Improvement District No. 4

Report on Water Conditions 2010

Note: Page 45, ID4 History of State Water Project (SWP) Entitlement and Actual Water Deliveries table, totals for the "Banking" column is changed to 299,012 acre-feet.

February 1, 2011

Board of Directors
Kern County Water Agency
P. O. Box 58
Bakersfield, CA 93302-0058

Dear Members of the Board:

The *Improvement District No. 4 2010 Report on Water Conditions*, 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. This is the 38th 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, 2010 through June 30, 2011.

Also included is an operating cost projection through 2011. This projection and the recommendations indicate the desirability of establishing a groundwater charge for the 2011-12 water 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 21, 2011 at 3:00 p.m. in the Stuart T. Pyle Water Resources Center Board Room, located at 3200 Rio Mirada Drive, Bakersfield, California.

Respectfully submitted,

James M. Beck
General Manager

I hereby acknowledge receipt of the *Improvement District No. 4 2010 Report on Water Conditions* and will make it available for examination by the public.

Acting Secretary of the Board

Improvement District No. 4
of the Kern County Water Agency

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Urban Bakersfield Advisory Committee – 2010

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. The Agency Board appoints nine members and nine alternate members to UBAC each year.

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Kern County Water Agency Appointed
Brighthouse Networks
Lou Patterson

Kern County Water Agency Appointed
Vaughn Water Company
Van Grayer

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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). This amount of water is normally used by a family of four during a one-year period for residential use.

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.

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.)

"Department" or "DWR"
State of California, Department of Water Resources.

District
Improvement District No. 4 of the Kern County Water Agency.

Enterprise Fund
General operating fund used to fund ID4 operations.

Ground Water Replenishment
Any act of God or man which replenishes or adds water to the subsurface aquifer system.

ID4
Improvement District No. 4 of the Kern County Water Agency.

MGD
Million gallons per day.

M&I
Municipal and Industrial – Generally refers to contracts for domestic water.

"Plant" or "Purification Plant"
Henry C. Garnett Water Purification Plant.

Potable Water
Water fit to drink pursuant to state and federal statutory requirements and esthetic acceptability.

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

Purveyors
Company or organization which provides a domestic water supply to a group of water users on a retail basis.

Small Groundwater Producing Facility
Facilities which have a discharge opening not greater than two (2) inches in diameter and which do not provide water for an area in excess of 10,000 square feet.

SWP
The 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 Department of Water Resources.

TWCEP
Treated Water Capacity Expansion Project

Very Small Groundwater Producing Facility
Facilities 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 estimated amount of agricultural water withdrawn from the groundwater supplies of Improvement District No. 4 (ID4) for the year 2010 is estimated to be 465 acre-feet (af). See the Groundwater Production Table on page 46.

- The estimated amount of all other non-agricultural water withdrawn from the groundwater supplies of ID4 for the 2010 calendar year is 91,100 af (page 46).

- 29,946 af (including Henry C. Garnett Water Purification Plant process and transportation losses) of treated surface water was delivered to water purveyors in ID4 during water year 2010 (page 41).

- The Kern County Water Agency (Agency) on behalf of ID4 was obligated by contract to pay for approximately 82,946 af of State Water Project (SWP) water in calendar year 2010 (page 44).

- If the 2011 California Department of Water Resources (DWR) SWP allocation remains at 60 percent, Agency staff estimates that 49,768 af of water will be imported into ID4. Approximately 16,589 af of this water will be recharged as conveyance losses in delivering raw surface water to the Henry C. Garnett Water Purification Plant. At time of printing, DWR SWP Table A water allocation remains at 50 percent.

Total fund accumulation in the Enterprise Fund was $9.2 million as of July 1, 2010 and is projected to be $8.2 million as of July 1, 2011. The total fund accumulation includes recommended reserve levels as summarized below.

Staff developed a reserve policy to identify appropriate levels of accumulation within the ID4 fund. The current treated water rate is set at $150 per af. The components of these reserve funds should include: $1.5 million to cover the Henry C. Garnett Water Purification Plant equipment and replacement; $0.5 million for Cross Valley Canal (CVC) power reserves; $2.0 million in additional funds available for catastrophic needs of ID4; and $1.0 million for acquisition of additional surface water supplies. Additionally, ID4 has approximately 260,789 af (page 40) stored in the Kern Water Bank, the Pioneer Project, the City of Bakersfield's (City) 2800 Acre Recharge Facility and the Rosedale-Rio Bravo Water Storage District (Rosedale) and ID4 Joint Use Recovery Project (JURP) area.

It is recommended that charges for groundwater production in ID4, for the water year commencing July 1, 2011 and ending June 30, 2012 be levied as follows:

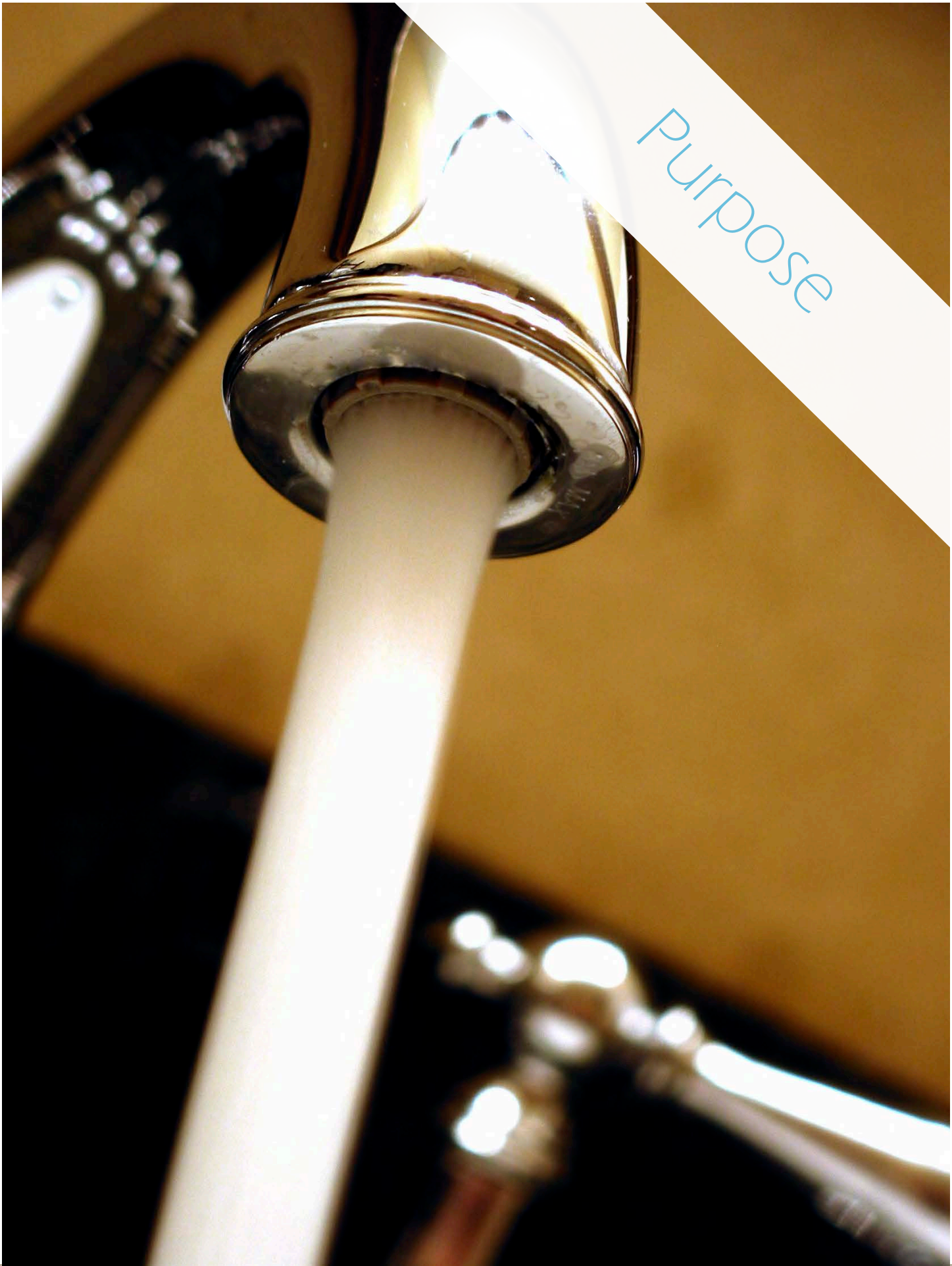
- 1. Agricultural groundwater production:
  $17.50 per acre-foot

- 2. All other groundwater production:
  $35 per acre-foot

- 3. Small groundwater producing facilities:
  $35 (flat rate)

- 4. Very small groundwater producing facilities[1]:
  $0 (no charge)

[1]For administrative convenience, a flat rate annual charge of $35 was levied for small water-producing facilities, and no charge was levied for very small water producing facilities where the cost of collection would exceed the flat rate charge.



Purpose

This is the 38th in a series of annual reports on water conditions in ID4. This report is intended to provide information upon which the levying of groundwater charges for Fiscal Year 2011-12 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 which 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 March 2008, which replaced the 1999 ID4 Financial Management Plan. The Revised Plan updated the financial requirements and reserve policy of ID4 as a result of the Treated Water Capacity Expansion Project.

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 (the "Act"). Following the Act, as amended February 17, 1982, requires that [such notice]:

1. All water-producing facilities (wells) located within ID4 shall be registered with the Agency by the owner or operator.

2. The District Engineer shall prepare an annual report by February 1 of each year.

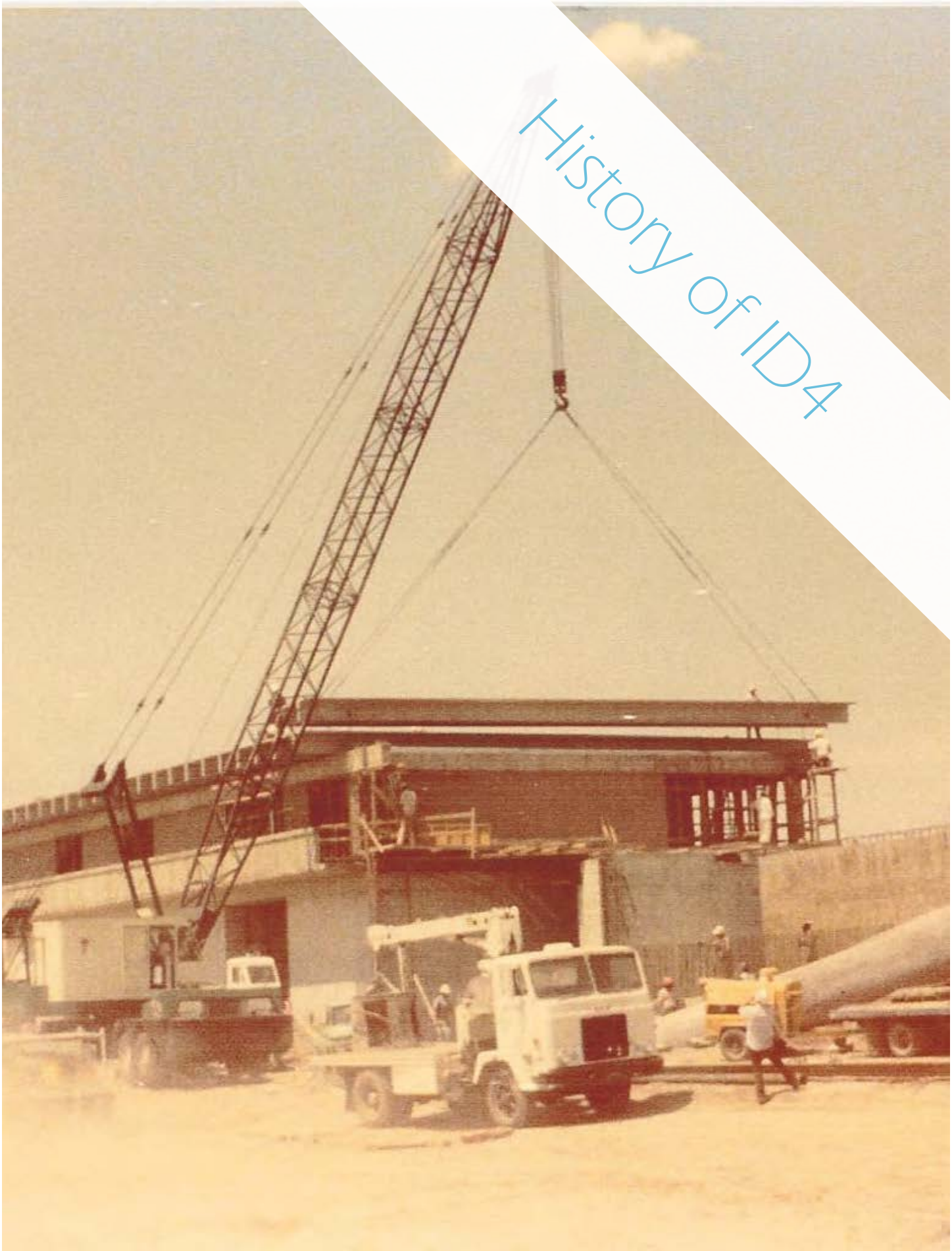
3. A public hearing shall be held on the third Monday in March regarding the Engineer's report and to receive public testimony thereon.

4. 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.

5. 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 Agency 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. Page 49 identifies irrigated agricultural, urban, industrial and undeveloped lands in ID4 based on a 2010 land use survey. Also shown on page 48 is the acreage devoted to each land use classification in 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 metropolitan 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 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 Improvement District No. 4

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 Agency 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. Resolutions 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.

"Prior to construction of the CVC, the primary water supply for all uses within ID4 was pumping groundwater."

The Bakersfield Californian

WEDNESDAY, AUGUST 4, 1976 METROPOLITAN NEWS SECTION PAGES 9 TO 18

Treatment plant and ponds in foreground are part of $11.9 million project to treat state project water carried through Cross Valley Canal for delivery to urban Bakersfield. In background are Kern County Water Agency building, now occupied, and holding pond near Pierce Road and Golden State Highway. Pond will be filled this fall.—(Photo by Jack Knight from plane piloted by Bill Clark)

Historic Conditions

Prior to construction of the CVC, the primary water supply for all uses within ID4 was pumping 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 Agency 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, 2011. 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 and Agency bookkeeping are on a fiscal year basis. For this reason, many of the comparisons cited in this report refer to calendar year 2011, which overlaps the 2011-2012 fiscal year.

The Bakersfield Californian

Despite yesterday's rain, a large group of public officials turned out for formal ceremonies marking the first delivery of state project water to urban Bakersfield. The men in stripes on right are employes of Kern County Water Agency. They served as parking attendants for other dignitaries, many of them present or former members of the agency board of directors. —(Californian Photo)

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 municipal and industrial (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 yield, 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 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.

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 2010 SWP Table A water received are shown on page 40, together with adjustments for exchanges and purchases. Actual historic deliveries are shown on page 44. 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 river water in wet years. In 2010, 5,702 af of river water were supplied for agricultural use within ID4 by the City and Kern Delta.

Treated municipal effluent irrigates agricultural land in the southeast area of ID4. City and county sewage treatment plants in the southeast area processed approximately 20,000 af in 2010, which were used in areas south of Brundage Lane and east of Cottonwood Road.

Water Needed for Surface Delivery

In 2011, ID4 needs about 37,250 af for direct deliveries to the purveyors, with an additional 14,900 af for internal purification plant processing and canal losses to allow for 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 for to augment surface supplies.

Water Needed for Groundwater Replenishment

SWP Table A water supplies not required for the Henry C. Garnett Water Purification Plant are normally utilized for groundwater replenishment. As of January 2011, the Kern River watershed is projected to be about 160 percent of normal. SWP supplies are projected to be at least 60 percent of SWP Table A water amounts, which results in an allocation to ID4 of 49,768 af. This supply is insufficient for full deliveries from the Henry C. Garnett Water Purification Plant. Additional supplies of approximately 5,000 af will be recovered from ID4's stored water in the groundwater banking projects in the Kern Fan area to supplement any delivery shortfall. 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 2010.

Groundwater Conditions

Data collected by Agency staff indicates an average decrease in water levels of 2.4 feet during 2010 (See Figure 1).

The average depth is weighted to account for the non-uniform density of monitored 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. Pages 70-72 depict the water surface elevation and depth-to-groundwater respectively.

Estimated Groundwater Extractions

Groundwater extraction is closely related to land use in ID4. Agency staff has conducted annual land use surveys since 1972. Data of historical land use in ID4 is shown on page 48. The ID4 crop report is shown on page 49 and shows agricultural land use by crops type produced in ID4 in 2010. The estimated amount of groundwater extracted in 2010 was 91,565 af (page 46).

Groundwater Replenishment

ID4's Project provides a treated surface water supply to replace a portion of groundwater pumping. The replaced pumping, or in-lieu recharge, combined with imported SWP or exchanged Kern River water recharges the underground aquifer. Recharge made possible by water exchanges with river interests commenced in 1971. Recharge using SWP water commenced in 1975 with the completion of the CVC. Absent environmental or drought-induced SWP Table A water amount reductions, the average annual amount available for replenishment is about 23,000 af. 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 1,780,766 af. The SWP Table A water available for recharge or total in the same period was 847,227 af. The difference 933,539 af, was obtained from exchanges with Kern River or Friant-Kern Canal interests and banked water imports.

In District recharge for 2010 was 64,102 af (page 43). The final SWP Table A water allocation was 50 percent and the Kern River runoff was 125 percent.

