

From the Headwaters to the Salton Sea – Colorado River Drought Planning Status Report

September 20, 2016

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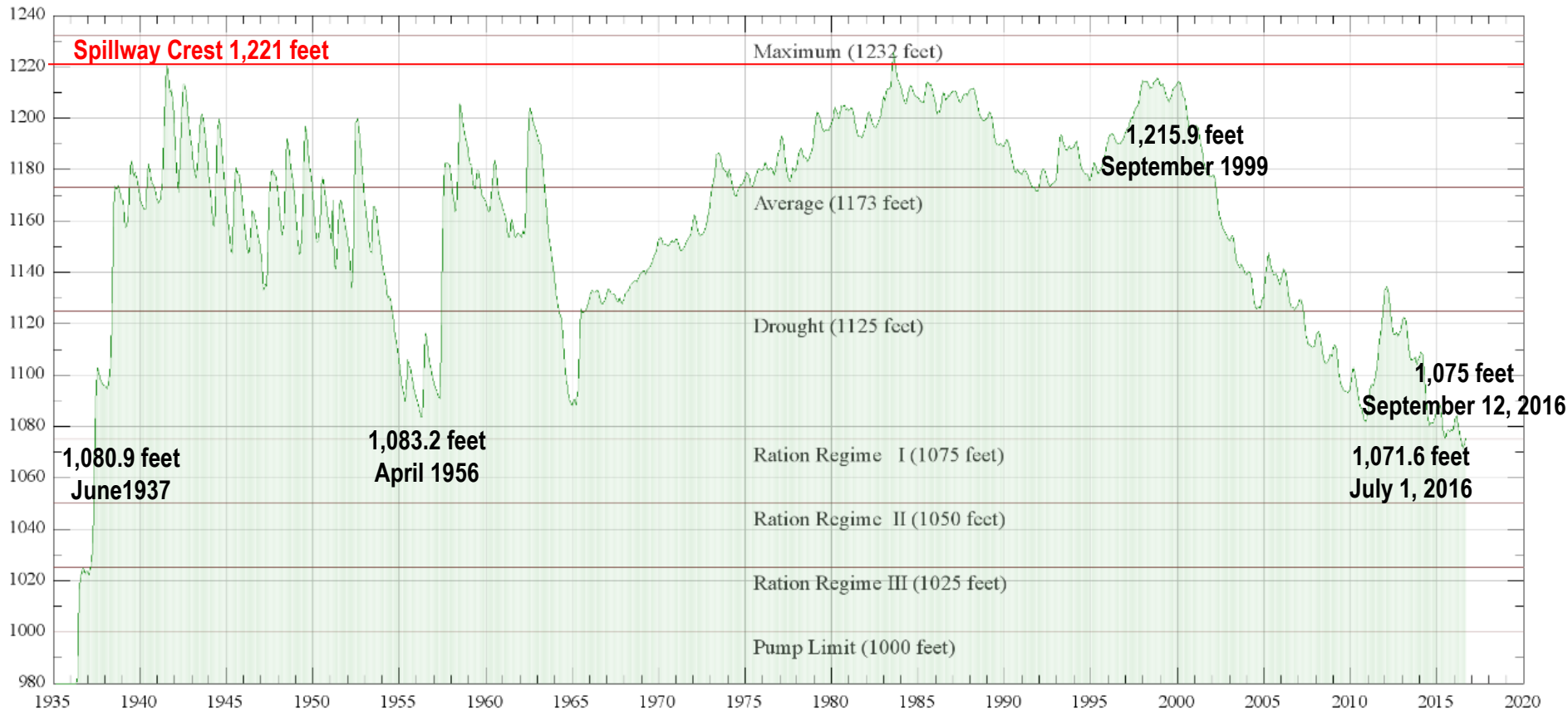


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Lake Mead Elevation (1936 – present)



Given 7.5 MAF of basic apportionments in the Lower Basin, 1.5 MAF of deliveries to Mexico and normal (8.23 MAF) releases from Lake Powell, Lake Mead storage declines 12 feet each year.



