KERN COUNTY WATER AGENCY

Stuart T. Pyle Water Resources Center
3200 Rio Mirada Drive
Bakersfield, California

Notice of
Special Board Meeting

March 17, 2025

Conference Line: +1 (571) 317-3122
Access Code: 863-465-805#
https://global.gotomeeting.com/join/863465805

AGENDA

I. Call to Order – 3:00 p.m.

II. Directors' Forum

III. Public Comment
Anyone may comment on any subject within Agency jurisdiction whether or not it is on the agenda. Time for such comment may be limited.

IV. Report of the General Manager

V. Public Hearing – Improvement District No. 4 2024 Report on Water Conditions

VI. Adjournment

DECLARATION OF POSTING: I declare under penalty of perjury, that I am employed by the Kern County Water Agency and that I posted the foregoing Agenda at the Agency Office on March 5, 2025.

Stephanie N. Prince, Board Secretary

Requests for a disability-related modification or accommodation, including auxiliary aids or services, in order to attend or participate in a meeting should be made to the Board Secretary in advance of the meeting to ensure availability of the requested service or accommodation.

IMPROVEMENT DISTRICT NO. 4

REPORT ON WATER CONDITIONS 2024

January 31, 2025

Board of Directors
Kern County Water Agency
3200 Rio Mirada Drive
Bakersfield, CA 93308

Dear Members of the Board:

The *Improvement District No. 4 Report on Water Conditions 2024*, prepared as required by section 14.25 of the Kern County Water Agency (Agency) Act, is herewith filed with the Agency's Secretary of the Board of Directors (Board). This is the 52nd in a series required for the setting of groundwater charges for funding operating costs of Improvement District No. 4 (ID4) project facilities.

This report describes surface and groundwater conditions for ID4 and includes estimates of water supplies and requirements for the Water Year July 1, 2025 through June 30, 2026.

Also included is an operating cost projection through 2025. This projection and the recommendations indicate the desirability of establishing a groundwater charge for the 2025-26 fiscal year. The information for setting this charge is contained in this report and is recommended for consideration at the public hearing to be held on Monday, March 17, 2025 at 3:00 p.m. in the Stuart T. Pyle Water Resources Center Board Room, located at 3200 Rio Mirada Drive, Bakersfield, California, at which time all interested persons may be heard.

Respectfully submitted,

Thomas D. McCarthy, PE, PG
General Manager

I hereby acknowledge receipt of the *Improvement District No. 4 Report on Water Conditions 2024* and will make it available for examination by the public.

Secretary of the Board

Enclosure

Phone No. (661) 634-1400

Mailing Address
3200 Rio Mirada Drive
Bakersfield, CA 93308

Improvement District No. 4

of the Kern County Water Agency

2024 Board of Directors

Division 1	Ted R. Page
Division 2	Laura Cattani
Division 3	Martin Milobar
Division 4	Eric L. Averett
Division 5	Charles (Bill) W. Wulff, Jr.
Division 6	Royce Fast
Division 7	Gene A Lundquist
General Manager	Thomas D. McCarthy
General Counsel	James Ciampa, Lagerlof, LLP

2024 Urban Bakersfield Advisory Committee

The Urban Bakersfield Advisory committee (UBAC) is charged with making recommendations to the Kern County Water Agency (Agency) Board of Directors (Board) on the Improvement District No. 4 (ID4) budget, water supply and water quality plans, and use of ID4 facilities. UBAC consists of nine members and nine alternate members appointed by the Agency Board.

California Water Service Company
Tamara Johnson
Rafael Molina (Alternate)

City of Bakersfield
Tylor Hestor
Robert Szilagyi (Alternate)

City of Bakersfield
Kristina Budak
Daniel R. Maldonado (Alternate)

East Niles Community Services District
Tim Ruiz, Chairman
David Snyder(Alternate)

North of the River Municipal Water District
Jim Tyack
Doug Nunneley (Alternate)

Kern County Water Agency Subcontractor
Oildale Mutual Water Company
Ryan Nunneley
Don Wattenbarger (Alternate)

Kern County Water Agency Board
Appointed Representative
Van Grayer - Vaughn Water Company

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Definitions

Acre-Foot (af) - The quantity of water required to cover one acre of land to a depth of one foot (325,851 gallons).

Agency - Kern County Water Agency.

Agricultural Water - Water first used on land in the production of crops or livestock for market.

Aquifer - Porous water-bearing stratum or zone below the Earth's surface.

Article 21 - Non–Table A water that becomes available on an intermittent, interruptible basis.

Central Valley Project - In Kern County, this refers to the Friant-Kern Canal and its service area.

Customers - Based on the new treated water contracts.

DWR - California Department of Water Resources.

Enterprise Fund - General operating fund used to fund ID4 operations.

ID4 - Improvement District No. 4.

In-Lieu Recharge: Use of a surface water supply for purposes that would have otherwise required the extraction of groundwater.

MCL - Maximum Contaminant Level - The highest level of a contaminant that is allowed in drinking water. Primary MCLs are set as close to the PHGs (or MCLGs) as is economically and technologically feasible. Secondary MCLs are set to protect the odor, taste and appearance of drinking water.

MCLG - Maximum Contaminant Level Goal.

MGD - Million gallons per day.

M&I - Municipal and Industrial - Generally refers to water used for domestic purposes.

PHG - Public Health Goal - The level of a contaminant in drinking water below which there is no known or expected risk to health. PHGs are set by the California Environmental Protection Agency.

Potable Water - Water fit to drink pursuant to State and federal statutory requirements and aesthetic acceptability.

Project Water - Any combination of State Water Project water and additional water generated from the State Water Project, or from exchanges with Kern River interests or other sources.

Purveyor - Company or organization that provides a domestic water supply to a group of water users on a retail basis.

Small Groundwater-Producing Facility - Facility that has a discharge opening not greater than two (2) inches in diameter and does not provide water for an area in excess of 10,000 square feet.

SWP - State Water Project - In Kern County, its major feature is the Edmund G. Brown California Aqueduct.

Table A - The amount of water from the State Water Project allocated to ID4, according to the Agency's contract with the California Department of Water Resources.

TWCEP - Treated Water Capacity Expansion Project.

Very Small Groundwater-Producing Facility - Facility where, in the opinion of ID4 staff, the cost of collection would exceed the flat rate charge.

Water Year - The water year as referenced within this report refers to the first day of January through the end of December.

Summary & Recommendations

Based on the information compiled and presented herein, it has been determined that the amount of agricultural water withdrawn from the groundwater supplies of Improvement District No. 4 (ID4) for the year 2024 is estimated to be 2,801 acre-feet (af). The estimated amount of all other non-agricultural water withdrawn from the groundwater supplies of ID4 for the 2024 calendar year is 59,249 af (Table 6).

43,664 af (including Henry C. Garnett Water Purification Plant process) of treated surface water was delivered to water purveyors within ID4 during calendar year 2024 (Table 3). The Kern County Water Agency (Agency), on behalf of ID4, was obligated by contract to pay for 82,946 af of State Water Project (SWP) water in calendar year 2024 (Table 5). If the 2025 California Department of Water Resources (DWR) SWP allocation remains at 20 percent, Agency staff estimates that 16,589 af of water will be imported into ID4. Approximately 7,467 af of this water will be recharged as conveyance losses in delivering raw surface water to the Henry C. Garnett Water Purification Plant.

Agency staff developed a reserve policy to identify appropriate levels of accumulation within the ID4 Enterprise Fund. The total fund accumulation includes recommended reserve levels as summarized below.

Reserve Designation	Balance
Acquisition of Additional Water	$1,000,000
CVC Power Rate Stabilization	$500,000
Capital Replacement	$1,500,000
Catastrophe	$2,000,000
Groundwater Banking	$500,000

It is recommended that charges for groundwater production in ID4, for the fiscal year commencing July 1, 2025 and ending June 30, 2026, be levied as follows:

1. Agricultural groundwater production: $20 per af
2. All other groundwater production: $40 per af
3. Small groundwater-producing facilities: $40 (flat rate)
4. Very small groundwater-producing facilities: $0 (no charge)

Purpose

This is the 52nd in a series of annual reports on water conditions within ID4. This report is intended to provide information upon which the levying of groundwater charges for Fiscal Year 2025-26 is based. The first report, issued on October 1, 1973, detailed events leading to the formation of ID4 and formulation of a project plan for importing water from the California Aqueduct. Appended to the first ID4 report on water conditions are the full texts of the formation resolution and a resolution declaring an intention to establish groundwater charges within ID4. Appended to the 1993 report are two resolutions that amended the formation of ID4 (prior Resolution No. 17-71) by raising the maximum permissible groundwater charge to $40 per af, thereby raising the cost of treated water to a maximum level of $38 in excess of the maximum groundwater charge levied in a given year. These actions were superseded when the Agency Board of Directors (Board) adopted the ID4 Financial Management Plan in March 1999. The Board adopted the Revised ID4 Financial Management Plan (Revised Financial Plan) in January 2011, which updated the financial requirements and reserve policy of ID4 as a result of the Treated Water Capacity Expansion Project (TWCEP). In April 2016, the Revised Financial Plan was updated again.

In December 1972, the Agency published a Notice of Intent to establish a groundwater charge in accordance with section 14.22 of the Agency Act 9098 (Act). Following the Act, as amended February 17, 1982, requires that [such notice]:

> All water-producing facilities (wells) located within ID4 shall be registered with the Agency by the owner or operator.
>
> The Agency Engineer shall prepare an annual report by February 1 of each year.
>
> A public hearing shall be held on the third Monday in March regarding the Engineer's report and to receive public testimony thereon.
>
> Within 30 days after the close of the hearing, the Board shall determine whether a groundwater charge will be levied, and if so, shall set the charge.
>
> Each owner or operator of a well shall file with the Agency, on or before January 31 and July 31 of each year, a statement of total water production for the preceding six months and shall pay the groundwater charges as determined on the water production statement.

The Act requires a projection of estimates of water conditions and requirements for fiscal years commencing July 1. SWP operations are based on a calendar year. Local hydrologic conditions have a substantial impact on the ability of ID4 to receive and spread its SWP Table A water. Therefore, this report presents hydrologic and operational histories for back-to-back calendar years for use in projecting fiscal year supplies and requirements as required by the Act. Plate 1 identifies irrigated agriculture,

municipal and industrial (M&I) areas determined via February 2024 aerial imagery of Kern County. Table 9 lists the acreage devoted to each land use classification within ID4 since 1972.

History of ID4

General

ID4 was formed by a resolution adopted by the Agency Board on December 21, 1971 to provide a supplemental water supply for portions of the urban Bakersfield area through the importation of water from the SWP. In order to have a means for transporting this supplemental water to ID4 from the California Aqueduct, the ID4 project included ID4's participation in the Cross Valley Canal (CVC). Upon reaching ID4, the imported supply was to be delivered directly to recharge areas for direct replenishment of the underlying groundwater aquifer or to the Henry C. Garnett Water Purification Plant for treatment and delivery to in-district water purveyors.

Creation of ID4

The Agency was formed by Chapter 1003 of the Statutes of 1961. The primary purpose for creating the Agency was the establishment of a single entity in Kern County to negotiate and administer a water supply contract with the State of California for its SWP. In November 1963, to provide a firm water supply to supplement the estimated safe yield of the underground basin, the Agency contracted with DWR for a water supply for member units within Kern County, which included 77,000 af annually for ID4.

Subsequent amendments to the Act added provisions for the formation of improvement districts as needed to expedite solutions to specific problems relating to flood control, drainage or water supply. Activities leading to the creation of ID4 were initiated by the Agency Board by adoption of Resolution No. 25-70 on December 10, 1970, which outlined the need for such an improvement district. ID4 was formed by a resolution adopted by the Agency Board on December 21, 1971, for the purpose of financing the construction of a water purification plant, related water conveyance facilities and a portion of the cost of the CVC. Resolution Nos. 16-71 and 17-71 were adopted by the Agency Board on December 21, 1971, to finalize formation activity and establish the boundaries of ID4 as they exist today. On September 12, 1972, an election was held within ID4 authorizing $17.5 million of general obligation bonds to construct ID4's share of the CVC and water purification facilities, making the contracted water supply available to the areas of need within ID4. Five water districts in the easterly portion of the San Joaquin Valley in Kern County shared in the construction of the CVC to convey their water to their respective districts.

Historic Conditions

Prior to construction of the CVC, the primary water supply for all uses within ID4 was groundwater. The groundwater basin underlying ID4 receives its recharge from the Kern River, which traverses ID4 from east to west, a distance of about 12 miles, through a wide, flat, permeable bed. Historically, flood flows that overflowed on lands on both sides of the river contributed further to groundwater recharge. Seepage and percolation through a number of unlined canals provided another source of recharge.

In the 1860s, when the first settlers arrived in Bakersfield, water levels were close to the surface. These levels declined from 40 to 90 feet by the 1940s and pumping lifts of 100 feet or more were common. Due to the declining water table, the quality of the groundwater in portions of ID4 degraded as poorer quality water moved into the area from adjacent lands.

Section 14.25 of the Act requires that, "... the Agency Engineer shall annually prepare a report which shall include, among other matters which the Agency may desire, information on the availability of surface and groundwater in the improvement district, the quantity of water needed for surface delivery and for replenishment of the groundwater supplies within the improvement district for the ensuing water year, the amount of water which the Agency is obligated to purchase for use in the improvement district during the ensuing water year and an estimate of the amount of groundwater to be extracted within the improvement district during the ensuing water year."

This report addresses establishing a groundwater charge for the fiscal year commencing July 1, 2025. However, the SWP operates on a calendar year basis. Water orders and payments for water are on the calendar year. Collection of tax funds by the County of Kern (County) and Agency bookkeeping are on a fiscal year basis. For this reason, many of the comparisons cited in this report refer to calendar year 2025, which overlaps the 2025-26 fiscal year.

Water Supply & Requirements

Availability of Surface Water and Groundwater

The annual surface water supply for ID4 includes a SWP Table A allocation of 77,000 af of M&I water and 5,946 af of firm agricultural water supplies for a total of 82,946 af. The annual Table A allocation received from the SWP is subject to reduction during drought conditions and regulatory requirements for environmental protection. Unless additional facilities are constructed to increase the SWP reliability, Table A allocation reductions will occur more frequently in future years.

The Board recognized the need for advanced planning to meet the water demand of a growing community and adopted Resolution No. 13-83 on June 23, 1983, stating that the Agency will do everything in its power to provide the urban Bakersfield area with additional potable surface water supplies. The Agency completed studies to determine the timing and extent of needs for such additional potable water supplies and the best way to meet these needs. Resolution No. 21-93, adopted on May 27, 1993, established policy for meeting future water supply requirements of ID4 and the joint City/County 2010 General Plan Area.

On May 26, 1988, the Board adopted Resolution No. 12-88 allocating to ID4 10,276 af of firm agricultural water and 1,554 af of surplus agricultural water. This resolution provides 35 cubic feet per second (cfs) of additional flow capacity in the California Aqueduct through Reach 16 to the forebay of the A.D. Edmonston Pumping Plant. This water had been previously contracted to Wheeler Ridge-Maricopa Water Storage District.

In 1996, the Kern Water Bank property was transferred to the entities participating in the Kern Water Bank Authority. As payment for its share of the Kern Water Bank, ID4 returned 4,330 af of its SWP firm agricultural Table A allocation to DWR. This reduction is reflected in current ID4 SWP Table A amounts.

On March 30, 2016, in response to the Sustainable Groundwater Management Act (SGMA) ID4 executed the Memorandum of Understanding to form the Kern River Groundwater Sustainability Agency (Kern River GSA) with the City of Bakersfield and Kern Delta Water District and developed a Groundwater Sustainability Plan (GSP) to cooperatively manage shared groundwater resources in a sustainable manner. The Kern River GSA GSP Area covers 361 square miles, about 13 percent of the 2,834-mile Subbasin and is cooperatively managed by Kern River GSA member agencies. Local surface water from the Kern River, imported water from the State Water Project (SWP), recycled water and other surface water sources are used to support beneficial uses. These surface water sources are supplemented by groundwater and managed conjunctively throughout the GSP Area.

The Kern River GSA GSP was submitted in January 2020 in coordination with four additional GSPs that collectively cover the entire Kern County Subbasin, the largest groundwater subbasin in California. The Kern River GSA GSP was amended in July 2022 in response to comments submitted by DWR. On March 2, 2023, DWR notified the GSAs in the Kern County Subbasin sufficient actions to correct previously identified deficiencies had not been taken and recommended the amended GSPs be determined inadequate. After receipt of DWR's notification, the Kern River GSA coordinated with other Kern County Subbasin GSAs to develop actions to correct the identified deficiencies while also preparing for a State Water Resources Control Board Probationary Hearing. In April 2023, the Kern River GSA continued to coordinate with GSAs within the Kern County Subbasin to complete and submit the Kern County Subbasin Groundwater Sustainability Plans Annual Report for Water Year 2022. The Kern River GSA continued implementing its GSP by measuring and recording depth-to-groundwater levels in 39 monitoring wells within its monitoring network and implementing GSP projects and management actions.

A revised 2024 Draft GSP for the Kern County Subbasin was submitted in May 2024. The State Water Resources Control Board (SWRCB) proceeded with public workshops based on the previously published plans in August 2024. The Kern County Subbasin also presented three public workshops based on the revised plan to educate the public and receive feedback on the plan. Also, SWRCB Board members and staff were given tours of the Subbasin hosted by the Kern County Subbasin. The revised 2024 Draft GSP was coordinated among and approved by the subbasin's 20 GSAs to develop a comprehensive plan that addresses identified deficiencies and was submitted to the SWRCB in December 2024 for review. SWRCB staff maintained some deficiencies were still not adequately addressed and issued a formal probationary hearing notice for February 20, 2025, to consider placing the subbasin in probation. The Kern County Subbasin GSAs continue to focus on the future of sustainable groundwater management in the Subbasin.

On October 10, 2017, the Urban Bakersfield Advisory Committee (UBAC) expressed support to the Agency Board that ID4 continue to participate in California WaterFix (WaterFix) planning and design activities. In January 2019, Governor Newsom announced during his State of the State address that he did not support the WaterFix as configured but did support a one tunnel conveyance project. In May 2019, DWR rescinded its approvals of the WaterFix and began planning for a single tunnel option known as the Delta Conveyance Project (DCP). On November 16, 2020, UBAC recommended to the Agency Board that ID4 fund ID4's share of DCP environmental review, planning and design costs at a 100 percent level of 82,946 af.

In 2024, DWR released the updated cost estimate for the DCP. The total project cost for the 6,000 cubic feet per second Bethany Reservoir Alignment is $20.12 billion in 2023 dollars. DWR is continuing to take the next steps to pursue numerous state and federal permits for authorizations. The final

Environmental Impact Report was completed in compliance with CEQA and certified on December 21, 2023. The final Environmental Impact Statement (EIS) is expected to be released in early 2025.

Other supplies utilized to maximize replenishment operations in normal to wet years include interruptible water from the SWP (Article 21 water), water that is surplus to the Central Valley Project, water available from the Friant-Kern Canal and Kern River water. The amounts of 2024 SWP Table A water received are shown in Table 1, together with adjustments for exchanges and purchases. Actual historic deliveries are shown in Table 5. ID4 actively negotiates exchanges with Kern River interests for a supply of Kern River water.

Kern River supplies are delivered to agricultural water users in areas served by the City and Kern Delta Water District (Kern Delta) within ID4. Most of these agricultural service areas have dual supply systems allowing for the use of groundwater in dry years and Kern River water in wet years. Kern Delta supplied 2,522 af of Kern River water for agricultural use within ID4 in 2024.

Treated municipal effluent irrigated agricultural land in the southeast area of ID4. City and County sewage treatment plants in the southeast portion of ID4 treat and process wastewater, which is applied to agricultural areas south of Brundage Lane and east of Cottonwood Road.

