

2026 Review

Water Quality Standards for Salinity Colorado River System



June 2026
Colorado River Basin Salinity Control Forum

PENDING

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2026 Review

**WATER QUALITY STANDARDS FOR SALINITY
COLORADO RIVER SYSTEM**

June 2026

**Prepared by
Colorado River Basin Salinity Control Forum**

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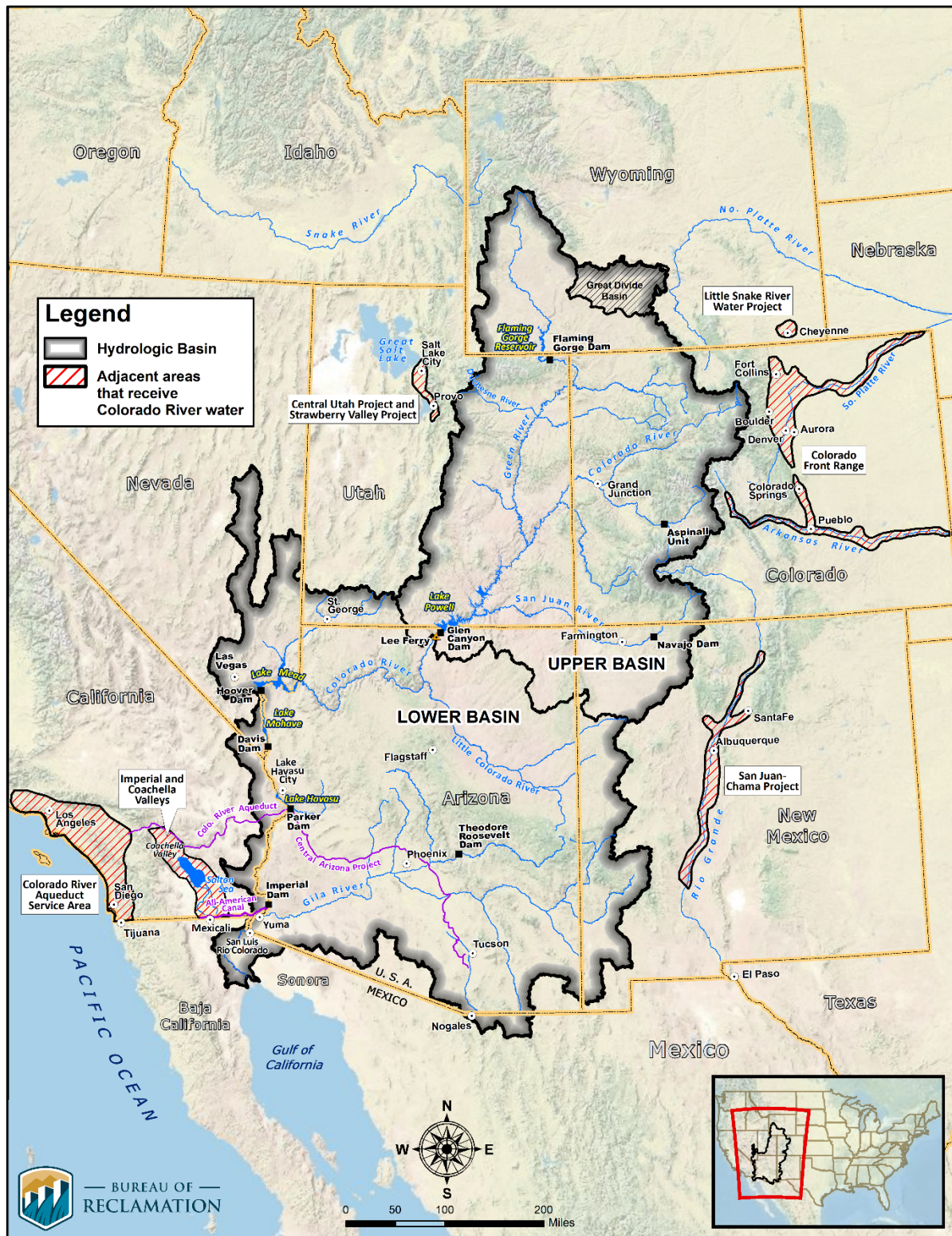
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COLORADO RIVER BASIN MAP



TRANSMITTAL LETTERS

The Federal Water Pollution Control Act requires that at least once every three years the Basin States review water quality standards relating to the salinity of the Colorado River. The states collectively initiated this review under the direction of the Forum.

With the adoption of this final review, copies are being sent to the Colorado River Basin State Governors listed below for inclusion within their individual state water quality standards.

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LIST OF ABBREVIATIONS AND DEFINITIONS

1996 Farm Bill	Federal Agriculture Improvement and Reform Act (P.L. 104-127) (1996)
2008 Farm Bill	Food, Conservation, and Energy Act (P.L. 110-246) (2008)
208 Plan	Section 208 of the Clean Water Act amendments of 1972 and 1977 requiring integrated area-wide plans and programs for dealing with water pollution problems
ADEQ	Arizona Department of Environmental Quality
Advisory Council	Colorado River Basin Salinity Control Advisory Council
AZPDES	Arizona Pollutant Discharge Elimination System
Basin	Colorado River Basin
Basin Funds	Lower Colorado River Basin Development Fund and Upper Colorado River Basin Fund
Basin States	Arizona, California, Colorado, Nevada, New Mexico, Utah, Wyoming
BSP	Basin States Program
Basinwide Program	Basinwide Salinity Control Program
BLM	United States Bureau of Land Management
CDPHE, WQCD	Colorado Department of Public Health and Environment, Water Quality Control Division
Clean Water Act	P.L. 92-500
Congress	United States Congress
DWQ	Utah Division of Water Quality
EQIP	Environmental Quality Incentives Program
EPA	United States Environmental Protection Agency
Forum	Colorado River Basin Salinity Control Forum
Lower Basin States	Arizona, California, Nevada
maf	million acre-feet
mgd	million gallons per day
mg/L	milligrams per liter = parts per million
Minute 242	Minute No. 242 to the Mexican Water Treaty of 1944
NMED	New Mexico Environment Department
NOFO	Notice of Funding Opportunity
NPDES	National Pollutant Discharge Elimination System
NRCS	Natural Resources Conservation Service
OHV	off-highway vehicle
Plan	Plan of Implementation
ppm	parts per million = milligrams per liter
Program	Colorado River Basin Salinity Control Program
PVU	Paradox Valley Unit
Reclamation	United States Bureau of Reclamation
Review	Triennial Review, <i>Water Quality Standards for Salinity, Colorado River System</i>
review period	January 1, 2027, to December 31, 2029

Salinity Control Act	The Colorado River Basin Salinity Control Act (P.L. 93-320) (1974), as amended by P.L. 98-569 (1984), P.L. 104-20 (1995), P.L. 104-127 (1996), P.L. 106-459 (2000), P.L. 107-171 (2002) and P.L. 110-246 (2008)
Standards	water quality standards for salinity approved by the EPA in 1975
SWQB	Surface Water Quality Bureau
TDS	total dissolved solids
TMDL	Total Maximum Daily Load
Upper Basin States	Colorado, New Mexico, Utah, Wyoming
USDA	United States Department of Agriculture
USDOI	United States Department of the Interior
USGS	United States Geological Survey
WDEQ	Wyoming Department of Environmental Quality
WGFD	Wyoming Game and Fish Department
WWDC	Wyoming Water Development Commission
WWTP	Wastewater Treatment Plant

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SUMMARY

This document is a review of the water quality standards for salinity in the Colorado River. Section 303 of the Clean Water Act amendments to the Federal Water Pollution Control Act require that water quality standards be reviewed every three years. Accordingly, the seven-state Colorado River Basin Salinity Control Forum (Forum) has reviewed the existing state-adopted water quality standards for salinity in the Colorado River, approved by the U.S. Environmental Protection Agency (EPA), which consist of numeric criteria and a Plan of Implementation. Upon adoption by the Forum, this Review will be submitted to the governors of each state in the Colorado River Basin (i.e., each “Basin State”) for inclusion in their state water quality standards.

The Forum recommends no change from the previous Review¹ to the numeric salinity criteria at the three stations located on the lower main stem of the Colorado River. The numeric criteria at these stations will remain:

<u>Station</u>	<u>Salinity</u> <u>(milligrams per liter [mg/L])²</u>
Below Hoover Dam	723
Below Parker Dam	747
At Imperial Dam	879

While the aim of the Plan of Implementation is to maintain Colorado River salinity at or below the numeric criteria, the Colorado River Basin Salinity Control Act (Salinity Control Act) requires the implementation of a control program to reduce Colorado River salinity, which reduces economic impacts on its users. While the Plan of Implementation included in this Review provides high confidence that the numeric criteria will not be exceeded during the period of January 1, 2027, to December 31, 2029 (review period), the Forum will continue to evaluate opportunities for additional salinity control to reduce the economic and environmental impacts of salinity in the Colorado River Basin (Basin).

The Forum’s Plan of Implementation includes the following elements:

1. Construction of salinity control measures by the U.S. Bureau of Reclamation (Reclamation), the Natural Resources Conservation Service (NRCS), which is part of the U.S. Department of Agriculture (USDA), and the Bureau of Land Management (BLM) to the extent that those measures remain viable and cost-effective;
2. Implementation by the Basin States of the Forum’s adopted policies for effluent limitations under the National Pollutant Discharge Elimination System (NPDES) (Appendix B of this Review); and

¹ Colorado River Basin Salinity Control Forum, 2023. “2023 Review: Water Quality Standards for Salinity, Colorado River System.” October.

² Flow-weighted average annual salinity, which is defined as the total annual salt load divided by the total annual streamflow.

3. Implementation of non-point source management plans developed by the Basin States and approved by EPA.

Item 1 of the Plan listed above is to be implemented by the relevant federal agencies in conjunction with state, local, and private participants. The Forum works jointly with federal agencies to develop implementation measures. Items 2 and 3 are primarily implemented by the Basin States.

To date, the Colorado River Basin Salinity Control Program (Program) has implemented projects that have reduced salt loads to the river by 1,346,400 tons per year. The Plan of Implementation in this Review anticipates that an additional 42,000 tons of annual salinity control will be implemented over the next three years. The Salinity Control Program continues to be a successful federal-state partnership that has environmental and economic benefits for users of Colorado River water.

PURPOSE

This document—the *2026 Review: Water Quality Standards for Salinity, Colorado River System* (Review)—is prepared and submitted in response to Section 303(c) of Public Law (P.L.) 92-500 (1972) (Clean Water Act) by the seven-state Colorado River Basin Salinity Control Forum on behalf of the governors of their respective states. This review of salinity water quality standards includes the numeric criteria and the Plan of Implementation developed and adopted by the Forum. This is the 18th review conducted by the Forum. Section 303(c)(1) of the Clean Water Act requires that:

The governor of a state or the state water pollution control agency of such state shall, from time to time (but at least once each three-year period beginning with the date of enactment of the Federal Water Pollution Control Act Amendments of 1972), hold public hearings for the purpose of reviewing applicable water quality standards and, as appropriate, modifying and adopting standards. Results of such review shall be made available to the Administrator [of the U.S. Environmental Protection Agency].

The scope of this Review is limited to the portion of the Basin above Imperial Dam and to its compliance with the EPA-approved 1975 salinity water quality standards (Standards). This Review focuses on the forward-looking review period (January 1, 2027, to December 31, 2029) and evaluates the appropriateness of the Standards for the Basin. The following Forum report contains historical information about the development and adoption of Colorado River salinity standards: [Water Quality Standards for Salinity, Including Numeric Criteria and Plan of Implementation for Salinity Control, Colorado River System, Colorado River Basin Salinity Control Forum, June 1975.](#)

Nothing in this Review shall be construed to alter, amend, repeal, interpret, modify or be in conflict with the provisions of the Boulder Canyon Project Act (45 Stat. 1057), the Boulder Canyon Project Adjustment Act (54 Stat. 774), the Colorado River Basin Project Act (82 Stat. 885), the Colorado River Compact, the Colorado River Storage Project Act (70 Stat. 105), the Upper Colorado River Basin Compact, or the Treaty with the United Mexican States (Treaty Series 994).

BACKGROUND

The Colorado River Basin Salinity Control Program is a unique, cooperative, watershed-scale effort among several federal agencies and seven states, designed to meet national, international, and state water-quality objectives. The Forum collaborates with federal, state, and local agencies and private entities to ensure the successful execution of the triennial Plan of Implementation through on-the-ground activities and legislative support for federal funding.

Colorado River Water Supplies

The Colorado River Basin comprises roughly 246,000 square miles (157 million acres) of the western United States and northern Mexico.³ About 40 million people in the seven Basin States of Arizona, California, Nevada (the Lower Basin States), Colorado, New Mexico, Utah, and Wyoming (the Upper Basin States) rely on the Colorado River and its tributaries to provide some or all of their municipal water supply needs.⁴ Additionally, water from the Colorado River system irrigates nearly 5.5 million acres in the Basin,⁵ producing some 15 percent of the nation's crops and 13 percent of its livestock, which, combined, generate many billions of dollars annually.

The Colorado River is also a critical water supply for 30 federally recognized Native American Indian tribes,⁶ seven National Wildlife Refuges, four National Recreation Areas, and eleven National Park units. Hydropower facilities along the Colorado River supply more than 4,200 megawatts of generating capacity⁷ to help meet the West's power needs. The Colorado River is also vital to Mexico, supporting a thriving agricultural industry in the San Luis and Mexicali Valleys and providing municipal water supplies for communities in the Mexican States of Sonora and Baja California.

As with most rivers, the natural flow of the Colorado River increases from its headwaters to its terminus. Today, however, the flow of the Colorado River decreases below Hoover Dam due to diversions and low runoff. In normal years, 1.5 maf from the Colorado River system is delivered to Mexico, and there is rarely any water in the river at its terminus at the Gulf of California.

Colorado River Salinity

Adverse impacts of Colorado River salinity have long been a major concern in the United States and Mexico. Between 1940 and 1972, the river carried an average salt load of approximately 9.8 million tons annually past Hoover Dam, the uppermost location at which numeric criteria have been established. From 1973 to 2023, approximately 7.3 million tons of salt flowed past Hoover Dam each year.⁸

³ Congressional Research Service, 2025. "Management of the Colorado River: Water Allocations, Drought, and the Federal Role." November, p. 1. Available at <https://www.congress.gov/crs-product/R45546>.

⁴ About 40 million people were estimated to be within the hydrologic boundaries of the Basin in the United States, as well as in the adjacent areas of the Basin States that receive Colorado River water, in 2015. See Reclamation, 2012. "Colorado River Basin Water Supply and Demand Study." December, p. 4. Available at <https://www.usbr.gov/lc/region/programs/crbstudy/finalreport/index.html>.

⁵ Reclamation, 2012. "Colorado River Basin Water Supply and Demand Study." December, p. 4. Available at <https://www.usbr.gov/lc/region/programs/crbstudy/finalreport/index.html>.

⁶ Reclamation, 2024. "Supplement to the 2007 Colorado River Interim Guidelines for Lower Basin Shortages and the Coordinated Operations for Lake Powell and Lake Mead, Record of Decision." May, p. 1. Available at https://www.usbr.gov/ColoradoRiverBasin/documents/NearTermColoradoRiverOperations/20240507-Near-termColoradoRiverOperations-SEIS-RecordofDecision-signed_508.pdf.

⁷ Reclamation, 2012. "Colorado River Basin Water Supply and Demand Study." December, p. 3. Available at <https://www.usbr.gov/lc/region/programs/crbstudy/finalreport/index.html>.

⁸ Department of the Interior, 2023. "Quality of Water, Colorado River Basin, Progress Report No. 27." September, p. 1. Available at <https://www.usbr.gov/uc/progact/salinity/pdfs/ProgressReports/20230900-QualityWaterColoradoRiverBasin-ProgressReport27-508-UCRO.pdf>

The salts in the Colorado River system are naturally occurring and pervasive. Salts contained in sedimentary rocks are readily eroded, dissolved, and transported into the river system. In a 1971 study,⁹ EPA analyzed salt loading in the Basin and divided it into two categories: naturally occurring and anthropogenic. EPA concluded that about half (47 percent) of the salinity measured at Hoover Dam is from natural sources, including contributions from saline springs, groundwater discharge into the river system (excluding irrigation return flows), sediment erosion and dissolution, and the concentrating effects of evaporation and transpiration.¹⁰ Other natural sources include salt contributions from non-point or unidentified sources (excluding irrigated agriculture), or from the vast, sparsely populated regions of the Basin, many of which are administered by the BLM or other governmental agencies. Of the land within the Basin, about 75 percent is owned and administered by the federal government or held in trust for tribal communities. The greatest portion of the naturally occurring salt load originates on these federally owned and administered lands.

The 1971 EPA study estimated that agricultural irrigation, reservoir evaporation and phreatophyte use, out-of-Basin exports, and municipal and industrial uses account for 53 percent of the salinity in water arriving at Hoover Dam (Table 1). Much of the load from irrigated agriculture is from federally developed irrigation projects. Other human activities, including livestock grazing, wildlife management, logging, mining, oil exploration, road building, recreation, and urbanization, can also influence the rate of natural salt movement from rock formations and soils to the river system.

Table 1 – Anthropogenic sources of salinity arriving at Hoover Dam

Anthropogenic Source	Percentage of Total
Agricultural irrigation	37 %
Reservoir evaporation and phreatophyte use	12 %
Out-of-Basin exports	3 %
Municipal and industrial uses	1 %
TOTAL	53 %

Source: EPA, 1971. "The Mineral Quality Problem in the Colorado River, Summary Report."

The salinity of the Colorado River increases from the headwaters to the terminus in the Gulf of California, known in Mexico as the Sea of Cortez. Much of the salt load derives from the Upper Basin, and some tributary streams have higher average salt concentrations than the mainstem. The development of water resources in the basin has also contributed to salinity in the river. For example, irrigation return flows often contain salt, which contributes to river salinity. Additionally, consumptive use of river water reduces the water available to dilute salt concentrations, thereby

⁹ Environmental Protection Agency (Regions VIII and IX), 1971. "The Mineral Quality Problem in the Colorado River, Summary Report," 65 pp. Available at <https://www.coloradoriversalinity.org/docs/The%20Mineral%20Quality%20Problem%20in%20the%20Colorado%20River%20Basin%20EPA-1971.pdf>.

¹⁰ The EPA study also identified that about 66% of the total salt *load* arriving at Hoover Dam was from natural sources. A more recent USGS study confirms this amount, estimating that 68% of the salt load is from natural sources (see Tillman, F.D. et al, 2022. "A Review of Current Capabilities and Science Gaps in Water Supply Data, Modeling, and Trends for Water Availability Assessments in the Upper Colorado River Basin." *Water* 14(23), 3813. Available at <https://www.mdpi.com/2073-4441/14/23/3813>).

increasing river salinity. Ongoing dry conditions in the basin have also contributed to river salinity.¹¹

Reclamation has developed a map of the Basin showing average flows and corresponding salinity levels for 2021-2025 (Figure 1). This map is provided for illustrative purposes only. The average flow of the Colorado River and its important tributaries is indicated by the line width, and salinity is illustrated by colors coded to total dissolved solids (TDS) ranges.

Salinity Regulation in the Colorado River

In 1972, the federal government enacted the Clean Water Act, mandating the development and maintenance of water quality standards in the United States. At the same time, Mexico and the United States engaged in discussions to address increasing salinity in Colorado River water delivered to Mexico.

Given their desire to manage salinity on a basin-wide basis, in 1973, the Basin States established the Colorado River Basin Salinity Control Forum. The Forum is composed of representatives from each Basin State, appointed by the governors of those states. The Forum was created for interstate cooperation and to provide the states with the information necessary to comply with Sections 303(a) and (b) of the Clean Water Act. The Forum participates with federal, state, and local agencies, and private participants to ensure the successful execution of the triennial plan of implementation (included in this report) through on-the-ground activities and support for federal funding.

In December 1974, the EPA promulgated a regulation establishing a basin-wide salinity control policy.¹² This regulation established a standards procedure and required the Basin States to adopt and submit to EPA for approval water quality standards for salinity, including numeric criteria and a plan of implementation. As described in the “Numeric Criteria” section below, in compliance with the regulation, the Forum selected three stations on the main stem of the lower Colorado River as appropriate locations at which to monitor the river’s salinity. These stations are located at the following points: (1) below Hoover Dam, (2) below Parker Dam, and (3) at Imperial Dam. The Forum also adopted a water quality standard for the Colorado River Basin, including both a plan of implementation and numeric criteria.

In general, over the last 50 years, salinity has decreased at all three numeric criteria stations (see Figure 2). The observed flow-weighted average salinity values at the numeric criteria stations are provided in Appendix A. In this Review, the terms “salinity,” “TDS,” and “salt concentration,” each in mg/L, are used interchangeably.

¹¹ Department of the Interior, 2023. “Quality of Water, Colorado River Basin, Progress Report No. 27.” September, p. 2. Available at <https://www.usbr.gov/uc/progact/salinity/pdfs/ProgressReports/20230900-QualityWaterColoradoRiverBasin-ProgressReport27-508-UCRO.pdf>

¹² EPA Regulation – 40 CFR, Part 120.