Lake Mead Key Operational Elevations

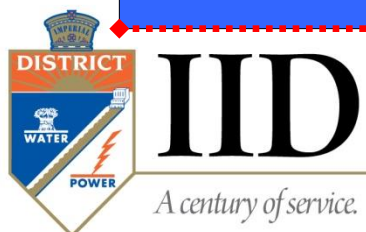
(based on 2007 Interim Guidelines)

1078.9'
12/31/16
projection
(Range of
1078' to 1080')

1074.3'
12/31/17
projection
(Range of
1073' to 1109')



		1220' (100% of capacity; 26.1 maf)
FLOOD CONTROL OR QUANTIFIED SURPLUS ("70R"); no diversion limits		1200' (88% of capacity)
DOMESTIC SURPLUS; MWD=250 KAF, SNWA=100 KAF CAP=100 KAF		1145' (62% of capacity; 16.2 maf)
NORMAL or ICS SURPLUS OPERATIONS		1075' (37% of capacity; 9.6 maf)
Mexico = 50 KAF	1st Shortage Tier @ 1075'	
U.S. = 333 KAF; Arizona = 320 KAF, Nevada = 13 KAF	<i>Minimum Power Pool and Bottom of SNWA Intake No. 1</i>	1050' (29% of capacity; 7.7 maf)
Mexico = 70 KAF	2nd Shortage Tier @ 1050'	
U.S. = 417 KAF; Arizona = 400 KAF, Nevada = 17 KAF		1025' (23% of capacity; 6.0 maf)
Mexico = 125 KAF	3rd Shortage Tier @ 1025'	
U.S. = 500 KAF; Arizona = 480 KAF, Nevada = 20 KAF	<i>Bottom of SNWA Intake No. 2</i>	1000' (17% of capacity; 4.5 maf)
RECONSULTATION		915' (2% of capacity)
<i>(No agreement on additional shortages)</i>		
<i>Minimum Mead Intake Elevation</i>		
<i>Top of Dead Storage</i>		895' (0% of capacity)
<i>Bottom of SNWA Intake No. 3</i>		875' (below diversion access for AZ, CA and Mexico)



Drought Contingency Planning

Goal: To reduce the short-term risk of Lakes Mead and Powell declining to critical elevations (through 2026).

- Collaborative effort with Lower Basin entitlement holders to protect 1020' @ Lake Mead
- Upper Basin developing plan to protect 3525' @ Lake Powell
- Voluntary actions layered on top of the 2007 Interim Shortage Guidelines



Drought Contingency Planning Timeline

June 2013 – Basin States met with Secretary Jewell to discuss 2012-13 hydrology and potential extended drought scenarios.

August 2013 – 24-Month Study results in first 7.48 MAF release from Lake Powell and increased probabilities of Lower Basin shortages.

July 2014 – Pilot System Conservation Agreement between USBR, MWD, CAP, SNWA, and Denver Water that provided \$11 million of initial funding that generated 63,000 AF of system conservation in Lake Mead.

December 2014 – Lower Basin Pilot Drought Response MOU between USBR, MWD, CAP and SNWA to develop 1.5-3 MAF of water in Lake Mead by 2019 and encourage more efficient USBR operations.



Draft Federal Drought Contingency Plan

Summer/Fall 2015 – Interstate discussions track 2014 MOU goals; reduce risk of Lake Mead elevation dropping below levels anticipated with the 2007 Interim Shortage Guidelines.

- Arizona and Nevada would make voluntary contributions sooner and in larger quantities than in the 2007 Guidelines.
 - California water contractors would make voluntary contributions if Lake Mead dropped below 1040'; contributions would be recoverable under certain conditions when Lake Mead recovers.
 - Incentivize additional storage in Lake Mead that would modify ICS rules to allow for additional operational flexibility below 1075'.
 - Includes federal contributions that would increase operational efficiency and continue Mexico coordination.
- Discussions are ongoing, no agreements have been reached.

