

The “reference hydrology” panel introduced in **Figure 3-5** is included in every vulnerability bar plot to provide context for interpreting the likelihood of the conditions associated with vulnerability. The historical reference lines are the first component of the context, and anytime an alternative is vulnerable to conditions that have already been observed, it is reasonable to assume these conditions can occur again.

The second component of the context is the boxplot that shows projections about potential future conditions. These projections are based on the “Drying-with-Variability” ensemble, which is a 100-trace statistically generated ensemble that represents conditions that may occur in the future.⁷ Long-term planning in the Basin must consider the significant potential for a future with more frequent, sustained, and/or severe dry periods and a downward trend in average flows, but this does not preclude the occurrence of wet years. The Drying-with-Variability ensemble was designed to capture this by combining information about the observed temperature trend, temperature’s impact on the translation of precipitation into streamflow, and the sequencing of wet and dry periods from paleo reconstructed data while preserving the potential for infrequent but significant wet years.

For every vulnerability bar plot, the two sources of hydrologic context – observed hydrology and the Drying with Variability ensemble – are used to make a summary statement about whether the Representative Preferred Alternative is reasonably likely or unlikely to be vulnerable absent additional action. This statement combines objective analysis of conditions likely to cause failure and Reclamation’s expert judgment considering how those conditions compare to the past and to a reasonable expectation of future hydrology given current trends.

Figure 3-6 provides the distribution of statistics across the 100 traces in the Drying-with-Variability ensemble and compares them to the worst statistic in the observed record (1906–2025). For the driest 1-year flow, over 50 percent of Drying-with-Variability traces have a drier year than the lowest observed flow, with the lowest single-year flow in the ensemble falling below 5 maf. In the 2-to-10-year windows, 60 percent of traces or more are drier than the worst observed statistic; for the driest 10-year volume, approximately 85 percent of traces contain drier decades than the worst observed decade, which occurred from 2012 to 2021.

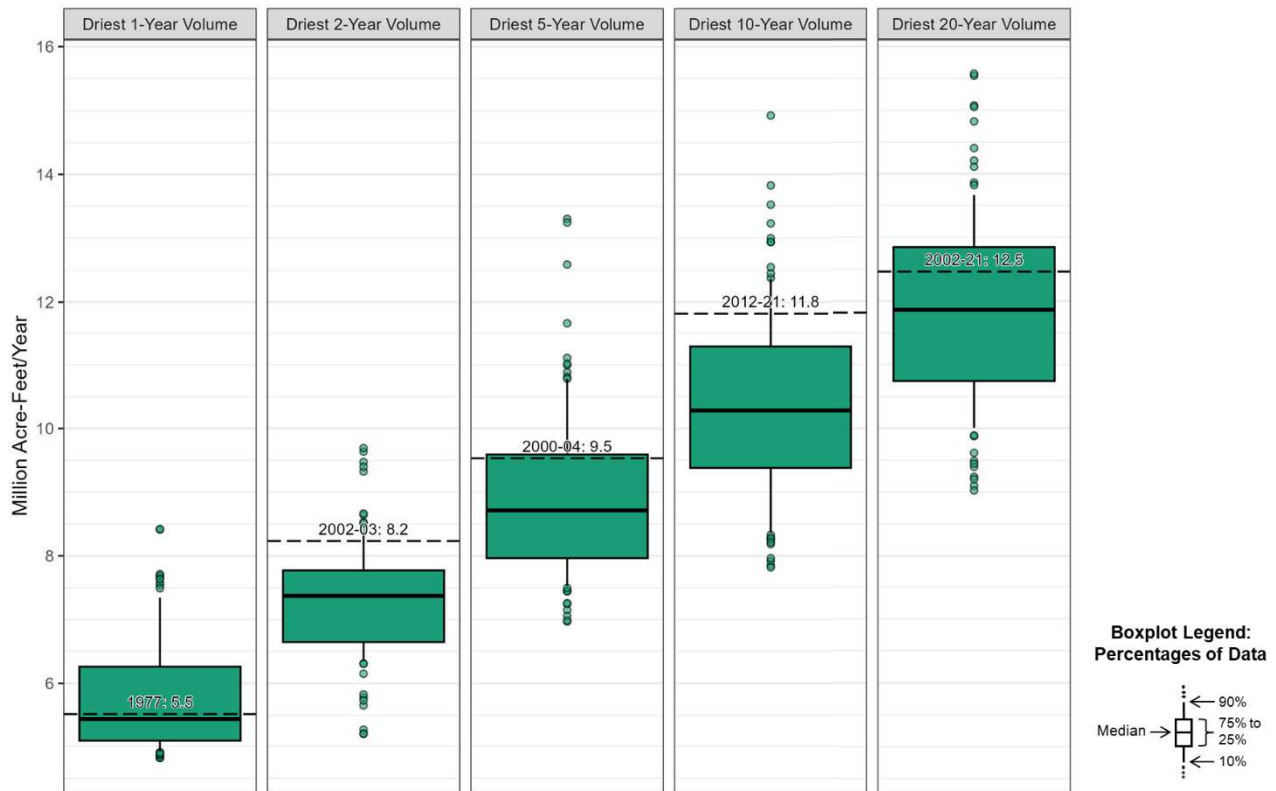
The purpose of describing the narrative, underlying data, and statistics of the Drying with Variability ensemble in the introduction to DMDU figures is to highlight that vulnerability bar plots provide a large amount of information that allows readers to use their judgment in determining the likelihood 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 and public review of the Draft EIS, Reclamation received comments requesting analysis of impacts to the Salton Sea. The Salton Sea is a terminal lake in Riverside and Imperial Counties, California. Lake levels 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 to the Salton Sea is not included in this EIS.

⁷ For additional information about this ensemble, refer to **Appendix F**, Approach to Hydrologic Uncertainty.

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



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 mafy at the Imperial Dam (California Natural Resources Agency 2024).

Over the past 20 years, inflows to the Salton Sea have declined from 1.3 mafy to approximately 1.1 mafy (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 policies, the SSMP used a range of projected annual net inflows to the Salton Sea as baselines for analysis: (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.

In summary, analysis of impacts to 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 as part of the baseline in the SSMP's long-range plan and the USACE's ongoing NEPA process. While any resultant impacts to the Salton Sea may be accelerated by Post-2026 policies, the overall magnitude of impacts would not change.
2. Reclamation does not manage or control the end use of water after the point of delivery. As such, Reclamation has no management authority over the distribution of end use or allocation by these water districts and individual users, including user decisions to participate in conservation programs. The State of California oversees management of the Salton Sea, and Reclamation has no management or enforcement authority over inputs to the Sea. Reclamation would need new authorities and compliance to implement any policies that change how water shortages are distributed to IID and CVWD.⁸

⁸ Reclamation's potential contribution of funds through contribution agreements does not affect the enforcement mechanisms of those state and local authorities.