

Water Quality Analysis Report

Maharashtra Water Quality Monitoring System

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Location: Godavari River - Aurangabad

File Analyzed: test_water_quality.csv

Executive Summary

This report provides a comprehensive analysis of water quality parameters based on uploaded data. The analysis includes 60-day predictions, risk assessment, trend analysis, and actionable recommendations.

Overall Risk Level: MEDIUM

Risk Score: 55/100

Trend: Stable

Critical Factors: 1

Risk Assessment

■ MODERATE RISK (Score: 55.0/100)

Some parameters are outside optimal ranges. While not immediately dangerous, conditions should be monitored closely. Preventive measures recommended to avoid escalation to higher risk levels.

Risk Factors

Parameter	Level	Score	Current Value	Description
Turbidity	CRITICAL	0.0	11.41	Turbidity critically exceeds maximum safe limit.
Dissolved_Oxygen	MEDIUM	0.0	6.90	Dissolved_Oxygen shows high variability.
Conductivity	LOW	0.0	453.01	Conductivity is within acceptable limits.
Temperature	LOW	0.0	23.43	Temperature is within acceptable limits.

60-Day Predictions

AI-powered predictions for the next 60 days (8 weeks) show trends for all monitored parameters. Predictions are based on historical data patterns and statistical modeling.

Parameter	Current	Week 4	Week 8	Trend	Confidence
BOD	0.60	3.63	3.38	Stable	84%
Conductivity	386.50	448.17	442.75	Stable	84%
Dissolved_Oxygen	9.50	6.95	7.31	Stable	84%
Fecal_Coliform	70.00	220.35	227.34	Stable	84%
Nitrate	0.60	2.63	2.82	Stable	84%
Temperature	21.70	22.62	22.02	Stable	84%
Turbidity	3.90	5.50	5.50	Stable	84%
pH	8.20	8.00	8.19	Stable	84%

Trend Analysis

■ STABLE CONDITIONS

Water quality remains relatively stable. 3/8 parameters show minimal change.

Recommendations

Medium Priority Actions

- 1. Enhanced Monitoring Program** - Implement comprehensive monitoring to track water quality trends and early warning signs.
- 2. Upgrade Treatment Infrastructure** - Current treatment capacity may be insufficient for maintaining consistent water quality.

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