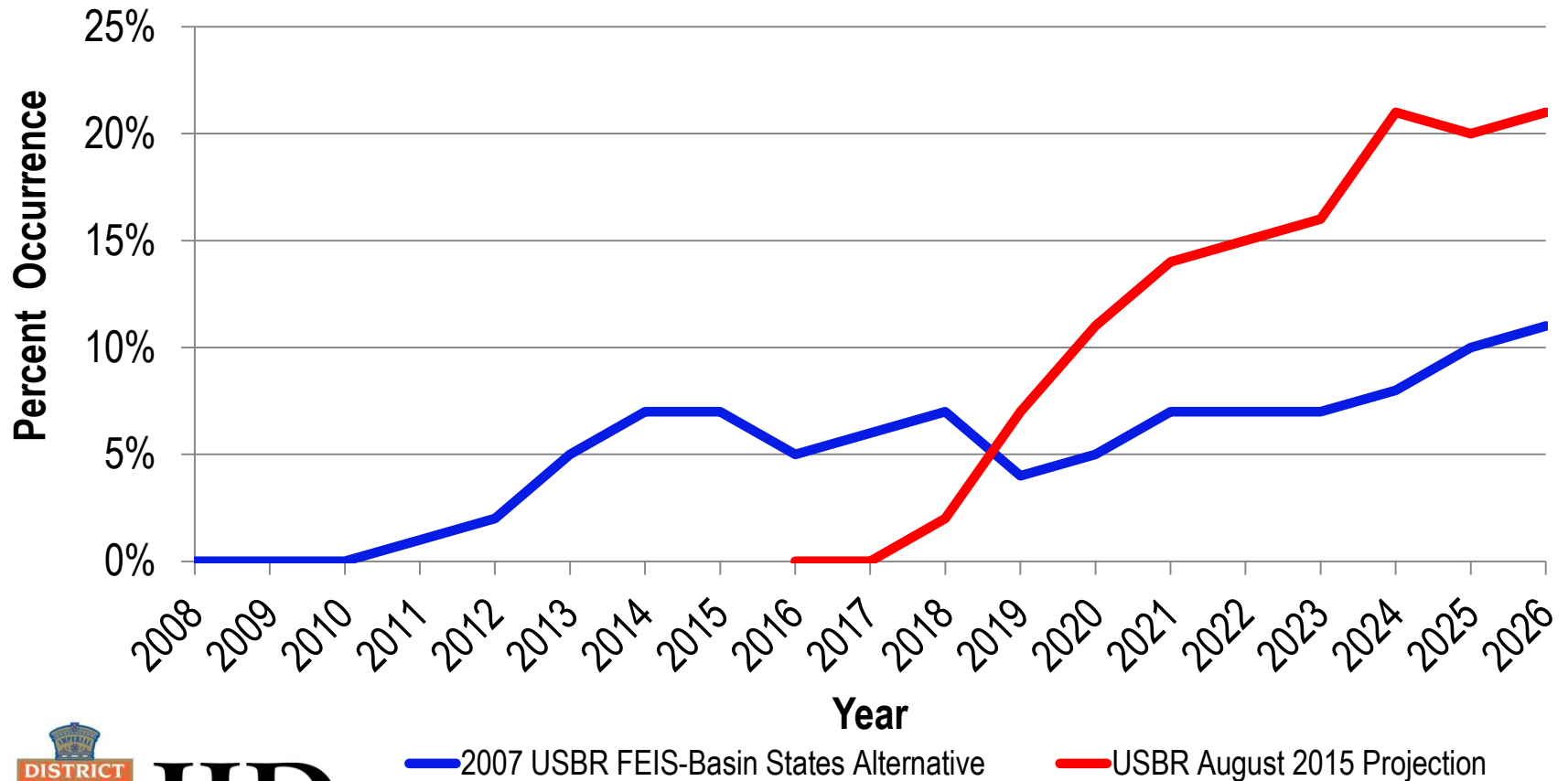


California Drought Goals

- Consensus plan supported by all California water contractors
- Protect California's senior water rights
- Proactively address ongoing drought conditions and declining reservoir levels
- Increase operational flexibility at low reservoir conditions
- Incentivize Lake Mead storage opportunities



Probability of Lake Mead Elevation Declining Below 1,020' in Any Month



California Impacts Based on Draft DCP

- Modeling indicates that, using historical data, there would be more than 70 percent probability that no California actions would be necessary (Lake Mead > 1040').
- Current draft DCP proposals allow for recovery when Lake Mead reaches 1110' before 2036, which allows for less than 25 percent recovery. Agency staff are working with Reclamation to determine lower elevations and/or extended recovery periods that would increase the probability of recovery.