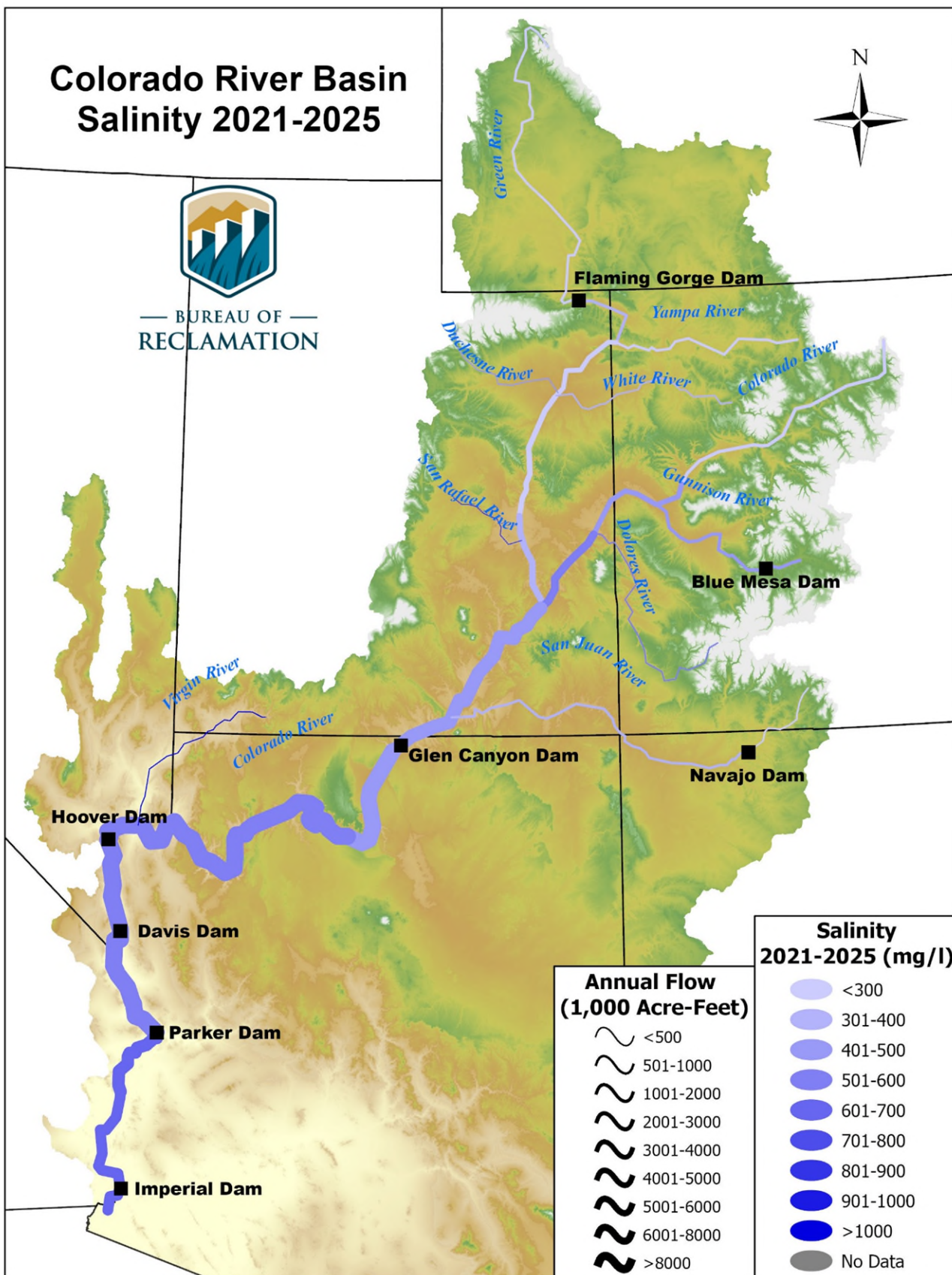


Figure 1 – 2021-2025 average generalized flow and salinity across the Colorado River Basin

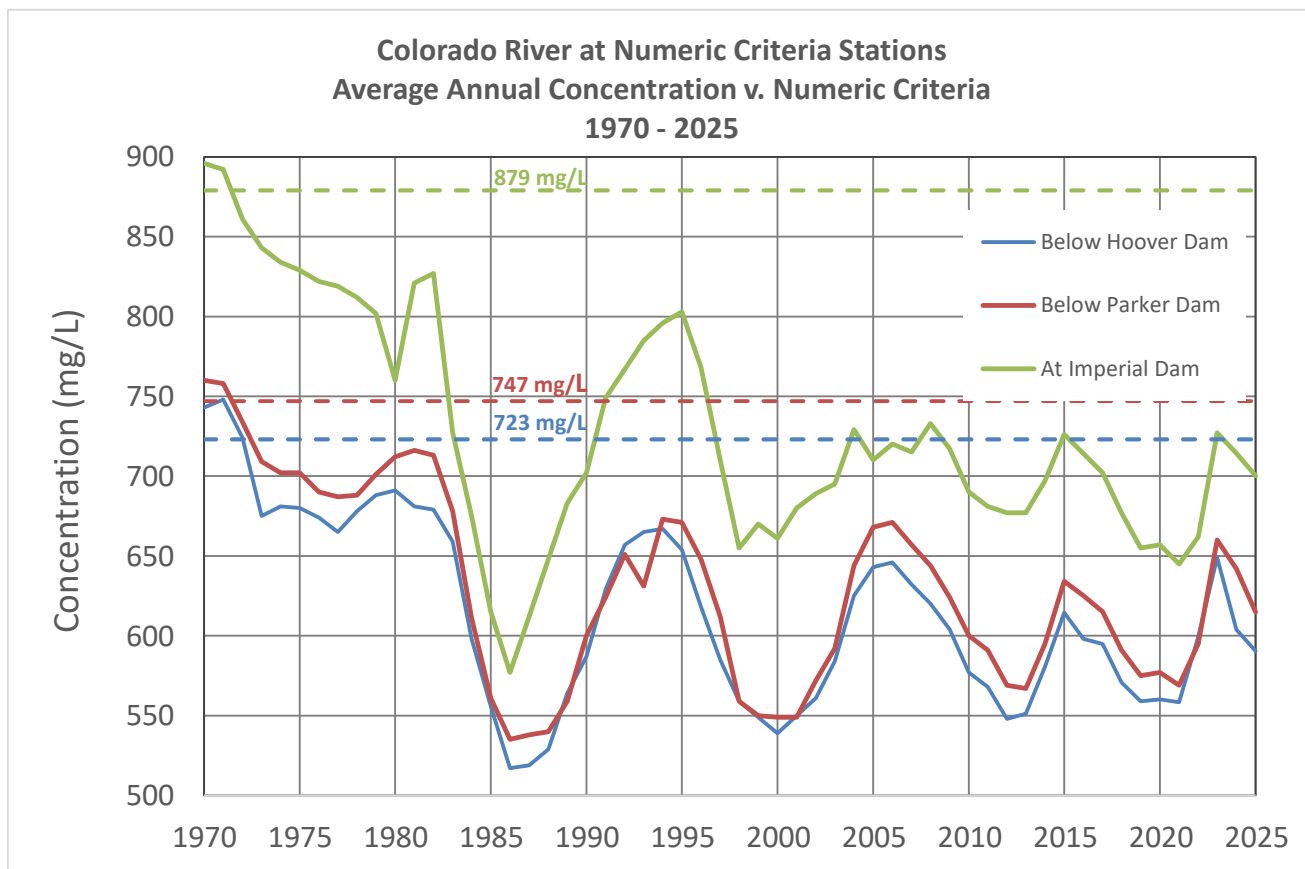


Figure 2 – Flow-weighted average annual salt concentrations at numeric criteria stations

The Salinity Control Act (P.L. 93-320) (1974) established the Program under Title II to address EPA’s concerns over salinity in the Colorado River. The Salinity Control Act also created the Colorado River Basin Salinity Control Advisory Council (Advisory Council) to advise the federal agencies on the administration of the Program. P.L. 93-320 has been amended several times since its original enactment. P.L. 98-569 (1984) authorized the USDA/NRCS on-farm program. P.L. 104-20 (1995) created Reclamation’s Basinwide Program. The Federal Agriculture Improvement and Reform Act (P.L. 104-127) (1996) (1996 Farm Bill) authorized up-front cost-sharing by the Basin States and modified the USDA authorities, including the use of the Environmental Quality Incentives Program (EQIP). P.L. 106-459 (2000) increased the appropriation ceiling. The Food, Conservation, and Energy Act of 2008 (P.L. 110-246) (2008 Farm Bill) created the Basin States Program (BSP). The Agricultural Improvement Act of 2018 (P.L. 115-334) continued EQIP’s authorization. The 2024 Colorado River Salinity Control Fix Act (P.L. 118-183) changed the Program cost-share percentages for appropriations and power revenues. This was required because declining Colorado River flows were leading to lower power generation revenues.

Below Imperial Dam, the federal government controls salinity to meet the terms of Minute No. 242 to the Mexican Water Treaty of 1944 (Minute 242)—the “Permanent and Definitive Solution to the International Problem of the Salinity of the Colorado River.” Minute 242 requires that

Colorado River water delivered to Mexico upstream of Morelos Dam be no more than 115 parts per million (ppm) $\pm$ 30 ppm higher in TDS, as an annual average, than the average annual flow-weighted salinity of the Colorado River at Imperial Dam. Evaluation of Minute 242 is outside the scope of this Review.

PROVISION FOR REVIEWING AND REVISING THE STANDARD

The Colorado River water quality standards for salinity and the Basin States' compliance approach are different from other water quality standards in the U.S. because, to date, the river's salinity has not been shown to harm human health or wildlife. The Standards, first approved by EPA in 1975, consist of the Plan of Implementation and the numeric criteria, established in 1972 to halt rising salinity in the river and the economic damage to U.S. and Mexican water users that it caused. The Plan of Implementation is designed to maintain the flow-weighted average annual salinity at or below the numeric criteria and to prevent increased economic damages to infrastructure and crop production in the Lower Colorado River Basin due to salinity.

Principle 7 from the Forum's 1974 document, "Principles and Assumptions for Development of Colorado River Salinity Standards and Implementation Plan," states the following:

The Plan of Implementation shall be reviewed and modified as appropriate from time to time, but at least once every three years. At the same time, the (numeric) standards, as required by Section 303 (c) (1) of P.L. 92-500, shall be reviewed for the purpose of modifying and adopting standards consistent with the plan so that the Basin States may continue to develop their compact-apportioned waters while providing the best practicable water quality in the Colorado River Basin.¹³

NUMERIC CRITERIA

EPA promulgated a regulation in 1974 establishing a salinity control policy for the Basin. This policy required that the flow-weighted average annual salinity in the lower mainstem of the Colorado River be maintained at or below 1972 levels. As noted in the "Background" section, flow-weighted average annual salinity is monitored at the following stations: (1) below Hoover Dam, (2) below Parker Dam, and (3) at Imperial Dam. These stations were selected for their proximity to key diversion facilities on the lower Colorado River. Nevada diverts mainstem water from Lake Mead (impounded behind Hoover Dam) for use in the Las Vegas area. The Metropolitan Water District of Southern California and the Central Arizona Project divert water from Lake Havasu (impounded behind Parker Dam) for millions of water users in southern California and central Arizona, respectively. The large agricultural areas in the Imperial and Coachella Valleys in California and the Yuma area in Arizona are served by diversions at Imperial Dam. The numeric criteria at each station are as follows:

¹³ Colorado River Basin Salinity Control Forum, 1975. "Water Quality Standards for Salinity, Including Numeric Criteria and Plan of Implementation for Salinity Control, Colorado River System," p. 133.

Below Hoover Dam	723 mg/L
Below Parker Dam	747 mg/L
At Imperial Dam	879 mg/L

The federal regulations allow temporary increases above the numeric criteria levels if sufficient control measures are included in the Plan of Implementation. However, based on the data presented in Table 2 below, no temporary increases are anticipated during this review period. For the years 2019 through 2025, Table 2 presents flow-weighted average annual salinity data derived from measurements at the three numeric criteria monitoring stations. For 2026 and 2027, Table 2 presents flow-weighted average annual salinity data from Reclamation modeling.¹⁴ As shown in Table 2, these recent data are well below the numeric criterion at each station.

Table 2 – Flow-weighted average annual salinity at the three numeric criteria monitoring stations, 2019-2027

Year	Below Hoover Dam (mg/L) Numeric criterion = 723 mg/L	Below Parker Dam (mg/L) Numeric criterion = 747 mg/L	At Imperial Dam (mg/L) Numeric criterion = 879 mg/L
2019	559	575	655
2020	563	577	657
2021	558	569	645
2022	600	595	662
2023	649	660	727
2024*	649	642	714
2025*	604	615	700
2026**	593	605	694
2027**	590	ND	ND

ND = No data

* 2024 and 2025 data are provisional.

** 2026 and 2027 data were derived from Reclamation modeling results. See Appendix E for a description of Reclamation's Lower Colorado River modeling system.

The Forum finds the current numeric criteria to be adequate for the next three years and recommends no changes at this time. Because of the potential economic benefits to the Basin, the Forum believes there is justification for maintaining salinity levels below the numeric criteria and continuing to expand efforts to control salinity in the Colorado River Basin, thereby avoiding hundreds of millions of dollars in annual damages.

¹⁴ Reclamation's modeling has a margin for error of approximately 20-25 mg/L. See Hydros Consulting, 2020. "Lake Mead CE-QUAL-W2 Model Refinement and Recalibration," Technical Memorandum from Kevin Bierlein, PhD; Christine Hawley; and Nicolás Rodríguez-Jeangros, PhD, PE to Hong Nguyen-DeCorse, Reclamation. July 17, pp. 26-31. <https://www.coloradoriversality.org/docs/4c%20-%20Lake%20Mead%20CE-QUAL-W2%20Model%20Refinement%20and%20Recalibration.pdf>.

PLAN OF IMPLEMENTATION

General

The Plan of Implementation aims to keep flow-weighted average annual salinity levels at or below the numeric criteria for the benefit of future generations in states relying on the Colorado River. Currently, measures control 1,346,400 tons of salt each year. By 2029, the Plan of Implementation would implement activities to prevent an additional 42,000 tons of salt from entering the river each year.

The Plan of Implementation comprises actions undertaken by federal and state agencies to meet the Plan's goals. Principally, activities aim to reduce salt loading to the Colorado River from existing sources and minimize future increases in the salt load caused by human activities. The Plan of Implementation can be summarized as follows:

1. Implementation of non-point source salinity control measures by Reclamation, NRCS, the BSP, and BLM to the extent that those measures remain viable and cost-effective.
2. Continued brine injection at the Paradox Valley Unit (PVU). Pumping operations at the PVU were suspended in March 2019 due to earthquake activity. Brine injection resumed on an interim basis in June 2022 at about 65,000 tons per year—two-thirds of the well's injection rate prior to 2019, which was approximately 100,000 tons per year. Ongoing concerns over seismic activity have raised questions about the well's remaining useful life. Because the brine injection well is currently operational, the Plan of Implementation includes a target of 65,000 tons of annual salinity control at PVU throughout the review period (2027-2029).
3. Implementation of the Forum-adopted policies by each Basin State. (Appendix B includes the text of these policies, and Appendices C and D list the NPDES permits issued under these policies.)
4. Implementation of non-point source management plans developed by the states in collaboration with stakeholders (including, but not limited to, landowners and state, federal, and local agencies) and approved by EPA (see the "State Water Quality Management Plans" section of this review).

The Forum works with federal, state, and local agencies and private entities to ensure the Plan of Implementation is carried out. The Forum also encourages Congress to appropriate the funds needed for implementation and recommends legislative changes when necessary.

Constructed Measures

Congress enacted Public Law (P.L.) 93-320 (the Salinity Control Act) in June of 1974 with the Forum's support. Title II of the Public Law established a water quality program to address salinity in the Colorado River in the United States above Imperial Dam. Title II assigned primary

responsibility for the Program to the Secretary of the Interior and directed Reclamation to investigate and build the Paradox Valley, Grand Valley, Las Vegas Wash, and Crystal Geyser salinity control units. It also directed the Secretary of Agriculture to support the effort within existing authorities.

P.L. 93-320 has been amended several times. These amendments directed the Secretaries of the Interior and Agriculture to prioritize salinity control units with the lowest cost per unit of salinity reduction. They established a BLM program, the BSP, and a voluntary on-farm salinity control program to be implemented by USDA/NRCS. Implementation of these programs led to many cost-effective measures to reduce salt load.

USDOI - Reclamation

The Salinity Control Act was amended in 1995 by P.L. 104-20 to authorize the Basinwide Program, which uses a competitive process to fund cost-effective salinity control in the Basin. Reclamation can implement various salinity control measures, but most projects focus on reducing deep percolation from **off-farm** irrigation delivery systems. Reclamation issues a Notice of Funding Opportunity (NOFO) to request salinity control project applications, evaluates and ranks each submission, and awards grants to the top proposals. Cost-effectiveness remains the key criterion for assessment. The timing of the NOFO depends on the need for additional salinity control projects and the federal appropriations Reclamation receives.

USDA - NRCS

The NRCS program primarily aims to decrease deep percolation by enhancing **on-farm** irrigation systems through EQIP. NRCS assesses and ranks EQIP applications and supports those that best align with the salinity control program's goals through technical and financial assistance. Under the Agricultural Improvement Act of 2018, NRCS may also establish EQIP contracts with "water management entities," including states, irrigation districts, and similar entities, to implement water conservation and efficiency practices that typically decrease deep percolation.

USDOI - BLM

The goal of the BLM program is to reduce salt transport to the Colorado River from BLM-managed public lands, primarily by minimizing soil erosion—the largest source of salt on these lands—and by addressing other nonpoint and point sources.

Basin States Program

The 2008 Farm Bill amended the Salinity Control Act and created the BSP, by which money from the Lower Colorado River Basin Development Fund and the Upper Colorado River Basin Fund (Basin Funds) is used for required state cost-sharing in Reclamation and NRCS salinity control programs. The money for the Basin Funds comes from levies assessed on users of hydropower generated within the Basin. The required cost share on the original salinity control units (the Paradox, Grand Valley, and Las Vegas Wash Units) is 25 percent of the project cost. Salinity control units and programs implemented after the original units require 30 percent and 15 percent

cost shares from the Basin Funds for the Basinwide and EQIP programs, respectively. The cost-share funds in the BSP are administered by Reclamation in consultation with the Advisory Council.

Reclamation expends the BSP cost-share funds required by Basinwide Program expenditures, together with the federal funds appropriated for the Basinwide Program itself, through the NOFO grant process. Reclamation expends the BSP cost-share funds required by EQIP expenditures through (1) the NOFO grant process; (2) agreements with other federal agencies (such as the U.S. Geological Survey) for studies and research; (3) agreements with Colorado, Utah, and Wyoming that fund approved salinity control activities; and (4) agreements with other entities for approved salinity control activities and projects. Cost-share funds from the BSP have proven effective for supplementing Basinwide and EQIP salinity control. The BSP complements the Reclamation and NRCS programs and encourages local water user participation.

Accomplishments and Future Control

The Forum, participating federal agencies, and Basin States each have specific responsibilities for addressing salinity in the Colorado River. The Forum, in conjunction with the Advisory Council, will continue to coordinate the Program, review salinity conditions and Program effectiveness, and advise participating federal agencies on Program implementation.

To date, Forum calculations indicate that the Program has reduced salt loading in the Colorado River by approximately 1,346,400 tons per year, resulting in a salinity reduction of approximately 116 - 131 mg/L in the Lower Basin. Figures 3, 4, and 5 compare measured salinity at the three numeric-criteria stations with salinity levels that would have occurred without the Program.

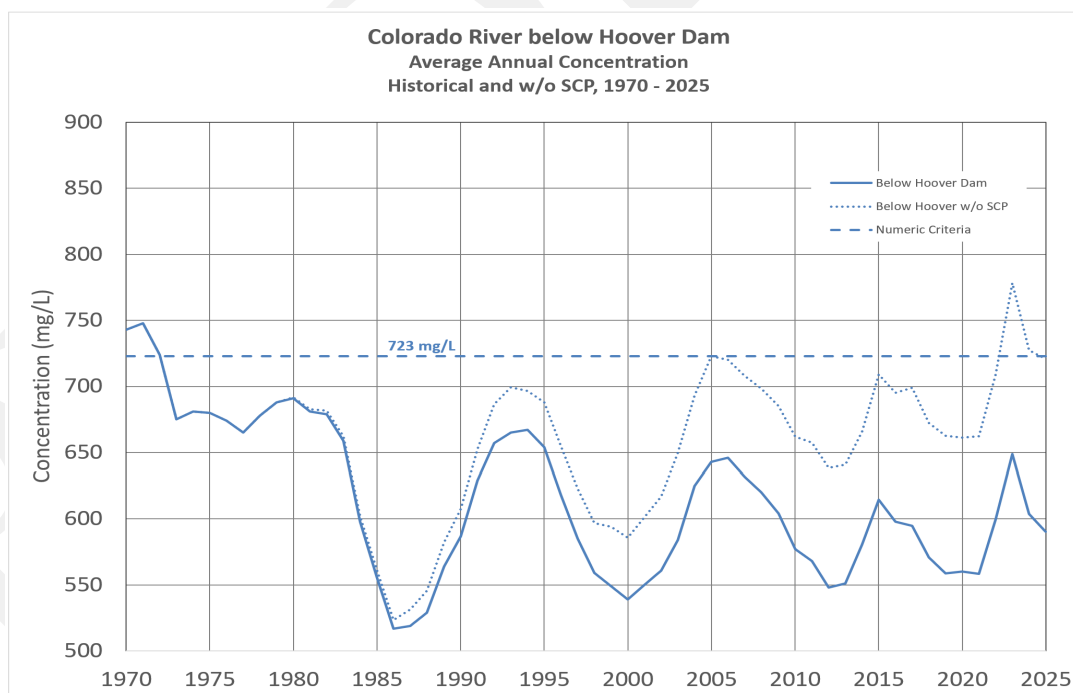


Figure 3 – Salinity Control Program impact on average annual concentration of the Colorado River below Hoover Dam, 1970-2025. Historical flow-weighted salinity concentrations with and without the Salinity Control Program.

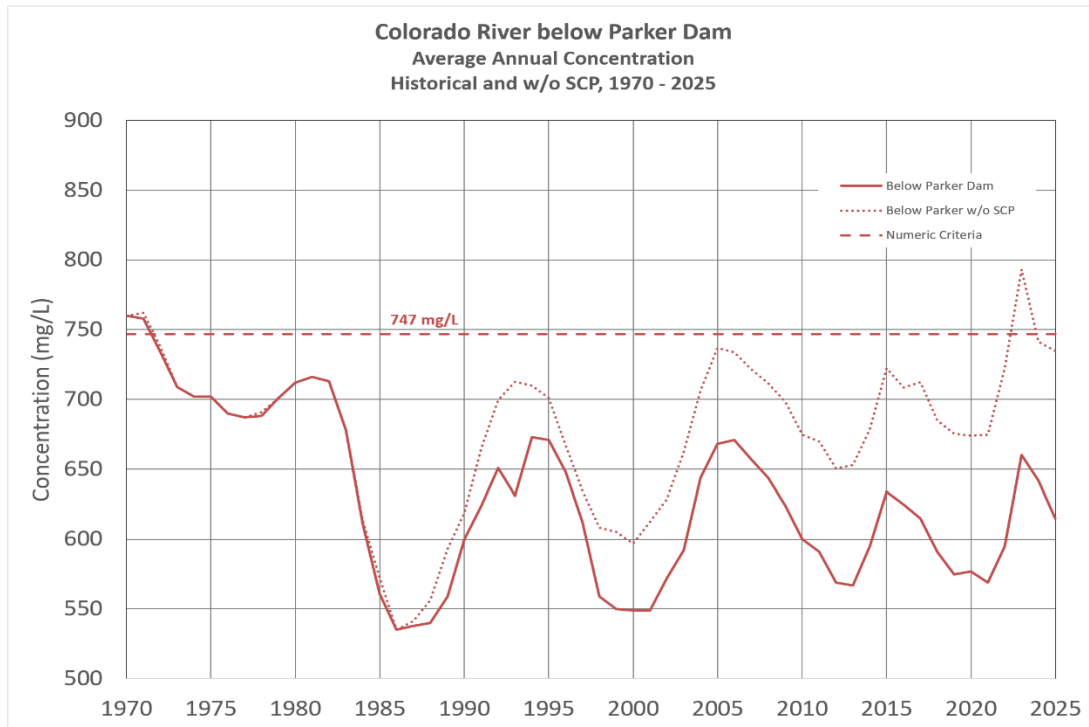


Figure 4 – Salinity Control Program impact on average annual concentration of the Colorado River below Parker Dam, 1970-2025. Historical flow-weighted salinity concentrations with and without the Salinity Control Program.

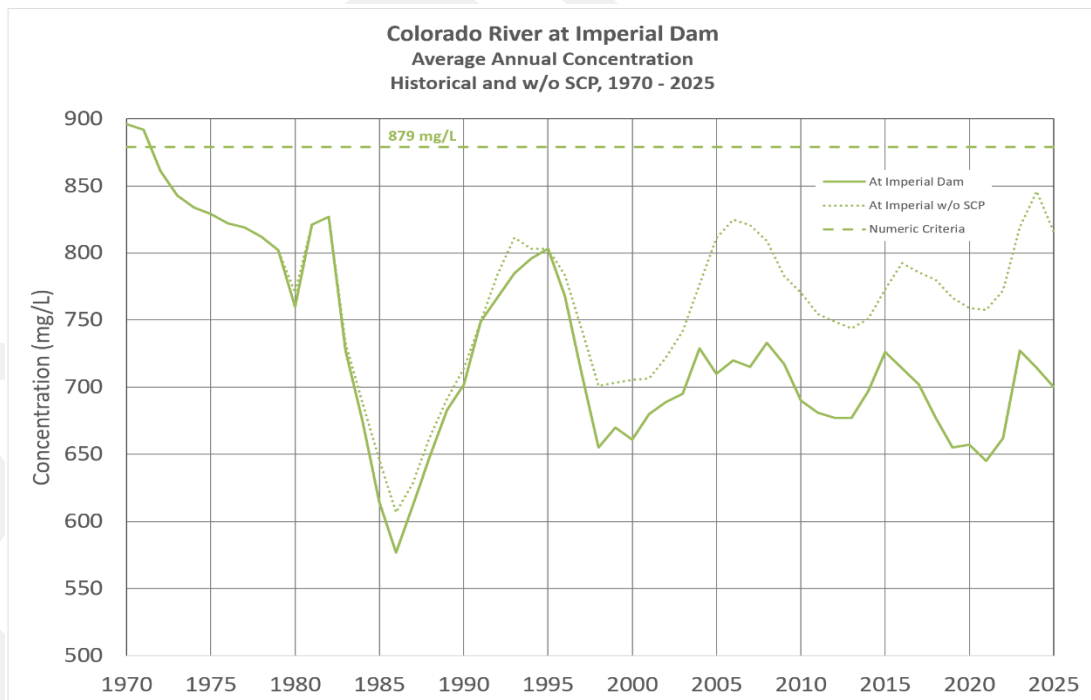


Figure 5 – Salinity Control Program impact on average annual concentration of the Colorado River at Imperial Dam, 1970-2025. Historical flow-weighted salinity concentrations with and without the Salinity Control Program.

Table 3 summarizes the reduction in salt load achieved to date across the various salinity control projects and project areas. Figure 6 shows the salinity areas where these measures have been implemented.

