

OBSForecasting — Flood Forecasting Platform

What it does: OBSForecasting is a free, public-access early warning tool that predicts river water levels up to 7 days ahead using real-time sensor data and weather forecasts. It is designed to help communities and decision-makers in flood-prone areas prepare for potential flooding events.

How it works: Every hour, the system automatically collects water level and rainfall data from Obscape devices deployed in the eThekweni Municipality monitoring network, downloads rainfall predictions from multiple global weather models, and runs a site-specific prediction model to forecast where the river level is heading. Flood warnings are displayed automatically when predictions exceed a configurable threshold.

Key Features

- **Hourly automated forecasts** — predictions update every hour with no manual intervention
 - **Multiple weather models** — rainfall predictions from leading global agencies provide a range of possible outcomes
 - **Flood warnings** — colour-coded alerts (green / yellow / red) when predicted water levels exceed the flood threshold
 - **Two views:**
 - *Lite View* — a clean, quick-glance forecast designed for community users
 - *Full Dashboard* — a detailed view with historical data, per-model comparisons, statistics, and forecast accuracy tracking
 - **Mobile app** — installable on Android and iOS home screens for quick access, like a native app
 - **Lightweight** — loads quickly even on slow mobile connections
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How to Use It

1. **Open the site** — visit the OBSForecasting website in any web browser (phone, tablet, or desktop). No login is required.
2. **Choose a river** — the home page shows a card for each monitored river with its current flood status. Tap a card to view the forecast.
3. **Read the forecast** — the chart shows predicted water level (amber line) and predicted rainfall (amber bars) over the coming days. A “Now” marker separates measured past data from predictions.

4. **Check flood status** — a status message below the chart header tells you whether flooding is predicted. If it is, a warning banner appears with details including the predicted peak level and timing.
 5. **Explore further** — tap “Full Dashboard” for observed history (up to 90 days), individual weather model comparisons, rainfall and water level statistics, and a forecast accuracy table showing how reliable predictions have been at different time horizons.
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Setting a Flood Threshold

Enter a water level (in metres) in the threshold input box on either view. When predictions exceed this level, flood warnings are triggered. Your setting is saved on your device and persists between visits. A default threshold (3× the historical average level) is used until you set your own.

Installing on Your Phone

Android: Visit the site in Chrome → tap the three-dot menu → “Install app” **iPhone:** Visit in Safari → tap the Share button → “Add to Home Screen”

The app opens full-screen without the browser address bar and caches pages for faster loading.

Currently Monitored Sites

River	Level Gauge	Rain Gauge
Mzinyathi River	Mzinyathi River Level Gauge	Ntathakusa Reservoir Rain Gauge
Palmiet River	Birdhurst Level Gauge	Pinetown Club Lane Rain Gauge

Additional sites can be added as monitoring stations become available — each new site requires only a river level gauge and a rain gauge within the catchment.

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Water level predictions are generated by automated models and are provided for informational purposes only. Always refer to official warnings from the South African Weather Service (SAWS) and local authorities for emergency guidance.