IID Salton Sea – Drought Nexus Timeline

- **October 2013** – IID/Imperial County/IC Air Pollution Control District sign *Salton Sea Stabilization and Restoration Memorandum of Understanding*.
- **October 2013** – IID releases draft *Salton Sea Restoration & Renewable Energy Initiative*, an adaptive management program to developing and managing projects around the Salton Sea.
- **Summer 2014** – IID/MWD release draft Lake Mead elevation building proposal.
- **August 2014** – SB 1139, intended to promote geothermal development to meet California’s Renewable Portfolio Standard, fails to clear the Assembly after receiving Senate approval in May 2014.
- **September 2014** – IID authorizes settlement agreement with last three private litigants in the QSA validation lawsuit.
- **September 2014** - Pacific Institute publishes *Hazard’s Toll: The Cost of Inaction at the Salton Sea*.



IID Salton Sea – Drought Nexus Timeline

- **November 18, 2014** – IID files *Petition for Modification* with the SWRCB, seeking a call to action for California to address a *smaller but sustainable Salton Sea* to manage QSA water transfer environmental and air quality impacts.
- **February 2015** – IID authorizes settlement agreement with IC and ICAPCD, the final litigants in the QSA validation lawsuit, concluding more than a decade of lawsuits and removing the water transfers' last legal uncertainties.
- **March 18, 2015** – SWRCB Salton Sea public workshop responding to IID's Petition; widespread public comments submitted regarding potential air quality and environmental concerns after the transfer's mitigation water ends.
- **April 2015** – Little Hoover Commission holds the first of four hearings regarding California's Salton Sea restoration responsibilities.



IID Salton Sea – Drought Nexus Timeline

- **May 2015** – Multi-agency Salton Sea Task Force formed by Governor Brown to seek input and develop recommendations to develop a restoration plan.
- **July 2015** – IID/IC release draft *SSRREI Framework* to initiate a dialogue about restoration as a means to maintain the security of California’s Colorado River water supply, address Salton Sea public health and environmental concerns and support the state’s renewable energy objectives.
- **September 2015** – Assistant secretary for Salton Sea policy appointed.
- **September 2015** – Little Hoover Commission report, *Averting Disaster: Action Now for the Salton Sea*, is released.
- **October 2015** – California announces Salton Sea Task Force Agency Actions, which include creation of 25,000 acres of playa-based habitat and air quality projects by 2025 to address declining elevation and evaluation of renewable energy development at the Sea.



IID Salton Sea – Drought Nexus Timeline

- **December 2015** – IID/MWD execute ICS Amendment for a 3-year pilot project that provides for expanded water storage opportunities with MWD for conservation that is outside the parameters of Lake Mead storage programs.
- **December 2015** – Draft federal Colorado River Drought Contingency Planning term sheet released.
- **January 2016** – IID authorizes \$500,000 to fund development of the Salton Sea Backbone Infrastructure Phase I concept design.
- **January 5, 2016** – SWRCB public workshop to report on the Task Force Actions; IID presents animation illustrating a time-lapse of approximately 75,000 acres of Salton Sea playa exposure as the mitigation deliveries end in 2017 and the water conservation and transfer volumes ramp-up.

