

## Assessment of Long-Term Changes in Surface Water Quality in the Almaty Water Body System

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**Abstract :** The article is devoted to monitoring the state of surface water quality in four water bodies, including three rivers (Kishi Almaty, Yessentai, and Ulken Almaty) and one lake (Ulken Almaty), on nine routes. Monitoring covers the period from 2013 to 2024 and also analyzes changes in water quality depending on time and factors affecting its composition. The study analyzed 31 physical and chemical parameters, including water temperature, dissolved oxygen, hydrogen index, suspended solids, transparency, salt composition ions, biogenic and organic substances (including nitrogen, phosphorus, iron, petroleum products, phenols, BPC5 and COD), as well as heavy metals. Monitoring results allow us to identify trends in the quality of water bodies and assess their suitability for use in various fields, including recreation, irrigation, industry, and water supply.

**Keywords :** water resources, water quality monitoring, surface waters, Kishi Rivers Almaty, Yessentai, Ulken Almaty, Ulken Lake Almaty, physical and chemical indicators, biogenic substances, heavy metals, environmental monitoring

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