

Package: floodchlorinationsurvey (via r-universe)

October 3, 2026

Title USAID Flood Response Rehabilitation and Chlorination Survey

Version 0.1.0

Description This R package provides tools for analyzing and visualizing data from the USAID Flood Response Rehabilitation and Chlorination Survey conducted in Mulanje, Malawi (2019–2020). It includes functions to assess handpump component replacements, evaluate changes in functionality before and after rehabilitation, and identify common repair trends using mWater-collected data.

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Depends R (>= 3.5)

LazyData true

Language en-GB

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URL <https://github.com/openwashdata/floodchlorinationsurvey>

BugReports <https://github.com/openwashdata/floodchlorinationsurvey/issues>

Repository <https://openwashdata.r-universe.dev>

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USAID Flood Response Rehabilitation and Chlorination Survey

Description

This dataset is from the USAID Flood Response Rehabilitation and Chlorination Survey, conducted between 2019 - 2020, to assess and rehabilitate flood-affected boreholes in Malawi. Using the mWater, data collectors captured detailed information on the condition of handpumps, their components, water safety risks, and the impact of chlorination and repairs. The survey was part of an emergency response initiative to restore access to safe drinking water following flood events.

Usage

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Format

A tibble with 328 rows and 118 variables

submitted_on Date when the data was submitted

water_point_name Name of the water point

latitude Latitude coordinate of the water point

longitude Longitude coordinate of the water point

chlorination_rehab_date Date chlorination or rehabilitation was conducted

community_mobilised Indicates whether the community was mobilized for support

functional_status_before Functional status of the water point before intervention

rating_bolts_nuts Condition rating of bolts and nuts

rating_compression_cone Condition rating of the compression cone

rating_cylinder Condition rating of the cylinder

rating_flapper Condition rating of the flapper

rating_footvalve_bobbin Condition rating of the footvalve bobbin

rating_footvalve_body Condition rating of the footvalve body

rating_footvalve_oring Condition rating of the footvalve O ring

rating_fulcrum_pin Condition rating of the fulcrum pin

rating_fulcrum_bearings Condition rating of the fulcrum pin bush bearings

rating_handle Condition rating of the pump handle

rating_hanger_pin Condition rating of the hanger pin

rating_hanger_bearings Condition rating of the hanger pin bush bearings

rating_head_bolt Condition rating of the head bolt

rating_plunger_bobbin Condition rating of the plunger bobbin
rating_plunger_body Condition rating of the plunger body
rating_plunger_useal Condition rating of the plunger U seal
rating_pump_head_case Condition rating of the pump head case
rating_pump_head_cover Condition rating of the pump head cover
rating_rising_main Condition rating of the rising main pipe
rating_rising_centralisers Condition rating of rising main centralisers
rating_rods Condition rating of connecting rods
rating_rod_centralisers Condition rating of rod centralisers
rating_rodhanger Condition rating of the rod hanger
rating_rope Condition rating of the rope
rating_socket Condition rating of the socket
rating_steel_cone Condition rating of the steel cone
rating_top_sleeve Condition rating of the top sleeve
rod_count Number of rods in the borehole
broken_parts_fished_out Indicates whether broken parts were retrieved from the borehole
broken_parts_comments Comments on the broken parts retrieved
silt_observed Presence of silt on parts (Yes/No)
corrosion_observed Presence of corrosion on parts (Yes/No)
slime_observed Presence of slime buildup on parts (Yes/No)
rising_main_length_m Length of the rising main pipe in meters
rope_attached Indicates whether a rope was attached to the rising main
photos_of_removed_parts URLs or filenames of photos showing removed parts
pedestal_condition General condition of the pedestal
pedestal_firm Is the pedestal held firmly in place?
photos_of_civil_work URLs or filenames of photos showing surrounding infrastructure
latrines_within_30m Presence of latrines within 30m of the water point
latrines_within_100m Presence of latrines within 100m of the water point
cemetery_within_30m Presence of cemetery within 30m
waste_dumps_within_30m Presence of waste dumps within 30m
difficult_access_by_car Whether the site is difficult to reach by car
chlorination_done Indicates whether chlorination was conducted
parts_chlorinated Indicates whether the parts were chlorinated
parts_chlorinated_unknown TRUE if unsure whether parts were chlorinated
borehole_depth_m Total depth of the borehole in meters
water_depth_m Depth of water in the borehole in meters
chlorine_water_buckets Number of 20L buckets of chlorine-treated water used

hth_dissolved_properly Whether 1g of HTH was dissolved for every 20L of water

chlorinated_parts_installed Were chlorinated parts reinstalled after treatment?