Table 3 – Reduction in salt load achieved to date across the various salinity control projects and project areas, through 2026

Agricultural Areas	Salinity Control (tons/year)	Other Projects	Salinity Control (tons/year)
Big Sandy	71,500	Paradox Valley Unit**	65,000
West Blacks Fork	1,100	Meeker Dome	48,000
Grand Valley	286,300	Las Vegas Wash	3,800
Green River	3,900	Ashley Valley WWTP	9,100
Henrys Fork	3,200	BLM Point Source*	14,600
Lower Gunnison	281,900		
Mancos	7,500		
Manila	23,600		
McElmo (Dolores)	58,200		
Muddy Creek	7,800		
Paria	1,800		
Price-San Rafael	173,900		
San Juan	51,400		
Silt	2,600		
Uinta	221,300		
USDA Tier 2	9,900		
TOTAL	1,205,900	TOTAL	140,500
GRAND TOTAL			1,346,400

* BLM Nonpoint Source controls not included herein.

** See discussion related to PVU operations on page 11.

The Plan of Implementation assumes that measures currently in place continue to operate through the review period (2027-2029) and beyond. Improved water delivery and irrigation systems must be continually maintained and operated efficiently to ensure reliable salinity control. The Forum acknowledges that much of the effort and financial burden of operating, maintaining, and replacing irrigation systems falls to the operators of the improved systems—typically, agricultural producers in the Basin. The same is true for non-agricultural measures, such as the PVU.

Table 3 includes 14,600 tons per year of BLM salinity control implemented by plugging abandoned, flowing oil and gas wells. Most of BLM's salinity control activities aim to reduce saline soil erosion, such as improving grazing and watershed management, or to mitigate oil and gas development, fire, or off-highway vehicle (OHV) damage. Therefore, these non-point-source activities typically guard against increased salinity rather than reducing salinity. As such, though critically important to the Program and the salinity of the Colorado River, these activities are not included in Table 3 and Table 4, which show potential improvements over 1972 conditions.

The Plan of Implementation anticipates that the Program will continue throughout the Review period (2027-2029). As presented in Table 4, the Program is anticipated to control an additional

42,000 tons of salt per year by 2029, as set forth in the 2026 Plan of Implementation, resulting in a total annual salt load reduction of 1,388,400 tons by 2029.

**Table 4 – Additional Salt Load Reduction,
Plan of Implementation 2026****

Funding Source	Additional Salt Load Reduction as of 2029 (tons/year)
RECLAMATION (Basinwide Program)*	21,900
BASIN STATES PROGRAM	2,100
USDA/NRCS (EQIP)	18,000
TOTAL**	42,000

*Includes cost-share dollars from Basin States Program

** BLM Nonpoint Source controls not included herein

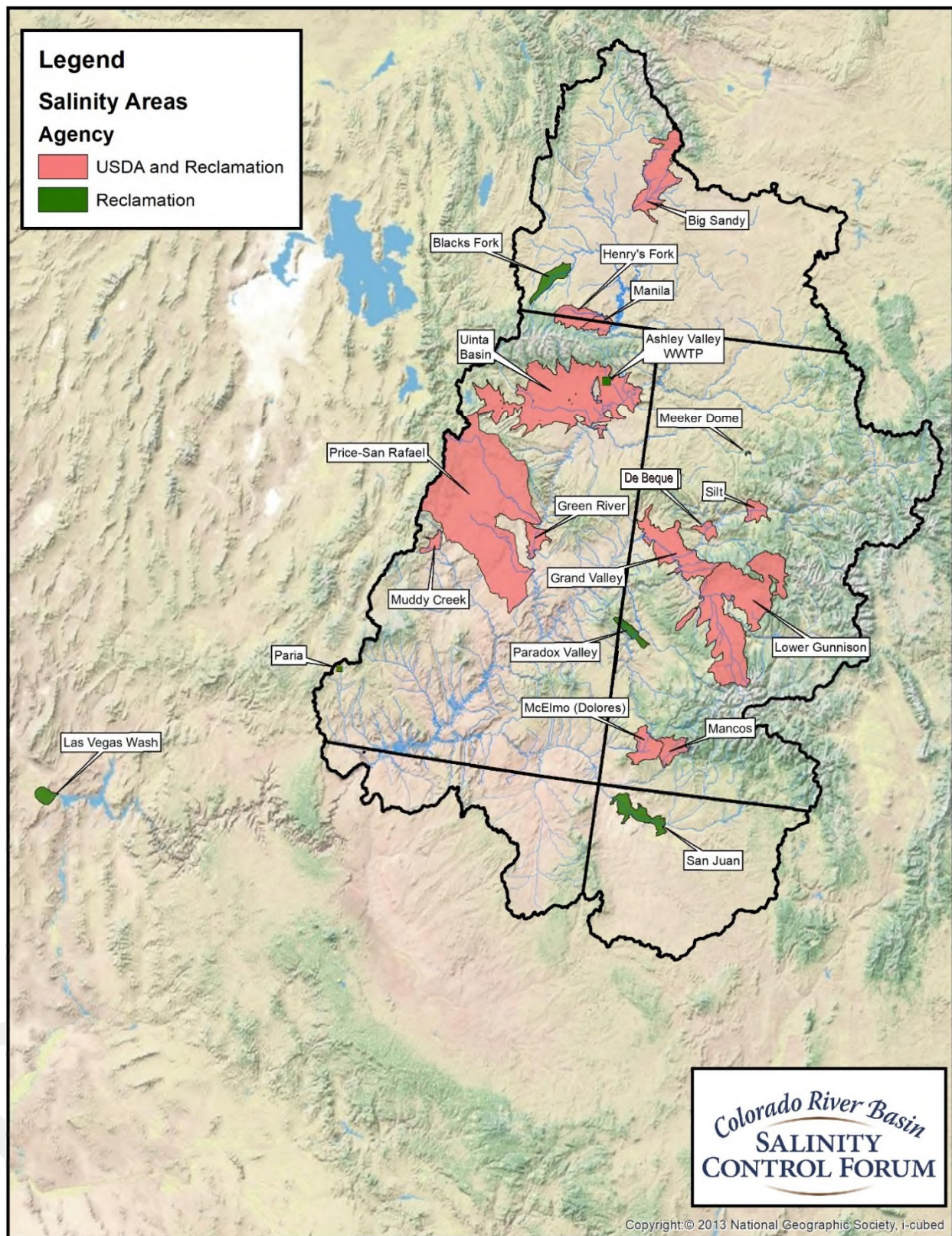


Figure 6 – Colorado River Basin Salinity Control Areas

This Plan of Implementation primarily aims to improve agricultural practices in the Upper Colorado River Basin. These improvements include both on-farm and off-farm activities. Most of the salt load reduction will occur in established salinity project areas, but some will occur outside those areas. Table 5 lists existing and potential salinity control project areas, along with estimates of the remaining potential for salt load reductions in those areas.

Table 5 – Potential Salinity Control Remaining after 2026*

Project Area	Potential Salt Load Reduction (tons/year)	Percent remaining
Big Sandy	35,660	33%
West Blacks Fork	26,900	96%
Grand Valley	210,160	42%
Green River	9,800	72%
Henrys Fork	14,920	82%
Lower Gunnison	470,100	63%
Mancos	16,200	68%
Manila	11,000	32%
McElmo (Dolores)	39,640	41%
Muddy Creek	5,260	40%
Paria	30	2%
Price-San Rafael	34,890	17%
San Juan	11,130	18%
Silt	9,460	78%
Uinta	65,200	23%
USDA Tier 2	6,110	38%
TOTAL**	966,460	

*BLM nonpoint source controls not included

**Saline groundwater sources not included

Reclamation estimates the remaining potential salt load reduction across all identified areas at 966,460 tons per year, which exceeds the 42,000 tons per year of additional salinity control targeted in the Plan of Implementation. Additional salinity control areas may be identified in the future.

Forum Policies and NPDES Permits

Forum policies and NPDES permits are important components of the Plan of Implementation that guide Basin States' activities to control salt transport to the Colorado River. In 1977, the Forum adopted the "Policy for Implementation of Colorado River Salinity Standards through the NPDES Permit Program." This policy provides guidance on the regulation of municipal and industrial point-source discharges of saline water. In 1980, the Forum adopted the "Policy for Use of Brackish and/or Saline Waters for Industrial Purposes" to encourage the environmentally and economically feasible use of brackish and/or saline waters for industrial purposes. The Forum adopted the "Policy for Intercepted Groundwater" in 1982, followed by the "Policy for Fish Hatcheries" in 1988, to address the salinity of water discharges from these sources. The Forum updated its NPDES policy in 2002 to ensure consistent implementation across the Basin States. A Forum subcommittee subsequently confirmed the States' consistent implementation in 2015 and, in 2025, reorganized the policies into a single document presented in Appendix B. Each state has adopted the Forum policies presented in Appendix B.

Appendix C presents a listing of NPDES permits and the compliance levels of discharge facilities within the Basin. During the permit process, salinity discharge requirements are evaluated, and practicable control requirements are established. Each Basin State has delegated primacy to issue NPDES permits except for New Mexico, where EPA Region 6 retains full NPDES permitting authority. EPA also issues NPDES permits for discharges on Tribal Lands and for federal facilities throughout the Basin. The New Mexico Environment Department certifies all NPDES permits issued in its state by EPA Region 6. Forum policies also apply to EPA-issued NPDES permits and, therefore, become part of the Plan of Implementation. The NPDES permits issued by EPA are listed in Appendix D. For the period of this Review, the implementation status of NPDES permits and water quality management plans in each Basin State is described below.

State Water Quality Management Plans

ARIZONA

Scope

The Colorado River enters Arizona and the Lower Basin near Page and travels through the Grand Canyon before turning southward at Lake Mead (Hoover Dam) and flowing to the Gulf of California. There are four major drainages in Arizona's portion of the Basin: 1) the Little Colorado River; 2) the Virgin River; 3) the Bill Williams River, formed by the Big Sandy and the Santa Maria Rivers at Alamo Lake, which empties into the Colorado River above Parker Dam; and 4) the Gila River, which joins the Colorado River below Imperial Dam. Because the Gila River is below Imperial Dam, facilities that discharge to the Gila River or its tributaries do not require conformance with the Forum policies.

NPDES Permitting

The Water Quality Division of the Arizona Department of Environmental Quality (ADEQ) administers the Arizona Pollutant Discharge Elimination System (AZPDES) program on non-Indian country lands. All permits for domestic wastewater and industrial discharges, with direct river discharges, are written in conformance with associated Forum policies. ADEQ continues to evaluate and revise other discharge permits as information becomes available.

Currently, there are 22 active individual discharge permit holders in Arizona's non-tribal portion of the Colorado River system. Of these, 16 permits are for municipal or domestic wastewater discharges. The other 6 permits are for industrial discharges related to fish hatcheries, mines, water treatment or water delivery. Additionally, there is 1 inactive permit that was terminated or expired since the 2023 triennial review. A specific listing of the individual permits and the status of compliance with Forum policies is contained in Appendix C.

There are currently 23 stream segments and lakes in the Basin that are listed in the state's 2022 Section 303(d) list as impaired in the following watersheds: Bill Williams (2), Colorado River Grand Canyon (11), Colorado River Lower Gila (3), Little Colorado River (7). No waters are currently listed for salinity, which only applies to the Colorado River. The primary causes of impairment are selenium (11), mercury (8), suspended sediment (2), *E. coli* (2), ammonia (2),

copper (1), and dissolved oxygen (1). Complete assessment information can be found on ADEQ's website.

Watershed Planning

ADEQ's TMDL Program and the Water Quality Improvement Grant Program utilize comprehensive watershed-based plans, which contain EPA's required nine elements, to help focus funding to those areas and projects that have the greatest chance for improving water quality. These plans contain implementation strategies for many of the impaired waters, as well as Best Management Practices to address existing and potential issues in the watershed.

Work plans are developed to secure grant funding under the Clean Water Act, Section 319(h) for watershed level planning and implementation. The work plans identify and coordinate efforts by state, federal and local agencies, along with watershed groups and private citizens, to reduce or prevent nonpoint source pollution through the use of Best Management Practices and "on-the-ground" projects.

CALIFORNIA

Note that California administers NPDES permits similar to other states, but it does not currently have any active NPDES permits which discharge in the Colorado River Basin.

Water Quality Management Planning

The Water Quality Control Plan for the Colorado River Basin (Basin Plan) was adopted by the California Regional Water Quality Control Board, Colorado River Basin (Regional Water Board) in November 1993 and approved by the State Water Resources Control Board (State Water Board) in February 1994. The revised plan became effective upon approval by the Office of Administrative Law (OAL) in August 1994. Subsequent Basin Plan updates include amendments adopted by the State and Regional Water Boards and approved by OAL, as necessary, through August 2024. The salinity control component of the Basin Plan is consistent with the Forum's Plan of Implementation for salinity control. The Regional Water Board collaborates with local entities and the Colorado River Board of California to ensure that implementation of the water quality plan is achieved.

Salinity control in ground and surface waters is a high priority for the State and Regional Water Boards and a very significant concern in arid areas like the Colorado River Basin Region, which relies heavily on water from the lower Colorado River for municipal and agricultural supply. To address rising salinities in groundwater, the State Water Board adopted a Recycled Water Policy in February 2009 which requires the development of Salt and Nutrient Management Plans for groundwater basins throughout California. The plans require basin-wide management of salts and nutrients from all sources in a manner that protects groundwater quality and beneficial uses. The salinity of the Colorado River is a critical factor in the development of Salt and Nutrient Management Plans for this region, given the large quantities of water that are diverted from the Colorado River to replenish the Coachella Valley municipal aquifer (over 3.2 million acre-feet to date), and to irrigate crops throughout the Imperial, Palo Verde, Bard, and Coachella Valleys.

Controlling nonpoint source pollution generated from agricultural operations is also a top priority of the State and Regional Water Boards. Wastewater discharges from agricultural activities such as irrigation runoff, flows from tile drains and storm water runoff impact water quality by transporting pollutants – pesticides, sediment, nutrients, salts, pathogens, heavy metals and others – from cultivated fields into surface waters. To prevent agricultural discharges from impairing waters that receive these discharges, the State Water Board established the Irrigated Lands Regulatory Program in 2003. This program regulates discharges from irrigated agricultural lands by issuing waste discharge requirements (WDRs) or conditional waivers of WDRs (Orders) to growers. The Regional Water Board adopted general WDRs for Palo Verde Valley and Bard Unit in 2019. Agricultural discharges in these areas are discharged to drains that are tributaries to the Colorado River. These Orders contain conditions requiring water quality monitoring of receiving waters and corrective actions when impairments are discovered.

COLORADO

Scope

Colorado's portion of the Colorado River Basin is comprised of six major drainages: 1) the main stem of the Colorado River from the continental divide to the Utah border, 2) the Roaring Fork River Basin, 3) the Yampa/White River Basin which flows to the Green River in Utah, 4) the Gunnison River Basin, 5) the Dolores River which flows to the main stem in Utah, and 6) the San Juan Basin which flows into New Mexico and then to the main stem in Utah.

NPDES Permitting

The Colorado Department of Public Health and Environment, Water Quality Control Division (CDPHE, WQCD), administers the NPDES permitting program in the Colorado River Basin, with the exception that EPA issues permits for point source discharges on the Southern Ute and Ute Mountain Ute Reservations, as well as for federally owned lands such as National Parks. This would include permits for discharges to groundwater that would contribute salinity to the Colorado River system through a hydrologic connection to surface waters. Permits for industrial and municipal discharges are written in conformance with the associated Forum policies. Although exempted by the Energy Policy Act from the requirement to obtain a federal permit, Colorado issues state stormwater permits to construction of oil and gas development sites and related infrastructure (e.g. roads) disturbing one or more acres.

Currently there are more than 300 active discharge permits and permit certifications in the Colorado portion of the Colorado River Basin where the salinity requirements have been addressed. A specific listing of these permits is contained in Appendix C.

Water Quality Assessments and TMDLs

The waters in Colorado's portion of the Colorado River Basin, particularly at higher elevation, are generally of good quality. Based on the 2024 303(d) List of Impaired Waters, there are 203 water quality impaired stream segments in the Colorado River Basin in Colorado (Gunnison River Basin: 68 impaired segments; Upper and Lower Colorado River Basin: 101 impaired segments; San Juan

River Basin: 34 impaired segments). Of these, a significant majority in the lower ends of these basins are impaired for selenium. Water quality impairments in the mountainous portions of these basins are due to high concentrations of metals, primarily caused by the remnants of historic mining activities. No waters are currently listed for salinity impacts.

The lower portions of each of these basins are underlain by bedrock deposits of the cretaceous period, most notably Mancos Shale and Dakota Sandstone. The Mancos Shale is a marine deposit and, as such, contains significant amounts of readily soluble constituent materials, including selenium. Groundwater which leaches to the relatively impermeable shale deposits tends to dissolve selenium and, as it flows atop the bedrock strata toward surface drainages, carries elevated levels of dissolved selenium with it. Various anthropogenic activities like sand and gravel extraction and agricultural and urban landscape irrigation accelerate the mobilization and transport of selenium from shale and shale-derived soil to surface water.

Given the selenium impairments, CDPHE, WQCD prioritized developing selenium Total Maximum Daily Loads (TMDLs) for several impaired tributaries within the Colorado River Basin. One of the primary reasons for prioritizing these TMDLs was the impact the selenium loading is having on threatened and endangered fish habitat. Selenium TMDLs for tributaries from Glenwood Springs to the Utah state line were completed in 2024. Planning and scoping activities continued during this reporting period in order to address the nonpoint source contributions that were identified in these TMDLs. Many of the Best Management Practices (BMPs) that will be implemented to address the selenium nonpoint source contributions are anticipated to reduce salinity as well.

Watershed Planning - Colorado River Basin Selenium/Salinity Nonpoint Source Activities

CDPHE, WQCD supported watershed plan implementation through the construction of BMPs for nutrient, selenium and salinity reduction in the Basin. Numerous partners also sponsored projects for selenium and salinity control in the Basin with a primary emphasis in the Lower Gunnison which was the largest contributing tributary. The Gunnison River Basin Selenium Management Program, which was developed in response to the 2009 USFWS Gunnison Basin Programmatic Biological Opinion, provides details of past, current, and planned selenium control projects. Selenium reductions associated with this program are attributed to previous and on-going off-farm and on-farm salinity control efforts implemented through the Colorado River Basin Salinity Control Program, Environmental Quality Incentives Program, National Irrigation Water Quality Program, Natural Resources Conservation Service Regional Conservation Partnership Program, Colorado Department of Natural Resources Species Conservation Trust Program, and Colorado Nonpoint Source Program.

During this reporting period, the Colorado Nonpoint Source Program continued to provide funding assistance for multi-benefit, nonpoint source pollution reduction projects in the Basin. While past BMP implementation focused on selenium control techniques that addressed seepage and deep percolation of water into the local Mancos Shale to reduce salinity loading, more recent projects addressed nutrients. As these nutrient reduction projects increased soil health, improved nutrient uptake and minimized the accumulation of salts from fertilizers, they also resulted in salinity reductions as indicated by decreased total dissolved solids in water quality samples taken after BMP implementation.

NEVADA

Scope

The Basin within Nevada consists of three major tributaries: 1) the Virgin River, 2) the Muddy River, and 3) the Las Vegas Wash. All of these tributaries flow into Lake Mead and provide nearly all of the inflow to the river from Nevada.

NPDES Permitting

The Nevada Division of Environmental Protection is the EPA delegated authority for the issuance of NPDES Permits. As of December 31, 2025, there were 51 active discharge permits in the Nevada portion of the Colorado River System. The largest dischargers, the City of Las Vegas with a permitted discharge maximum flow of up to 101 mgd (91 mgd from the Water Pollution Control Facility and 10 mgd from the Durango Hills Facility), the Clark County Water Reclamation District with a permitted discharge maximum flow of up to 150 mgd, the City of Henderson with a permitted discharge maximum flow of up to 48 mgd (40 mgd from the Kurt R. Segler Water Reclamation Facility and 8 mgd from the Southwest Water Reclamation Facility), and the City of North Las Vegas with a permitted discharge maximum flow up to 25 mgd. The quality of the water affected by these permits is closely monitored and all necessary programs to protect water quality standards are being implemented. Nevada continues to apply the policies adopted by the Forum.

NEW MEXICO

Scope

New Mexico's portion of the Basin above Imperial Dam is comprised of two major drainages: 1) the Rio Puerco, which is a tributary of the Little Colorado River, and 2) the San Juan River, which is a major tributary of the Colorado River.

NPDES Permitting

The NPDES program is administered by the EPA Region 6 in the State of New Mexico, including Tribal Nations and except for facilities on the Navajo Nation which are issued by EPA Region 9. The New Mexico Environment Department (NMED) Surface Water Quality Bureau (SWQB) assists the EPA Region 6 in implementing the Clean Water Act Section 402 NPDES permit program by reviewing federal permits and preparing Section 401 certifications to certify that the permit also complies with New Mexico law. Permits for industrial and municipal discharges are written in conformance with the associated Forum policies. The State of New Mexico adopts the standards of the Forum by reference in the Water Quality Standards for Interstate and Intrastate Surface Waters at 20.6.4.54 NMAC. Currently, there are 35 discharge permits (active and inactive) in the New Mexico portion of the Basin, of which EPA Region 6 administers 22 permits and EPA Region 9 administers 13 Navajo Reservation permits. Of these, 18 permits (14 state, 4 Navajo Nation) are for industrial discharges and 16 permits (6 state, 1 Jicarilla Apache, 9 Navajo Nation) are associated with municipal wastewater discharges.

Water Quality Assessment and TMDLs

The New Mexico Water Quality Control Commission currently adopts the water quality framework developed and proposed by the NMED which includes the State of New Mexico Water Quality Management Plan and the New Mexico Nonpoint Source Management Plan. Both plans cover the entire state, except for lands under the jurisdiction of the Nations, Tribes, and Pueblos. Much of the Basin in New Mexico falls within the Navajo Nation boundary.

The following TMDLs have been adopted by the New Mexico Water Quality Control Commission and approved by EPA within the New Mexico portion of the Basin at this time:

- Gallegos Canyon (San Juan to Navajo boundary) selenium
- San Juan River (Animas River to Canon Largo) sedimentation, *E.coli*
- Animas River (San Juan River to Estes Arroyo) temperature, *E.coli*
- Animas River (San Juan River to Estes Arroyo) total nitrogen, total phosphorus
- Animas River (Estes Arroyo to Southern Ute) *E.coli*, total phosphorus
- La Plata River (McDermott Arroyo to CO border) *E.coli*
- La Plata River (McDermott Arroyo to CO border) dissolved oxygen
- La Plata River (San Juan River to McDermott Arroyo) sedimentation, *E.coli*
- San Juan River (Navajo and at Hogback to Animas River) *E.coli*

The most recent San Juan Basin ambient surface water quality survey was conducted in 2017 and 2018 by the NMED SWQB. These data sources were collated and assessed to determine the current Clean Water Act 303(d) impairments and de-listing, and for the future TMDL development. These surveys are normally scheduled throughout the various watersheds and basins in the state on a 7- to 8-year cycle. NMED with Navajo Nation and Southern Ute Indian Tribe assistance, coordinates and uploads data to WQX from sampling events in the New Mexico portions utilizing Gold King Mine Spill settlement funds. In 2026, NMED SWQB is developing new TMDLs for aluminum, *E.coli*, plant nutrients, sediment, and selenium, as well as implementing an ambient rotational surface water quality survey in the San Juan River Basin.

Watershed Planning

The NMED, through New Mexico's Nonpoint Source Management Program, supports the development and implementation of watershed-based plans (WBPs) primarily with federal Clean Water Act (CWA) Section 319 funding. NMED also supports water quality improvement projects and habitat improvement projects with the State's River Stewardship Program and Land of Enchantment and Legacy Funds. Currently (March 2026), the Lower Animas River Watershed Based Plan is the only WBP in New Mexico that is part of the Colorado River Basin. The Lower Animas River WBP focuses on improving water quality for *E. coli* and nutrients and describes various management measures for septic systems, agriculture, urban stormwater, and river restoration which may provide additional benefits for salinity. New Mexico's Nonpoint Source Management Plan briefly describes that the Colorado River Basin Salinity Control Forum will work together to improve agricultural practices, remove invasive vegetation, and intercept extremely saline water sources. NMED-Construction Programs Bureau's Clean Water State Revolving Fund may also be used for salinity control projects. Additional state actions in support

of salinity control include: 1) inclusion of salinity control measures in the Section 208 plans, 2) dissemination of information on salinity sources and control, 3) consultation with industries on potential salinity reduction measures, 4) implementation of Forum policy through NPDES permits, and 5) maintaining a continuous water quality planning program whereby new or additional salinity control measures can be addressed. Funding associated with the 2015 Gold King Mine Spill is also used to conduct San Juan River Watershed conferences where on-going watershed restoration and sampling efforts are presented.

