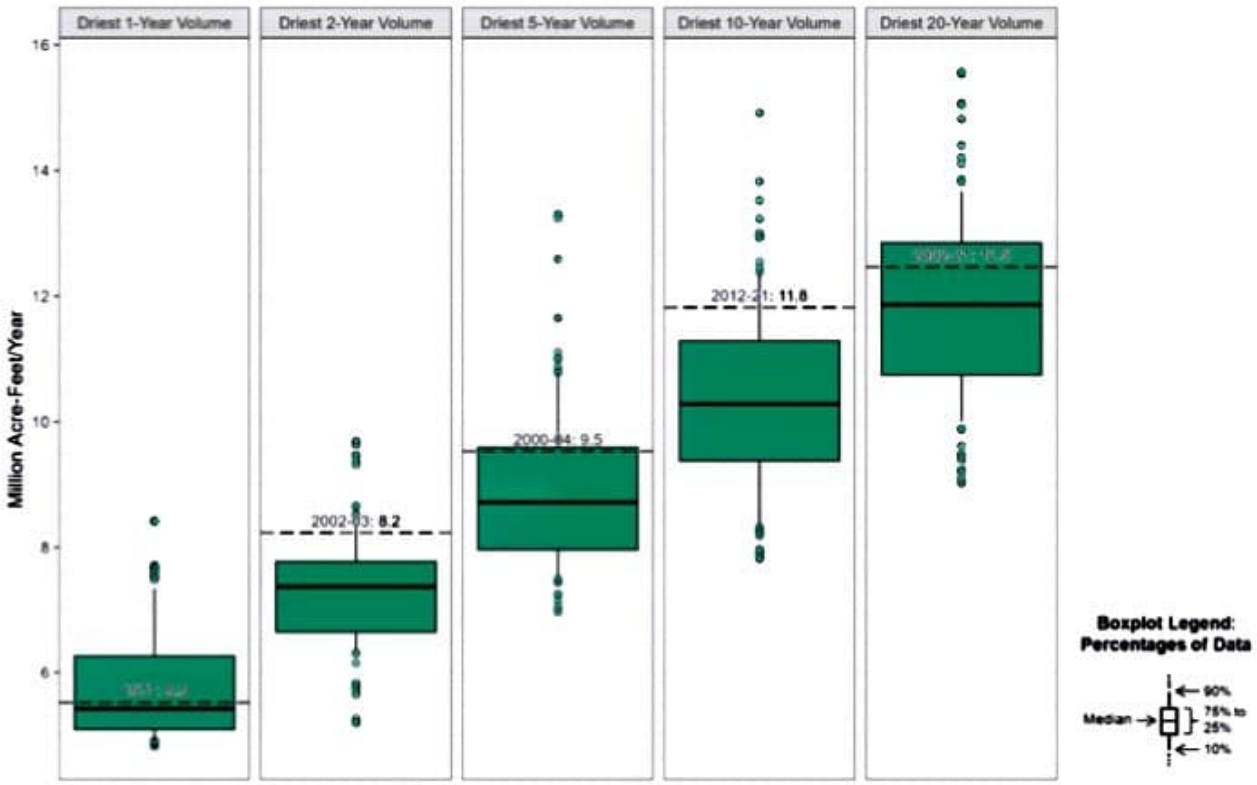
Figure 3-6
Key Statistics for the Drying with Variability Ensemble



The purpose of describing the narrative, underlying data, and statistics of the Drying-with-Variability ensemble in the introduction to DMDU figures is to highlight that vulnerability bar plots provide a large amount of information that allows readers to use their judgment in determining the likelihood of negative resource impacts. The vulnerability bar plots combine information about the conditions in which each alternative is vulnerable, historical context, and the potential for a drier future.

3.2.7 Salton Sea

During scoping, Reclamation received comments requesting analysis of impacts on the Salton Sea. The Salton Sea is a terminal lake in Riverside and Imperial Counties, California. Salton Sea elevations are influenced by runoff from the surrounding Imperial Valley and Coachella Valley watersheds, as well as agricultural drainage from the IID and CVWD. As explained below, analysis of impacts on the Salton Sea is not included in this EIS.

The Salton Sea acts as a terminal sump for agricultural drainage; therefore, reductions in agricultural runoff could impact Salton Sea elevations, which, in turn, could impact air quality and shoreline wildlife habitat. Agriculture in the IID and CVWD service areas, as well as smaller non-agricultural uses, are sustained by Colorado River water diverted at the Imperial Dam and delivered via the All American and Coachella Canals. In recent years, total diversions of Colorado River water were approximately 2.8 maf per year at the Imperial Dam (California Natural Resources Agency 2024).

Over the past 20 years, inflows to the Salton Sea have declined from 1.3 maf per year to approximately 1.1 maf per year (California Natural Resources Agency 2024), primarily related to California's reduced usage of Colorado River water due to the prolonged drought in the Basin and changing agricultural practices, including implementation of water conservation programs.