Water Needed for Surface Delivery and Groundwater Replenishment

In 2025, ID4 needs about 50,000 af for direct deliveries to the purveyors, with an additional 26,400 af for canal losses and internal purification plant processing to allow for a maximum, non-interruptible supply to the Henry C. Garnett Water Purification Plant. Water needed for surface delivery will be SWP water contracted for by the Agency on behalf of ID4 as described earlier in this report, and/or Kern River water obtained by purchase or exchange and/or water recovered from ID4's banking projects to augment surface supplies.

SWP Table A water supplies not required for the Henry C. Garnett Water Purification Plant are normally utilized for groundwater recharge. As of January 2025, the Kern River watershed is projected to be about 75 percent of normal. SWP supplies are projected to be at least 20 percent of SWP Table A water amounts, which results in an allocation to ID4 of 16,589 af. This supply is insufficient for full deliveries from the Henry C. Garnett Water Purification Plant. Additional supplies will be delivered from resources carried over from 2024. In the past, natural replenishment of the basin's groundwater supply derived primarily from Kern River flows. When a dry year follows a period of heavy replenishment, rapid declines in groundwater levels adjacent to the river are noted as mounds dissipate.

Water Obligated for Purchase by the Agency

The Agency was obligated to pay for 82,946 af on behalf of ID4 in 2024.

Groundwater Conditions

Data collected by Agency staff indicates an average increase in groundwater levels of 5.9 feet in 2024. In previous years, the change in groundwater levels has been calculated from contour maps generated from data collected in the fall (September through October). Comparing fall data can produce an erroneous interpretation in the calculation due to the large amount of groundwater extraction occurring in and adjacent to ID4 during the time it was collected. A more accurate calculation may be made by comparing data from mid-winter through early spring (January through March), due to the decrease in groundwater demand (pumping). Calculating the change in groundwater levels using data collected in the spring was instituted in 2011 (see Figure 1).

The average depth is weighted to account for the non-uniform density of monitoring wells within three distinct areas of the groundwater service area of ID4. These three areas consist of the area approximately north of Rosedale Highway, the area approximately south of Stockdale Highway and the Kern River area. These three areas are considered separately due to varying groundwater recharge practices, different groundwater extraction demands and geological considerations with respect to the relative ease of subsurface migration of groundwater. Plate 6 and Plate 7 depict the elevation of water in wells and depth to water in wells, respectively.

Estimated Groundwater Extractions

Groundwater extraction is closely related to land use within ID4. Agency staff has conducted annual land use surveys since 1972. Data of historical land use within ID4 is shown in Table 9. The estimated amount of groundwater extracted in 2024 was 62,050 af (Table 6). Total reported groundwater production since 1976 is 3,870,122 af (Table 6).

Groundwater Replenishment

ID4 provides a treated surface water supply to replace a portion of groundwater pumping within its boundaries. The replaced pumping, or in-lieu recharge, combined with direct recharge of imported SWP or exchanged Kern River water replenishes the underground aquifer. Recharge made possible by water exchanges with Kern River interests commenced in 1971. Recharge using SWP water commenced in 1975 with the completion of the CVC. Actual amounts spread may vary from about 8,000 af of unavoidable seepage losses to over 90,000 af, depending on local and SWP water conditions and regulation afforded by exchanges.

Since 1971, ID4 has recharged 1,980,862 af. The SWP Table A water available for recharge or total in the same period was 987,841 af. The difference of 994,735 af was obtained from exchanges with Kern River or Friant-Kern Canal interests and banked water imports.

In-District direct recharge for 2024 was 11,328 af. The final SWP Table A water allocation was 40 percent and the Kern River runoff was 99 percent. (See Table 4 for detailed information.)

Operations

Banking

Kern Water Bank

ID4 has a 9.62 percent interest in the Kern Water Bank recharge and recovery facilities as a result of the 1996 agreement among project participants, the Agency and DWR. The number of recovery wells currently available is 88, yielding a total annual recovery capacity of approximately 180,000 af. The maximum annual recharge capacity of the project is about 600,000 af. ID4 did not recover or recharge in the Kern Water Bank facilities in 2024.

Pioneer Project

ID4 has a 10 percent interest in the Agency-owned Pioneer Project recharge and recovery facilities as a result of the 1998 Pioneer Participation Agreement. The total number of completed wells on the project is 38, which yield a total annual recovery of approximately 100,000 af. The maximum annual recharge capacity of the project is about 250,000 af. ID4 recharged 147 af in the Pioneer Project facilities in 2024.

ID4 Recovery Program

ID4 currently owns four wells on the City's 2800 Acre Recharge Facility, located west of Allen Road and south of Stockdale Highway. These wells were drilled and cased in 1999 and remained idle from 2000 through 2002. In 2003, the project was completed with the installation of pumps, motors and pipelines. ID4's overall recovery capacity for this project is 20 cfs, or 12,000 af annually. ID4 recharged 697 af in the 2800 Acre Recharge Facility in 2024.

Allen Road Well Field Complex

ID4 owns and operates seven wells located along the north side of the Kern River between Allen Road and Coffee Road. ID4 can use the wells to enhance potential exchanges or for water quality benefits for the Henry C. Garnett Water Purification Plant. In 2024, ID4 recharged 2,731 af in the Allen Road Well Field Complex.

Improvement District No. 4 - Rosedale-Rio Bravo Joint Use Recovery Program

The Rosedale and ID4 Joint Use Groundwater Recovery Program (JURP) facility includes seven recovery wells with a total capacity of 45 cfs. ID4 operates this well field to recover banked water for two of Rosedale's partners, Kern-Tulare Water District (Kern-Tulare) and Arvin-Edison Water Storage District, with a maximum annual recovery capacity of 19,000 af. Recovery for Rosedale's partner, Arvin-Edison Water Storage District, totaled 1,740 af in 2024. The JURP Agreement also provides ID4 with the ability to exchange surface water for an equal amount of banked water in the JURP area. In 2024, ID4 did not

recover or recharge in JURP.

Exchanges

Exchanges of SWP water for Kern River and Friant-Kern Canal water will typically improve the quality of raw water delivered to the Henry C. Garnett Water Purification Plant and water spread for replenishment of the groundwater aquifer. Also, there are savings to ID4 in reduced CVC pumping costs when the exchange entity can accept return of ID4 water in the California Aqueduct, or at locations west of the Henry C. Garnett Water Purification Plant. These power savings occur when ID4 does not have to pump the water easterly from the SWP through the seven lift stations on the CVC to bring it into ID4. The current power costs averaged for the year are $6.21 per af at pumping plants one through seven, resulting in a total average cost of approximately $43.50 per af when water is delivered the full distance from the California Aqueduct to the terminus of the CVC Extension. An activity table depicting exchange activity for 2024 is shown in Table 1.

In 2024, ID4 exchanged water with several entities to benefit all parties by saving costs, conserving supplies and keeping water quality consistent.

Summary of Groundwater Replenishment Activities

The total amount of direct, in-lieu and Kern River recharge incidental to ID4 operations since 1971 is shown in Figure 1. ID4 recharge in banking programs outside of ID4 boundaries, which also benefits ID4, is also included.

ID4 In-District Direct Recharge (Table 4 – Direct Recharge)	1,978,517
Treated Water Supply (Table 3 – In-Lieu Recharge)	1,444,575
Subtotal ID4 In-District Groundwater Replenishment Activities	3,423,092
ID4 Banked Water (Table 4)	494,952
Total ID4 Project Water Supplies	3,918,044

Recharge of water incidental to the ID4 Project effort also occurs during Kern River flood years and through conveyance of Kern River water to others within ID4 boundaries.

Planning & Engineering

ID4 Construction & Maintenance Projects

The Engineering and Groundwater Services Department completed several projects for ID4 in 2024. These projects were successfully completed with coordinated assistance from ID4 Operations and Maintenance staff, purveyors and adjacent water districts, vendors, contractors and consultants. These projects include:

- Cross Valley Canal Extension Lining Project – Pool No. 8
    - Install permanent dewatering system on east half of Pool 8
    - Reconstruct canal prism (earthwork)
    - Place concrete liner
    - Levee road improvements
    - Install electrical conduit for River Turnout No. 4
- Slide Gate Installation for the Temperature Equalization Pond (TEP) Outlet Structure Project
    - Dewater the TEP
    - Remove and dispose of existing gates and actuators
    - Install new gates and actuators
    - Testing and inspection
    - Fill the TEP and test water quality
- Sediment Removal for the TEP and Calloway Canal Extension Project
    - Remove approximately 2,000 CY of sediment from the TEP
    - Remove approximately 1,000 CY of sediment from the Calloway Canal Extension
    - Clean up disposal site
- Outlet Structure Structural Integrity Analysis
    - Evaluate and assess existing structure, concrete, and slide gates
- Oswell Regulating Facility Recoating Project
    - Recoat interior shell and floor of the 6.8 MG tank
    - Replace baffle curtains and cathodic protection system for the 6.8 MG tank
    - Recoat exterior of all facilities
- Removal of Precipitated Solids from Drying Bed Nos. 8 and 9 Project
    - Remove and stockpile approximately 3,000 CY from Drying Bed Nos. 8 & 9
    - Place wire mesh and straw wattles around perimeter of stockpiles
- Disposal of Precipitated Solids from Drying Bed Nos. 8 and 9 Project
    - Load, transport, and unload approximately 3,000 CY of stockpiled precipitated solids to the Bena Landfill
- North and East Pipeline Integrity Project
    - Jeffrey Street Potholing Project
    - Northwest Feeder Potholing Project
- High Speed Rail Project

    - Potholing and utility location
- ARC Flash Study
    - Update and complete engineering study at the HCGWPP, ID4 Well Sites, and JURP Well Sites
- Sedimentation Basin No. 3 Conditional Assessment and Feasibility Study Project
- Northwest Feeder Variable Frequency Drives Replacement and Facilities Upgrades Project
    - Evaluate the condition of the existing equipment and facilities, including the NWF VFDs, the air conditioning units, and the equipment building
    - Prepare analysis report
- HCGWPP Electrical Service Entrance Load Bank Battery Testing and Analysis
    - NERC load testing on 120V flooded system
    - Provide analysis and associated report with results and recommendations

Henry C. Garnett Water Purification Plant

Operations

In 2024, the Henry C. Garnett Water Purification Plant delivered 41,430 af of water for domestic consumption. This represents a 3 percent increase when compared to the amount delivered in 2023 (40,176 af). Additional water was used for filter backwash, plant process use, sludge discharge and evaporation. The peak production flow occurred on July 25, 2024 and amounted to 59 million gallons per day (mgd). This represents 57 percent of the expanded maximum permitted flow of 103 mgd. The Henry C. Garnett Water Purification Plant did not operate at flows greater than design capacity in 2024.

The Henry C. Garnett Water Purification Plant's chemical costs were 17 percent more in 2024 than 2023 ($1,972,232 in 2024 and $1,635,630 in 2023). When compared to 2023, incremental costs have increased by approximately $6.89 per af of water delivered for domestic purposes. This change is a result of changes in treated water chemical pricing and increased deliveries. In 2024, chemicals consisting of sodium hypochlorite, aluminum sulfate, sodium hydroxide, cationic polymer, powdered activated carbon, zinc orthophosphate and sulfuric acid were used for water treatment processes. A detailed accounting of chemical consumption and a complete breakdown of the 2023 and historical operating costs are shown in Table 10. A history of water use by source is in Table 3. Agency staff continued to use copper sulfate instead of potassium permanganate for algae control in the temperature equalization pond. In 2024, the utilization of copper sulfate as an oxidant continued to show a significant cost savings compared to potassium permanganate, with no impact to water quality.

Agency staff also conducted semi-annual well measurements within ID4. This included static water level monitoring of hundreds of wells in the metropolitan Bakersfield area.

Maintenance

Agency staff provided support and coordination for ID4 maintenance and construction projects to continue reliable and efficient operations, and to minimize treatment and distribution facility outages. Routine maintenance projects included drafting and implementing new preventive maintenance procedures and safety protocols, annual maintenance to Henry C. Garnett Water Purification Plant basins and treated water distribution pumps, annual cross connection control survey and backflow testing, vegetation removal and landscaping at various facilities, dewatering and cleaning of various storage tanks, oil sampling for pad-mounted electrical transformers, inspections of various facilities, updating the annual road permit with the City of Bakersfield and replacement of filter anodes as needed.

Agency staff also provided support for non-routine maintenance projects including:

- Interior lining project for the Oswell 6.8 mg storage tank
- Exterior coating project at the Oswell facility
- Actuator replacements for the Train A & B filter valves
- Installation of new sodium hypochlorite feed pumps and controls for Group "A"
- Roof replacement of the Motor Control Center (MCC) building at the Oswell facility
- Battery load bank testing for the Electrical Service Entrance (ESE) facility
- Inverter repairs for the Solar Photovoltaic facility
- Pad mount transformer replacement for the JURP-05 well site
- Fuel polishing services for the ESE generator diesel tank
- Traveling screen overhaul for the Calloway extension inlet
- Arc Flash label installation and electrical distribution panel and breaker upgrades at the HCGWPP
- ARMCO gate drive nut replacement

Laboratory

Title 22 and constituents of concern analyses were performed on the Henry C. Garnett Water Purification Plant treated and source water. Treated and source water samples were also analyzed quarterly for 1,2-dibromomethane, 1,2-dibromo-3-chloropropane, volatile organic chemical (VOC), general mineral, physical, metal and inorganic nonmetallic constituents, and monthly for general mineral, physical and inorganic nonmetallic constituents.

The distribution system was monitored weekly for coliform bacteria and physical constituents, monthly for total organic carbon (TOC) and total trihalomethanes (TTHM), and quarterly for regulated haloacetic acid (HAA5), TOC and TTHM constituents. Treated water was monitored every other week, and six distribution system sample locations were monitored twice a year for pH, calcium, orthophosphate and zinc as requested by the State Water Resources Control Board, Division of Drinking Water (DDW) due to corrosion control treatment in the distribution system.

Kern River sanitary survey samples were collected quarterly and analyzed for general mineral, physical, coliform bacteria, TOC, dissolved oxygen and VOC constituents. Lake Isabella was monitored for VOCs following all holiday weekends, and Lake Ming was monitored periodically for VOCs following any drag boat races as requested by DDW.

Taste and odor samples were analyzed weekly in the warmer months and monthly in the cooler months to detect and avoid odor incidents. Multiple batches of copper and microcystin samples were analyzed because of aquatic growth control measures occurring in the temperature equalization pond. VOC, motor oil, diesel and glycol samples were collected and analyzed in response to several vehicle crashes in the Kern River and a diesel contamination event from an unidentified source.

Education

ID4 has historically participated in funding a comprehensive Water Education Program to educate local students about Bakersfield's water supplies, the importance of water and water use efficiency. The goal of the Water Education Program is to provide the public with the opportunity to make informed decisions when it comes to water use and conservation. The ID4 program incorporates teacher workshops, community events, videos, grade-level water education units and materials, and assemblies and classroom presentations. All curricula and instruction offered through the Water Education Program support the Common Core Standards and Next Generation Science Standards for grades Kindergarten-12th grade.

Water Education Program Components

Project WET – Project WET (Water Education for Today) promotes the awareness, appreciation, knowledge and stewardship of water resources. ID4 is a facilitator for Project WET, and annually hosts two workshops. In the 2023-2024 school year, a total of 35 teachers from ID4's service area attended the Project WET teacher workshops. The workshops feature insight into both historical and current water challenges and opportunities and integrates inquiry-based learning. Each teacher received a new Project WET 2.0 Guide (Guide) and materials to conduct activities in their classrooms.

Community Events – ID4 participates in community events, presenting age-appropriate activities and materials. Topics include Bakersfield's water resources, careers in water and current educational offerings. In the 2023-2024 school year, approximately 3,170 community members were reached.

5th Grade Water Cycle Presentation, **The Incredible Journey** – This Project WET activity is conducted in the classroom. As part of the lesson, students role-play as a water molecule, which helps them conceptualize the water cycle as more than a two-dimensional path. At the conclusion of the lesson, the students will have made a water cycle bracelet that describes their "Incredible Journey" as a water molecule. In the 2023-2024 school year, over 1,330 students within ID4's service area participated in this activity.

Water Education K-6th Grade Water Education Units and Presentations – ID4 offers the following Common Core and Next Generation Science Standards-based grade-level water education units and presentations that address Bakersfield's State and local water supplies, the Henry C. Garnett Water Purification Plant, local groundwater banking programs and water conservation.

Kindergarten Program – "Ruby the Radish" − Urban Water Use and Water Conservation Story — This inquiry-based water education unit teaches kindergarten students in Bakersfield the importance of water and its conservation. Students learn about the water cycle and the different states of water as a basis for this understanding. In addition,

students will learn that plants require water to grow. In the 2023-2024 school year, 129 students within ID4's service area participated in this program.

1st Grade Program – "Suzie-Q's Water Awareness Campaign" − Urban Water Use and Water Conservation — This water education unit teaches first-grade students in Bakersfield the importance of water and its conservation. Students are introduced to their water sources and how they use water at home and school to gain a deeper understanding of this topic. In the 2023-2024 school year, 722 students within ID4's service area participated in this program.

2nd Grade Program – "Casey's Incredible Journey" - Water Purification and Water Conservation — This inquiry-based water education unit teaches second-grade students how water is cleaned and purified at the Henry C. Garnett Water Purification Plant, where their water comes from, water conservation and that seeds need water to grow. In the 2023-2024 school year, 956 students within ID4's service area participated in this program.

3rd-4th Grade Program – Uncover the Facts! Metropolitan Bakersfield's Water Story — Water in California is the theme explored in this exciting standards-based water education unit that highlights Bakersfield's rich water history and how water is moved throughout the State of California. In the 2023-2024 school year, 2,145 students within ID4's service area participated in this program.

5th-6th Grade Program – H2O & You - Exploring Metropolitan Bakersfield's Water Supplies — This exciting standards-based program explores the water cycle, surface water supplies, and groundwater, as well as how water is purified at the Henry C. Garnett Water Purification Plant. In the 2023-2024 school year, 2,223 students within ID4's service area participated in this program.

Financial Aspects of the Project

ID4 is an original participant in the construction of the CVC to convey water to the Henry C. Garnett Water Purification Plant and to the Kern River for groundwater replenishment. CVC construction was completed in 1976, and on February 29, 1980, Fox & Company completed a final construction cost audit. The audit was reviewed and accepted by the Agency Board. The total construction cost of the CVC was $22,777,873, of which ID4's share was $6,833,362.

Also, Fox & Company audited the ID4 construction fund to include the original Henry C. Garnett Water Purification Plant and treated water pipelines. This audit was completed on June 30, 1982. Updated construction costs since the two Fox & Company audits are summarized as follows:

CVC (ID4 share)	**$7,132,899**
Purification Plant and Conveyance Facilities	**$25,755,025**
Total	**$32,887,924**

Annual Costs and Revenue

Cash flow for the fiscal year ending June 30, 2024, for all ID4 funds together with a forecast of cash flow conditions for the next fiscal year, is shown in Table 11. These projections are subject to change based on capital projects deemed necessary to the continued operation of ID4. The Agency Board adopted Resolution No. 14-16, which incorporated the Revised Financial Plan and established groundwater charges as well as a long-term surcharge on treated water rates.

ID4 continues to look for ways to provide a supplemental water supply to metropolitan Bakersfield in a cost-effective manner. Under action taken by the Agency Board in 1996, Zone of Benefit credits are authorized to be used for the purchase of additional water from the State or federal projects. This measure was taken to mitigate the inability of the SWP to deliver 100 percent of Table A amounts annually. ID4 also works to reduce water pumping costs by exchanging SWP water for Friant-Kern and Kern River water. An optimum exchange can eliminate power costs for CVC pumping and potentially lessen the quantity of chemicals applied in the purification process. Chemical costs are affected substantially by the source and condition of the raw water. The availability of most exchanges cannot be predicted; therefore, power and chemical costs are budgeted conservatively by assuming use of the CVC for all but those exchanges currently in effect.