UTAH

Scope

Utah's portion of the Colorado River Basin is comprised of ten major sections: 1) the main stem of the Colorado River from the Colorado border to the Arizona Border in Lake Powell, 2) the Green River Basin from the Wyoming state line in Flaming Gorge Reservoir to the confluence with the Colorado River, 3) the Duchesne River Basin, 4) the lower Yampa and White River Basins which flow to the Green River in Utah, 5) the Price and San Rafael River Basins, 6) the Dirty Devil and Escalante Rivers, 7) the lower portion of the San Juan River Basin which flows into the main stem of the Colorado River in Utah, 8) the Paria River, 9) the Kanab Creek Basin to the Arizona State Line, and 10) the Virgin River Basin to the Arizona state line.

NPDES Permitting

The Utah Division of Water Quality (DWQ) within the Utah Department of Environmental Quality administers the NPDES permitting program in Utah. Permits for industrial and municipal discharges within the Colorado River Basin are written in conformance with the associated Forum policies and are available for viewing online at the [UPDES Permitting Program](#) webpage.

As of December 31, 2025, there are 75 discharge permits as issued by DWQ in the Utah portion of the Colorado River Basin. Of these, 36 are for municipal discharges and 39 are for industrial discharges, of which 3 industrial permits have been recently terminated. A specific listing of the individual permits and their compliance status is presented in Appendix C. Multiple UPDES discharge permits for coal mining operations in Utah were developed to offset salinity contributions from industrial sources in accordance with the Forum policy initially adopted as part of the 2002 Triennial Review. The salinity-offset project plans have been finalized previously, with projects implemented to offset salinity contributions in excess of the one-ton-per-day requirement from those facilities. These projects have been implemented in coordination with the Utah Department of Agriculture and Food to further control TDS within the Utah portion of the Colorado River Basin.

Water Quality Assessments and TMDLs

The waters in Utah's portion of the Colorado River Basin are generally of good quality; however, there are 64 assessment units currently listed as impaired for TDS exceedances and 19 for selenium exceedances according to the 303(d) list presented in the [2024 Integrated Report](#). These segments are generally in the lower reaches of the respective basins and are the result of a combination of

natural salt loadings and agricultural drainage. TMDLs have been developed for a number of assessment units to address past impairments from TDS and selenium and can be viewed on DWQ's [Approved TMDL](#) webpage.

Watershed Planning

[Utah's Watershed Protection Program](#) is committed to the preservation and restoration of the state's aquatic ecosystems, including streams, lakes, and groundwater resources. This mission is executed through a robust framework of stewardship, monitoring, inter-agency coordination, and strategic watershed planning. Restoration initiatives are active statewide, including the Upper Colorado River Basin. To drive these efforts, UDWQ leverages state resources alongside federal EPA Clean Water Act Section 319 grants to mitigate nonpoint source pollutant loading.

WYOMING

Scope

Wyoming's portion of the Colorado River Basin comprises two major drainages: the Little Snake River (a tributary to the Yampa River in Colorado) and the Green River, which empties into Flaming Gorge Reservoir on the Wyoming-Utah border.

NPDES Permits

The Wyoming portion of the Colorado River Basin currently has 29 active discharge permits, all of which are written in conformance with Forum policies. These permits are divided into 14 industrial and 15 municipal wastewater permits. The industrial permits cover facilities such as coal mines, oil and gas production, power plants, and fish hatcheries. While most industrial facilities reported no discharge during the 2023-2025 period, discharges from coal mines were highly intermittent and associated with precipitation runoff events; however, these discharges are usually captured and reused for dust suppression, meaning a negligible volume actually reaches a live water. The 15 municipal facilities collectively serve a population of approximately 80,000 people. With the exception of the City of Rock Springs, which upgraded its system to a mechanical treatment plan in late 2025, all municipal facilities are lagoon systems. A specific listing of the individual permits and compliance status is contained in Appendix C.

Water Quality Assessments and TMDLs

The waters in the Upper Colorado River Basin within Wyoming are generally of good quality. According to [Wyoming's 2022/2024 Integrated 305\(b\) and 303\(d\) Report](#), the majority of assessed stream miles in the combined Green River and Little Snake River Basins (91%) are supporting those designated uses that have been assessed with remaining assessed stream miles identified as impaired (4%), have insufficient information to determine designated uses support (<1%), or have been addressed by total maximum daily loads (4%). Specifically, there are 16 stream and river segments identified as impaired among these two basins. Of these, two segments are impaired for salinity-related impacts: Bitter Creek in the Green River Basin and Muddy Creek in the Little Snake River Basin that are impaired for exceedance of Wyoming's numeric chloride and/or

selenium criteria protective of aquatic life.

Other water quality impairments in the Green River and Little Snake River Basins include exceedance of Wyoming's narrative criteria protective of aquatic life due to sedimentation/siltation, habitat alterations, temperature, or nutrients; exceedance of numeric cadmium, copper, silver, or pH criteria protective of aquatic life; and exceedance of Wyoming's *Escherichia coli* or fecal coliform bacteria criteria protective of recreation. A web map of assessed waterbodies with access to monitoring and assessment reports, fact sheets, and total maximum daily loads (TMDLs) is available on Wyoming Department of Environmental Quality's [Water Quality Assessment webpage](#) by clicking on the "Interactive Map" tab.

TMDL's have been completed for eight stream and river segments within the Green River and Little Snake River Basins that are not directly associated with salinity-related impairments. TMDL's for Bitter Creek and Muddy Creek are currently at low priority for development.

A 2015 probabilistic survey by the WDEQ of *perennial* streams and rivers in the Green and Little Snake River Basins found that approximately 6% of perennial stream miles were in the most-disturbed condition (>95th percentile of reference) for salinity. These impacted areas were largely located in the Big Sandy, Blacks Fork, and Muddy Creek watersheds of the Green River Basin. Potential anthropogenic sources of salinity include irrigated agriculture, mineral and industrial development, municipal wastewater discharges, and road salt application.

Watershed Planning and Nonpoint Source Reduction

Watershed planning and restoration are ongoing for several streams and rivers in the Green and Little Snake River Basins. To date, two nine-element watershed-based plans have been developed by local conservation districts and approved for competitive Clean Water Act Section 319(h) nonpoint source water quality implementation project funding. Specifically, the Sublette County Conservation District developed a plan to address the existing sediment impairment on the Little Sandy River, identifying methods like best management practices and river restoration. The Sweetwater County Conservation District's plan targets fecal coliform bacteria and chloride impairments on Bitter and Killpecker Creeks within the Green River Basin.

The Wyoming Water Development Commission's (WWDC) [2010 Green River Basin Plan](#), which includes the Little Snake River Basin, details the basin's water resources, current and projected uses, available unused water volumes, and strategies for identified water issues. The Plan was amended in 2018 with an updated "Environmental and Recreational Water Use Analysis" to establish a consistent viewpoint and accounting process for environmental and recreational water demands to guide future basin planning.

From 2023-2025, the Wyoming Game and Fish Department, Trout Unlimited, Little Snake River Conservation District, and the U.S. Bureau of Land Management successfully implemented several stream and river restoration projects in the Green and Little Snake River Basins. These projects – located on the Green River, Henry's Fork, New Fork River, Trout Creek, Dry Piney Creek watershed, Muddy Creek watershed to the Little Snake River, and Savery Creek – reduced bank erosion, restored stable channel forms, and decreased contributions of excess sediment along

several miles of stream and river. Funding for these efforts came from local, state, or federal sources including Clean Water Act Section 319(h) grants administered by the WDEQ.

CONCLUSION AND ADOPTION OF THE STANDARDS

The water quality standards for salinity control in the Colorado River consist of two components: numeric criteria and the Plan of Implementation. No changes have been made to the numeric criteria since their adoption by the seven Basin States in 1975 and subsequent EPA approval. Following its 2026 triennial review process, the Forum again concludes that the numeric criteria are appropriate and recommends no changes. The Forum also finds that the updated Plan of Implementation is adequate to maintain salinity concentrations below the numeric criteria through 2029, thereby providing significant benefits to the Colorado River Basin.

The Program cannot be successful without the cooperation of many agencies and governments at the local, state, and federal levels. First, the Program relies on landowners to implement cost-effective salinity control measures. Second, the Program depends on a multitude of agreements among the seven Basin States, which have historically been reached by consensus. Lastly, the Program depends on the three federal agencies that implement salinity control projects, as well as other federal agencies such as the United States Fish & Wildlife Service, USGS, and the EPA. Given their involvement in preparing this Review, it is expected that cooperating federal agencies will support the Plan of Implementation and its programs.

In May 2026, the Forum adopted the draft 2026 Review for public comment. During the summer of 2026, the Forum and the seven Basin States will solicit public and cooperating-agency comments on the Review. Each state will use its own method for soliciting comments, and the Forum will post the draft 2026 Review on its website and request public comments. It is the Forum's intent to adopt the final 2026 Review at its fall meeting.

With the Forum's approval of this Review, each of the seven Basin States will include these standards as a part of their own water quality standards through their respective procedures. The states will obtain EPA approval of their water quality standards based on their respective regions. The State of New Mexico will submit its triennial review to EPA Region 6 in Dallas, Texas; Colorado, Utah, and Wyoming will submit their reviews to EPA Region 8 in Denver, Colorado; and Arizona, California, and Nevada will submit their reviews to EPA Region 9 in San Francisco, California. It is anticipated that EPA will fully support this salinity control effort by approving each state's submittals.

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APPENDIX A

Observed Flow-Weighted Salinity Values at the Numeric Criteria Stations

Observed Flow-Weighted Average Salinity at the Numeric Criteria Stations
(Total Dissolved Solids in mg/L)¹

Calendar Year	Below Hoover Dam	Below Parker Dam	At Imperial Dam
1970	743	760	896
1971	748	758	892
1972	724	734	861
1973	675	709	843
1974	681	702	834
1975	680	702	829
1976	674	690	822
1977	665	687	819
1978	678	688	812
1979	688	701	802
1980	691	711	760
1981	681	716	821
1982	680	713	826
1983	658	678	727
1984	597	611	675
1985	556	561	615
1986	517	535	577
1987	519	537	612
1988	529	540	648
1989	564	559	683
1990	587	598	702
1991	629	624	749
1992	658	651	767
1993	664	631	785
1994	668	673	796
1995	655	665	797
1996	618	648	768
1997	585	612	710
1998	559	559	655
1999	549	550	670
2000	541	545	671
2001	550	549	680
2002	564	569	690
2003	584	592	695
2004	623	621	727
2005	643	668	710
2006	647	673	712
2007	632	657	715
2008	622	646	717
2009	604	624	717
2010	576	596	690
2011	568	591	681
2012	548	571	676
2013	551	567	677
2014	581	598	695
2015	614	634	726
2016	598	624	715
2017	595	615	702
2018	571	592	677
2019	559	575	655
2020	560	577	657
2021	558	569	645
2022	600	595	662
2023	649	660	727
2024 ²	604	642	714
2025 ²	590	615	700

¹ Determined by the USGS from data collected by Reclamation and USGS

² 2024-2025 values are provisional

Salinity concentrations are based on TDS as the sum of constituents whenever possible. The sum of constituents is defined to include calcium, magnesium, sodium, chloride, sulfate, a measure of the carbonate equivalent of alkalinity and, if measured, silica and potassium.

APPENDIX B

Forum Policies

PENDING

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POLICY FOR IMPLEMENTATION OF COLORADO RIVER SALINITY STANDARDS THROUGH THE NPDES PERMIT PROGRAM

Adopted by The Colorado River Basin Salinity Control Forum

February 28, 1977
Revised October 30, 2002
Revised October 29, 2025

OVERVIEW

In November 1976, the United States Environmental Protection Agency Regional Administrators notified each of the seven Colorado River Basin states of the approval of the water quality standards for salinity for the Colorado River System as contained in the document entitled “Proposed Water Quality Standards for Salinity Including Numeric Criteria and Plan of Implementation for Salinity Control, Colorado River System, June 1975,” and the supplement dated August 25, 1975. The salinity standards including numeric criteria and a plan of implementation provide for a flow weighted average annual numeric criteria for three stations in the lower main stem of the Colorado River: below Hoover Dam, below Parker Dam, and at Imperial Dam.

In 1977, the states of the Colorado River Basin adopted the “Policy for Implementation of Colorado River Salinity Standards through the NPDES Permit Program.” The plan of implementation is comprised of a number of federal and non-federal projects and measures to maintain the flow-weighted average annual salinity in the Lower Colorado River at or below numeric criteria at the three stations as the Upper and Lower Basin states continue to develop their compact-apportioned waters. One of the components of the Plan consists of the placing of effluent limitations, through the National Pollutant Discharge Elimination System (NPDES) permit program, on industrial and municipal discharges.

POLICY AMENDMENTS

NPDES Policy for Municipal and Industrial Discharges of Salinity in the Colorado River

The purpose of this policy is to provide more detailed guidance in the application of salinity standards developed pursuant to Section 303 and through the NPDES permitting authority in the regulation of municipal and industrial sources (see Section 402 of the Clean Water Act). The objective of the policy, as provided in Sections I.A. and I.B., is to achieve “no salt return” whenever practicable for industrial discharges and an incremental increase in salinity over the supply water for municipal discharges. This policy is applicable to discharges that would have an impact, either direct or indirect on the lower main stem of the Colorado River System. The lower main stem is defined as that portion of the River from Hoover Dam to Imperial Dam.

In October 2002, the Colorado River Basin Salinity Control Forum (Forum) substantially amended the NPDES policies relating to industrial discharges but made no changes to the procedures for municipal discharges (2002 Review). In the printing of the 2002 Review the section relating to municipal discharges and an additional appendix entitled “Guidance on New Construction

Determination” were inadvertently omitted. Both errors were corrected in the 2002 Review printing and the Forum reaffirmed the validity of all of the policies as they appear in this document.

NPDES Policies Separately Adopted by the Forum

The Forum developed a separate and specific policy for the use of brackish and/or saline waters for industrial purposes on September 11, 1980. The Forum addressed the issue of intercepted ground water and adopted a specific policy dealing with that type of discharge on October 20, 1982. On October 28, 1988, the Forum adopted a specific policy addressing the water use and discharge associated with fish hatcheries. Each of these separately adopted policies is attached hereto.

2002 Amendments to NPDES Policies for Specified Industrial Discharges

On October 30, 2002, the Forum amended the “NPDES Permit Program Policy for Implementation of Colorado River Salinity Standards” in order to address the following four additional types of industrial discharges: (1) water that has been used for once-through noncontact cooling water purposes; (2) new industrial sources that have operations and associated discharges at multiple locations; (3) “fresh water industrial discharges” where the discharged water does not cause or contribute to exceedances of the salinity standards for the Colorado River System; and (4) this policy was also amended to encourage new industrial sources to conduct or finance one or more salinity-offset projects in cases where the permittee has demonstrated that it is not practicable to prevent the discharge of all salt from proposed new construction. A description of each of these policy amendments is included below:

(1) Discharges of Once-Through Noncontact Cooling Water

Section I.C. of this policy has been added to address discharges of water that have been used for once-through noncontact cooling water purposes. The policy for such discharges shall be to permit these uses based upon a finding that the returned water does not contribute to the loading or the concentration of salts in the waters of the receiving stream beyond a *de minimis* amount. A *de minimis* amount is considered, for purposes of this policy, as an average annual increase of not more than 25 milligrams per liter (mg/L) in total dissolved solids (TDS) measured at the discharge point or outfall prior to any mixing with the receiving stream in comparison to the TDS concentration measured at the intake monitoring point of the cooling process or facility. This policy is not intended to supersede any other water quality standard that applies to the receiving stream, including but not limited to narrative standards promulgated to prohibit impairment of designated uses of the stream. It is the intent of the Forum to permit the return of once-through noncontact cooling water only to the same stream from which the water was diverted. Noncontact cooling water is distinguished from blowdown water, and this policy specifically excludes blowdown or any commingling of once-through noncontact cooling water with another waste stream prior to discharge to the receiving stream. Sections I.A. and I.B. of this policy govern discharges of blowdown or commingled water.

(2) New Industrial Sources with Operations and Discharges at Multiple Locations under Common or Affiliated Ownership or Management

As of the 2002 Review, there had been a proliferation of new industrial sources that have operations and associated discharges at multiple locations. An example is the growth in the development of energy fuel and mineral resources that has occurred in the Upper Colorado River Basin. This type of industrial development may involve the drilling of relatively closely spaced wells into one or more geological formations for the purpose of extracting oil, gas or minerals in solution. Large-scale ground water remediation efforts involving multiple pump and treat systems operating for longer than one year may share similar characteristics. With such energy and mineral development and ground water remediation efforts there is the possibility of a single major industrial operation being comprised of numerous individual point source discharges under common or affiliated ownership or management that produce significant quantities of water as a waste product or byproduct over a long period. Given the large areal scope of these types of major industrial sources and the often-elevated concentrations of salinity in their produced water, the total amount of salt loading that they could generate may be very large in comparison to the Forum's past and present salt removal projects. Relatively small quantities of this produced water could generate one ton per day in discharges to surface waters. Since salinity is a conservative water quality constituent, such discharges of produced water, if uncontrolled, could have an adverse effect on achieving the adopted numeric salinity standards for the Colorado River System.

These kinds of major industrial sources strain the conventional interpretation of the industrial source waiver for new construction set forth in Section I.A.1.a. of this policy, which authorizes a discharge of salinity from a single point source of up to one ton per day in certain circumstances. The Forum adopted this provision in 1977, well before most of the new major industrial sources that have operations and discharges at multiple locations began to appear in the Colorado River Basin. A new category of industrial sources was, therefore, warranted. NPDES permit requirements for New Industrial Sources with Operations and Discharges at Multiple Locations under Common or Affiliated Ownership or Management are set forth in Section I.D. of this policy. These new requirements were intended to apply to new industrial sources with operations that commence discharging after October 30, 2002.

For purposes of interpreting this policy, "common or affiliated ownership or management" involves the authority to manage, direct, superintend, restrict, regulate, govern, administer, or oversee, or to otherwise exercise a restraining or directing influence over activities at one or more locations that result in a discharge of salinity into the Colorado River System. Common or affiliated ownership or management may be through the ownership of voting securities or may be indicated where individual sources are related through one or more joint ventures, contractual relationships, landlord/tenant or lessor/lessee arrangements. Other factors that indicate two or more discharging facilities are under common or affiliated ownership or management include: sharing corporate executive officers, pollution control equipment and responsibilities, common workforces, common administrative functions, and/or payroll activities among operational facilities at different locations.

(3) Fresh Water Industrial Discharges

Sections I.A. and I.B. of this policy have been amended to allow the permitting authority to authorize “fresh water industrial discharges” where the discharged water does not cause or contribute to exceedances of the adopted numeric salinity standards for the Colorado River System. Different end-of-pipe concentrations of salinity as shown in Table 1 of the policy, are appropriate for discharges to tributaries depending upon their location within the Basin. The concept of “benchmark concentrations” has been developed in order to address this need for different end-of-pipe concentrations. These benchmark concentrations are not to be interpreted as water quality standards. Rather, they are intended to serve solely for the establishment of effluent limits for implementing the waiver for “fresh water discharges.” The allowance for freshwater discharges is intended to preserve flows from discharges in the Basin, which do not cause significant degradation of existing ambient quality with respect to salinity. Operations or individual discharges that qualify for the freshwater waiver shall not be subject to any further limitation on salt loading under this policy.

(4) Salinity-Offset Projects

This policy has been amended to allow the permitting authority to authorize industrial sources of salinity to conduct or finance one or more salinity-offset projects when the permittee has determined that it is not practicable: (i) to prevent the discharge of all salt from proposed new construction; (ii) to reduce the salt loading to the Colorado River to less than one ton per day or 366 tons per year; or (iii) the proposed discharge is of insufficient quality in terms of TDS concentrations that it could be considered “fresh water” as defined below. Presently, the permitting authority can consider the costs and availability of implementing off-site salinity control measures to mitigate the adverse impacts of the permitted salt load. It is not intended that the applicant be required to develop or design an off-site salinity control project or establish a salt bank, but rather to assess the costs of conducting or buying into such projects where they are available. In the future the Forum or another entity may create a trading/banking institution to facilitate the implementation of a salinity-offset program, basin-wide. This would allow industrial sources to conduct or finance the most cost-effective project available at the time an offset project is needed regardless of the project’s location in the Basin.

NPDES Policies Review – 2026 Reorganization

On October 29, 2025, the Forum reorganized the “NPDES Permit Program Policy for Implementation of Colorado River Salinity Standards” in order to create a singular policy document including all Forum policies without changing or omitting context or provisions of the policies.

**NPDES PERMIT PROGRAM POLICY
FOR IMPLEMENTATION OF COLORADO RIVER SALINITY STANDARDS**

I. Industrial Sources

The Salinity Standards state that “The objective for discharges shall be a no-salt return policy whenever practicable.” This is the policy that shall be followed in issuing NPDES discharge permits for all new industrial sources, and upon the reissuance of permits for all existing industrial sources, except as provided herein. The following addresses those cases where “no discharge of salt” may be deemed not to be practicable.

A. New Construction

1. “New construction” is defined as any facility from which a discharge may occur, the construction of which is commenced after October 18, 1975 (date of submittal of water quality standards as required by 40 CFR 120, December 11, 1974). Attachment 1 provides guidance on new construction determination. “A new industrial source with operations and discharging facilities at multiple locations under common or affiliated ownership or management” shall be defined for purposes of NPDES permitting, as an industrial source that commenced construction on a pilot, development, or production scale on or after October 30, 2002.
 - a. The permitting authority may permit the discharge of salt upon a satisfactory demonstration by the permittee that:
 - i. It is not practicable to prevent the discharge of all salt from the new construction, or
 - ii. In cases where the salt loading to the Colorado River from the new construction is less than one ton per day or 366 tons per year, or
 - iii. The proposed discharge from the new construction is of sufficient quality in terms of TDS concentrations that it can be considered “fresh water” that would have no adverse effect on achieving the adopted numeric standards for the Colorado River System. The permitting authority may consider a discharge to be fresh water if the maximum TDS concentration is: (i) 500 mg/L for discharges into the Colorado River and its tributaries upstream of Lees Ferry, Arizona; or, (ii) 90% of the applicable in-stream salinity standard at the appropriate benchmark monitoring station for discharges into the Colorado River downstream of Lees Ferry as shown in Table 1, below.

Table 1

	Benchmark Monitoring Station	Applicable Criteria (mg/L)	Freshwater Discharge (mg/L)
1	Colorado River at Lees Ferry, Arizona	N/A	500
2	Colorado River below Hoover Dam	723	650
3	Colorado River below Parker Dam	747	675
4	Colorado River at Imperial Dam	879	790

- b. Unless exempted under Sections I.A.1.a. ii. or iii., above, the demonstration by the applicant must include information on the following factors relating to the potential discharge:
- i. Description of the proposed new construction.
 - ii. Description of the quantity and salinity of the water supply.
 - iii. Description of water rights, including diversions and consumptive use quantities.
 - iv. Alternative plans that could reduce or eliminate salt discharge. Alternative plans shall include:
 - (A) Description of alternative water supplies, including provisions for water reuse, if any;
 - (B) Description of quantity and quality of proposed discharge;
 - (C) Description of how salts removed from discharges shall be disposed of to prevent such salts from entering surface waters or groundwater aquifers;
 - (D) Costs of alternative plans in dollars per ton of salt removed; and

- (E) Unless the permitting authority has previously determined through prior permitting or permit renewal actions that it is not practicable to prevent the discharge of all salt from the new construction in accordance with Section I.A.1.a.i., the applicant must include information on project options that would offset all or part of the salt loading to the Colorado River associated with the proposed discharge or that would contribute to state or interstate salinity control projects or salt banking programs.
- v. A statement as to the one plan among the alternatives for reduction of salt discharge that is recommended by the applicant and also information as to which of the other evaluated alternatives are economically infeasible.
- vi. Such other information pertinent to demonstration of non-practicability as the permitting authority may deem necessary.
- c. In determining what permit conditions shall be required under I.A.1.a.i., above, the permit issuing authority shall consider, but not be limited to the following:
 - i. The practicability of achieving no-discharge of salt from the new construction.
 - ii. Where “no discharge” is determined not to be practicable:
 - (A) The impact of the total proposed salt discharge of each alternative on the lower main stem in terms of both tons per year and concentration.
 - (B) Costs per ton of salt removed from the discharge for each plan alternative.
 - (C) Capability of minimizing salinity discharge.
 - (D) If applicable under I.A.1.b.(iv)(E), costs and practicability of offsetting all or part of the salt load by the implementation of salt removal or salinity control projects elsewhere in the Colorado River Basin. The permittee shall evaluate the practicability of offsetting all or part of the salt load by comparing such factors as the cost per ton of salt removal for projects undertaken by the Colorado River Basin Salinity Control Forum and the costs in damages associated with increases in salinity concentration against the permittee’s cost in conducting or buying into such projects where they are available.

