

# Water Quality Analysis Report

Maharashtra Water Quality Monitoring System

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## 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 saf...
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	3.48	3.45	Stable	84%
Conductivity	386.50	447.56	438.84	Stable	84%
Dissolved_Oxygen	9.50	6.96	6.99	Stable	84%
Fecal_Coliform	70.00	229.21	245.21	Stable	84%
Nitrate	0.60	2.93	3.21	Stable	84%
Temperature	21.70	22.74	22.07	Stable	84%
Turbidity	3.90	5.50	5.50	Stable	84%
pH	8.20	8.05	8.13	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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