Operations

Banking

ID4 recovered water from water banking projects in early 2010 due to the initial SWP allocation of 5 percent. Hydrologic conditions improved as the year progressed, and as the final SWP allocation increased to 50 percent, ID4 was able to cease recovery from the banking projects. ID4 also banked water through exchanges with Kern Water Bank Members and Pioneer Project Participants during the year.

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 between project participants, the Agency and DWR. The number of recovery wells currently available is 86, yielding a total annual recovery capacity of approximately 230,000 af. The maximum annual recharge capacity of the project is about 450,000 af. ID4 recovered 3,102 af and banked 5,008 af through an exchange with Kern Water Bank Members in 2010.

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 35 which yield a total annual recovery of approximately 100,000 af. The maximum annual recharge capacity of the project is 146,000 af. ID4 recovered 1,315 af and banked 2,124 af through an exchange with Pioneer Project Participants in 2010.

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 during 2000 and 2001. In 2003, the project was completed with the installation of pumps, motors and pipelines. The overall recovery capacity for this project is 20 cubic feet per second (cfs) or 12,000 af annually. During 2010, ID4 made these wells available to Pioneer Project Participants who recovered 861 af.

Allen Road Complex Well Field

IID4 owns and operates seven wells located along the north side of the Kern River between Allen Road and Calloway Drive. These wells may be used as part of a joint program with the City to recover previously recharged water for delivery into the Kern River channel for recreational purposes during dry years. ID4 can also use the wells to enhance potential exchanges or for water quality benefits for the Henry C. Garnett Water Purification Plant. ID4 did not utilize these wells to recover water in 2010.

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

The Rosedale and ID4 JURP facility includes seven recovery wells with a total capacity of 35 cfs. ID4 operates this well field to recover banked water for two of Rosedale's partners, Kern-Tulare Water District and Arvin-Edison Water Storage District with a maximum annual capacity of 21,000 af. 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 2010, ID4 did not recover water through the JURP wells. Rosedale recharged approximately 30,000 af of water into the JURP area on behalf of its banking partners.

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 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 $4.00 per af at pumping plants one through seven, resulting in a total average cost of $28.00 per af when water is delivered the full distance from the California Aqueduct to the terminus of the CVC Extension. 2010 Exchange activity is summarized on page 40.

ID4 also continued treated water deliveries to the City by utilizing surplus capacity in the Henry C. Garnett Water Purification Plant. The deliveries were made with City-owned water and are shown as part of the exchange activity on page 40. A total of 3,226 af were purified and delivered to customers in the City service area in 2010.

Summary of Water Supply Operations

The total amount of direct, in-lieu and Kern River recharge incidental to ID4 operations since 1971 is shown on Figure 1 (page 60). This includes banking programs outside ID4 boundaries, which also benefit ID4.

Total ID4 in-district recharge (direct recharge)	1,780,766
Total Treated Water Supply (in-lieu recharge)	906,043
Subtotal of ID4 Project recharge activities	2,686,809

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.

Subtotal of ID4 Project recharge activities	2,686,809
Incidental canal & river recharge	1,270,000
Total recharge within ID4	3,956,809
Total reported groundwater production within ID4	(2,956,326)
Net balance for ID4 Project duration	1,000,483

*All values above are in acre-feet


Planning & Engineering

Treated Water Capacity Expansion Project

On September 21, 2005, Agreements for a Water Supply (Agreements) between the Agency and California Water Service Company (Cal Water), the City, East Niles Community Services District (East Niles) and North of the River Municipal Water District (North of the River) were executed. The Agreements included increasing treated water deliveries from the current level of 25,000 af per year to 53,000 af per year over a 30-year period. New water treatment, pumping and transmission facilities are required in order to produce and deliver the water contracted by Project Participants. The Treated Water Capacity Expansion Project (TWCEP) was developed to meet the infrastructure needs. The TWCEP includes the expansion of the existing Henry C. Garnett Water Purification Plant, the North Feeder Facility, the East Feeder Facility and the construction of the Northwest Feeder Facility.

Henry C. Garnett Water Purification Plant Expansion Project

The Henry C. Garnett Water Purification Plant Expansion Project (Expansion Project) will increase peaking capacity from 38 million gallons per day (mgd) to 72 mgd. On May 20, 2008, staff issued the Notice to Proceed to SSC Construction, Inc. (SSC) for the construction of the Expansion Project. During 2010, SSC focused work on four facilities described below.

Raw Water Pump Station: A 4,200-square-foot pumping facility designed to pump up to 72 mgd of raw water from the Temperature Equalization Pond to the Henry C. Garnett Water Purification Plant. The facility is equipped with four 300 horsepower pumps with variable frequency drives. SSC completed installation of process measurement instrumentation and the heating ventilation and air conditioning system. Pumps and variable frequency drives were tested and put into operation.

Treatment Train B (Train B): A 71,800 square-foot-conventional treatment facility designed to treat up to 45 mgd and operate parallel to the existing treatment train. The facility has a hydraulic pump diffusion flash mixer, five flocculation basins, five sedimentation basins and six filter basins. The dual media filter basins utilize anthracite and sand for filtration. SSC completed the installation of process equipment in the flocculation, sedimentation and filtration structures. Filter media were placed in the filters and prepared for service through the filter backwash process. Startup testing was performed in all Train B facilities using both local manual testing and remote operation with a new supervisory control and data acquisition system (SCADA).

Treatment Train A (Train A): The original 60,000-square-foot conventional treatment facility designed to treat up to 38 mgd and operates parallel to Train B. The facility has a hydraulic pump diffusion flash mixer, three flocculation basins, three sedimentation basins and six filter basins. The dual media filter basins utilize anthracite and sand for filtration. SSC started the demolition work on the existing facilities slated to be replaced or upgraded through the expansion process. New concrete interior walls were constructed for the flocculation basins to improve the mixing energy from the flocculators. The existing filter underdrain system was inspected, repaired and prepared for new filter media. SSC also installed the facility piping, process instrumentation and operational control system.

Clearwell No. 3: A 32,000-square-foot underground concrete water storage facility designed to store 4.7 million gallons of treated water from both treatment trains. The facility has a hydraulic flow-through design which uses a hypalon baffle wall system to increase contact time for disinfection and to reduce short circuiting of flow. This facility operates in series with the two existing clearwells. SSC completed the installation of valve operators, hatches and railings. Clearwell No. 3 was disinfected and put into service along with Train B.

Chemical Storage and Feed Facility: An 8,300-square-foot facility designed to house the chemical metering pumps used to deliver chemicals used for the water purification processes to various injection points throughout both treatment trains. Chemical storage is located adjacent to the building separated by dual containment walls depending on the type of chemical contained in the storage tanks. SSC completed the installation and testing of the structure, storage tanks, chemical feed pumps, metering instrumentation and process piping.

The Expansion Project is scheduled to be completed in April 2011, with an overall estimated cost of $80 million.

Henry C. Garnett Water Purification Plant Electrical Service Entrance Project

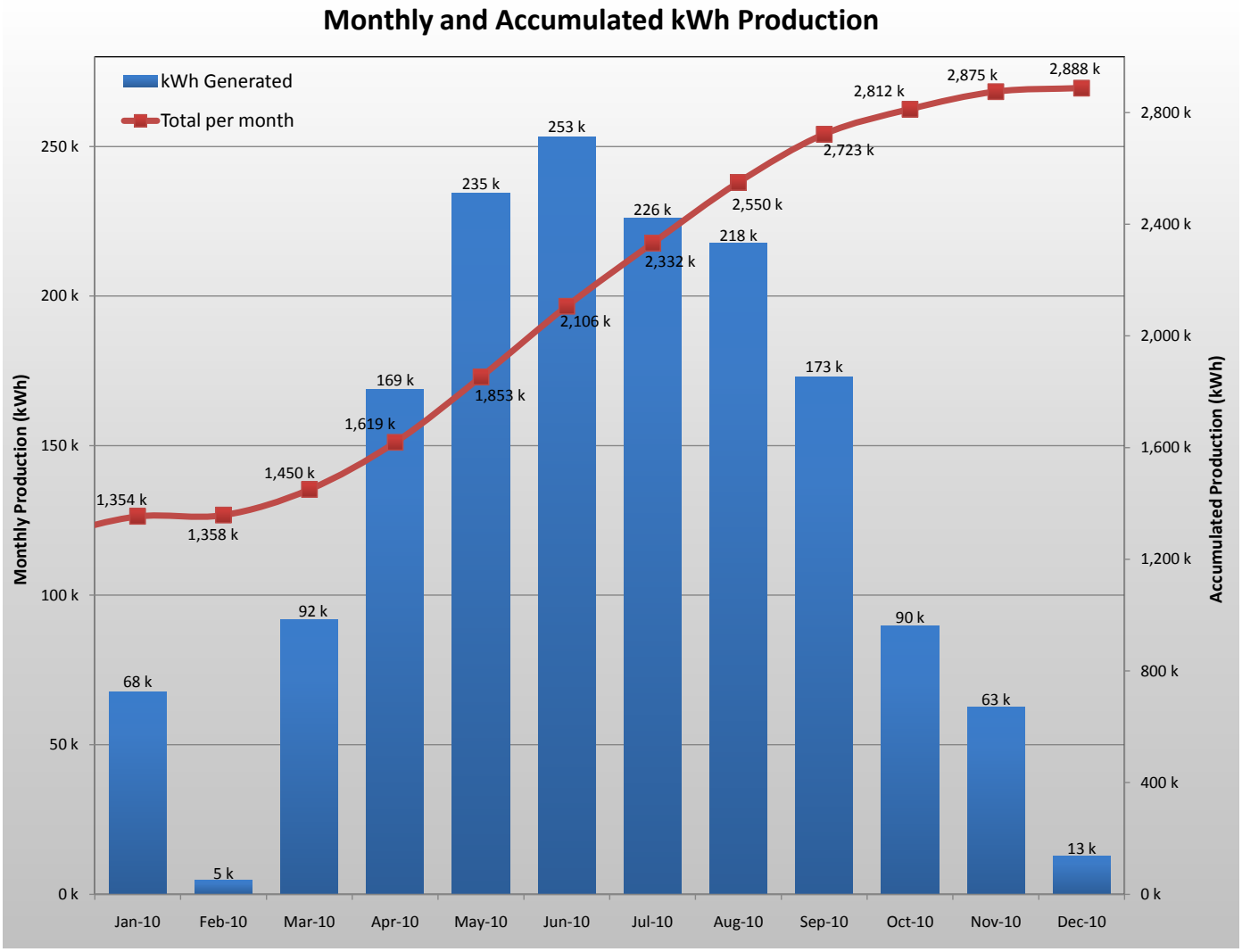
The Expansion Project increased the electrical load at the site. The Henry C. Garnett Water Purification Plant Electrical Service Entrance Project (Electrical Service Entrance Project) was constructed to respond to the increased electrical load. The facility includes a 115,000-volt substation, a 5,000-square-foot electrical control building and a 4,160-volt electrical distribution system. The electrical substation is the connection of electrical load to service from the Pacific Gas and Electric Company (PG&E). The control building provides electrical supply management of PG&E's service, the ID4 Solar Photovoltaic Project (Solar Project) and the two 2.0 megawatt standby diesel generators. The electrical switchgear in the building also provides safety and control as the power is distributed to various load centers. The Electrical Service Entrance Project has allowed ID4 to move from primary electrical services to transmission level services, which will save approximately $260,000 annually.

The Electrical Service Entrance Project was completed in December 2009, with an overall cost of $15.9 million.

Improvement District No. 4 Solar Photovoltaic Project

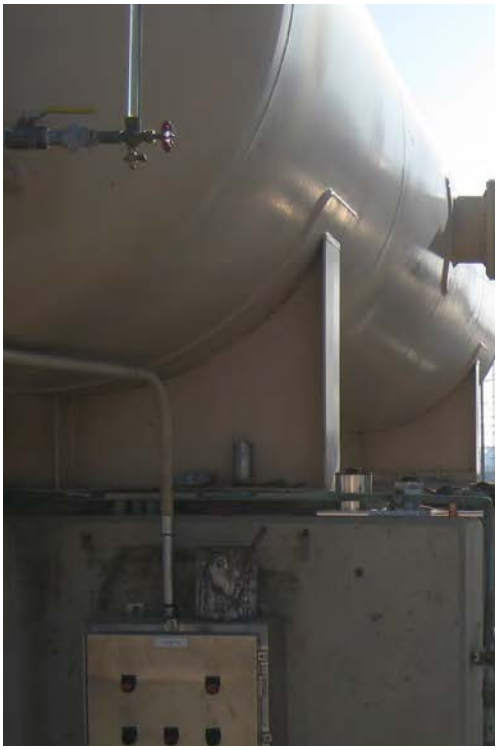
The Solar Project was constructed to offset current and future electrical power costs at the Henry C. Garnett Water Purification Plant. This 1.0 megawatt alternating current of California Energy Commission-rated ground-mount solar photovoltaic (PV) facility is located on approximately five acres of land northwest of the Henry C. Garnett Water Purification Plant. Approximately 7,000 150-watt PV panels were installed on a single axis tracking support structure. The panels are wired together and connected to five inverters where the voltage is converted from direct current to alternating current. The inverters are connected through a series of underground electrical duct banks to a 480-volt electrical switch and breaker facility. A transformer located adjacent to the breaker facility steps up the voltage to 5 kilovolts where it is fed to the Electrical Service Entrance facility.

The Solar Project was completed in March 2009, with an overall cost of $9.2 million. Through December 2010 the Solar Project has produced a total of 2,888 megawatt-hours of energy, earning rebates of approximately $1,390,536 through participation in the California Solar Initiative and saving $331,224 through engery offset production.



North Feeder Expansion Project

ID4 expanded pumping capacity and modified water transmission facilities for the existing North Feeder Facility, which serves North of the River and Oildale Mutual Water Company (Oildale Mutual). The project was completed in two phases which included the Parallel North Pipeline Project and the North Pump Station Project. The Parallel North Pipeline Project included the construction of approximately one mile of 27-inch-diameter cement mortar-lined and coated steel pipe to provide additional pipeline capacity from the Henry C. Garnett Water Purification Plant to the north Bakersfield area. The North Pump Station Project included the installation of four 600 horsepower pumps, and the construction of a discharge pipeline and an electrical control building. The constructed improvements provide 22.1 mgd of treated water pumping capacity to North of the River and Oildale Mutual. The North Feeder Expansion Project was completed with an overall cost of $4.4 million.



East Feeder Expansion Project

ID4 is currently in the process of expanding pumping capacity and water transmission facilities for the existing East Feeder Facility, which serves Cal Water and East Niles. The four-part project includes: (1) expansion of the East Feeder Facility; (2) construction of the Oswell Bypass Project; (3) modifications to the 23 Corner Tank Facility; and (4) relocation of the State Route 178 pipeline crossing.

The expansion of the East Feeder Facility has been divided into two parts which include the East Pump Station Project and East Pipeline Project. The East Pump Station Project will increase capacity in the existing East Pump Station by 7.1 mgd and was completed in December 2010 for a cost of $1.2 million. The East Pipeline Project includes the construction of a 30-inch diameter pipeline between the Oswell Reservoir and 23 Corner Tank Facilities. The East Pipeline Project was completed in November 2008 at a cost of $1.3 million.

The Oswell Bypass Project was completed in June 2009, with an overall cost of $2.8 million. Modifications to the 23 Corner Tank Facility are scheduled to be completed in March 2011 at a cost of $400,000. The State Route 178 pipeline crossing project was completed in October 2007, at a cost of $700,000.

Northwest Feeder Project

ID4 constructed 32 mgd of new treated water capacity to the west side of ID4 through the Northwest Pump Station and a Northwest Pipeline, collectively called the Northwest Feeder Project. The Northwest Pump Station is located at the Henry C. Garnett Water Purification Plant and will pump 32 mgd at 80 pounds per square inch into the Northwest Pipeline. The Northwest Pipeline Project included the construction of three and one-half miles of 42-inch diameter concrete mortar lined and coated pipeline from the Northwest Pump Station located at the Henry C. Garnett Water Purification Plant to the west side of the Coffee Road and Meany Avenue intersection. The Northwest Pipeline is connected to the existing distribution systems of Cal Water and the City.

The Northwest Feeder Project was completed in October 2007, at a cost of $15.5 million.

Henry C. Garnett Water Purification Plant

In 2010, the Henry C. Garnett Water Purification Plant delivered 29,384 af of water for domestic consumption. This represents a 3.7 percent increase when compared to the amount delivered in 2009 (28,335 af). Additional water was used for filter backwash, plant process use, sludge discharge, evaporation, TWCEP construction activities and losses.

The peak production flow occurred on August 2, 2010 and amounted to 48.6 mgd. This represents a 8.0 percent increase when compared to the maximum design flow of 45.0 mgd. The Henry C. Garnett Water Purification Plant operated at flows greater than design capacity 7 days in August.

The Henry C. Garnett Water Purification Plant's chemical costs were 27 percent less in 2010 than 2009 ($449,778 in 2010 and $619,402 in 2009). This represents an incremental cost decrease of approximately $6.55 per af of water delivered for domestic purposes. This change is a result of decreased contractual chemical costs from suppliers and improvement in source water quality.

In 2010, 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 is on page 49, as well as a history of chemical use for the previous ten years. Page 41 shows a history of water use by source and page 50 shows a complete breakdown of the 2010 and historical operating costs.