ID4 Funds

ID4 has four income sources managed within three fund accounts:

1. The ID4 Bond Fund was established to account for the receipts and disbursements of money needed to comply with the interest and redemption requirements of the bonds issued to construct the TWCEP. This fund will continue until the settlement of the debt incurred to construct the TWCEP. The interest and principal payments are being paid through a Capital Facilities Charge (CFC) as provided by the Agreements.

2. Zone of Benefit No. 7 was established in accordance with the SWP contract with the Agency dated November 15, 1963 to account for property taxes collected and interest earned on money held. Zone of Benefit No. 7 is used for the purchase of State or federal water supplies. The 2023-24 tax rate (per $100,000) is $44.06.

3. The Enterprise Fund is an operations fund established to account for money necessary for the operation of the Henry C. Garnett Water Purification Plant, the treated water distribution system, groundwater replenishment and ID4's share of CVC costs. Expenditures are primarily for current day-to-day operating expenses and operating equipment. Revenues are recorded by source, principally water sales, groundwater pumping charges and interest earned on reserves. Revenues are derived from groundwater and treated water charges. The 2023-24 charges for each water type were $19.50 per af for produced agricultural groundwater and $39 per af for all other types of produced groundwater, and sales of treated water were at the rate of $195 per af.

ID4 has no other regular revenue sources other than those described above. Money from the Enterprise Fund can be transferred into either or both of the other two funds to reduce the ad valorem tax burden, but excess revenues collected in the ID4 Bond Fund and Zone of Benefit No. 7 fund must remain in those funds. The total fund accumulation includes recommended reserve levels of about $1.5 million for capital replacement, $0.5 million for CVC power reserves, $2.0 million for catastrophic needs of ID4, $1.0 million for acquisition of additional surface water supplies and $0.5 million for groundwater banking. The present level of groundwater charges and sales of treated water are projected to yield approximately $12.0 million.

Well Registration and Collection of Groundwater Charges

Wells within ID4 are registered pursuant to Section 14.24 of the Act (Table 7).

On July 1, 2024, agricultural groundwater charges were $20 per af, and charges for all other groundwater extractions were $40 per af. For administrative convenience, a flat rate annual charge of $40 was levied for small groundwater-producing facilities and no charge was levied for very small groundwater-producing facilities where the cost of collection would exceed the flat rate charge.

ID4 Financial Management Plan

On April 28, 2016, the Board adopted the Revised Financial Plan, which updated the previous versions of the ID4 Financial Management Plan. The Revised Financial Plan provides details on the principles and practices to be followed in administering the financial resources of ID4. The Revised Financial Plan identifies the need for a long-term surcharge on treated water rates to address increasing costs associated with operation of the Henry C. Garnett Water Purification Plant and to meet ID4's debt repayment obligation. With the adoption of the Revised Financial Plan, the Board authorized the setting of rates and charges to ensure sufficient revenues to continue the ID4 project.

Refinancing of General Obligation Bonds

In November 2006, the Agency successfully retired the remaining balance of its $17.5 million general obligation bond used to construct the Henry C. Garnett Water Purification Plant, the treated water distribution system and ID4's share of the CVC.

Sale of Certificates of Participation for Capital Projects

In 2006, ID4 issued $27 million in water revenue Certificates of Participation (COP) to fund $22.5 million of the TWCEP costs and refund the 1999 COPs. In 2008, ID4 issued an additional $121 million in water revenue COPs to fund capital improvement projects associated with the TWCEP. In 2016, ID4 issued $89 million in water revenue Refunding Bonds, which resulted in a total net present value of $12 million in savings, by refunding the outstanding 2006 tax-exempt and taxable COPs, Series 2006A and 2006B, respectively, as well as the outstanding 2008 tax-exempt COPs, Series 2008A. In 2006, ID4 also entered into a low-interest loan agreement with the DWR Safe Drinking Water State Revolving Fund (SDWSRF) Program for $2.82 million to fund the Oswell Bypass Project. The SDWSRF loan payments became due in 2010 and will retire in 2030. The SDWSRF loan is a parity obligation to the 2006 COPs.

Money to be used for the repayment of debt is provided for in the Agreements. The Agreements, and subsequent project agreements, include a contract provision for the biannual payment of a CFC to charge purveyors for all capital facility costs, including principal, interest and other costs associated with repayment of any debt incurred in the development and construction of the TWCEP. The Agreement will be effective through 2035, or until the COPs and any additional financing for the TWCEP are paid in full. Under the Agreements, each purveyor is responsible for its proportionate share of capital costs. The CFC is considered a "general obligation" expense of the purveyor, regardless of the amount of water delivered or whether the capacity is required for delivery of the purveyor's water.

Appendix

Table 1 - 2024 ID4 Water Supplies, Exchanges and Deliveries *All units in acre-feet unless otherwise noted.*

ID4 SUPPLIES	SWP[1]	SWP by Exchange[2]	Kern River	SWP by Exchange[3]	Bank Recovery	Total
SWP (M&I)	30,746					30,746
SWP (Ag)	2,378					2,378
Carryover from 2023	32,461		21,522			53,983
CVC Dewatering (March)	45					45
Subtotal	65,630	-	21,522	-	-	87,152
ID4 EXCHANGES / OBLIGATIONS						
Buena Vista WSD (TRF 24-014)	(4,000)				4,000	-
Buena Vista WSD (TRF 24-030)	(30,000)	30,000				-
California Aqueduct	(5,000)					(5,000)
KCWA Op Ex	(5,350)		5,350			-
Total Exchanges/Obligations	(44,350)	30,000	5,350	-	4,000	(5,000)
Available Supplies	**21,280**	**30,000**	**26,872**	**-**	**4,000**	**82,152**

acre-feet

ID4 DELIVERIES	SWP[1]	SWP by Exchange[2]	Kern River	SWP by Exchange[3]	Bank Recovery	Total
Henry C. Garnett Water Purification Plant	5,627	26,835	11,202			43,664
In-District Transportation Recharge	150	3,165	5,282			8,597
In-District Direct Recharge	2,071		660			2,731
Out of District Losses	50		3,437			3,487
2800 AC	697					697
Kern Water Bank	-					-
Pioneer Project	147					147
Carryover to 2025	12,538		6,291		4,000	22,829
Total Deliveries	**21,280**	**30,000**	**26,872**	**-**	**4,000**	**82,152**

Table 2 - ID4 Water Recharge and Recovery Asset Summary *All units in acre-feet unless otherwise noted.*

Groundwater Banking Facility	ID4 Interest	Annual Recharge Capacity	Annual Recovery Capacity[6]	ID4 Recharge Capacity	ID4 Recovery Capacity	Summary of Banked Water
Kern Water Bank	9.62%	600,000	180,000	57,720	17,316	188,202
Pioneer Project	10%	250,000	100,000	25,000	10,000	42,233
ID4 Banking Wells[4]	100%		12,000		12,000	5,729
ID4/Rosedale Joint Use Recovery Project[5]	22.2%		21,000		5,940	3,356
Allen Road Well Field	100%		36,000		36,000	130,216
Total		850,000	349,000	82,720	81,256	369,736

[1] *SWP allocation for 2024 was 40 percent.*

[2] *SWP water by exchange with Kern River interests.*

[3] *SWP water by exchange with Friant-Kern interests.*

[4] *ID4 recovery wells and banked water in City of Bakersfield's 2800 Acres Recharge Facility.*

[5] *First priority for 10 cfs of recovery capacity.*

[6] *Recovery capacity varies with respect to depth to groundwater.*

Table 3 - ID4 History of Purification Plant Water Use by Sources *Units in acre-feet unless otherwise noted.*

Year	State Water Project	State Water Project by Exchange[1]	Kern River	State Water Project by Exchange[2]	Recovered	Total Treated Water Supply[3]
1975						-
1976						-
1977	15,950					15,950
1978	8,329	15,607				23,936
1979	5,347	21,078				26,425
1980	4,288	18,551				22,839
1981	20,457	3,407				23,864
1982	3,584	21,488				25,072
1983	1,287	23,317				24,604
1984	21,068	5,200				26,268
1985	942	23,331				24,273
1986	1,487	22,967				24,454
1987	1,974	23,534				25,508
1988	7,971	21,360				29,331
1989	11,844	15,593				27,437
1990	24,728	2,694				27,422
1991	2,467	9,146			7,719	19,332
1992	6,830	8,442			12,241	27,513
1993	4,653	23,414		2,883		30,950
1994	4,030	20,680		715	4,186	29,611
1995	2,528	28,883			222	31,633
1996	24	28,527		1,387		29,938
1997		25,416		7,980		33,396
1998		26,510		1,906		28,416
1999		28,340				28,340
2000	132	29,023				29,155
2001	3,503	7,579			15,810	26,892
2002	5,228	21,327			1,194	27,749
2003	9,826	14,011			2,111	25,948
2004	4,282	14,419			6,693	25,394
2005	1,967	24,320			787	27,074
2006	7,160	18,412				25,572
2007	4,826	14,874			7,301	27,001
2008	1,462	25,000				26,462
2009	-	28,335				28,335
2010	718	29,231				29,949
2011	2,473	20,751	13,021			36,245
2012	22,272	8,892	14,066			45,230
2013	2,554	19,049	3,007		13,051	37,661
2014		7,682	457		24,179	32,318
2015	963			121	27,948	29,032
2016	7,432	21,735	4,028	665		33,860
2017	3,551	22,257	14,142			39,950
2018	1,566	17,742	15,584	4,223		39,115
2019	12,877	20,291	7,588			40,756
2020	4,667	13,833	12,377	310	10,451	41,638
2021		12,510	2,855		21,256	36,621
2022		27,609	895		10,595	39,099
2023	1,881	21,645	14,683	1,995	3,139	43,343
2024	5,627	26,835	11,202	-	-	43,664
TOTAL	**254,755**	**884,847**	**113,905**	**22,185**	**168,883**	**1,444,575**

[1] *SWP water by exchange with Kern River interests.*

[2] *SWP water by exchange with Friant-Kern interests.*

[3] *Total includes water used for internal purification plant processes.*

Table 4 - History of Groundwater Replenishment by ID4

All units in acre-feet unless otherwise noted.

			Water Supplies Delivered into ID4							
Year	% Allocation	Kern-River Runoff (% of mean)[4]	SWP	Recovery[1]	SWP by Exchange[2]	Kern River	Friant-Kern[3]	In-District Direct Recharge[6]	Banked Water	Total
1971					6,400		-	6,400	-	6,400
1972					11,000		-	11,000	-	11,000
1973					67,500		-	67,500	-	67,500
1974					10,900		-	10,900	-	10,900
1975		81%	5,700		-		-	5,700	-	5,700
1976		23%	27,800		-		-	27,800	-	27,800
1977		20%	6,400		2,000		-	8,400	-	8,400
1978	100%	230%	1,470		37,840		2,990	42,300	-	42,300
1979	100%	88%	60,680		36,200		1,120	98,000	-	98,000
1980	100%	208%	23,210		23,230		3,460	49,900	-	49,900
1981	100%	53%	55,270		2,350		480	58,100	-	58,100
1982	100%	168%	5,480		35,810		2,110	43,400	-	43,400
1983	100%	325%	1,250		10,860		3,290	15,400	-	15,400
1984	100%	89%	15,690		5,120		1,690	22,500	-	22,500
1985	100%	89%	7,980		32,280		940	41,200	-	41,200
1986	100%	187%	22,530		68,000		2,220	83,423	9,327	92,750
1987	100%	44%	14,000		18,200		540	32,740	-	32,740
1988	100%	34%	5,210		29,850		-	35,060	-	35,060
1989	100%	50%	6,990		14,040		-	21,030	-	21,030
1990	50%	24%	10,713		3,116		-	13,829	-	13,829
1991	0%	59%	1,651		6,279		-	7,930	-	7,930
1992	45%	39%	2,574	1,750	4,437		-	8,761	-	8,761
1993	100%	126%	51,045	-	30,319		32,727	92,195	21,896	114,091
1994	50%	41%	24,671	-	15,250		193	30,005	10,109	40,114
1995	100%	199%	50,200 [5]	-	76,878		23,000 [5]	104,148	45,935	150,083
1996	100%	128%	58,934	-	65,281		13,283	85,232	52,266	137,498
1997	100%	122%	744	-	66,015		5,432	67,670	4,521	72,191
1998	100%	239%	17,642	-	45,680		4,793	40,427	27,688	68,115
1999	100%	53%	70,898	-	13,872		842	85,543	69	85,612
2000	90%	65%	26,304	-	22,843		4,699	46,054	7,792	53,846
2001	39%	54%	4,440	4,496	18,601		-	24,973	2,564	27,537
2002	70%	43%	7,537	-	43,904		-	41,258	10,183	51,441
2003	90%	70%	24,303	-	24,229		-	20,152	28,380	48,532
2004	65%	48%	20,018	2,640	14,466		-	35,152	1,972	37,124
2005	90%	169%	89,743	689	36,502		16,557	104,053	39,438	143,491
2006	100%	156%	89,601	-	38,962		12,831	107,938	33,456	141,394
2007	60%	26%	25,901	336	20,411		1,567	45,592	2,623	48,215
2008	35%	72%	2,179	124	34,530			10,371		10,371
2009	40%	63%			38,166			9,831		9,831
2010	50%	125%	8,469		56,426			34,946	645	35,591
2011	80%	201%	11,703		38,585	23,453	172	37,668	50,857	88,525
2012	65%	38%	30,969		12,828	18,898		17,465	-	17,465
2013	35%	22%	6,745	20,553	30,982			20,619	-	20,619
2014	5%	24%	-	38,441	15,931			22,054	-	22,054
2015	20%	18%	1,500	41,813			210	14,491	-	14,491
2016	60%	51%	13,411		36,426		1,000	16,977	-	16,977
2017	85%	260%	16,186		32,543	33,483		42,262	57,311	99,573
2018	35%	49%	4,613		25,702	21,450	4,883	17,533	-	17,533
2019	75%	197%	36,075		38,058	9,973		43,350	18,590	61,940
2020	20%	43%	9,172	10,451	15,884	8,353	404	2,626		2,626
2021	5%	15%	-	25,476	16,704	2,079		7,638		7,638
2022	5%	21%	-	12,658	37,204			10,763		10,763
2023	100%	344%	10,240	4,101	23,894	19,872	2,166	16,930	68,486	85,416
2024	40%	99%	7,848	-	30,000	17,144	-	11,328	844	12,172
TOTAL			**995,689**	**163,528**	**1,442,488**	**154,705**	**143,599**	**1,978,517**	**494,952**	**2,473,469**

[1] Recovered from wells on Kern Fan Element property (unavoidable losses in conveyance to Henry C. Garnett Water Purification Plant).

[2] SWP water by exchange with Kern River interests.

[3] Acquired from Friant-Kern interests.

[4] Percentage of the 1894 to date, long-term average of the April-July snowmelt runoff at First Point.

[5] Estimated.

[6] In-District Direct Recharge is calculated as the sum of all water all supplies delivered into ID4 less the Total Treated Water Supply (Table 3).

Table 5 - ID4 History of State Water Project (SWP) Entitlement and Actual Water Deliveries

All units in acre-feet unless otherwise noted.

		SWP SUPPLIES							ID4 Deliveries						
		Table A Entitlement													
Year	SWP Allocation	M&I	Ag	Table A Allocated	Long-Term Purchase	Surplus[9]	Other	Total Supply	Deliveries Within ID4	Banked Water	Water Transfers	Total Deliveries	Carryover	SWP Supply Deficiency	Inability to Accept SWP Supply
1970	100%	18,700		18,700				18,700				-			18,700 [1]
1971	100%	22,100		22,100				22,100	22,100			22,100			
1972	100%	24,500		24,500				24,500	24,500			24,500			
1973	100%	28,000		28,000				28,000	27,907			27,907			93 [3]
1974	100%	31,400		31,400				31,400	30,816			30,816			584 [3]
1975	100%	35,000		35,000				35,000	35,000			35,000			
1976	100%	37,300		37,300				37,300	37,300			37,300			
1977	90%	40,800		36,720				36,720	23,695		5,000	28,695	8,025 [4]	4,080 [2]	
1978	100%	43,100		43,100			10,892	53,992	42,020			42,020			11,972 [3]
1979	100%	45,400		45,400			48,524	93,924	93,924			93,924			
1980	100%	47,700		47,700	1,050		3,104	51,854	38,678			38,678			13,176 [3]
1981	100%	50,200		50,200	1,250		30,545	81,995	71,995			71,995			10,000 [3]
1982	100%	53,600		53,600	1,550		2,000	57,150	20,120			20,120			37,030 [3]
1983	100%	56,000		56,000	1,850			57,850	3,427			3,427			54,423 [3]
1984	100%	59,400		59,400	2,530		7,913	69,843	69,843			69,843			
1985	100%	62,900		62,900	2,795			65,695	65,695		1,100	66,795	2,908		
1986	100%	65,300		65,300	3,875		2,908	72,083	32,040	9,327	1,100	42,467			29,616 [3]
1987	100%	68,800		68,800	3,950			72,750	71,030		1,100	72,130	620		
1988	100%	71,200	9,335	80,535	4,750		620	85,905	73,674		6,100 [4]	79,774	6,131		
1989	100%	73,500	9,860	83,360	5,477		6,530 [4]	95,367	77,367		18,000	95,367			
1990	100%	77,000	10,276	82,138	6,100	1,554		89,792	79,413			79,413	8,828 [6]	5,138 [2]	
1991	30%	77,000	10,276	23,100	5,600	1,554	635	30,889	24,851			24,851	2,500	64,176 [2]	
1992	45%	77,000	10,276	39,274	5,400	1,554	2,500	48,728	44,992			44,992	(1,083) [7]	48,002 [2]	
1993	100%	77,000	10,276	87,276	5,310	1,554	39,189	133,329	109,879	21,896		131,775			
1994	53%	77,000	10,276	46,169	5,220	1,554		52,943	69,917	10,109		80,026	(2,195) [7]	41,107 [2]	
1995	100%	77,000	10,276	87,276	5,050		(2,195) [5]	90,131	108,781	45,935		154,716	2,011		
1996	100%	77,000	10,276	87,276	11,100		2,011	100,387	120,324	52,266		172,590			
1997	100%	77,000	5,946	82,946	11,000			93,946	103,767	4,521		108,288			
1998	100%	77,000	5,946	82,946	10,800			93,746	79,474	27,688		107,162			7,700 [3]
1999	100%	77,000	5,946	82,946	10,600			93,546	191,201	69		191,270			
2000	90%	77,000	5,946	74,651	14,352		47,122	136,125	121,774	7,792		129,566	10,471 [8]	8,295 [2]	
2001	39%	77,000	5,946	32,349	6,219		14,395	52,963	46,744	2,564		49,308		50,597 [2]	
2002	70%	77,000	5,946	58,062	6,455		3,593	68,110	71,195	10,183		81,378		24,884 [2]	
2003	90%	77,000	5,946	74,651	10,503		15,938	101,092	86,619	28,380		114,999	5,062	8,295 [2]	
2004	65%	77,000	5,946	53,915	5,435		7,904	67,254	79,571	1,972		81,543		29,031 [2]	
2005	90%	77,000	5,946	74,651	11,474		72,709	158,834	51,811	39,438		91,249	390	8,295 [2]	
2006	100%	77,000	5,946	82,946	13,219		42,564	138,729	63,921	33,456		97,377	1,425		
2007	60%	77,000	5,946	49,768	4,080		8,280	62,128	63,552	2,623		66,175	(477) [7]	33,178 [2]	
2008	35%	77,000	5,946	29,031			136	29,167	29,167	-		29,167	1,190	53,915 [2]	
2009	40%	77,000	5,946	33,178			1,236	34,414	21,716	-		21,716	12,698	49,768 [2]	
2010	50%	77,000	5,946	41,473			12,974	54,447	43,753	645		44,398	8,182	41,473 [2]	
2011	80%	77,000	5,946	66,357			25,057	91,414	58,378	29,360		87,738	211	16,589 [2]	
2012	65%	77,000	5,946	53,915			1,727	55,642	55,183	-		55,183	2,301	29,031 [2]	
2013	35%	77,000	5,946	29,031			10,314	39,345	47,202	-		47,202	(7,225) [7]	53,915 [2]	
2014	5%	77,000	5,946	4,147			(6,614)	(2,467)	-	-		-	2,993	78,799 [2]	
2015	20%	77,000	5,946	16,589			3,507	20,096	1,500	-		1,500	11,904	66,357 [2]	
2016	60%	77,000	5,946	49,768			13,136	62,904	13,411	-		13,411	6,426	33,178 [2]	
2017	85%	77,000	5,946	70,504			13,749	84,253	16,186	6,358		22,544	10,805	12,442 [2]	
2018	35%	77,000	5,946	29,031			16,921	45,952	4,613	-		4,613	5,915	53,915 [2]	
2019	75%	77,000	5,946	62,210			22,454	84,664	36,075	7,103		43,178	8,820	20,737 [2]	
2020	20%	77,000	5,946	16,589			12,708	29,297	9,172			9,172	1,455	66,357 [2]	
2021	5%	77,000	5,946	4,147			3,548	7,695	-			-	9,280	78,799 [2]	
2022	5%	77,000	5,946	4,147			9,280	13,427	-			-	5,129	78,799 [2]	
2023	100%	77,000	5,946	82,946			5,129	88,075	10,240	-		10,240	32,461	-	
2024	40%	77,000	5,946	33,178			32,461	65,639	7,848			7,848	12,538	49,768	
TOTALS		**3,629,900**	**257,615**	**2,778,598**	**176,994**	**7,770**	**545,404**	**3,508,766**	**2,733,361**	**341,685**	**32,400**	**3,107,446**	**169,699**	**1,108,917**	**183,294**

[1] CVC/ID4 project not completed.

