

**INTERNATIONAL BOUNDARY AND WATER COMMISSION**  
**UNITED STATES AND MEXICO**

San Diego, California  
July 11, 2019

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**JOINT REPORT OF THE PRINCIPAL ENGINEERS WITH THE IMPLEMENTING DETAILS OF THE  
BINATIONAL WATER SCARCITY CONTINGENCY PLAN IN THE COLORADO RIVER BASIN**

**To the Honorable Commissioners  
International Boundary and Water Commission  
United States and Mexico  
El Paso, Texas and Ciudad Juarez, Chihuahua**

**Madam and Sir:**

Minute No. 323, "Extension of Cooperative Measures and Adoption of a Binational Water Scarcity Contingency Plan in the Colorado River Basin," dated September 21, 2017, includes, in Section IV, provisions for the implementation of a Binational Water Scarcity Contingency Plan. The Minute references the common vision of the United States and Mexico on a "clear need for additional and continued actions due to the impacts on Lake Mead elevation from meeting system demands, hydrologic conditions, increased temperatures, and other factors." The Minute specifies the recoverable water savings that will be applied to the United States and Mexico at certain Lake Mead elevations.

Minute 323 states, "Section IV will take effect only after the U.S. Commissioner communicates to the Mexican Commissioner that the United States Secretary of the Interior has provided notice that a U.S. Lower Basin Drought Contingency Plan, consistent with the water savings described in the first table of Section IV, is effective as authorized by U.S. Federal law. Within 100 calendar days of the date the U.S. Commissioner notifies the Mexican Commissioner, the implementing details of the Binational Water Scarcity Contingency Plan will be specified in a Joint Report of the Principal Engineers."

In this context, U.S. Commissioner Jayne Harkins, by means of letter No. US 107/19, dated May 31, 2019, notified Mexican Commissioner Roberto Salmon that the conditions have been met for Section IV of Minute 323 to take effect.

In light of the above, we respectfully submit for your approval this Joint Report with the implementing details of the Binational Water Scarcity Contingency Plan.

**I. DEFINITIONS**

Terms defined in the 1944 United States-Mexico Treaty on Utilization of Waters of the Colorado and Tijuana Rivers and of the Rio Grande ("1944 Water Treaty") and those defined in Minute 323 shall have the same meaning when used in this Joint Report.

**U.S. Lower Basin Drought Contingency Plan (DCP) Contributions:** Savings of specific volumes of water by the United States at certain low reservoir elevations at Lake Mead, as a contribution to the DCP for recovery at a later date under certain conditions.

**Mexico's Recoverable Water Savings:** Savings of specific volumes of water by Mexico at certain low reservoir elevations at Lake Mead, as a contribution to the Binational Water Scarcity Contingency Plan for recovery at a later date when reservoir conditions improve.

**Mexico's Water Reserve:** Volumes of water established under Sections V.A, V.B, and V.C of Minute 323; that is Emergency Storage, Revolving Account, and Intentionally Created Mexican Allocation, respectively.

**Secretary:** The Secretary of the United States Department of the Interior.

**Reclamation:** The United States Department of the Interior, Bureau of Reclamation.

**II. SAVINGS APPLICABLE TO THE UNITED STATES AND MEXICO IDENTIFIED IN MINUTE 323.**

Savings applicable to the United States and Mexico are identified in Minute 323 as follows:

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| Projected January 1 Lake Mead<br>Elevation (ft msl) | U.S. Savings that<br>Contribute to the Lower<br>Basin Drought<br>Contingency Plan | Mexico's Savings that<br>Contribute to the<br>Binational Water Scarcity<br>Contingency Plan |
|-----------------------------------------------------|-----------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|
|                                                     | <i>Units in acre-feet (millions of cubic meters)</i>                              |                                                                                             |
| At or below 1,090 and above 1,075                   | 200,000<br>(247)                                                                  | 41,000<br>(51)                                                                              |
| At or below 1,075 and above 1,050                   | 200,000<br>(247)                                                                  | 30,000<br>(37)                                                                              |
| At or below 1,050 and above 1,045                   | 200,000<br>(247)                                                                  | 34,000<br>(42)                                                                              |
| At or below 1,045 and above 1,040                   | 450,000<br>(555)                                                                  | 76,000<br>(94)                                                                              |
| At or below 1,040 and above 1,035                   | 500,000<br>(617)                                                                  | 84,000<br>(104)                                                                             |
| At or below 1,035 and above 1,030                   | 550,000<br>(679)                                                                  | 92,000<br>(113)                                                                             |
| At or below 1,030 and above 1,025                   | 600,000<br>(740)                                                                  | 101,000<br>(125)                                                                            |
| At or below 1,025                                   | 600,000<br>(740)                                                                  | 150,000<br>(185)                                                                            |

**III. OPERATIONAL PROVISIONS APPLICABLE IN THE UNITED STATES UNDER THE U.S. LOWER BASIN DROUGHT CONTINGENCY PLAN**

The DCP, which entered into force on May 20, 2019, establishes operational provisions in the United States, including the following:

- DCP Contributions that will be made by U.S. Lower Basin States at specific Lake Mead reservoir elevations.
- The accounting required for the DCP Contributions made by each State.
- Provisions related to the storage and creation of DCP Contributions.
- System and evaporation assessments that will apply to DCP Contributions when they are stored in Lake Mead.

- Provisions related to the short-term access, repayment, and recovery of DCP Contributions through December 31, 2057.

**IV. OPERATIONAL PROVISIONS APPLICABLE TO MEXICO**

Section IV of Minute 323 stipulates that the implementing details for both the Binational Water Scarcity Contingency Plan and the U.S. Lower Basin Drought Contingency Plan “should be in harmony to ensure parity and equivalent implementation of these important efforts. The following elements of both contingency plans will be identical: a) evaporation/losses, b) recovery timing and limitations, and c) the term for recovery.” Considering the above, the operational provisions applicable to Mexico are described below.

**A. Mexico’s Recoverable Water Savings**

1. Mexico may create Mexico's Recoverable Water Savings, in accordance with Section IV of Minute 323, in the following manner:
  - a. By means of a downward adjustment to the schedule for annual delivery to Mexico of its Article 10(a) allotment under the 1944 Water Treaty showing the volume of Mexico’s Recoverable Water Savings that will be generated each month;
  - b. As an option, Mexico may use Mexico’s Water Reserve to convert it to Mexico’s Recoverable Water Savings; or
  - c. A combination of IV.A.1.a and IV.A.1.b above.
2. In December of the year prior, Mexico shall present in its annual delivery schedule any adjustments pursuant to the provisions of IV.A.1.a above used to create all or part of Mexico’s Recoverable Water Savings. In the event that Mexico decides to use Mexico’s Water Reserve to create Mexico’s Recoverable Water Savings pursuant to the provisions of IV.A.1.b above, the annual delivery schedule will include the months in which this conversion will take place.

3. If, in any year, Mexico is required to create Mexico's Recoverable Water Savings based on the preceding year's August 24-Month Study projection, and its volume exceeds that which would have been determined based upon Lake Mead's actual January 1 elevation, then such excess shall be accounted for and remain available as part of Mexico's Water Reserve.
4. The Principal Engineers will meet at least quarterly to review the status of creation of Mexico's Recoverable Water Savings and United States DCP Contributions.