Operations

In 2010 multiple components of the TWCEP were constructed and readied for service. Agency staff worked with various contractors to test newly installed equipment and instrumentation. Agency staff also developed standard operating procedures for the startup and testing of Train B. The standard operating procedures were reviewed with inspectors from the California Department of Public Health (CDPH) prior to their inspection of Train B and other TWCEP facilities. On June 30, 2010, after demonstrating Train B was producing water in accordance with State and Federal drinking water regulations, Agency staff received CDPH permission to deliver water from Train B to treated water purveyors.

Agency staff operated Train A and Train B in parallel during July, 2010. Operating the two treatment trains enabled the Agency staff to test various features of Train B while maintaining the ability to deliver treated water from Train A if needed. Agency staff also participated in training on the operation of new raw water pumps, chemical feed pumps, flocculators, sludge drives, metering devices, automated filter backwashing and SCADA system. Staff also continued to develop and amend standard operating procedures for the new distribution system facilities that were part of the TWCEP.

Agency staff began updating the Henry C. Garnett Water Purification Plant operations manual to include instructions and schematics for the SCADA system and new equipment. The operations manual will be completed in 2011.

Agency staff continued exploring the benefits of using copper sulfate instead of potassium permanganate for algae control in the temperature equalization pond. In 2010, the utilization of copper sulfate as an oxidant continued to show a significant cost savings versus using potassium permanganate, with no impact to water quality.

Agency staff conducted the semiannual well runs within ID4. This included static water level monitoring of hundreds of wells in the metropolitan Bakersfield area.

Maintenance

Agency staff continued to provide assistance with TWCEP construction activities. Staff was responsible for locating existing underground facilities, repairing damaged underground facilities, providing construction water with backflow protection, providing technical and physical assistance with facility shutdowns and restarts, addressing site security issues and providing disinfection oversight. Staff continued to perform corrective and preventive maintenance to the existing ID4 facilities and began drafting and implementing preventive maintenance procedures for the newly installed facilities and equipment. A study of equipment reliability and failure analysis of all key operational components will be conducted.

Staff also assisted in the startup and testing activities for the new Raw Water Pump Station and Train B by overseeing the disinfection, filter media placement, basin filling and all equipment startup. Shortly after Train B commissioning, demolition and modernization work began on Train A. Staff participated in the construction process by shutting down and safely securing operational facilities prior to their demolition and removal. Older electrical facilities were shutdown, and newer systems brought online.

The Northwest Feeder Pipeline and Pumping Station continued to operate and provided increased water deliveries to the northwest Bakersfield area. Agency staff worked to refine the proper operating ranges as the City and Cal Water connections were placed into operation along the Northwest Pipeline.

Work commenced to expand the East Pump Station water distribution capacity and construct a North Pump Station. Staff provided oversight and assistance with the demolition, disinfection, and flushing of facilities and piping. The older control systems were moved out of the way of construction and staff provided assistance in integrating the older and newer systems into the SCADA system. By the end of 2010, Agency staff assisted with startup and testing of the new North Pump Station and the modified East Pump Station.

Agency staff conducted weekly and monthly monitoring of the new Electrical Service Entrance facility. Agency staff started the process of drafting and implementing new preventative maintenance tasks for the complex array of electrical equipment, controls and switchgear. The new electrical control systems were incorporated into the SCADA system. Agency Staff conducts weekly inspections and biweekly testing of the two 2.0 megawatt standby generators.

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 volatile organic chemicals (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 acids, TOC and TTHM constituents.

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.

Taste and odor samples were analyzed weekly in the warmer months and bimonthly in the cooler months in an effort to detect and avoid odor incidents. Multiple batches of copper samples were analyzed as a result of aquatic growth control measures occurring on the temperature equalization pond. Numerous batches of samples from newly constructed TWCEP facilities were collected and analyzed for general mineral, physical, metal, inorganic nonmetallic, coliform bacteria and VOC constituents.

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. Total 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 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, 2010, for all ID4 funds together with a forecast of cash flow conditions for the next fiscal year is shown on pages 51-53. These projections are subject to change based on capital projects deemed necessary to the continued operation of ID4. The Agency Board adopted Resolution 06-08 which incorporated the Revised Financial Plan and established new groundwater charges as well as a long-term surcharge on treated water rates. The new rates are projected to generate adequate revenues for the continued operation of the ID4 Project, while meeting ID4 debt service coverage requirements from the financing obtained to construct the TWCEP.

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 cost 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.

Improvement District No. 4 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. The 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 purchase of State or federal water supplies. The 2009-10 tax rate (per $100.00) is 0.033188.

3. The Enterprise Fund is an operations fund established to account for money necessary for 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 charges, which are currently $17.50 per af for agricultural water and $35 per af for all other types of water, and sales of treated water at the rate of $150 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 funds must remain in those funds. The Enterprise Fund accumulation of July 1, 2010, was $9.2 million including reserves of about $1.5 million for equipment replacement, $500 thousand for CVC power reserves, $2.0 million for catastrophic needs of ID4 and $1.0 million for acquisition of additional surface water supplies.

The present level of groundwater charges and sales of treated water are projected to yield approximately $7.5 million. It is anticipated that the operating expenses of ID4 will exceed the estimated revenues in 2010 by approximately $1.0 million, mainly due to the costs associated with the recovery of banked water to augment surface supplies and surface water exchange fees.

Well Registration and Collection of Groundwater Charges

Wells within ID4 are registered pursuant to Section 14.24 of the Agency Act. (See page 47)

On July 1, 2010, agricultural groundwater charges were $17.50 per af, and charges for all other groundwater extractions were $35 per af. For administrative convenience, a flat rate annual charge of $35 was levied for small water producing facilities and no charge was levied for very small water-producing facilities where the cost of collection would exceed the flat rate charge.

ID4 Financial Management Plan

On March 11, 2008 the Board adopted the Revised Plan which updated the previous ID4 Financial Management Plan. The Revised Plan provides detail on the principles and practices to be followed in administering the financial resources of ID4. The Revised Plan also 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 meet ID4's debt repayment obligation. With the adoption of the Revised 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 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 (COPs) to fund $22.5 million of the Treated Water Capacity Expansion costs and refund the 1999 certificates of participation. In 2008, ID4 issued an additional $121 million in water revenue COPs to fund capital improvement projects associated with the TWCEP. The COPs will be retired in 30 years. In 2006, ID4 also entered into a low-interest loan agreement with the State of California Department of Water Resources Safe Drinking Water State Revolving Fund (SDWSRF) Program for $2.82 million to fund the Oswell Bypass Project. The SDWSRF loan payments will become due in 2010 and 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 actually required for delivery of the purveyor's water, and whether or not the TWCEP is completed.

2010 ID4 Water Supplies, Exchanges, and Deliveries (acre-feet)

ID4 SUPPLIES	SWP[1]	SWP by Exchange[2]	SWP by Exchange[3]	Bank Recovery	Total
SWP (M&I)	38,500				38,500
SWP (Ag)	2,973				2,973
Carryover 2008	12,698				12,698
Turnback Pool A	29				29
Turnback Pool B	247				247
Recovery				4,376	4,376
Subtotal	54,447	-	-	4,376	58,823
ID4 EXCHANGES / OBLIGATIONS					
30K NKWSD Exchange 2007		6,411			6,411
30K NKWSD Exchange 2009		1,765			1,765
Arvin-Edison Water Storage Dist 2005 *receipt*	3,661			6,339	10,000
Buena Vista WSD *payback*	(5,000)				(5,000)
City of Bakersfield NW Feeder		3,226			3,226
Dudley Ridge Water Dist 2010	(965)		965		-
Kern Delta WD 2010	(3,034)	3,034			-
Kern Tulare WD *historical balance*	1,958				1,958
Kern Tulare WD 2010 *receipt*		26,825			26,825
Kern Tulare WD 2010 *payback*	(22,084)		(4,741)		(26,825)
Kern Water Bank Recovery	3,102			(3,102)	-
North Kern WSD/West Kern WD 2006 *receipt*		4,641			4,641
North Kern WSD 2010	(10,000)	10,000			-
North Kern WSD Category A		544			544
Pastoria Energy Facility (KWBA)	(250)			(71)	(321)
Pioneer Project Recovery	1,315			(1,315)	-
Wheeler Ridge-Maricopa WSD 2010	(3,776)		3,776		-
Total Exchanges/Obligations	(35,073)	56,446	-	1,851	23,224
Available Supplies	**19,374**	**56,446**	**-**	**6,227**	**82,047**

acre-feet

ID4 DELIVERIES	SWP[1]	SWP by Exchange[2]	SWP by Exchange[3]	Bank Recovery	Total
Henry C. Garnett Water Purification Plant	718	29,231			29,949
In-District Transportation Recharge	7,751	27,195			34,946
Kern Water Bank	523				523
Pioneer Project	270				270
Out of District Transportation Losses	25				25
Lake Isabella Evaporative Losses		19			19
Carryover 2010	10,086			6,227	16,313
Total Deliveries	**19,374**	**56,446**	**-**	**-**	**82,047**

ID4 Groundwater 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 Water Banked
Kern Water Bank	9.62%	450,000	230,000	43,290	22,126	141,342
Pioneer Project	10%	146,000	100,000	14,600	10,000	54,751
ID4 Banking Wells[4]	100%		12,000		12,000	62,951
ID4/Rosedale Joint Use Recovery Project[5]	22.2%		21,000		5,940	1,745
Allen Road Well Field	100%		36,000		36,000	
Total		596,000	399,000	57,890	86,066	260,789

[1] *SWP allocation for 2010 was 50%.*

[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 Acre Recharge Facility.*

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

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

ID4 History of Purification Plant Water Use by Sources (acre-feet)

Year	State Water Project	State Water Project by Exchange[1]	State Water Project by Exchange[2]	Recovered	Total
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
TOTAL	**188,892**	**644,016**	**14,871**	**58,264**	**906,043**

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

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

History of Groundwater Replenishment by ID4

Year	% Allocation	SWP	Recovery[1]	SWP by Exchange[2]	Friant-Kern[3]
1971				6,400	-
1972				11,000	-
1973				67,500	-
1974				10,900	-
1975		5,700		-	-
1976		27,800		-	-
1977		6,400		2,000	-
1978	100%	1,470		37,840	2,990
1979	100%	60,680		36,200	1,120
1980	100%	23,210		23,230	3,460
1981	100%	55,270		2,350	480
1982	100%	5,480		35,810	2,110
1983	100%	1,250		10,860	3,290
1984	100%	15,690		5,120	1,690
1985	100%	7,980		32,280	940
1986	100%	22,530		68,000	2,220
1987	100%	14,000		18,200	540
1988	100%	5,210		29,850	-
1989	100%	6,990		14,040	-
1990	50%	10,713		3,116	-
1991	0%	1,651		6,279	-
1992	45%	2,574	1,750	4,437	-
1993	100%	51,045	-	30,319	32,727
1994	50%	24,671	-	15,250	193
1995	100%	50,200 [5]	-	76,878	23,000 [5]
1996	100%	58,934	-	65,281	13,283
1997	100%	744	-	66,015	5,432
1998	100%	17,642	-	45,680	4,793
1999	100%	70,898	-	13,872	842
2000	90%	26,304	-	22,843	4,699
2001	39%	4,440	4,496	18,601	-
2002	70%	7,537	-	43,904	-
2003	90%	24,303	-	24,229	-
2004	65%	20,018	2,640	14,466	-
2005	90%	89,743	689	36,502	16,557
2006	100%	89,601	-	38,962	12,831
2007	60%	25,901	336	20,411	1,567
2008	35%	2,179	124	34,530	
2009	40%			38,166	
2010	50%	8,469		56,426	
TOTAL		**847,227**	**10,035**	**1,087,747**	**134,764**

[1] Recovered from wells on Kern Fan Element property (unavoidable losses in conveyance to water treatment 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 snow melt runoff at First Point.

[5] Estimated.

Total	Kern-River Runoff (% of mean)[4]	In District Recharge	Banked Water
6,400		6,400	-
11,000		11,000	-
67,500		67,500	-
10,900		10,900	-
5,700	81	5,700	-
27,800	23	27,800	-
8,400	20	8,400	-
42,300	230	42,300	-
98,000	88	98,000	-
49,900	208	49,900	-
58,100	53	58,100	-
43,400	168	43,400	-
15,400	325	15,400	-
22,500	89	22,500	-
41,200	89	41,200	-
92,750	187	83,423	9,327
32,740	44	32,740	-
35,060	34	35,060	-
21,030	50	21,030	-
13,829	24	13,829	-
7,930	59	7,930	-
8,761	39	8,761	-
114,091	126	92,195	21,896
40,114	41	30,005	10,109
150,083	199	104,148	45,935
137,498	128	85,232	52,266
72,191	122	67,670	4,521
68,115	239	40,427	27,688
85,612	53	85,543	69
53,846	65	46,054	7,792
27,537	54	24,973	2,564
51,441	43	41,258	10,183
48,532	70	20,152	28,380
37,124	48	35,152	1,972
143,491	169	104,053	39,438
141,394	156	107,938	33,456
48,215	26	45,592	2,623
36,833	72	36,833	
38,166	63	38,166	
64,895	125	64,102	793
2,079,778		**1,780,766**	**299,012**

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

		SWP SUPPLIES						
		Table A Entitlement						
Year	SWP Allocation	M&I	Ag	Table A Allocated	Long Term Purchase	Surplus *	Other **	Total Supply
1970	100%	18,700	-	18,700	-	-	-	18,700
1971	100%	22,100	-	22,100	-	-	-	22,100
1972	100%	24,500	-	24,500	-	-	-	24,500
1973	100%	28,000	-	28,000	-	-	-	28,000
1974	100%	31,400	-	31,400	-	-	-	31,400
1975	100%	35,000	-	35,000	-	-	-	35,000
1976	100%	37,300	-	37,300	-	-	-	37,300
1977	90%	40,800	-	36,720	-	-		36,720
1978	100%	43,100	-	43,100	-	-	10,892	53,992
1979	100%	45,400	-	45,400	-	-	48,524	93,924
1980	100%	47,700	-	47,700	1,050	-	3,104	51,854
1981	100%	50,200	-	50,200	1,250	-	30,545	81,995
1982	100%	53,600	-	53,600	1,550	-	2,000	57,150
1983	100%	56,000	-	56,000	1,850	-	-	57,850
1984	100%	59,400	-	59,400	2,530	-	7,913	69,843
1985	100%	62,900	-	62,900	2,795	-		65,695
1986	100%	65,300	-	65,300	3,875	-	2,908	72,083
1987	100%	68,800	-	68,800	3,950	-	-	72,750
1988	100%	71,200	9,335	80,535	4,750	-	620 [5]	85,905
1989	100%	73,500	9,860	83,360	5,477	-	6,530 [4]	95,367
1990	100%	77,000	10,276	82,138	6,100	1,554	-	89,792
1991	30%	77,000	10,276	23,100	5,600	1,554	635 [5]	30,889
1992	45%	77,000	10,276	39,274	5,400	1,554	2,500 [5]	48,728
1993	100%	77,000	10,276	87,276	5,310	1,554	39,189	133,329
1994	53%	77,000	10,276	46,169	5,220	1,554	-	52,943
1995	100%	77,000	10,276	87,276	5,050	-	(2,195) [6]	90,131
1996	100%	77,000	10,276	87,276	11,100	-	2,011 [5]	100,387
1997	100%	77,000	5,946	82,946	11,000	-	-	93,946
1998	100%	77,000	5,946	82,946	10,800	-	-	93,746
1999	100%	77,000	5,946	82,946	10,600	-	-	93,546
2000	90%	77,000	5,946	74,651	14,352	47,122	-	136,125
2001	39%	77,000	5,946	32,349	6,219	-	14,395	52,963
2002	70%	77,000	5,946	58,062	6,455	-	3,593	68,110
2003	90%	77,000	5,946	74,651	10,503	2,491	13,447	101,092
2004	65%	77,000	5,946	53,915	5,435	7,469	435	67,254
2005	90%	77,000	5,946	74,651	11,474	56,277	16,432	158,834
2006	100%	77,000	5,946	82,946	13,219	42,174	390	138,729
2007	60%	77,000	5,946	49,768	4,080	-	8,280	62,128
2008	35%	77,000	5,946	29,031	-	-	136	29,167
2009	40%	77,000	5,946	33,178	-	-	1,236	34,414
2010	50%	77,000	5,946	41,473	-		12,974	54,447
TOTALS		**2,474,900**	**168,425**	**2,214,566**	**176,994**	**163,303**	**213,520**	**2,768,383**

* Replaced by interruptible water after execution of the Monterey Agreement in December 1994

** Surplus, Unscheduled Surplus, Dry Year Cutback/Payback, Carryover, Interruptible, exchanges and GRP water

*** ID4 banking in City's 2,800 acres, Pioneer North & South, and Kern Water Bank

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

ID4 Deliveries						
Deliveries within ID4	Banking ***	Water Transfers	Total Deliveries	Carryover	SWP Supply Deficiency	Inability to Accept SWP Supply
-	-		-	-	-	18,700 [1]
22,100	-		22,100	-	-	-
24,500	-		24,500	-	-	-
27,907	-		27,907	-	-	93 [3]
30,816	-		30,816	-	-	584 [3]
35,000	-		35,000	-	-	-
37,300	-		37,300	-	-	-
23,695	-	5,000	28,695	8,025 [4]	4,080 [2]	-
42,020	-		42,020	-	-	11,972 [3]
93,924	-		93,924	-	-	-
38,678	-		38,678	-	-	13,176 [3]
71,995	-		71,995	-	-	10,000 [3]
20,120	-		20,120	-	-	37,030 [3]
3,427	-		3,427	-	-	54,423 [3]
69,843	-		69,843	-	-	-
65,695	-	1,100	66,795	2,908	-	-
32,040	9,327	1,100	42,467	-	-	29,616 [3]
71,030	-	1,100	72,130	620 [5]	-	-
73,674	-	6,100 [4]	79,774	6,131	-	-
77,367	-	18,000	95,367	-	-	-
79,413	-		79,413	8,828 [7]	5,138 [2]	-
24,851	-		24,851	2,500 [5]	64,176 [2]	-
44,992	-		44,992	(1,083) [8]	48,002 [2]	-
109,879	21,896		131,775	-	-	-
69,917	10,109		80,026	(2,195) [8]	41,107 [2]	-
108,781	45,935		154,716	2,011 [5]	-	-
120,324	52,266		172,590	-	-	-
103,767	4,521		108,288	-	-	-
79,474	27,688		107,162	-	-	7,700 [3]
191,201	69		191,270	-	-	-
121,774	7,792		129,566	10,471 [9]	8,295 [2]	-
46,744	2,564		49,308	-	50,597 [2]	-
71,195	10,183		81,378	-	24,884 [2]	-
86,619	28,380		114,999	5,062 [5]	8,295 [2]	-
79,571	1,972		81,543		29,031 [2]	-
51,811	39,438		91,249	390 [5]	8,295 [2]	-
63,921	33,456		97,377	1,425 [5]	-	-
63,552	2,623		66,175	(477) [8]	33,178 [2]	-
29,167	-		29,167	1,190 [5]	53,915 [2]	-
21,716	-		21,716	12,698 [5]	49,768 [2]	-
43,753	793		44,546	10,086 [5]	41,473 [2]	
2,429,800	**298,219**		**2,760,419**	**68,590**	**428,759**	**183,294**

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

[8] Overdeliveries.

