

PREDICTIVE COMPLIANCE SOFTWARE FOR WATER.

AqMB Prophet™

incorporates predictive analytics using the integrated AqMB Designer™ software to create a digital twin.

Integrated securely with SCADA, IoT instrumentation and climatic data, AqMB Prophet™ predicts water quality and advises the operator on plant performance and how to prepare for compliance.

Key features

AqMB Prophet™ allows you to prepare for the future by predicting performance outcomes for equipment and water quality.

- Simple to use, with real time model updates to changes in feed quality, flow and temperature
- Machine learning to predict feed water quality changes based on climatic data and other variables
- Equipment variables such as changing pressures and conductivities update the model when syncing with SCADA
- Zero negative impact to plant security, one-way SCADA sync via Wi-Fi Direct™ on isolated network
- Visually forecast 'red flags' or potential compliance or performance exceedances
- Anticipate equipment performance decline through: scaling, oxidation, fouling, poor feed water quality, high flux, high solids, low flow etc.
- Choose to automatically take preventative action through SCADA, adjust equipment parameters manually or simply monitor
- Preserve equipment and stay compliant by identifying potential errors before they happen
- Automated compliance and forecast reports

Why choose AqMB Prophet™ ?

FLEXIBLE CONTRACT	TECHNICAL SUPPORT	USER TRAINING	CUSTOM MODEL CONFIGURATION	ACCURATE RESULTS	LIVE PERFORMANCE FORECASTS	CYBER SECURE SOLUTION
✓	✓	✓	✓	✓	✓	✓



AqMB Prophet™ forecasts events which allows plant owners to fix problems before they occur.

Users can determine upcoming changes in feed water quality / quantity and weather conditions via machine learning to predict impacts to equipment within the treatment plant and the resulting discharge water quality.

AqMB Prophet™ has been developed by process engineers with extensive experience in troubleshooting water treatment plants and is supported by trained process consultants through reputable channel partners.



AqMB™

simulating water solutions

Contact us for pricing on your application at support@aqmb.net or view more information at

www.aqmb.net

Using deterministic modeling and machine learning for calibration, the AqMB Designer™ user interface creates a digital twin of any treatment plant for performance forecasting and breach avoidance.

The seamless integration between AqMB Designer and AqMB Prophet leads to calibrated forecasting on customized model flow sheets. These models can be easily reconfigured when changing process consumables or revising equipment or plant design.

AqMB Prophet™ is for operators of existing treatment plants and the process consultants supporting these operations.

CONFIGURE
FLOW SHEET
DESIGN FOR
PLANT



**SYNC &
UPDATE**
SCADA
PARAMETERS &
CLIMATIC
DATA



ANALYZE
MODEL
FORECAST



**AUTOMATED
REPORTING & EASY
EXPORT**
EQUIPMENT PERFORMANCE
& COMPLIANCE FORECAST
REPORTS



Configure flow sheet

Have our process engineers or one of our channel partner consultants setup a working model of your existing treatment plant using AqMB Designer™.

Determine the plant data and feed water quality parameters to be synced and the frequency to update the configured model.

Maintain your model results exclusively behind a firewall on your own infrastructure.

Predict performance and compliance

One-way secure sync with SCADA occurs automatically before each model run. Predicted results are displayed on a web page in an interactive color flow sheet that can be integrated with your existing system. Valuable forecast insights include:

- *Water Quality Compliance* - forecast treated water parameter values or conditions that may compromise equipment warranty, availability or license to operate
- *Bottlenecks* - find and prevent process flow bottlenecks throughout the plant
- *Equipment Performance* - avoid adverse operating conditions before performance decline

Analyze model results

Click on each unit operation for detailed results including critical process parameters, stream properties, chemical speciation and precipitated solid species.

Equipment with potential problem areas are colored in red. Threshold exceedances for critical process parameters or compliance limits are also highlighted in red.

Easily make notes on-screen for any unit operation which are then highlighted for review and email the team for action.

Take action

Once you've identified the errors, take preventative action which could include the following:

- optimize operating recovery
- revise chemical dosing
- schedule and specify cleans
- push back membrane replacement

Specific actions can also be integrated to occur automatically through your SCADA system.

Export, report, comply

AqMB Prophet™ lets you automatically export your forecast report into easy-to-share formats for compliance reporting, budget forecasts, plant performance reports.

Automated forecast reports

Configure automated performance & compliance forecast reports in .pdf, .xls or .doc highlighting the impact on equipment performance, chemical and power consumption as well as unplanned equipment downtime or potential license issues.