



2019 - 2021 ANNUAL ENGINEERING REPORT





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1.0 INTRODUCTION

Located south of the City of Bakersfield and south of the Kern River, the Kern Delta Water District (District) was organized in December 1965 to contract with the Kern County Water Agency (KCWA) for an imported water supply from the State Water Project, and to protect existing Kern River water rights. In 1976, the District acquired the Kern Island Water Company from the City of Bakersfield (City), which excluded the domestic Ashe Water Service Area, per Agreement 76-70 “Agreement for the Sale of Kern River Water Rights and Canals” (Agreement). From the Agreement, the District garnered water rights to five service areas: Buena Vista, Stine, Farmers, Kern Island, and Eastside, along with the respective canal distribution facilities, summarized in Table 1. The District realized early on that improvements to the canal distribution facilities were necessary to maintain continued efficient and reliable operation to meet water user requests.

Table 1: Canal Distribution System

Canal System	Canal Lengths in Miles			Turnouts
	Main	Laterals	Total	
Buena Vista	17	7	24	65
Stine	13	4	17	42
Farmers	11	12	23	31
Kern Island	24	42	65	300
Eastside	20	0	20	79
Total	84	65	149	517

Over the years, the District made concerted efforts to improve the canal distribution systems, seek out and develop water partnerships in response to the growing need to store (bank) water in the San Joaquin Valley during years with above average precipitation, and recover banked water during periods of drought or years with increased irrigation demands. The District has developed a water banking partnership with The Metropolitan Water District of Southern California (MWD) which consists of the construction of conveyance facilities, banking facilities, pipeline delivery systems, and groundwater extraction wells.

The importance of banking water increased due to the steady decline of groundwater levels and the implementation of the Sustainable Groundwater Management Act (SGMA) of 2014. The landmark law requires locally established Ground Water Sustainability Agencies (GSAs) to implement Groundwater Sustainability Plans (GSPs) tailored to their respective management areas. The goal of GSPs is to demonstrate a path to sustainability by the year 2040. The District joined with the City of Bakersfield, Improvement District No. 4 of KCWA, and local agencies in and around the City to form the Kern River Groundwater Sustainability Agency (KRGSA).

The District has compiled an annual report to highlight some of the major developments and improvements within the District over the course of the year. This year’s Annual Engineering Report (Report) captures activities from 2019 through 2021. With the District’s continued commitment to provide a reliable and efficient means of delivering water to its customers, the Report also details maintenance and repair activities, and potential future capital improvement



projects. The report also highlights alterations to District facilities to accommodate the continued urbanization of the City of Bakersfield and further development of water banking projects.

As there are many improvement projects currently in the planning stages, this Report also includes a preliminary Capital Improvement Plan (CIP) for the purposes of identifying projects that will enhance our ability to deliver safe and dependable water supply to our customers and improve our banking projects. The CIP summarizes some of the future construction efforts that will be undertaken by the District, including the construction of banking facilities, groundwater extraction wells, groundwater monitoring wells, and the rehabilitation of District conveyance facilities.



2.0 OPERATIONS

2.1 Operations Overview

The District's main water supply comes from the Kern River (pre-1914 appropriative rights acquired through Agreement 76-70), with an approximate long term average of 205,00 acre-feet per year (af/yr). Other water supplies available to the District include 25,500 af/yr of State Water Project Table A water (long term average of approximately 16,000 af/yr), Friant high flow water when available, and groundwater. In addition to managing its vast canal distribution system, the District also manages approximately 1,122-acres of groundwater banking facilities and twenty groundwater extraction wells (see sections 3.3 and 3.4 respectively of this report for further details). Table 2 below summarizes the water year in percent of historical average and the amount of water banked in those years. The values shown below do not include water banked due to canal seepage.

Table 2: Water Banking Summary

Water Year	%	Spreading Basins ¹ (acre-feet)	Grower Recharge ² (acre-feet)	Total Banked Water (acre-feet)
2015	25	-	-	-
2016	50	-	-	-
2017	274	59,939	10,000	69,939
2018	59	8,840	-	8,840
2019	176	53,432	-	53,432
2020	54	9,886	-	9,886
2021	22	849	-	849

2.2 Transfer Water

In November of 2017, the District reached a settlement with North Kern Water Storage District (Ventura County Superior Court Case NO. 65-2012-00425941-CU-WM-VTA) relating to the District's Kern River Water Allocation Plan and the use and disposition of Kern River water accruing to certain Kern River water rights owned by the District. Although this Report is not intended to summarize the settlement, it is important to note that the District's implementation of the Kern River Water Allocation Plan allows the District greater flexibility to fully utilize District river entitlements.

The ability to more fully utilize the District's river entitlements requires the District to ensure all canals are always in good operating condition for operation on short notice. Prioritizing facility improvements around this new schedule will require accelerated project schedules during canal shutdown periods, especially in December of each year. The use of outside contractors to ensure

¹ Spreading basins owned and operated by the District.

² 2017 Marks the first time the District paid landowners within the District to recharge water on private land.



all projects are completed within available shutdown windows is a tool the District may utilize more heavily in this new norm. Depending on the type of year and the amount of transfer water available, if necessary, secondary canals may be shut down for two to three-week intervals at various times of the year to perform necessary maintenance projects.

Historically, the District hired seasonal canal tenders between March and August. As peak irrigation demand tapered off (peak irrigation demand usually occurs in June and July), these seasonal employees were either retained or let go, depending on the District's needs. The District now keeps its canal tenders year-round and is always prepared to operate all canals and banking projects throughout the year. Calendar year 2018 represents the first year in which these new procedures were used. The District is maximizing the amount of water available for its use and has adjusted to the maintenance and operation demands accordingly.



3.0 CURRENT CONSTRUCTION PROJECTS

3.1 District Office Expansion

The District anticipates hiring more staff and adding office space to keep up with an increasing regulatory environment and the operation of expanding banking facilities. The District began planning a ±3,636-sqft expansion to the current office building in 2019. The expansion includes additional office space, storage space, improved reception area and board room, and an additional conference room. The District retained the services of Skarphol/Frank Associates to design the office expansion. Plans for the office expansion were approved in February 2020 and the project went out to bid by March 2020. The District awarded Black/Hall Construction with the construction contract. The office expansion project commenced in June 2020 and was completed by March 2021.

3.2 Conveyance Facilities

As shown in Table 1, the District owns and operates approximately 149-miles of canals that date back to the late 1800's when the individual canal companies were formed (Stine Canal Company, Buena Vista Canal Company, Farmers Canal Company, Kern Island Irrigating Canal Company, and Eastside Canal Company). The District has made concerted efforts to rehabilitate and expand facilities to maintain and enhance capacity for deliveries.

With many new farming entities, new cropping patterns, and aging water delivery structures, the District has endeavored to provide quality weirs and turnouts to accommodate a changing industry. The District must also adapt to increasing urbanization of agricultural land within its boundaries. Urbanization causes District facilities to be realigned, pipelined, or both, and possibly abandoned altogether. From 2019 through 2021, several improvements were made to District facilities, some by the District, others by private and public entities.

3.2.1 Buena Vista Canal Realignment

In 2019, a private developer approached the District to consider realignment of the Buena Vista Canal on the northeast corner of Harris Road and Buena Vista Road to accommodate a proposed apartment complex. After the District completed its review of the proposal and agreements were finalized (e.g., new canal easement, ditch eradication agreement, etc.), the project was allowed to move forward. The canal was realigned in an open channel and included a slight bend on the northeast corner of the property, a ninety-degree bend on the northwest corner of the property, and tie back into the existing road crossing. The Buena Vista Canal realignment project was completed in early 2020. Photos 1 and 2 on the next page are aeriels showing the canal alignment prior to 2020 and after completion of the project.



Photo 1: Buena Vista Canal alignment before 2020



Photo 2: Buena Vista Canal alignment completed

3.2.2 Branch One Canal Realignment

The Branch One Canal, south of Hosking Avenue was realigned and put into a pipeline to accommodate future commercial development. Approximately 509-feet of open channel canal was put into a 48-inch diameter reinforced concrete pipeline (RCP) and realigned to the north and west end of the property. The project will be completed in two phases: Phase One consists of laying 509-feet of RCP and installing an air vent, Phase Two consist of installing a junction box connecting the new pipeline with the old pipeline, just west of Hughes Lane, and installing a concrete bowl where the pipeline discharges back into an open canal.

3.2.3 Centennial Corridor

The Centennial Corridor Project (Project) plans to connect Highway 58 from where it ends at Real Road, to Interstate 5. The Project will cross only one of the District's facilities, the Stine Canal. Initially, the crossing of the Stine Canal was envisioned to be a bridge crossing, and therefore avoiding the need to extend the existing twin 60-inch RCP culvert at Stockdale Highway further South. However, the Thomas Road Improvement Program (TRIP) changed the design from a bridge crossing the Stine Canal to pipelining approximately 420-feet of the canal to accommodate a dirt embankment over the top of the pipeline. Prior to the start of construction, the City of Bakersfield and the District entered into a Common Use Agreement and a Ditch Eradication and Pipeline Agreement. The pipeline portion was completed in 2020 and the highway remains in various stages of construction. Photos 3 through 5 show the various stages of pipelining the Stine Canal.



Photo 3: Stine Canal Pipeline, looking southeast



Photo 4: Structural backfill over pipeline, looking south



Photo 5: Stine Canal pipeline discharge, looking north



3.2.4 Eastside Canal

The Eastside Canal poses a particular challenge to the District regarding the maintenance and quality of water transported to its customers and banking partners. The alignment of the canal is such that there is very little elevation change at any point along the canal (less than .03%), which equates to about 1.5 feet of drop per mile of canal. Flow velocities in the canal have always been low and result in significant sedimentation deposits, algae, and plant growth. The entirety of the Eastside Canal above State Route 58 has sediment deposits varying from one to three feet in depth. The District continues to remove sediment from the canal as time allows, and in 2020, the District removed sediment on the Eastside Canal between Owens Street and Miller Street (roughly a quarter mile) as shown in Photos 6 and 7. The District anticipates removing sediment from other portions of the canal every year to help improve flow capacity.



Photo 6: Eastside Canal, looking west towards Owens Street



Photo 7: Eastside Canal, looking east towards Robinson Street

3.2.5 Kern Island East Branch

The Kern Island East Branch Canal is a three-mile long canal that diverts from the Kern Island Central Branch Canal, north of Terrace Way and terminates roughly 1,250-feet south of Watts Drive. In 2020, the District cleaned approximately 400-feet of the Kern Island East Branch, north of Casa Loma Drive. This stretch has become overgrown with trees and brush. In 2021, the District made various improvements to facilitate more flow through the Kern Island East Branch, which included making modifications to the diversion structure immediately south of Casa Loma Drive



and modifications to the turnout that feeds the pump station just north of Watts Drive (see Photo 8).



Photo 8: Kern Island East Brach turnout replacement

3.2.6 Kern Island Central Branch Canal at Panama Lane

The Kern Island Central Branch Canal culvert crossing at Panama Lane was extended further south to accommodate the widening of Panama Lane to its full right-of-way width. The culvert extension consisted of extending the twin 60-inch RCP culvert, removing two turnouts on the west bank, relocating one turnout on the east bank, demolishing the existing weir, constructing a new weir further downstream, and installing a concrete canal liner from the new headwall to the new weir. The project included the conversion of a private ditch that served customers east of Cottonwood Road into a buried pipeline. The entire culvert extension project was completed in two weeks, starting around December 15th, 2021, and ending December 31st, 2021. The canal had to be operational by January 1st, 2022. Photos 9 through 12 show the various stages of construction.

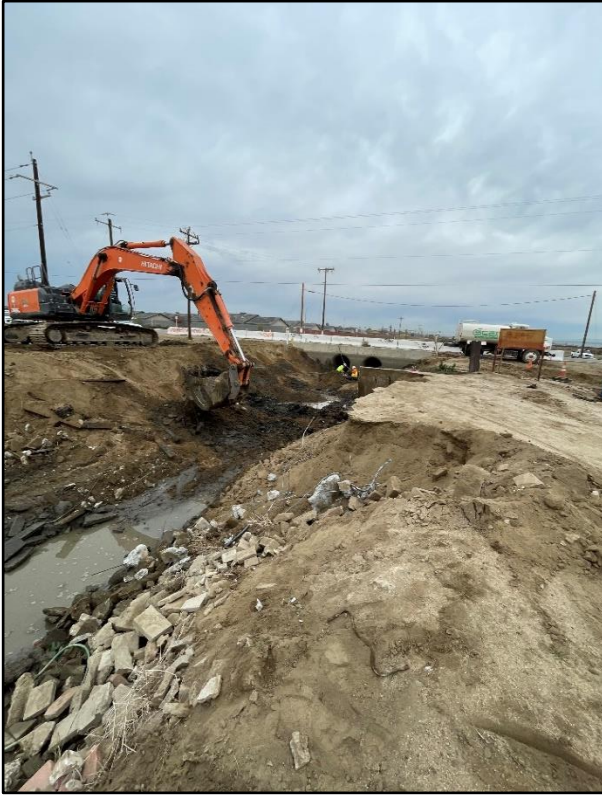


Photo 9: Kern Island Central Branch, demolition of existing weir

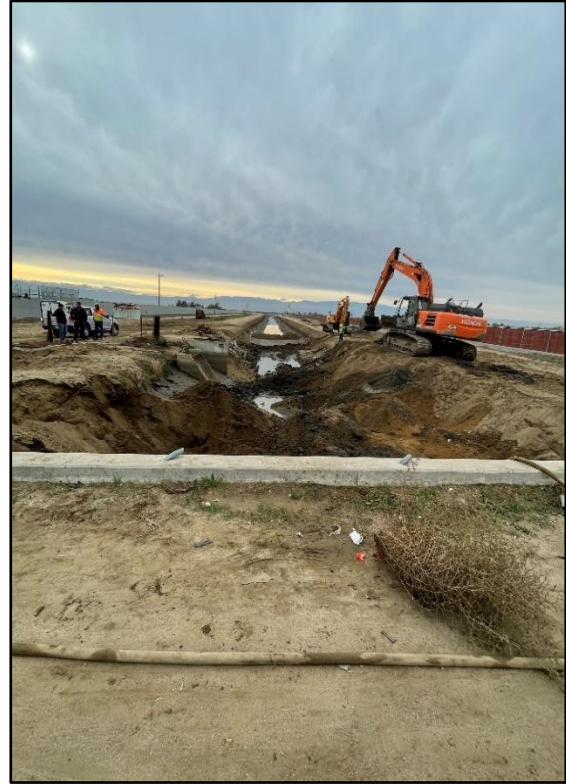


Photo 10: Kern Island Central Branch, site prep looking south



Photo 11: Kern Island Central Branch, looking north from new weir



Photo 12: Kern Island Central Branch, looking south at new weir



3.2.7 Burness Ditch and Stillson Ditch at Taft Highway

Both the Burness and Stillson Ditches cross Taft Highway via a corrugated metal pipe (CMP) culvert. As early as 2018, it became apparent that these crossings would have to be repaired or replaced as signs of deterioration began to show (a small pothole opened on the Burness Ditch and the Stillson Ditch pipe culvert began to collapse behind the headwall, south of Taft Highway). District Staff began discussing solutions with Caltrans in April of 2019. The District and Caltrans entered a Consent to Common Use Agreement (CCUA) whereby Caltrans would assume responsibility for maintaining the culvert crossings. Both crossings were eventually replaced in September of 2020. The Taft Highway crossing for the Burness Ditch is now a 6-ft by 3-ft box culvert as shown in Photo 13 and the Stillson Ditch crossing is a 24-inch polyvinyl chloride pipe.



Photo 13: Burness Ditch box culvert, looking north



3.2.8 Section 23 Ditch Multi-Use Path

The City of Bakersfield proposed to construct a 12-ft wide Multi-Use Path on the south bank of the District's Section 23 Ditch, along Pacheco Road between Stine Road and Wible Road. The City provided engineering plans to the District for a formal review and comment process. Upon review of the plans and the execution of a Common Use Agreement between the City and the District, the project was allowed to move forward. The District negotiated weed-control services to be paid for by the City as part of the project. The presence of a curb along Pacheco Road and the Multi-Use Path should cut down on the use of the canal bank for parking by the public. Although the District can still access both banks of the 23 Ditch with its equipment, the need for routine maintenance, such as side sloping, will be much less frequent now. Construction began in October 2021 and ended in November 2021 (see Photo 14 below).



Photo 14: Multi-Use Path, looking west

3.3 Groundwater Banking Facilities

The District owns and operates approximately 1,122 gross acres of groundwater banking facilities located along the Kern Island Canal, Branch One Canal, Buena Vista Canal, Stine Canal, Farmers Canal, Smith Judd Canal, and Eastside Canal as shown in Exhibit 1. Table 3 summarizes the District's groundwater banking projects.