- iii. With regard to subparagraphs (b) and (c) above, the permit issuing authority shall consider the compatibility of state water laws with either the complete elimination of a salt discharge or any plan for minimizing a salt discharge.
- B. Existing Facilities or any discharging facility, the construction of which was commenced before October 18, 1975
 - 1. The permitting authority may permit the discharge of salt upon a satisfactory demonstration by the permittee that it is not practicable to prevent the discharge of all salt from an existing facility.
 - 2. The demonstration by the applicant must include, in addition to that required under Section I.A.1.b the following factors relating to the potential discharge:
 - a. Existing tonnage of salt discharged and volume of effluent.
 - b. Cost of modifying existing industrial plant to provide for no salt discharge.
 - c. Cost of salt minimization.
 - 3. In determining what permit conditions shall be required, the permit issuing authority shall consider the items presented under I.A.1.c.(ii), and in addition; the annual costs of plant modification in terms of dollars per ton of salt removed for:
 - a. No salt return.
 - b. Minimizing salt return.
 - 4. The no-salt discharge requirement may be waived in those cases where:
 - a. The discharge of salt is less than one ton per day or 366 tons per year; or
 - b. The permitting authority determines that a discharge qualifies for a “fresh water waiver” irrespective of the total daily or annual salt load. The maximum TDS concentration considered to be fresh water is 500 mg/L for discharges into the Colorado River and its tributaries upstream of Lees Ferry, Arizona. For discharges into the Colorado River downstream of Lees Ferry the maximum TDS concentration considered to be fresh water shall be 90% of the applicable in-stream standard at the appropriate benchmark monitoring station shown in Table 1, above.
- C. Discharge of Once-Through Noncontact Cooling Water
 - 1. Definitions:

- a. The terms “noncontact cooling water” and “blowdown” are defined as per 40CFR 401.11 (m) and (n).
 - b. “Noncontact cooling water” means water used for cooling that does not come into direct contact with any raw material, intermediate product, waste product or finished product.
 - c. “Blowdown” means the minimum discharge of recirculating water for the purpose of discharging materials contained in the water, the further buildup of which would cause concentration in amounts exceeding limits established by best engineering practice.
 - d. “Salinity” shall mean TDS as the sum of constituents.
2. Permits shall be authorized for discharges of water that has been used for once-through noncontact cooling purposes based upon a finding that the returned water does not contribute to the loading of salts or the concentration of salts in the waters of the receiving stream in excess of a *de minimis* amount.
 3. This policy shall not supplant nor supersede any other water quality standard of the receiving stream adopted pursuant to the Federal Clean Water Act, including but not limited to impairment of designated uses of the stream as established by the governing water quality authority having jurisdiction over the waters of the receiving stream.
 4. Noncontact cooling water shall be distinguished from blowdown, and Section 1.C. of this policy specifically excludes blowdown or any commingling of once-through noncontact cooling water with another waste stream prior to discharge to the receiving stream. Sections I.A. and I.B of this policy shall in all cases govern discharge of blowdown or commingled water.
 5. Once-through noncontact cooling water shall be permitted to return only to the same stream from which the water was diverted.
 6. Because the increase in temperature of the cooling water will result in some evaporation, a *de minimis* increase in the concentration of dissolved salts in the receiving water may occur. An annual average increase in TDS of not more than 25 milligrams per liter (mg/L) measured at the intake monitoring point, as defined below, of the cooling process or facility, subtracted from the effluent total TDS immediately upstream of the discharge point to the receiving stream, shall be considered *de minimis*.
 7. At the time of NPDES discharge permit issuance or reissuance, the permitting authority may permit a discharge in excess of the 25 mg/L increase based upon a satisfactory demonstration by the permittee pursuant to Section 1.A.1.a.

8. Once-through demonstration data requirements:
 - a. Description of the facility and the cooling process component of the facility.
 - b. Description of the quantity, salinity concentration and salt load of intake water sources.
 - c. Description of the discharge, covering location, receiving waters, quantity of salt load and salinity concentration of both the receiving waters and the discharge.
 - d. Alternative plans for minimizing salt discharge from the facility which shall include:
 - i. Description of alternative means to attain no discharge of salt.
 - ii. Cost of alternative plans in dollars per ton of salt removed from discharge.
 - iii. Such other information pertinent to demonstration of non- practicability as the permitting authority may deem necessary.
9. If, in the opinion of the permitting authority, the database for the salinity characteristics of the water source and the discharge is inadequate, the permit will require that the permittee monitor the water supply and the discharge for salinity. Such monitoring program shall be completed in two years and the permittee shall then present the once-through demonstration data as specified above.
10. All new and reissued NPDES permits for once-through noncontact cooling water discharges shall require at a minimum semiannual monitoring of the salinity of the intake water supply and the effluent, as provided below.
 - a. The intake monitoring point shall be the point immediately before the point of use of the water.
 - b. The effluent monitoring point shall be prior to the discharge point at the receiving stream or prior to commingling with another waste stream or discharge source.
 - c. Discrete or composite samples may be required at the discretion of the permitting authority, depending on the relative uniformity of the salinity of the water supply.
 - d. Analysis for salinity may be either TDS or electrical conductivity where a satisfactory correlation with TDS has been established. The correlation shall be based on a minimum of five different samples.

D. Discharges of Salinity from a New Industrial Source with Operations and Discharging Facilities at Multiple Locations

1. The objective for discharges to surface waters from a new industrial source with operations and discharging facilities at multiple locations shall be to assure that such operations will have no adverse effect on achieving the adopted numeric salinity standards for the Colorado River System.
2. NPDES permit requirements for a new industrial source with operations and discharging facilities at multiple locations shall be defined, for purposes of establishing effluent limitations for salinity, as a single industrial source if these facilities meet the criteria:
 - a. The discharging facilities are interrelated or integrated in any way including being engaged in a primary activity or the production of a principle product; and
 - b. The discharging facilities are located on contiguous or adjacent properties or are within a single production area e.g. geologic basin, geohydrologic basin, coal or gas field or 8-digit hydrologic unit watershed area; and
 - c. The discharging facilities are owned or operated by the same person or by persons under common or affiliated ownership or management.
3. The permitting authority may permit the discharge of salt from a new industrial source with operations and discharging facilities at multiple locations if one or more of the following requirements are met:
 - a. The permittee has demonstrated that it is not practicable to prevent the discharge of all salt from the industrial source. This demonstration by the applicant must include detailed information on the factors set forth in Section I.A.1.b of the Policy for implementation of Colorado River Salinity Standards through the NPDES permit program; with particular emphasis on an assessment of salinity off-set options that would contribute to state or interstate salinity control projects or salt banking programs and offset all or part of the salt loading to the Colorado River associated with the proposed discharge.
 - b. In determining what permit conditions shall be required under I.A.1.a.i., above, the permit issuing authority shall consider the requirement for an offset project to be feasible if the cost per ton of salt removal in the offset project options (i.e. the permittee's cost in conducting or buying into such projects where they are available) is less than or equal to the cost per ton of

salt removal for projects undertaken by the Colorado River Basin Salinity Control Forum or less than the cost per ton in damages caused by salinity that would otherwise be cumulatively discharged from the outfalls at the various locations with operations controlled by the industrial source; or

- c. The permittee has demonstrated that one or more of the proposed discharges is of sufficient quality in terms of TDS concentrations to qualify for a “fresh water waiver” from the policy of “no salt return, whenever practical.” An individual discharge that can qualify for a fresh water waiver shall be considered to have no adverse effect on achieving the adopted numeric salinity standards for the Colorado River System.
4. For the purpose of determining whether a freshwater waiver can be granted, the quality of water discharged from the new industrial source with operations and discharging facilities at multiple locations, determined as the flow weighted average of salinity measurements at all outfall points, must meet the applicable benchmark concentration in accordance with Section I.A.1.a.iii., as set forth above.
5. Very small-scale pilot activities, involving five or fewer outfalls, that are sited in areas not previously developed or placed into production by new industrial source operations and discharges at multiple locations under common or affiliated ownership or management, may be permitted in cases where the discharge of salt from each outfall is less than one ton per day or 366 tons per year. However, no later than the date of the first permit renewal after the pilot activities have become part of a larger industrial development or production scale effort, all discharging facilities shall be addressed for permitting purposes as a single industrial source with operations and discharges at multiple locations under common or affiliated ownership or management.
6. The public notice for NPDES permits authorizing discharges from operations at multiple locations with associated outfalls shall be provided promptly and in the most efficient manner to all member states in the Colorado River Basin Salinity Control Forum in relation to this policy.

II. **Municipal Discharges**

The basic policy is that a reasonable increase in salinity shall be established for municipal discharges to any portion of the Colorado River stream system that has an impact on the lower main stem. The incremental increase in salinity shall be 400 mg/L or less, which is considered to be a reasonable incremental increase above the flow weighted average salinity of the intake water supply.

- A. The permitting authority may permit a discharge in excess of the 400 mg/L incremental increase at the time of issuance or reissuance of a NPDES discharge permit, upon satisfactory demonstration by the permittee that it is not practicable to attain the 400 mg/L limit.
- B. Demonstration by the applicant must include information on the following factors relating to the potential discharge:
 - 1. Description of the municipal entity and facilities.
 - 2. Description of the quantity and salinity of intake water sources.
 - 3. Description of significant salt sources of the municipal wastewater collection system, and identification of entities responsible for each source, if available.
 - 4. Description of water rights, including diversions and consumptive use quantities.
 - 5. Description of the wastewater discharge, covering location, receiving waters, quantity, salt load, and salinity.
 - 6. Alternative plans for minimizing salt contribution from the municipal discharge. Alternative plans should include:
 - a. Description of system salt sources and alternative means of control.
 - b. Cost of alternative plans in dollars per ton, of salt removed from discharge.
 - 7. Such other information pertinent to demonstration of non-practicability as the permitting authority may deem necessary.
- C. In determining what permit conditions shall be required, the permit issuing authority shall consider the following criteria including, but not limited to:
 - 1. The practicability of achieving the 400 mg/L incremental increase.
 - 2. Where the 400 mg/L incremental increase is not determined to be practicable:
 - a. The impact of the proposed salt input of each alternative on the lower main stem in terms of tons per year and concentration.

- b. Costs per ton of salt removed from discharge of each alternative plan.
 - c. Capability of minimizing the salt discharge.
- D. If, in the opinion of the permitting authority, the data base for the municipal waste discharger is inadequate, the permit will contain the requirement that the municipal waste discharger monitor the water supply and the wastewater discharge for salinity. Such a monitoring program shall be completed within 2 years and the discharger shall then present the information as specified above.
- E. Requirements for establishing incremental increases may be waived in those cases where the incremental salt load reaching the main stem of the Colorado River is less than one ton per day or 366 tons per year. Evaluation will be made on a case-by-case basis.
- F. All new and reissued NPDES permits for all municipalities shall require monitoring of the salinity of the intake water supply and the wastewater treatment plant effluent in accordance with the following guidelines:

<u>Treatment Plant Design Capacity</u>	<u>Monitoring Frequency</u>	<u>Type of Sample</u>
<1.0 MGD	Quarterly	Discrete
1.0 - 5.0 MGD	Monthly	Composite
>5.0 - 50.0 MGD	Weekly	Composite
50.0 MGD	Daily	Composite

1. Analysis for salinity may be either as TDS or be electrical conductivity where a satisfactory correlation with TDS has been established. The correlation should be based on a minimum of five different samples.
2. Monitoring of the intake water supply may be at a reduced frequency where the salinity of the water supply is relatively uniform.

III. Other Industrial-Type Sources

A. POLICY FOR USE OF BRACKISH AND/OR SALINE WATERS FOR INDUSTRIAL PURPOSES

Adopted by The Colorado River Basin Salinity Control Forum

September 11, 1980

The states of the Colorado River Basin, the Federal Executive Department, and the Congress have all adopted as a policy that the salinity in the lower main stem of the Colorado River shall be maintained at or below the flow-weighted average values found during 1972, while the Basin states continue to develop their compact-apportioned waters. In order to achieve this policy, all steps which are practical and within the framework of the administration of states' water rights must be taken to reduce the salt load of the river. One such step was the adoption in 1975 by the Forum of a policy regarding effluent limitations for industrial discharges with the objective of "no-salt return" wherever practicable. Another step was the Forum's adoption in 1977 of the "Policy for Implementation of Colorado River Salinity Standards through the NPDES Permit Program." These policies are part of the basinwide plan of implementation for salinity control which has been adopted by the seven Basin states.

The Forum finds that the objective of maintaining 1972 salinity levels would be served by the exercise of all feasible measures including, wherever practicable, the use of brackish and/or saline waters for industrial purposes.

The summary and page 32 of the Forum's 1978 Revision of the Water Quality Standards for Salinity state: "The plan also contemplates the use of saline water for industrial purposes whenever practicable..." In order to implement this concept and thereby further extend the Forum's basic salinity policies, the Colorado River Basin states support the Water and Power Resources Service (WPRS) appraisal study of saline water collection, pretreatment and potential industrial use.

The Colorado River Basin contains large energy resources which are in the early stages of development. The WPRS study should investigate the technical and financial feasibility of serving a significant portion of the water requirements of the energy industry and any other industries by the use of Basin brackish and/or saline waters. The Forum recommends that:

1. The Colorado River Basin states, working with federal agencies, identify, locate and quantify such brackish and/or saline water sources.
2. Information on the availability of these waters be made available to all potential users.
3. Each state encourages and promote the use of such brackish and/or saline waters, except where it would not be environmentally sound or economically feasible, or would significantly increase consumptive use of Colorado River System water in the state above that which would otherwise occur.
4. The WPRS, with the assistance of the states, encourages and promotes the use of

brackish return flows from federal irrigation projects in lieu of fresh water sources, except where it would not be environmentally sound or economically feasible, or would significantly increase consumptive use of Colorado River System water.

5. The WPRS considers a federal contribution to the costs of industrial use of brackish and/or saline water, where cost-effective, as a joint private-government salinity control measure. Such activities shall not delay the implementation of the salinity control projects identified in Title II of P.L. 93-320.

B. POLICY FOR IMPLEMENTATION OF COLORADO RIVER SALINITY STANDARDS THROUGH THE NPDES PERMIT PROGRAM FOR INTERCEPTED GROUND WATER

Adopted by The Colorado River Basin Salinity Control Forum

October 20, 1982

The States of the Colorado River Basin in 1977 agreed to the “Policy for Implementation of Colorado River Salinity Standards through the NPDES Permit Program” with the objective for industrial discharge being “no-salt return” whenever practicable. That policy required the submittal of information by the applicant on alternatives, water rights, quantity, quality, and costs to eliminate or minimize the salt discharge. The information is for use by the NPDES permit-issuing agency in evaluating the practicability of achieving “no-salt” discharge.

There are mines and wells in the Basin which discharge intercepted ground waters. The factors involved in those situations differ somewhat from those encountered in other industrial discharges. Continued development will undoubtedly result in additional instances in which permit conditions must deal with intercepted ground water.

The discharge of¹ intercepted ground water needs to be evaluated in a manner consistent with the overall objective of “no-salt return” whenever practical. The following provides more detailed guidance for those situations where ground waters are intercepted with resultant changes in ground-water flow regime.

1. The “no-salt” discharge requirement may be waived at the option of the permitting authority in those cases where the discharged salt load reaching the main stem of the Colorado River is less than one ton per day or 366 tons per year. Evaluation will be made on a case-by-case basis.
2. Consideration should be given to the possibility that the ground water, if not intercepted, normally would reach the Colorado River System in a reasonable time frame. An industry desiring such consideration must provide detailed information including a description of the topography, geology, and hydrology. Such information must include direction and rate of ground-water flow; chemical quality and quantity of ground water; and the location, quality, and quantity of surface streams and springs that might be affected. If the information adequately demonstrates that the ground water to be intercepted normally would reach the river system in a reasonable time frame and would contain approximately the same or greater salt load than if intercepted, and if no significant localized problems would be created, then the permitting agency may waive the “no-salt” discharge requirement.
3. In those situations where the discharge does not meet the criteria in I or II above, the applicant will be required to submit the following information for consideration:

¹The term “intercepted ground water” means all ground water encountered during mining or other industrial operations.

- a. Description of the topography, geology, and hydrology. Such information must include the location of the development, direction and rate of ground-water flow, chemical quality and quantity of ground water, and relevant data on surface streams and springs that are or might be affected. This information should be provided for the conditions with and without the project.
- b. Alternative plans that could substantially reduce or eliminate salt discharge. Alternative plans must include:
 - i) Description of water rights, including beneficial uses, diversions, and consumptive use quantities.
 - ii) Description of alternative water supplies, including provisions for water reuse, if any.
 - iii) Description of quantity and quality of proposed discharge.
 - iv) Description of how salts removed from discharges shall be disposed of to prevent their entering surface waters or ground-water aquifers.
 - v) Technical feasibility of the alternatives.
 - vi) Total construction, operation, and maintenance costs; and costs in dollars per ton of salt removed from the discharge.
 - vii) Closure plans to ensure termination of any proposed discharge at the end of the economic life of the project.
 - viii) A statement as to the one alternative plan for reduction of salt discharge that the applicant recommends be adopted, including an evaluation of the technical, economic, and legal Practicability of achieving no discharge of salt.
 - ix) Such information as the permitting authority may deem necessary.
- 4. In determining whether a “no-salt” discharge is Practicable, the Permit-issuing authority shall consider, but not be limited to, the water rights and the technical, economic, and legal practicability of achieving no discharge of salt.
- 5. Where “no-salt” discharge is determined not to be Practicable the permitting authority shall, in determining permit conditions, consider:

- a. The impact of the total proposed salt discharge of each alternative on the lower main stem in terms of both tons per year and concentration.
- b. Costs per ton of salt removed from the discharge for each plan alternative.
- c. The compatibility of state water laws with each alternative.
- d. Capability of minimizing salinity discharge.
- e. The localized impact of the discharge.
- f. Minimization of salt discharges and the preservation of fresh water by using intercepted ground water for industrial processes, dust control, etc. whenever it is economically feasible and environmentally sound.

C. POLICY FOR IMPLEMENTATION OF COLORADO RIVER SALINITY STANDARDS THROUGH THE NPDES PERMIT PROGRAM FOR FISH HATCHERIES

Adopted by The Colorado River Basin Salinity Control Forum
October 28, 1988

The states of the Colorado River Basin in 1977 adopted the “Policy for Implementation of Colorado River Salinity Standards through the NPDES Permit Program.” The objective was for “no-salt return” whenever practicable for industrial discharges and an incremental increase in salinity over the supply water for municipal discharges. The Forum addressed the issue of intercepted ground water under the 1977 policy, and adopted a specific policy dealing with that type of discharge.

A specific water use and associated discharge which has not been here-to-fore considered is discharges from fish hatcheries. This policy is limited exclusively to discharges from fish hatcheries within the Colorado River Basin. The discharges from fish hatcheries need to be addressed in a manner consistent with the 1977 and 1980 Forum policies.

The basic policy for discharges from fish hatcheries shall permit an incremental increase in salinity of 100 mg/L or less above the flow-weighted average salinity of the intake supply water. The 100 mg/L incremental increase may be waived if the discharged salt load reaching the Colorado River system is less than one ton per day, or 366 tons per year. Evaluation is to be made on a case-by-case basis.

1. The permitting authority may permit a discharge in excess of the 100 mg/L incremental increase at the time of issuance or reissuance of a NPDES discharge permit. Upon satisfactory demonstration by the permittee that it is not practicable to attain the 100 mg/L limit.
2. Demonstration by the applicant must include information on the following factors relating to the potential discharge:
 - a. Description of the fish hatchery and facilities.
 - b. Description of the quantity and salinity of intake water sources.
 - c. Description of salt sources in the hatchery.
 - d. Description of water rights, including diversions and consumptive use quantities.
 - e. Description of the discharge, covering location, receiving waters, quantity salt load, and salinity.
 - f. Alternative plans for minimizing salt discharge from the hatchery. Alternative plans should include:

- i. Description of alternative means of salt control.
 - ii. Cost of alternative plans in dollars per ton, of salt removed from discharge.
- g. Such other information pertinent to demonstration of non-practicability as the permitting authority may deem necessary.
- 3. In determining what permit conditions shall be required, the permit-issuing authority shall consider the following criteria including, but not limited to:
 - a. The practicability of achieving the 100 mg/L incremental increase.
 - b. Where the 100 mg/L incremental increase is not determined to be practicable:
 - i. The impact of the proposed salt input of each alternative on the lower main stem in terms of tons per year and concentration.
 - ii. Costs per ton of salt removed from discharge of each alternative plan.
 - iii. Capability of minimizing the salt discharge.
- 4. If, in the opinion of the permitting authority, the database for the hatchery is inadequate, the permit will contain the requirement that the discharger monitor the water supply and the discharge for salinity. Such monitoring program shall be completed within two years and the discharger shall then present the information as specified above.
- 5. All new and reissued NPDES permits for all hatcheries shall require monitoring of the salinity of the intake water supply and the effluent at the time of peak fish population.
 - a. Analysis for salinity may be either as total dissolved solids (TDS) or be electrical conductivity where a satisfactory correlation with TDS has been established. The correlation should be based on a minimum of five different samples.

Attachment 1

Guidance on New Construction Determination

For purposes of determining a new construction, a source should be considered new if by October 18, 1975, there has not been:

- 1) Significant site preparation work such as major clearing or excavation; and/or
- 2) Placement, assembly or installation of unique facilities or equipment at the premises where such facilities or equipment will be used; and/or
- 3) Any contractual obligation to purchase unique facilities or equipment. Facilities and equipment shall include only the major items listed below, provided that the value of such items represents a substantial commitment to construct the facility:
 - a) structures; or
 - b) structural materials; or
 - c) machinery; or
 - d) process equipment; or
 - e) construction equipment.
- 4) Contractual obligation with a firm to design, engineer, and erect a completed facility (i.e., a turnkey plant).

APPENDIX C

States NPDES Permits List

LEGEND

NPDES PERMITS EXPLANATION CODES

COLORADO RIVER BASIN SALINITY CONTROL FORUM January 1, 2023, through December 31, 2025

NPDES permits are reviewed under two different criteria under Forum policy; these being municipal and industrial. In order for a permittee to be in compliance under the municipal criteria, the increase in concentration between inflow and outflow cannot be greater than 400 mg/L. Forum industrial criteria requires that no industrial user discharges more than 1.00 ton/day. Under Forum policy there can be granted exceptions to these limitations by the states. The following gives an explanation of the current status of the NPDES permits. Because at any given time many of the permits identified in this list are being reviewed, reissued, and/or terminated, and new discharge permits are being filed, this list must be considered as being subject to frequent change.

