

DROUGHT INFORMATION FOR CANYON RESERVOIR



The goal of GBRA's drought contingency plan (DCP) is to extend the current water supply in Canyon Reservoir for essential uses as the current drought persists. This information provides context for past and current drought impacts to reservoir levels.

GBRA'S ROLE AS A WHOLESALE WATER SUPPLIER

GBRA is a regional wholesale water supplier utilizing Canyon Reservoir to provide water to more than 30 municipalities, districts, utilities, and industrial entities across the Guadalupe River basin.

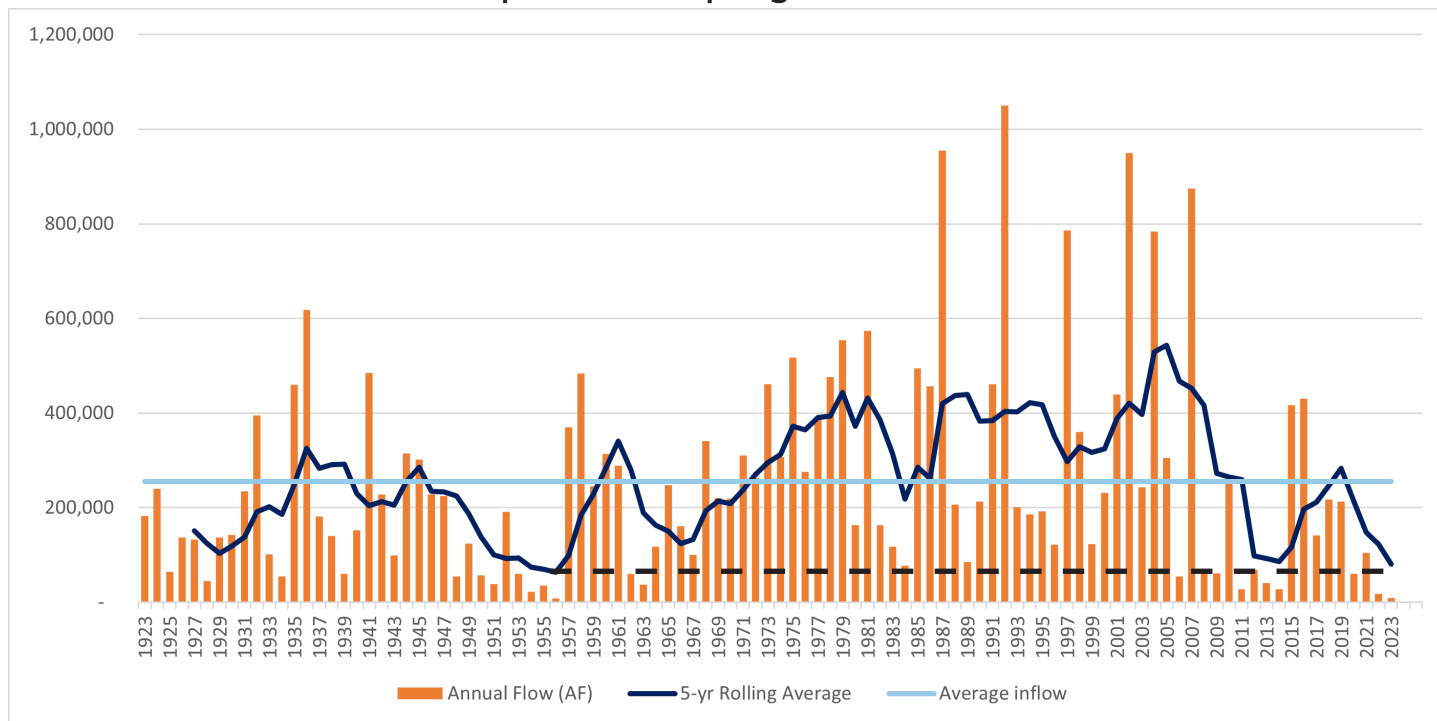
DROUGHT IMPACT AND CANYON RESERVOIR LEVELS

- The upper Guadalupe watershed above Canyon Reservoir has been in drought conditions for 4 out of the 5 past years.
- Despite three years of significant drought in the watershed above Canyon Reservoir, the lake maintains over 50% of its conservation storage.

Historic Drought Comparison

- 2022 and 2023 have been the driest consecutive two year period in the Upper Guadalupe River during the last century.
- The graph below uses a 5-year rolling average inflow to represent the severity of long-term drought in the Upper Guadalupe River. This data shows that while the lowest 5-year average flow occurred during the drought in the 1950s, the current drought is approaching similar levels.