[2] Due to State Water Project shortfalls.

[3] Wet years on the Kern River.

[4] Includes 5,000 af released to water pool for use by agricultural districts.

[5] Carryover 6,131 af and 5,000 af Kern-Tulare/Lost Hills/ID4 exchange.

[6] Includes 635 af of carryover and 8,193 af released to water pool for use by agricultural district.

[7] Overdeliveries.

[8] Includes 10,000 af exchanged with Arvin-Edison; 47 af carryover.

[9] Replaced by interruptible water after execution of the Monterey Agreement in December 1994.

Table 6 - Groundwater Production

Year	Agricultural	All Other	Total	Charges Collected
1976	20,000	78,200	98,200	$1,321,000
1977	11,700	61,900	73,600	$1,102,000
1978	14,500	55,500	70,000	$1,119,000
1979	14,100	61,600	75,700	$1,369,000
1980	11,900	63,000	74,900	$1,190,000
1981	12,797	68,697	81,494	$1,458,000
1982	7,655	63,140	70,795	$1,575,700
1983	4,869	62,591	67,460	$1,302,530
1984	9,755	73,052	82,807	$1,564,580
1985	7,568	74,080	81,648	$1,522,013
1986	2,726	74,386	77,112	$1,516,070
1987	4,595	72,330	76,925	$1,426,287
1988	4,555	67,500	72,055	$1,384,849
1989	4,730	69,100	73,830	$1,541,380
1990	5,000	71,000	76,000	$1,546,222
1991	12,000	72,000	84,000	$1,524,830
1992	4,454	81,230	85,684	$1,621,910
1993	3,281	79,455	82,736	$2,365,720
1994	5,743	87,009	92,752	$1,582,433
1995	4,834	80,673	85,507	$2,500,738
1996	3,889	89,226	93,115	$2,736,595
1997	2,089	88,721	90,810	$2,696,467
1998	988	76,492	77,480	$2,315,939
1999	2,676	92,197	94,873	$2,871,004
2000	1,569	92,182	93,751	$2,797,852
2001	1,098	95,677	96,775	$2,828,000
2002	360	99,821	100,181	$2,961,831
2003	173	96,522	96,695	$2,310,515
2004	157	93,290	93,447	$2,799,629
2005	108	82,614	82,722	$2,623,381
2006	380	76,120	76,500	$2,800,000
2007	507	89,794	90,301	$2,983,707
2008	466	94,034	94,500	$3,065,002
2009	636	90,747	91,383	$3,162,445
2010	398	78,027	78,425	$3,103,644
2011	117	75,751	75,868	$2,640,849
2012	63	77,271	77,334	$2,720,115
2013	263	73,929	74,192	$2,679,707
2014	1,661	82,270	83,931	$3,042,016
2015	1,239	65,334	66,573	$2,724,571
2016	337	61,570	61,908	$2,240,097
2017	295	62,468	62,762	$2,261,050
2018	423	61,046	61,469	$2,332,976
2019	553	55,544	56,097	$2,292,091
2020	860	58,674	59,534	$2,124,075
2021	1,847	68,292	70,138	$2,501,342
2022	4,247	63,722	67,969	$2,689,120
2023	1,355	54,777	56,132	$2,345,397
2024*	2,801	59,249	62,050	$2,287,345
Total	198,317	3,671,804	3,870,122	$107,471,025

All units in acre-feet unless otherwise noted.

Table 7 - Registered Active Wells Within ID4

Year	Commercial	Domestic	Irrigation	Purveyor	Total Active Wells
2015	105	82	10	222	419
2016	103	80	10	221	414
2017	99	81	10	221	411
2018	97	78	11	221	407
2019	93	75	11	219	398
2020	94	74	11	219	398
2021	95	74	11	216	396
2022	90	74	12	216	392
2023	91	74	12	216	393
2024	91	74	12	216	393

Table 8 - History of ID4 Groundwater Charges

Year	Agricultural Use	All Other Uses	Sm Groundwater Facilities
	$/acre-foot	*$/acre-foot*	*$/year*
1975-1978	$7.50	$15.00	$0.00
1978-1994	$10.00	$20.00	$0.00
1994-2008	$15.00	$30.00	$30.00
2008-2009	$17.00	$34.00	$34.00
2009-2012	$17.50	$35.00	$35.00
2012-2015	$18.00	$36.00	$36.00
2015-2018	$18.50	$37.00	$37.00
2018-2021	$19.00	$38.00	$38.00
2021-2024	$19.50	$39.00	$39.00
2024-2025	$20.00	$40.00	$40.00

Table 9 - ID4 Land Use

Units in acres unless otherwise noted.

Year	M & I	Agricultural	Undeveloped	Total	Year	M & I	Agricultural	Undeveloped	Total
1972	24,200	19,500	21,700	65,400	2006	53,019	8,715	3,666	65,400
1974	30,700	18,400	16,300	65,400	2007	52,993	8,742	3,665	65,400
1976	30,600	18,500	16,300	65,400	2008	52,993	8,741	3,666	65,400
1978	33,500	18,000	13,900	65,400	2009	52,984	8,741	3,675	65,400
1980	36,700	16,500	12,200	65,400	2010	55,708	6,029	3,663	65,400
1982	38,600	14,700	12,100	65,400	2011	55,708	6,029	3,663	65,400
1984	40,000	12,000	13,400	65,400	2012	55,708	6,029	3,663	65,400
1986	42,000	10,800	12,600	65,400	2013	55,920	6,359	3,121	65,400
1988	42,270	10,821	12,309	65,400	2014	59,055	4,127	2,218	65,400
1990	49,364	8,558	7,478	65,400	2015	55,019	5,199	5,182	65,400
1991	49,424	12,493	3,483	65,400	2016	55,400	5,100	4,900	65,400
1992	49,759	11,641	4,000	65,400	2017	55,600	5,100	4,700	65,400
1993	50,456	11,102	3,842	65,400	2018	55,600	5,100	4,700	65,400
1994	51,418	10,214	3,768	65,400	2019	55,700	5,100	4,600	65,400
1995	51,472	11,533	2,395	65,400	2020	55,715	5,100	4,585	65,400
1996	52,775	9,431	3,194	65,400	2021	55,755	5,100	4,545	65,400
1997	53,146	8,816	3,438	65,400	2022	55,900	3,900	5,600	65,400
1998	51,503	7,951	5,946	65,400	2023	56,200	3,900	5,300	65,400
1999	52,558	7,228	5,614	65,400	2024	56,300	3,900	5,200	65,400
2000	53,457	6,592	5,351	65,400					
2001	54,145	6,204	5,051	65,400					
2002	52,907	8,787	3,706	65,400					
2003	52,907	8,787	3,706	65,400					
2004	52,907	8,788	3,705	65,400					
2005	53,019	8,722	3,659	65,400					

Table 10 - Henry C. Garnett Water Purification Plant Operations Costs 2024

	Purchased Chemicals ($)	Labor ($)	Energy ($)	Miscellaneous Expenditures[1] ($)	Capital Outlays ($)	Total ($)	Deliveries (af)	Unit Rate ($/af)
January	109,271	272,695	-	152,973	12,737	547,676	2,429	225
February	163,846	234,563	61,755	228,176	79,235	767,575	2,060	373
March	49,264	243,282	115,786	151,101	136,608	696,041	2,470	282
April	141,703	210,247	58,959	132,979	2,126	546,014	2,561	213
May	215,379	343,111	64,059	116,622	3,027	742,198	4,101	181
June	244,414	227,344	186,263	399,484	122,216	1,179,721	4,627	255
July	168,838	232,943	8,974	150,607	3,266	564,628	4,904	115
August	227,105	244,999	103,196	142,741	5,043	723,084	4,966	146
September	256,773	238,367	103,787	148,067	35,058	782,052	4,225	185
October	165,033	226,243	97,046	109,544	-	597,866	3,863	155
November	153,950	398,157	71,817	156,570	7,502	787,996	2,629	300
December	76,656	243,258	62,519	289,978	-	672,411	2,595	259
Totals	**1,972,232**	**3,115,209**	**934,161**	**2,178,842**	**406,818**	**8,607,262**	**41,430**	**208**

Table 10A - Henry C. Garnett Water Purification Plant Historic Annual Operations Costs

	Purchased Chemicals ($)	Labor ($)	Energy ($)	Miscellaneous Expenditures[1] ($)	Capital Outlays ($)	Total ($)	Deliveries (af)	Unit Rate ($/af)
2015	403,424	2,769,409	275,214	1,606,540	121,114	5,175,701	27,877	186
2016	647,088	2,614,321	305,148	1,393,931	48,165	5,008,653	32,364	155
2017	912,336	2,636,823	317,412	1,448,409	85,733	5,400,713	37,993	142
2018	960,812	2,884,463	326,469	1,794,815	251,590	6,218,149	36,752	169
2019	1,051,166	2,589,461	368,039	1,706,382	192,483	5,907,531	38,215	155
2020	840,715	2,442,894	539,972	1,711,079	35,177	5,569,837	39,823	140
2021	905,968	2,555,994	515,649	1,621,925	200,572	5,800,108	34,377	169
2022	1,517,000	2,745,126	656,247	1,981,919	116,799	7,017,091	36,032	195
2023	1,635,630	2,903,882	851,483	1,716,228	482,095	7,589,318	40,176	189
2024	1,972,232	3,115,209	934,161	2,178,842	406,818	8,607,262	41,430	208
Totals	**10,846,371**	**27,257,582**	**5,089,794**	**17,160,070**	**1,940,546**	**62,294,363**	**365,039**	

[1] *Includes: operations (less chemicals), maintenance, office supplies, memberships, professional services, licenses & permits, insurance premiums, debt service on ID4 capital assets, Agency overhead charges and other expenses.*

Table 11 - ID4 - Operations Fund

Revenues	Actual 2021-22	Actual 2022-23	Final Budget 2023-24	Estimated Actual 2023-24	Proposed Budget 2024-25
4150 Treated Water Sales	8,928,796	9,708,204	9,750,000	10,295,350	10,703,250
4170 Other Water Sales	107,813	-	-	54,340	-
Water Sales Total	**9,036,609**	**9,708,204**	**9,750,000**	**10,349,690**	**10,703,250**
4290 Refunds & Credits	-		-	-	-
Credits & Refunds Total	**-**	**-**	**-**	**-**	**-**
4400 Participant's Annual Payments	196,237	151,613	178,400	178,400	178,400
4401 Participant's O&M Costs	2,148,428	1,575,222	2,974,680	3,196,400	1,646,530
4402 Participant's Power Costs	4,296,817	5,400,826	5,267,800	4,970,700	6,665,700
4430 Exchange/Conveyance Fees	8,089,049	2,401,303	150,000	150,000	472,500
4499 Other User Charges	1,287,338	1,027,218	383,250	-	312,500
User ChargesTotal	**16,017,869**	**10,556,182**	**8,954,130**	**8,495,500**	**9,275,630**
4500 Groundwater Charge Collection	2,656,822	2,375,037	2,574,000	2,160,000	2,215,120
Ground Water Charges Total	**2,656,822**	**2,375,037**	**2,574,000**	**2,160,000**	**2,215,120**
4610 Reimburseables	153,655	2,307,384	461,800	4,952,700	320,000
Reimbursements Total	**153,655**	**2,307,384**	**461,800**	**4,952,700**	**320,000**
4700 Investment Income	31,320	153,028	64,000	285,000	200,000
4705 Interest From Other Sources	-	-	-	-	-
Interest Income Total	**31,320**	**153,028**	**64,000**	**285,000**	**200,000**
4800 Proceeds from Debt Issuance	-	-	-	-	-
Proceeds From Debt Insurance Total	**-**	**-**	**-**	**-**	**-**
4900 Other Revenue	10,905	19,496	2,101,160	2,394,530	-
4901 Disposal of Fixed Assets	-	-	-	-	-
4902 Lease Income	-	-	-	-	-
4911 Water Analyses	8,105	21,320	25,000	20,000	20,000
Other Revenue Total	**19,010**	**40,816**	**2,126,160**	**2,414,530**	**20,000**
Total Revenues	**27,915,285**	**25,140,651**	**23,930,090**	**28,657,420**	**22,734,000**

Table 11 - ID4 - Operations Fund - continued

Expenditures	Actual 2021-22	Actual 2022-23	Final Budget 2023-24	Estimated Actual 2023-24	Proposed Budget 2024-25
5000 Salaries Regular	2,265,197	2,442,250	2,562,820	2,503,720	2,720,120
5001 Salaries Overtime	52,948	61,590	65,000	109,120	110,000
5002 Salaries Temporary	-	-	-	-	-
5010 Benefits Social Security	163,602	172,289	202,660	201,440	218,080
5011 Workers Compensation Insurance	16,405	36,066	51,500	49,330	55,200
5012 Benefits Unemployment Insurance	-	-	-	-	-
5020 Benefits Retirement	1,074,073	1,167,255	1,376,180	1,316,900	1,423,080
5021 Benefits Health Insurance	838,981	802,770	846,540	823,800	884,100
5022 Benefits Life Insurance	15,815	16,184	22,560	16,390	24,000
5023 Benefits Dental Insurance	17,782	18,723	25,920	12,840	29,160
5024 Benefits Vision Insurance	5,094	5,081	6,360	3,210	6,600
5025 Benefits LTD Insurance	16,087	16,001	25,560	25,040	27,480
5026 Benefits LTC Insurance	2,618	4,116	6,960	5,180	7,680
Labor CostsTotal	**4,468,602**	**4,742,325**	**5,192,060**	**5,066,970**	**5,505,500**
5250 Member Unit Credits	-	-	-	-	-
Member Unit Credit Total	**-**	**-**	**-**	**-**	**-**
5100 Groundwater Recharge Fees	179,984	509,607	796,000	796,000	618,000
5101 Groundwater Extraction Fees	4,364,047	2,452,211	1,338,500	507,790	1,198,180
5103 Water Exchange & Convey. Fees	141,320	115,659	76,820	38,280	80,000
5115 Reregulation Fees	-	-	-	-	-
5130 CVC O&M Costs	1,441,383	1,174,828	2,236,000	1,740,000	1,400,000
5131 CVC Power & Standby Charges	174,361	377,887	550,000	850,000	550,000
5170 Other Water Purchases	-	-	-	-	-
Water Purchases & Fees Total	**6,301,095**	**4,630,192**	**4,997,320**	**3,932,070**	**3,846,180**
5260 Fuels, Oils and Grease	59,409	82,415	78,850	69,150	77,250
5270 Chemicals	995,674	1,609,820	2,000,000	2,015,000	2,195,000
5280 Water Analyses	125,092	145,318	150,400	150,100	155,100
5290 Rents and Leases	2,289	3,482	3,500	3,500	3,700
5299 Other Operating Supplies	7,000	5,081	5,000	5,000	5,200
Operations Total	**1,189,464**	**1,846,116**	**2,237,750**	**2,242,750**	**2,436,250**
5300 Power for Operations	8,012,526	8,034,731	6,117,800	5,870,700	7,700,760
5301 Standby Charges for Power	52,811	14,366	19,800	27,000	27,000
Power Total	**8,065,337**	**8,049,097**	**6,137,600**	**5,897,700**	**7,727,760**
5400 Maint - Structures & Improvmts	558,800	417,758	286,300	296,280	348,750
5401 Maint - Mobile Equip	29,048	40,322	28,700	39,000	40,430
5402 Maint - Electronic Equip	80,549	199,305	120,300	126,000	131,700
5403 Maint - Wells, Pumps, Motors	415,007	56,007	82,000	36,000	150,750
5404 Maint - Chemicals	-	-	-	-	-
5408 Maint - Office Equip & Furnish	823	434	500	250	500
5409 Maint - Other	29,636	19,237	21,500	20,500	22,500
5410 Maint - Janitorial	22,417	22,690	25,000	25,000	26,250
Maintenance Total	**1,136,280**	**755,753**	**564,300**	**543,030**	**720,880**

Table 11 - ID4 - Operations Fund - continued

Expenditures - continued	Actual 2021-22	Actual 2022-23	Final Budget 2023-24	Estimated Actual 2023-24	Proposed Budget 2024-25
5500 General Office Supplies	3,631	3,128	3,450	5,750	5,250
5501 Printing and Reproduction	14	90	100	100	100
5502 Computer Supplies	3,068	1,228	1,750	4,000	2,450
5503 Publications & Subscriptions	13,997	8,560	8,700	9,200	9,400
5504 Mailing Services	993	1,867	2,350	1,850	1,750
5510 Laundry and Uniforms	15,286	16,912	18,000	20,000	19,000
5520 Legal Notices & Job Advertise.	2,600	8,294	2,650	3,800	3,800
5530 Computer Access Fees	10,393	12,622	12,850	14,900	14,900
5540 Promotions & Advertisements	2,784	2,868	-	870	-
5550 Assoc. & Prof. Membership Fees	107,661	20,761	234,140	299,140	244,450
5570 Telephone	28,967	20,846	27,850	32,300	33,800
5571 Utilities	7,740	11,795	14,800	11,820	12,500
5581 Liability Insurance	36,425	52,524	84,100	55,300	89,900
5582 Property Insurance	69,966	80,855	97,400	100,820	120,940
5584 Other Insurance Premiums	-	3,597	-	3,370	3,600
5589 Safety Programs & Equipment	53,122	66,454	51,650	48,750	53,750
5590 Directors' Fees	18,032	21,583	20,200	20,310	19,500
5591 Business Meetings & Travel	830	3,258	15,000	12,500	15,000
5592 Education & Training	1,445	2,380	10,000	10,000	10,000
5593 Employee Recruitment	7,674	58,552	-	7,250	5,750
5599 Agency Overhead Allocation	1,138,285	1,137,045	1,195,200	1,195,200	1,194,000
AdministrationTotal	**1,522,913**	**1,535,219**	**1,800,190**	**1,857,230**	**1,859,840**
5601 Legal Services	6,285	13,916	10,000	5,000	10,000
5602 Consulting Engineers	224,590	426,797	311,500	255,000	222,500
5603 Audit Services	10,667	10,978	16,800	15,400	16,800
5604 Special Consultants	324,676	231,685	300,000	172,510	472,000
Professional Services Total	**566,218**	**683,376**	**638,300**	**447,910**	**721,300**
5710 Land Purchase	-	-	-	-	
5720 Structures & Improvements	501,349	345,023	2,215,000	2,350,000	455,000
5730 Mobile Equipment	-	-	140,000	140,000	60,000
5740 Electrical & Mechanical Equip	150,522	109,281	193,000	121,250	538,800
5790 Other Equipment	-	2,160	-	-	-
Capital Outlays Total	**651,871**	**456,464**	**2,548,000**	**2,611,250**	**1,053,800**
5800 Principal on Long Term Debt	145,050	148,537	148,400	151,980	155,630
5801 Interest on Long Term Debt	33,346	29,996	30,000	26,420	22,770
Debt Repayment Total	**178,396**	**178,533**	**178,400**	**178,400**	**178,400**
5910 Tax Collection Charge	-	-	-	-	-
5920 Amort. / Deprec. Expense	-	-	-	-	-
5950 Licenses & Permits	55,648	54,542	61,840	55,500	56,000
5951 Prof. License & Certification Fees	750	1,291	1,000	1,120	1,220
5960 Security	87,820	192,299	182,400	206,000	210,000
5970 Special Projects	-	299,664	2,215,000	6,677,860	-
5999 Other Expenses	46,147	31,114	35,850	36,400	40,400
Other Expenses Total	**190,365**	**578,910**	**2,496,090**	**6,976,880**	**307,620**
5900 Unapplied Appropriations	-	-	-	-	-
Unapplied Appropriations Total	**-**	**-**	**-**	**-**	**-**
Total Expenditures	**24,270,541**	**23,455,985**	**26,790,010**	**29,754,190**	**24,357,530**