The California Natural Resources Agency established the Salton Sea Management Program (SSMP) to oversee restoration efforts at the Salton Sea. Currently, the SSMP is working with local, state, tribal, and federal partners to implement the first phase of habitat restoration projects to establish at least 14,900 acres of aquatic habitat and up to 14,900 acres of vegetated habitat by the year 2028 (USACE 2024). Additionally, the SSMP released a long-range plan to address future recession of the Salton Sea beyond the year 2028 (California Natural Resources Agency 2024). The goal of the plan is to protect or improve air quality, water quality, and wildlife habitat to prevent or reduce health and environmental consequences anticipated from the long-term recession of the Salton Sea shoreline (California Natural Resources Agency 2024).

Given that inflows into the Salton Sea depend on a highly managed system, subject to growing water demands, and uncertain weather patterns and water polices, the SSMP used a range of projected annual net inflows to the Salton Sea: (1) high probability of inflow at 889,000 af, (2) low probability inflow at 684,000 af, and (3) very low probability at 444,000 af. These flows are used to project the future baseline of the Salton Sea and the restoration needs. The SSMP's long-range plan specifically acknowledges the uncertainty around policy decisions on this Colorado River Post-2026 process and is a reason for using a range of net inflows.

The SSMP's long-range plan is informing the scope of the Imperial Streams and Salton Sea Ecosystem Restoration Feasibility Study and NEPA compliance that the USACE is currently preparing. Once that process is complete, state and federal funding will be pursued to support the resultant design and construction of restoration projects, beginning around 2028.

For this Post-2026 process, Reclamation's action is to develop operational guidelines for the storage and release of water through Lake Powell at Glen Canyon Dam and Lake Mead at Hoover Dam. Reclamation's contracts with IID and CVWD do not provide Reclamation with the discretion to determine how individual water users within these districts use or allocate their water resources, including user decisions to participate or not participate in conservation programs.

Any reductions of Colorado River water available for diversion at the Imperial Dam for use by IID and CVWD could result in less available water for agriculture and, depending on the conservation activity or how the reduction would be implemented, subsequent drainage to the Salton Sea. While Reclamation cannot control Basin hydrology, there could be policy decisions that result in shortages. The alternative that would result in the largest possible shortage for IID and CVWD would be the Enhanced Coordination Alternative, with a maximum shortage of 3.0 maf, which is modeled as being distributed pro rata. A pro rata distribution under this alternative would result in a hypothetical maximum shortage to IID and CVWD of about 925,930 af for a minimum diversion amount from Imperial Dam of about 1.8 maf. Under this scenario, the resultant inflow to the Salton Sea would be about 783,000 af, which is within the range used by the SSMP long-range plan.

In summary, analysis of impacts on the Salton Sea are not included in this EIS for the following reasons:

1. Any resultant impacts are within the scope and range of inflows being considered in the SSMP's long-range plan and the USACE's ongoing NEPA process. While any resultant impacts on the Salton Sea may be accelerated by Post-2026 policies, the overall magnitude of impacts would not change.
2. Reclamation does not control the end use and management of delivered or conserved water. As such, Reclamation has no management authority over inputs to the Salton Sea, and Reclamation has no enforcement authorities over the Salton Sea. The State of California, IID, and CVWD have their own authorities not controlled by Reclamation. Reclamation would need new authorities and compliance to implement any policies that change how water shortages are distributed to IID and CVWD.[9]

3.3 Hydrologic Resources

3.3.1 Affected Environment

Overview and Study Area

This section summarizes the Basin's hydrology from the full pool elevation of Lake Powell to the SIB with Mexico. It also includes groundwater under direct influence of the Colorado River and the Lower Basin reservoirs. For a more detailed account of the affected environment for the hydrologic resources, please see **TA 3.1**, Hydrologic Resources.

Key Drivers and Trends

Worsening drought conditions have been a major driver for changes to hydrologic resources in the Basin. Since 2000, the Basin has experienced persistent drought conditions, exacerbated by higher temperatures, resulting in increased evapotranspiration, reduced soil moisture, and ultimately reduced runoff (Lukas and Payton 2020). The flow in the Colorado River is highly variable from year to year because of variations in precipitation in the Basin. However, the Basin is currently experiencing a prolonged period of drought; 2000 to 2024 was the driest 25-year period in more than a century. A paleo reconstruction of Colorado River streamflow at Lee Ferry, Arizona, back to 762 current era indicates that the recent 25-year period has lower streamflow than any other period in the last 1,200 years (Meko et al. 2007). These conditions have led to a cumulative streamflow deficit of about 70.0 maf relative to twentieth-century conditions (Reclamation 2025b).

Operational Impacts

The overall characteristics and connectivity of the Basin remain unchanged from when the 2007 Final EIS was issued. However, since 2007, key operational changes have affected hydrologic resources. Domestic agreements specifying such operations include the 2007 Interim Guidelines (supplemented in 2024), 2016 Glen Canyon Dam LTEMP (supplemented in 2024), and the 2019

[9] Reclamation's potential contribution of funds through contribution agreements does not affect the enforcement mechanisms of those state and local authorities.