MUNICIPAL

- (M) Municipal user in compliance with Forum policy.
 - (M-A) Municipal user in compliance with the 400 mg/L incremental increase provision, or
 - (M-B) Municipal user in compliance with the 1 ton per day or 366 tons per year provision.
 - (M-1)* Permit has expired or been terminated. No discharge.
 - (M-2) Permittee did not discharge during the reporting period.
 - (M-3) Measurement of TDS is not currently required, but the state and/or EPA plans to require measurements of both inflow and outflow when the permit is reissued.
- Measurements of inflow are not consistent with Forum policy:
- (M-4A) Therefore, it is not known whether or not this municipal user is in compliance.
 - (M-4B) However, since outflow concentration is less than 500 mg/L it is presumed that this permit is not in violation of the ≤ 400 mg/L increase.
-
- (M-5) Permittee is in violation of Forum policy in that there is an increase in concentration of >400 mg/L over the source waters. No provision has been made allowing this violation of Forum policy.
 - (M-5A) The state and/or EPA is currently working to bring permittee into compliance.
 - (M-5B) Though discharge is >400 mg/L over source waters, in keeping with Forum policy the permittee has demonstrated the salt reduction is not practicable and the requirement has been waived.
-
- (M-6) This permit requires no discharge or discharge only under rare and extreme hydrologic conditions. Thus, flow and concentration measurements are not required.
 - (M-7) Insufficient data to know the current status of this permit.
-

* Permits that have expired or been terminated and listed with the M-1 and I-1 explanation codes shall be removed from the NPDES list during the subsequent triennial review.

INDUSTRIAL

- (I) Industrial user in compliance with Forum policy.
 - (I-A) Industrial user in compliance with the Forum's salinity offset policy.
 - (I-B) Industrial user in compliance with the 1 ton per day or 366 tons per year provision.
 - (I-1)* Permit has expired or been terminated. No discharge.
 - (I-2) Permittee did not discharge during the reporting period.
 - (I-3) Measurement of TDS is not currently required, but the state and/or EPA plans to require measurements of both volume and concentration of outflow when the permit is reissued.
 - (I-4) Either concentration or volume of outflow are not currently being reported, thus the permittee is in violation of Forum policy. It is not known if the discharge is in excess of the <1.00 ton/day requirement.
-
- (I-5) Permittee is in violation of Forum policy in that discharge of salts is >1.00 ton/day. No provision has been made allowing this violation of Forum policy.
 - (I-5A) The state and/or EPA is currently working to bring permittee into compliance.
 - (I-5B) Though discharge is >1.00 ton/day, in keeping with Forum policy the permittee has demonstrated the salt reduction is not practicable and the requirement has been waived.
 - (I-5C) The use of ground water under this permit is for geothermal energy and only heat is extracted. The intercepted salt and water are naturally tributary to the Colorado River System and hence, this discharge does not increase salt in the river. The permit is covered by the Forum's policy on intercepted ground waters.
 - (I-5D) This permit is in compliance with the Forum's policy for fish hatcheries. The use of the water is a one-time pass through, and the incremental increase in salinity is ≤ 100 mg/l.
 - (I-5E) This permit is for the interception and passage of ground waters and thus is excepted under the Forum's policy on intercepted ground waters.
-
- (I-6) This permit requires no discharge or discharge only under rare and extreme hydrologic conditions. Thus, flow and concentration measurements are not required.
 - (I-7) Insufficient data to know the current status of this permit.
-

LEGEND (continued)
NPDES PERMITS
REACH DEMARCATIONS

COLORADO RIVER BASIN SALINITY CONTROL FORUM

In order to provide a better understanding of the location of the various NPDES permits and the geographical sequence in the Colorado River System, each of the following NPDES permits is identified with a Colorado River reach number. The reach numbers have their origin in the old CRSS river model. Though this model is no longer used, the reach numbers assist in understanding the general location of the permits. The reaches are defined as:

100	Upper Main Stem	from headwaters of Colorado River to Colorado River near Cameo
190	Taylor Park	from headwaters of Gunnison River to above Blue Mesa Reservoir
200	Blue Mesa	from above Blue Mesa Reservoir to below Blue Mesa Dam
210	Morrow Point	from below Blue Mesa Dam to Crystal Reservoir
220	Lower Gunnison	from Crystal Reservoir to confluence with Colorado River
300	Grand Valley	from Colorado River near Cameo to confluence with Green River
310	Dolores River	from headwaters of Dolores River to confluence with Colorado River
401	Fontenelle	from headwaters of Green River to Green River near Green River, WY
411	Flaming Gorge	from Green River near Green River, WY to confluence with White and Duchesne Rivers
500	Yampa River	from headwaters of Yampa River to confluence with Green River
510	White River	from headwaters of White River to confluence with Green River
600	Green River	Green River from confluence with White and Duchesne Rivers to confluence with Colorado River
610	Duchesne River	from headwaters of Duchesne River to confluence with Green River
700	Lake Powell	Colorado River from confluence of with Green River to Lees Ferry
710	San Rafael River	from headwaters of San Rafael River to confluence with Green River
801	Upper San Juan River	from headwaters of San Juan River to San Juan near Bluff
802	Lower San Juan River	from San Juan near Bluff to confluence with Lake Powell
900	Glen Canyon to Lake Mead	Colorado River from Lees Ferry to backwaters of Lake Mead
905	Virgin River	from headwaters of Virgin River to backwaters of Lake Mead
910	Lake Mead	from backwaters of Lake Mead to Colorado River below Hoover Dam
920	Lake Mohave	Colorado River from below Hoover Dam down to I-40 bridge
930	Lake Havasu	Colorado River from I-40 bridge to below Parker Dam
940	Parker Dam to Imperial Dam	Colorado River from below Parker Dam to above Imperial Dam
945	Imperial Dam	Colorado River from above Imperial Dam to Gila and Yuma users

NPDES PERMITS						
Colorado River Basin Salinity Control Forum						
January 1, 2023 through December 31, 2025						
NPDES PERMIT#	REACH	NAME of Discharging Facility	TDS Conc. AVG (mg/L)	Flow Rate AVG (MGD)	Salt Load Tons/Day	Explanantion Code
Arizona						
AZ0026697	900	BISON RANCH	233	0.018	0.0175	M-4B
AZ0024015	900	VALLE AIRPARK WASTEWATER RECLAMATION FACILITY			0.0000	M-2
AZ0025755	900	CITY OF WILLIAMS - WASTEWATER TREATMENT PLANT	255	0.852	0.9060	M-A
AZ0023639	900	FLAGSTAFF, CITY OF RIO DE FLAG POTW	388	1.96	3.1712	M-A
AZ0020427	900	FLAGSTAFF, CITY OF WILDCAT HILL POTW	428	2.05	3.6588	M-A
AZ0026263	900	HIGH COUNTRY PINES			0.0000	M-1
AZ0025542	900	HOLBROOK, CITY OF PAINTED MESA POTW			0.0000	M-2
AZ0026719	900	TUSAYAN WASTEWATER RECLAMATION FACILITY	455	0.062	0.1176	M-B
AZ0026182	900	USBR/GLEN CANYON WWTP	1012.8	0.0015	0.0063	M-B
AZ0026280	900	USBR/GLEN CANYON PPDS	465	0.549	1.0645	I
AZ0023621	900	USNPS/GRAND CANYON/INDIAN GARDENS	198	0.155	0.1280	I
AZ0110426	900	USNPS/GRAND CANYON/NORTH RIM	584	0.0274	0.0667	M-A
AZ0022152	900	USNPS/GRAND CANYON/SOUTH RIM WWTP	607	0.173	0.4379	M-A
AZ0026310	900	WINSLOW, CITY OF POTW			0.0000	M-2
AZ0023655	905	VIRGIN RIVER DOMESTIC WASTEWATER IMP DISTRICT	557	0.024	0.0557	M-A
AZ0025160	910	USBR/HOOVER DAM	885	0.015	0.0554	M-A
AZ0000132	910	USFWS/WILLOW BEACH NATIONAL FISH HATCHERY	755	7.21	22.6996	I-5D
AZ0026808	920	BULLHEAD, CITY OF SECTION 10 WWTP			0.0000	M-2
AZ0023990	930	CAWCD-HAVASU PUMPING PLANT	618	1.33	3.4275	I-5
AZ0026018	930	KINGMAN, CITY OF DOWNTOWN POTW		0.231	0.0000	M-7
AZ0022756	930	PETRO STOP CENTER/KINGMAN	8.1	0.0303	0.0010	M
AZ0022268	930	FREEPOT-McMoRan BAGDAD Inc.			0.0000	I-2
AZ0023752	940	QUARTZSITE, CITY OF POTW	1340	0.179	1.0002	M-A

NPDES PERMITS						
Colorado River Basin Salinity Control Forum						
January 1, 2023 through December 31, 2025						
NPDES PERMIT#	REACH	NAME of Discharging Facility	TDS Conc. AVG (mg/L)	Flow Rate AVG (MGD)	Salt Load Tons/Day	Explanantion Code
Colorado						
CO0000003	310	Thorin Resources LLC	233.200	0.671	0.653	I-B
CO0000010	510	Rangely WWTF	648.545	0.123	0.333	M-A
CO0000012	300	Palisade WWTF Brentwood Dr	463.500	0.178	0.343	M-A
CO0000051	100	Iles Dome Unit Production		0.159	0.000	I-5
CO0000132	220	Sanborn Creek and Elk Creek Coal Mines			0.000	I-2
CO0000213	310	New Horizon Mine	2043.636	0.713	6.076	1-5B
CO0000221	500	Seneca Mine Complex	2496.525	0.153	1.589	1-5B
CO0000230	100	Henderson Mill			0.000	I-B
CO0000248	100	Climax Mine	1133.727	18.919	89.444	I-5
CO0020443	190	Crested Butte Town of WWTF		0.192	0.000	M-A
CO0020451	100	Frisco Sanitation District WWTF	431.271	0.539	0.969	M-A
CO0020699	100	Granby Sanitation District WWTF				M-A
CO0020826	100	Blue River WWTF				M-A
CO0020834	500	Steamboat Springs WWTF	403.000	3.047	5.120	M-A
CO0020907	220	Olathe Town of	1990.667	0.141	1.168	M-5B
CO0021369	100	Vail WWTF	454.231	1.329	2.518	M-A
CO0021385	100	Red Cliff WWTF	291.333	0.033	0.040	M-A
CO0021539	100	Farmers Korner WWTF	391.600	2.050	3.347	M-7
CO0021598	100	Copper Mtn Cons Metro Dist WWTF	407.417	0.220	0.374	M-A
CO0022756	190	Pitch Reclamation Project	782.944	0.613	2.002	I-5B
CO0022969	500	Morrison Creek Metro WWTF	453.446	0.060	0.113	M-A
CO0023086	100	Snowmass WSD	247.296	0.602	0.621	M-A
CO0023485	300	Grand Mesa WWTF	231.000	0.014	0.013	M-A
CO0023876	100	Arapahoe Basin Ski Area	909.917	0.008	0.031	M-5/M-B
CO0024007	310	Naturita WWTF	611.714	0.023	0.058	M-A
CO0026051	100	Winter Park Water and San Dist WWTF		0.194	0.000	M-A

NPDES PERMITS						
Colorado River Basin Salinity Control Forum						
January 1, 2023 through December 31, 2025						
NPDES PERMIT#	REACH	NAME of Discharging Facility	TDS Conc. AVG (mg/L)	Flow Rate AVG (MGD)	Salt Load Tons/Day	Explanantion Code
CO0026069	500	Eisenhower Tunnel WWTF		0.275	0.000	M-A
CO0026387	100	Aspen Consolidated San Dist WWTF	609.771	1.290	3.280	M-A
CO0027146	300	Roadside North & South Mines	1181.250	0.149	0.736	I-5B
CO0027154	500	Mines 1 and 2 And Eckman Park Mine	3168.445	0.326	4.310	I-5B
CO0027171	190	Mt Crested Butte Water and San Dist WWTF	272.017	0.317	0.360	M-A
CO0029955	100	Summit County Snake River WWTF	310.000	0.610	0.789	M-A
CO0030449	220	West Montrose San Dist WWTF	479.273	0.325	0.650	M-A
CO0030635	500	Yampa WWTF	387.600	0.034	0.055	M-A
CO0031984	220	Cedaredge WWTF		0.175	0.000	M-A
CO0032115	500	Trapper Mine		0.193	0.000	I-B
CO0033791	300	Clifton Regional WWTF	570.667	1.100	2.618	M-A
CO0034142	500	Williams Fork Mine	1914.500	0.024	0.189	I-5
CO0035394	190	Mt Emmons Project	850.917	0.504	1.788	I-5
CO0035556	500	Steamboat Lake WSD WWTF	496.273	0.038	0.079	M-A
CO0036251	310	Jd 7 And Jd 9 Mines			0.000	I-4
CO0036684	500	Fish Creek Tipple	3372.755	0.011	0.161	I-B
CO0037206	220	Ruby Trust Mine	166.833	0.813	0.566	I-B
CO0037311	100	Edwards WWTF	687.667	0.944	2.708	M-5
CO0037681	100	Table Mountain WWTF	307.833	0.394	0.506	M-A
CO0037729	220	Crawford WWTF	339.636	0.027	0.038	M-A
CO0038024	510	Deserado Mine	3627.710	0.218	3.300	I-B
CO0038342	300	McClane Canyon Mine		0.100	0.000	I-B
CO0038598	100	Sunlight Inc	705.417	0.011	0.031	I-B
CO0038776	220	West Elk Mine		0.010	0.000	I-B
CO0039624	220	Montrose WWTP	843.879	2.139	7.528	M-5/M-B
CO0039641	220	Delta WWTF	1121.969	0.872	4.078	M-5
CO0040037	500	Craig WWTF	845.727	0.963	3.396	M-5

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CO0040053	300	Persigo WWTF	782.257	8.314	27.119	M-5
CO0040142	100	Upper Fraser Valley Treatment Plant		0.654	0.000	M-A
CO0040487	300	Valleywide Sewerage System WWTP	873.833	0.058	0.211	M-5/M-B
CO0040673	190	Lake City WWTF	340.833	0.094	0.133	M-A
CO0040959	500	Hayden Town of	593.000	0.181	0.446	M-5/M-B
CO0041530	190	Gunnison WWTF	443.115	1.271	2.348	M-A
CO0042161	500	Foidel Creek Mine		0.007	0.000	M-A
CO0042447	100	Rifle Station			0.000	I-B
CO0042617	220	Horizon Health Care and Retirement Community WWTF	410.500	0.008	0.014	M-A
CO0043397	220	Ouray WWTF	563.000	0.196	0.461	M-5/M-B
CO0044750	100	Roaring Fork Water and San Dist WWTF	814.333	0.076	0.259	M-A
CO0044776	220	Bowie No 2 Mine		0.181	0.000	I-B
CO0044903	220	Hotchkiss WWTF	1090.583	0.122	0.553	M-5/M-B
CO0045161	500	Colowyo Mine	3485.258	0.336	4.886	I-B
CO0045411	100	Crooked Creek Ranch	964.545	0.008	0.034	M-5/M-B
CO0045420	100	Iowa Hill Water Reclamation Facility			0.000	M-A
CO0045501	100	Tabernash Meadows Water and San Dist WWTF		0.036	0.000	M-A
CO0045802	100	Oak Meadows WWTF	657.333	0.018	0.050	M-A
CO0046124	100	Spring Valley San Dist WWTF	874.833	0.044	0.161	M-4A
CO0046370	100	Redstone Water and San District WWTF	486.091	0.016	0.033	M-2
CO0046566	100	Devils Thumb Ranch	393.545	0.011	0.018	M-A
CO0046914	190	Aspen Institute WWTF		0.067	0.000	M-A
CO0047139	510	Meeker San Dist WWTF	966.958	0.121	0.488	M-A
CO0047431	220	Paonia WWTF	891.083	0.127	0.471	M-5/M-B
CO0047449	500	Milner Community WWTF	721.714	0.016	0.047	M-A
CO0047562	300	Whirlwind Project			0.000	I-2
CO0048119	190	Golden Wonder Mine	3090.333	0.010	0.129	I-2

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CO0048135	300	De Beque WWTF	965.200	0.031	0.125	M-4A
CO0048143	300	Mesa WSD	612.727	0.008	0.021	M-2
CO0048151	100	Rifle Regional WW Reclamation Facility	1086.708	0.828	3.750	M-4A
CO0048233	100	Minrec North Thompson Ponds			0.000	I-2
CO0048241	100	Eagle WWTF	797.103	0.565	1.877	M-A
CO0048275	500	Peabody Sage Creek Mine	3811.176	0.280	4.448	I-5B
CO0048437	100	Kremmling Sanitation District WWTF	439.000	0.118	0.215	M-A
CO0048577	100	Iron Mountain Hot Springs		0.464	0.000	I-2
CO0048623	500	Barn Spring WTF			0.000	I-B
CO0048815	100	South Canyon Landfill			0.000	I-B
CO0048823	100	Avalanche Ranch	2343.909	0.122	1.196	I-5
CO0048830	100	Gypsum WWTF	511.273	0.624	1.331	M-A
CO0048847	300	PWI #535	552.667	0.003	0.007	I-B
CO0048852	100	Glenwood Springs Reg WWTF		0.866	0.000	M-5
CO0048854	100	Fruita WRF	543.000	0.917	2.077	M-A
CO0048900	190	Bear Ranch wwtf	378.000	0.001	0.001	M-A
CO0048901	100	Eagle Valley Clean Energy	235.100	0.094	0.092	I-5
CO0048945	310	Nucla WWTF	1180.818	0.095	0.469	M-5/M-B
CO0048952	100	Lib 4	232.636	0.129	0.125	I-B
CO0048958	100	Glenwood Hot Spgs Lodge and Pool		3.589	0.000	I-4
CO0048983	220	Ouray Hot Springs Swimming Pool WWTF	1697.545	0.138	0.975	I-5
CO0048999	500	Steamboat Health & Rec Assoc.	934.875	0.330	1.285	I-5
CO0049022	100	CR 5001 WWTF	368.830	0.004	0.006	M-A
CO0049026	100	Mid Valley Metro Dist WWTF	430.727	0.442	0.794	M-A
CO0049045	220	Bowie No 1 Mine			0.000	I-2
CO0049065	100	Blue Valley Ranch Phosphorus Discharge Project			0.000	I-2
COG080858	100	Snowmass Building 10 A/B	478.165	0.032	0.064	I-5

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COG080944	300	Persigo WWTP Expansion - Phase 1	66983.745	1.970	550.358	M-5
COG080991	100	Gypsum Wastewater Treatment Plant	247.214	0.010	0.011	M-1
COG080994	100	Vail Pass Aux Phase 1 CP 4 (24567)			0.000	I-2
COG081004	100	Roaring Fork Bridge Rehab	260.000		0.000	I-B
COG081009	500	Wilbur Residences	134.000	0.009	0.005	I-B
COG081112	220	Delta WWTF	1081.600	0.144	0.649	M-5
COG081197	190	Whetstone Affordable Housing			0.000	I-2
COG081206	100	Town of Granby North Service Area Water Treatment Plant	6.992	0.001	0.000	M-5
COG081207	220	Best Sand and Gravel	785.858	3205131.80	10503306.20	I-5
COG081214	190	Lake City WWTP	165.000	0.720	0.495	M-A
COG081218	500	608 Yampa MF Bldg	350.000	0.017	0.024	I-A
COG081234	100	West Middle Creek Apartments			0.000	I-2
COG081236	100	Snake River Wastewater Treatment Plant	198.000	0.936	0.773	M-A
COG081255	100	King Mountain Ranch			0.000	I-2
COG081257	100	Red Hawk Ranch			0.000	I-2
COG081261	500	Walton Creek Townhomes			0.000	I-2
COG081276	510	Big Beaver Dam Outlet Rehabilitation	154.784	0.642	0.415	I-A
COG081284	220	Beaver Creek Diversion Restoration		0.058	0.000	I-A
COG081285	100	Breckenridge Intake	87.000	0.135	0.049	I-A
COG081286	100	1295 Red Butte Dr			0.000	I-2
COG081296	500	Craig Diversion Park			0.000	I-2
COG081303	220	Region 3 SH 50A Culvert Replacement	3000.000	0.144	1.801	I-5
COG081316	100	Arcadian on Beaver Creek	746.250		0.000	I-7
COG081322	100	Basalt WWTP	224.000	0.040	0.037	M-A
COG081338	500	Rio County CR77 Bridge Replacement			0.000	I-2
COG081365	300	GVIC Fish Screen Rehabilitation Project	867.000	0.012	0.042	I-5
COG081375	100	Elk Creek Bridge Replacement			0.000	I-2

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COG081403	100	61 Stillwater Ln			0.000	I-2
COG130001	100	Crystal River Fish Hatchery	282.250	5.064	5.960	I-5D
COG130004	190	Pitkin Fish Hatchery	123.618	3.596	1.854	I-5D
COG130006	190	Roaring Judy Fish Hatchery	181.967	4.477	3.397	I-5D
COG130007	500	Finger Rock Rearing Unit	156.400	1.748	1.140	I-5D
COG130011	100	Rifle Falls Fish Hathery		6.148	0.000	I-5D
COG317084	100	Snowmass Building 12 Aura	355.250		0.000	I-A
COG317225	100	Dobson Ice Arena	395.000	0.000	0.001	I-A
COG317241	100	Frisco Town Center			0.000	I-2
COG318036	100	A27 CP Liquids Line Release Remediation	723.333	0.040	0.121	I-5
COG318057	100	Keystone Lodge and Argentine Condos	204.154	0.035	0.030	I-A
COG318058	100	Red Hawk Lodge	181.400	0.687	0.520	I-A
COG318062	100	Solaris Residences	1015.833	0.474	2.007	I-5
COG318064	100	The Lion	1237.240		0.000	I-5
COG318065	100	Manor Vail Resort	685.310	0.714	2.041	I-5
COG318074	100	Bank of the West GJ	8036.464	0.000	0.000	I-5
COG318077	100	Springs Lodge	181.708	0.148	0.112	I-A
COG318079	100	Arrabelle Hotel	853.967	0.038	0.134	I-5
COG500001	500	Bunn Ranch Pit			0.000	I-2
COG500003	300	Latham-Burkett Pit	3086.111	0.189	2.431	I-5
COG500010	190	Gunnison Pit	369.750	0.226	0.349	I-B
COG500062	500	Williams Fork S&G Pit			0.000	I-2
COG500088	100	Eagle West Pit	1359.300	0.442	2.503	I-5
COG500114	100	Silt Pit			0.000	I-2
COG500119	100	Chambers Pit	1549.500	0.076	0.491	I-5
COG500127	220	Whitewater Pit No 500	1657.357	1.188	8.210	I-5
COG500161	100	South Fruita Pit/Arcuby Pit	3270.750	0.848	11.566	I-5

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COG500210	220	Mule Farm Gravel Pit			0.000	I-2
COG500216	100	River Road Pit	4032.500	0.440	7.399	I-5
COG500243	500	Hogue River Pit	380.815	0.599	0.951	I-B
COG500252	100	Loesch Pit			0.000	I-2
COG500263	100	Orchard Groce Industrial Park 23 1/4 Road Pit	3880.000	0.233	3.770	I-5
COG500267	100	Sievers Ranch Pit	370.556	0.135	0.209	I-B
COG500299	100	Railhead Gravel Pit		0.180		I-7
COG500312	500	Mesa Gravel Pit			0.000	I-2
COG500342	100	Gypsum Ranch Pit			0.000	I-2
COG500348	100	2311 Road Pit			0.000	I-2
COG500350	500	Tellier Pit	623.444	0.035	0.092	I-5
COG500356	100	Yule Marble Quarry			0.000	I-2
COG500364	100	Soaring Eagle Gravel Pit	2140.000	0.750	6.693	I-5
COG500380	100	Monument View Gravel Pit			0.000	I-2
COG500396	500	Camilletti Milner Pit #2	369.200	0.654	1.007	I-A
COG500408	100	Mamm Creek Gravel Pit			0.000	I-2
COG500419	500	Deakins Pit	2245.000	0.268	2.509	I-5
COG500420	190	Seahorse #2 Pit	217.333	1.457	1.320	I-A
COG500433	100	Maryland Creek Ranch Pit			0.000	I-2
COG500435	300	D Road Gravel Pit	3865.714	1.188	19.151	I-5
COG500437	100	15 Road Pit	3371.583	0.951	13.372	I-5
COG500439	220	Bennett Gravel Pit			0.000	I-2
COG500444	220	Delta Paving Pit			0.000	I-2
COG500464	220	Anderson Pit	1373.636	2.738	15.685	I-5
COG500467	100	Glens Pit	1018.000	0.053	0.226	I-5
COG500482	100	North Bank Pit	975.833	0.698	2.841	I-5
COG500484	510	White River City Pit	1190.400	0.266	1.320	I-5

