ Spatial Data (GIS) Mapping
- ✓ Automated & Real-Time Alerts
- ✓ Water Quality Data Analysis & Reporting
- ✓ Ecological/Biological Sample Management
- ✓ Online Data Publishing and Information Sharing
- ✓ Standard and Customized Report Generation



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## Highlights and Features

[www.kisters.net](http://www.kisters.net)



### USER MANAGEMENT

- Enterprise software built on a n-tier client-server architecture.
- Secure data access controls through flexible and highly configurable administrative roles.
- Easily define author, publisher and user rights.
- Scalable from a single-user to hundreds of users.
- Full control over external access.
- Integrates with your existing LDAP system.
- Provides real-time access to staff and public users.



### DATA IMPORT/EXPORT

- Unlimited sites, stations, parameters and data storage.
- Automatic import of SCADA, GOES, CDEC, NWS, USGS data.
- Automated and user-configurable data import and export.
- Open architecture database structure (ODBC compliant) that responds to user-demands and user-defined templates.
- Drag and drop hot folders, email attachments and more.
- **Data loggers and sensors:** water level, flow, precipitation.
- **Telemetry:** telephone, mobile, satellite, internet, etc.
- **External sources:** control systems, GIS, databases, internet.
- **Flow measurement devices:** current meters, sensors, ADCP.
- **Manual capture:** PDAs and handhelds, web interfaces.
- **Historical data:** lists, archives, files, gauge charts.



### QA/QC

- Full range of validation, estimation and editing algorithms.
- Automated and user-configurable data import and export.
- 254 definable color-coded quality flags and an unlimited amount of standard remarks and comments.
- Automated data aggregation and load profiles.
- Available standard and user-defined QA/QC reports.
- User-friendly GUI with on screen editing and visualization.
- Data validation based on client and industry business rules.



### ANALYSIS AND MODELING

- **Time-Series:** Continuous Data Points, Continuous Totals, Continuous Directional Values, Aggregated Minimum, Aggregated Maximum, Aggregated Means, Aggregated Totals.
- **Time-Series Interpolation:** Non-Interpolatable, Linear Interpolatable, Constant Until Next Time Stamp, Constant Since Previous Time Stamp, Non-Interpolatable Linear Until Next Time Stamp, Linear Since Constant Until Next Time, Constant Since Previous Time Stamp.
- **Statistical Forecasts:** Artificial Neural Networks, Adaptive Logic Networks, (Neuro-) Fuzzy Logic, ARMA, ARIMA, ARIMAX and Kalman filtering methodologies.
- **Link-and-Node Model:** Directly links to external models such as USGS, USACE, EPA, or any in-house custom code.
- **Rating Curve Methods:** Interpolated Skeletal Points, Single Point Method with Spline Interpolation, Power Law Method with and Without Zero Offset, Power Law Method in Sections, Predefined Weir Functions (e.g. V-notch weir), Formula Editor for functions that can be defined freely.
- **Graphs:** Time dependent (time-series), Reservoir Inflow, Reservoir Outflow and Precipitation, Deformation Graphs, Parameter In-Dependent Graphs, Stage Discharge Curve, Precision and Uncertainties Plots, Box Whisker Plots, Tiefen-Plots, etc.



### REPORTING

- Interactive report designer offers rapid visualization of WISKI graphs including: True-to-Scale Structural Illustrations, Confidence Interval Plots and Vertical Profiles.
- Quickly customize reports using KiScript scripting language.
- Pick from a range of standard fixed reports including: Annual/Monthly Lists, Daily Mean and Long Term reports.
- Predefined water quality reports include: WQM Exceedance Report, WQM Parameter Report and WQM Station Report.



### ONLINE DATA SHARING

- Publish real-time hydrological data via the Internet.
- Display data using industry-standard GIS software including ESRI ArcGIS, Google Maps, Google Earth or Bing Maps.
- Supported XML Exchange Formats include WaterML 1.0/2.0, SOS, WaterOneFlow, WMS, WFS.
- Supported Formats: ASCII, HTML, CSV, XLS, JSON, GeoJSON and PNG/JPG.
- KiWIS Module based on web services for web publishing.
- Integrates with KISTERS time-series archives.



### SYSTEM REQUIREMENTS

- **Client Software:** MS Windows 7 (32bit & 64bit), Windows 8 (32bit & 64bit), MS Excel 2000 or higher, network card with 100 Mbit.
- **Application Server Software:** MS Windows 2008 Server R2 (64bit), MS Windows 2012 Server R2 (64bit).
- **Database Software:** Oracle 11gR1, Oracle 12cR1, Oracle 11gR2, Oracle 11gR2 Enterprise Edition with Partitioning.
- **Client Hardware:** PC with Intel/AMD Double Quad Core or higher, 2 GB available RAM, 5 GB free hard disk space.
- **Application Server Hardware:** Multi processor system, 32-64 GB RAM, Raid 10 hard drive, 200 GB free disk space, network card (1000 MBit).
- **Database Hardware:** Multi processor system, 32-64 GB RAM, Raid 10 hard drive, 200 GB free disk space, network card (1000 MBit).

Based on recommended system requirements. Please inquire for more information.