**B. Evaporation/Losses**

1. For the creation of Mexico's Recoverable Water Savings, a 10% assessment will be applied at the time of creation in lieu of annual reductions for evaporation, and no further assessments will be applied through December 31, 2026. Beginning in 2027, on December 31 of each year, the amount of Mexico's Recoverable Water Savings shall be reduced by 3%.
2. For Mexico's Water Reserve, 10% will be assessed at the time of creation instead of the annual 3% evaporation losses stipulated in Section V.E.5 of Minute 323, through December 31, 2026. Starting in 2027, on December 31 of each year, a 3% reduction will be applied to Mexico's Water Reserve.
3. For any volume of water currently in Mexico's Water Reserve that has not yet had an evaporation assessment of 10%, a one-time assessment will be applied until reaching 10% and no further assessments will be applied through December 31, 2026.

**C. Recovery Timing and Limitations for Mexico's Recoverable Water Savings through December 31, 2026.**

1. Delivery of Mexico's Recoverable Water Savings, jointly with any other delivery, will have the same volumetric limitations set forth in Sections III.C (1,500,000 acre-feet/1,850,234,000 cubic meters) and V.E.3 (1,700,000 acre-feet/2,096,931,000 cubic meters) of Minute 323.
2. Lake Mead January 1 elevation projected to be at or above 1,110 feet. In years when Lake Mead's January 1 elevation is projected to be at or above 1,110 feet, Mexico shall be permitted to schedule delivery of Mexico's Recoverable Water Savings without any repayment obligation.
3. Lake Mead January 1 elevation projected to be above 1,025 feet and below 1,110 feet. In years when Lake Mead's January 1 elevation is projected to be above 1,025 feet and below 1,110 feet, Mexico shall be permitted to have short-term access to Mexico's Recoverable Water Savings as reflected in the most recent record of its saved volumes. Mexico shall repay such volumes in their entirety by December 31 of the following year by making the corresponding adjustments in its annual delivery schedule, and no assessment will be applied on such repayment.
4. Mexico shall submit the annual request for delivery of Mexico's Recoverable Water Savings, broken down by month, simultaneously with submission of its annual delivery schedule for the subsequent year.
5. Mexico may submit requests for changes in delivery from Mexico's Recoverable Water Savings during the year in which delivery is requested. In those cases, the request must be submitted 30 days prior to the month in which the delivery is requested in accordance with Article 15 F of the 1944 Water Treaty. The increase or decrease to Mexico's monthly water delivery schedule, inclusive of all requests, shall be by no more than 20% of the total monthly quantity in accordance with Article 15 F referenced above.

6. Delivery from Mexico's Recoverable Water Savings will be subject to Mexico's available balances and to limitations as to the rates of deliveries specified in Article 15 of the 1944 Water Treaty. In the event the deliveries have the potential to cause adverse effects on United States operations, such as flooding, or on water quality, the two countries will discuss the means to schedule the deliveries to avoid these effects.
  7. Lake Mead January 1 elevation projected to be at or below 1,025 feet. In years when Lake Mead's January 1 elevation is projected to be at or below 1,025 feet, Mexico's Recoverable Water Savings will not be available for delivery.
- D. Recovery Timing and Limitations for Mexico's Recoverable Water Savings from January 1, 2027 through December 31, 2057.
1. Delivery of Mexico's Recoverable Water Savings, jointly with any other delivery, will have the same volumetric limitations set forth in Sections III.C (1,500,000 acre-feet/1,850,234,000 cubic meters) and V.E.3 (1,700,000 acre-feet/2,096,931,000 cubic meters) of Minute 323.
  2. Lake Mead January 1 elevation projected to be at or above 1,110 feet. In years when Lake Mead's January 1 elevation is projected to be at or above 1,110 feet, Mexico shall be permitted to schedule delivery of Mexico's Recoverable Water Savings without any repayment obligation.
  3. Lake Mead January 1 elevation projected to be above 1,075 feet and below 1,110 feet. In years when Lake Mead's January 1 elevation is projected to be above 1,075 feet and below 1,110 feet, Mexico shall be permitted to schedule delivery of Mexico's Recoverable Water Savings and shall, not later than the fourth year following the year in which the water was delivered, elect either of the following repayment options:

- a. Repay any quantity before or during the fifth year following the year in which the water was delivered; or
- b. The Mexican Commissioner will request that the U.S. Commissioner notify the Secretary to reduce Mexico's Recoverable Water Savings account by an additional twenty percent (20%) of the amount borrowed before or during the fifth year following the year the water was delivered.