Table 12 - Treated Water 2024

Constituent	Maximum Contaminant Level			Parameter			Months in Compliance	
Microbiological								
Coliform Bacteria	> 5.0% of samples present for coliform bacteria in one month			40 or more samples collected per month			12	
Constituent	**Units**	**PHG**	**MCL**	**Quarter 1**	**Quarter 2**	**Quarter 3**	**Quarter 4**	**Average**
Primary Inorganic Chemicals								
Aluminum	mg/L	0.6	1	0.137	ND	0.088	0.140	0.091
Antimony	mg/L	0.001	0.006	ND	ND	ND	ND	ND
Arsenic	mg/L	0.000004	0.010	ND	ND	ND	ND	ND
Asbestos	MFL	7	7	-	ND	-	-	N/A
Barium	mg/L	2	1	ND	ND	ND	ND	ND
Beryllium	mg/L	0.001	0.004	ND	ND	ND	ND	ND
Cadmium	mg/L	0.00004	0.005	ND	ND	ND	ND	ND
Chromium, Hexavalent	mg/L	0.00002	0.01	-	ND	-	-	N/A
Chromium, Total	mg/L	N/A	0.05	ND	ND	ND	ND	ND
Cyanide	mg/L	0.15	0.15	-	ND	-	-	N/A
Fluoride	mg/L	1	2	ND	0.20	0.14	0.18	0.13
Lead*	mg/L	0.0002	0.015	ND	ND	ND	ND	ND
Mercury	mg/L	0.0012	0.002	ND	ND	ND	ND	ND
Nickel	mg/L	0.012	0.1	ND	ND	ND	ND	ND
Nitrate (as Nitrogen, N)	mg/L	10	10	0.63	ND	0.10	ND	0.18
Nitrite (as Nitrogen, N)	mg/L	1	1	ND	ND	ND	ND	ND
Nitrite + Nitrate (sum as Nitrogen, N)	mg/L	10	10	0.63	ND	0.10	ND	0.18
Perchlorate	mg/L	0.001	0.006	-	-	-	0.002	N/A
Selenium	mg/L	0.03	0.05	ND	ND	ND	ND	ND
Thallium	mg/L	0.0001	0.002	ND	ND	ND	ND	ND
Secondary Standards								
Aluminum	mg/L	N/A	0.2	0.137	ND	0.088	0.140	0.091
Color	Units	N/A	15	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5
Copper*	mg/L	0.3	1.3	ND	ND	ND	ND	ND
Foaming Agents (MBAS)	mg/L	N/A	0.5	-	ND	-	-	N/A
Iron	mg/L	N/A	0.3	0.22	ND	ND	0.12	0.08
Manganese	mg/L	N/A	0.05	ND	ND	ND	ND	ND
Methyl tert-butyl ether	mg/L	N/A	0.005	ND	ND	ND	ND	ND
Odor	Units	N/A	3	2.0	2.0	2.0	2.0	2.0
Silver	mg/L	N/A	0.1	ND	ND	ND	ND	ND
Thiobencarb	mg/L	N/A	0.001	-	ND	-	-	N/A
Turbidity	NTU	N/A	5	0.25	0.19	ND	0.22	0.17
Zinc	mg/L	N/A	5.0	ND	ND	ND	0.07	0.02
Total Dissolved Solids	mg/L	N/A	1000	365	119	81	111	169
Specific Conductance	uS/cm	N/A	1600	684	200	145	181	303
Chloride	mg/L	N/A	500	116	7.51	6.51	7.39	34.4
Sulfate	mg/L	N/A	500	60.6	27.8	17.9	23.3	32.4
General Minerals								
Total Alkalinity (as $CaCO_3$)	mg/L	N/A	N/A	66	54	40	50	53
Bicarbonate	mg/L	N/A	N/A	80.5	65.9	48.8	61.0	64.1
Carbonate	mg/L	N/A	N/A	ND	ND	ND	ND	ND
Hydroxide	mg/L	N/A	N/A	ND	ND	ND	ND	ND
Total Hardness (as $CaCO_3$)	mg/L	N/A	N/A	117	54.6	33.5	42.4	61.9
Calcium	mg/L	N/A	N/A	22.1	16.7	10.4	13.1	15.6
Magnesium	mg/L	N/A	N/A	14.9	3.12	1.80	2.35	5.54
Sodium	mg/L	N/A	N/A	80.4	19.4	13.4	16.3	32.4
Potassium	mg/L	N/A	N/A	4.43	2.40	1.61	1.91	2.59
pH	Units	N/A	N/A	7.18	7.37	7.26	7.40	7.30
Additional Analyses								
Ammonia	mg/L	N/A	N/A	ND	ND	ND	ND	ND
Boron**	mg/L	N/A	1	-	0.11	-	-	N/A
Bromide	mg/L	N/A	N/A	0.17	ND	ND	ND	0.04
Chlorate**	mg/L	N/A	0.8	0.217	0.225	0.173	0.222	0.209
Chlorite	mg/L	0.05	1.0	ND	ND	ND	ND	ND
Phosphate as PO_4	mg/L	N/A	N/A	ND	ND	0.36	ND	0.09
Silica	mg/L	N/A	N/A	12.5	11.2	10.8	9.22	10.9
Total Organic Carbon	mg/L	N/A	N/A	2.2	1.8	1.7	1.7	1.9
Vanadium***	mg/L	N/A	0.05	-	ND	-	-	N/A
Radioactivity								
Gross Alpha	pCi/L	N/A	15	-	1.33	-	-	N/A

*Values identified as MCLs are Action Levels under the lead and copper rule

**Values identified as MCLs are Notification Levels or Advisory Levels for constituents lacking MCLs

MCL = Maximum Contaminant Level

MFL = million fibers per liter: MCL for fibers exceeding 10 micrometers in length

mg/L = milligrams per liter (parts per million)

N/A = Not Applicable

ND = Not Detected

NTU = nephelometric turbidity units

pCi/L = picocuries per liter

PHG = Public Health Goal

uS/cm = microsiemens per centimeter

Table 12 - Treated Water 2024

Constituent	Units	PHG	MCL	Quarter 1	Quarter 2	Quarter 3	Quarter 4	Average
Regulated Organic Chemicals								
Total Trihalomethanes	mg/L	N/A	0.080	Refer to Attachment 1				
Haloacetic Acids (HAA5)	mg/L	N/A	0.060	Refer to Attachment 1				
Benzene	mg/L	0.00015	0.001	ND	ND	ND	ND	ND
Carbon Tetrachloride	mg/L	0.0001	0.0005	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	mg/L	0.6	0.6	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	mg/L	0.006	0.005	ND	ND	ND	ND	ND
1,1-Dichloroethane	mg/L	0.003	0.005	ND	ND	ND	ND	ND
1,2-Dichloroethane	mg/L	0.0004	0.0005	ND	ND	ND	ND	ND
1,1-Dichloroethylene	mg/L	0.01	0.006	ND	ND	ND	ND	ND
cis-1,2-Dichloroethylene	mg/L	0.013	0.006	ND	ND	ND	ND	ND
trans-1,2-Dichloroethylene	mg/L	0.05	0.01	ND	ND	ND	ND	ND
Dichloromethane	mg/L	0.004	0.005	ND	ND	ND	ND	ND
1,2-Dichloropropane	mg/L	0.0005	0.005	ND	ND	ND	ND	ND
1,3-Dichloropropene	mg/L	0.0002	0.0005	ND	ND	ND	ND	ND
Ethylbenzene	mg/L	0.3	0.3	ND	ND	ND	ND	ND
Methyl tert-butyl ether	mg/L	0.013	0.013	ND	ND	ND	ND	ND
Monochlorobenzene	mg/L	0.07	0.07	ND	ND	ND	ND	ND
Styrene	mg/L	0.0005	0.1	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	mg/L	0.0001	0.001	ND	ND	ND	ND	ND
Tetrachloroethylene	mg/L	0.00006	0.005	ND	ND	ND	ND	ND
Toluene	mg/L	0.15	0.15	ND	ND	ND	ND	ND
1,2,4-Trichlorobenzene	mg/L	0.005	0.005	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	mg/L	1	0.200	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	mg/L	0.0003	0.005	ND	ND	ND	ND	ND
Trichloroethylene	mg/L	0.0017	0.005	ND	ND	ND	ND	ND
Trichlorofluoromethane	mg/L	1.3	0.15	ND	ND	ND	ND	ND
1,1,2-Trichloro-1,2,2-Trifluoroethane	mg/L	4	1.2	ND	ND	ND	ND	ND
Vinyl Chloride	mg/L	0.00005	0.0005	ND	ND	ND	ND	ND
Xylenes (total)	mg/L	1.8	1.750	ND	ND	ND	ND	ND
Regulated Non-Volatile Synthetic Organic Chemicals								
Alachlor	mg/L	0.004	0.002	-	ND	-	-	N/A
Atrazine	mg/L	0.00015	0.001	-	ND	-	-	N/A
Bentazon	mg/L	0.2	0.018	-	ND	ND	-	N/A
Benzo(a)pyrene	mg/L	0.000007	0.0002	-	ND	-	-	N/A
Carbofuran	mg/L	0.0007	0.018	-	ND	-	-	N/A
Chlordane	mg/L	0.00003	0.0001	-	ND	ND	-	N/A
Dalapon	mg/L	0.79	0.2	-	ND	ND	-	N/A
1,2-Dibromo-3-chloropropane	mg/L	0.000003	0.0002	ND	ND	ND	ND	ND
2,4-Dichlorophenoxyacetic acid (2,4-D)	mg/L	0.02	0.07	-	ND	ND	-	N/A
Di(2-ethylhexyl)adipate	mg/L	0.2	0.4	-	ND	-	-	N/A
Di(2-ethylhexyl)phthalate	mg/L	0.012	0.004	-	ND	-	-	N/A
Dinoseb	mg/L	0.014	0.007	-	ND	-	-	N/A
Diquat	mg/L	0.006	0.02	-	ND	-	-	N/A
Endothall	mg/L	0.094	0.1	-	ND	ND	-	N/A
Endrin	mg/L	0.0003	0.002	-	ND	ND	-	N/A
Ethylene Dibromide	mg/L	0.00001	0.00005	ND	ND	ND	ND	ND
Glyphosate	mg/L	0.9	0.7	-	ND	-	-	N/A
Heptachlor	mg/L	0.000008	0.00001	-	ND	ND	-	N/A
Heptachlor Epoxide	mg/L	0.000006	0.00001	-	ND	ND	-	N/A
Hexachlorobenzene	mg/L	0.00003	0.001	-	ND	ND	-	N/A
Hexachlorocyclopentadiene	mg/L	0.002	0.05	-	ND	ND	-	N/A
Lindane	mg/L	0.000032	0.0002	-	ND	ND	-	N/A
Methoxychlor	mg/L	0.00009	0.03	-	ND	ND	-	N/A
Molinate	mg/L	0.001	0.02	-	ND	-	-	N/A
Oxamyl	mg/L	0.026	0.05	-	ND	-	-	N/A
Pentachlorophenol	mg/L	0.0003	0.001	-	ND	ND	-	N/A
Picloram	mg/L	0.166	0.5	-	ND	ND	-	N/A
Polychlorinated Biphenyls	mg/L	0.00009	0.0005	-	ND	ND	-	N/A
Simazine	mg/L	0.004	0.004	-	ND	-	-	N/A
Thiobencarb	mg/L	0.042	0.07	-	ND	-	-	N/A
Toxaphene	mg/L	0.00003	0.003	-	ND	ND	-	N/A
1,2,3-Trichloropropane	mg/L	0.0000007	0.000005	-	ND	-	-	N/A
2,3,7,8-TCDD (Dioxin)	mg/L	0.00000000005	0.00000003	-	waived	-	-	N/A
2,4,5-TP (Silvex)	mg/L	0.003	0.05	-	ND	ND	-	N/A

*Values identified as MCLs are Action Levels under the lead and copper rule

**Values identified as MCLs are Notification Levels or Advisory Levels for constituents lacking MCLs

MCL = Maximum Contaminant Level

MFL = million fibers per liter: MCL for fibers exceeding 10 micrometers in length

mg/L = milligrams per liter (parts per million)

N/A = Not Applicable

ND = Not Detected

NTU = nephelometric turbidity units

pCi/L = picocuries per liter

PHG = Public Health Goal

uS/cm = microsiemens per centimeter

Table 12 - Treated Water 2024

Constituent	Units	PHG	MCL	Quarter 1	Quarter 2	Quarter 3	Quarter 4	Average
Unregulated Organic Chemicals								
tert-Amyl methyl ether	mg/L	N/A	N/A	ND	ND	ND	ND	ND
Bromobenzene	mg/L	N/A	N/A	ND	ND	ND	ND	ND
Bromochloromethane	mg/L	N/A	N/A	ND	ND	ND	ND	ND
Bromomethane	mg/L	N/A	N/A	ND	ND	ND	ND	ND
Tertiary butyl alcohol**	mg/L	N/A	0.012	ND	ND	ND	ND	ND
n-Butylbenzene**	mg/L	N/A	0.26	ND	ND	ND	ND	ND
sec-Butylbenzene**	mg/L	N/A	0.26	ND	ND	ND	ND	ND
tert-Butylbenzene**	mg/L	N/A	0.26	ND	ND	ND	ND	ND
Chloroethane	mg/L	N/A	N/A	ND	ND	ND	ND	ND
Chloromethane	mg/L	N/A	N/A	ND	ND	ND	ND	ND
2-Chlorotoluene**	mg/L	N/A	0.14	ND	ND	ND	ND	ND
4-Chlorotoluene**	mg/L	N/A	0.14	ND	ND	ND	ND	ND
Dibromomethane	mg/L	N/A	N/A	ND	ND	ND	ND	ND
1,3-Dichlorobenzene**	mg/L	N/A	0.6	ND	ND	ND	ND	ND
Dichlorodifluoromethane**	mg/L	N/A	1	ND	ND	ND	ND	ND
1,3-Dichloropropane	mg/L	N/A	N/A	ND	ND	ND	ND	ND
2,2-Dichloropropane	mg/L	N/A	N/A	ND	ND	ND	ND	ND
1,1-Dichloropropene	mg/L	N/A	N/A	ND	ND	ND	ND	ND
Diisopropyl ether	mg/L	N/A	N/A	ND	ND	ND	ND	ND
Ethyl tert-butyl ether	mg/L	N/A	N/A	ND	ND	ND	ND	ND
Hexachlorobutadiene	mg/L	N/A	N/A	ND	ND	ND	ND	ND
Isopropylbenzene**	mg/L	N/A	0.77	ND	ND	ND	ND	ND
p-Isopropyltoluene	mg/L	N/A	N/A	ND	ND	ND	ND	ND
Naphthalene**	mg/L	N/A	0.017	ND	ND	ND	ND	ND
Nitrobenzene	mg/L	N/A	N/A	ND	ND	ND	ND	ND
Pentachloroethane	mg/L	N/A	N/A	ND	ND	ND	ND	ND
n-Propylbenzene**	mg/L	N/A	0.26	ND	ND	ND	ND	ND
1,1,1,2-Tetrachloroethane	mg/L	N/A	N/A	ND	ND	ND	ND	ND
1,2,3-Trichlorobenzene	mg/L	N/A	N/A	ND	ND	ND	ND	ND
1,3,5-Trichlorobenzene	mg/L	N/A	N/A	ND	ND	ND	ND	ND
1,2,3-Trimethylbenzene	mg/L	N/A	N/A	ND	ND	ND	ND	ND
1,2,4-Trimethylbenzene**	mg/L	N/A	0.33	ND	ND	ND	ND	ND
1,3,5-Trimethylbenzene**	mg/L	N/A	0.33	ND	ND	ND	ND	ND
Methyl isobutyl ketone**	mg/L	N/A	0.12	ND	ND	ND	ND	ND
Unregulated Non-Volatile Synthetic Organic Chemicals								
Aldicarb**	mg/L	N/A	0.007	-	ND	-	-	N/A
Aldicarb Sulfone	mg/L	N/A	N/A	-	ND	-	-	N/A
Aldicarb Sulfoxide	mg/L	N/A	N/A	-	ND	-	-	N/A
Aldrin**	mg/L	N/A	0.000002	-	ND	ND	-	N/A
Bromacil	mg/L	N/A	N/A	-	ND	-	-	N/A
Butachlor	mg/L	N/A	N/A	-	ND	-	-	N/A
Carbaryl**	mg/L	N/A	0.7	-	ND	-	-	N/A
Diazinon**	mg/L	N/A	0.0012	-	ND	-	-	N/A
Dicamba	mg/L	N/A	N/A	-	ND	ND	-	N/A
Dieldrin**	mg/L	N/A	0.000002	-	ND	ND	-	N/A
Dimethoate**	mg/L	N/A	0.001	-	ND	-	-	N/A
Diuron	mg/L	N/A	N/A	-	-	ND	-	N/A
3-Hydroxycarbofuran	mg/L	N/A	N/A	-	ND	-	-	N/A
Methomyl	mg/L	N/A	N/A	-	ND	-	-	N/A
Metolachlor	mg/L	N/A	N/A	-	ND	-	-	N/A
Metribuzin	mg/L	N/A	N/A	-	ND	-	-	N/A
Propachlor**	mg/L	N/A	0.09	-	ND	-	-	N/A
2,4,5-T	mg/L	N/A	N/A	-	ND	ND	-	N/A

*Values identified as MCLs are Action Levels under the lead and copper rule

**Values identified as MCLs are Notification Levels or Advisory Levels for constituents lacking MCLs

MCL = Maximum Contaminant Level

MFL = million fibers per liter: MCL for fibers exceeding 10 micrometers in length

mg/L = milligrams per liter (parts per million)

N/A = Not Applicable

ND = Not Detected

NTU = nephelometric turbidity units

pCi/L = picocuries per liter

PHG = Public Health Goal

uS/cm = microsiemens per centimeter

Table 12 - Treated Water 2024

Total Trihalomethanes Monitoring 2024 (State Stage 2 D/DBPR)