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

All units in acre-feet unless otherwise noted.

Year	Agricultural	All Other	Total Production	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	194	88,068	88,262	$2,800,000
2007	506	88,016	88,522	$2,983,707
2008	462	93,388	93,850	$3,065,002
2009	627	90,446	91,073	$3,162,445
2010*	465	91,100	91,565	$3,103,644
Total	**182,123**	**2,774,203**	**2,956,326**	**$69,486,629**

** Estimated production values. Reported use not returned at time of publication.*

Registered Active Wells within ID4 2001-2010

Year	Commercial	Domestic	Irrigation	Purveyor	Total Active Wells
2001	147	110	25	65	347
2002	144	108	24	66	342
2003	142	105	19	61	327
2004	130	97	11	60	298
2005	127	96	11	60	294
2006	125	97	11	60	293
2007	125	97	11	60	293
2008	123	97	11	70	301
2009	119	91	9	73	292
2010*	113	90	12	235	450

** Complete report pending return of water production statements.*

History of ID4 Groundwater Charges ($/Acre-foot)

Year	Agricultural Use	All Other Uses	Sm Groundwater Facilities
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	$35.00	$34.00
2009-2011	$17.50	$35.00	$35.00

Year	M & I	Agricultural	Undeveloped	Total
1972	24,200	19,500	21,700	65,400
1974	30,700	18,400	16,300	65,400
1976	30,600	18,500	16,300	65,400
1978	33,500	18,000	13,900	65,400
1980	36,700	16,500	12,200	65,400
1982	38,600	14,700	12,100	65,400
1984	40,000	12,000	13,400	65,400
1986	42,000	10,800	12,600	65,400
1988	42,270	10,821	12,309	65,400
1990	49,364	8,558	7,478	65,400
1991	49,424	12,493	3,483	65,400
1992	49,759	11,641	4,000	65,400
1993	50,456	11,102	3,842	65,400
1994	51,418	10,214	3,768	65,400
1995	51,472	11,533	2,395	65,400
1996	52,775	9,431	3,194	65,400
1997	53,146	8,816	3,438	65,400
1998	51,503	7,951	5,946	65,400
1999	52,558	7,228	5,614	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
2006	53,019	8,715	3,666	65,400
2007	52,993	8,742	3,665	65,400
2008	52,993	8,741	3,666	65,400
2009	52,984	8,741	3,675	65,400
2010	55,708	6,029	3,663	65,400

Agriculture	*acres*
Alfalfa	720
Compost	80
Cotton	49
Milo	95
Onions	18
Pasture	33
Poultry	7
Wheat	2,357
Subtotal	*3,359*

Other	*acres*
Canal	41
Cemetary	154
Golf	1,300
River	678
Sewer	535
Subtotal	2,708

Developing/Developed	53,000
Fallow	2,670
Undeveloped	3,663
Non-Producing Acres	59,333
Total District Acres	**65,400**

Irrigation Styles	*acres*
Flood	2,652
Miscellaneous	7
Row	49
Sprinkler	
automatic	98
circular	553
Total Irrigated Acres	**3,359**

Henry C. Garnett Water Purification Plant Operations Costs 2010

	Chemicals ($)	Labor ($)	Energy ($)	Miscellaneous Expenditures[1] ($)	Capital Outlays ($)	Total ($)	Deliveries (af)	Unit Rate ($/af)
January	32,349	207,374	33,051	75,182	-	347,956	1,706	203.96
February	-	101,485	17,271	52,043	-	170,799	373	457.91
March	9,818	137,491	-	112,854	-	260,163	1,255	207.30
April	43,540	118,029	25,679	66,507	-	253,755	2,069	122.65
May	34,106	117,666	16,823	121,576	13,760	303,931	2,838	107.09
June	77,489	122,680	37,460	94,835	(18,738)	313,726	3,214	97.61
July	69,287	210,377	18,078	65,989	-	363,731	4,097	88.78
August	47,802	123,990	-	76,384	-	248,176	3,924	63.25
September	46,115	139,260	26,791	83,360	25,569	321,095	3,148	102.00
October	9,456	128,771	-	52,865	-	191,092	2,859	66.84
November	28,857	129,113	23,924	61,949	4,226	248,069	2,182	113.69
December	50,959	223,658	29,068	71,804		375,489	1,719	218.43
Totals	**449,778**	**1,759,894**	**228,145**	**935,348**	**24,817**	**3,397,982**	**29,384**	**115.64**

Henry C. Garnett Water Purification Plant Historic Annual Operations Costs

	($)	($)	($)	($)	($)	($)	(af)	($/af)
2001	201,180	1,106,012	242,941	710,659	281,974	2,542,766	25,089	101.35
2002	264,144	1,296,554	256,824	982,284	142,947	2,942,753	26,078	112.84
2003	307,187	1,332,116	259,658	1,471,117	221,474	3,591,552	25,125	142.95
2004	281,990	1,494,611	200,132	1,156,501	409,807	3,543,041	24,944	142.04
2005	373,640	1,651,025	256,785	1,429,100	297,483	4,008,033	26,172	153.14
2006	410,347	1,736,945	269,666	1,168,357	76,412	3,661,727	25,166	145.50
2007	496,534	1,759,677	259,859	1,288,309	74,081	3,878,460	26,998	143.66
2008	563,518	1,592,535	230,467	1,010,175	199,101	3,595,796	26,463	135.88
2009	619,402	1,643,238	454,070	955,730	27,399	3,699,839	28,335	130.57
2010	449,778	1,759,894	228,145	935,348	24,817	3,397,982	29,384	115.64
Totals	**3,967,720**	**15,372,607**	**2,658,547**	**11,107,580**	**1,755,495**	**34,861,949**	**263,754**	

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

ID4 Operations Fund

Revenues	Final Actual 2007-08	Actual 2008-09	Budget 2009-10	Estimated Actual 2009-10	Proposed Budget 2010-11
4150 Treated Water Sales	3,859,072	4,061,456	4,126,000	4,280,054	5,122,500
4170 Other Water Sales	973,915	2,270,939	2,448,250	2,638,419	-
Water Sales Total	**4,832,987**	**6,332,395**	**6,574,250**	**6,918,474**	**5,122,500**
4290 Refunds & Credits	-	147,421	1,117,000	727,868	1,000,000
Credits & Refunds Total	**-**	**147,421**	**1,117,000**	**727,868**	**1,000,000**
4400 Participant's Annual Payments	-	-	140,000	82,754	180,000
4401 Participant's O&M Costs	31,166	437,053	486,080	294,628	383,350
4402 Participant's Power Costs	1,403,071	1,845,756	2,449,000	1,360,590	1,857,450
4430 Exchange/Conveyance Fees	-	61,775	-	-	-
4499 Other User Charges	33,265	618,249	433,240	235,984	113,264
User ChargesTotal	**1,467,502**	**3,257,674**	**3,508,320**	**1,973,955**	**2,534,064**
4500 Groundwater Charge Collection	3,058,536	3,126,142	3,150,000	3,089,944	3,150,000
Ground Water Charges Total	**3,058,536**	**3,126,142**	**3,150,000**	**3,089,944**	**3,150,000**
4610 Reimburseables	946,517	1,261,053	350,000	1,041,436	260,000
Reimbursements Total	**946,517**	**1,261,053**	**350,000**	**1,041,436**	**260,000**
4700 Investment Income	390,802	309,776	150,000	161,068	95,000
4705 Interest From Other Sources	-	26,196	-	21,367	-
Interest Income Total	**390,802**	**335,972**	**150,000**	**182,435**	**95,000**
4800 Proceeds from Debt Issuance	-	-	69,600	-	-
Proceeds From Debt Insurance Total	**-**	**-**	**69,600**	**-**	**-**
4900 Other Revenue	792,233	27,128	-	113,838	-
4901 Disposal of Fixed Assets	3,768	2,364	-	-	-
4902 Lease Income	-	-	-	-	-
4911 Water Analyses	14,257	21,381	10,000	21,050	20,000
Other Revenue Total	**810,258**	**50,873**	**10,000**	**134,888**	**20,000**
Total Revenues	**$ 11,506,601**	**$ 14,511,530**	**$ 14,929,170**	**$ 14,069,000**	**$ 12,181,564**

Expenditures	Final Actual 2007-08	Actual 2008-09	Budget 2009-10	Estimated Actual 2009-10	Proposed Budget 2010-11
5000 Salaries Regular	1,508,984	1,440,470	1,722,240	1,461,444	1,752,660
5001 Salaries Overtime	48,672	54,980	62,200	52,975	57,500
5002 Salaries Temporary	395	1,821	6,000	430	5,500
5010 Benefits Social Security	116,471	107,174	137,040	104,898	139,180
5011 Workers Compensation Insurance	36,645	(14,267)	44,230	5,472	45,030
5020 Benefits Retirement	513,953	394,926	516,640	435,252	613,460
5021 Benefits Health Insurance	353,455	328,917	421,080	337,258	390,720
5022 Benefits Life Insurance	10,721	9,441	11,760	9,206	11,520
5023 Benefits Dental Insurance	20,823	18,773	25,080	19,468	27,120
5024 Benefits Vision Insurance	4,965	4,243	5,880	4,345	6,000
5025 Benefits LTD Insurance	12,593	11,950	15,460	12,652	15,720
5026 Benefits LTC Insurance	3,852	3,319	4,320	3,102	7,320
Labor CostsTotal	**2,631,529**	**2,361,746**	**2,971,930**	**2,446,502**	**3,071,730**
5250 Member Unit Credits	-		-	-	-
Member Unit Credit Total	**-**	**-**	**-**	**-**	**-**
5100 Groundwater Recharge Fees	62,844	311,075	127,000	10,931	80,000
5101 Groundwater Extraction Fees	431,107	1,739,653	1,200,000	504,619	530,000
5103 Water Exchange & Convey. Fees	89,491	1,221,409	150,000	937,372	150,000
5115 Reregulation Fees	-	4,999	-	33,057	-
5130 CVC O&M Costs	526,638	502,166	558,000	393,031	625,200
5131 CVC Power & Standby Charges	624,394	334,634	546,000	149,945	560,000
5170 Other Water Purchases	-	-	-	12,600	-
5206 Untr'ed Wtr Purchases WY06	-	-	-	-	-
Water Purchases & Fees Total	**1,734,475**	**4,113,937**	**2,581,000**	**2,041,556**	**1,945,200**
5260 Fuels, Oils and Grease	32,122	36,347	27,800	21,845	29,500
5270 Chemicals	487,313	619,313	834,000	512,934	765,000
5280 Water Analyses	104,567	81,829	73,000	63,857	78,500
5290 Rents and Leases	2,571	2,727	5,250	3,884	3,500
5299 Other Operating Supplies	13,245	7,353	15,800	4,824	12,250
Operations Total	**639,818**	**747,569**	**955,850**	**607,343**	**888,750**
5300 Power for Operations	1,655,875	2,158,162	3,303,000	1,716,580	2,156,150
5301 Standby Charges for Power	85,664	200	1,200	1,727	1,200
Power Total	**1,741,539**	**2,158,362**	**3,304,200**	**1,718,308**	**2,157,350**
5400 Maint - Structures & Improvmts	129,886	95,810	377,550	177,788	169,000
5401 Maint - Mobile Equip	18,729	22,259	16,200	7,757	17,500
5402 Maint - Electronic Equip	34,048	51,681	35,500	29,403	79,500
5403 Maint - Wells, Pumps, Motors	25,322	64,514	163,000	98,375	30,500
5408 Maint - Office Equip & Furnish	1,221	600	1,000	-	1,000
5409 Maint - Other	71,598	58,119	59,400	27,732	59,450
5410 Maint - Janitorial	20,675	26,140	30,000	23,418	30,000
Maintenance Total	**$ 301,478**	**$ 319,124**	**$ 682,650**	**$ 364,474**	**$ 386,950**

	Final Actual 2007-08	Actual 2008-09	Budget 2009-10	Estimated Actual 2009-10	Proposed Budget 2010-11
5500 General Office Supplies	6,582	5,589	5,320	3,841	4,600
5501 Printing and Reproduction	1,281	5,026	1,850	4,429	4,000
5502 Computer Supplies	7,241	5,975	10,500	6,046	6,500
5503 Publications & Subscriptions	3,385	6,016	5,500	3,994	6,000
5504 Mailing Services	3,289	446	4,250	1,146	3,000
5510 Laundry and Uniforms	19,563	14,447	24,000	14,371	20,000
5520 Legal Notices & Job Advertise.	1,608	5,148	3,000	3,511	2,000
5530 Computer Access Fees	12,412	2,456	6,720	2,012	6,500
5540 Promotions & Advertisements	49,601	19,983	26,000	16,597	14,000
5550 Assoc. & Prof. Membership Fees	32,860	24,878	45,800	37,405	40,550
5570 Telephone	11,318	6,814	11,200	10,068	9,000
5571 Utilities	13,870	6,681	13,500	9,912	11,000
5581 Liability Insurance	56,214	15,285	60,600	25,981	58,600
5582 Property Insurance	23,071	24,354	18,000	45,369	25,000
5589 Safety Programs & Equipment	20,057	20,559	16,600	13,657	18,300
5590 Directors' Fees	7,415	7,234	7,000	6,757	7,500
5591 Business Meetings & Travel	41,564	28,130	61,600	28,308	42,500
5592 Educational Expenses	7,112	22,967	6,500	851	6,000
5599 Agency Overhead Allocation	724,656	493,248	702,500	702,504	618,520
AdministrationTotal	**1,043,099**	**715,236**	**1,030,440**	**936,759**	**903,570**
5601 Legal Services	4,983	21,128	20,000	8,236	25,000
5602 Consulting Engineers	200,073	118,596	197,600	66,924	175,500
5604 Special Consultants	137,646	59,346	128,000	59,743	137,000
Professional Services Total	**342,701**	**199,070**	**345,600**	**134,903**	**337,500**
5710 Land Purchase	-	-	-	2,491	800,000
5720 Structures & Improvements	2,728,653	2,330,014	812,000	511,354	765,000
5730 Mobile Equipment	23,588	1,820	-	4,999	30,000
5740 Electrical & Mechanical Equip	48,645	32,747	22,000	13,427	46,000
5790 Other Equipment	1,849	7,955	-	206	-
Capital Outlays Total	**2,802,736**	**2,372,536**	**834,000**	**532,476**	**1,641,000**
5800 Principal on Long Term Debt	-	-	468,700	-	315,000
5801 Interest on Long Term Debt	-	26,196	981,300	49,821	1,165,320
Debt Repayment Total	**-**	**26,196**	**1,450,000**	**49,821**	**1,480,320**
5910 Tax Collection Charge	-	-	-	-	-
5920 Amort. / Deprec. Expense	981,775	1,065,825	-	1,066,956	-
5940 Wheeling Charges Distribution	-	-	-	-	-
5950 Licenses & Permits	15,161	12,304	18,300	14,828	27,600
5960 Security	66,995	55,753	55,200	63,104	60,000
5970 Special Projects	-	-	1,117,000	729,475	1,000,000
5999 Other Expenses	3,903	153,852	3,000	2,996	-
Other Expenses Total	**1,067,834**	**1,287,735**	**1,193,500**	**1,877,359**	**1,087,600**
5900 Unapplied Appropriations	-	-	-	-	
Unapplied Appropriations Total	**-**	**-**	**-**	**-**	**-**
Total Expenditures	**$ 12,305,207**	**$ 14,301,510**	**$ 15,349,170**	**$ 10,709,500**	**$ 13,899,970**