Table 3: Kern Delta Water District Groundwater Banking Projects

Banking Facility	Location	Year Constructed	Total Area (Gross Acres)	Spreading Capability (ac-ft/day)	2017 Observed Infiltration (ac-ft/day)
Kern Island Basins	NE Corner of Houghton and South “H” Street	2008	175 ³	70	37
Stine Basins	Stine Canal, South of Taft Hwy	2009 & 2010	40	19	23
Stonefield Basins	Smith Judd Canal, north of Bear Mt. Blvd	2010	79	22	25
Buena Vista Basins	Buena Vista Canal, north of Taft Highway	2010	227	157	91
Romero Basins	Between Ashe Rd and Stine Rd, North of Romero Rd	2015	165	67	45
Howard Frick Basins	Eastside Canal, south of Di Giorgio Road	2015	71	19	21
Houchin Pit	Buena Vista East Canal, North of Bear Mt. Blvd	2010	72	14	14
Branch One Basins	Branch One Canal, north of Curnow Road	2018	74 ⁴	TBD	N/A
Sunset Basins	NW corner of Sunset Blvd and Edison Road	2022	75 ⁵	TBD	N/A
Old River Basins	NE corner of Old River Road and Taft Hwy	TBD	144	TBD	N/A
Totals			1,122	368	256

3.3.1 Kern Island Basins

Located on the northwest corner of South “H” Street and Houghton Road, the Kern Island Basins Project was the first groundwater recharge facility built by the District. The original facility consisted of 157 acres, six ponds, and four groundwater extraction wells. In 2020, the District purchased an additional 19 acres to the north of the existing basins as shown in Exhibit 2. The additional property became the seventh pond at the Kern Island Basins and came with an existing well. After further review, the District will either abandon this well or convert it into a monitoring well. The construction of Pond 7 was completed in 2021, with the District installing a new turnout from Pond 1 to Pond 7 later that year (see Photos 15 and 16).

³ Includes an additional 19 gross acres the District acquired in 2020

⁴ Includes an additional 8.88 gross acres the District acquired in 2020

⁵ This is a joint project with AEWSD. The total project size is 150 gross acres; of which 75 are attributable to the District’s total recharge area.



Photo 15: Kern Island Basins Expansion, east levee construction



Photo 16: Kern Island Basins Expansion, new turnout

3.3.2 Branch One Basins

The Branch One Basins, located at the terminus of the Branch One Canal, north of Curnow Road, were completed in 2018, totaling 66 acres. This groundwater recharge facility consists of two ponds, one to the north of the Branch One Canal, and one to the south of the Branch One Canal as shown in Exhibit 3. The District acquired an additional 8 acres immediately east of Pond 2 in 2020. The District incorporated the additional acreage into Pond 2 by removing the eastern levee of Pond 2, and reconstructing it along the eastern property line and consequently extending the southern levee further east. The existing groundwater well located on the northern end of Pond 1 will either be converted into a monitoring well or abandoned after further review by the District. The Branch One Expansion was completed in early 2021. Photos 17 and 18 show construction of the east and south levees respectively.



Photo 17: Branch One Basins Expansion, east levee construction



Photo 18: Branch One Basins Expansion, south levee construction

3.3.3 Romero Basins

The Romero Basins recharge facility is a 165-acre facility, located on the Farmers Canal between Ashe Road and Stine Road, and north of Romero Road (see Exhibit 4). It consists of nine ponds and one groundwater extraction well. The main facility, Ponds 1 through 7 were completed in 2015. During the high-water flow year of 2017, the District constructed Pond 8 to serve as an overflow pond and made slight modifications to Pond 9. The modifications to Pond 9 included taking out an old booster pump and a portion of the pump stand to facilitate water movement to the southern portion of this pond. In 2021, the District hired a contractor to flatten and level the bottom of Pond 9 and maximize the wetted area to the north. The project created a below grade recharge pond and the excess soil was used to build a berm surrounding the pond. The excess soil could be removed at a future date if needed for other projects. The Pond 9 project was completed in July 2021. As mentioned, the site has one groundwater extraction well, FR-02, which is plumbed into the Farmers Canal and the Randall Ditch. No further groundwater extraction wells are planned for the Romero Basins. Photos 19 and 20 show various stages of Pond 9 construction.



Photo 19: Romero Basins, Pond 9 construction, looking south



Photo 20: Romero Basins, Pond 9 construction, looking west



3.3.4 Stonefield Basins

Completed in 2010, the Stonefield Basins consist of four ponds on 79 acres, north of Bear Mountain Boulevard and east of the Smith Judd Canal. The Stonefield Basins can return flow back to the Smith Judd Canal via a return structure in Pond 3 as shown in Exhibit 5. As no return to the Smith Judd Canal exist in Pond 4, the water level in Pond 4 needs to always be less than a foot so it can serve as a capture pond in the event a levee breaches or the water level gets too high in Ponds 1 through 3. The current groundwater extraction well, FR-01, located on the northwest corner of Pond 1, will either be converted into a monitoring well, plumbed into the Smith Judd Canal, or abandoned altogether after further review by the District.

3.3.5 Buena Vista Basins

The Buena Vista Basins are currently the District's largest groundwater recharge facility at 277 acres, ten ponds, and four groundwater extraction wells (see Exhibit 6). The Buena Vista Basins were completed in 2010, the same year as the Stonefield Basins. The District plans to abandon the well in Pond 2 due to the fact the well casing has collapsed and the site is caving in.

3.3.6 Houchin Borrow Pit

The Houchin Borrow Pit is located on the northwest corner of I-5 and Bear Mountain Boulevard as shown in Exhibit 7. While the Houchin Borrow Pit is extremely deep and has a large capacity, the infiltration rates are very low. Care needs to be taken that once the Houchin Borrow Pit is full, the inflow rate needs to be very low.

3.3.7 Stine Basins

Currently, there are three groundwater recharge basins served by the Stine Canal, south of Taft Highway. The first basin, the Stine Regulating Basin, is approximately ½ mile south of Taft Highway. The North and South Triangle Basins are located where the Stine Canal intersects with Houghton Road (see Exhibit 8).

The Stine Regulating Basin is controlled by an overflow structure built on the southwest corner of the site (see Exhibit 9). In 2019, the District discovered that the overflow wall needed to be lowered by one (1) foot to function as intended and hired an outside contractor to saw cut one (1) foot from the overflow wall as shown in Exhibit 9.

The District also hired a land-leveling contractor in 2019 to remove sediment from all three ponds and stockpile excess dirt on the northern levees of each pond. Approximately one foot of topsoil was removed from the west triangle basin which accomplished two things; it exposed the sandy soil and created additional storage for surge flows. The Stine Canal dead ends into a terminal reservoir located about one mile south of this pond and is susceptible to overflowing the banks when excess flows occur. The District converted both triangle ponds from gate control to board control to accept surges.



3.3.8 Old River Basins

In 2021, the District acquired 144 acres of former agricultural land on the northeast corner of Old River Road and Taft Highway. The property came with one production well, Stine-01 (ST-01 for short) capable of producing 3 cubic feet per second (cfs) and the District plans to plumb the well into the canal. Since the acquisition, the District has removed hundreds of feet of old concrete irrigation line and stockpiled the material nearby for use as riprap. The District had the property surveyed and created a conceptual basin design which was given to a design engineer to prepare plans, specifications and bid documents for the construction of the facility. The project should go out to bid in the fall of 2022.

3.3.9 Howard Frick Recharge Basins

Formerly the Di Giorgio Basins, the Howard Frick Recharge Basins are located on the southwest corner of Di Giorgio Road and the Eastside Canal. This 70-acre site consists of six ponds, with the ability to return flow to the Eastside Canal from Pond 2 (see Exhibit 10). Pond 2 is also capable of accepting surge flow from the Eastside Canal via a control structure located south of Di Giorgio Road.

3.3.10 Sunset Basins

The Eastside Canal serves as a common boundary between the District and Arvin-Edison Water Storage District (AEWSD). As both Districts overlie a common groundwater basin and have constructed several joint use facilities in the past to promote water management between the two Districts, both Districts embarked on a project to create a joint-use groundwater recharge facility along the Eastside Canal.

In 2018, 150 acres of potential groundwater recharge land, located on the northwest corner of Sunset Boulevard and Edison Road, was up for sale. The District hired a contractor to drill several exploratory soil borings at the site. Based on the borings, the District determined that the ground was favorable for water banking. Both Districts entered a cost share agreement for the purchase of the subject property. As the property was located outside the District's historical boundaries, the District proceeded with annexation No. 3 to incorporate the newly acquired property into the District.

To maximize the use of the site, AEWSD plans to construct an interconnection between their Forrest Frick Pipeline (FFP) and the District's Eastside Canal. The intertie will be located approximately ¼ mile south of Muller Road and a ¼ mile west of Highway 184 and will be capable of delivering between 30-cfs to 40-cfs into the Eastside Canal.

A hydraulic model was performed on the canal from Muller Road to the end of the canal and it was found that with some minor modifications, the canal should be able to handle the additional flows. Because the elevation of the newly acquired property is higher than the Eastside Canal, the



Sunset Basins will require the construction of pump stations and pipeline(s) to get the water from the canal to the recharge ponds.

The construction of the Sunset Basins will be conducted in two phases: Phase I included the construction of the pond levees, inter-basin structures, a gravity structure to allow banking in Pond 4 by gravity and to allow surge flows to enter the facility. Phase I also included raising the banks of the Eastside Canal below the facility such that the surge flows will be contained in the canal and be capable of flowing into the gravity diversion pond. Phase II consists of the construction of pump stations and a delivery pipeline to the eastern most pond. Construction of Phase I began in November of 2021 and is expected to be completed by February 2022. Phase II and the FFP Eastside Canal Intertie are expected to be completed later in 2022.

3.4 Groundwater Extraction Wells

The District currently owns and operates twenty (20) groundwater extraction wells located throughout the service area. Most of these extraction wells were built between 2009 and 2010. These wells have been and are being serviced monthly to maintain their performance. Table 3 on page 19, includes a list of wells owned and operated by the District and the dates in which they were constructed and/or rehabilitated.

3.4.1 Well Preventative Maintenance – 2018

The last time the District operated wells for payback to our banking partners was during 2016. When a well is turned on, heat is generated in the circuitry of the control panel. The repeated cycle of the heat up and cool down can cause fittings to loosen over time, which in turn creates more heat. It is important to maintain the well panels by checking the resistance of wires from the motor to the panel to ensure the insulations aren't decaying and to inspect all fittings in the panel for tightness. The District retained the services of an electrical contractor to clean and inspect every well control panel owned by the District. The process involved cleaning each control panel enclosure and checking the termination points of all critical wires for tightness. The fans and oil drippers were also inspected and repaired as needed.



Table 4: Well Construction and Rehabilitation

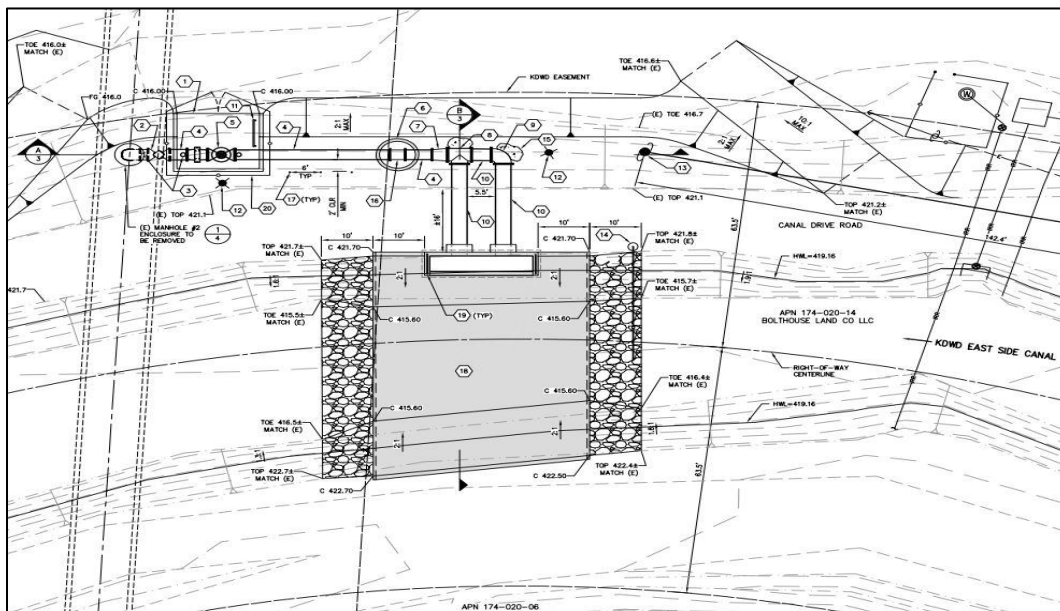
Well Name	Location	Canal to Receive Recovered Water	Year Constructed or Rehabilitated	Capacity (cfs)
KD-01	N/o Fairview Rd & South "H" Street	Kern Island Main Canal	2012	4.7
KD-02	SW/o E Panama Ln & Cottonwood Rd	Central Branch Canal	2012/2014	3.6
KB-01	NW Corner of Kern Island Basins	Kern Island Main Canal	2010	8.82
KB-03	NE Corner of Kern Island Basins	Kern Island Main Canal	2010	9.11/4 ⁶
KB-04	Westside of Kern Island Basins	Kern Island Main Canal	2010	8.84
KB-06	Eastside of Kern Island Basins	Kern Island Main Canal	2010	9.10
KI-07	S/o Berkshire Rd and South "H" St	Kern Island Main Canal	2010	9.80
KI-08	N/o Hosking Ave & South "H" St	Kern Island Main Canal	2010	9.64
AE-01	SW/o District Blvd & Ashe Rd	Stine Canal & Kern Island Main Canal	2010	10.16
AE-02	S/o Panama Ln & Akers Rd	Kern Island Main Canal	2010	9.82
AE-03	S/o Panama Ln & Wible Rd	Branch One Canal and Kern Island Main Canal	2010	10.13
AE-04	S/o Panama Ln & South "H" Street	Kern Island Main Canal	2010	10.02
FR-01	NW Corner of Stonefield Basins	Smith Judd Canal	TBD	TBD
FR-02	SW/o Taft Hwy and Stine Rd	Farmers Canal	2013	5.62
FR-03	SW/o Panama Ln & Stine Rd	Farmers Canal	2012	6.51
BV-02	NE corner of Buena Vista Basin Pond 5	Buena Vista Canal	2010	9.62
BV-03	NW Corner of Buena Vista Basin Pond 5	Buena Vista Canal	2010	9.44
BV-04	NE Corner of Buena Vista Basin Pond 6	Buena Vista Canal	2010	9.69
BV-05	NE Corner of Buena Vista Basin Pond 7	Buena Vista Canal	2010	9.73
ST-01	Old River Basins	Stine Canal	TBD	3.00
Total				165.82

⁶ This well motor was converted to a variable frequency drive and currently operates at 4 cfs

In addition to several ongoing projects, the District attempts to identify future Capital Improvement Projects that will enhance operations to allow for improved ability to store water, reclaim banked water, and transport water to any of the facilities within the District and to the District's partners. Several canals will require reconstruction efforts, banking facilities will be constructed, existing basins will be maintained, and additional groundwater recovery wells will need to be constructed. The following is a brief summary of CIP's the District is considering taking on in the near future and is not meant to be an all-inclusive list.

The District's conveyance facilities have been improved significantly since the initiation of the District's Water Banking Projects. Operation of the District canals is more efficient, and flows are more accurately controlled and measured. The following are additional facilities that the District is considering for the continued expansion of the District's Water Banking Projects.

As outlined in section 3.3.10, AEWSD is proceeding with plans to construct an intertie between their FFP and Kern Delta Water District's Eastside Canal. The plan is to connect a 30-inch diameter pipeline from FFP's Manhole No. 2 and split flows between two 36-inch diameter discharge pipelines that discharge into the Eastside Canal. Figures 1 and 2 show a 60% design for the FFP Eastside Canal Intertie.