Total Trihalomethanes MCL	0.080 ppm				
MCL in CCR units	80 ppb				
Location	2024 TTHM Results (ppb)				
	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	LRAA
Site 1: 1022 Sequoia Street	15.6	25.7	32.4	68.3	35.5
Site 2: Francis Street Alley	17.8	24.5	32.4	72.3	36.8
Site 3: NOR Terminal Tank Inlet	22.1	59.9	29.4	69.4	45.2
Site 4: North King & Jeffrey	21.7	32.5	37.3	86.4	44.5
Site 5: Wenatchee Pump Station	23.3	32.6	34.9	95.3	46.5
Site 6: Oswell Large Tank	37.5	67.4	39.4	94.0	59.6
Site 7: Oswell Pump Station	23.4	37.5	36.8	91.7	47.4
Site 8: Seven Seas	28.6	36.0	34.4	83.6	45.7
Site 9: Meany & Alken	26.5	34.7	34.1	86.3	45.4
Site 10: Meany & Coffee	27.3	36.7	35.2	84.8	46.0

CCR Table Excerpt

Contaminant (CCR units)	MCL	PHG (or MCLG)	Highest LRAA	Range	Sample Date	Violation	Typical Source
TTHM (ppb)	80	N/A	59.6	15.6 - 95.3	2024	No	Byproduct of drinking water disinfection

Haloacetic Acids Monitoring 2024 (State Stage 2 D/DBPR)

Haloacetic Acids MCL	0.060 ppm				
MCL in CCR units	60 ppb				
Location	2024 HAA5 Results (ppb)				
	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	LRAA
Site 1: 1022 Sequoia Street	16.5	23.6	28.0	36.7	26.2
Site 2: Francis Street Alley	15.8	24.0	30.8	19.1	22.4
Site 3: NOR Terminal Tank Inlet	18.6	48.6	29.5	22.0	29.7
Site 4: North King & Jeffrey	19.4	32.2	32.2	40.1	31.0
Site 5: Wenatchee Pump Station	22.0	33.3	34.5	30.1	30.0
Site 6: Oswell Large Tank	41.4	48.5	44.4	18.5	38.2
Site 7: Oswell Pump Station	20.2	35.6	31.9	28.5	29.1
Site 8: Seven Seas	23.8	33.8	30.6	36.7	31.2
Site 9: Meany & Alken	24.1	31.1	33.8	26.6	28.9
Site 10: Meany & Coffee	25.6	32.6	34.2	26.6	29.8

CCR Table Excerpt

Contaminant (CCR units)	MCL	PHG (or MCLG)	Highest LRAA	Range	Sample Date	Violation	Typical Source
HAA5 (ppb)	60	N/A	38.2	15.8 - 48.5	2024	No	Byproduct of drinking water disinfection

CCR = Consumer Confidence Report
LRAA = Locational Running Annual Average
MCL = Maximum Contaminant Level
MCLG = Maximum Contaminant Level Goal
N/A = Not Applicable
PHG = Public Health Goal
ppb = parts per billion
ppm = parts per million

Table 13 - Source 2024

Constituent	Units	PHG*	MCL*	Source			
				Friant-Kern	CVC	Aqueduct	Kern River
Primary Inorganic Chemicals							
Aluminum	mg/L	0.6	1	0.154	0.081	0.640	0.336
Antimony	mg/L	0.001	0.006	ND	ND	ND	ND
Arsenic	mg/L	0.000004	0.010	ND	0.003	ND	0.003
Asbestos	MFL	7	7	ND	ND	ND	ND
Barium	mg/L	2	1	ND	ND	ND	ND
Beryllium	mg/L	0.001	0.004	ND	ND	ND	ND
Cadmium	mg/L	0.00004	0.005	ND	ND	ND	ND
Chromium, Hexavalent	mg/L	0.00002	0.01	0.00006	-	0.00010	ND
Chromium, Total	mg/L	N/A	0.05	0.001	ND	0.002	0.001
Cyanide	mg/L	0.15	0.15	ND	-	ND	ND
Fluoride	mg/L	1	2	ND	0.10	ND	0.20
Lead**	mg/L	0.0002	0.015	ND	ND	ND	ND
Mercury	mg/L	0.0012	0.002	ND	ND	ND	ND
Nickel	mg/L	0.012	0.1	ND	ND	ND	ND
Nitrate (as N)	mg/L	10	10	ND	0.28	0.44	ND
Nitrite (as Nitrogen, N)	mg/L	1	1	ND	ND	ND	ND
Nitrate + Nitrite (sum as Nitrogen, N)	mg/L	10	10	ND	0.28	0.44	ND
Perchlorate	mg/L	0.001	0.006	ND	-	ND	ND
Selenium	mg/L	0.03	0.05	ND	ND	ND	ND
Thallium	mg/L	0.0001	0.002	ND	ND	ND	ND
Secondary Standards							
Aluminum	mg/L	N/A	0.2	0.154	0.081	0.640	0.336
Color	Units	N/A	15	12.5	10	20	10
Copper**	mg/L	0.3	1.3	ND	ND	ND	ND
Foaming Agents (MBAS)	mg/L	N/A	0.5	ND	-	ND	ND
Iron	mg/L	N/A	0.3	0.19	ND	0.59	0.28
Manganese	mg/L	N/A	0.05	ND	ND	0.04	0.05
Methyl tert-butyl ether	mg/L	N/A	0.005	ND	ND	ND	ND
Odor	Units	N/A	3	4	6	6	4
Silver	mg/L	N/A	0.1	ND	ND	ND	ND
Thiobencarb	mg/L	N/A	0.001	ND	-	ND	ND
Turbidity	Units	N/A	5	3.5	2.5	9.8	6.4
Zinc	mg/L	N/A	5.0	ND	ND	ND	ND
Total Dissolved Solids	mg/L	N/A	1000	33	170	211	99
Specific Conductance	uS/cm	N/A	1600	44	301	378	166
Chloride	mg/L	N/A	500	2.09	34.1	44.7	4.06
Sulfate	mg/L	N/A	500	0.96	23.9	39.1	10.6
General Minerals							
Total Alkalinity (as $CaCO_3$)	mg/L	N/A	N/A	20	73	68	64
Bicarbonate	mg/L	N/A	N/A	24.4	76.9	83.0	78.1
Carbonate	mg/L	N/A	N/A	ND	12	ND	ND
Hydroxide	mg/L	N/A	N/A	ND	ND	ND	ND
Total Hardness (as $CaCO_3$)	mg/L	N/A	N/A	10.3	74.0	90.4	53.2
Calcium	mg/L	N/A	N/A	4.13	18.8	18.7	16.3
Magnesium	mg/L	N/A	N/A	ND	6.59	10.6	3.07
Sodium	mg/L	N/A	N/A	5.31	25.7	39.7	13.2
Potassium	mg/L	N/A	N/A	1.37	2.32	3.36	2.29
pH	Units	N/A	N/A	7.48	8.76	8.15	7.92
Additional Analyses							
Ammonia	mg/L	N/A	N/A	ND	0.05	ND	ND
Boron***	mg/L	N/A	1	ND	-	0.19	0.12
Bromide	mg/L	N/A	N/A	ND	0.09	0.12	0.01
Phosphate	mg/L	N/A	N/A	ND	ND	ND	ND
Silica	mg/L	N/A	N/A	7.43	14.0	10.4	11.8
Total Organic Carbon	mg/L	N/A	N/A	1.8	2.7	3.7	2.7
Vanadium***	mg/L	N/A	0.05	ND	-	0.004	ND
Radioactivity							
Gross Alpha	pCi/L	N/A	15	0.355	-	2.64	4.10
Gross Beta	mrem/yr	N/A	4	-	-	-	-
Radium 226	pCi/L	0.05	N/A	-	-	-	-
Radium 228	pCi/L	0.019	N/A	-	-	-	-
Radium 226 + Radium 228	pCi/L	N/A	5	-	-	-	-
Strontium-90	pCi/L	0.35	8	-	-	-	-
Tritium	pCi/L	400	20,000	-	-	-	-
Uranium	pCi/L	0.43	20	-	-	-	-

*Applicable to treated water only
**Values identified as MCLs are Action Levels under the lead and copper rule
***Values identified as MCLs are Notification Levels or Advisory Levels for constituents lacking MCLs
MCL = Maximum Contaminant Level
MFL = million fibers per liter: MCL for fibers exceeding 10 micrometers in length
mg/L = milligrams per liter (parts per million)
mrem/yr = millirems per year
N/A = Not Applicable
ND = Not Detected
NTU = nephelometric turbidity units
pCi/L = picocuries per liter
PHG = Public Health Goal
uS/cm = microsiemens per centimeter

Table 13 - Source 2024

Constituent	Units	PHG*	MCL*	Source			
				Friant-Kern	CVC	Aqueduct	Kern River
Regulated Volatile Organic Chemicals							
Benzene	mg/L	0.00015	0.001	ND	ND	ND	ND
Carbon Tetrachloride	mg/L	0.0001	0.0005	ND	ND	ND	ND
1,2-Dichlorobenzene	mg/L	0.6	0.6	ND	ND	ND	ND
1,4-Dichlorobenzene	mg/L	0.006	0.005	ND	ND	ND	ND
1,1-Dichloroethane	mg/L	0.003	0.005	ND	ND	ND	ND
1,2-Dichloroethane	mg/L	0.0004	0.0005	ND	ND	ND	ND
1,1-Dichloroethylene	mg/L	0.01	0.006	ND	ND	ND	ND
cis-1,2-Dichloroethylene	mg/L	0.013	0.006	ND	ND	ND	ND
trans-1,2-Dichloroethylene	mg/L	0.05	0.01	ND	ND	ND	ND
Dichloromethane	mg/L	0.004	0.005	ND	ND	ND	ND
1,2-Dichloropropane	mg/L	0.0005	0.005	ND	ND	ND	ND
1,3-Dichloropropene	mg/L	0.0002	0.0005	ND	ND	ND	ND
Ethylbenzene	mg/L	0.3	0.3	ND	ND	ND	ND
Methyl tert-butyl ether	mg/L	0.013	0.013	ND	ND	ND	ND
Monochlorobenzene	mg/L	0.07	0.07	ND	ND	ND	ND
Styrene	mg/L	0.0005	0.1	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	mg/L	0.0001	0.001	ND	ND	ND	ND
Tetrachloroethylene	mg/L	0.00006	0.005	ND	ND	ND	ND
Toluene	mg/L	0.15	0.15	ND	ND	ND	ND
1,2,4-Trichlorobenzene	mg/L	0.005	0.005	ND	ND	ND	ND
1,1,1-Trichloroethane	mg/L	1	0.200	ND	ND	ND	ND
1,1,2-Trichloroethane	mg/L	0.0003	0.005	ND	ND	ND	ND
Trichloroethylene	mg/L	0.0017	0.005	ND	ND	ND	ND
Trichlorofluoromethane	mg/L	1.3	0.15	ND	ND	ND	ND
1,1,2-Trichloro-1,2,2-Trifluoroethane	mg/L	4	1.2	ND	ND	ND	ND
Vinyl Chloride	mg/L	0.00005	0.0005	ND	ND	ND	ND
Xylenes (total)	mg/L	1.8	1.750	ND	ND	ND	ND
Regulated Non-Volatile Synthetic Organic Chemicals							
Alachlor	mg/L	0.004	0.002	ND	-	ND	ND
Atrazine	mg/L	0.00015	0.001	ND	-	ND	ND
Bentazon	mg/L	0.2	0.018	ND	-	ND	ND
Benzo(a)pyrene	mg/L	0.000007	0.0002	ND	-	ND	ND
Carbofuran	mg/L	0.0007	0.018	ND	-	ND	ND
Chlordane	mg/L	0.00003	0.0001	ND	-	ND	ND
Dalapon	mg/L	0.79	0.2	ND	-	ND	ND
1,2-Dibromo-3-chloropropane	mg/L	0.000003	0.0002	ND	ND	ND	ND
2,4-Dichlorophenoxyacetic acid (2,4-D)	mg/L	0.02	0.07	ND	-	ND	ND
Di(2-ethylhexyl)adipate	mg/L	0.2	0.4	ND	-	ND	ND
Di(2-ethylhexyl)phthalate	mg/L	0.012	0.004	ND	-	ND	ND
Dinoseb	mg/L	0.014	0.007	ND	-	ND	ND
Diquat	mg/L	0.006	0.02	ND	-	ND	ND
Endothall	mg/L	0.094	0.1	ND	-	ND	ND
Endrin	mg/L	0.0003	0.002	ND	-	ND	ND
Ethylene Dibromide	mg/L	0.00001	0.00005	ND	ND	ND	ND
Glyphosate	mg/L	0.9	0.7	ND	-	ND	ND
Heptachlor	mg/L	0.000008	0.00001	ND	-	ND	ND
Heptachlor Epoxide	mg/L	0.000006	0.00001	ND	-	ND	ND
Hexachlorobenzene	mg/L	0.00003	0.001	ND	-	ND	ND
Hexachlorocyclopentadiene	mg/L	0.002	0.05	ND	-	ND	ND
Lindane	mg/L	0.000032	0.0002	ND	-	ND	ND
Methoxychlor	mg/L	0.00009	0.03	ND	-	ND	ND
Molinate	mg/L	0.001	0.02	ND	-	ND	ND
Oxamyl	mg/L	0.026	0.05	ND	-	ND	ND
Pentachlorophenol	mg/L	0.0003	0.001	ND	-	ND	ND
Picloram	mg/L	0.166	0.5	ND	-	ND	ND
Polychlorinated Biphenyls	mg/L	0.00009	0.0005	ND	-	ND	ND
Simazine	mg/L	0.004	0.004	ND	-	ND	ND
Thiobencarb	mg/L	0.042	0.07	ND	-	ND	ND
Toxaphene	mg/L	0.00003	0.003	ND	-	ND	ND
1,2,3-Trichloropropane	mg/L	0.0000007	0.000005	ND	-	ND	ND
2,3,7,8-TCDD (Dioxin)	mg/L	0.00000000005	0.00000003	waived	-	waived	waived
2,4,5-TP (Silvex)	mg/L	0.003	0.05	ND	-	ND	ND

*Applicable to treated water only
**Values identified as MCLs are Action Levels under the lead and copper rule
***Values identified as MCLs are Notification Levels or Advisory Levels for constituents lacking MCLs
MCL = Maximum Contaminant Level
MFL = million fibers per liter: MCL for fibers exceeding 10 micrometers in length
mg/L = milligrams per liter (parts per million)
mrem/yr = millirems per year

N/A = Not Applicable
ND = Not Detected
NTU = nephelometric turbidity units
pCi/L = picocuries per liter
PHG = Public Health Goal
uS/cm = microsiemens per centimeter

Table 13 - Source 2024

Constituent	Units	PHG*	MCL*	Source			
				Friant-Kern	CVC	Aqueduct	Kern River
Unregulated Volatile Organic Chemicals							
tert-Amyl methyl ether	mg/L	N/A	N/A	ND	ND	ND	ND
Bromobenzene	mg/L	N/A	N/A	ND	ND	ND	ND
Bromochloromethane	mg/L	N/A	N/A	ND	ND	ND	ND
Bromomethane	mg/L	N/A	N/A	ND	ND	ND	ND
Tertiary butyl alcohol***	mg/L	N/A	0.012	ND	ND	ND	ND
n-Butylbenzene***	mg/L	N/A	0.26	ND	ND	ND	ND
sec-Butylbenzene***	mg/L	N/A	0.26	ND	ND	ND	ND
tert-Butylbenzene***	mg/L	N/A	0.26	ND	ND	ND	ND
Chloroethane	mg/L	N/A	N/A	ND	ND	ND	ND
Chloromethane	mg/L	N/A	N/A	ND	ND	ND	ND
2-Chlorotoluene***	mg/L	N/A	0.14	ND	ND	ND	ND
4-Chlorotoluene***	mg/L	N/A	0.14	ND	ND	ND	ND
Dibromomethane	mg/L	N/A	N/A	ND	ND	ND	ND
1,3-Dichlorobenzene***	mg/L	N/A	0.6	ND	ND	ND	ND
Dichlorodifluoromethane***	mg/L	N/A	1	ND	ND	ND	ND
1,3-Dichloropropane	mg/L	N/A	N/A	ND	ND	ND	ND
2,2-Dichloropropane	mg/L	N/A	N/A	ND	ND	ND	ND
1,1-Dichloropropene	mg/L	N/A	N/A	ND	ND	ND	ND
Diisopropyl ether	mg/L	N/A	N/A	ND	ND	ND	ND
Ethyl tert-butyl ether	mg/L	N/A	N/A	ND	ND	ND	ND
Hexachlorobutadiene	mg/L	N/A	N/A	ND	ND	ND	ND
Isopropylbenzene***	mg/L	N/A	0.77	ND	ND	ND	ND
p-Isopropyltoluene	mg/L	N/A	N/A	ND	ND	ND	ND
Naphthalene***	mg/L	N/A	0.017	ND	ND	ND	ND
Nitrobenzene	mg/L	N/A	N/A	ND	ND	ND	ND
Pentachloroethane	mg/L	N/A	N/A	ND	ND	ND	ND
n-Propylbenzene***	mg/L	N/A	0.26	ND	ND	ND	ND
1,1,1,2-Tetrachloroethane	mg/L	N/A	N/A	ND	ND	ND	ND
1,2,3-Trichlorobenzene	mg/L	N/A	N/A	ND	ND	ND	ND
1,3,5-Trichlorobenzene	mg/L	N/A	N/A	ND	ND	ND	ND
1,2,3-Trimethylbenzene	mg/L	N/A	N/A	ND	ND	ND	ND
1,2,4-Trimethylbenzene***	mg/L	N/A	0.33	ND	ND	ND	ND
1,3,5-Trimethylbenzene***	mg/L	N/A	0.33	ND	ND	ND	ND
Methyl isobutyl ketone***	mg/L	N/A	0.12	ND	ND	ND	ND
Unregulated Non-Volatile Synthetic Organic Chemicals							
Aldicarb***	mg/L	N/A	0.007	ND	-	ND	ND
Aldicarb Sulfone	mg/L	N/A	N/A	ND	-	ND	ND
Aldicarb Sulfoxide	mg/L	N/A	N/A	ND	-	ND	ND
Aldrin***	mg/L	N/A	0.000002	ND	-	ND	ND
Bromacil	mg/L	N/A	N/A	ND	-	ND	ND
Butachlor	mg/L	N/A	N/A	ND	-	ND	ND
Carbaryl***	mg/L	N/A	0.7	ND	-	ND	ND
Diazinon***	mg/L	N/A	0.0012	ND	-	ND	ND
Dicamba	mg/L	N/A	N/A	ND	-	ND	ND
Dieldrin***	mg/L	N/A	0.000002	ND	-	ND	ND
Dimethoate***	mg/L	N/A	0.001	ND	-	ND	ND
Diuron	mg/L	N/A	N/A	ND	-	ND	ND
3-Hydroxycarbofuran	mg/L	N/A	N/A	ND	-	ND	ND
Methomyl	mg/L	N/A	N/A	ND	-	ND	ND
Metolachlor	mg/L	N/A	N/A	ND	-	ND	ND
Metribuzin	mg/L	N/A	N/A	ND	-	ND	ND
Propachlor***	mg/L	N/A	0.09	ND	-	ND	ND
2,4,5-T	mg/L	N/A	N/A	ND	-	ND	ND

*Applicable to treated water only
**Values identified as MCLs are Action Levels under the lead and copper rule
***Values identified as MCLs are Notification Levels or Advisory Levels for constituents lacking MCLs
MCL = Maximum Contaminant Level
MFL = million fibers per liter: MCL for fibers exceeding 10 micrometers in length
mg/L = milligrams per liter (parts per million)
mrem/yr = millirems per year

N/A = Not Applicable
ND = Not Detected
NTU = nephelometric turbidity units
pCi/L = picocuries per liter
PHG = Public Health Goal
uS/cm = microsiemens per centimeter

