Lake Mead Storage and Water Conservation Accounts Plots

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July 23, 2024

Description

This is an R Markdown document. This document shows a plot of Lake Mead Storage, Water Conservation Program Account Balances, anticipated Lake Mead storage if the water conservation program did not exist, and reservoir protection elevation.

Within the Colorado River basin, the Lake Mead water conservation program is called Intentionally Created Surplus (ICS) program for Lake Mead. This program is defined in the 2007 Interim Guidelines and 2019 Drought Contingency Plans (Reclamation, 2007; 2019).

In the voluntary conservation program, states reduce use from their historical allocations, leave the conserved water in Lake Mead, and withdraw the conserved water at a future date under certain restrictions.

Figures

Figure 1. A stacked area plot of Lake Mead storage shows the division between Lake volume, water conservation account balances, anticipated storage absent the water conservation program, and protection volume.

Data Sources

1. Storage elevation curve for Lake Mead: Colorado River Simulation System (Wheeler et al 2019). MeadDroughtContingencyPlan.xlsx.

2. Lake Mead Storage read in from USBR Application Programming Interface (API). https://www.usbr.gov/lc/region/g4000/riverops/_HdbWebQuery.html # # API query - https://www.usbr.gov/pn-bin/hdb/hdb.pl?svr=lchdb&sdi=1776%2C2091%2C1721%2C1874&tstp=MN&t1=2022-01-01T00:00&t2=2024-05-01T00:00&table=R&mrid=0&format=html

3. Lake Mead conservation account balances: USBR (2023). "Boulder Canyon Operations Office - Program and Activities: Water Accounting Reports". https://www.usbr.gov/lc/region/g4000/wtracct.html. These annual reports are aggregated in the Excel file IntentionallyCreatedSurplus-Summary.xlsx.

Requested Citation

David E. Rosenberg (2024), "Lake Mead Storage and Water Conservation Account Balances: ." Utah State University. Logan, Utah. https://github.com/dzeke/ColoradoRiverCollaborate/tree/main/LakeMeadWaterConservationProgramAnalysis/LakeMeadStorageICS

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Figure 1. Lake Mead Storage, Water Conservation Account Balances, and anticipated Lake volume absent the water conservation program