replaced_rising_main_length_m Length of rising main pipe replaced (m)

replaced_rod_count Number of rods replaced

replaced_bolts_nuts_tick TRUE if bolts and nuts were replaced

replaced_bolts_nuts_count Number of bolts and nuts replaced

replaced_compression_cone_tick TRUE if compression cone was replaced

replaced_compression_cone_count Number of compression cones replaced

replaced_cylinder_tick TRUE if cylinder was replaced

replaced_cylinder_count Number of cylinders replaced

replaced_flapper_tick TRUE if flapper was replaced

replaced_flapper_count Number of flappers replaced

replaced_footvalve_bobbin_tick TRUE if footvalve bobbin was replaced

replaced_footvalve_bobbin_count Number of footvalve bobbins replaced

replaced_footvalve_body_tick TRUE if footvalve body was replaced

replaced_footvalve_body_count Number of footvalve bodies replaced

replaced_footvalve_oring_tick TRUE if footvalve O-ring was replaced

replaced_footvalve_oring_count Number of O-rings replaced

replaced_fulcrum_pin_tick TRUE if fulcrum pin was replaced

replaced_fulcrum_pin_count Number of fulcrum pins replaced

replaced_fulcrum_bearings_tick TRUE if fulcrum bearings were replaced

replaced_fulcrum_bearings_count Number of fulcrum bearings replaced

replaced_handle_tick TRUE if handle was replaced

replaced_handle_count Number of handles replaced

replaced_hanger_pin_tick TRUE if hanger pin was replaced

replaced_hanger_pin_count Number of hanger pins replaced

replaced_hanger_bearings_tick TRUE if hanger bearings were replaced

replaced_hanger_bearings_count Number of hanger bearings replaced

replaced_head_bolt_tick TRUE if head bolt was replaced

replaced_head_bolt_count Number of head bolts replaced

replaced_plunger_bobbin_tick TRUE if plunger bobbin was replaced

replaced_plunger_bobbin_count Number of plunger bobbins replaced

replaced_plunger_body_tick TRUE if plunger body was replaced

replaced_plunger_body_count Number of plunger bodies replaced

replaced_plunger_useal_tick TRUE if plunger U-seal was replaced

replaced_plunger_useal_count Number of U-seals replaced

replaced_pump_head_case_tick TRUE if pump head case was replaced

replaced_pump_head_case_count Number of pump head cases replaced
replaced_pump_head_cover_tick TRUE if pump head cover was replaced
replaced_pump_head_cover_count Number of pump head covers replaced
replaced_rising_main_tick TRUE if rising main pipe was replaced
replaced_rising_main_count Number of rising main pipes replaced
replaced_rising_centralisers_tick TRUE if rising main centralisers were replaced
replaced_rising_centralisers_count Number of centralisers replaced
replaced_rods_tick TRUE if rods were replaced
replaced_rods_count Number of rods replaced
replaced_rod_centralisers_tick TRUE if rod centralisers were replaced
replaced_rod_centralisers_count Number of rod centralisers replaced
replaced_rodhanger_tick TRUE if rodhanger was replaced
replaced_rodhanger_count Number of rodhangers replaced
replaced_rope_tick TRUE if rope was replaced
replaced_rope_count Number of ropes replaced
replaced_socket_tick TRUE if socket was replaced
replaced_socket_count Number of sockets replaced
replaced_steel_cone_tick TRUE if steel cone was replaced
replaced_steel_cone_count Number of steel cones replaced
replaced_top_sleeve_tick TRUE if top sleeve was replaced
replaced_top_sleeve_count Number of top sleeves replaced
functionality_after Functional status of the water point after intervention
time_to_fill_20l_bucket Time (in seconds) it took to fill a 20L bucket
strokes_to_yield_water Number of strokes required to yield water from the pump

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* **datasets**

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