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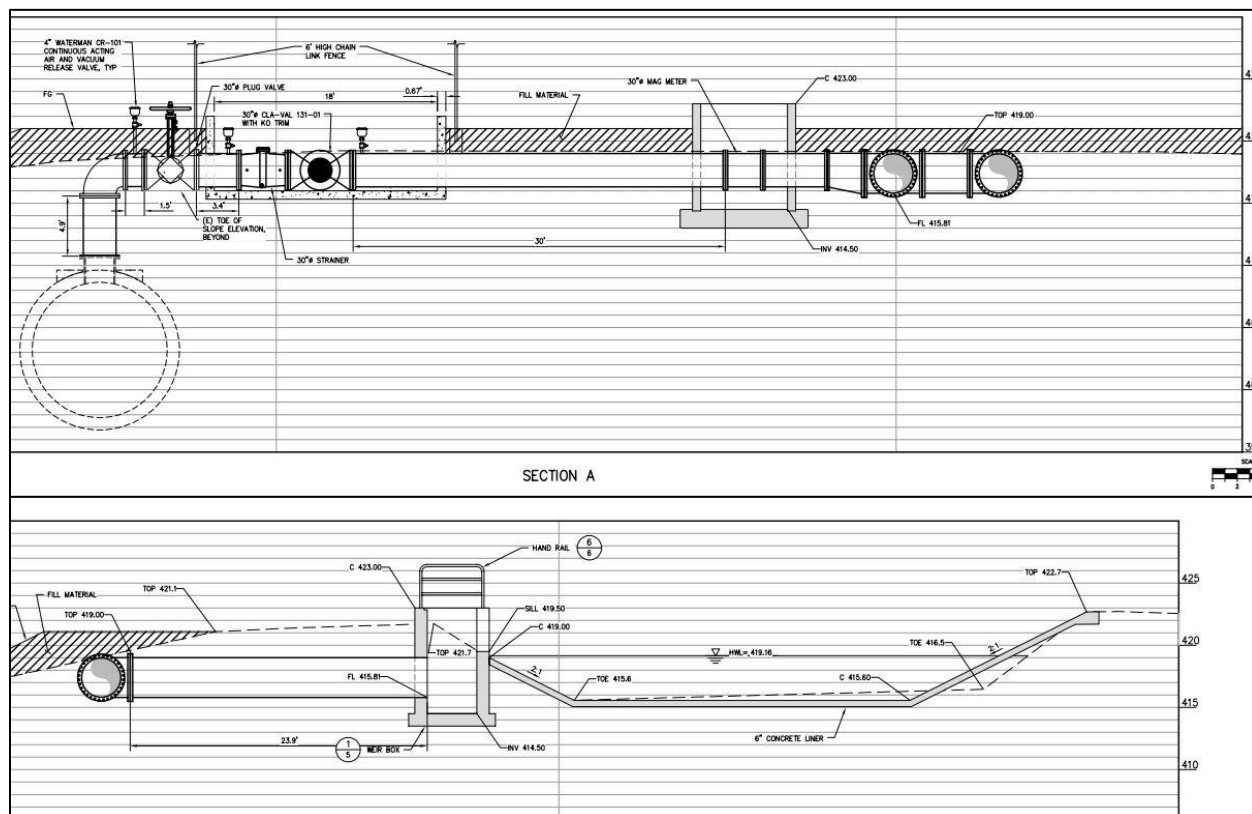


Figure 2: Profile view of proposed FFP Eastside Canal intertie

4.1.2 Kern Island Canal

The Kern Island Canal received much needed rehabilitation over the past several years; however, there are still locations that need improvements for the canal to be operated as planned for water banking and irrigation demands.

Among the improvements still to be completed is the reconfiguration of the diversion from the Kern Island Main Canal into the Kern Island Central Branch Canal. Presently, this diversion point does not have adequate control to regulate flows into either canal. The District plans to remove the existing weir in the Kern Island Main Canal and replace it with structures that will regulate flows into either canal. These structures will also be constructed to provide adequate relief during times of high flows or other operational concerns. A preliminary conceptual design is shown in Exhibit 11.



4.1.3 Rim Ditch “The Notch”

The east bank of the Rim Ditch, approximately three miles south of Bear Mountain Boulevard, is often referred to as the Notch. Historically, the east bank had to be notched out to allow heavy storm flows from the foothills in the Tejon Creek area to flow into the canal. A natural drainage course that receives storm water from Adobe Road, is located just east of the Notch. If the Notch isn't present, storm flows would fill up this drainage course, flood the adjacent field, and eventually breach into the canal.

At about 4:00 AM on Saturday, February 18, 2017, Caliente, Sycamore, Comanche, Tejon, El Paso, Pastoria, and Grapevine Creeks all started flooding the valley floor from heavy rains the night before. All these creeks, except Caliente, come together at Adobe Road and threatened to breach into the Rim Ditch either at the Notch or further downstream at the Herring Road drainage ditch. In 2017, a turntable pump was placed at the Notch to pump water from the drainage ditch into the Rim Ditch. Had this not been done, flood water would have breached uncontrollably into the canal, causing a surge of water and sediment to be sent downstream.

Although the pump worked well in 2017, it is often quite difficult to get equipment to the Notch area due to the slippery and muddy conditions. Furthermore, if stormwater runoff peaks at night, or on a holiday, it can be difficult to get personnel on site on short notice. A profile of a conceptual design to serve as a safety measure to handle both storm water and heavy flows within the canal is shown in Exhibit 14.

4.1.4 Eastside Canal

The District plans to continue the hydraulic model of the Eastside Canal that was started as part of the Sunset Basins Project (see section 3.3.10 for more information) and model the entirety of the canal to identify key areas of improvement. In addition to the hydraulic model, the District will continue to remove sediment build up within the canal as time allows.

4.1.5 Stine Canal North of California Avenue

The head of the Stine Canal comes off the Carrier Canal, south of Truxtun Avenue and west of Highway 99. From an open channel, it then transitions into an 84-inch diameter pipeline as it goes underneath the railroad, then transitions into an open ditch for approximately 295-feet, then transitions into two 60-inch diameter pipes as it goes underneath California Avenue. The District tries to avoid transitions from pipeline, to open channel, back to pipeline in relatively short stretches, as it tends to increase losses within the canal. Other issues that arise from leaving this portion of the canal as an open ditch are the homeless encampments that occur in the canal pipeline and the buildup of trash. Exhibit 15 shows the pipeline alignment as well as proposes continuing the 84-inch line into a transition structure and exits into two 60-inch pipes.



4.2 Groundwater Extraction Wells

To support the District's water banking program, the District anticipates drilling between three to five additional groundwater extraction wells. It is envisioned that two more groundwater extraction wells will be added to the Old River Basins and one groundwater extraction well built at the Howard Frick Basins. The locations of the other two groundwater extraction wells are yet to be determined. It is possible that the well at the Stonefield Basins (FR-01) can be rehabilitated to recover water banked in those basins; however, from initial inspection, this well may need to be abandoned and replaced.

4.2.1 Monitoring Wells in Compliance With SGMA

The District joined with the City of Bakersfield, Improvement District 4 of the Kern County Water Agency and other local agencies to form the KRGSA. The KRGSA completed a final draft of their GSP in December 2019 and submitted it to the state of California in January 2020. The GSP requires the District to monitor the groundwater levels in several groundwater extraction wells on a semi-annual basis. Prior to SGMA, the District tracked the depth to water level in several wells as part of other programs: California Statewide Groundwater Elevation Monitoring (CASGEM), maintenance on District owned wells, State Water Project assessments, and data to KCWA. Further details may be found in the KRGSA's GSP.

4.3 Groundwater Recharge Facilities

4.3.1 New Groundwater Recharge Properties

The District currently owns and operates eleven groundwater recharge sites, totaling 1,122 gross acres, which are used in wet years to recharge the underground aquifer. This total includes the 75-acres of land attributed to the District for the Sunset Basins, the 19-acres to the north of the Kern Island Basins, the 8.88-acres to the east of the Branch One Basin's Pond 2, and the 144-acres of the newly acquired Old River Basins on the northeast corner of Old River and Taft Highway.

The potential of SGMA regulations possibly restricting groundwater pumping is motivation to enhance recharge capabilities. In 2017, the District banked approximately 60,000 acre-feet through direct recharge in its recharge basins. This amount does not include canal seepage, grower recharge, or in-lieu deliveries. Since 2017, the District has purchased additional recharge ground and it is estimated that an additional 94-acres would be needed to achieve the District's goal of banking approximately 90,000 acre-feet per year when high flow water is available.

4.3.2 Recharge Measurement

The District measures recharge amounts using two basic methods: 1) by measurement of water into the basins through waterman gates and subtracting out whatever leaves the lower basins, and/or 2) collecting canal flow rates at the closest weirs upstream and downstream of the basins with the difference in flow being what was recharged. While this is accurate in determining the



overall effectiveness of all ponds at a given site, it does not show the effectiveness of individual ponds.

In the future, staff gauges need to be installed in all the individual ponds to accurately track performance of each pond. In the beginning of 2017, the high flow river water was turbid and most of the canals were running for the first time in a long while, meaning a lot of dirt was suspended in the water. As fine-grained particles enter the basins, it is important to track performance of individual ponds in order to determine when remedial options are considered. Infiltration rates need to be determined during each recharge period and compared to the previous recharge period to track trends. It is normal for spreading ponds to silt up over time, but without collecting the data, it is difficult to evaluate the effectiveness of groundwater recharge.



5.0 MAINTENANCE ACTIVITIES

Maintenance activities are performed on a regular basis throughout the year on all canals, canal crossings, turnouts, District owned wells and recharge basins. These activities are presented below. The following sections are routine maintenance activities performed by the District.

5.1 Maintenance Activities – 2019

The Maintenance staff's operation in the 2019 calendar year continued to incorporate two different areas of maintenance summarized below: normal District maintenance, and water banking maintenance.

5.1.1 Kern Delta Water District Maintenance

The following activities were performed by Kern Delta Water District's maintenance staff during 2019 for regular District operations.

- Repairs were made to numerous turnouts/gates, which are summarized in the attached monthly maintenance reports: Over the course of the year, these gates encountered operational problems, including minor leaking, rusted components, sediment build up, and other problems ranging from slight inconvenience in operating to major problems that limited or even prevented the use of the gates (i.e., slide gate was broken, gate had been buried by sediment, etc.).
- Motor grader sloped and graded all canals within the District throughout the year.
- Tumbleweeds were removed from District canals and property, stacked, and burned.
- Grade boards on the Kern Island, Central Branch, and Eastside Canals were replaced.
- Facility access gates where vandalism or other damage occurred were repaired.
- Tree trimming.
- Bulk items trash pickup and disposal from all canals.
- Used a bulldozer to remove weed overgrowth from the Buena Vista Canal.

Meters: The District has increased the usage of flow meters at both diversion points and at major canal locations. Meter repairs are summarized in the monthly reports.

District Wells: All District wells were serviced monthly. See section 3.4.1 of this report for more information.



5.1.2 Kern Delta Water Baking Maintenance

The following activities were performed by the District maintenance staff during 2019 for District water banking project operations.

- Maintained all baking facilities including washout repairs and erosion.
- Two turnouts into the Branch One Basins were installed: one 36-inch turnout into Pond 1 and one 24-inch turnout into Pond 2.

District Wells: All wells were serviced monthly.

Weed Control: All banking projects and related facilities were maintained regularly, including spraying pre-emergent, active weed control, etc. along roads, slopes, and outer perimeters of the basins. Additionally, all basins were mowed as required.

5.2 Maintenance Activities – 2020

The maintenance staff's operations in the 2020 calendar year continued to incorporate two different areas of maintenance summarized below: normal District maintenance, and water banking maintenance.

5.2.1 Kern Delta Water District Maintenance

The following activities were performed by District maintenance staff during 2020 regular District operations.

- Repairs were made to numerous turnouts/gates, which are summarized in the attached monthly maintenance reports: Over the course of the year, these gates encountered operational problems, including leaking, rusted components, sediment build up, and other problems ranging from slight inconvenience in operating to major problems that limited or even prevented the use of the gates (i.e., slide gate was broken, turnout had been buried by sediment, etc.).
- New turnouts: one on the Eastside Canal, south of Buena Vista Road, one new turnout into the Romero Basins, and one turnout repaired on the 15 Ditch for Boswell.
- Assisted the City of Bakersfield in the repair of the collapsed road crossing of the Stine Canal at McCutchen.
- Installation of new board control boxes on the Smith Judd Extension Canal and on the 18 North Canal.
- Demolition and repair of concrete liner on the Smith Judd Extension Canal drop structure.
- Removed broken section of corrugated pipe on the Stine Canal at Progress Road.
- Raised elevation of the east bank of the Buena Vista Canal at the head of the Buena Vista East and West Canals.
- Cleaned out the bottoms of the Stine Canal and Buena Vista Canal with a dozer.
- Tree trimming.
- Bulk items trash pickup and disposal from all canals.



District Wells: All District wells were serviced monthly. See section 3.4.1 of this report for more information.

5.2.2 Kern Delta Water Banking Project Maintenance

The following activities were performed by the District maintenance staff during 2020 for District water banking project operations.

- Maintained all banking facilities, including washout repairs and erosion.
- Repaired banks at all basins that were damaged by wave action during the 2017 season.

District Wells: All wells were serviced monthly.

Weed Control: All banking projects and related facilities were maintained regularly, including spraying pre-emergent, active weed control, etc. along the roads, slopes, and outer perimeters of the basins. Additionally, all the basins were mowed as required.

5.3 Maintenance Activities – 2021

The Maintenance staff's operation in the 2021 calendar year continued to incorporate two different areas of maintenance summarized below: normal District maintenance, and water banking maintenance.

5.3.1 Kern Delta Water District Maintenance

The following activities were performed by Kern Delta Water District's maintenance staff during 2021 for regular District operations.

- Repairs were made to numerous turnouts/gates, which are summarized in the attached monthly maintenance reports: Over the course of the year, these gates encountered operational problems, including leaking, rusted components, sediment build up, and other problems ranging from slight inconvenience in operating to major problems that limited or even prevented the use of the gates (i.e., slide gate was broken, turnout had been buried by sediment, etc.).
- Motor grader sloped and graded all canals within the District throughout the year.
- Repaired Rim Ditch seepage issues caused by gopher activity and high water levels.
- Removed sediment from Eastside Canal and Farmers Canal.
- Treated and cleaned Central Branch Canal inlet into Costerisan Lake.
- Made improvements to East Branch Canal standpipe, south of Casa Loma to improve flow.
- Replaced old 24" turnout with new 36" turnout on East Branch Canal.
- Repaired internal joint seams on 13 Ditch headgate.
- Rebuilt Branch One Return Box area for more efficient operation of the canal.

Meters: The District has increased the usage of flow meters at both diversion points and at major canal locations. Meter repairs are summarized in the monthly reports.



District Wells: All District wells were serviced monthly. See section 3.4.1 of this report for more information.

5.3.2 Kern Delta Water Banking Project Maintenance

The following activities were performed by the District maintenance staff during 2021 for District water banking project operations.

- Maintained all baking facilities, including washout and erosion repairs.
- Removed irrigation pipelines from Marlette property (Kern Island Basins Expansion) and AC Electric property (Old River Basins).
- Added emergency overflow pipeline into Branch One Basins' Pond 1.

District Wells: All wells were serviced monthly.

Weed Control: All banking projects and related facilities were maintained regularly, including spraying pre-emergent, active weed control, etc. along roads, slopes, and outer perimeters of the basins. Additionally, all basins were mowed as required.



Appendix A

Maintenance Report

January 2019

1. **Structure and Turnout Repairs.** The following jobs were completed during the month;
 - a. Install vent covering on Stine Canal at Easton
 - b. Excavate and evaluate turnout installation at #6-0-6 (BV Canal at Pieri Road) for gate/box installation
 - c. Repair wash-ins on Farmers, 20' and Stine Canals
2. **Shop.** The following jobs were completed during the month;
 - a. Normal service and repairs on District vehicles and equipment.
 - b. Repair truck #320, stops running at times
 - c. Repair ramp on Trailer # T12
 - d. Repair engine on Truck #202
 - e. Finish repairs on engine of Truck # 321 (water in oil)
 - f. Service and repair 430F2 backhoe
3. **District Wells.**
 - a. No service or monthly inspection of District Wells this month.
4. **Motor Grader.** The following canals were sloped and graded;
 - a. Slope portions of the BV and BV East Canal, Branch 2, Randel, 13 Ditch and 20'
5. **Backhoe 1.** The following jobs were completed during the month;
 - a. Complete shutdown projects
 - b. Finish installation of turnouts on Branch 1
 - c. Clean canals of debris blown in by recent storms (Farmers, Smith Judd, Kern Island and 15 Ditch)
6. **Backhoe 2.** The following jobs were completed this month;
 - a. Removed mattresses, debris, tumbleweeds and tires from canals, turnouts, weirs and crossing on Kern Island, Central, Farmers, 15 Ditch, Stine and BV Canals
7. **Weed Spraying.** The following canals were sprayed during the month;
 - a. Farmers, BV, Branch 2, 20', 13 Ditch and Kern Island Canals
8. **Aquatic Treatments.** No treatments were made to canals during shutdown.
9. **Rodent Control**
 - a. Bait Stations were filled at 18 N&S, BV and 20-Foot West of Wible Rd.
10. **Trash Removal.**
 - a. Daily cleaning of crossings, trash screens and weirs on all canals
 - b. Remove bulky items from Kern Island, Farmers, Central, East Branch, Stine and BV and haul trash to the landfill.
11. **Fence Repairs.** Fences were repaired at the following locations;
 - a. Kern Island – Columbus and Kentucky Street
 - b. Branch 1 – Panama Lane and White Lane
 - c. Stine at Easton Complex

12. Safety Meetings. Weekly tailgate safety topics were;

- a. Shutdown Project Safety Rap-up
- b. Hits & Misses from the Past Week (1.11.19)
- c. Proper Lifting Procedures
- d. Vehicle Inspection Report
- e. Company New Hands-Free Device Policy

13. Water Banking Activities. The following jobs were completed during the month;

- a. Replace turnout # 3-4-154 on the lined section of the Branch 1 Canal with a new 36" turnout and piping into the large pond of Branch 1 Basins
- b. Replace 18" turnout # 3-4-157 on the Branch 1 Canal with a new 24" turnout and piping into the small pond of the Branch 1 Basins.
- d. Burn Tumbleweeds
- e. Prep fence lines, levees and roadways for pre-emergent application
- f. Spraying of pre-emergent at all Basins

14. Future Projects. The following projects will be completed as time and scheduling permit:

- a. 15 Ditch meter installation
- b. Installation of bollards at Easton Complex on Stine Canal
- c. Build catwalk at 551 Weir for cleaning safely
- d. Finish installation of Owl Box throughout district
- e. Build and install screen structures on Eastside Canal turnouts
- f. Build tumbleweed attachment for second backhoe