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	0.053	0.068	0.264	0.128	0.128
Antimony	mg/L	0.02	0.006	ND	ND	ND	ND	ND
Arsenic	mg/L	0.000004	0.010	ND	ND	0.002	ND	0.001
Asbestos	MFL	7	7	-	-	ND	-	N/A
Barium	mg/L	2.0	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 (Total)	mg/L	N/A	0.05	ND	ND	ND	ND	ND
Fluoride	mg/L	1	2	0.23	0.22	0.18	0.20	0.21
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 NO_3)	mg/L	45	45	ND	ND	ND	ND	ND
Nitrite (as Nitrogen, N)	mg/L	1	1	ND	ND	ND	ND	ND
Nitrite + Nitrate (sum as Nitrogen, N)	mg/L	10	10	ND	ND	ND	ND	ND
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	0.053	0.068	0.264	0.128	0.128
Color	Units	N/A	15	< 2.5	2.5	< 2.5	< 2.5	< 2.5
Copper*	mg/L	0.3	1.0	ND	ND	ND	ND	ND
Iron	mg/L	N/A	0.3	ND	ND	0.208	ND	0.052
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	2	2	2	2
Silver	mg/L	N/A	0.1	ND	ND	ND	ND	ND
Turbidity	NTU	N/A	5	0.07	0.06	0.06	0.08	0.07
Zinc	mg/L	N/A	5	0.090	0.048	0.098	0.050	0.072
Total Dissolved Solids	mg/L	N/A	1000	134	106	69	80	97
Specific Conductance	micromhos	N/A	1600	224	179	108	139	163
Chloride	mg/L	N/A	500	10.6	8.29	6.15	6.36	7.85
Sulfate	mg/L	N/A	500	38.4	24.6	10.5	18.7	23.1
General Minerals								
Total Alkalinity (as $CaCO_3$)	mg/L	N/A	N/A	58	54	35	40	47
Bicarbonate	mg/L	N/A	N/A	70.8	65.9	42.7	48.8	57.1
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	51.5	44.8	25.5	32.5	38.6
Calcium	mg/L	N/A	N/A	15.6	13.7	8.20	10.2	11.9
Magnesium	mg/L	N/A	N/A	3.04	2.57	1.22	1.71	2.14
Sodium	mg/L	N/A	N/A	21.2	16.9	10.5	14.1	15.7
Potassium	mg/L	N/A	N/A	2.00	1.67	1.22	1.43	1.58
pH	Units	N/A	N/A	7.09	7.10	7.10	7.11	7.10
Additional Analyses								
Ammonia	mg/L	N/A	N/A	ND	ND	ND	ND	ND
Boron***	mg/L	N/A	1	-	0.12	-	-	N/A
Bromide	mg/L	N/A	N/A	ND	ND	ND	ND	ND
Chlorate***	mg/L	N/A	0.8	0.143	0.131	0.239	0.244	0.189
Chlorite	mg/L	0.05	1	ND	ND	ND	ND	ND
Phosphate	mg/L	N/A	N/A	0.56	ND	0.67	6.43	1.92
Silica	mg/L	N/A	N/A	5.52	5.91	10.9	4.17	6.63
Total Organic Carbon	mg/L	N/A	N/A	1.8	1.8	1.6	1.7	1.7

*Values identified as MCLs are action levels under the lead and copper rule

**Quarterly average

***Values identified as MCLs are notification levels for constituents without MCLs

MCL = Maximum Contaminant Level

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

microhmos = measure of conductivity

N/A = Not applicable

ND = Not Detected

NTU = Nephelometric Turbidity Units

pCi/L = picocuries per liter

Treated water quarterly monitoring compliance determined by running annual average of four quarterly samples.

Treated Water 2010 - continued

Constituent	Units	PHG	MCL	Quarter 1	Quarter 2	Quarter 3	Quarter 4	Average
Regulated Organic Chemicals								
Total Trihalomethanes**	mg/L	N/A	0.080	0.031	0.035	0.044	0.031	0.035
Bromodichloromethane**	mg/L	N/A	N/A	0.007	0.004	0.003	0.005	0.005
Bromoform**	mg/L	N/A	N/A	ND	ND	ND	ND	ND
Chloroform**	mg/L	N/A	N/A	0.023	0.031	0.041	0.026	0.030
Dibromochloromethane**	mg/L	N/A	N/A	0.001	ND	ND	ND	ND
Haloacetic Acids (HAA5)**	mg/L	N/A	0.060	0.029	0.030	0.057	0.026	0.036
Monochloroacetic acid**	mg/L	N/A	N/A	ND	ND	0.006	ND	0.001
Dichloroacetic acid**	mg/L	N/A	N/A	0.011	0.016	0.024	0.011	0.015
Trichloroacetic acid**	mg/L	N/A	N/A	0.018	0.013	0.028	0.015	0.019
Monobromoacetic acid**	mg/L	N/A	N/A	ND	ND	ND	ND	ND
Dibromoacetic acid**	mg/L	N/A	N/A	ND	ND	ND	ND	ND
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	0.1	0.006	ND	ND	ND	ND	ND
trans-1,2-Dichloroethylene	mg/L	0.06	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
Methy tert-butyl ether	mg/L	0.013	0.013	ND	ND	ND	ND	ND
Monochlorobenzene	mg/L	0.2	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	0.2	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	mg/L	0.0003	0.005	ND	ND	ND	ND	ND
Trichlorethylene	mg/L	0.0017	0.005	ND	ND	ND	ND	ND
Trichlorofluoromethane	mg/L	0.7	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	1.75	ND	ND	ND	ND	ND

*Values identified as MCLs are action levels under the lead and copper rule

**Quarterly average

***Values identified as MCLs are notification levels for constituents without MCLs

MCL = Maximum Contaminant Level

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

microhmos = measure of conductivity

N/A = Not applicable

ND = Not Detected

NTU = Nephelometric Turbidity Units

pCi/L = picocuries per liter

Treated water quarterly monitoring compliance determined by running annual average of four quarterly samples.

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
Napthalene***	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
1-Phenylpropane***	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
Tribromoacetic acid**	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-Trichloropropane***	mg/L	N/A	0.000005	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

*Values identified as MCLs are action levels under the lead and copper rule
**Quarterly average
***Values identified as MCLs are notification levels for constituents without 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)
microhmos = measure of conductivity
N/A = Not applicable
ND = Not Detected
NTU = Nephelometric Turbidity Units
pCi/L = picocuries per liter
PHG = Public Health Goal

Treated water quarterly monitoring compliance determined by running annual average of four quarterly samples.

Constituent	Units	PHG*	MCL*	Source			
				Friant Kern	Groundwater	Aqueduct	Kern River
Primary Inorganic Chemicals							
Aluminum	mg/L	0.6	1	0.067	0.089	0.170	0.335
Antimony	mg/L	0.02	0.006	ND	ND	ND	ND
Arsenic	mg/L	0.000004	0.010	ND	0.002	0.002	0.004
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 (Total)	mg/L	N/A	0.05	ND	ND	0.001	ND
Cyanide	mg/L	0.15	0.15	ND	ND	ND	ND
Fluoride	mg/L	1	2	ND	0.11	0.13	0.25
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 NO_3)	mg/L	45	45	ND	1.41	5.04	ND
Nitrite (as Nitrogen, N)	mg/L	1	1	ND	ND	ND	ND
Nitrate + Nitrite (sum as Nitrogen, N)	mg/L	10	10	ND	ND	1.14	ND
Perchlorate	mg/L	0.006	0.006	ND	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	0.067	0.089	0.170	0.335
Color	Units	N/A	15	15	15	30	20
Copper**	mg/L	0.3	1.0	ND	ND	ND	ND
Foaming Agents (MBAS)	mg/L	N/A	0.5	ND	ND	ND	ND
Iron	mg/L	N/A	0.3	0.137	0.170	0.280	0.482
Manganese	mg/L	N/A	0.05	ND	ND	ND	0.037
Methyl tert-butyl ether	mg/L	N/A	0.005	ND	ND	ND	ND
Odor	Units	N/A	3	6	4	4	3
Silver	mg/L	N/A	0.1	ND	ND	ND	ND
Thiobencarb	mg/L	N/A	0.001	ND	ND	ND	ND
Turbidity	Units	N/A	5	1.57	1.72	4.22	7.51
Zinc	mg/L	N/A	5	ND	ND	ND	ND
Total Dissolved Solids	mg/L	N/A	1000	39	67	306	98
Specific Conductance	micromhos	N/A	1600	51	88	507	159
Chloride	mg/L	N/A	500	3.16	6.66	75.0	5.10
Sulfate	mg/L	N/A	500	1.29	5.08	57.3	12.5
General Minerals							
Total Alkalinity (as $CaCO_3$)	mg/L	N/A	N/A	20	28	87	62
Bicarbonate	mg/L	N/A	N/A	24.4	34.2	106	75.6
Carbonate	mg/L	N/A	N/A	ND	ND	ND	ND
Hydroxide	mg/L	N/A	N/A	ND	ND	ND	ND
Total Hardness (as $CaCO_3$)	mg/L	N/A	N/A	12.1	19.2	123	45.2
Calcium	mg/L	N/A	N/A	4.83	7.72	25.1	13.8
Magnesium	mg/L	N/A	N/A	ND	ND	14.7	2.62
Sodium	mg/L	N/A	N/A	4.90	8.98	52.6	14.5
Potassium	mg/L	N/A	N/A	1.04	1.06	3.57	1.86
pH	Units	N/A	N/A	7.56	7.84	8.47	7.87
Additional Analyses							
Ammonia	mg/L	N/A	N/A	ND	ND	ND	ND
Boron***	mg/L	N/A	1	ND	ND	0.23	0.13
Bromide	mg/L	N/A	N/A	ND	0.02	0.19	0.01
Chromium (Hexavalent)	mg/L	0.00006	N/A	ND	ND	ND	-
Phosphate	mg/L	N/A	N/A	ND	ND	ND	ND
Silica	mg/L	N/A	N/A	11.1	11.7	15.2	6.93
Total Organic Carbon	mg/L	N/A	N/A	2.5	2.1	5.7	2.9
Radioactivity							
Gross Alpha	pCi/L	N/A	15	ND	ND	3.98	ND
Gross Beta	mrem/yr	N/A	4	-	-	-	-
Radium 226 + Radium 228	pCi/L	N/A	5	-	-	-	-
Radium 226	pCi/L	0.05	N/A	ND	1.01	ND	ND
Radium 228	pCi/L	0.019	N/A	ND	ND	1.03	ND
Strontium-90	pCi/L	0.35	8	-	-	-	-
Tritium	pCi/L	400	20,000	-	-	-	-
Uranium	pCi/L	0.43	20	ND	1.0	1.4	1.5

*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 for constituents lacking MCLs

MCL = Maximum Contaminant Level

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

mrem/yr = millirems per year

N/A = Not applicable

ND = Not Detected

NTU = Nephelometric Turbidity Units

pCi/L = picocuries per liter

Constituent	Units	PHG*	MCL*	Source			
				Friant Kern	Groundwater	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	0.1	0.006	ND	ND	ND	ND
trans-1,2-Dichloroethylene	mg/L	0.06	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	0.2	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	0.2	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	0.7	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	1.75	ND	ND	ND	ND
Regulated Non-Volatile Synthetic Organic Chemicals							
Alachlor	mg/L	0.004	0.002	ND	ND	ND	ND
Atrazine	mg/L	0.00015	0.001	ND	ND	ND	ND
Bentazon	mg/L	0.2	0.018	ND	ND	ND	ND
Benzo(a)pryene	mg/L	0.000007	0.0002	ND	ND	ND	ND
Carbofuran	mg/L	0.0017	0.018	ND	ND	ND	ND
Chlordane	mg/L	0.00003	0.0001	ND	ND	ND	ND
Dalapon	mg/L	0.79	0.2	ND	ND	ND	ND
1,2-Dibromo-3-chloropropane	mg/L	0.0000017	0.0002	ND	ND	ND	ND
2,4-Dichlorophenoxyacetic acid	mg/L	0.02	0.07	ND	ND	ND	ND
Di(2-ethyhexyl)adipate	mg/L	0.2	0.4	ND	ND	ND	ND
Di(2-ethyhexyl)phthalate	mg/L	0.012	0.004	ND	ND	ND	ND
Dinoseb	mg/L	0.014	0.007	ND	ND	ND	ND
Diquat	mg/L	0.015	0.02	ND	ND	ND	ND
Endrin	mg/L	0.0018	0.002	ND	ND	ND	ND
Endothall	mg/L	0.58	0.1	ND	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	ND
Heptachlor	mg/L	0.000008	0.00001	ND	ND	ND	ND
Heptachlor Epoxide	mg/L	0.000006	0.00001	ND	ND	ND	ND
Hexachlorobenzene	mg/L	0.00003	0.001	ND	ND	ND	ND
Hexachlorocyclopentadiene	mg/L	0.05	0.05	ND	ND	ND	ND
Lindane	mg/L	0.000032	0.0002	ND	ND	ND	ND
Methoxychlor	mg/L	0.00009	0.03	ND	ND	ND	ND
Molinate	mg/L	0.001	0.02	ND	ND	ND	ND
Oxamyl	mg/L	0.026	0.05	ND	ND	ND	ND
Pentachlorophenol	mg/L	0.0003	0.001	ND	ND	ND	ND
Picloram	mg/L	0.5	0.5	ND	ND	ND	ND
Polychlorinated Biphenyls	mg/L	0.00009	0.0005	ND	ND	ND	ND
Simazine	mg/L	0.004	0.004	ND	ND	ND	ND
2,4,5-TP (Silvex)	mg/L	0.025	0.05	ND	ND	ND	ND
2,3,7,8-TCDD (Dioxin)	mg/L	0.00000000005	0.00000003	waived	waived	waived	waived
Thiobencarb	mg/L	0.07	0.07	ND	ND	ND	ND
Toxaphene	mg/L	0.00003	0.003	ND	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 for constituents lacking MCLs
MCL = Maximum Contaminant Level
mrem/yr = millirems per year
N/A = Not applicable
ND = Not Detected
NTU = Nephelometric Turbidity Units

Constituent	Units	PHG*	MCL*	Source			
				Friant Kern	Groundwater	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
1-Phenylpropane***	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-Trichloropropane***	mg/L	N/A	0.000005	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	N/A	ND	ND	ND	ND
Aldicarb Sulfone	mg/L	N/A	N/A	ND	ND	ND	ND
Aldicarb Sulfoxide	mg/L	N/A	N/A	ND	ND	ND	ND
Aldrin	mg/L	N/A	N/A	ND	ND	ND	ND
Bromacil	mg/L	N/A	N/A	ND	ND	ND	ND
Butachlor	mg/L	N/A	N/A	ND	ND	ND	ND
Carbaryl	mg/L	N/A	N/A	ND	ND	ND	ND
Chlorothalonil	mg/L	N/A	N/A	ND	ND	ND	ND
Diazinon***	mg/L	N/A	0.0012	ND	ND	ND	ND
Dicamba	mg/L	N/A	N/A	ND	ND	ND	ND
Dieldrin	mg/L	N/A	N/A	ND	ND	ND	ND
Dimethoate	mg/L	N/A	N/A	ND	ND	ND	ND
Diuron	mg/L	N/A	N/A	ND	ND	ND	ND
3-Hydroxycarbofuran	mg/L	N/A	N/A	ND	ND	ND	ND
Methomyl	mg/L	N/A	N/A	ND	ND	ND	ND
Metolachlor	mg/L	N/A	N/A	ND	ND	ND	ND
Metribuzin	mg/L	N/A	N/A	ND	ND	ND	ND
Propachlor***	mg/L	N/A	0.09	ND	ND	ND	ND
Trifluralin	mg/L	N/A	N/A	ND	ND	ND	ND
2,4,5-T	mg/L	N/A	N/A	ND	ND	ND	ND