Any repayment shall be included in Mexico's annual water delivery schedule. In the case Mexico is not able to fulfill the commitments established in IV.D.3.a and IV.D.3.b above, the Secretary shall make the corresponding delivery schedule adjustments to ensure that Mexico's Recoverable Water Savings delivered pursuant to this Section are fully repaid by the end of the fifth year following the year in which the water was delivered. The Secretary shall notify the U.S. Commissioner of the adjustments who shall then notify the Mexican Commissioner of the above in writing.

4. Lake Mead January 1 elevation projected to be above 1,025 feet and at or below 1,075 feet. In years when Lake Mead's January 1 elevation is projected to be above 1,025 feet and at or below 1,075 feet, Mexico shall be permitted to have short-term access to Mexico's Recoverable Water Savings as reflected in the most recent record of its saved volumes. Mexico shall repay such volumes in their entirety by December 31 of the following year by making the corresponding adjustments in its annual delivery schedule, and no assessment will be applied on such repayment.
5. Delivery of Mexico's Recoverable Water Savings shall be subject to the provisions of IV.C.4, IV.C.5, and IV.C.6 above.
6. Lake Mead January 1 elevation projected to be at or below 1,025 feet. In years when Lake Mead's January 1 elevation is projected to be at or



below 1,025 feet, Mexico's Recoverable Water Savings will not be available for delivery.

**E. Accounting**

At least annually, the Commission, in consultation with Reclamation, will prepare a record of the volumes of Mexico's Recoverable Water Savings, including the volumes created and delivered. Mexico may accumulate a maximum combined total balance of Mexico's Recoverable Water Savings and Mexico's Water Reserve not to exceed 1,500,000 acre-feet (1,850,234,000 cubic meters). Additionally, each year the U.S. Section will provide the Mexican Section with a copy of the *Colorado River Accounting and Water Use Report: Arizona, California, and Nevada* prepared by Reclamation, which contains information on volumes saved by both countries.

**V. OPERATIONAL PROVISIONS APPLICABLE TO WATER FOR THE ENVIRONMENT**

In accordance with Section VIII of Minute 323, the water for the environment will be subject to savings during application of the Binational Water Scarcity Contingency Plan in amounts that are proportionate to the savings applied to Mexico's total water deliveries. Details of the above will be included in a separate Joint Report of the Principal Engineers.

Any volume of Mexico's Recoverable Water Savings that derives from the proportional savings applicable to water for the environment shall only be delivered for environmental purposes.

**VI. EFFECTIVE PERIOD (TERM FOR RECOVERY)**

This Joint Report will remain in effect through the term of Minute 323; that is, through December 31, 2026. After that date, the provisions for the accounting and delivery of Mexico's Recoverable Water Savings contained in this report shall remain in effect through December 31, 2057.

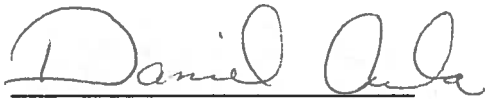
The Principal Engineers recognize that the provisions of this Joint Report shall apply for the periods identified herein, but also recognize that the Commission may develop a successor

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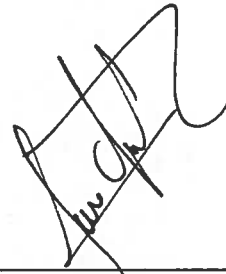
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agreement to Minute 323 that would extend or replace the substantive provisions of that Minute and this Joint Report.

Respectfully,



**Daniel Avila**  
**Principal Engineer**  
**United States Section**



**Luis Antonio Rascón Mendoza**  
**Principal Engineer**  
**Mexican Section**