15. Future Water Banking Projects.

- a. Mow weeds at Stine overflow basin
- b. Install two return structures from basins into Branch 1 Canal
- c. Install small overflow weirs at west side of Romero Basins

**Maintenance Report
February 2019**

1. **Structure and Turnout Repairs.** The following jobs were completed during the month;
 - a. Dig and repair 15" gate #3-0-157 on Kern Island
 - b. Repair backup weir # 5-0-165 with rip-rap on Stine Canal
 - c. Repair washouts on Rim
 - d. Repair wash-ins on Farmers and Stine Canals
 - e. Build and install screen structures on Eastside Canal turnouts
2. **Shop.** The following jobs were completed during the month;
 - a. Normal service and repairs on District vehicles and equipment.
 - b. Repair truck #202 & 203 and prep for sale
 - c. Service Grader
 - d. Prep new trucks for use (221, 222 and 223)
 - e. Install night lighting for all Ops trucks
3. **District Wells.**
 - a. No service or monthly inspection of District Wells this month.
4. **Motor Grader.** The following canals were sloped and graded;
 - a. Slope portions of the BV, Randel, Eastside and Kern Island
5. **Backhoe 1.** The following jobs were completed during the month;
 - a. Repair Stine, Farmers and Rim from wash-ins and washouts
 - b. Finish installation of board control structures on Branch 1
 - c. Clean canals of debris from storms (Farmers, Smith Judd, Kern Island and 13 Ditch)
6. **Backhoe 2.** The following jobs were completed this month;
 - a. Removed mattresses, debris, tumbleweeds and tires from canals, turnouts, weirs and crossing on Kern Island, Branch 1, Central, Rim and Eastside
7. **Weed Spraying.** The following canals were sprayed during the month;
 - a. Farmers, BV, Stine, Eastside, Kern Island Canals and Basins
8. **Aquatic Treatments.** No treatments were made this month.
9. **Rodent Control**
 - a. Bait Stations were not filled this month
10. **Trash Removal.**
 - a. Daily cleaning of racks, crossings, screens and weirs on all canals
 - b. Cleanup on canals to remove debris from Kern Island, Farmers, Randal, Eastside, Central, Branch 1, Stine and BV to remove shopping baskets, tires and debris. All the trash trucks were used to haul debris to the landfill from brush and trash removal.
11. **Fence Repairs.** Fences were repaired at the following locations;
 - a. Kern Island – Columbus, 30 St. and Pacheco

- b. Branch 1 – Panama Lane
- c. Central at Calcutta, South Gate, Wilson and South P
- d. Stine at Summer Tree Lane

12. Safety Meetings. Weekly tailgate safety topics were;

- a. February Projects and Safety
- b. Fresno Valve Gate Installation Safety
- c. Risk Assessment for Jobs
- d. Weekend Projects and Safety
- e. Reporting use of Safety Equipment on Vehicles

13. Water Banking Activities. The following jobs were completed during the month;

- a. Installation of 2 new return structure from basins into Branch 1 Canal
- b. Burn Tumbleweeds on fence lines and at basins
- c. Prep fence lines and roadways for soil sterilant spraying

14. Future Projects. The following projects will be completed as time and scheduling permit:

- a. 15 Ditch meter installation
- b. Installation of bollards at Easton Complex on Stine Canal
- c. Build catwalk at 551 Weir for cleaning safely
- d. Finish installation of Owl Box throughout district
- e. Build tumbleweed attachment for second backhoe

18. Future Water Banking Projects.

- a. Install Pipe Line Markers
- b. Install small overflow weirs at west side of Romero Basins

Maintenance Report

March 2019

1. **Structure and Turnout Repairs.** The following jobs were completed during the month;
 - a. Install rip-rap on Farmers Canal at Old River Road for sand and level control
 - b. Repair washouts on Rim, Stine and 18 N & S
 - c. Repair washout on Randal at Houghton
 - d. Repair wash-ins on Eastside, BV, Farmers and Stine Canals
 - e. Build and install screen panels at Eastside Canal turnouts
 - f. Install bollards around Stine Canal pipeline-access-port at the Easton Business Complex
2. **Shop.** The following jobs were completed during the month;
 - a. Normal service and repairs on District vehicles and equipment.
 - b. Remove and salvage spray equipment from truck #309 and prep for sale
 - c. Prep Trucks for Sale (202, 203, 204, 205 & 320)
 - d. Service 430F1 backhoe and safety check trailer
 - e. Repair starter solenoid on truck #217
 - f. Repair A/C and cooling system on truck #214
3. **District Wells.**
 - a. No service or monthly inspection of District Wells this month.
4. **Motor Grader.** The following canals were sloped and graded;
 - a. Slope portions of the Kern Island and Central
5. **Backhoe 1.** The following jobs were completed during the month;
 - a. Repair wash-ins and washouts on BV, Stine, Farmers and Rim
 - b. Repair rodent damaged on Stine Canal
 - c. Remove debris from March 5 storm event in the 13 Return, BV, Farmers, Kern Island and Branch 1
6. **Backhoe 2.** The following jobs were completed this month;
 - a. Removed mattresses, debris, tumbleweeds and tires from canals, turnouts, weirs and crossings on Eastside, Central, Stine, Randal, Burness and East Branch
7. **Weed Spraying.** The following canals were sprayed during the month;
 - a. BV, BV East, Canfield, Stine, Farmers, KI, Branch 1, 15 Ditch, Central and Romero Basins
8. **Aquatic Treatments.** No treatments were made to canals this month.
9. **Rodent Control**
 - a. Installed New Bait Stations along the Rim and BV Canal
 - b. 12 New Owl Boxes were installed throughout the District
10. **Trash Removal.**
 - a. Daily cleaning of racks, crossings, screens and weirs on all canals

- b. Remove debris from the Kern Island, Farmers, Randal, Eastside, Central, Branch 1, Stine and BV. Both trash trucks were used to haul debris to the landfill.

11. Fence Repairs. Fences were repaired at the following locations;

- a. Kern Island – Columbus, 34th St., 30 St., Calcutta and Pacheco
- b. Branch 1 – Berkshire, Hughes Lane and Panama
- c. Central - Pacheco, South Gate, Wilson and South P
- d. Stine - Summer Tree Lane, Wilson, Pacheco and Bell Terrace

12. Safety Meetings. Weekly tailgate safety topics were;

- a. Reporting Use of Safety Equipment in Vehicles
- b. Time Change Effects & Safety
- c. Work Station Risk & Hygiene
- d. Accident Reporting
- e. Week in Review (Near Misses)

13. Water Banking Activities. The following jobs were completed during the month;

- a. Installation of flood irrigation structures west of Romero Basins for spreading

14. Future Projects. The following projects will be completed as time and scheduling permit:

- a. 15 Ditch meter installation
- b. Build catwalk at 551 Weir for cleaning safety
- c. Build tumbleweed attachment for second backhoe

15. Future Water Banking Projects.

- a. Grading on Kern Delta property west of vet hospital to improve spreading capability

**Maintenance Report
April 2019**

1. **Structure and Turnout Repairs.** The following jobs were completed during the month;
 - a. Place metal plates in Rock Dam weir of the Eastside Canal to back up water for a recommissioned delivery point
 - b. Installed new meters on the 15 Ditch (20-Foot)
2. **Shop.** The following jobs were completed during the month;
 - a. Normal service and repairs on District vehicles and equipment.
 - b. Replace mole board blades on grader
 - c. Repair 430 backhoe pins & bushing, bucket connection system and slide on mast
 - d. Repair truck #213 air conditioning system
 - e. Repair cooling system on truck # 214
3. **District Wells.**
 - f. No service or monthly inspection of District Wells this month.
4. **Motor Grader.** The following canals were sloped and graded;
 - a. Slope portions of the BV East and BV
 - b. Grade channels into the north part of the acreage west of horse hospital to enhance water spreading
5. **Backhoe 1 – 430.** The following jobs were completed during the month;
 - a. Repair BV, Stine, Farmers, Eastside and Rim from wash-ins and washouts
 - b. Repair Romero Basin and Stine Canal from rodent damage
 - c. Clean canals of debris (13 Return, Farmers, Kern Island and Branch 1)
6. **Backhoe 2 – 430F2.** The following jobs were completed this month;
 - a. Removed mattresses, debris, tumbleweeds and tires from canals, turnouts, weirs and crossing on the Eastside, Central, Stine, Randal, Burness and East Branch
7. **Weed Spraying.** The following canals were sprayed during the month;
 - a. BV, BV East, Canfield, Stine, Farmers, KI, Branch 1, 15 Ditch, Central and Romero Basins, 18 N&S and East Branch
8. **Aquatic Treatments.** Treatments including surface spraying for algae mats and injection treatments for control of algae or vascular aquatic weeds were done on the Central, Eastside, 13 Ditch, KI and BV
9. **Rodent Control.**
 - a. Bait Stations were checked and all locations filled throughout this month
 - b. Owl Boxes had bedding installed throughout the District
10. **Trash Removal.**
 - a. Daily cleaning of racks, crossings, screens and weirs was done on all canals
 - b. Removed trash (shopping carts, tires etc.) from the Kern Island, Farmers, Eastside, Central, Branch 1, Stine and BV. Both trash trucks were used to haul debris to the landfill

- c. Tree and brush removal along the upper Kern Island canal for grader passage and homeless prevention

11. Fence Repairs. Fences were repaired at the following locations;

- a. Kern Island – Columbus, 34th St., 30 St., Calcutta and Pacheco
- b. Branch 1 – Berkshire, Hughes Lane and Panama
- c. Central - Pacheco, South Gate, Wilson, Planz Rd. and South P
- d. Stine - Summer Tree Lane, Park Circle, Wilson, Pacheco and Bell Terrace
- e. BV – White Lane and Mountain Vista
- f. Eastside – Sterling, Kentucky, Oswell and Fairfax

12. Safety Meetings. Weekly tailgate safety topics were;

- a. First Aid Kits
- c. Job Walk for Tree Falling
- d. Daily Vehicle Inspection
- e. Week in Review (Near Misses)

13. Water Banking Activities. The following jobs were completed during the month;

- a. Repair seepage leak at Romero Basins
- b. Repair feeder ditch turnout at BV Basins
- c. Grade flow channels in the area west of the vet hospital for enhanced spreading

14. Future Projects. The following projects will be completed as time and scheduling permit:

- a. Trim and remove trees as needed along canals
- b. Build catwalk at 551 Weir for cleaning safety
- c. Build tumbleweed attachment for second backhoe

18. Future Water Banking Projects.

- a. Add rip-rap and/or slurry around intertie structures
- b. Install Staff Gauges in Basins

Maintenance Report

May 2019

1. **Structure and Turnout Repairs.** The following jobs were completed during the month;
 - a. Install rip-rap on Stine and BV Canals to avoid bank erosion
 - b. Repair wash-ins on KI, BV, Eastside and Stine
 - c. Place K-Rails at terminus of Hill Top St. to prevent traffic onto the Eastside Canal to stop dumping
 - d. Repair/Replace meters on Farmers #4-0-143, Branch 1 #3-4-164 and KI #3-0-77
2. **Shop.** The following jobs were completed during the month;
 - a. Normal service and repairs on District vehicles and equipment.
 - b. Repair cracks to sloper frame on motor grader (#403)
 - c. Replace hydraulic fitting on new backhoe (#404)
 - d. Repair shorted electrical fuel sensor on old backhoe (#402)
 - e. Replace tarps on both trash trucks (#322 and #323)
 - f. Repair air bag system on truck #214
 - g. Repair & paint propane trailer (#T5)
 - h. Repair & paint welding trailer (#T2)
3. **District Wells.**
 - a. No service or monthly inspection of District Wells this month.
4. **Motor Grader #403** The following canals were sloped and graded;
 - a. Slope portions of the BV and Stine
5. **Backhoe #402** The following jobs were completed during the month;
 - a. Repair BV, Stine, Farmers, Eastside and Rim from wash-ins and washouts
 - b. Clean canals of debris (13 Return, Randal and Eastside)
6. **Backhoe #404** The following jobs were completed this month;
 - a. Removed mattresses, debris, tumbleweeds and tires from canals, turnouts, weirs and crossings on Eastside, Central, Farmers, Stine, Randel, Burness, Branch 1 and East Branch
 - b. Clean and remove brush & trees from Kern Island from 58 South to Calcutta
 - c. Clean and remove brush & trees from the BV from Howell south to Ming Avenue
7. **Weed Spraying.** The following canals were sprayed during the month;
 - a. BV, Farmers, KI, Branch 1, Branch 2, Ditch, Central, Romero, 20', 18 N&S and Eastside
8. **Aquatic Treatments.** Treatments including surface spraying for algae mats and injection treatments for control of algae or vascular aquatic weeds were done on Central, Eastside, 13 Ditch, KI, 18 N&S, Stine, BV and Farmers
9. **Rodent Control**
 - a. Bait Stations were checked and all locations filled throughout this month

10. Trash Removal.

- a. Daily cleaning of racks, crossings, screens and weirs was done on all canals
- b. Remove debris from the Kern Island, Farmers, Eastside, Central, Branch 1, East Branch, Stine and BV. Both trash trucks were used to haul debris to the landfill.
- c. Tree and brush removal along canal for grader passage and homeless prevention on Kern Island and BV

11. Fence Repairs. Fences were repaired at the following locations;

- a. Kern Island – Columbus, 30 St., Planz, Calcutta and Pacheco
- b. Branch 1 – So. H, Berkshire, Hughes Lane and Panama Lane
- c. Central - Pacheco, South Gate, Wilson, Planz Rd. and South P
- d. Stine - Summer Tree Lane, Park Circle, Wilson, Pacheco and Bell Terrace
- e. BV – Vista Del Mar Ave. and Mountain Vista
- f. Eastside – Quantico, Sterling, Kentucky, Oswell and Fairfax

12. Safety Meetings. Weekly tailgate safety topics were;

- a. Heat Stress – Part 1 From Employee Hand Book
- b. Heat Stress – Part 1.2
- c. Heat Stress – Part 2
- d. Heat Stress – Part 2.2
- e. Heat Stress – Part 3

13. Water Banking Activities. The following jobs were completed during the month;

- a. Repair bank at DiGiorgio Basins
- b. Repair seepage leak on Branch 1 Basin levee
- c. Repair rodent damage at Branch 1 Basins

14. Future Projects. The following projects will be completed as time and scheduling permit:

- a. Trim and remove trees/brush as needed along canals for grader passage (Central)
- b. Removal overgrown brush on the Rim for equipment passage
- c. Build catwalk at 551 weir for cleaning safety
- d. Build tumbleweed attachment for second backhoe

18. Future Water Banking Projects.

- a. Install permanent staff gauges in basins
- b. Place rip-rap around eroded intertie structures
- c. Build Sunset Basins (outside contractor)

Maintenance Report

June 2019

1. **Structure and Turnout Repairs.** The following jobs were completed during the month;
 - a. Install rip-rap on Stine, Kern Island and BV Canals to avoid bank erosion
 - b. Repair wash-outs on KI, BV, Eastside and Stine
 - c. Repair meters throughout district; #5-0-168 & 201, 2-0- 290 & 300, 3-0-116, 19, 17 & 93, 4-0-258 & 254, 45-0-200
 - d. Repair gates at 3-0-93 and 5-0-180
 - e. Repair fire damage to office / yard sump
2. **Shop.** The following jobs were completed during the month;
 - a. Normal service and repairs on District vehicles and equipment.
 - b. Front end repairs to Truck #321
 - c. Replace rear window on truck #321
 - d. Repairs to truck #322 air conditioning system
 - e. Repairs to Equipment # 402 electrical wiring loom
 - f. Repairs to truck #210 brake system
 - g. Remove old coolers and install 3 new coolers on shop building
 - h. Repair air conditioning on truck # 207 & 213
3. **District Wells.**
 - a. No service or monthly inspection of District Wells this month.
4. **Motor Grader # 403** The following canals were sloped and graded;
 - a. Slope portions of the Stine, 15 Ditch, Branch 2 and Farmers Canal
5. **Backhoe # 402** The following jobs were completed during the month;
 - a. Repair washouts on BV, Stine, Eastside and Rim
 - b. Clean debris from Central and Eastside
6. **Backhoe # 404** The following jobs were completed this month;
 - a. Removed mattresses, debris, tumbleweeds and tires from canals, turnouts, weirs and crossing on Eastside, Central, Farmers, Stine, Randal, Burness, Branch 1 and East Branch
 - b. Clean and remove brush & trees from Kern Island at Terrace Way
 - c. Clean and remove brush & trees from the head of Central and moving down stream
7. **Weed Spraying.** The following canals were sprayed during the month;
 - a. BV East, Kern Island, Central, Rim, East Branch and Canfield
8. **Aquatic Treatments.** Treatments including surface spraying for algae mats and injection treatments for control of algae or vascular aquatic weeds were done on Kern Island, Farmers, Randal, Stine, Central, BV East, BV and Eastside
9. **Rodent Control**
 - a. Bait Stations were checked and all locations filled throughout this month