*Applicable to treated water only

**Values identified as MCLs are action levels under the lead and copper rule

mrem/yr = millirems per year

N/A = Not applicable

Figure 1

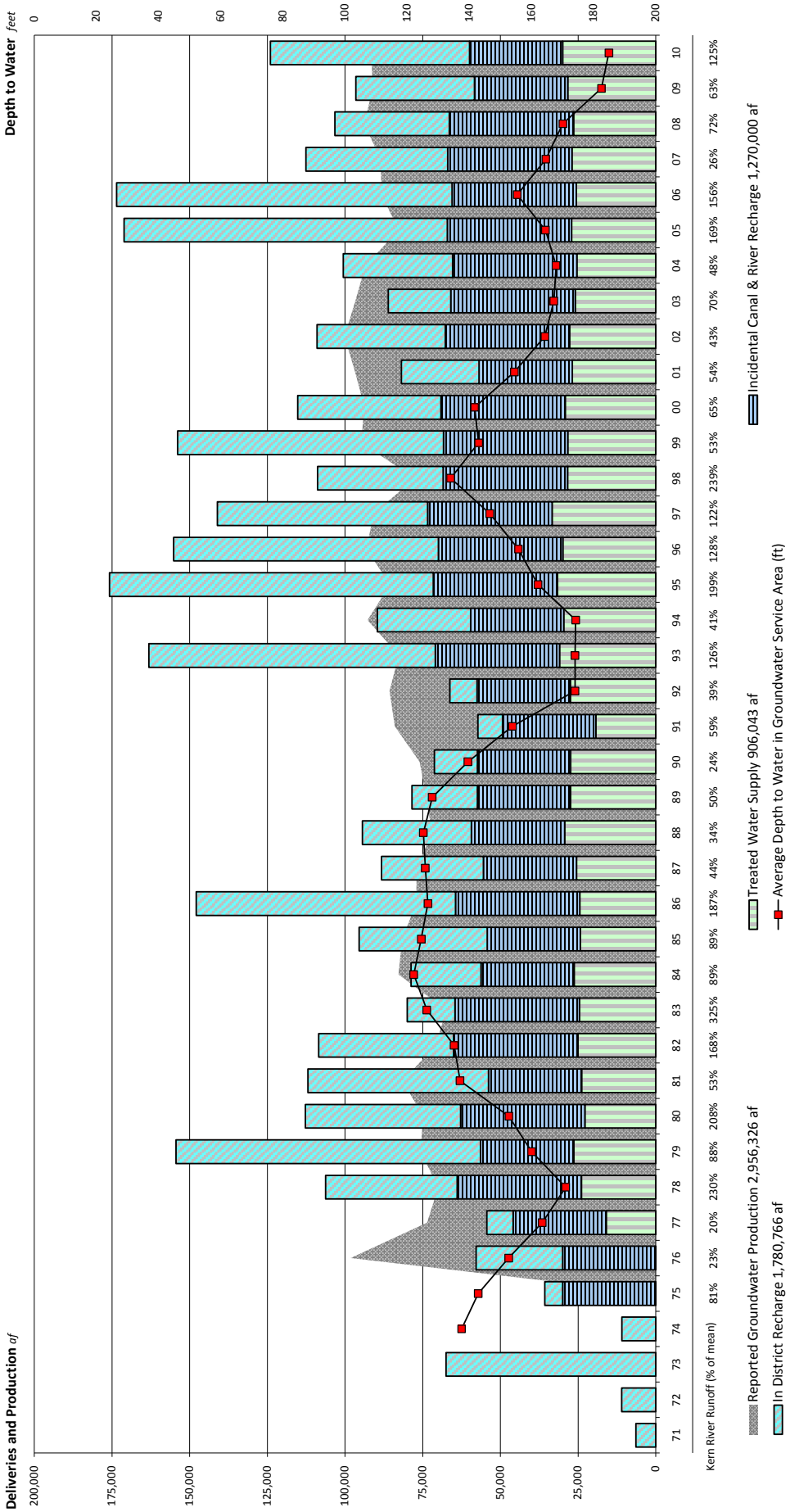
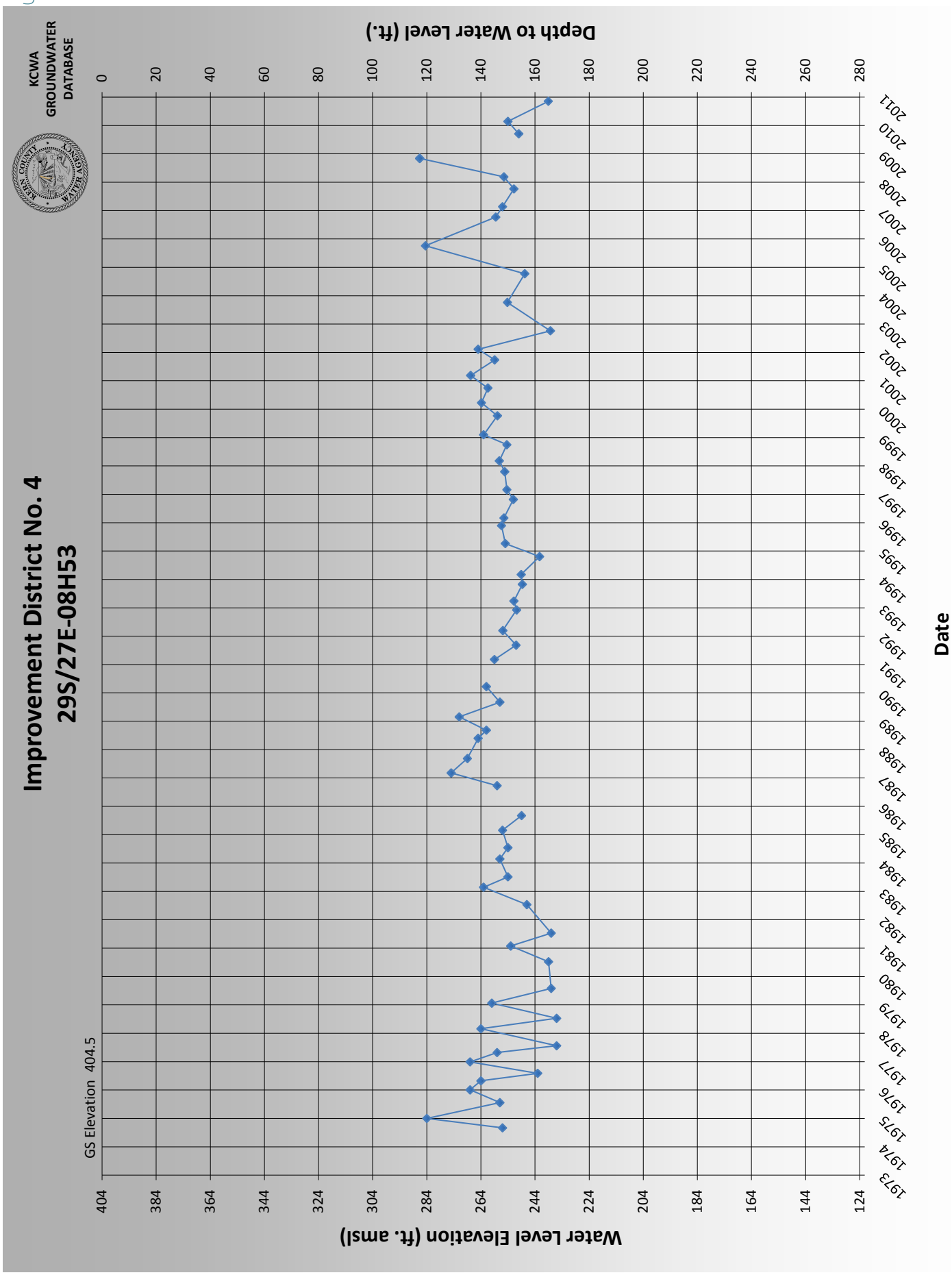

Depth to Water feet
Deliveries and Production af
200,000
175,000
150,000
125,000
100,000
75,000
50,000
25,000
0
0
20
40
60
80
100
120
140
160
180
200
Kern River Runoff (% of mean)
71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 00 01 02 03 04 05 06 07 08 09 10
81% 23% 20% 230% 88% 208% 53% 168% 325% 89% 89% 187% 44% 34% 50% 24% 59% 39% 126% 41% 199% 128% 122% 239% 53% 65% 54% 43% 70% 48% 169% 156% 26% 72% 63% 125%
Reported Groundwater Production 2,956,326 af
In District Recharge 1,780,766 af
Treated Water Supply 906,043 af
Average Depth to Water in Groundwater Service Area (ft)
Incidental Canal & River Recharge 1,270,000 af

Figure 2


Improvement District No. 4
29S/27E-08H53
KCWA GROUNDWATER DATABASE
GS Elevation 404.5
Water Level Elevation (ft. amsl)
Depth to Water Level (ft.)
Date
404
384
364
344
324
304
284
264
244
224
204
184
164
144
124
0
20
40
60
80
100
120
140
160
180
200
220
240
260
280
1973
1974
1975
1976
1977
1978
1979
1980
1981
1982
1983
1984
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1986
1987
1988
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2005
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2007
2008
2009
2010
2011

Figure 3

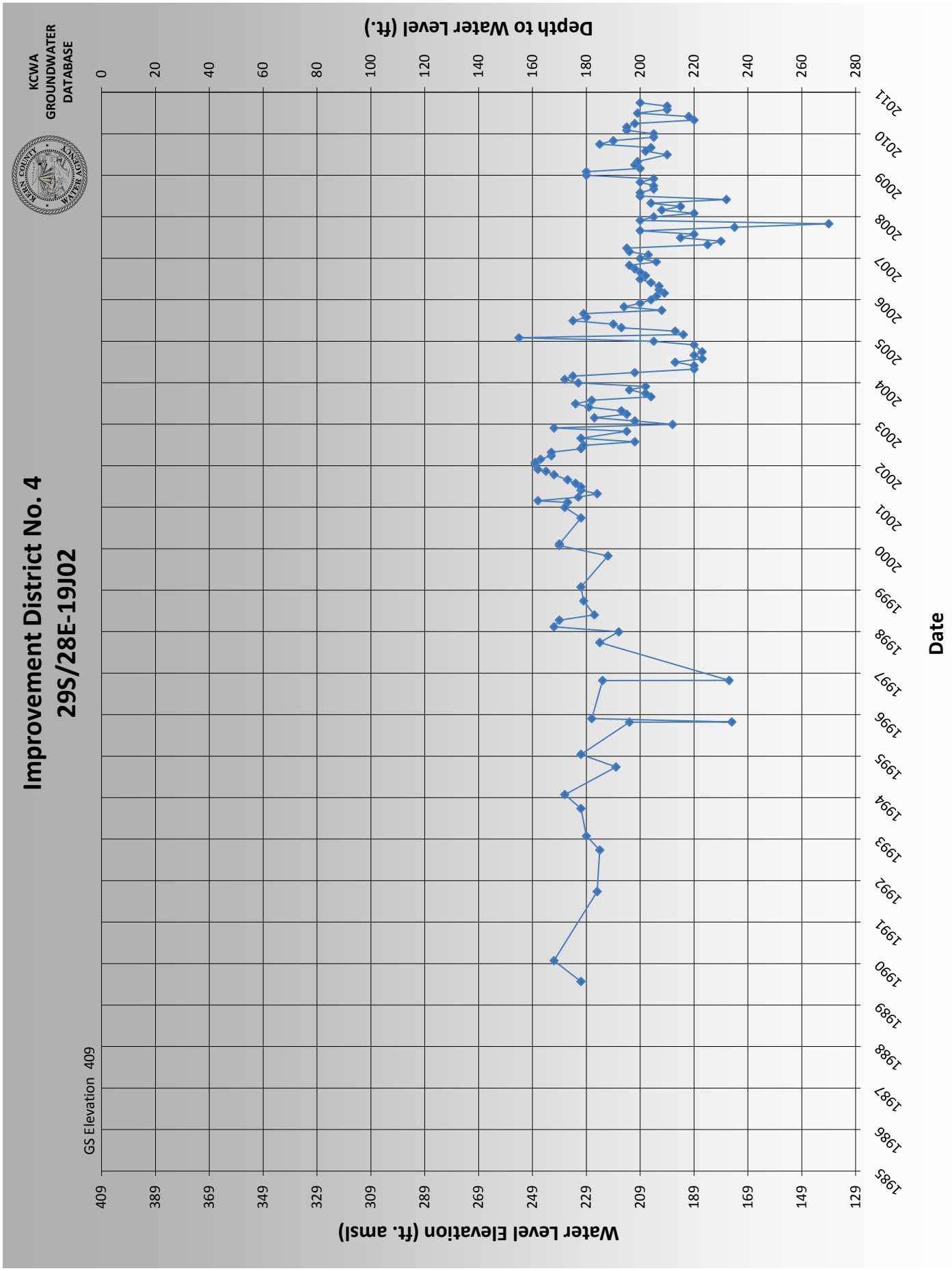

KCWA
GROUNDWATER
DATABASE
Improvement District No. 4
29S/28E-19J02
GS Elevation 409
Depth to Water Level (ft.)
0
20
40
60
80
100
120
140
160
180
200
220
240
260
280
Water Level Elevation (ft. amsl)
409
389
369
349
329
309
289
269
249
229
209
189
169
149
129
Date
1985
1986
1987
1988
1989
1990
1991
1992
1993
1994
1995
1996
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011

Figure 4

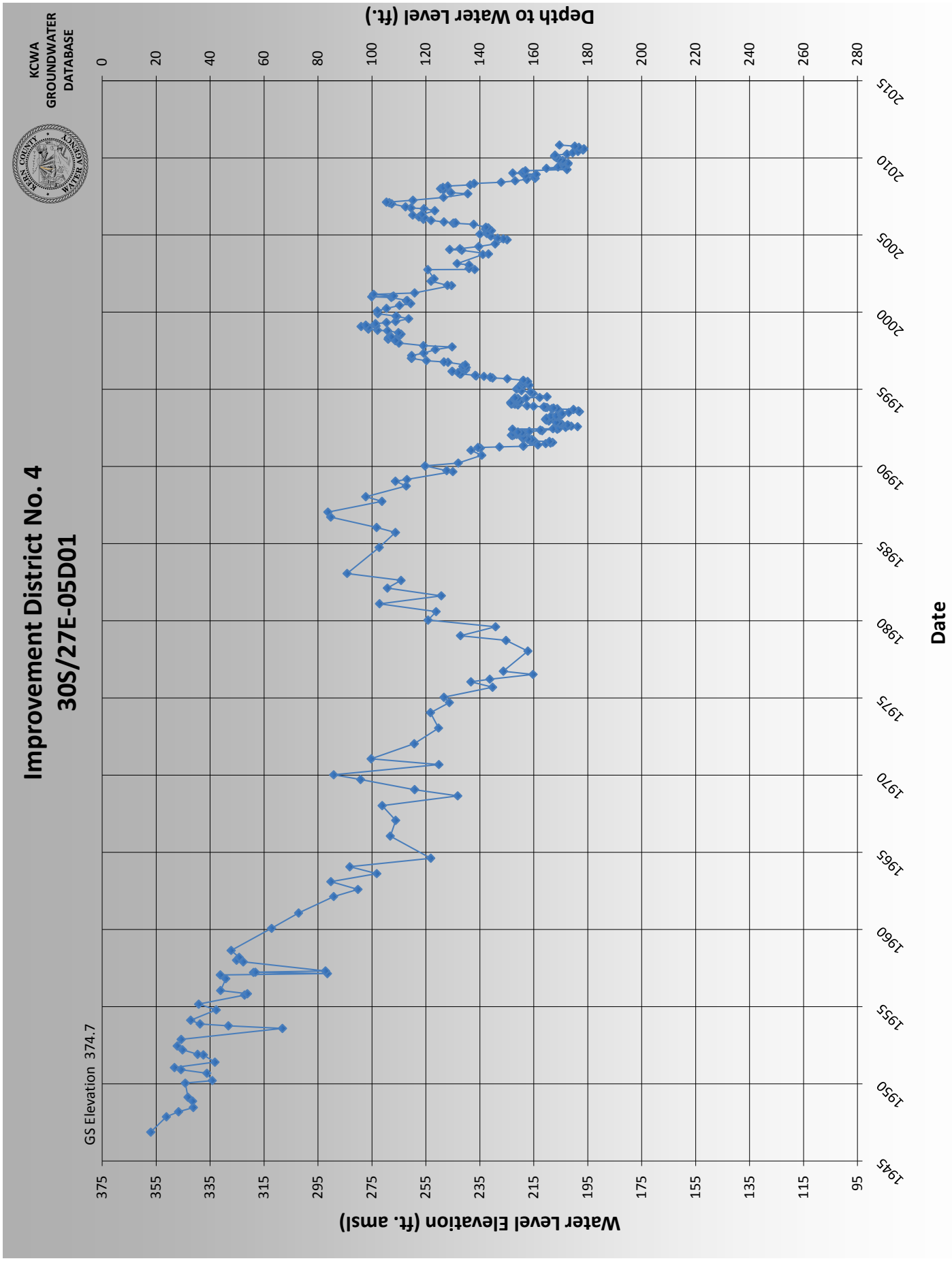
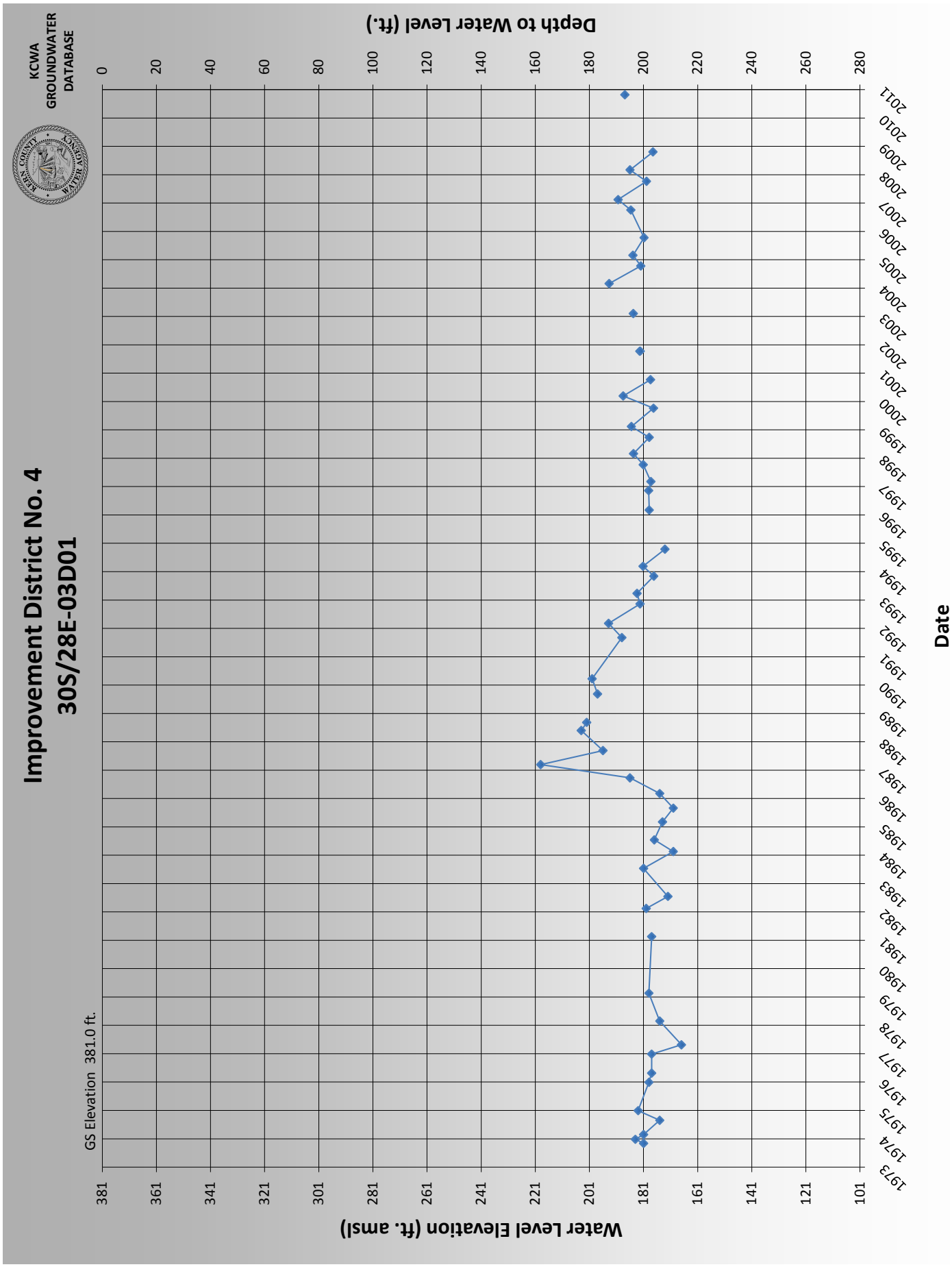