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COG500491	100	20 Road Gravel Pit	5079.000	0.120	2.542	I-5
COG500498	220	Tri County Pit	1776.818	0.918	6.799	I-5
COG501505	300	Una Pit			0.000	I-2
COG501510	100	Scott Pit	936.000	0.670	2.615	I-7
COG501513	300	32 Rd Gravel Pit			0.000	I-2
COG501517	510	Flintstone Pit	965.000		0.000	I-5
COG501522	500	Lyster Pit	1685.000	0.578	4.061	I-5
COG501524	500	Wand Pit			0.000	I-2
COG501525	500	Gehrman Pit			0.000	I-2
COG501528	500	Frentress Gravel Pit			0.000	I-2
COG501532	220	Gunnison River Gravel Pit 5	716.200	0.004	0.012	I-5
COG501534	500	Steamboat Sand and Gravel Fisker Trail	189.767	0.002	0.001	I-A
COG501542	300	De Beque Pit No 2	1568.333	0.608	3.976	I-7
COG501545	220	Warren Gravel Pit			0.000	I-2
COG501559	220	Uncompahgre Pit			0.000	I-2
COG501567	300	Otter Creek Pit	6670.417	0.254	7.058	I-5
COG501590	500	Hayden Pit	166.000	0.040	0.028	I-A
COG501614	500	Breeze Basin Sand and Gravel Pit	975.000	1.005	4.086	I-5
COG501615	220	R-34 Pit			0.000	I-2
COG501617	300	5 Mile Pit	1846.600	0.936	7.208	I-5
COG501949	220	Bear River Sand and Gravel			0.000	I-2
COG501955	220	Reynolds Pit			0.000	I-2
COG502099	100	Thompson Resource			0.000	I-2
COG502149	500	Bear River Sand and Gravel			0.000	I-2
COG502196	300	23 1/4 West Pit			0.000	I-2
COG502236	100	North Hangs Mine			0.000	I-2
COG502248	220	C 1/2 Road Gravel Pit			0.000	I-2

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COG588032	220	Delta Correctional Center	634.800	0.018	0.047	M-A
COG588041	100	Ouray Ranch Homeowners Assn WWTF	234.333	0.005	0.005	M-A
COG588046	100	Silt Town of	888.000	0.248	0.919	M-A
COG588079	100	East River Regional SD WWTF	344.192	0.057	0.082	M-A
COG588086	300	SW Mesa Co Rural Pub Imp Dis WWTF	726.333	0.016	0.049	M-5/M-B
COG588123	190	SCS Generational Properties LLC			0.000	M-A
COG588147	100	River Dance RV Park	663.750	0.001	0.004	I-A
COG589110	100	Wastewater Treatment Service WWTF	1038.667	0.071	0.308	M-A
COG589146	500	Timbers WSD WWTF	169.091	0.013	0.009	M-A
COG589147	500	Steamboat Mountain School	304.667	0.030	0.038	I-A
COG589148	100	C Lazy U Ranch	377.667	0.006	0.010	I-A
COG589157	220	Ouray City of	603.200	0.196	0.494	M-A
COG589159	500	Oak Creek Town of	527.000	0.145	0.319	M-A
COG590006	100	Riverbend Subdivision	879.333	0.009	0.033	I-A
COG590008	100	West Glenwood Springs SD	390.921	0.289	0.471	M-A
COG590012	190	Almont WWTF	329.150	0.011	0.016	M-A
COG590029	100	El Rocko MHP	523.182	0.003	0.006	M-A
COG590035	100	Cavern Springs MHC LLC	774.083	0.021	0.066	I-A
COG590049	100	Lazy Glen Home Owners Association	324.000	0.056	0.076	I-A
COG590050	100	Carbondale Town of	357.111	0.466	0.693	M-A
COG590052	190	L and N Inc	489.667	0.005	0.011	I-A
COG590061	100	Apple Tree Waste Water	1463.500	0.056	0.343	I-5
COG590062	100	New Castle Town of	752.833	0.321	1.009	I-5
COG590066	100	Riversbend Apartments	698.833	0.001	0.003	I-A
COG590067	100	GRIZZLY CREEK REST AREA WWTF	2506.873	0.001	0.008	M-5
COG590070	100	Two Rivers Village Metro Dist WWTF	932.250	0.043	0.165	M-5
COG590074	100	Blue Creek Ranch WWTF	912.750	0.007	0.028	M-5

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COG590075	100	Bair Ranch Rest Area	2114.800	0.001	0.006	I-5
COG590076	100	Hanging Lake Rest Area WWTF	1323.100	0.001	0.004	M-5
COG590083	100	Glenwood Canyon Resort WWTF	495.714	0.002	0.005	M-A
COG590084	100	Hot Sulphur Springs WWTF	390.250	0.063	0.103	M-A
COG590085	100	Aspen Village, Inc	808.000	0.005	0.017	M-5
COG590103	100	Woody Creek Mobile Home Park		0.009	0.000	I-A
COG590109	190	Ute Trail Ranch	454.667	0.002	0.004	I-A
COG590112	190	Camp Gunnison Church Camp	307.833	0.005	0.006	I-A
COG590116	100	Roundup River Ranch WWTF	1572.200	0.002	0.012	M-A
COG590132	190	Vickers Horse River Ranch	545.500	0.002	0.005	I-A
COG590138	190	Taylor River Canyon LLC			0.000	I-2
COG590147	100	River Dance RV Resort	1241.000	0.004	0.020	I-5
COG590148	500	Milner Community WWTF	844.800	0.014	0.050	M-A
COG590151	100	Phillips Mobile Home Park			0.000	I-2
COG590152	100	No Name Rest Area WWTP			0.000	I-2
COG591040	500	Maybell WWTF			0.000	I-2
COG591086	100	Battlement Mesa Dist WWTF	1625.000	0.356	2.410	M-5
COG591091	220	Elk Meadows	783.000	0.004	0.013	I-5
COG591139	100	Canyon Creek Estates WWTF	476.000	0.007	0.014	M-A
COG591147	500	Steamboat Mountain School WWTF	305.500	0.004	0.005	M-A
COG591170	190	Crested Butte South Metropolitan District WWTF	301.464	0.078	0.098	M-A
COG591173	220	Cedaredge WWTF	223.400	0.151	0.140	M-A
COG591184	500	Routt Co for Phippsburg Comm WWTF	579.500	0.011	0.026	M-A
COG591185	500	Yampa WWTF	387.000	0.023	0.037	M-A
COG591189	310	Naturita WWTF	568.940	0.016	0.037	M-A
COG591198	100	Basalt Sanitation District	268.875	0.427	0.479	I-A
COG591202	100	Ranch at Roaring Fork HOA Inc WWTF	1131.000	0.030	0.141	M-5

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COG591208	190	Crested Butte Town of WWTF	196.625	0.198	0.162	M-A
COG591217	220	Ridgeway Town of	580.000	0.095	0.229	I-A
COG605009	100	Covered Bridge Building			0.000	I-2
COG605015	100	Main Street Station Breckenridge		0.239		I-7
COG608003	100	Little Nell Well City Well 4			0.000	I-2
COG608005	500	Lake Catamount WWTF	242.571	0.002	0.002	M-A
COG641006	100	Dillon Straight Creek WTP	229.833	0.047	0.045	I-B
COG641015	220	Cedaredge WTP	76.492	0.012	0.004	I-B
COG641019	100	Hot Sulphur Springs WTP	186.694	0.006	0.004	I-B
COG641027	100	Nettle Creek WTF	71.000	0.088	0.026	M-A
COG641031	100	Brush Creek WTP			0.000	M-2
COG641037	300	Palisade WTF and Tank			0.000	M-2
COG641044	100	Big Mac Water Treatment Plant	41.000	0.008	0.001	M-A
COG641052	100	Red Mountain WTF			0.000	M-2
COG641058	100	Upper Eagle Regional WTR Auth			0.000	M-2
COG641066	100	Castle Creek WTP	329.408	0.030	0.041	M-A
COG641067	100	Wayne Bristol WTF	98.364	0.019	0.008	M-A
COG641068	100	Battlement Mesa Metro District WTP	249.550	0.939	0.977	M-A
COG641072	100	Gateway Mesa WTP	1211.273	0.003	0.016	M-5
COG641081	220	Orchard City WTP	67.556	0.049	0.014	I-B
COG641087	100	Little Mac WTF	38.000	0.004	0.001	M-A
COG641091	220	Hotchkiss WTF			0.000	M-2
COG641092	100	New Castle WTF	231.829	0.041	0.040	M-B
COG641094	100	Roaring Fork WTP			0.000	M-2
COG641095	100	Basalt Springs WTF	87.727	0.011	0.004	M-B
COG641104	220	Spaulding Peak Treatment Plant	96.667	0.045	0.018	M-B
COG641105	100	Edwards Drinking Water Facility	178.288	0.006	0.004	M-B

NPDES PERMITS						
Colorado River Basin Salinity Control Forum						
January 1, 2023 through December 31, 2025						
NPDES PERMIT#	REACH	NAME of Discharging Facility	TDS Conc. AVG (mg/L)	Flow Rate AVG (MGD)	Salt Load Tons/Day	Explanantion Code
COG641111	310	Mustang WTF	289.000	0.016	0.019	M-A
COG641112	100	Silt WTF	631.500	0.062	0.163	M-5
COG641114	100	Mosher Plant	164.000	0.003	0.002	M-A
COG641121	100	Frisco Sanitation District WWTP			0.000	M-2
COG641134	220	Paonia WTP aka Lower Plant			0.000	M-2
COG641135	100	Red Sky Ranch WTP	551.818	0.013	0.031	I-B
COG641154	100	Hamilton Creek Metropolitan District		0.058	0.000	
COG641170	190	Dos Rios WTF			0.000	M-2
COG641181	100	Peak 9 Water Plant	45.200	0.032	0.006	
COG641195	100	Granby South Service Area WTP			0.000	M-2
COG641200	100	Eagle Lower Basin Water Treatment Plant			0.000	M-2
COG641201	100	No Name Cave System			0.000	M-2
COG641213	100	River Dance RV Park			0.000	I-2
COG641214	100	Minturn Water Treatment Plant			0.000	M-2
COG840002	100	Greenback Shaeffer Ranch Facility			0.000	M-2
COG840015	100	Parachute Treatment Facility			0.000	M-2
COG850008	500	Hayden Gulch Loadout			0.000	I-2
COG850028	220	Terror Creek Loadout			0.000	I-2
COG850054	500	Peabody Twentymile 6 Main N Shaft			0.000	I-2
COR040284	220	Mt. Emmons Project	753.457	1.321	4.150	I-5
Nevada						
NV0000060	910	Titanium Metals Corporation	662.1	0.480	1.325	I-5B
NV0020133	910	City of Las Vegas Water Pollution Control Facility	1018.4	46.730	198.442	M-A
NV0020192	910	NDOW - Lake Mead Fish Hatchery				I-2
NV0021261	910	Flamingo Water Resource Center (formerly Clark County Water	1131.3	111.770	527.254	M-A

NPDES PERMITS						
Colorado River Basin Salinity Control Forum						
January 1, 2023 through December 31, 2025						
NPDES PERMIT#	REACH	NAME of Discharging Facility	TDS Conc. AVG (mg/L)	Flow Rate AVG (MGD)	Salt Load Tons/Day	Explanantion Code
NV0021563	920	Laughlin Water Resource Center (formerly Laughlin Water Recl)	1059.9	1.400	6.188	M-A
NV0021750	910	Wastegate Las Vegas Resort and Casino (formerly Las Vegas Hil	938	0.001	0.004	I
NV0021911	910	Las Vegas Valley MS4				I-7
NV0022098	910	Kurt R. Segler Water Reclamation Facility - City of Henderson	1123.9	17.800	83.424	M-A
NV0022195	910	Valley Hospital Medical Center		0.006		I-5E
NV0022691	910	Lake Las Vegas Dam (formerly Lake Las Vegas Resort (Dam))				I-2
NV0022772	910	Sterling/Squire/Crescendo HOA (formerly Saxton)	4884.54	0.123	2.495	I-5E
NV0022781	910	Tomiyasu Residence (formerly Shanghai Partners - Tomiyasu Re	1153.3	0.100	0.481	I-5E
NV0022870	910	7-Eleven Store # 19653				I-2
NV0022888	910	Las Vegas Sands-Venetian Casino Resort	1454.0	0.146	0.885	I-5E
NV0022942	910	Lloyd D. George Federal Courthouse	3412.9	0.012	0.167	I
NV0022985	910	Planet Hollywood Resort Casino (formerly Aladdin Resort)	2400.0	0.000	0.001	I-5E
NV0022993	910	Golden Nugget Hotel and Casino	920.6	0.004	0.017	I-5E
NV0023043	910	Maryland Villas Apartment Complex	1601.3	0.124	0.831	I-5E
NV0023060	910	Nevada Environmental Response Trust (formerly Tronox LLC)	4100.0	1.607	27.468	I-5B
NV0023159	910	Clark County Regional Justice Center	1429.0	0.004	0.021	I
NV0023191	910	Caesar's Palace Hotel and Casino	2021.0	0.042	0.356	I
NV0023221	910	7-Eleven Store #27607		0.001		I-7
NV0023256	910	The Stirling Club	1880.0	0.086	0.678	I
NV0023329	910 / 920	Nevada Department of Transportation Municipal Separate Storm Sewer System				I-7
NV0023477	910	Sky Las Vegas Master Association	2121.7	0.000	0.003	I-5E
NV0023485	910	Las Vegas Academy		0.444		I-7
NV0023515	910	The Cosmopolitan of Las Vegas (formerly The Cosmopolitan Res	1612.0	0.043	0.286	I-5E
NV0023558	910	The Martin (formerly Panorama Towers)	1794.2	0.002	0.017	I-5E
NV0023566	910	Fountainbleau Casino and Resort	2426.3	0.173	1.748	I-5E
NV0023604	910	Howard Hughes (fomerly Howard Hughes Office Complex)	1851.7	0.001	0.004	I-5E
NV0023621	910	Resorts World Las Vegas (formerly Echelon Resort)	1973.6	0.180	1.484	I-5E

NPDES PERMITS						
Colorado River Basin Salinity Control Forum						
January 1, 2023 through December 31, 2025						
NPDES PERMIT#	REACH	NAME of Discharging Facility	TDS Conc. AVG (mg/L)	Flow Rate AVG (MGD)	Salt Load Tons/Day	Explanantion Code
NV0023647	910	City of North Las Vegas Water Reclamation Facility	938.8	18.990	74.343	M-A
NV0023663	910	Former Conoco Station No. 28003				I-2
NV0023701	910	CityCenter (formerly City Center Land)	2202.4	6.228	57.197	I-5E
NV0023736	910	Bowman Reservoir & Muddy River Outfalls				I-2
NV0023744	910	Doubletree by Hilton (formerly Four Points Sheraton)		0.008		I-7
NV0023761	910	Harry Reid International Airport (formerly McCarran International)	1600	0.04828	0.322	I-5E
NV0023809	910	Terrible Herbst #225				I-2
NV0023841	910	Hudson Cleaners	1958.6	0.0320	0.261	I
NV0023931	910	Mendenhall Center - UNLV	2816.7	0.0040	0.047	I-5E
NV0024104	910	LVVWD/SNWA Operations and Maintenance	938.5	0.9234	3.614	M-A
NV0024112	910	Endeavour, LLC - AGTS (formerly American Pacific Corp AGTS)	2391.7	1.0174	10.147	I-5B
NV0024121	910	City of North Las Vegas Utilities Water System O&M	510.8	0.4466	0.951	M
NV0024139	910	City of Henderson Water Systems and Facilities		0.1041		M-7
NV0024201	910 / 920	Statewide Vault Maintenance Dewatering		0.0402		I-7
NV0024202	910	Sunset Regional Park Splash Pad	650.6	0.1221	0.331	M
NV0024220	910	Village Shop #4 / Sinclair Station				I-2
NV0024227	910	Former PJs Cleaners	2968.3	0.0199	0.246	I
NV0024232	910	Las Vegas Convention and Visitors Authority Remediation System	2314.0	0.2140	2.065	I-5E
NV0024235	910	TBC - The Boring Company				I-2
NV0024238	910	Charleston / Maryland Storm Drain				I-2
NV0024239	910	Allegiant Stadium	1484.8	0.0115	0.071	I-5E
NV0024240	910	Whitney Channel Replacement				I-2
NV0024242	910	Clark County Public Works	2570.0	0.1000	1.072	I-5E
NV0024245	910	RW-LVCC Connector				I-2
NV0024247	910	I-15 Tropicana Project				I-2
NV0024253	910	Weir #5 Las Vegas Wash				I-2
NV0024254	910	4613 S Las Vegas Blvd				I-2

NPDES PERMITS						
Colorado River Basin Salinity Control Forum						
January 1, 2023 through December 31, 2025						
NPDES PERMIT#	REACH	NAME of Discharging Facility	TDS Conc. AVG (mg/L)	Flow Rate AVG (MGD)	Salt Load Tons/Day	Explanantion Code
NV0024255	910	TROP / UCD Grade Separation				I-2
NV0024256	910	Encore-LVCC Connector	2200.0	0.0240	0.220	I
NV0024257	910	Rebel Station #8	1866.7	0.0454	0.353	I
NV0024259	910	Monthill PS & Pipeline				I-2
NV0024262	910	Jasmine Development LLC				I-2
New Mexico*						
NM0028762	801	Aztec, City of / WTP	455.9	0.122	0.1546	I
NM0020168	801	Aztec, City of / WWTP	321.25	0.566	0.091	M
NM0020770	801	Bloomfield, City of / WWTP	268.59	0.664	0.089	M
NM0031135	801	Farmington Electric Utility System (FEUS)-Bluff View	2120	0.102	1382.2	I
NM0020583	801	Farmington WWTP	392.04	5.53	9.04	M-5A
NM0031194	801	NTUA Cutter Lateral Water Treatment Plant (CLWTP)	0	0	0.00	I-2
NM0024163		Reserve, Village of WWTP				
NM0029505	801	Westmoreland San Juan Mining LLC - La Plata	0	0	0	I-3
NM0028746	801	Wesmoreland San Juan Mine LLC - San Juan	0	0	4000	I
NM0020672	900	Gallup WWTP	1425	3.22	5.35	M-4A
*Permits in New Mexico are issued by the U.S. EPA and certified by the State of New Mexico Environmental Department.						
Utah						
UT0025828	300	Courthouse Wash Water	972	0.04	0.15	M-B
UT0025712	300	Energy Queen Mine	-	0.00	0.00	I-2
UT0026204	300	Kane Springs Improvement District	-	0.00	0.00	M-2
UT0026166	300	Red Cliffs Lodge	-	0.00	0.00	I-2
UT0020419	300	Moab, City of	420	1.08	1.89	M-A

NPDES PERMITS						
Colorado River Basin Salinity Control Forum						
January 1, 2023 through December 31, 2025						
NPDES PERMIT#	REACH	NAME of Discharging Facility	TDS Conc. AVG (mg/L)	Flow Rate AVG (MGD)	Salt Load Tons/Day	Explanantion Code
UT0023922	300	CUR Sage-Rim Mine	-	0.00	0.00	I-2
UT0025810	300	Velvet Mine	-	0.00	0.00	I-2
UTG640027	411	Ashely Valley WTP	-	0.00	0.00	M-6
UTG640003	411	Ashley Springs WTP	-	0.00	0.00	M-6
UT0025348	411	Ashley Valley Water & Sewer POTW	537	3.04	6.81	M-5B
UTG640014	411	Dutch John WTP	-	0.00	0.00	M-6
UT0000035	411	Ashley Valley Operating	1310	0.71	3.88	I-A
UT0024015	411	Intermountain Concrete	318	0.01	0.01	I-B
UTG640023	411	Manilla WTP	-	0.00	0.00	M-6
UT0020338	411	USBOR-Flaming Gorge Dam	775	0.00	0.01	M-A
UTG130001	411	USFWS-Jones Hole Fish Hatchery	125	3.43	1.79	I-5D
UT0026344	600	Airbuild, Inc.-Green River Bioremediation	-	0.00	0.00	I-2
UTG040007	600	Coal Energy Group 2-Wildcat Loadout	-	0.00	0.00	I-2
UTG040011	600	Canyon Fuel Co.- Banning Loadout	-	0.00	0.00	I-1
UT0025593	600	Canyon Fuel Co.- Dugout Mine	-	0.00	0.00	I-2
UT0023540	600	Canyon Fuel Co.- Skyline Mine	440	10.71	19.65	I-A
UT0023680	600	Canyon Fuel Co.-Soldier Canyon Mine	-	0.00	0.00	I-2
UTG040030	600	Coal Energy Group-Kinney No. 2 Mine	-	0.00	0.00	I-1
UTG640012	600	E. Carbon City-Sunnyside CWTP	-	0.00	0.00	M-6
UTG640017	600	Green River WTP	-	0.00	0.00	M-6
UT0025771	600	Green River, City of, POTW	4003	0.63	10.52	M-B
UT0023094	600	Hiawatha Coal Company	728	0.23	0.71	I-B
UT0026018	600	Lila Canyon Mine	2067	0.43	3.72	I-A
UTG040010	600	Price River Terminal-Energy Transfer	-	0.00	0.00	I-2
UTG640035	600	Price City WTP	-	0.00	0.00	M-6
UT0021814	600	Price River Water Imp. Dist. POTW	1082	1.05	4.74	M-A
UTG640034	600	Price River WID	-	0.00	0.00	M-6

NPDES PERMITS						
Colorado River Basin Salinity Control Forum						
January 1, 2023 through December 31, 2025						
NPDES PERMIT#	REACH	NAME of Discharging Facility	TDS Conc. AVG (mg/L)	Flow Rate AVG (MGD)	Salt Load Tons/Day	Explanantion Code
UTG040005	600	Savage Industries Coal Terminal	-	0.00	0.00	I-2
UTG040025	600	Sunnyside Cogeneration-Star Point Coal Refuse Facility	-	0.00	0.00	I-2
UT0024759	600	Sunnyside Cogeneration Plant	-	0.00	0.00	I-2
UTG040029	600	Utah Land Resources-Tower Mine	-	0.00	0.00	I-2
UT0025640	600	West Ridge Mine	-	0.00	0.00	I-2
UT0020095	610	Duchesne City Corp.	-	0.00	0.00	M-2
UT0025801	610	Duchesne Valley WTP	424	0.09	0.16	I-B
UTG640008	610	Myton Community Water System	-	0.00	0.00	M-6
UT0023001	610	Neola Town Water & Sewer Assoc.	-	0.00	0.00	M-2
UTG640002	610	Tridell-Lapoint Water WTP	-	0.00	0.00	M-6
UTG130012	610	UDWR-Whiterocks Fish Hatchery	239	4.98	4.96	I-5D
UT0022918	700	Canyon Fuel Co.- SUFCo Mine	686	5.50	15.73	I-A
UT0025798	700	Capital Reef National Park	-	0.00	0.00	I-2
UTG040026	700	Bronco Utah Operations-Hidden Valley Mine	-	0.00	0.00	I-1
UT0022616	700	Bronco Utah Operations-Emery Deep Mine	1620	0.86	5.84	I-5B
UTG130003	700	UDWR-Egan/Bicknell Fish Hatchery	137.5	9.20	5.28	I-5D
UTG130007	700	UDWR-Loa Fish Hatchery	-	0.00	0.00	I-5D
UTG640004	700	USNPS-Glen Canyon Hite Marina WTP	-	0.00	0.00	M-6
UT0023663	710	Castle Valley SSD-Castle Dale	-	0.00	0.00	M-2
UT0020052	710	Castle Valley SSD-Ferron	-	0.00	0.00	M-2
UT0021296	710	Castle Valley SSD-Huntington	3803	0.19	3.08	M-B
UTG640056	710	North Emery Water Users SSD	-	0.00	0.00	M-6
UTG640030	710	Emery WTP	-	0.00	0.00	M-6
UTG640039	710	Ferron WTP	-	0.00	0.00	M-6
UT0024368	710	Princess Mine	531	0.31	0.69	I-B
UTG640040	710	Huntington WTP	-	0.00	0.00	M-6
UTG640031	710	Orangeville WTP	-	0.00	0.00	M-6