10. Trash Removal.

- a. Daily cleaning of crossings, screens and weirs on all canals
- b. Cleanup on canals to remove discarded debris from banks and canals of the Kern Island, Farmers, Eastside, Central, Branch 1, East Branch, Stine and BV to remove shopping baskets, tires and debris. Both trash trucks were used to haul debris to the landfill from brush and trash removal.
- c. Tree and brush removal along the Kern Island and Central canal for grader passage and homeless prevention

11. Fence Repairs. Fences were repaired at the following locations;

- a. Kern Island – Calcutta and Pacheco
- b. Branch 1 – Panama Lane
- c. Central - South Gate, Terrace Way and South P
- d. Stine - Summer Tree Lane and Wilson
- e. BV – White Lane
- f. Eastside – Sterling

12. Safety Meetings. Weekly tailgate safety topics were;

- a. Fall Protection Safety (Harness Safety)
- b. Review of Yard Sump Fire
- c. Emergency Response Plan 1.1 (Plan Outline)
- d. Emergency Response Plan 2.1 (Maintenance's Responsibility)

13. Water Banking Activities. The following jobs were completed during the month;

- a. Repair and clean screens on Stine Pond A
- b. Repair damaged fence at Romero Basin and Farmers Canal

14. Future Projects. The following projects will be completed as time and scheduling permit:

- a. Trim and remove trees/brush as needed along canals for grader passage (Central)
- b. Removal of overgrown brush from Rim west of Hwy 99

15. Future Water Banking Projects.

- a. Install permanent staff gauges in basins
- b. Place rip-rap around eroded intertie structures
- c. Build Sunset Basins (outside contractor)

Maintenance Report

July 2019

1. **Structure and Turnout Repairs.** The following jobs were completed during the month;
 - a. Install rip-rap around failing backup weir on the Stine Canal
 - b. Repair wash-outs on 20', 15 Ditch and Rim
 - c. Repair meters; 3-0-93 and 3-0-95
 - d. Replace meters; 5-0-168 and 2-0-300
 - e. Repair turnouts; 3-6-10 and 3-2-238
2. **Shop.** The following jobs were completed during the month;
 - a. Normal service and repairs on District vehicles and equipment.
 - b. Front end repairs to 2015 Tahoe #101
 - c. Front end repairs to 2005 spray truck #321
 - d. Prep truck #316 (old service truck) for sale
 - e. Prep truck #328 (new service truck) for field use
 - f. Major service equipment #403 (Grader)
 - g. Repairs brakes on #215 and #212, #321 (from accident damage) and #285 (side view mirror repair)
 - h. Repair air conditioning system on truck # 215, 321 and 322
3. **District Wells.**
 - a. Monthly service and inspection of District Wells
4. **Motor Grader # 403** The following canals were sloped and roads graded;
 - a. Slope portions of the 20', Kern Island, Rim, Central and East Branch
5. **Backhoe # 402** The following jobs were completed during the month;
 - a. Repair washouts on BV, Stine and Rim
 - b. Clean debris from Central, Stine, Farmers and Eastside
6. **Backhoe # 404** The following jobs were completed this month;
 - a. Removed mattresses, debris, tumbleweeds and tires from canals, turnouts, weirs and crossing on Eastside, Central, Farmers, Stine, Randal, Burness, Branch 1 and East Branch
 - b. Clean and remove brush & trees from Central at Terrace Way
 - c. Clean and remove debris along East Branch at Terrace Way
7. **Weed Spraying.** The following canals were sprayed during the month;
 - a. BV, BV East, Kern Island, Central, Branch 2, Eastside, Farmers, Stine and Canfield
8. **Aquatic Treatments.** Treatments including surface spraying for algae mats and injection treatments for control of algae or vascular aquatic weeds were done on the; Kern Island, Branch 1, 15 Ditch, Farmers, Randal, Stine, Branch 2, Central, BV East, BV and Eastside

9. Rodent Control

- a. Bait Stations were checked and filled at all locations throughout the District

10. Trash Removal.

- a. Daily cleaning of crossings, weirs, racks and screens on all canals
- b. Cleanup on canals to remove debris from the Kern Island, Farmers, Eastside, Central, Branch 1, East Branch, Stine and BV. Both trash trucks and dump trucks were used to haul debris to the landfill.
- c. Removal of overgrown brush and trimming of trees along the Rim from Hwy. 99 West for grader passage
- d. Tree and brush removal along the Kern Island, Central and East Branch Canal for grader passage and homeless prevention

11. Fence Repairs. Fences were repaired at the following locations;

- a. Kern Island – Calcutta, Pacheco, 30th St., 34th St. and Columbus
- b. Branch 1 – White Lane and Hughes
- c. Central - South Gate, Terrace Way and South P
- d. East Branch – Terrace Way and South P
- e. Stine – Chester Lane, Garnsey Lane and Ash
- f. BV – White Lane
- g. Eastside – 34th St. and Columbus

12. Safety Meetings. Weekly tailgate safety topics were;

- a. Emergency Response Plan 2.2 (SDS Sheets)
- b. Emergency Response Plan 3.0 (Earth Quake)
- c. Vehicle Accident Reporting Procedures
- d. House Keeping

13. Water Banking Activities. The following jobs were completed during the month;

- a. Weed spraying of fence lines and roadways on BV, Stonefield, Romero, Branch 1, DiGiorgio and Kern Island Basins
- b. Aquatic weed treatments on Smith Judd and Stine at the Bladder Basin
- c. Prepare north property area of Branch 1 Basins for fencing

14. Future Projects. The following projects will be completed as time and scheduling permit:

- a. Trim and remove trees/brush as needed along canals for grader passage (Central)
- b. Replace dilapidated weir/crossing #543P on Stine (as water levels permit)
- c. Meter and discharge pipe upgrade 4-0-249
- d. Contractor tree removal on Kern Island and Central

15. Future Water Banking Projects.

- a. Install permanent staff gauges in basins
- b. Place rip-rap around eroded intertie structures
- c. Construct Sunset Basins

Maintenance Report

August 2019

1. **Structure and Turnout Repairs.** The following jobs were completed during the month;
 - a. Install riprap around backup weir on the Stine Canal crossing to help avoid erosion
 - b. Repair meter number; 3-2-248, 2-0-265, 4-0-254 and 4-0-258
 - c. Replace meter number; 3-0-118B
 - d. Repair turnout gate number; 30-20-40 and 3-5-1
2. **Shop.** The following jobs were completed during the month;
 - a. Normal service and repairs on District vehicles and equipment.
 - b. Replace fuel sensor on truck 321
 - c. Battery replacement on truck 214
 - d. Replace fuel pump on truck 207
 - e. Replace windshield on truck #211
 - f. Repair air conditioning system on truck # 208,
 - g. Engine diagnostics by Jim Burke on the old spray rig (#321)
3. **District Wells.**
 - a. Monthly service and inspection of District Wells
 - b. Test for rotation and start wells KB1, KB4, BV2 and BV4 for sampling
4. **Motor Grader # 403** The following canals were sloped and graded;
 - a. Portions of the Kern Island, Eastside, Branch 1, Lower BV and BV East
5. **Backhoe # 402** The following jobs were completed during the month;
 - a. Repair washouts on Randal, Stine, Kern Island and Smith Judd
 - b. Clean debris from Central, Stine, Farmers and Eastside
 - c. Load brush from the Central near Terrace Way
6. **Backhoe # 404** The following jobs were completed this month;
 - a. Removed mattresses, debris, tumbleweeds and tires from canals, turnouts, weirs and crossing on Eastside, Central, Farmers, Stine, Randal, Burness, Branch 1 and East Branch
 - b. Squirrel abatement and bank repair on the Stine
 - c. Repair breach through a rodent hole on the Rim Ditch below the Drain
7. **Weed Spraying.** The following canals were sprayed during the month;
 - a. BV, BV East, Kern Island, 20', Drain, Central, Section 5 Ditch, Branch 1, Eastside, Farmers, 15 Ditch, 13 Ditch, Randal and Burness
8. **Aquatic Treatments.** Treatments including surface spraying for algae mats and injection treatments for control of algae or vascular aquatic weeds were done on the Kern Island, Branch 1, 15 Ditch, Farmers, Randal, Stine, Branch 2, Central, BV East, BV and Eastside
9. **Rodent Control**
 - a. Bait Stations were filled throughout the District this month
 - b. Four new bait stations added to the Sine near banking ponds B and C

10. Trash Removal.

- a. Daily cleaning of crossings, weirs, racks and screens on all canals
- b. Remove debris from the Kern Island, Eastside, Central, Branch 1, Stine and BV and haul to Bena landfill.
- c. Tree and brush removal along the Kern Island, Central, BV and Eastside Canals for grader passage and homeless prevention

11. Fence Repairs. Fences were repaired at the following locations;

- a. Kern Island – Calcutta, Pacheco, 30th St., 34th St. and Columbus
- b. Branch 1 – White Lane and Hughes Area
- c. Central - Terrace Way
- d. East Branch – Terrace Way and South P
- e. Stine – Chester Lane, Garnsey Lane, Arvin Edison Canal crossing and Gosford
- f. BV – Buena Vista Rd. and Discovery Ridge Ave.
- g. Eastside – 34th St. and Columbus

12. Safety Meetings. Weekly tailgate safety topics were;

- a. Record Keeping
- b. Eye Protection
- c. 811 Dig Safety
- d. Owning Your Equipment
- e. September's Projects Safety Review

13. Water Banking Activities. The following jobs were completed during the month;

- a. Weed spraying of fence lines and roadways on BV, Smith Judd, Stonefield, Romero, Branch 1, DiGiorgio and Met Basins
- b. Aquatic treatments for algae and water weeds were made on Smith Judd, Stonefield, Stine at the Bladder and the Branch 1 (Cattails)

14. Future Projects. The following projects will be completed as time and scheduling permit:

- a. Replace Crossing on 18 N & S Ditch (starting week of Sept. 2)
- b. Replace dilapidated weir/crossing #543P on Stine (week of Sept. 8th)
- c. Repair turnouts, gates and crossings as needed on 13 Ditch (week of Sept.15th)
- d. Meter and discharge pipe upgrade 4-0-249 (as time permits)
- e. Contractor removal of trees on Kern Island and Central Canal

15. Future Water Banking Projects.

- a. Install permanent staff gauges in basins when possible
- b. Place riprap around eroded intertie structures as needed
- c. Build Sunset Basins (outside contractor)

Maintenance Report

September 2019

1. **Structure and Turnout Repairs.** The following jobs were completed during the month;
 - a. Install new 36" HDPE piping and riprap at 18 North Ditch Crossing
 - b. Extend crossing on 18 South for Brancado/Angone
 - c. Remove dilapidated backup crossing and install a new one Stine at 543
 - d. Repair washouts on Rim Ditch and Smith Judd
 - e. Repair meters 2-0-151 and 2-0-297
 - f. Replace meters 3-6-12 and 45-0-200
 - g. Repair turnout gates; 3-6-12, 3-6-17, 3-6-10, 3-20-15, 3-5-01, 3-5-10 and 3-5-43,
 - h. Replace turnout gates; 3-6-10, 5-0-165 and 5-0-180
2. **Shop.** The following jobs were completed during the month;
 - a. Normal service and repairs on District vehicles and equipment.
 - b. Engine diagnostics run by Cumming's to determine issues with truck #322
 - c. Replace lights in offices
 - d. Repairs ground speed unit on truck #326
 - e. Repairs hydraulic system on truck #321
 - f. Install safety lights truck # 323
 - g. Repair safety lighting on truck # 218
3. **District Wells.**
 - a. No monthly service or inspection of District Wells is month;
4. **Motor Grader # 403** The following canals were sloped and roads graded;
 - a. Slope portions of the Kern Island, Branch 1, 18 N & S, 13 Ditch, Farmers, Smith Judd, Branch 2, 15 Ditch, 23 Ditch and portions of the Central
5. **Backhoe # 402** The following jobs were completed during the month;
 - a. Structure and Turnout repairs as stated above
 - b. Rodent abatement on Drain
6. **Backhoe # 404** The following jobs were completed this month;
 - a. Removed mattresses, debris, tumbleweeds and tires from canals, turnouts, weirs and crossing on Eastside, Central, Farmers, Stine, Randal, Burness, Branch 1 and East Branch
 - b. Haul dirt for crossings and backup weirs
 - c. Assist with structure and turnout repairs as stated above
7. **Weed Spraying.** The following canals were sprayed during the month;
 - a. East Branch, Eastside, Stine, Kern Island, 13 Ditch, Drain, Central, and Basins (Met, Stonefield and Stine)
8. **Aquatic Treatments.** Treatments including surface spraying for algae mats and injection treatments for control of algae or vascular aquatic weeds were done on the; Buena Vista, Eastside, Kern Island and Central

9. Rodent Control

- a. Bait Stations were frequently checked and all locations were filled throughout the District this month

10. Trash Removal.

- a. Daily cleaning of crossings, weirs, racks and screens on all canals
- b. Remove debris from banks of the Kern Island, Eastside, Central, Branch 1 and Stine. Both trash trucks were used along with dump trucks to haul trash to the landfill.
- c. Tree and brush removal along the Eastside Canal and Farmers for grader passage and homeless prevention.

11. Fence Repairs. Fences were repaired at the following locations;

- a. Kern Island – Calcutta
- b. Branch 1 – White Lane and Hughes Area
- c. Central – Southgate
- d. East Branch – Bell Terrace & Madison
- e. Stine – Chester Lane, Garnsey Lane
- f. BV – None
- g. Eastside – Kentucky

12. Safety Meetings. Weekly tailgate safety topics were;

- a. 18N&S Projects Safety Review
- b. Stine Projects Safety Review
- c. Homeless Encounters and Safety
- d. Defensive Driving for all staff (by JPIA, Lee Patton)
- e. Digital Water Meters Operation & Maintenance

13. Water Banking Activities. The following jobs were completed during the month;

- a. Weed spraying of fence lines and roadways around basins on BV, Smith Judd, Stonefield, Romero, Branch 1, DiGiorgio and Met Basins

14. Future Projects. The following projects will be completed as time and scheduling permit:

- a. Trim and remove trees/brush as needed along canals for grader passage
- b. Repair of fencing on canals damaged by vandals and homeless
- c. Repair turnouts, gates and crossings as needed on canals as possible
- d. Meter and discharge pipe upgrade 4-0-249 (as time permits)
- e. Contractor removal of trees on Kern Island and Central Canal
- f. Fabricate and build trailer mounted buffalo / spray system

15. Future Water Banking Projects.

- a. Install permanent staff gauges in basins when possible
- b. Place riprap around eroded intertie structures as needed

Maintenance Report

October 2019

1. **Structure and Turnout Repairs.** The following jobs were completed during the month;
 - a. Replace turnouts (gate, box & piping), on Kern Island Canal (3-0-87 & 3-0-90)
 - b. Repair washouts on Rim Ditch and Stine
 - c. Repair erosion areas with riprap on Stine & Branch 2
2. **Shop.** The following jobs were completed during the month;
 - a. Normal service and repairs on District vehicles and equipment.
 - b. Repairs to truck #326 (ground speed unit)
 - c. Remove bed from truck #321 (prep for sale)
 - d. Repairs to truck # 217 (brakes)
3. **District Wells.**
 - a. No monthly service or inspection of District wells is month;
4. **Motor Grader # 403.** The following canals were sloped and graded;
 - a. Slope portions of the Kern Island, Central, Section 5, Stine and East Branch
5. **Backhoe # 402.** The following jobs were completed during the month;
 - a. Assist with the turnout replacement referenced in Item 1a above
 - b. Rodent abatement on Rim
 - c. Load/Haul and place dirt and riprap for erosion area repair referenced in Item 1c
6. **Backhoe # 404.** The following jobs were completed this month;
 - a. Removed mattresses, debris, tumbleweeds and tires from the Eastside, Central, Stine, Randal, Burness, Branch 1 and East Branch
 - b. Haul dirt and repair banks due to gopher hole erosion on the Burness
 - c. Loading rip rap, fill and pipe for erosion area abatement and turnout replacement
7. **Weed Spraying.** The following canals were sprayed during the month;
 - a. East Branch, Eastside, Rim, Central, BV & BV East
8. **Aquatic Treatments.** Treatments including surface spraying for algae mats and injection treatments for control of algae or vascular aquatic weeds were done on the Buena Vista, Eastside and Central
9. **Rodent Control.**
 - a. Bait Stations were checked and filled throughout the District this month
10. **Trash Removal.**
 - a. Daily cleaning of crossings, weirs, racks and screens on all canals
 - b. Removal of discarded debris from the Kern Island, Eastside, Central, Branch 1 and Stine. Both trash trucks were used along with dump trucks to haul debris to the landfill.
 - c. Tree and brush removal along the Eastside, Central and East Branch for grader passage and homeless prevention.
 - d. Contractor removal of trees on Kern Island and Central Canal