Improvement District No. 4
30S/27E-05D01
KCWA GROUNDWATER DATABASE
GS Elevation 374.7
Water Level Elevation (ft. amsl)
Depth to Water Level (ft.)
Date
375
355
335
315
295
275
255
235
215
195
175
155
135
115
95
0
20
40
60
80
100
120
140
160
180
200
220
240
260
280
1945
1950
1955
1960
1965
1970
1975
1980
1985
1990
1995
2000
2005
2010
2015

Figure 5


KCWA GROUNDWATER DATABASE
Improvement District No. 4
30S/28E-03D01
GS Elevation 381.0 ft.
Water Level Elevation (ft. amsl)
Depth to Water Level (ft.)
Date
381
361
341
321
301
281
261
241
221
201
181
161
141
121
101
0
20
40
60
80
100
120
140
160
180
200
220
240
260
280
1973
1974
1975
1976
1977
1978
1979
1980
1981
1982
1983
1984
1985
1986
1987
1988
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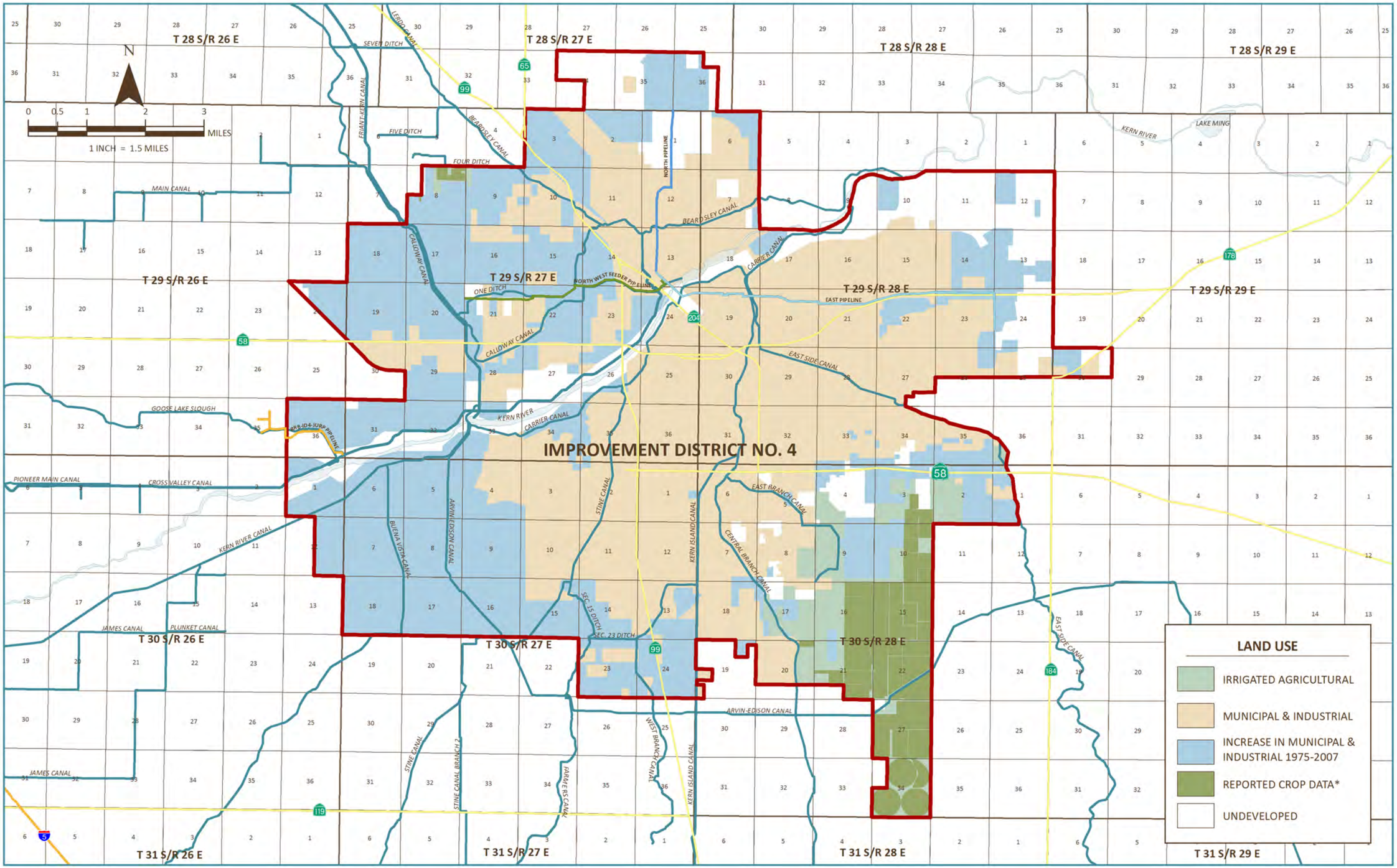
2008
2009
2010
2011

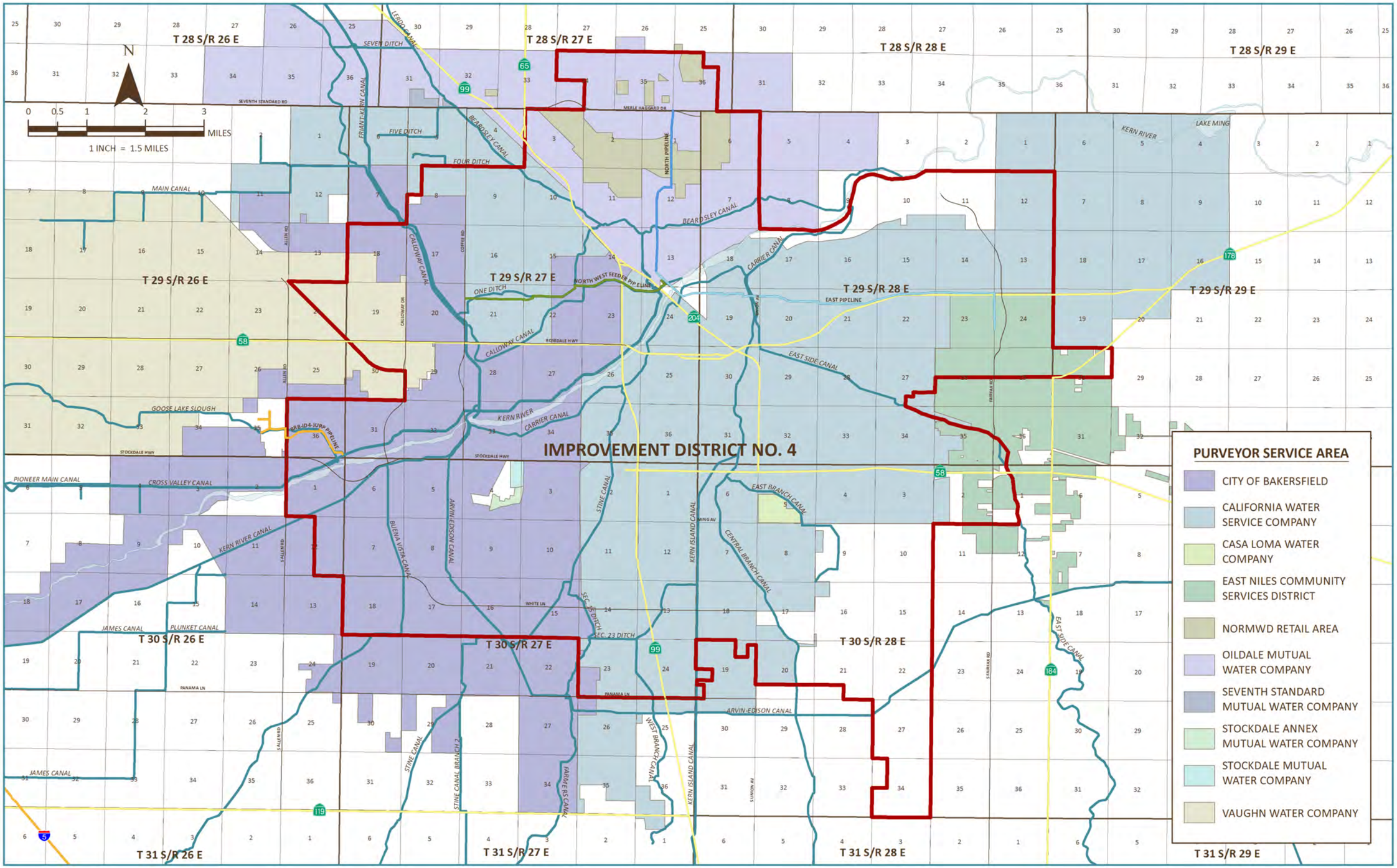
Plate 1 - Land Use



BY: S. CHAMBLESS
DATE: DECEMBER 17, 2010
REVIEWED BY: M. VARGA
FILENAME: Plate 1 - Land Use.mxd

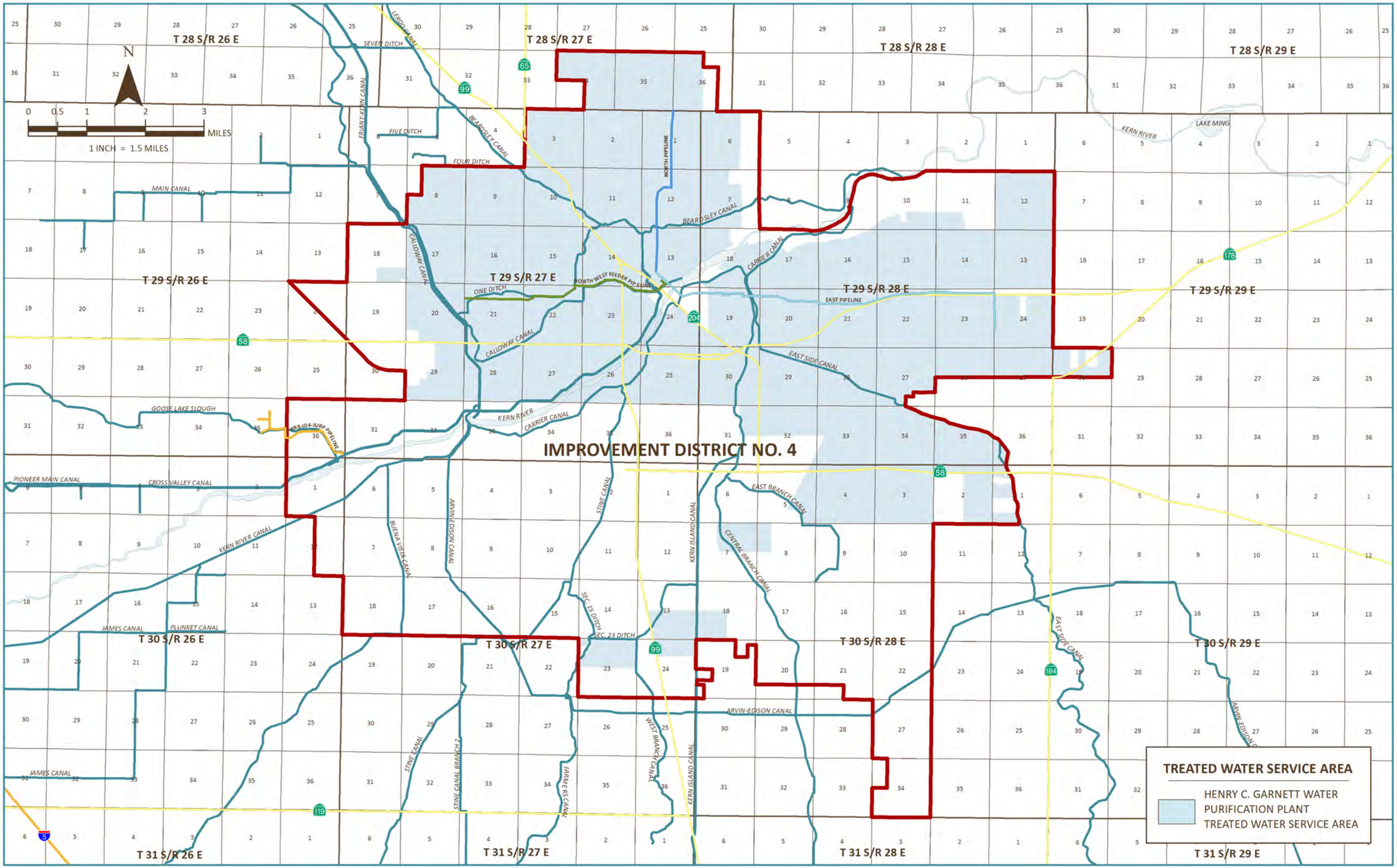
*Crop data obtained from the Department of Agriculture and Measurement Standards. Last Updated October 27, 2010.

Plate 2 - Purveyor Service Area Map



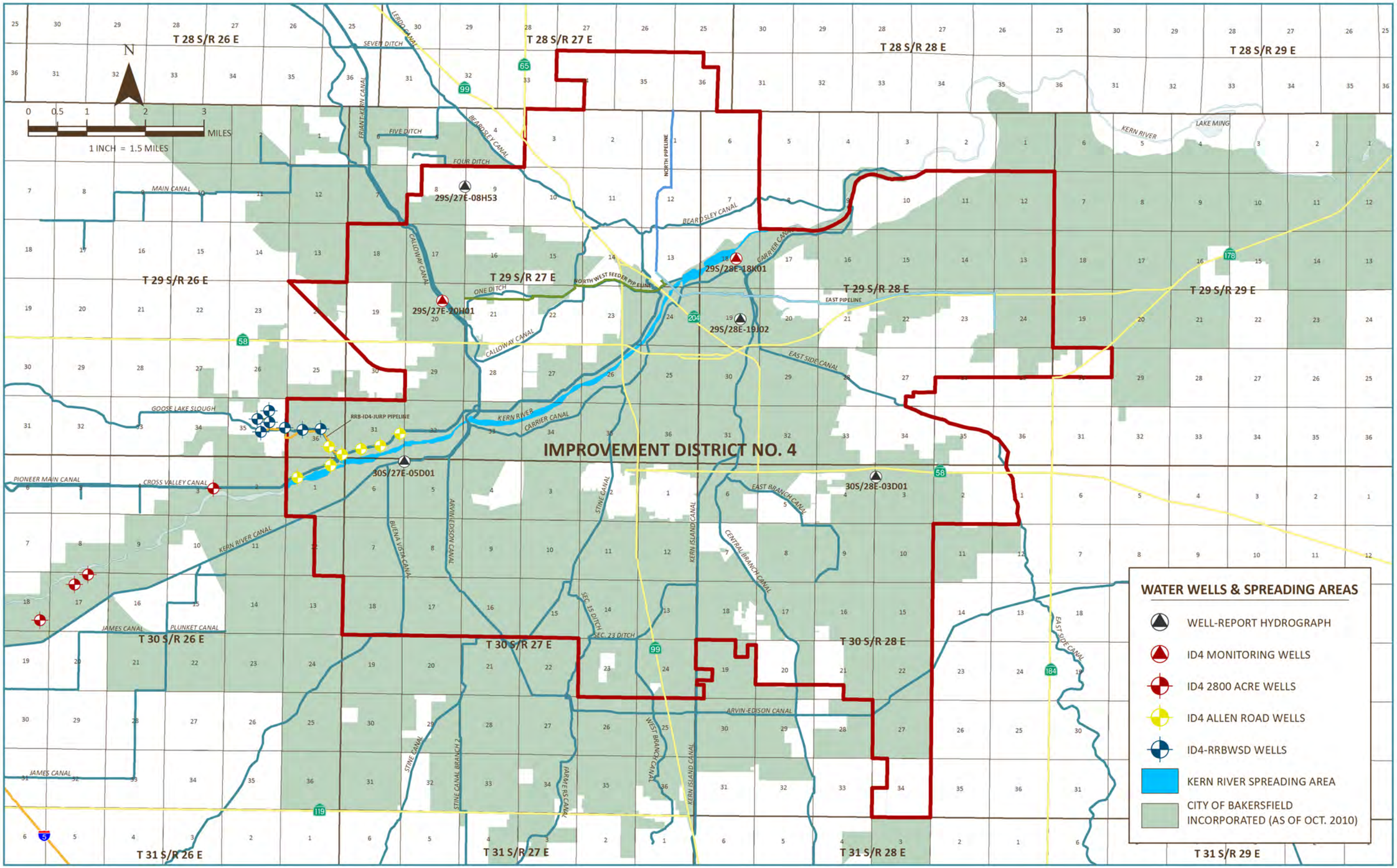
BY: S. Chambless
DATE: December 20, 2010
REVIEWED BY: M. Varga
FILENAME: Plate 2 - Purveyor Service Area.mxd