NPDES PERMITS						
Colorado River Basin Salinity Control Forum						
January 1, 2023 through December 31, 2025						
NPDES PERMIT#	REACH	NAME of Discharging Facility	TDS Conc. AVG (mg/L)	Flow Rate AVG (MGD)	Salt Load Tons/Day	Explanantion Code
UTG040006	710	Gentry Mountain Mining-Bear Canyon Mine	1005	0.37	1.55	I-B
UT0023604	710	PacifiCorp-Deer Creek Mine	-	0.00	0.00	I-2
UTG040009	710	Hunter Plant Coal Prep Facility	-	0.00	0.00	I-2
UT0023728	710	Fossil Rock-Trail Mountain Mine	-	0.00	0.00	I-2
UT0022896	710	PacifiCorp-Wilberg Mine	1050	0.07		I-B
UTG640019	802	Blanding Culinary Water Treatment	-	0.00	0.00	M-6
UTG640047	802	Bluff Culinary Water Works SSD	-	0.00	0.00	M-6
UT0024503	802	Monticello POTW	-	0.00	0.00	M-2
UTG640015	802	Monticello City (Culinary WTP)	-	0.00	0.00	M-6
UT0025992	900	Alton Coal Development	688	0.12	0.34	I
UT0025224	905	Springdale	971	0.24	0.97	M-B
UT0026123	905	Gunlock DW Plant	-	0.00	0.00	I-2
UT0026131	905	Sand Hollow DW Plant	940	0.00	0.01	I-B
UTG640021	905	St. George WTP - Quail Creek	-	0.00	0.00	M-6
UT0026301	905	Ash Creek SSD-Confluence Park	-	0.00	0.00	M-2
UT0024686	905	St. George, City of	1164	12.5	60.9	M-5B
Wyoming						
WY0000027	401	Green River-Rock Springs JPB Water Plant	0	0.000	0.00	M-2
WY0000094	401	Boulder Rearing Station	77	2.498	0.81	I-5D
WY0020133	401	Big Piney Wastewater Lagoon	681	0.056	0.13	M-B
WY0020656	401	Pinedale Wastewater Lagoons	195	0.722	0.59	M-4B
WY0021806	401	Superior Waste Water Lagoon				M-1
WY0021997	401	Marbleton Wastewater Lagoon	689	0.461	1.25	M-A
WY0022080	401	LaBarge Wastewater Lagoon	821	0.023	0.13	M-A
WY0022128	401	B & R Mobile Home Village	607	0.020	0.05	M-4A

NPDES PERMITS						
Colorado River Basin Salinity Control Forum						
January 1, 2023 through December 31, 2025						
NPDES PERMIT#	REACH	NAME of Discharging Facility	TDS Conc. AVG (mg/L)	Flow Rate AVG (MGD)	Salt Load Tons/Day	Explanantion Code
WY0022357	401	Rock Springs Water Reclamation Facility	1074	2.040	9.13	M-5B
WY0023825	401	Stansbury Mine				I-1
WY0096857	401	Black Butte Mine	0	0.000	0.00	I-2
WY0030350	401	Jim Bridger Mine	1483	0.984	0.91	I-B
WY0054224	401	Jensen Disposal Facility	0	0.000	0.00	I-2
WY0094528	401	BLM Rock Springs Wild Horse Facility	0	0.000	0.00	I-2
WY0020443	411	Green River Wastewater Lagoon	738	0.990	3.04	M-5
WY0056499	411	Pioneer Cryogenic Gas Plant	1356	0.006	0.03	I-B
WY0022896	411	Mountain View Wastewater Lagoon	578	0.260	0.62	M-A
WY0000051	411	Kemmerer Mine	2352	0.079	0.27	I-B
WY0000116	411	Kemmerer Water Treatment Plant	236	0.156	0.15	M-4B
WY0020117	411	Lyman Wastewater Lagoon	1247	0.242	0.84	M-5
WY0020311	411	Naughton Plant	1313	1.728	8.67	I-5B
WY0020320	411	Kemmerer Wastewater Treatment	805	0.333	1.12	M-5
WY0022071	411	Fort Bridger Sewer District	651	0.157	0.43	M-A
WY0032697	411	Carter Creek Gas Plant	0	0.000	0.00	I-2
WY0036153	411	Fort Bridger Travel Stop	0	0.000	0.00	I-2
WY0096873	411	Haystack Coal	238	0.491	0.84	I-B
WY0096849	411	Love's Travel Stops and Country Stores #888	0	0.000	0.00	I-2
WY0021938	500	Dixon Wastewater Lagoon	398	0.027	0.02	M-B
WY0022888	500	Baggs Wastewater Lagoons	933	0.096	0.25	M-B
WY00996679	500	Cow Creek Project	0	0.000	0.00	I-2
WY0096776	500	Atlantic Rim CBM Project	0	0.000	0.00	I-2

APPENDIX D

EPA NPDES Permits List

PND DRAFT

LEGEND

NPDES PERMITS EXPLANATION CODES

COLORADO RIVER BASIN SALINITY CONTROL FORUM January 1, 2023, through December 31, 2025

NPDES permits are reviewed under two different criteria under Forum policy; these being municipal and industrial. In order for a permittee to be in compliance under the municipal criteria, the increase in concentration between inflow and outflow cannot be greater than 400 mg/L. Forum industrial criteria requires that no industrial user discharges more than 1.00 ton/day. Under Forum policy there can be granted exceptions to these limitations by the states. The following gives an explanation of the current status of the NPDES permits. Because at any given time many of the permits identified in this list are being reviewed, reissued, and/or terminated, and new discharge permits are being filed, this list must be considered as being subject to frequent change.

MUNICIPAL

- (M) Municipal user in compliance with Forum policy.
 - (M-A) Municipal user in compliance with the 400 mg/L incremental increase provision, or
 - (M-B) Municipal user in compliance with the 1 ton per day or 366 tons per year provision.
 - (M-1)* Permit has expired or been terminated. No discharge.
 - (M-2) Permittee did not discharge during the reporting period.
 - (M-3) Measurement of TDS is not currently required, but the state and/or EPA plans to require measurements of both inflow and outflow when the permit is reissued.
- Measurements of inflow are not consistent with Forum policy:
- (M-4A) Therefore, it is not known whether or not this municipal user is in compliance.
 - (M-4B) However, since outflow concentration is less than 500 mg/L it is presumed that this permit is not in violation of the ≤ 400 mg/L increase.
-
- (M-5) Permittee is in violation of Forum policy in that there is an increase in concentration of >400 mg/L over the source waters. No provision has been made allowing this violation of Forum policy.
 - (M-5A) The state and/or EPA is currently working to bring permittee into compliance.
 - (M-5B) Though discharge is >400 mg/L over source waters, in keeping with Forum policy the permittee has demonstrated the salt reduction is not practicable and the requirement has been waived.
-
- (M-6) This permit requires no discharge or discharge only under rare and extreme hydrologic conditions. Thus, flow and concentration measurements are not required.
 - (M-7) Insufficient data to know the current status of this permit.
-

* Permits that have expired or been terminated and listed with the M-1 and I-1 explanation codes shall be removed from the NPDES list during the subsequent triennial review.

INDUSTRIAL

- (I) Industrial user in compliance with Forum policy.
 - (I-A) Industrial user in compliance with the Forum's salinity offset policy.
 - (I-B) Industrial user in compliance with the 1 ton per day or 366 tons per year provision.
 - (I-1)* Permit has expired or been terminated. No discharge.
 - (I-2) Permittee did not discharge during the reporting period.
 - (I-3) Measurement of TDS is not currently required, but the state and/or EPA plans to require measurements of both volume and concentration of outflow when the permit is reissued.
 - (I-4) Either concentration or volume of outflow are not currently being reported, thus the permittee is in violation of Forum policy. It is not known if the discharge is in excess of the <1.00 ton/day requirement.
-
- (I-5) Permittee is in violation of Forum policy in that discharge of salts is >1.00 ton/day. No provision has been made allowing this violation of Forum policy.
 - (I-5A) The state and/or EPA is currently working to bring permittee into compliance.
 - (I-5B) Though discharge is >1.00 ton/day, in keeping with Forum policy the permittee has demonstrated the salt reduction is not practicable and the requirement has been waived.
 - (I-5C) The use of ground water under this permit is for geothermal energy and only heat is extracted. The intercepted salt and water are naturally tributary to the Colorado River System and hence, this discharge does not increase salt in the river. The permit is covered by the Forum's policy on intercepted ground waters.
 - (I-5D) This permit is in compliance with the Forum's policy for fish hatcheries. The use of the water is a one-time pass through, and the incremental increase in salinity is ≤ 100 mg/l.
 - (I-5E) This permit is for the interception and passage of ground waters and thus is excepted under the Forum's policy on intercepted ground waters.
-
- (I-6) This permit requires no discharge or discharge only under rare and extreme hydrologic conditions. Thus, flow and concentration measurements are not required.
 - (I-7) Insufficient data to know the current status of this permit.
-

LEGEND (continued)
NPDES PERMITS
REACH DEMARCATIONS

COLORADO RIVER BASIN SALINITY CONTROL FORUM

In order to provide a better understanding of the location of the various NPDES permits and the geographical sequence in the Colorado River System, each of the following NPDES permits is identified with a Colorado River reach number. The reach numbers have their origin in the old CRSS river model. Though this model is no longer used, the reach numbers assist in understanding the general location of the permits. The reaches are defined as:

100	Upper Main Stem	from headwaters of Colorado River to Colorado River near Cameo
190	Taylor Park	from headwaters of Gunnison River to above Blue Mesa Reservoir
200	Blue Mesa	from above Blue Mesa Reservoir to below Blue Mesa Dam
210	Morrow Point	from below Blue Mesa Dam to Crystal Reservoir
220	Lower Gunnison	from Crystal Reservoir to confluence with Colorado River
300	Grand Valley	from Colorado River near Cameo to confluence with Green River
310	Dolores River	from headwaters of Dolores River to confluence with Colorado River
401	Fontenelle	from headwaters of Green River to Green River near Green River, WY
411	Flaming Gorge	from Green River near Green River, WY to confluence with White and Duchesne Rivers
500	Yampa River	from headwaters of Yampa River to confluence with Green River
510	White River	from headwaters of White River to confluence with Green River
600	Green River	Green River from confluence with White and Duchesne Rivers to confluence with Colorado River
610	Duchesne River	from headwaters of Duchesne River to confluence with Green River
700	Lake Powell	Colorado River from confluence of with Green River to Lees Ferry
710	San Rafael River	from headwaters of San Rafael River to confluence with Green River
801	Upper San Juan River	from headwaters of San Juan River to San Juan near Bluff
802	Lower San Juan River	from San Juan near Bluff to confluence with Lake Powell
900	Glen Canyon to Lake Mead	Colorado River from Lees Ferry to backwaters of Lake Mead
905	Virgin River	from headwaters of Virgin River to backwaters of Lake Mead
910	Lake Mead	from backwaters of Lake Mead to Colorado River below Hoover Dam
920	Lake Mohave	Colorado River from below Hoover Dam down to I-40 bridge
930	Lake Havasu	Colorado River from I-40 bridge to below Parker Dam
940	Parker Dam to Imperial Dam	Colorado River from below Parker Dam to above Imperial Dam
945	Imperial Dam	Colorado River from above Imperial Dam to Gila and Yuma users

EPA ADMINISTERED NPDES PERMITS
Colorado River Basin Salinity Control Forum
January 1, 2023 through December 31, 2025

NPDES PERMIT#	REACH	NAME of Discharging Facility	TDS Conc. AVG.(Mg/L)	Flow Rate AVG.(MGD)	Salt Load Tons/Day	Explanantion Code
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* Permit issued to a federal agency (except in NM) or an Indian tribe and the responsibility of EPA

** Issued by a tribal entity with delegation of the NPDES program

Region 6 Permits

NM0030520*	801	Village of Dulce (Tribe)	339	0.32	0.452	M
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All other permits in New Mexico are issued by the U.S. EPA and certified by the State of New Mexico Environmental Department as reported in Appendix C.

Region 8 Permits

CO0034975*	190	USNPS - Colorado National Monument				M-6
CO0000086*	220	HOTCHKISS NTL. FISH HATCHERY	8	5.89	0.196	I-5D
CO0022853*	801	SOUTHERN UTE INDIAN TRIBE(E)	321	0.308	0.412	M
CO0034398*	801	USDINPS-MESA VERDE NAT PARK (E)	348	0.0228	0.033	M
CO0034622*	801	USDINPS-MESA VERDE NAT PARK (E)	139	0.0117	0.007	M
CO0034665*	801	FOUR CORNER MATERIALS	193	0.3723	0.300	I
CO0034959*	801	IGNACIO PEAK WASTEWATER LAGOON				M-1
CO0034967*	801	SOUTHERN UTE WATER TRTMNT PLNT				M-2
COG589201*	801	TOWAOC WASTEWATER LAGOON				M-1
COG589202*	801	WHITE MESA WASTEWATER LAGOONS				M-1
COG589203*	801	TOWAOC WASTEWATER LAGOON 2				M-1
UT0000167*	510	American Gilsonite Co.	1,732	0.0611	0.441	I
UT0025259*	510	American Gilsonite Co.	2586	0.011	0.119	I
UT0000184*		Table Rock Minerals, LLC	0.0582	1195	0.290	I

Region 9 Permits

AZ0021415	940	COLORADO RIVER JOINT VENTURE	1592			M-A
AZ0024627	945	MESA NORTHWEST WRP				M-7
NN0000019	801	APS Four Corners Power Plant	746			I-7
NN0020133	803	NACOGDOCHES OIL & GAS	1170	0.008	0.04	I-B
NN0020265	802	NTUA/CHINLE	763			M-7
NN0020281	802	NTUA/KAYENTA	630			M-7
NN0020290	900	NTUA/TUBA CITY	436			M-A

EPA ADMINISTERED NPDES PERMITS
Colorado River Basin Salinity Control Forum
January 1, 2023 through December 31, 2025

NPDES PERMIT#	REACH	NAME of Discharging Facility	TDS Conc. AVG.(Mg/L)	Flow Rate AVG.(MGD)	Salt Load Tons/Day	Explanantion Code
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* Permit issued to a federal agency (except in NM) or an Indian tribe and the responsibility of EPA

** Issued by a tribal entity with delegation of the NPDES program

NN0020621	801	NTUA Shiprock	729			M-A
NN0020800	801	BIA Nenahnezad Community School	139			M-4B
NN0020869	801	BIA Crystal Boarding School				M-1*
NN0020958	900	BIA Wingate School				M-6
NN0020991	801	BIA Pueblo Pintado				M-1*
NN0021555	900	NTUA/WINDOW ROCK-FT.DEFIANCE	899			M-5
NN0021610	900	CAMERON TRADING POST	460			M-A
NN0022195	900	NTUA/GANADO				M-2
NN0025178	900	RJG Inc. - Gouldings Lodge				M-2
NN0028193	801	NAVAJO MINE				I-2
NN0029386	900	Chevron Mining, Inc. / McKinley Mine	1803	0.224	0.16	I-B
NN0030325	900	Ramah Navajo School Board - Pine Hill				M-2
NN0030335	900	NTUA Navajo Townsite				M-1*
NN0030343	801	NTUA Northern Edge Casino	787			M-7
NN0030344	900	NTUA Twin Arrows Casino	1444			M-7
NN0030345	801	Navajo Engineering & Construction Authority (NECA)				M-7
NN0030346	900	Mariano Lake Waterline Project				M-1*
NNG990001	802/900	General Permit for Low Threat Discharges in Navajo Nation				M-1*

APPENDIX E

Reclamation's Lower Colorado River Modeling System

PND DRAFT

APPENDIX E

RECLAMATION'S LOWER COLORADO RIVER MODELING SYSTEM

To help manage the salinity requirements of Minute 242, Reclamation and its consultant, Hydros Consulting (Hydros), use a two-model system to forecast salinity at the Northerly International Boundary with Mexico (NIB). The first model—the CE-QUAL-W2 Lake Mead Water-Quality Model (LMWQM)—forecasts the outflow salinity from Lake Mead at Hoover Dam. The second model—the RiverWare Salinity Projection Model (SPM)—uses output from the LMWQM to forecast salinity at the NIB. Based on flow inputs from Reclamation's 24-Month Study, this modeling system can forecast 24 months into the future. The system also produces salinity forecasts for Parker Dam and Imperial Dam, which, along with Hoover Dam, represent the three monitoring stations for the Colorado River Basin Salinity Control Program (Program). The following sections describe the LMWQM and the SPM in more detail.

Lake Mead Water-Quality Model

The LMWQM was developed using CE-QUAL-W2, which is a mechanistic hydrodynamic and water-quality modeling software package. The software was originally developed by the U.S. Army Corps of Engineers and is currently supported and updated by Portland State University. The model software can simulate total dissolved solids concentration (TDS), complex hydrodynamics (including thermal stratification), and evapo-concentration. CE-QUAL-W2 is a two-dimensional model that assumes lateral homogeneity but simulates vertical and longitudinal variation. Additionally, the model is in the public domain and is widely accepted and used. The software is written in FORTRAN and is provided as open-source code. Detailed documentation of the software and the associated technical manuals are available at <http://www.cee.pdx.edu/w2/>.

The Upper Colorado Region of the U.S. Bureau of Reclamation (USBR) developed and, up until 2019, routinely used a CE-QUAL-W2 model of Lake Mead. In 2019, Hydros conducted an initial evaluation of the model and concluded that it could be used in conjunction with the downstream SPM to improve TDS forecast accuracy at Imperial Dam and the NIB. Hydros subsequently refined and recalibrated the model, yielding the LMWQM.¹ Currently, Hydros runs the LMWQM on a quarterly basis (four times per year) to provide forecasts of TDS concentrations below Hoover Dam for the USBR Yuma Area Office (YAO) in support of the downstream SPM. The data required to generate an updated forecast with the LMWQM are described below.

Input Data Sources

Four types of input data are required to run the LMWQM:

¹ Hydros Consulting, 2020. "Lake Mead CE-QUAL-W2 Model Refinement and Recalibration," Technical Memorandum from Kevin Bierlein, PhD; Christine Hawley; and Nicolás Rodríguez-Jeangros, PhD, PE to Hong Nguyen-DeCorse, Reclamation. July 17.

- Initial conditions;
- Meteorology;
- Inflows; and
- Outflows.

Recent observed data are compiled for all four categories of input data, and predictive methods are used to forecast future meteorology, inflows, and outflows. Due to the lag time required to collect and QA/QC data from the reservoir for initial conditions and to set up the model run, the initial period of the simulation uses as much observed data as available, with the remainder of the simulation period relying on forecasts or predicted data. These input data and forecast methods are summarized below.

Initial Conditions

Initial conditions define the temperature and TDS concentrations in Lake Mead at the start of the model simulation. The initial conditions use temperature and electrical conductivity (EC) profiles collected by USBR across the reservoir. The EC profiles are converted into TDS profiles using a constant TDS:EC ratio for all profiles. This ratio is calculated using a 12-month moving average of paired TDS and EC data collected by USBR (approximately monthly) from the Hoover Dam tailrace.² Once the EC profiles are converted to TDS profiles, the temperature and TDS profiles are then spatially interpolated to populate the initial conditions of all cells in the reservoir model grid. The sampling date of the temperature and EC profiles also sets the start date of the model simulation.

Meteorology

Meteorological data are obtained from the Harry Reid International Airport weather station in Las Vegas. From this station, air temperature, dew point, wind speed and direction, and cloud coverage are retrieved hourly. Any available observed data collected beyond the model run start date are input into the model. Future meteorological data are estimated using an analog year of observed meteorological data from the same weather station. An analog year is a prior year with meteorological conditions/flow patterns similar to those expected in the upcoming year. The selection of an appropriate analog year is performed by USBR, and this analog year is also used to develop input for a model of Lake Powell.³

Inflows

Flow, temperature, and TDS data for the four main tributaries to Lake Mead—the Colorado River, Virgin River, Muddy River, and Las Vegas Wash—are required for a model forecast. As

² Although the TDS:EC ratio may vary spatially across the reservoir, due to data availability limitations, it is assumed to be constant throughout the reservoir when setting up initial conditions for the Lake Mead Model.

³ The Lake Powell Model is a CE-QUAL-W2 model that was developed and is currently maintained by the USBR. The model is periodically run by USBR, though the timing of the model runs differs from that of the LMWQM runs. Lake Powell Model results for temperature and TDS in inflows are provided by USBR to Hydros to support the LMWQM forecast runs.

with the meteorological data, any available observed data within the forecast simulation period are included, while the remaining inflow data are derived from forecasting methods.

Daily observed flow data are obtained from USGS gages on the four tributaries. Forecasted flow data rely on the most recent 24-month study from USBR. Historical flow patterns and volumes are also used to develop daily flows for the four main tributaries from the monthly flows in the 24-month study.

Inflow temperatures are estimated using regressions for each tributary. For the Colorado River, the temperature regression uses flow, water temperature, and air temperature at Glen Canyon Dam. The inflow temperature regression for the Virgin River uses Virgin River flow and Harry Reid Airport air temperature. Given the proximity and similarity to the Virgin River, and its relatively minor impact on temperature in Lake Mead, inflow temperatures from the Muddy River are assumed to be equal to the Virgin River inflow temperature. Las Vegas Wash inflow temperatures are estimated using a regression based on daily flow and six-hour temperature data at Harry Reid Airport. The six-hour basis aims to capture the influence of municipal wastewater discharges from the City of Las Vegas on the diurnal temperature pattern. Each of these regressions uses the same analog year of meteorology used to develop the meteorological inputs to predict inflow temperature in the forecast period of the model run.

Several methods are used to estimate TDS concentrations in the inflows to Lake Mead from the four main tributaries. For the Colorado River, inflow concentrations are estimated using TDS concentrations at Lees Ferry (calculated using observed daily conductivity data) and forecast TDS in outflows from the Lake Powell Model. The Lees Ferry TDS concentrations are then used in a regression equation to estimate TDS concentrations entering Lake Mead from the Colorado River. For the Virgin River, inflow TDS concentrations are also estimated using a regression. This regression is derived from SLOAD—a method used by the USGS to produce TDS regression equations at several sites in the Colorado River basin. Inflow TDS concentrations for the Muddy River and Las Vegas Wash are estimated as a function of flow from these respective tributaries.

Outflows

The outflow time series for the LMWQM forecast runs use observed outflows at the Hoover Dam, observed withdrawals by the Southern Nevada Water Authority (SNWA), and future outflow volumes from the 24-month study. Outflow volumes at Hoover Dam are distributed between the upper and lower outlet structures using an equation from USBR that is a function of reservoir water surface elevations.

Salinity Projection Model

As noted above, the SPM simulates the reach of the Colorado River from Hoover Dam to the NIB, and it is used to ensure compliance with the salinity differential in Minute 242. The SPM consists of two main parts: (1) a statistical model developed by the U.S. Geological Survey (USGS) that uses salinity output from the LMWQM at Hoover Dam to calculate salinity at

Parker and Imperial Dams, and (2) a mechanistic RiverWare model of the Colorado River between Imperial Dam and NIB. Details about RiverWare are available at <https://riverware.org/>, and Hydros has documented the RiverWare portion of the SPM.⁴ Since the areas downstream of Imperial Dam are not relevant to the work of the Program, the remainder of the SPM description will focus on part (1) of the model—the statistical model used to calculate salinity at Parker and Imperial Dams.

USGS Statistical Model

Equations from a recent USGS statistical model⁵ have been incorporated into the RiverWare SPM, effectively extending the model domain upstream from Imperial Dam to Hoover Dam. Inputs to the USGS model include monthly discharge and monthly flow-weighted TDS below Hoover Dam, and monthly discharge at the following locations: (a) below Parker Dam, (b) at the outlet of the Colorado River Indian Reservation Main Canal, and (c) at the outlet of the Palo Verde Canal. Using coefficients, the model also accounts for open-water evaporation, evapotranspiration from riparian vegetation, floodplain aquifer discharge/recharge, rainfall-runoff, and elevated TDS in agricultural return water. Coefficients for the model were estimated using data from a calibration period from May 2008 through September 2016. The model simulates monthly flow-weighted TDS for the Colorado River at Imperial Dam. The calibrated model can also provide monthly flow-weighted TDS at Parker Dam. These monthly output data can be converted to annual average flow-weighted TDS values.

⁴ Hydros Consulting, 2025, “RiverWare Salinity Projection Model: Model Report for Yuma Area Office of Water Operations, U.S. Bureau of Reclamation,” July.

⁵ Anning, D.W., Coes, A.L., and Mason, J.P., 2018, “Conceptual and numerical models of dissolved solids in the Colorado River, Hoover Dam to Imperial Dam, and Parker Dam to Imperial Dam, Arizona, California, and Nevada : U.S. Geological Survey Scientific Investigations Report 2018–5108,” 34 pp., <https://doi.org/10.3133/sir20185108>.