Guadalupe River at Spring Branch 1923-2023

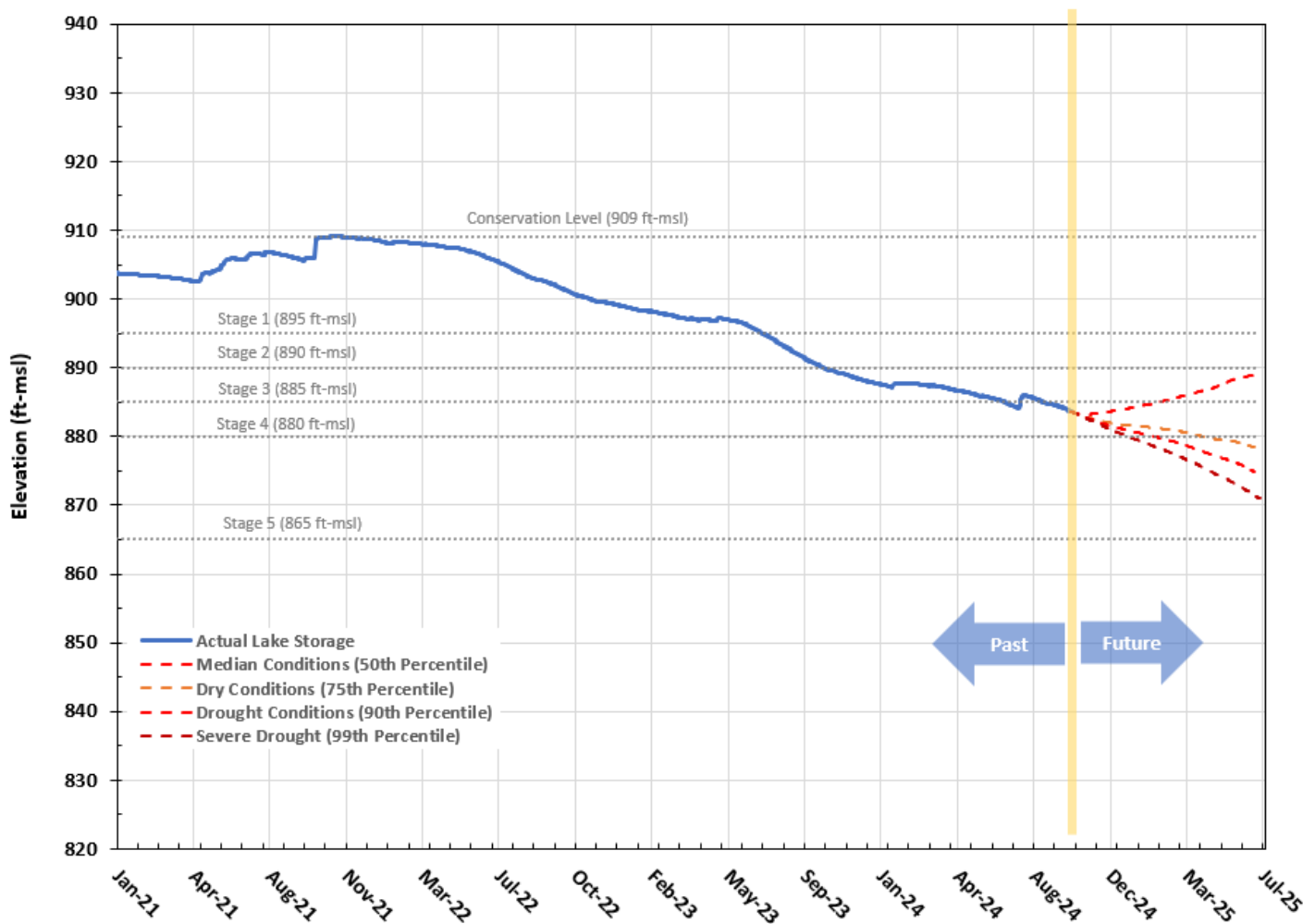


Inflows to Canyon

- The Guadalupe River inflow into Canyon Reservoir is measured at the USGS Spring Branch gauge which is located on the Guadalupe River just downstream of the Highway 281 bridge.
- The average annual flow at Spring Branch has been 254,972 acre-feet over the 100-year period that data has been collected.
- 2022 and 2023 recorded extremely low inflows into Canyon Reservoir, making them the 2nd (18,245 acre-feet) and 3rd (8,838 acre-feet) lowest years on record for the Spring Branch gauge on the Guadalupe River.
- The Guadalupe River at Spring Branch was completely dry for 108 days in 2022 and for 134 days in 2023, so no water was flowing into Canyon Reservoir during these time periods.

STAGE 4 WATER SHORTAGE RESPONSE

- Stage 4 of GBRA's DCP is initiated when the water level drops below 880 msl for 30 consecutive days (approximately 49% capacity).
- During Stage 4, a 15% pro-rata curtailment of contracted wholesale water supplies from Canyon Reservoir is implemented.
- The Curtailment Plan is developed by the wholesale customer and outlines the measures to be implemented in order to achieve the required stage reduction.



IMPACT OF DROUGHT ON GROUNDWATER SUPPLIES

- The Edwards Aquifer Authority (EAA) regulates groundwater pumping from the Edwards Aquifer. EAA has been in a Critical Management Period and enforcing various degrees of reductions based on aquifer levels and spring flows since mid-2022.