Plate 3 - Treated Water Service Area



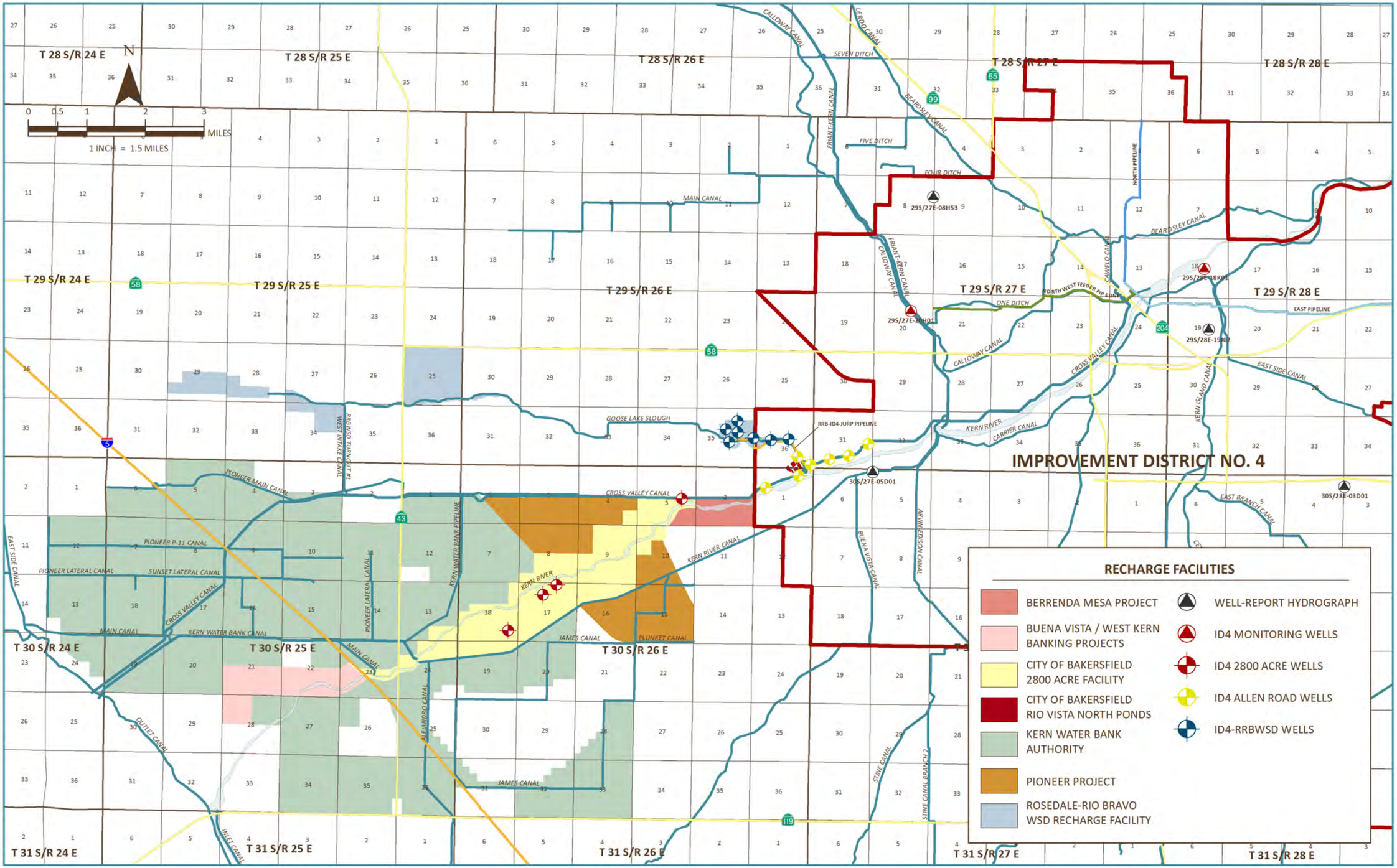
BY: S. CHAMBLESS
DATE: DECEMBER 21, 2010
REVIEWED BY: M. VARGA
FILENAME: Plate 3 - Treated Water Service Area.mxd

Plate 4 - Water Wells and Spreading Areas



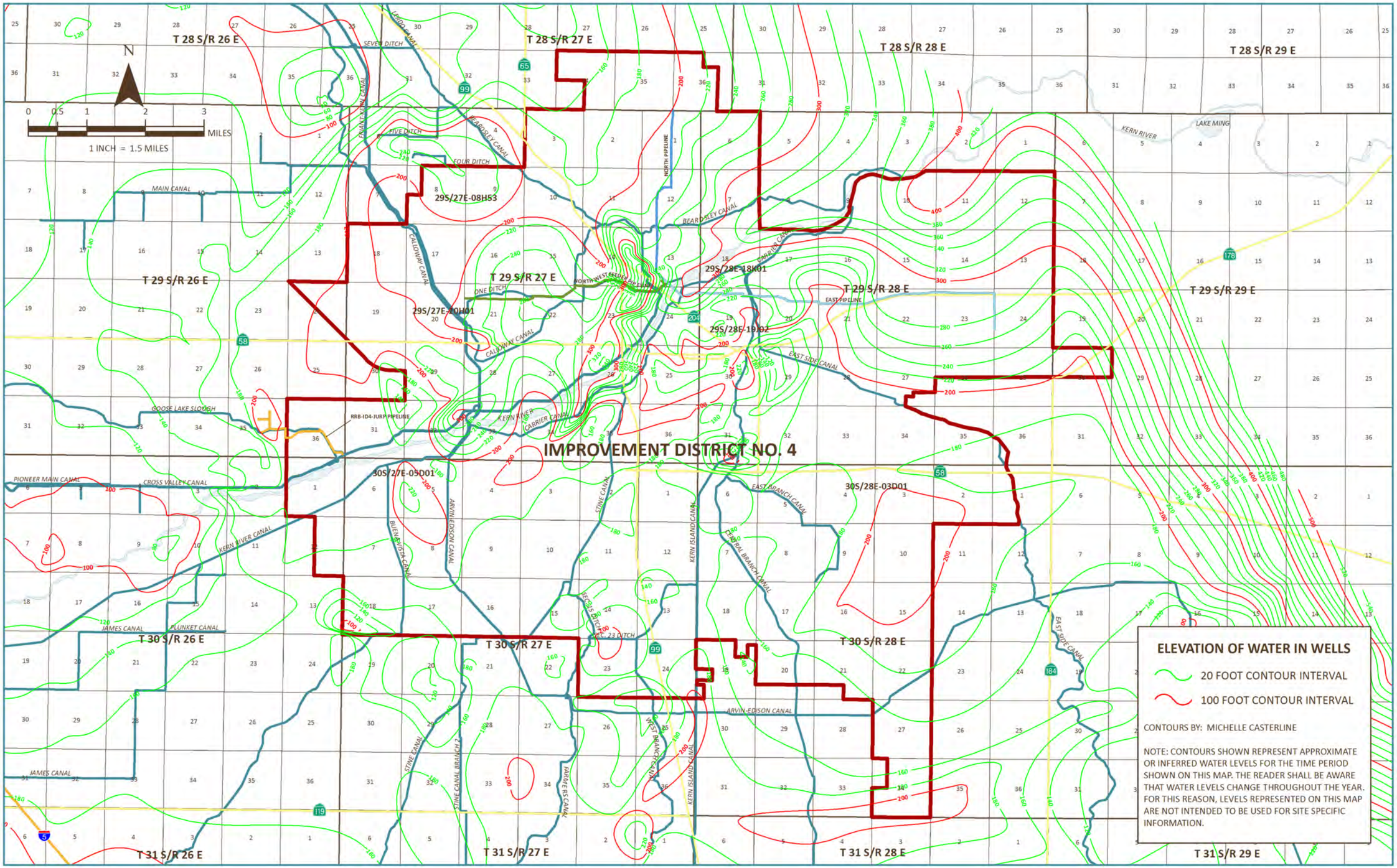
BY: S. CHAMBLESS
DATE: DECEMBER 17, 2010
REVIEWED BY: M. VARGA
FILENAME: Plate 4 - Water Wells and Spreading Areas.mxd

Plate 5 - Recharge Facilities Available to ID4



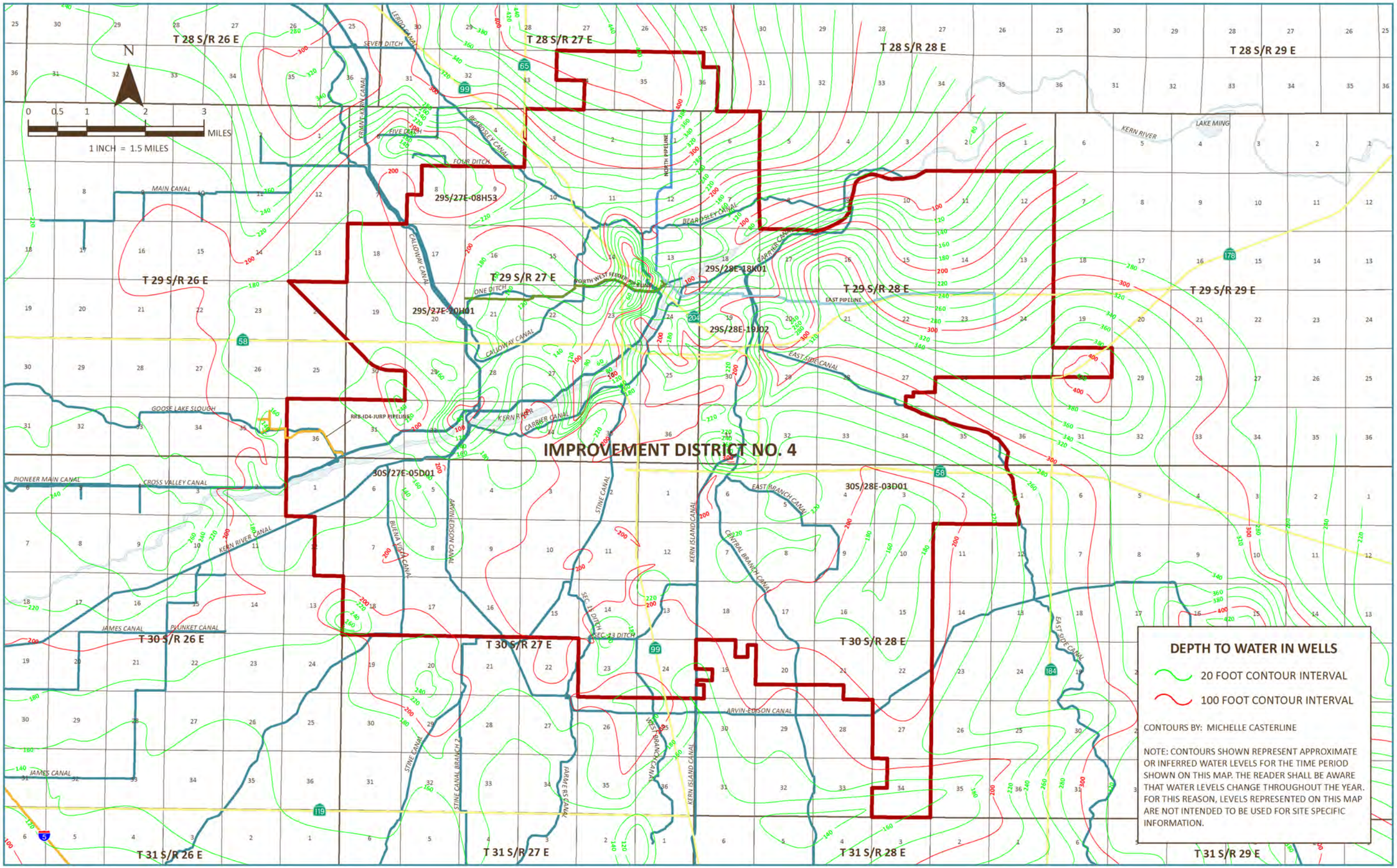
BY: S. CHAMBLESS
DATE: DECEMBER 17, 2010
REVIEWED BY: M. VARGA
FILENAME: Plate 5 - Recharge Facilities.mxd

Plate 6 - Elevation of Water in Wells



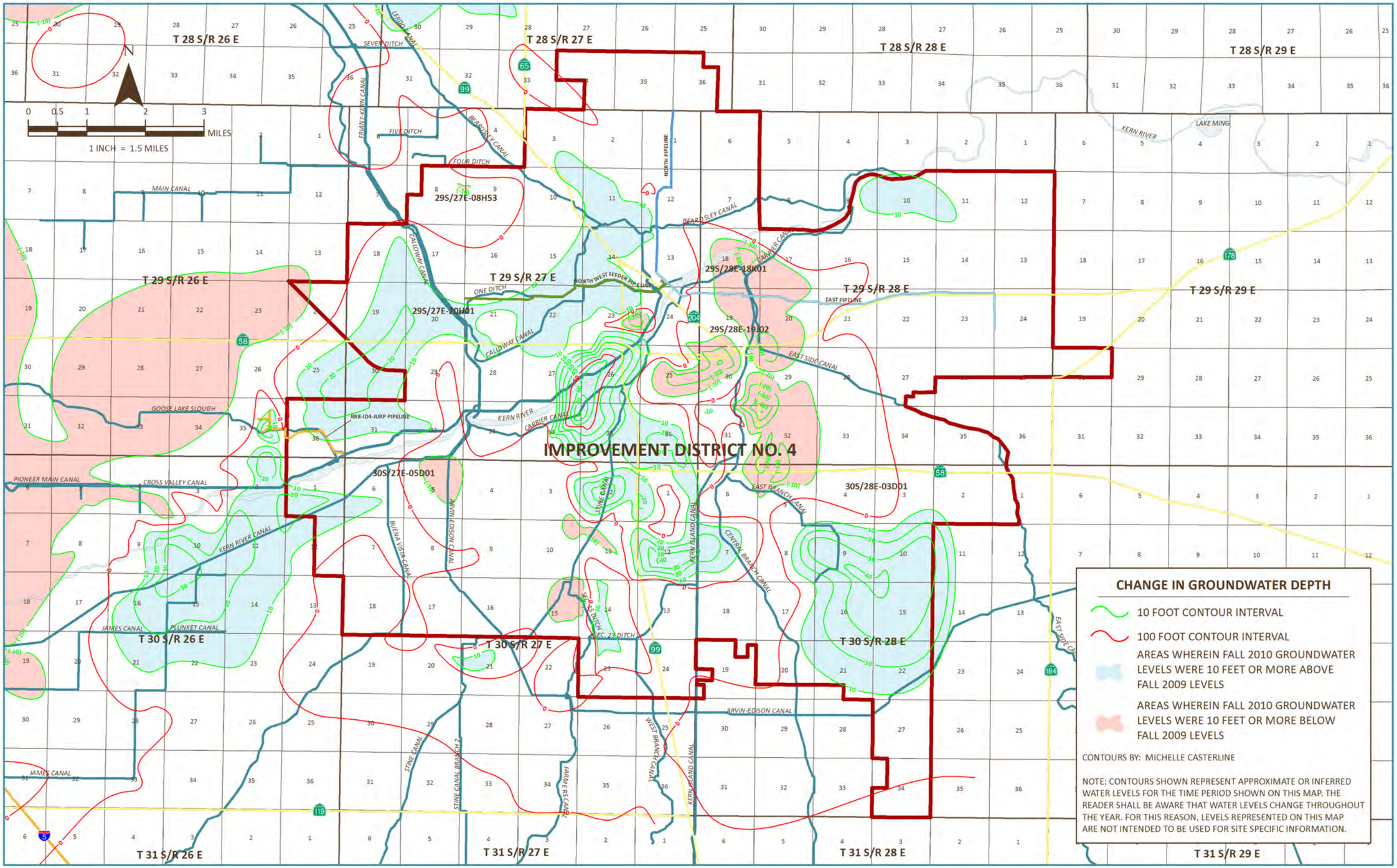
BY: S. CHAMBLESS
DATE: JANUARY 13, 2011
REVIEWED BY: M. VARGA
FILENAME: Plate 6 - Elevation of Water in Wells.mxd

Plate 7 - Depth to Water in Wells



BY: S. CHAMBLESS
DATE: JANUARY 13, 2011
REVIEWED BY: M. VARGA
FILENAME: Plate 7 - Depth to Water in Wells.mxd

Plate 8 - Change in Groundwater Depth



CHANGE IN GROUNDWATER DEPTH

10 FOOT CONTOUR INTERVAL

100 FOOT CONTOUR INTERVAL

AREAS WHEREIN FALL 2010 GROUNDWATER LEVELS WERE 10 FEET OR MORE ABOVE FALL 2009 LEVELS

AREAS WHEREIN FALL 2010 GROUNDWATER LEVELS WERE 10 FEET OR MORE BELOW FALL 2009 LEVELS

CONTOURS BY: MICHELLE CASTERLINE

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.

BY: S. CHAMBLESS
DATE: JANUARY 13, 2011
REVIEWED BY: M. VARGA
FILENAME: Plate 8 - Change in Groundwater Depth.mxd

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Phone: (661) 634-1400