Figure 1 - Improvement District No. 4 Groundwater Replenishment

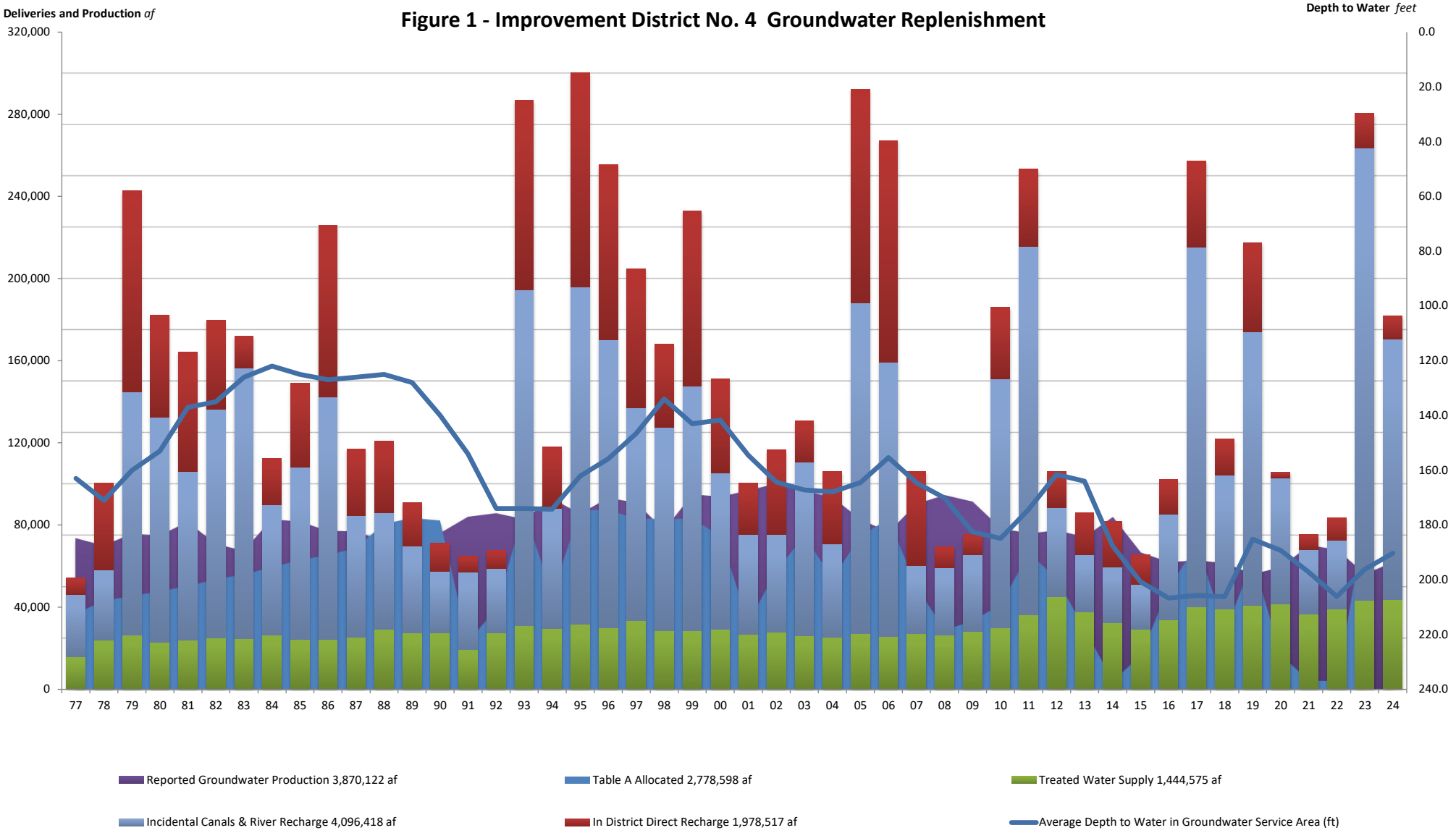
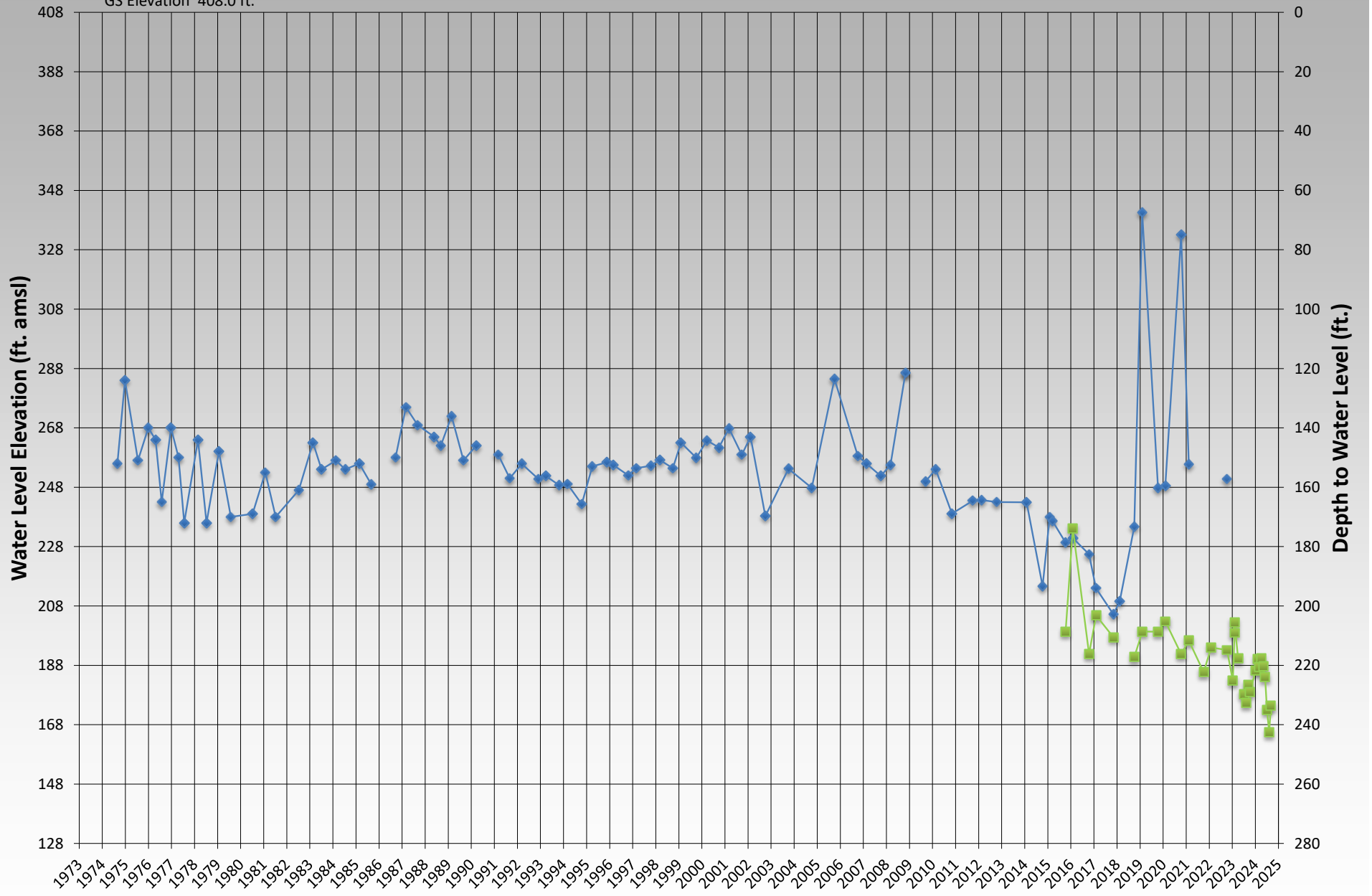


Figure 2 29S/27E-08H05
29S/27E-08H53

Improvement District No. 4
29S/27E-08H05 (29S/27E-08H53)

KCWA GROUNDWATER DATABASE



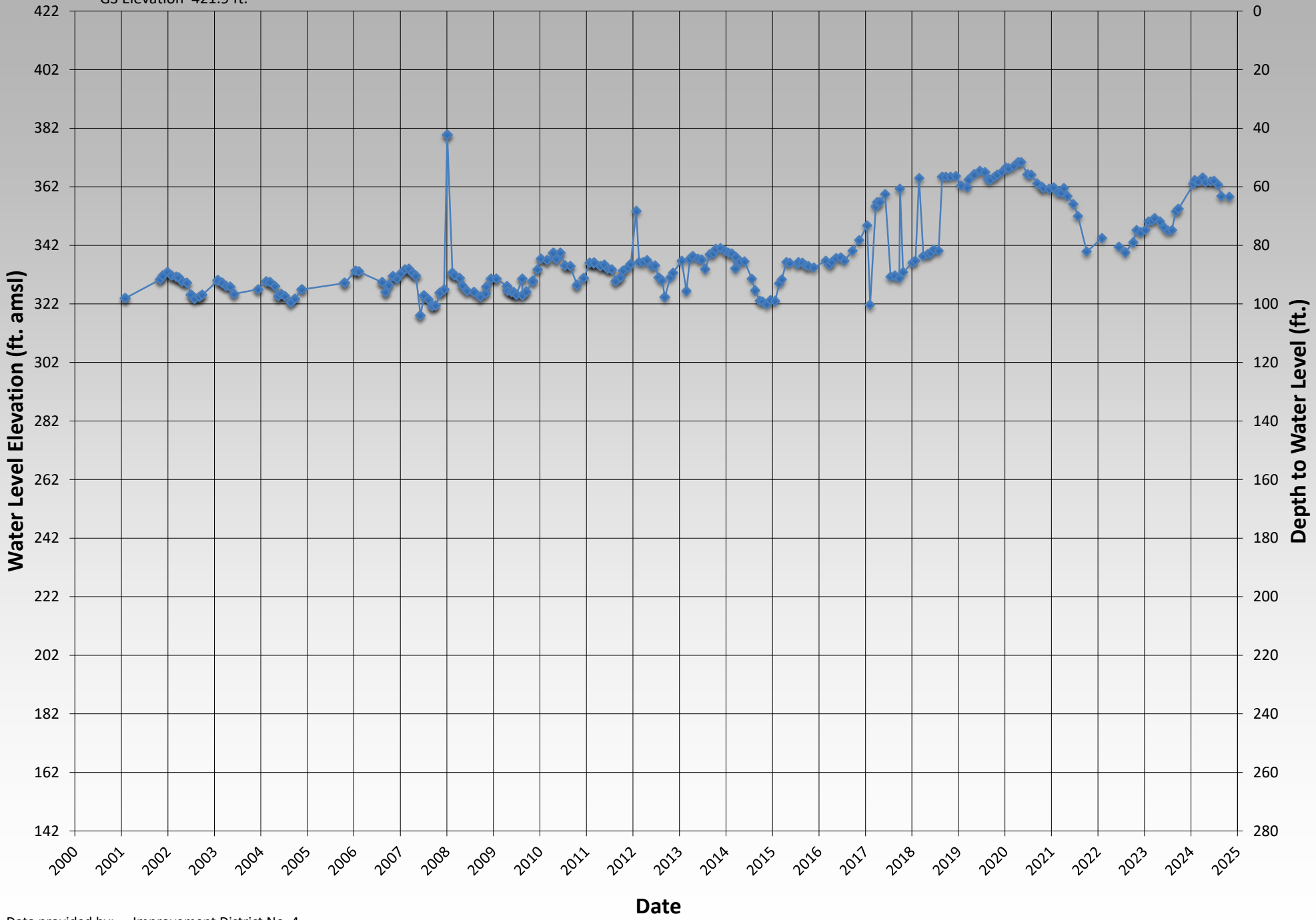
Data provided by: Improvement District No. 4

Improvement District No. 4
29S/28E-18K01

Figure 3 29S/28E-18K01

GS Elevation 421.9 ft.

KCWA GROUNDWATER DATABASE



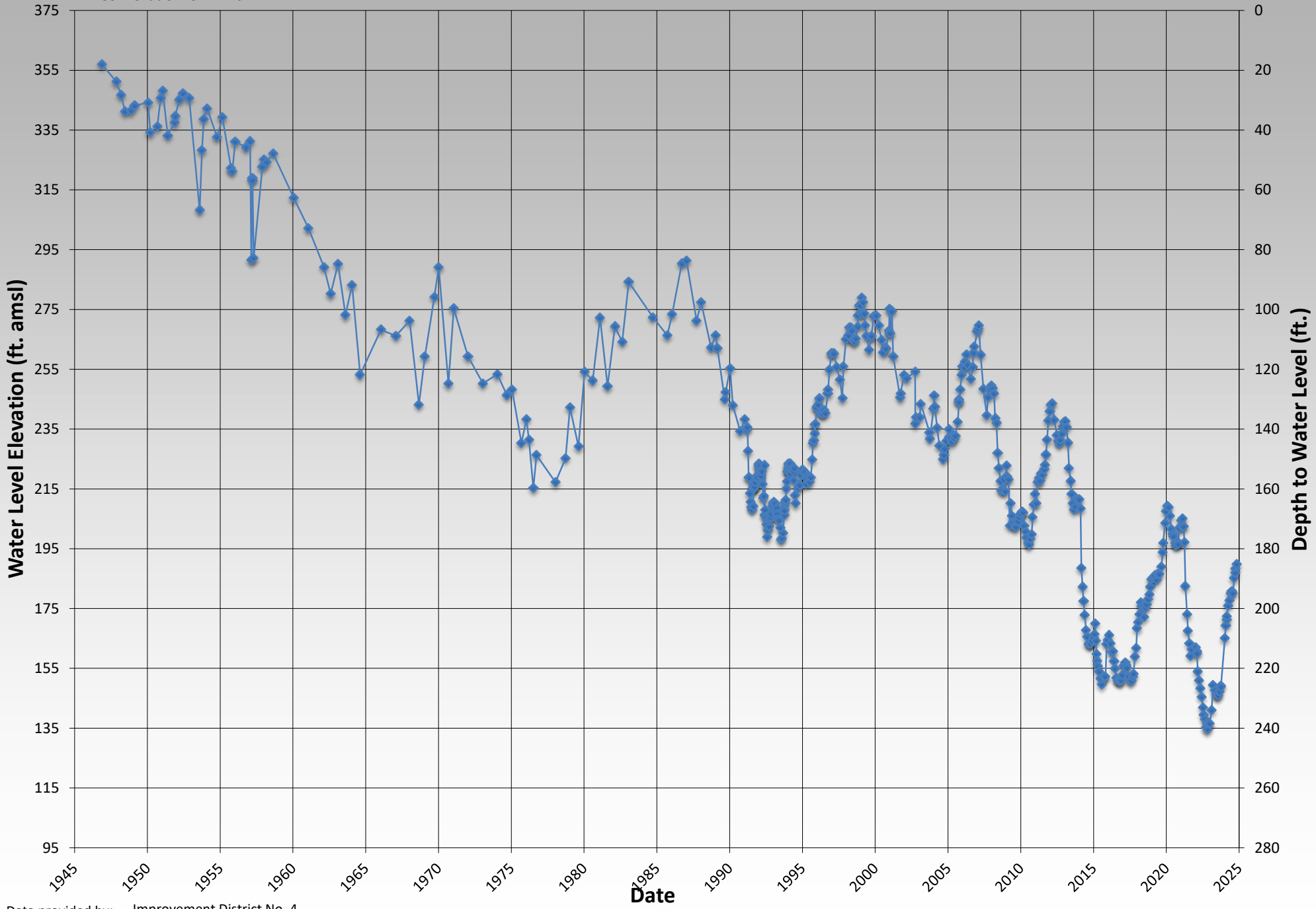
Data provided by: Improvement District No. 4

Improvement District No. 4
30S/27E-05D01

Figure 4 30S/27E-05D01

GS Elevation 374.7 ft.

KCWA GROUNDWATER DATABASE



Data provided by: Improvement District No. 4

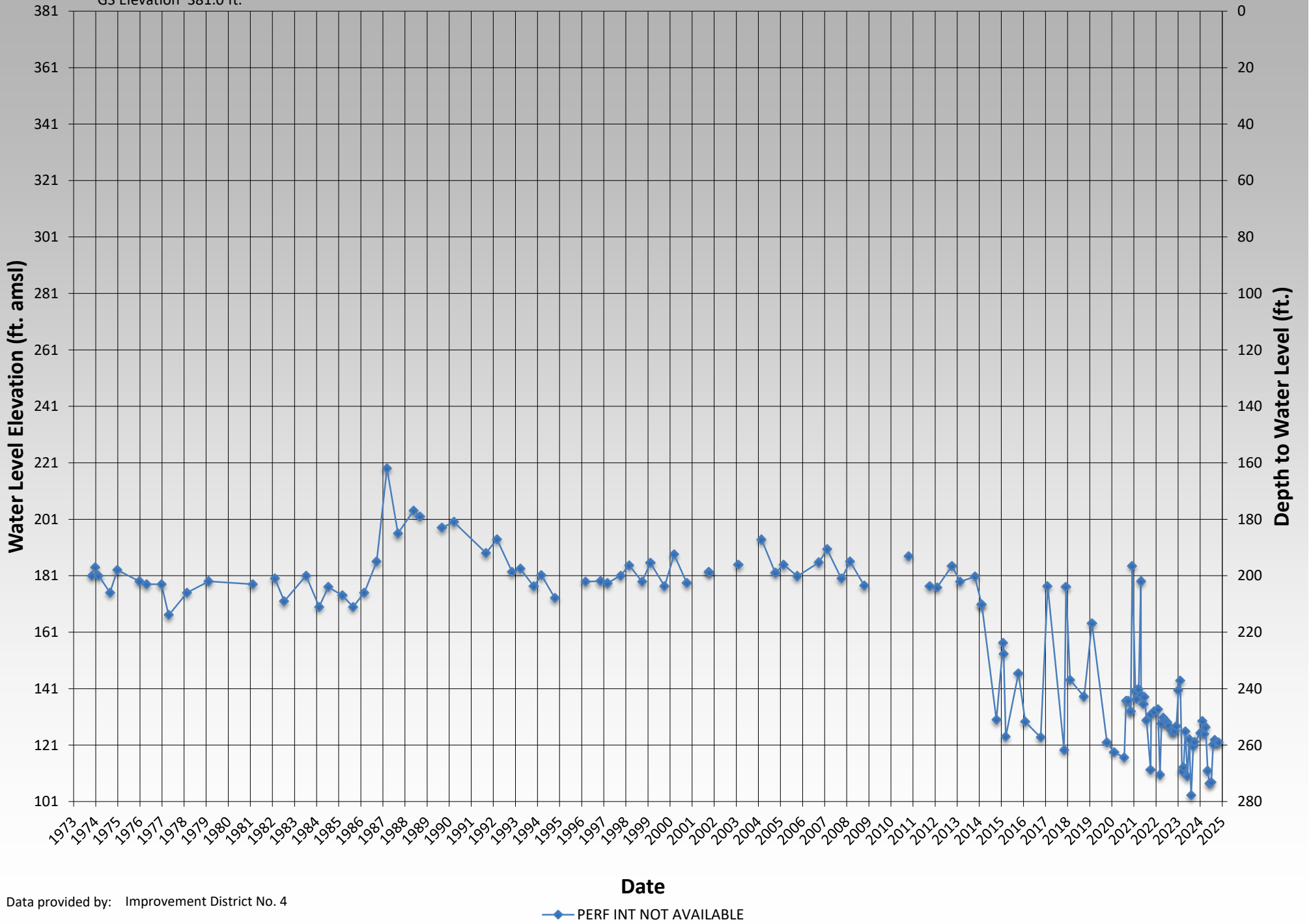
PERF INT 85'-504'

Improvement District No. 4
30S/28E-03D01

Figure 5 30S/28E-03D01

GS Elevation 381.0 ft.