11. **Fence Repairs.** Fences were repaired at the following locations;
 - a. Kern Island – Calcutta, 30th St. north to Head at Columbus
 - b. Branch 1 – Hughes and White Lane South to 99
 - c. Central – Southgate and Terrace Way
 - d. East Branch – South P, Terrace Way and Madison
 - e. Stine – Park Circle, Planz, Grissom, District and Stine
 - f. BV – Camino Media
 - g. Eastside – Kentucky, 30th St. north to Columbus
12. **Safety Meetings.** Weekly tailgate safety topics were;
 - a. Near Misses for the week
 - b. Safety Planning for upcoming projects
 - c. Power Tool Failure
 - d. Traffic Control & Flagger Procedures
 - e. Daily Record Keeping and Accountability
13. **Water Banking Activities.** The following jobs were completed during the month;
 - a. Weed spraying of fence lines and roadways around basins
 - b. Hand weeding of fence lines (tumbleweeds in preparation for pre-emergence)
14. **Future Projects.** The following projects will be completed as time and scheduling permit:
 - a. Replace booster pump meter at Old River and Bear Mtn (4-0-249)
 - b. Fabricate and build trailer mounted spray system
 - c. Dozer work to clean sand bars and canals bottoms
15. **Future Water Banking Projects.**
 - a. Lower overpour at the Stine Bladder Basin
 - b. Modify Stine basins for surge control
 - c. Install permanent staff gauges in basins
 - d. Place riprap around eroded intertie structures as needed
 - e. Mow weeds in basins when possible

Maintenance Report

November 2019

1. **Structure and Turnout Repairs.** The following jobs were completed during the month;
 - a. Replace turnouts (gate, box & piping), on Kern Island Canal # 3-0-93
 - b. Repair wash-in on BV at Seven Oaks Golf Course
2. **Shop.** The following jobs were completed during the month;
 - a. Normal service and repairs on District vehicles and equipment.
 - b. Fuel and service rental equipment
 - c. Repairs to truck #326 (electrical issue w/onboard computer)
 - d. Repairs to truck # 325 (DEF System & smog)
 - e. Repairs to truck # 220, 215, 212 and 218 (flat/tire replacement)
3. **District Wells.**
 - a. No monthly service or inspection of District Wells is month;
4. **Motor Grader # 403** The following canals were sloped and roads graded;
 - a. Slope portions of the Kern Island, Stine, BV and Romero
 - b. Remove sandbars with bulldozer and motor-grader from bottom of BV Canal at head gate section and between Pensinger Rd. & Windermere St.
5. **Backhoe # 402** The following jobs were completed during the month;
 - a. Assist with the replacement of turnouts (dig, backfilling, compaction, transport new equipment, installation of turnouts, piping and Briggs Boxes)
 - b. Load/Haul and place dirt and riprap for wash ins / washouts on canals
 - c. Remove excess dirt from weir immediately below Panama Lane and from various turnouts on BV
 - d. Remove tumbleweeds from basin areas in preparation for pre-emergent spraying
6. **Backhoe # 404** The following jobs were completed this month;
 - a. Removed mattresses, debris, tumbleweeds and tires from the Eastside, Central, Stine, Randal, Burness, Branch 1 and East Branch
 - b. Remove crossing and shape bank on BV South of Panama Ln.
 - c. Haul dirt from crossing area to BV Basin
 - d. Remove dirt/sand bars from turnouts and culverts on BV
7. **Weed Spraying.** The following canals were sprayed during the month;
 - a. Farmers, Central, Branch 1 and Branch 2
8. **Aquatic Treatments.** Treatments including surface spraying for algae mats and injection treatments for control of algae or vascular aquatic weeds were done on the; Eastside and Central
9. **Rodent Control**
 - a. Bait Stations were checked, and all locations were filled throughout the District as needed.

10. Trash Removal.

- a. Daily cleaning of crossings, weirs, racks and screens on all canals
- b. Removal of dumping and debris from the Kern Island, Eastside, Central, Branch 1, Farmers and Stine. Both trash trucks were used along with dump trucks to haul debris to the landfill.
- c. Tree and brush removal along the Stine, Farmers and BV for grader passage and homeless prevention.

11. Fence Repairs. Fences and Gates were repaired at the following locations;

- a. Kern Island – 30th St.
- b. Branch 1 – South H, McCourry, Hughes and White Lane
- c. Central – Terrace Way
- d. Stine – Chester Lane, Garnsey and Real Rd.
- e. BV – Comino Media and BV basins

12. Safety Meetings. Weekly tailgate safety topics were;

- a. Accident Reporting basin
- b. Shop/Yard NOV's
- c. Project Safety Review
- d. Shop Safety
- e. Defining Safe Work Area & Untheorized Entry

13. Water Banking Activities. The following jobs were completed during the month;

- a. Mowing weeds in cells of basins (DiGiorgio, Romero and BV)
- b. Mowing banks of BV Basins
- c. Hand weeding of fence lines at DiGiorgio, Stonefield, Romero and BV basins in preparation for pre-emergent

14. Future Projects. The following projects will be completed as time and scheduling permit:

- a. Repair dilapidated turnouts, gates, piping and crossings as availability of canals is made possible
- b. Meter and discharge pipe upgrade 4-0-249 (replace old meter w/new style)
- c. Notch out gate overpour at Stine Bladder basin to match high water mark
- d. Fab and build trailer mounted spray system
- e. Dozer work to clean sand bars and bottoms of canals
- f. Prepare for shutdown projects

15. Future Water Banking Projects.

- a. Install permanent staff gauges in basins when possible
- b. Place riprap around eroded intertie structures as needed
- c. Spray Pre-emergence as weather permits

Maintenance Report

December 2019

1. **Structure and Turnout Repairs.** The following jobs were completed during the month;
 - a. Replace three turnouts, piping, and gates on the Central Canal; 3-2-172, 208 and 250. Done by outside contractor.
 - b. Install four new turnouts, piping and gates near the following existing turnouts; 3-7-139 (15 ditch), 3-7-119, (20 foot), and 5-3-48 (Branch 2) and 4-0-156 (Farmers).
 - c. Repair gate at 3-20-17 (Rim Ditch near Hwy 99).
 - d. Replace board control crossing on the Farmers south of Bear Mountain; 4-0-561.
 - e. Replace turnout at the end of the Branch 1; 3-4-163.
 - f. Saw cut and remove 1-foot of the overpour wall on the Stine Bladder Basin. Done by outside contractor.
 - g. Convert Stine triangle-basin-inlets to board control for surge protection in the Stine Canal.
 - h. Install 20' of additional piping on Smith Judd crossing 4-5-541.
 - i. Repair fixed blade weir at 4-0-554.
2. **Shop.** The following jobs were completed during the month;
 - a. Normal service and repairs on District vehicles and equipment.
 - b. Fuel rental equipment and service.
 - c. Repairs to truck #326 (electrical issue w/onboard computer).
 - d. Repairs to truck # 217 (Tires).
 - e. Repair seat on forklift (new seat & seat rails).
 - f. Repair steam cleaner recycle system.
 - g. Steam clean shop and surrounding concrete slabs for Christmas party.
3. **District Wells.**
 - a. No monthly service or inspection of District Wells is month;
4. **Motor Grader # 403** The following canals were sloped and roads graded;
 - a. Grade the roads surrounding the upper triangle basin on the Stine Canal.
5. **Backhoe # 402** The following jobs were completed during the month;
 - a. Assist with the repair and installation of new turnouts mentioned above (dig, backfilling, compaction, hauling and installation).
 - b. Remove excess dirt from weirs on BV.
 - c. Remove tumbleweeds from basin areas.
6. **Backhoe # 404** The following jobs were completed this month;
 - a. Removed debris from the Farmers, Central and Kern Island.
 - b. Remove crossing on the BV Canal south of Panama Lane and replace crossing on the Smith Judd Canal.
 - c. Haul dirt from crossing area to BV Basin.

- d. Remove sand bars and sediment buildup from turnouts and culverts on Farmers, Central and Kern Island.
- 7. **Weed Spraying.** No canals were sprayed during the month;
- 8. **Aquatic Treatments.** No aquatic treatments were done this month.
- 9. **Rodent Control**
 - a. Bait Stations were frequently checked, and all locations were filled throughout the District this month.
- 10. **Trash Removal.**
 - a. Daily cleaning of crossings, weirs, racks and screens on all canals.
 - b. Remove debris from the Kern Island, Central, BV and Farmers.
- 11. **Fence Repairs.** Fences and Gates were repaired at the following locations;
 - a. BV – Block Wall repaired at Windermere.
- 12. **Safety Meetings.** Weekly tailgate safety topics were;
 - a. Project PPE Safety.
 - b. Shutdown Orientation.
 - c. Week in Review.
 - d. Project Safety- Week in Review.
 - e. Project Safety Meeting and Week in Review.
 - f. Shutdown Rap-up and Review.
- 13. **Water Banking Activities.** The following jobs were completed during the month;
 - a. Remove approximately 1 foot of soil from the bottom of the three Stine basins to improve percolation and add volume for surge protection. Done by outside contractor.
 - b. Mowing weeds around banks of basins (DiGiorgio, Romero and Stonfield)
 - c. Spraying Sterilant on roads and fence lines.
 - d. Hand weeding of fence lines for sterilant application (tumbleweeds from storm, Stonefield, Romero and BV).
- 14. **Future Projects.** The following projects will be completed as time and scheduling permit:
 - a. Inspect and repair turnouts, screens and crossings on the Eastside Canal when it is drained down sufficiently.
 - b. Install a new turnout on the Eastside Canal below Buena Vista Road.
 - c. Replace meter at Old River and Bear Mountain 4-0-249.
 - d. Build trailer mounted spray system using parts from the old sprat rig.
- 15. **Future Water Banking Projects.**
 - a. Install permanent staff gauges in basins.
 - b. Place riprap around eroded intertie structures as needed.
 - c. Relocate rip rap stored in the Romero basins.
 - d. Finish spraying pre-emergence.
 - e. Design a new surge protection basin for the bottom end of the Stine Canal.

Maintenance Report

January 2020

1. **Structure and Turnout Repairs.** The following jobs were completed during the month;
 - a. Install turnout on Eastside, south of Buena Vista
 - b. Install turnout on Farmers into the Romero Basins
 - c. Remove old short crossing and install new 40-foot crossing on the Smith/Judd (finish from shutdown)
2. **Shop.** The following jobs were completed during the month;
 - a. Normal service and repairs on District vehicles and equipment.
 - b. Repairs to trucks 215, 210 & 213 lighting system
 - c. Repairs to truck # 214 (computer system, dealer repair)
 - d. Repairs to truck #326 (electrical issue w/onboard computer, Kisco repair)
 - e. Repairs to truck # 106 (Body parts loose, warranty)
 - f. Repairs to truck # 324 (Air Brake System)
3. **District Wells.**
 - a. No monthly service or inspection of District Wells is month;
4. **Motor Grader # 403** The following canals were sloped and roads graded;
 - a. No sloping this month
5. **Backhoe # 402** The following jobs were completed during the month;
 - a. Assist with the installation of new turnout structures and piping (dig, backfill, compaction, transport new equipment)
 - b. Assist with the removal of tumbleweeds from canals
 - c. Bank repair from gopher's damage at DiGiorgio Basins
6. **Backhoe # 404** The following jobs were completed this month;
 - a. Removed debris from the Eastside, Central, Stine, Randal, Burness, Branch 1 and East Branch
 - b. Assist with private road crossing replacement on Smith/Judd
 - c. Stop leakage at DiGiorgio Basin
7. **Weed Spraying.** The following canals were sprayed during the month;
 - a. Eastside, Central and Kern Island
8. **Aquatic Treatments.** No treatments were made this month
9. **Rodent Control**
 - a. Bait Stations were checked and all locations were filled this month
10. **Trash Removal.**
 - a. Daily cleaning of crossings, weirs, racks and screens on all canals
 - b. Cleanup of the banks of the Kern Island, Eastside, Central, Branch 1, Farmers, Stine and Burness. Both trash trucks were used to haul debris to the landfill.

11. **Fence Repairs.** Fences and Gates were repaired at the following locations;
 - a. Kern Island – Terrace Way and P Street
 - b. East Branch – Bell Terrace and Madison
 - c. Central – Terrace Way, South Gate and Wilson
 - d. Stine – Chester Lane, Garnsey and Real Rd.
12. **Safety Meetings.** Weekly tailgate safety topics were;
 - a. Slips, Trips & Falls
 - b. OSHA Revised Injury Reporting Reg's
 - c. Defensive Driving in the Fog
 - d. Week in Review (accidents & mishaps)
13. **Water Banking Activities.** The following jobs were completed during the month;
 - a. Tumbleweed removal from fence lines at Met and DiGiorgio Basins
 - b. Repair leakage from gopher hole at DiGiorgio Basin
14. **Future Projects.** The following projects will be completed as time and scheduling permit:
 - a. Meter and discharge pipe upgrade 4-0-249 (replace old meter w/new style)
 - b. Fabricate and build trailer mounted buffalo / spray system
 - c. Install board control backup on Smith/Judd Extension
15. **Future Water Banking Projects.**
 - a. Install permanent staff gauges in basins when possible
 - b. Place riprap around eroded intertie structures as needed
 - c. Install 2 board control outlets and berm / channel dry cell at Romero Basin

Maintenance Report

February 2020

1. **Structure and Turnout Repairs.** The following jobs were completed during the month;
 - a. Assist the City in the repair of a collapsed pipe on Stine Canal crossing at McCutchen
 - b. Repair wash ins on BV
 - c. Remove sandbars from the Farmers Canal between Gosford and Shafter Rd.
 - d. Repair wash in on lower Kern Island near floating weir
2. **Shop.** The following jobs were completed during the month;
 - a. Normal service and repairs on District vehicles and equipment.
 - b. Start building spray trailer from repurposed parts
 - c. Repairs to truck #326 (spray rig electrical issue w/onboard computer and pumps)
 - d. Repairs to truck # 220 (brakes)
 - e. Repairs truck # 214 (water pump)
 - f. Repairs to #402 backhoe (install extend-a-hoe shims and hard-face buckets)
3. **District Wells.**
 - a. No monthly service or inspection of District Wells is month;
4. **Motor Grader # 403** The following canals were sloped and roads graded;
 - a. Portions of Eastside and Central
5. **Backhoe # 402** The following jobs were completed during the month;
 - a. Load/Haul and place dirt and riprap for wash ins / washouts on canals
 - b. Remove excess dirt from turnouts on Farmers
 - c. Remove tumbleweeds from the Stine, Farmers and Eastside
 - d. Rodent control on Stine
6. **Backhoe # 404** The following jobs were completed this month;
 - a. Removed debris from the Eastside, Central, Stine, Randal, Burness, Branch 1 and East Branch
 - b. Haul dirt to the Stine to repair collapsed pipe
 - c. Remove tumbleweeds from Central, Kern Island, Burness and Eastside
7. **Weed Spraying.** The following canals were sprayed during the month;
 - a. Eastside, Central, East Branch and Kern Island
8. **Aquatic Treatments.** No aquatic treatments were performed this month
9. **Rodent Control**
 - a. Bait Stations were frequently checked and all locations were filled throughout the District this month
 - b. Dig and bury squirrel holes on Stine to prevent washouts

10. Trash Removal.

- a. Daily cleaning of crossings, weirs, racks and screens on all canals
- b. Remove discarded debris from the Kern Island, Eastside, Central, Branch 1, Farmers and Stine. Both trash trucks were used to haul debris to the landfill
- c. Tree and brush removal along the Kern Island at 8th Street and on Central at Ming for grader passage and homeless prevention.

11. Fence Repairs. Fences and Gates were repaired at the following locations;

- a. Kern Island – 30th St., 34th St., Columbus, Fairview and Terrace Way
- b. Branch 1 – South H, Hughes and White Lane
- c. Central – Terrace Way, South Gate, Ming, Planz and Union
- d. Stine – Chester Lane, Garnsey, Real Rd., District and Ash
- e. BV – Old River Rd. and White Lane

12. Safety Meetings. Weekly tailgate safety topics were;

- a. House Keeping
- b. Record Keeping
- c. Hazard Communication Program Part 1
- d. Hazard Communication Program Part 2

13. Water Banking Activities. The following jobs were completed during the month;

- a. Mowing weeds in cells of basins (Horse Hospital Spreading Area)
- b. Fence repair at Met and DiGiorgio
- c. Tumbleweed removal

14. Future Projects. The following projects will be completed as time and scheduling permit:

- a. Meter and discharge pipe upgrade 4-0-249 (replace old meter w/new style)
- b. Finish building trailer mounted buffalo / spray system
- c. Remove piping obstruction on 20'
- d. Install meters on Stine Canal at Bladder basin

15. Future Water Banking Projects.

- a. Install permanent staff gauges in basins when possible
- b. Place riprap and fill around eroded intertie structures as needed
- c. Mow basin bottoms
- d. Spray banks and fence lines for weeds with new trailer mount system

Maintenance Report

March 2020

1. **Structure and Turnout Repairs.** The following jobs were completed during the month;
 - a. Install 48-in dia. board control box on the Smith Judd Extension
 - b. Install 36-in dia. board control box in the 18 N ditch by nursery
 - c. Repair gopher hole on Central near 3-2-300
 - d. Install crash post at Hirschfield manhole at northwest corner of Stine & McKee
2. **Shop.** The following jobs were completed during the month;
 - a. Normal service and repairs on District vehicles and equipment.
 - b. Install electrical system to spray trailer T-3
 - c. Repairs to truck #211 & 219 (brakes)
 - d. Repairs to Grader (sloper bolt)
 - e. Repair mower implement drive line
 - f. Repairs to #402 backhoe (adjust extend-a-hoe shims)
3. **District Wells.**
 - a. No monthly service or inspection of District Wells is month;
4. **Motor Grader # 403** The following canals were sloped and roads graded;
 - a. Slope portions of Rim, Drain, 13 Ditch, 18 N&S and Kern Island
5. **Backhoe # 402** The following jobs were completed during the month;
 - a. Load/Haul and place dirt and riprap for wash ins / washouts on canals
 - b. Remove riprap from Smith Judd Extension and place downstream as needed
 - c. Remove tumbleweeds from canals (Central, Kern Island, Farmers & Eastside)
 - d. Rodent control on Central
6. **Backhoe # 404** The following jobs were completed this month;
 - a. Removed debris from Eastside, Central, Stine, Randal, Burness, Branch 1, Smith Judd and East Branch
 - b. Assist with box installations
7. **Weed Spraying.** The following canals were sprayed during the month;
 - a. 18 N&S, 13 Ditch, Drain, Rim, Farmers, Smith Judd, BV and Kern Island
8. **Aquatic Treatments.** No Treatments were done this month for algae mats/aquatic weeds
9. **Rodent Control**
 - a. Bait Stations were checked, and all locations were filled throughout the District
10. **Trash Removal.**
 - a. Daily cleaning of crossings, weirs, and trash screens on all canals
 - b. Remove debris from the Kern Island, Eastside, Central, Branch 1, Farmers and Stine and haul to the landfill.
 - c. Tree and brush removal at the Head of the BV for grader passage and homeless prevention.