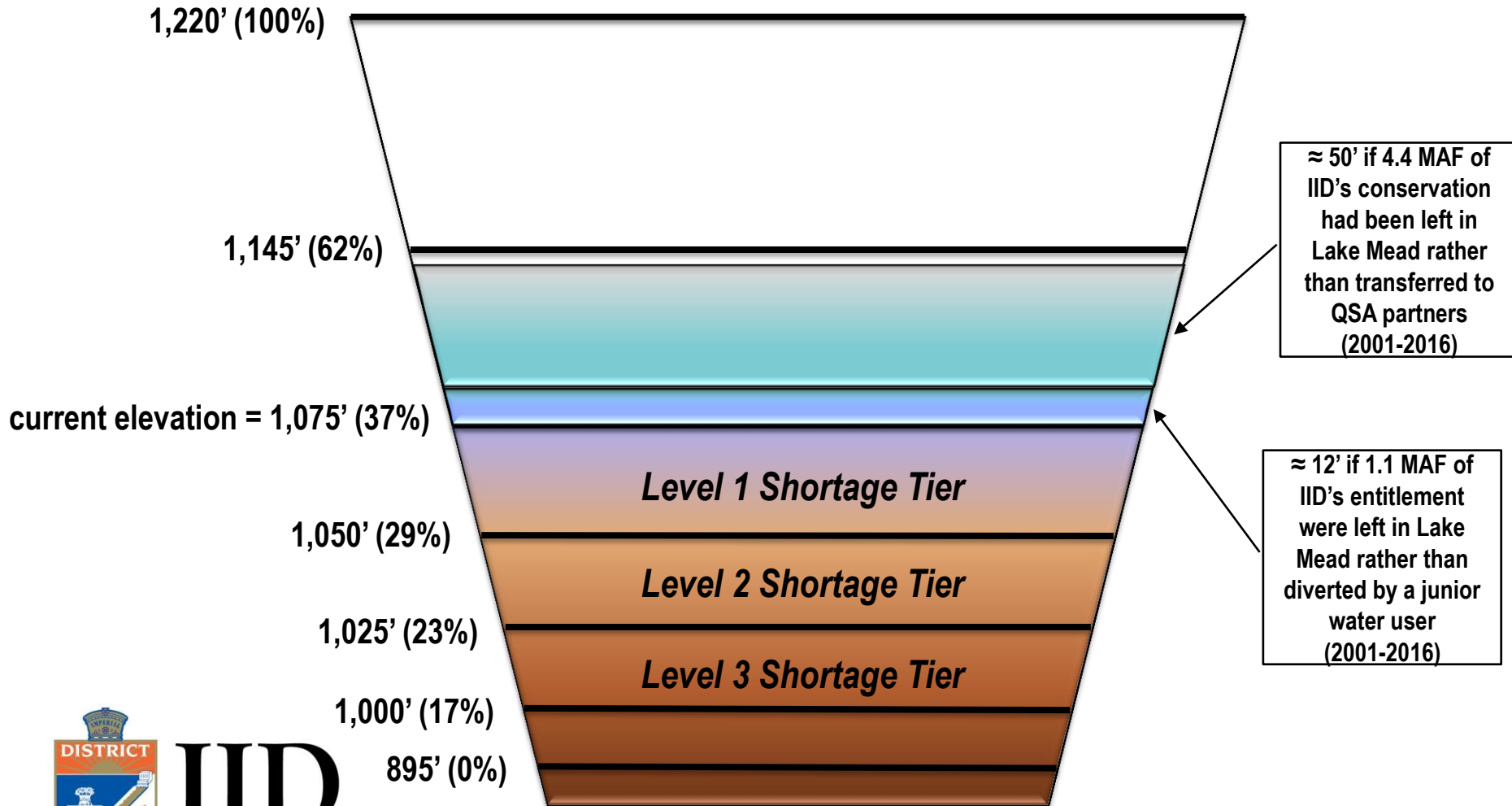


IID Salton Sea – Drought Nexus Timeline

- **January 6, 2016** – California releases draft 2016-17 budget allocating \$80.5 million for Salton Sea restoration activities.
- **April 2016** – SWRCB public workshop provides an update as to the status of the state’s Salton Sea Management Program; little to no on-the-ground project progress reported.
- **June 2016** – Little Hoover Commission renews its 2015 call for urgent action at the Salton Sea to prevent massive public and environmental health issues.
- **July 1, 2016** – IID’s last QSA following program initiated; the sole purpose of the 2016-17 program is to create the balance of 800,000 AF of mitigation water for delivery to the Salton Sea by December 31, 2017.
- **August 2016** – US Department of Interior and California Natural Resources Agency sign MOU regarding the coordination of Salton Sea management activities and support water supply reliability.



IID's Lake Mead Capacity Diagram Perspective



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