KCWA GROUNDWATER DATABASE



Data provided by: Improvement District No. 4

IMPROVEMENT DISTRICT NO. 4

T 28 S/R 26 E
T 28 S/R 27 E
T 28 S/R 28 E
T 28 S/R 29 E
T 29 S/R 26 E
T 29 S/R 27 E
T 29 S/R 28 E
T 29 S/R 29 E
T 30 S/R 26 E
T 30 S/R 27 E
T 30 S/R 28 E
T 31 S/R 26 E
T 31 S/R 27 E
T 31 S/R 28 E
T 31 S/R 29 E

N

0 0.5 1 2 3 MILES

LAND USE - 2024

- UNDEVELOPED
- IRRIGATED AGRICULTURAL
- MUNICIPAL & INDUSTRIAL
- CANAL (MOSTLY LINED)
- CANAL (MOSTLY UNLINED)
- IMPROVEMENT DISTRICT NO. 4 PIPELINES

BY: M. ALLEN
DATE: 11/01/24
REVIEWED BY: JT GARDINER
FILENAME: Plate 1 - Land Use (2024).mxd

Irrigated agriculture, municipal and industrial areas determined via February 2024 aerial imagery of Kern County.

Plate 1 - Land Use - 2024

IMPROVEMENT DISTRICT NO. 4

T 28 S/R 26 E
T 28 S/R 27 E
T 28 S/R 28 E
T 28 S/R 29 E
T 29 S/R 26 E
T 29 S/R 27 E
T 29 S/R 28 E
T 29 S/R 29 E
T 30 S/R 26 E
T 30 S/R 27 E
T 30 S/R 28 E
T 31 S/R 26 E
T 31 S/R 27 E
T 31 S/R 28 E
T 31 S/R 29 E

N

0 0.5 1 2 3 MILES

SEVEN DITCH
LERDO CANAL
FRIANT-KERN CANAL
FIVE DITCH
FOUR DITCH
BEARDSLEY CANAL
MAIN CANAL
CALLOWAY CANAL
ONE DITCH
NORTHWEST FEEDER PIPELINE
NORTH PIPELINE
EAST PIPELINE
CARRIER CANAL
EAST SIDE CANAL
KERN RIVER
LAKE MING
GOOSE LAKE SLOUGH
AERA PARK PONDS
LAKES AT RIVERWALK
TRUXTUN LAKES
PIONEER MAIN CANAL
CROSS VALLEY CANAL
KERN RIVER CANAL
JAMES CANAL
PLUNKET CANAL
BUENA VISTA CANAL
ARVIN-EDISON CANAL
STINE CANAL
SEC. 23 DITCH
KERN ISLAND CANAL
WESTBRANCH CANAL
CENTRAL BRANCH CANAL
EAST BRANCH CANAL
FARMERS CANAL
STINE CANAL BRANCH 2

SEVENTH STANDARD RD
KRATZMEYER RD
SNOW RD
HAGEMAN RD
ROSEDALE HWY
BRIMHALL RD
STOCKDALE HWY
BRUNDAGE LN
E BRUNDAGE LN
OLIVE DR
ROUND MOUNTAIN RD
PALADINO DR
PANORAMA DR
COLUMBUS ST
NILES ST
E CALIFORNIA AV
CALIFORNIA AV
TRUXTUN AV
EDISON HWY
REDBANK RD
MULLER RD
E WHITE LN
WHITE LN
CASA LOMA DR
MING AV
HOSKING AV
E HOSKING AV
MC CUTCHEN RD
PANAMA LN
TAFT HWY
MERLE HAGGARD DR

SANTA FE WY
ZACHARY AV
ZENEN RD
DRIVER RD
SALINAS ST
FRUITVALE AV
ELVERTA AV
CALLOWAY DR
COFFEE RD
AIRPORT DR
NUESTER AV
RIVER ST
MANOR ST
RIVER BLVD
MT VERNON AV
OSWELL ST
MORNING DR
VINELAND RD
MASTERSON ST
RANCHERIA RD
FAIRFAX RD
GREELEY RD
NORD AV
RENFRO RD
ALLEN RD
HEATH RD
S RENFRO RD
GOSFORD RD
ASHE RD
NEW STINE RD
WEBB RD
OAK ST
CHESTER AV
MOHAWK ST
BEAR AV
DR MARTIN LUTHER KING JR BLVD
S MT VERNON AV
S OSWELL ST
S VINELAND RD
S EDISON RD
COMANCHE DR
ADOBE RD
S UNION AV
S H ST
COTTONWOOD RD
OLD RIVER RD
S ALLEN RD
BUENA VISTA RD
S CHESTER AV

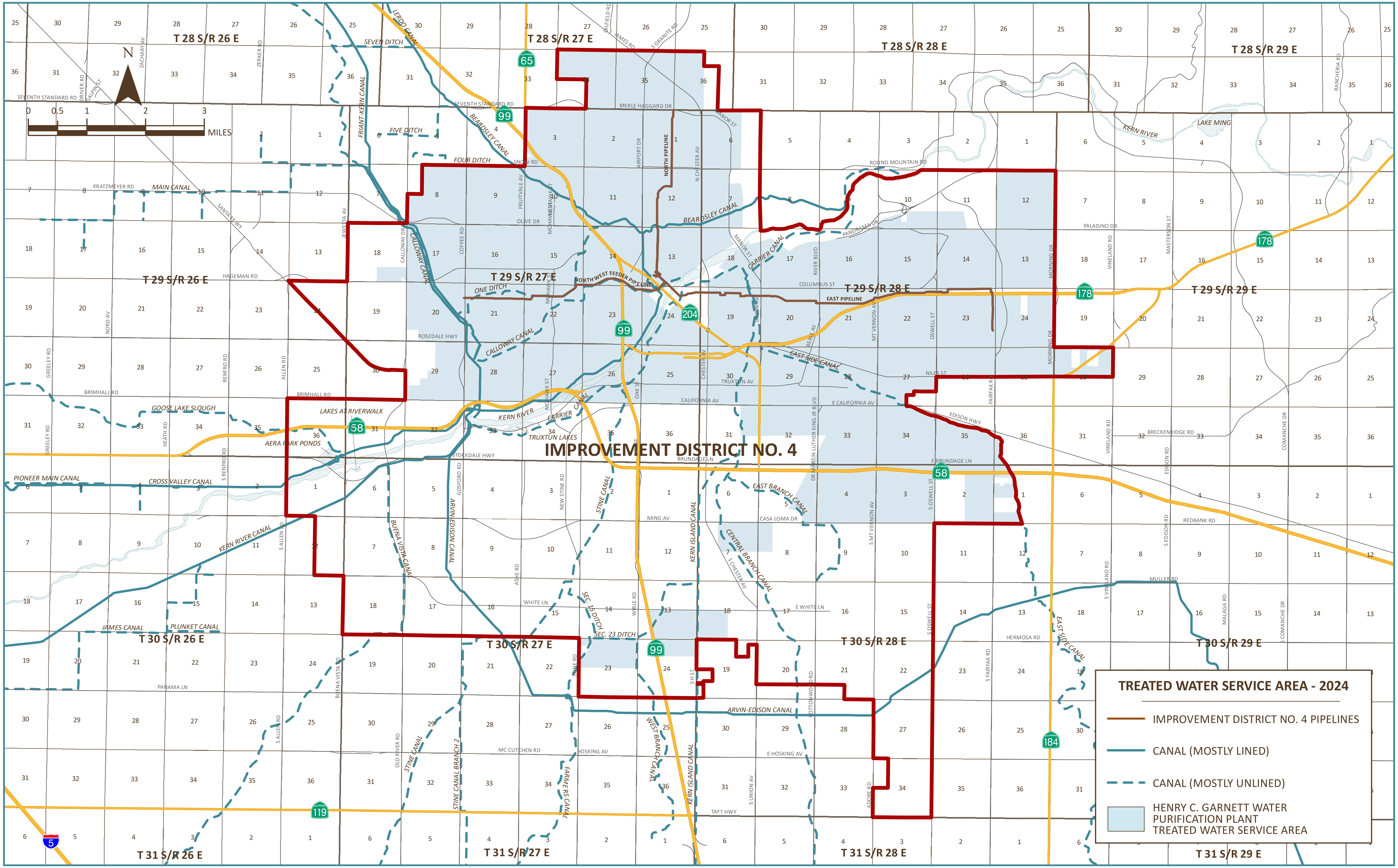
99
65
58
204
178
119
5

PURVEYOR BOUNDARIES - 2024

- IMPROVEMENT DISTRICT NO. 4 PIPELINES
- CANAL (MOSTLY LINED)
- CANAL (MOSTLY UNLINED)
- NO SERVICE
- CALIFORNIA WATER SERVICE COMPANY
- CASA LOMA WATER COMPANY
- CITY OF BAKERSFIELD WATER RESOURCES
- EAST NILES COMMUNITY SERVICES DISTRICT
- NORTH OF THE RIVER MUNICIPAL WATER DISTRICT
- OILDALE MUTUAL WATER COMPANY
- RANCHO DEL RIO MUTUAL WATER COMPANY
- REDBANK WATER SYSTEM
- STOCKDALE ANNEX MUTUAL WATER COMPANY
- STOCKDALE MUTUAL WATER COMPANY
- VAUGHN WATER COMPANY

BY: M. ALLEN
DATE: 11/01/24
REVIEWED BY: JT GARDINER
FILENAME: Plate 2 - Purveyor Boundaries (2024).mxd

Plate 2 - Purveyor Boundaries - 2024



BY: M. ALLEN
DATE: 11/01/24
REVIEWED BY: JT GARDINER
FILENAME: Plate 3 - Treated Water Service Area (2024).mxd

Plate 3 - Treated Water Service Area - 2024

IMPROVEMENT DISTRICT NO. 4

T 28 S/R 26 E
T 28 S/R 27 E
T 28 S/R 28 E
T 28 S/R 29 E
T 29 S/R 26 E
T 29 S/R 27 E
T 29 S/R 28 E
T 29 S/R 29 E
T 30 S/R 26 E
T 30 S/R 27 E
T 30 S/R 28 E
T 31 S/R 26 E
T 31 S/R 27 E
T 31 S/R 28 E
T 31 S/R 29 E

N

0 0.5 1 2 3 MILES

29S/27E-08H53
29S/27E-08H05
29S/28E-18K01
30S/27E-05D01
30S/28E-03D01

SANTA FE WAY
ZACHARY AVE
ZERKER RD
DRIVER RD
SEVENTH STANDARD RD
LERDO CANAL
SEVEN DITCH
FRIANT-KERN CANAL
BEARDSLEY CANAL
FIVE DITCH
FOUR DITCH
WEIDENBACH ST
SNOW RD
KRATZMEYER RD
MAIN CANAL
RENFRO RD
JEWETT AVE
CALLOWAY DR
CALLOWAY CANAL
COFFEE RD
FRUITVALE AVE
MOHAWK ST
OLIVE DR
AIRPORT DR
NORTH PIPELINE
N CHESTER AVE
MANOR ST
CHINA GRADE LOOP
MERLE HAGGARD DR
S GRANITE RD
JAMES RD
ROUND MOUNTAIN RD
RANCHERIA RD
KERN RIVER
LAKE MING
ALFRED HARRELL HWY
LAKE ISABELLA BLVD
PALADINO DR
MASTERSON ST
VINELAND RD
HAGEMAN RD
NORTH WEST FEEDER PIPELINE
CARRIER CANAL
RIVER BLVD
COLUMBUS ST
EAST PIPELINE
ONE DITCH
NORD AVE
GREELEY RD
ROSEDALE HWY
MOHAWK ST
OAK ST
CHESTER AVE
MONTEREY ST
EAGLE AVE
MT VERNON AVE
OSWELL ST
MORNING DR
W NILES ST
E NILES ST
E TRUXTUN AVE
TRUXTUN AVE
CALIFORNIA AVE
E CALIFORNIA AVE
EAST SIDE CANAL
BRIMHALL RD
GOOSE LAKE SLOUGH
HEATH RD
RENFRO RD
ALLEN RD
KERN RIVER
CARRIER CANAL
TRUXTUN LAKES
AERA PARK PONDS
RRB-ID4-JURP PIPELINE
LAKES AT RIVERWALK
STOCKDALE HWY
BRUNDAGE LN
E BRUNDAGE LN
EDISON HWY
PAIRFAX RD
BRECKENRIDGE RD
EDISON RD
COMANCHE DR
PIONEER MAIN CANAL
CROSS VALLEY CANAL
KERN RIVER CANAL
S ALLEN RD
BUENA VISTA CANAL
ARVIN-EDISON CANAL
GOSFORD RD
ASHE RD
NEW STINE RD
STINE CANAL
KERN ISLAND CANAL
DR MARTIN LUTHER KING JR BLVD
EAST BRANCH CANAL
CASA LOMA DR
MING AVE
S MT VERNON AVE
S OSWELL ST
CENTRAL BRANCH CANAL
SOUTHERN AVE
E WHITE LN
WHITE LN
WIBLE RD
STINE RD
SEC. 15 DITCH
SEC. 23 DITCH
JAMES CANAL
PLUNKET CANAL
PANAMA LN
BUENA VISTA RD
OLD RIVER RD
MC CUTCHEN RD
HOSKING AVE
E HOSKING AVE
S H ST
COTTONWOOD RD
S UNION AVE
TAFT HWY
S FAIRFAX RD
HERMOSA RD
STINE CANAL BRANCH 2
FARMERS CANAL
WEST BRANCH CANAL
ARVIN-EDISON CANAL

65 99 58 204 178 119 5 184

ID4 WATER WELLS & SPREADING AREAS - 2024

- WELL-REPORT HYDROGRAPH
- ID4 2800 ACRE WELLS
- ID4 ALLEN ROAD WELLS
- ID4-RRBWSD WELLS
- KERN RIVER SPREADING AREA
- CITY OF BAKERSFIELD BOUNDARY
- IMPROVEMENT DISTRICT NO. 4 PIPELINES
- CANAL (MOSTLY LINED)
- CANAL (MOSTLY UNLINED)

BY: M. ALLEN
DATE: 11/01/24
REVIEWED BY: JT GARDINER
FILENAME: Plate 4 - Water Wells and Spreading Areas (2024).mxd

Plate 4 - ID4 Water Wells & Spreading Areas - 2024

RECHARGE FACILITIES - 2024

- CITY OF BAKERSFIELD AERA PARK
- BERRENDA MESA PROJECT
- BUENA VISTA / WEST KERN BANKING PROJECTS
- BUENA VISTA PALMS PROJECT
- CITY OF BAKERSFIELD 2800 ACRE FACILITY
- STRAND AND STOCKDALE PROJECTS
- KERN DELTA WATER DISTRICT
- KERN WATER BANK AUTHORITY
- NORTH KERN WATER STORAGE DISTRICT
- PIONEER PROJECT
- ROSEDALE-RIO BRAVO WATER STORAGE DISTRICT

- RECHARGE BASINS
- WELL-REPORT HYDROGRAPH
- ID4 2800 ACRE WELLS
- ID4 ALLEN ROAD WELLS
- ID4-RRBWSD WELLS
- IMPROVEMENT DISTRICT NO. 4 PIPELINES
- CANAL (MOSTLY LINED)
- CANAL (MOSTLY UNLINED)

0 0.5 1 2 3 Miles

N

IMPROVEMENT DISTRICT NO. 4

BY: M. ALLEN
DATE: 11/01/24
REVIEWED BY: JT GARDINER
FILENAME: Plate 5 - Recharge Facilities (2024).mxd

Plate 5 - Recharge Facilities - 2024

ELEVATION OF WATER IN WELLS
SPRING 2024

20 FOOT CONTOUR INTERVAL

100 FOOT CONTOUR INTERVAL

IMPROVEMENT DISTRICT NO. 4 PIPELINES

CANAL (MOSTLY LINED)

CANAL (MOSTLY UNLINED)

CONTOURS BY: MICHELLE ANDERSON, PG #8898

NOTE: CONTOURS SHOWN REPRESENT APPROXIMATE OR INFERRED WATER LEVELS FOR THE TIME PERIOD SHOWN ON THIS MAP. THE READER SHALL BE AWARE THAT WATER LEVELS CHANGE THROUGHOUT THE YEAR. FOR THIS REASON, LEVELS REPRESENTED ON THIS MAP ARE NOT INTENDED TO BE USED FOR SITE SPECIFIC INFORMATION. DASHED CONTOUR LINES INDICATE ESTIMATED VALUES.

N

0 0.5 1 2 3 MILES

IMPROVEMENT DISTRICT NO. 4

T 28 S/R 26 E | T 28 S/R 27 E | T 28 S/R 28 E

T 29 S/R 26 E | T 29 S/R 27 E | T 29 S/R 28 E | T 29 S/R 29 E

T 30 S/R 26 E | T 30 S/R 27 E | T 30 S/R 28 E | T 30 S/R 29 E

T 31 S/R 26 E | T 31 S/R 27 E | T 31 S/R 28 E | T 31 S/R 29 E

BY: M. ALLEN
DATE: 11/01/24
REVIEWED BY: JT GARDINER
FILENAME: Plate 6 - Elevation of Water in Wells (2024).mxd

Plate 6 - Elevation of Water in Wells - Spring 2024

DEPTH TO WATER IN WELLS
SPRING 2024

- 20 FOOT CONTOUR INTERVAL
- 100 FOOT CONTOUR INTERVAL
- IMPROVEMENT DISTRICT NO. 4 PIPELINES
- CANAL (MOSTLY LINED)
- CANAL (MOSTLY UNLINED)

CONTOURS BY: MICHELLE ANDERSON, PG #8898

NOTE: CONTOURS SHOWN REPRESENT APPROXIMATE OR INFERRED WATER LEVELS FOR THE TIME PERIOD SHOWN ON THIS MAP. THE READER SHALL BE AWARE THAT WATER LEVELS CHANGE THROUGHOUT THE YEAR. FOR THIS REASON, LEVELS REPRESENTED ON THIS MAP ARE NOT INTENDED TO BE USED FOR SITE SPECIFIC INFORMATION.

N

0 0.5 1 2 3 MILES

IMPROVEMENT DISTRICT NO. 4

T 28 S/R 26 E | T 28 S/R 27 E | T 28 S/R 28 E | T 29 S/R 26 E | T 29 S/R 27 E | T 29 S/R 28 E | T 29 S/R 29 E

T 30 S/R 26 E | T 30 S/R 27 E | T 30 S/R 28 E | T 30 S/R 29 E

T 31 S/R 26 E | T 31 S/R 27 E | T 31 S/R 28 E | T 31 S/R 29 E

EAST PIPELINE

BY: M. ALLEN
DATE: 11/01/24
REVIEWED BY: JT GARDINER
FILENAME: Plate 7 - Depth to Water in Wells (2024).mxd

Plate 7 - Depth to Water in Wells - Spring 2024

CHANGE IN GROUNDWATER DEPTH SPRING 2023 TO SPRING 2024

- 20 FOOT CONTOUR INTERVAL
- 100 FOOT CONTOUR INTERVAL
- AREAS WHEREIN SPRING 2024 GROUNDWATER LEVELS WERE 20 FEET OR MORE ABOVE SPRING 2023 LEVELS
- AREAS WHEREIN SPRING 2024 GROUNDWATER LEVELS WERE 20 FEET OR MORE BELOW SPRING 2023 LEVELS
- IMPROVEMENT DISTRICT NO. 4 PIPELINES
- CANAL (MOSTLY LINED)
- CANAL (MOSTLY UNLINED)

CONTOURS BY: MICHELLE ANDERSON, PG #8898

NOTE: CONTOURS SHOWN REPRESENT APPROXIMATE OR INFERRED WATER LEVELS FOR THE TIME PERIOD SHOWN ON THIS MAP. THE READER SHALL BE AWARE THAT WATER LEVELS CHANGE THROUGHOUT THE YEAR. FOR THIS REASON, LEVELS REPRESENTED ON THIS MAP ARE NOT INTENDED TO BE USED FOR SITE SPECIFIC INFORMATION.

N

0 0.5 1 2 3 MILES

BY: M. ALLEN
DATE: 11/01/24
REVIEWED BY: JT GARDINER
FILENAME: Plate 8 - Change in Groundwater Depth (2024).mxd

Plate 8 - Change in Groundwater Depth - Spring 2023 to Spring 2024