- d. Remove files and shelving from upstairs offices and transport to Derrel's Mini Storage. Dispose of old files in accordance with District approved file retention policy.
11. **Fence Repairs.** Fences and Gates were repaired at the following locations;
- a. Kern Island – 30th St., 34th St., Columbus, Fairview and Terrace Way
 - b. Branch 1 – South H, Hughes and White Lane
 - c. Central – Terrace Way, South Gate, Ming, Planz and Union
 - d. Stine – Chester Lane, Garnsey, Real Rd., District and Ash
 - e. BV – Mountain Vista
 - f. Eastside – Kentucky, Lake, Hailey, Virginia, Quántico & Oswell
12. **Safety Meetings.** Weekly tailgate safety topics were;
- a. Hazard Communication Program Part 3
 - b. Hazard Communication Program Part 4
 - c. DOT Rules Training
 - d. District COVID-19 Policy
13. **Water Banking Activities.** The following jobs were completed during the month;
- a. Install (2) 36-in dia. board control boxes at Romero Basins.
 - b. Mowing weeds at Romero & BV basins
 - c. Fence repair at Romero
 - d. Tumbleweed removal at all basins
14. **Future Projects.** The following projects will be completed as time and scheduling permit:
- a. Meter and discharge pipe upgrade on Farmers (replace/repair meter)
 - b. Trouble shoot, fine tune and begin usage of the trailer mounted spray system
 - c. Oversee removal of piping obstruction on 20' in December (farmer's responsibility)
 - d. Install meters on Stine Canal weir at the Bladder outflow
15. **Future Water Banking Projects.**
- a. Install permanent staff gauges in basins
 - b. Place riprap around eroded intertie structures as needed
 - c. Prepare wells for planned usage in April

Maintenance Report

April 2020

1. **Structure and Turnout Repairs.** The following jobs were completed during the month;
 - a. Finish installing new board control crossing on the 18N ditch near Union Ave.
 - b. Demo panels and pour new concrete panels that were damaged from felt failure undermining concrete structure on the Smith Judd Extension. Added 24-inch high fixed blade weir onto the existing drop structure
 - c. Re-built file storage racks, moved file boxes to offsite storage unit, organized new storage unit, prepped, painted and furnished upstairs temporary offices.
 - d. Repair turnout (45-5-10) stem and frame on the Smith Judd that was damaged by Motor Grader
2. **Shop.** The following jobs were completed during the month;
 - a. Normal service and repairs on District vehicles and equipment.
 - b. Repairs brakes on Trucks # 215, 220 and 285
 - c. Repair fan shroud assembly and replace upper/lower sloper bolts on Motor Grader
 - d. Install proper drainage system for the shop ice machine
 - e. Outside repair (Advanced Muffler) of Trucks #219 and 323 (stolen catalytic converters)
 - f. Outside repair (Cummins) to truck #322 for recurring exhaust system issues
 - g. Repairs to truck #212 from accident
 - h. Prep new truck #225 for use and place into service into Operation Department
3. **District Wells.**
 - a. Monthly service and inspection of all District Wells is month.
4. **Motor Grader # 403** The following canals were sloped, and roads graded;
 - a. Slope Farmers, Smith Judd, Smith Judd Extension and Upper Kern Island
5. **Backhoe # 402** The following jobs were completed during the month;
 - a. Load, haul and place dirt from wash ins on Kern Island and BV
 - b. Remove riprap and damaged panels from Smith Judd Extension and stockpile at Stonefield Basins
 - c. Remove tumbleweeds from Kern Island and BV
 - d. Rodent control on Rim and BV
6. **Backhoe # 404** The following jobs were completed this month;
 - a. Removed mattresses, debris, tumbleweeds and tires from Eastside, Central, Stine, Randal, Burness, Branch 1, Smith Judd, Smith Judd Extension and East Branch
7. **Weed Spraying.** The following canals were sprayed during the month with spray trailer;
 - a. Eastside, Stine and Upper Central
8. **Aquatic Treatments.** Treatments including surface spraying for algae mats and injection treatments for control of algae or vascular aquatic weeds; Treatments where made to the Eastside, Central and Kern Island Canals

9. Rodent Control

- a. Bait Stations were frequently checked, and all locations were filled throughout the District this month

10. Trash Removal.

- a. Daily cleaning of crossings, weirs and screens on all running canals
- b. Removed debris from the Kern Island, Eastside, Central, Branch 1, Farmers. Both trash trucks were used to haul debris to the landfill

11. Fence Repairs. Fences and Gates were repaired at the following locations;

- a. Kern Island – 30th St., 34th St., Columbus, 4th and Terrace Way
- b. Branch 1 – Hughes, White Lane and Panama
- c. Central – Terrace Way, South Gate, Ming, Planz and Union
- d. Stine – Chester Lane, Garnsey, Gosford, District and Ash
- e. BV – Howell
- f. Eastside – 34th St., Kentucky, Lake, Hailey, Virginia, Quántico and Oswell

12. Safety Meetings. Weekly tailgate safety topics were;

- a. District COVID-19 Policy
- b. COVID – 19 Training Part I
- c. COVID – 19 Training Part II
- d. COVID – 19 Updates

13. Water Banking Activities. The following jobs were completed during the month;

- a. Mowing weeds in cells of the Romero and Stine basins
- b. Fence repair at Romero
- c. Weed spraying with spray trailer

14. Future Projects. The following projects will be completed as time and scheduling permit:

- a. Instruct customer to install new meter and piping at booster pump on Farmers Canal at Old River Road (#4-0-249)
- b. Continue office moves and prepare for office remodel project
- c. Oversee the removal of piping obstruction on 20-foot Ditch in December

15. Future Water Banking Projects.

- a. Install permanent staff gauges in basins
- b. Place riprap around eroded intertie structures as needed at DiGiorgio Basin
- c. Oversee Romero Basin earthen plug Project
- d. Install meters in Stine Canal at the Bladder basin

Maintenance Report

May 2020

1. **Structure and Turnout Repairs.** The following jobs were completed during the month;
 - a. Repair plugged pipeline at turnout # 3-0-149 (15 Ditch for Boswell)
2. **Shop.** The following jobs were completed during the month;
 - a. Normal service and repairs on District vehicles and equipment.
 - b. Repairs to truck # 210, 221, 217 and 212 (brakes)
 - c. Repairs to Grader (Sloper Bolts)
 - d. Repairs to truck 293 (replace engine oil pump with high mileage pump)
 - e. Repairs to truck #322 (recurring air conditioning issue)
 - f. Prep truck 212 for towing spray trailer
3. **District Wells.**
 - a. Monthly service and inspection of all District Wells is month.
4. **Motor Grader # 403** The following canals were sloped, and roads graded;
 - a. Slope portions of Farmers, 23 Ditch, BV, and Stine Canals
5. **Backhoe # 402** The following jobs were completed during the month;
 - a. Load and haul and place dirt for wash ins on Stine.
 - b. Dip and glean canals of trash and debris on Eastside, Central and KI
 - c. Push berms from sloping of canals on Stine and BV
6. **Backhoe # 404** The following jobs were completed this month;
 - a. Removed debris from Eastside, Central, Stine, Randal, Burness, Branch 1, Smith Judd, and East Branch
 - b. Remove moss from 15 Ditch
7. **Weed Spraying.** The following canals were sprayed during the month with spray trailer;
 - a. Central, Rim & Eastside at Lake Street with pull spray rig
8. **Aquatic Treatments.** Treatments including surface spraying for algae mats and injection treatments for control of algae or vascular aquatic weeds; Treatments where made to the Eastside, Central and Kern Island Canals
9. **Rodent Control**
 - a. Bait Stations were frequently checked, and all locations were filled throughout the District this month
10. **Trash Removal.**
 - a. Daily cleaning of crossings, weirs, and screens on all canals
 - b. Cleanup on canals to remove discarded debris from banks of the Kern Island, Eastside, Central, Branch 1, Farmers. Both trash trucks were used to haul debris to the landfill as needed.
11. **Fence Repairs.** Fences and Gates were repaired at the following locations;
 - a. Kern Island – 30th St., 34th St., Columbus, 4th, and Terrace Way
 - b. Branch 1 – Hughes, White Lane and McCourry

- c. Central – South Gate, Planz and Wilson
- d. Stine – California & Real, Chester Lane, Garnsey, Gosford, District and Ash
- e. BV – Discovery Ridge and Mountain Vista
- f. Eastside – 34th St., Kentucky, Lake, Hailey, Virginia, Quántico & Oswell

12. Safety Meetings. Weekly tailgate safety topics were;

- a. District Job Description Update
- b. Heat Illness Prevention Program
- c. District Housekeeping
- d. How to Stay Safe in an Earthquake
- e. New Office Prep

13. Water Banking Activities. The following jobs were completed during the month;

- a. Mow bottoms of BV and DiGiorgio basins
- b. Fence repair at Romero
- c. Weed spraying with spray trailer

14. Future Projects. The following projects will be completed as time and scheduling permit:

- a. Trim and remove trees/brush as needed along canals for grader passage
- b. Continue office moves and mobile office installs
- c. Install 24" piping at 3-0-149 for Boswell
- d. Install meters on Stine at Bladder

15. Future Water Banking Projects.

- a. Place riprap around eroded intertie structures as needed at DiGiorgio Basin
- b. Assist outside contractor in the earthen plug project at Romero Basins

Maintenance Report

June 2020

1. **Structure and Turnout Repairs.** The following jobs were completed during the month;
 - a. Remove broken section of corrugated pipe on Stine Canal at Progress Rd.
 - b. Repair head gates of the 18 N&S and the 13 Ditch
 - c. Raise elevation on canal bank of BV Canal at head of BV East and West (East bank)
2. **Shop.** The following jobs were completed during the month;
 - a. Normal service and repairs on District vehicles and equipment.
 - b. Repairs to truck # 221, 106, 220, 210, 219, and 214
 - c. Repairs to Truck #326 (radiator cleaning)
 - d. Set-up new truck for use #224
 - e. Repairs to truck #324 (air leak and service)
3. **District Wells.**
 - a. Monthly service and inspection of all District wells this month.
 - b. Remove motor and well column and clean bowls of KI7
4. **Motor Grader # 403** The following canals were sloped and roads graded;
 - a. Slope portions of BV, Eastside, Central, Kern Island Canals and its branch canals, BV East, BV West, 15 Ditch, East Branch, Rim, Drain, and 20-foot.
5. **Backhoe # 402** The following jobs were completed during the month;
 - a. Load, haul and place dirt for washout on Central
 - b. Dip and clean canals of trash and debris on Eastside, Central, and KI
 - c. Place berms on Stine Canal at Progress Road to prevent crossing over dilapidated corrugated pipe.
6. **Backhoe # 404** The following jobs were completed this month;
 - a. Removed debris from canals, turnouts, and weirs on the Eastside, Central, Stine, Randal, 13 Ditch, Branch 1, and East Branch
 - b. Dig and haul dirt to washout on Central
 - c. Remove moss and algae from 13 Ditch and Eastside
7. **Weed Spraying.** The following canals were sprayed during the month;
 - a. Eastside, East Branch, Central, Rim, Drain, Kern Island, Branch 1 and 18 N&S
8. **Aquatic Treatments.** Treatments including surface spraying for algae mats and injection treatments for control of algae or vascular aquatic weeds; Treatments were made to the Eastside, Central, 13 Ditch and Kern Island Canals
9. **Rodent Control**
 - a. Bait Stations were frequently checked and all locations were filled throughout the District this month
10. **Trash Removal.**
 - a. Daily cleaning of crossings, weirs, and screens on all canals

- b. Remove debris from the Kern Island, Eastside, Central, Branch 1, Farmers. Both trash trucks were used to haul debris to the landfill.
11. **Fence Repairs.** Fences and Gates were repaired at the following locations;
- a. Kern Island – 30th St., 34th St., Columbus, 4th and Niles
 - b. Branch 1 – Hughes, White Lane and McCourry
 - c. Central – South Gate, Planz and Union
 - d. Stine – California & Real, Chester Lane, Garnsey, Gosford, District and Ash
 - e. BV – White Lane and Old River Road.
 - f. Eastside – 34th St., Kentucky, Lake, Hailey
12. **Safety Meetings.** Weekly tailgate safety topics were;
- a. District Changes Effective 6-15-2020
 - b. New Covid -19 Changes
 - c. Emergency Action Plan
 - d. Daily Equipment Walk Around
13. **Water Banking Activities.** The following jobs were completed during the month;
- a. Mowing weeds in the bottoms of the BV Basins
 - b. Weed spraying with spray trailer
14. **Future Projects.** The following projects will be completed as time and scheduling permit:
- a. Meter and discharge pipe upgrade on Farmers #4-0-249
 - b. Remove piping obstruction on 20' in December
 - c. Install 24" piping at 3-0-149 for Boswell
 - d. Install meters on Stine at the Bladder basin discharge
15. **Future Water Banking Projects.**
- a. Install permanent staff gauges in basins
 - b. Place riprap around eroded intertie structures as needed at DiGiorgio Basin
 - c. Spray weeds and Typha (cattails), with new trailer mount system

Maintenance Report

July 2020

1. **Structure and Turnout Repairs.** The following jobs were completed during the month;
 - a. Remove the failing Progress Rd crossing on Stine Canal west of Gosford Rd.
 - b. Build up the bank of the BV Canal at the BV East Canal intersection
 - c. Repair wash in on Central near Panama Rd.
 - d. Begin cleaning bottom of Stine Canal with rental Dozer
 - e. Repair turnout # 3-0-88 (rebuild stem and rails)
2. **Shop.** The following jobs were completed during the month;
 - a. Normal service and repairs on District vehicles and equipment.
 - b. Repairs to truck # 219, 221, 220, 213 and 211
 - c. Repairs to Backhoe Trailer #T11 (frame/spring weld failure)
 - d. Repairs to grader and sloper (fan assembly, exhaust system & sloper arm)
3. **District Wells.**
 - a. Monthly service and inspection of all District wells is month.
 - b. Replace oil drippers on 8 wells
 - c. Clean pads and service wells as Needed
4. **Motor Grader # 403** The following canals were sloped, and roads graded;
 - a. Slope portions of Central, East Branch, Kern Island, Branch 1, 13-Ditch, Rim, Drain and Farmers.
5. **Backhoe # 402** The following jobs were completed during the month;
 - a. Load, haul, and place dirt for washout on Central
 - b. Dip with debris bucket the Eastside, Central and Kern Island canal screens
 - c. Remove Stine Canal crossing on Progress Road; remove dilapidated corrugated pipe and reshape the canal
6. **Backhoe # 404** The following jobs were completed this month;
 - a. Removed mattresses, debris, tumbleweeds, and tires from the Eastside, Central, Stine, Randal, 13-Ditch, Branch 1 and East Branch
 - b. Dig and haul dirt to backfill washout on Central
 - c. Remove Moss from 13 Ditch, Central and Eastside
7. **Weed Spraying.** The following canals were sprayed during the month;
 - a. Famers, Smith Judd, Randal, Stine and BV Canals
8. **Aquatic Treatments.** Treatments including surface spraying for algae mats and injection treatments for control of algae or vascular aquatic weeds; Treatments where made to the Eastside, Central, 13 Ditch, BV, and Kern Island Canals
9. **Rodent Control**
 - a. Bait Stations were frequently checked and all locations were filled throughout the District this month

10. Trash Removal.

- a. Daily cleaning of crossings, weirs, and screens on all canals
- b. Remove brush from cottonwood trees along 13-Ditch return for Grader passage
- c. Remove debris from the Kern Island, Eastside, Central, Branch 1, Farmers. Both trash trucks were used along with dump trucks to haul debris to the landfill.

11. Fence Repairs. Fences and Gates were repaired at the following locations;

- a. Kern Island – 30th St., 34th St., Columbus, 4th and Niles
- b. Branch 1 – Hughes, White Lane and McCourry
- c. Central – Terrace Way
- d. Stine – California, Chester Lane, Garnsey, Gosford, District Blvd, and Ash
- e. Eastside – 30th, 34th St., Columbus, Kentucky, and Lake St.

12. Safety Meetings. Weekly tailgate safety topics were;

- a. Public Relations
- b. Covid-19 Updates
- c. Slips, Trips & Falls
- d. Effects of Heat
- e. Shop Safety

13. Water Banking Activities. The following jobs were completed during the month;

- a. Mowing weeds in cells of basins (Stonefield)
- b. Weed spraying with spray trailer

14. Future Projects. The following projects will be completed as time and scheduling permit:

- a. Oversee removal piping obstruction on 20-foot in December
- b. Install 24" piping at 3-0-149 for Boswell
- c. Install meters on Stine at the Bladder basin discharge
- d. Clean bottoms of canal with rental dozer
- e. Repair turnouts on Stine Canal

15. Future Water Banking Projects.

- a. Install permanent staff gauges in basins
- b. Place riprap around eroded intertie structures as needed at DiGiorgio Basin
- c. Mow and remove trees at DiGiorgio Basin
- d. Mow weeds when possible (If dry enough to get equipment in basins)
- e. Spray weeds and Typha (cattails), with new trailer mount system

Maintenance Report

August 2020

1. **Structure and Turnout Repairs.** The following jobs were completed during the month;
 - a. Clean bottom of Stine Canal and move to the BV Canal with rental Dozer
 - b. Repair staff gage at the Bloomfield Y on the Central Canal
2. **Shop.** The following jobs were completed during the month;
 - a. Normal service and repairs on District vehicles and equipment.
 - b. Repairs to truck # 323, 326, 285 and 327 (air conditioning issues and minor repairs)
 - c. Replaced bent axle on Trailer # T3
 - d. Repair/adjust grader door
 - e. Repair John Deere #401 (clutch cable, radiator tank, fuel leak and shredder issues)
 - f. Smog certification repairs for Truck # 208, prepare for sale
3. **District Wells.**
 - a. Monthly service and inspection of all District Wells is month.
 - b. Replacement of drippers on well oilers as needed
 - c. Clean well pads and service wells as needed
 - d. PG&E repairs to FR2
4. **Motor Grader # 403** The following canals were sloped, and roads graded;
 - a. Slope portions of Farmers, Randal, Branch 2, and Stine Canal
5. **Backhoe # 402** The following jobs were completed during the month;
 - a. Load, haul, and place dirt for washout on Stine
 - b. Dip and clean canals of trash and debris on Eastside, Central and KI
 - c. Remove sediment buildup around turnouts and weirs in the Stine Canal
6. **Backhoe # 404** The following jobs were completed this month;
 - a. Removed mattresses, debris, tumbleweeds and tires from canals, turnouts, weirs and crossing on Eastside, KI, Central, Stine, Randal, 13 Ditch, Branch 1, and East Branch
 - b. Begin reinstallation well piping from FR-2 to the Randal Ditch at Romero Basins
 - c. Remove sediment buildup around turnouts on Stine Canal
 - d. Remove tumbleweeds on Central (Adobe Road), Farmers, Eastside, East Branch and Branch 1
7. **Weed Spraying.** The following canals were sprayed during the month;
 - a. BV East, BV, Canfield Ditch and Eastside Canal
8. **Aquatic Treatments.** Treatments including surface spraying for algae mats and injection treatments for control of algae or vascular aquatic weeds; Treatments were made to the 18 N&S, Farmers, Eastside, Central, 13 Ditch, BV, and Kern Island Canals
9. **Rodent Control**
 - a. Checked Bait Stations. All locations were filled throughout the District this month

10. Trash Removal.

- a. Daily cleaning of crossings, weirs, and screens on all canals
- b. Cleanup on canals to remove debris from the Kern Island, Eastside, Central, Branch 1, Farmers. Both trash trucks were used along with dump trucks to haul debris to the landfill.
- c. Remove brush in lot at Chester Lane on the Stine Canal and on East Branch at P and Terrace Way

11. Fence Repairs. Fences and Gates were repaired at the following locations;

- a. Kern Island – 30th St., 34th St. and Columbus
- b. Branch 1 – Hughes, White Lane and McCourry
- c. Central – Terrace Way
- d. Stine – California Ave, Chester Lane, Garnsey, Gosford, District and Ash
- e. Eastside – 30th, 34th St., Columbus, Kentucky, Lake St.

12. Safety Meetings. Weekly tailgate safety topics were;

- a. Inventory Accountability
- b. The Public and Canal Maintenance
- c. Equipment Maintenance
- d. Districts Fencing Policy

13. Water Banking Activities. The following jobs were completed during the month;

- a. Mow weeds in cells of basins (Equestrian Area and Stine Basin)
- b. Weed spraying with spray trailer (DiGiorgio Basin, Branch 1 and Stonefield)
- c. Romero Basins earthwork completed by outside contractor

14. Future Projects. The following projects will be completed as time and scheduling permit:

- a. Trim and remove trees/brush as needed along canal banks for grader passage
- b. Repair fencing on canals damaged by vandals, homeless and vehicles
- c. Repair turnouts, gates, piping, and crossings as availability of canals is made possible (BV and Eastside)
- d. Install 24" piping at 3-0-149 for Boswell turnout (October)
- e. Install meters on Stine Canal at the Bladder outlet
- f. Clean bottoms of canal with rental dozer

15. Future Water Banking Projects.

- a. Install permanent staff gauges in basins
- b. Place riprap around eroded entrance structures at DiGiorgio Basins
- c. Mow and remove trees at DiGiorgio Basins
- d. Mow weeds when possible (if dry enough to get equipment in basins)
- e. Spray weeds and Typha (cattails), with new trailer mount system

Maintenance Report

September 2020

1. **Structure and Turnout Repairs.** The following jobs were completed during the month;
 - a. Clean bottom of BV Canal with rental Dozer
 - b. Reposition dislodged trash screen on Kern Island Gate 3-00-107
2. **Shop.** The following jobs were completed during the month;
 - a. Normal service and repairs on District vehicles and equipment
 - b. Service and repair air brake system on truck # 322
 - c. Replace bent axle on Trailer # T3 (spray trailer)
 - d. Repair Motor Grader sloper attachment
 - e. Replace braker in shop electrical panel
 - f. Service temporary office and shop air conditioning systems
3. **District Wells.**
 - a. Monthly service and inspection of all District Wells is month.
 - b. Clean pads and service wells as needed
4. **Motor Grader # 403** The following canals were sloped and roads graded;
 - a. Finish the Stine Canal and begin sloping at the head of BV Canal
5. **Backhoe # 402** The following jobs were completed during the month;
 - a. Spot clean areas of BV Canal for turnout repair
6. **Backhoe # 404** The following jobs were completed this month;
 - a. Removed debris from the Eastside, KI, Central, Stine, Branch 1, and East Branch
 - b. Remove tumbleweeds along the Central and Eastside Canals
7. **Weed Spraying.** The following canals were sprayed during the month;
 - a. Stine, Branch 2, Randal, Farmers, Central, Section 5 Ditch, and Eastside Canal
8. **Aquatic Treatments.** Treatments including surface spraying for algae mats and injection treatments for control of algae or vascular aquatic weeds; were made in the Farmers, Central, 13 Ditch and Kern Island Canals
9. **Rodent Control**
 - a. Bait Stations were frequently checked and all locations were filled throughout the District this month
10. **Trash Removal.**
 - a. Daily cleaning of crossings, weirs, and screens on all canals
 - b. Remove debris from the Kern Island, Eastside, Central, Branch 1 and haul to the landfill
 - c. Remove brush on the Stine Canal and on East Branch at P and Terrace Way
11. **Fence Repairs.** Fences and Gates were repaired at the following locations;
 - a. Kern Island – 30th St., 34th St. and Columbus
 - b. Branch 1 – Hughes, White Lane and McCourry St.
 - c. Central – Terrace Way, South Gate and Wilson

- d. Stine – California Ave, Chester Lane, Garnsey, Gosford, District and Ash
- e. Eastside – 30th, 34th St., Columbus, Kentucky, Lake St.

12. Safety Meetings. Weekly tailgate safety topics were;

- a. House Keeping
- b. Workstation Risk and Hygiene
- c. Homeless Encampment Cleanup
- d. Near Misses - Chain Saw Use

13. Water Banking Activities. The following jobs were completed during the month;

- a. Mowing weeds in Romero and BV Basins
- b. Weed spraying with spray trailer at BV and Stine Basins
- c. Dozer work on Romero to push old trees, clean debris, and create a terrace for rip-rap storage

14. Future Projects. The following projects will be completed as time and scheduling permit:

- a. Trim and remove trees/brush as needed along canals for grader passage
- b. End of season repairs of turnouts, gates, piping and crossings on Stine and Eastside
- c. Remove piping obstruction on 20 Foot in December
- d. Install 24" piping at 3-0-149 for Boswell turnout on the 14 Ditch
- e. Install meters on Stine Canal at Bladder outlet
- f. Clean bottoms of Eastside Canal with rental dozer when dry
- g. Replace rusted steel supports on BV Canal weirs (6-0-519 and 525)
- h. Continue removal of brush and trees on East Branch between Madison & Casa Loma and assist subcontractor in large tree removal.

15. Future Water Banking Projects.

- a. Install permanent staff gauges and signage in basins
- b. Place riprap around eroded entrance structures as needed at DiGiorgio Basin
- c. Mow and remove trees at DiGiorgio Basins
- d. Mow weeds (If dry enough to get equipment in basins), at Met and DiGiorgio
- e. Spray weeds and Typha (cattails), with new trailer mount system after mowing
- f. Dig & reconnect Well No. FR-2 pipeline in Romero Basin

Maintenance Report

October 2020

1. **Structure and Turnout Repairs.** The following jobs were completed during the month;
 - a. Cleaning around turnouts to improve flow on the BV Canal
 - b. Remove dilapidated pipe on 15 Ditch at Herring Road, reposition pipeline and install new 24" HDPE Pipe
 - c. Re-install 15" pipeline at the Romero Basins (Well No. FR2 discharge pipe into Randal Ditch)
 - d. Tree removal on East Branch to improve flow rates
 - e. Rebuild steel supports in two weirs on BV (6-0-519 & 525)
 - f. Cleaning of culverts and lowering of bottom of canal at Lake St. & Gage St. on Eastside Canal to improve flow
2. **Shop.** The following jobs were completed during the month;
 - a. Normal service and repairs on District vehicles and equipment.
 - b. Repairs to Trailer #T11 (ramp repair)
 - c. Repair Motor Grader (Sloper attachment pins & ram repair)
 - d. Replace rear frame on John Deere Mower
 - e. Replace fuel tank on Backhoe #402
 - f. Repairs to brake system on vehicles #210 & 211
 - g. Repair to toolboxes on equipment # 224 & 225
3. **District Wells.**
 - a. Monthly service and inspection of all District Wells to check dripper operation
4. **Motor Grader # 403** The following canals were sloped and roads graded;
 - a. Finish sloping the BV East, BV West and the BV Canal
5. **Backhoe # 402** The following jobs were completed during the month;
 - a. Clean turnouts, weirs and built-up areas of BV Canal for turnout repairs
 - b. Piping installations on 15 Ditch & FR2 Pipeline
 - c. Load and haul Riprap from High School development property to DiGiorgio Basins for future use
6. **Backhoe # 404** The following jobs were completed this month;
 - a. Removed debris from Central, East Branch and Eastside Canals
7. **Weed Spraying.** The following canals were sprayed during the month;
 - a. BV Canal Bottoms, 18 N&S, 13 Ditch, Kern Island, 20", Randal and Branch 1
8. **Aquatic Treatments.** Treatments including surface spraying for algae mats and injection treatments for control of algae or vascular aquatic weeds; Treatments were made to the Central, 13 Ditch, 18 N&S and Kern Island Canals
9. **Rodent Control**
 - a. Bait Stations were frequently checked and all locations were filled throughout the District this month

10. Trash Removal.

- a. Daily cleaning of crossings, weirs, and screens
- b. Removed debris with both trash trucks from the Kern Island, Eastside, Central, Branch 1 and haul to the landfill
- c. Remove brush and trees on the Eastside and East Branch Canals
- d. Removal of overgrown brush and trees between Madison & Casa Loma on East Branch

11. Fence Repairs. Fences and Gates were repaired at the following locations;

- a. Kern Island – 30th St., 34th St. and Columbus
- b. Branch 1 – Hughes and White Lane
- c. Central – East Terrace Way, South Gate and Madison
- d. Stine – California, Chester Lane, Garnsey and Gosford
- e. Eastside – 30th, 34th St., Columbus, Kentucky, Lake St.

12. Safety Meetings. Weekly tailgate safety topics were;

- a. Awareness of our surroundings
- b. District house keeping
- c. Near misses from the week
- d. Job site safety
- e. Eye protection at the work sites

13. Water Banking Activities. The following jobs were completed during the month;

- a. Mowing weeds in cells of basins (finish BV Basins and start DiGiorgio Basins)
- b. Weed spraying with spray trailer on BV and DiGiorgio Basin
- c. Install pipeline that was removed for basin repair in the Romero North East Basin which ran from FR2 Well to the Randal Canal

14. Future Projects. The following projects will be completed as time and scheduling permit:

- a. Repair dilapidated turnouts, gates, piping, and crossings in the Farmers and Eastside Canals
- b. Remove soil deposits from Eastside Canal in the Gage Street area.
- c. Install meters on Stine Canal at Bladder Basin
- d. Paint refurbished weirs on BV Canal (6-0-519 & 525)
- e. Install 40' of HDPE pipe on Farmers to replace dilapidated pipe crossing

15. Future Water Banking Projects.

- a. Install permanent staff gauges and signage in basins
- b. Place riprap around eroded entrance structures as needed at DiGiorgio Basin
- c. Mow and remove trees at DiGiorgio Basin
- d. Mow weeds at Met, when dry enough to get equipment in basin
- e. Spray weeds and Typha (cattails), with new trailer mount system after mowing Met Basins

Maintenance Report

November 2020

1. **Structure and Turnout Repairs.** The following jobs were completed during the month;
 - a. Cleaning around turnouts and removing sand bars in the Stine, Farmers & Smith Judd Canals
 - b. Stockpile riprap obtained from Del Oro High School site on the Central Canal at trespass points from the Rexland Acres neighborhood
 - c. Remove and replace rusted I-beam supports on two weirs in the Farmers Canal (4-0-530 & 529)
 - d. Remove sediment from the Eastside Canal upstream and downstream of the Gage Street crossing. Stockpile soil on the embankment for future removal.
 - e. Removal of temporary over-bank piping obstruction on 20 Foot was not necessary because the Farmer completed this project as requested
 - f. Install 40' of HDPE pipe to replace a rusted corrugate-pipe crossing on the Farmers Canal
2. **Shop.** The following jobs were completed during the month;
 - a. Normal service and repairs on District vehicles and equipment.
 - b. Repairs to Trailer #T10 (ramp jack installed & ramps repaired)
 - c. Repair sloper attachment, pins, and ram hose on Motor Grader
 - d. Repair air conditioning on Backhoe #404
 - e. Repairs to brake system on vehicles #215, 214, 327, 211 & 221
3. **District Wells.**
 - a. Monthly service and inspection of all District Wells and check dripper operation
4. **Motor Grader # 403** The following canals were sloped and graded;
 - a. Finish sloping the Eastside Canal
 - b. Remove tumbleweeds and fill in the abandoned portion of the 31 Ditch
5. **Backhoe # 402** The following jobs were completed during the month;
 - a. Clean turnouts, weirs, sand bars and built-up areas along the Stine, Farmers and Smith Judd Canals
 - b. Load and haul Riprap from Del Oro High School to Central Canal
6. **Backhoe # 404** The following jobs were completed this month;
 - a. Removed debris from Stine and Eastside Canals and the DiGiorgio Basins
7. **Weed Spraying.** The following canals were sprayed during the month;
 - a. Kern Island, Branch 1, and Eastside (bottom)
8. **Aquatic Treatments.** Surface spraying algae mats and injection treatments for control of algae or vascular aquatic weeds were made to the Central, 13 Ditch and Kern Island Canals
9. **Rodent Control**
 - a. Checked and filled Bait Stations as needed throughout the District
 - b. New Bait Stations were built and installed on the BV Canal

10. Trash Removal.

- a. Daily cleaning of crossings, weirs, and screens on actively running canals
- b. Removed debris and illegal dumping from the Kern Island, Eastside, Central, and Branch 1 and haul to the landfill
- c. Removed debris from the Eastside Canal, Stine Canal, and 31 Ditch

11. Fence Repairs. Fences and Gates were repaired at the following locations;

- a. Kern Island – 30th St. and 34th St.
- b. Branch 1 – Wible
- c. Central – Pacheco
- d. Stine – California & Real, Chester Lane, Garnsey, and White Lane
- e. Eastside – 30th, 34th St., Columbus, Kentucky, and Lake St.

12. Safety Meetings. Weekly tailgate safety topics were;

- a. