

[P15] Construction of an interactive web map of City of Cape Town surface water quality monitoring using R and Leaflet.

Michael Silberbauer¹

¹ 38 Hillside Road, Fish Hoek, 7975, South Africa.

Michael.Silberbauer@gmail.com

This poster describes a programmatically generated interactive web map that visualises the surface water quality monitoring data published in text form on the City of Cape Town's website. The map provides an inventory of water quality results for samples from the City of Cape Town inland waters, which can benefit interested members of the public and researchers. The program was developed in R to extract the data from the City's raw files and compile an interactive map, using Leaflet, to view the sites, colour-coded and with selectable links to time-series plots of the data. Users can see an overview of water quality in streams and wetlands in the City of Cape Town area, focus on systems of interest, examine the water quality at sites, or compare sites in the system. Views of the data at different scales and detail provide insights into spatial and temporal distributions of pollution levels. The system also aids comparison with features on the map, such as potential pollution sources, to provide further insights. Overall, this interactive web map provides a customisable tool for exploring the surface water quality monitoring data collected by the City of Cape Town.