



Evidence UI GreenMetric Questionnaire



University : Songkhla Rajabhat University
Country : Thailand
Web Address : www.skru.ac.th

[3] Waste (WS)

[3.17] Sewage Disposal (WS.6)





Recycling Program for Songkhla Rajabhat University (Songkhla, Thailand)



Water quality monitoring at Songkhla Rajabhat University

Description:

The wastewater treatment system of Songkhla Rajabhat University was aeration system which treated technically for reuse wastewater. Songkhla Rajabhat University implements a comprehensive water quality management program to ensure that wastewater and surface water within the campus are effectively monitored and maintained. Regular water quality assessments are conducted at the Environmental Learning Center to evaluate the effectiveness of water treatment processes and to support sustainable environmental management.

The university routinely monitors key water quality parameters, including Dissolved Oxygen (DO), pH, Ammonia (NH₃), Nitrite (NO₂⁻), Salinity, and Water Depth. Water samples are collected from the surface, middle, and bottom layers of the water body to ensure representative monitoring of overall water conditions.

Water Quality Analysis Results

The monitoring results indicate the following:

Parameter	Before Treatment	After Treatment
Dissolved Oxygen (DO)	6.0–9.0 mg/L	1.5–2.0 mg/L
pH	3.0–6.5	6.5
Ammonia (NH ₃)	0 mg/L	0 mg/L
Nitrite (NO ₂ ⁻)	0 mg/L	0 mg/L
Salinity	35 ppt	28 ppt
Water Depth	2.8 m	3.0–3.5 m

Interpretation of Results**Dissolved Oxygen (DO)**

Before treatment, DO concentrations ranged from approximately 6.0 to 9.0 mg/L, indicating relatively good oxygen availability in the water column. After treatment, DO levels decreased to approximately 1.5–2.0 mg/L. This reduction may indicate oxygen consumption during biological treatment processes or increased microbial activity. Additional aeration may be required to improve dissolved oxygen concentrations.

pH

The pH values before treatment ranged from 3.0 to 6.5, indicating acidic conditions in some sampling locations. After treatment, the pH stabilized at approximately 6.5, which is closer to the acceptable range for aquatic ecosystems and demonstrates improved water quality.

Ammonia (NH₃)

Ammonia concentrations were not detected (0 mg/L) in all samples before and after treatment, indicating the absence of significant nitrogen pollution from organic waste sources.

Nitrite (NO₂⁻)

Nitrite concentrations remained at 0 mg/L throughout the monitoring period, suggesting efficient nitrogen cycling and low risk of toxic nitrite accumulation.

Salinity

Salinity decreased from approximately 35 ppt to 28 ppt after treatment. This reduction may be associated with dilution effects or improved water management practices within the system.

Water Depth

Water depth increased from approximately 2.8 m to 3.0–3.5 m, indicating improved water retention and storage capacity within the monitored area.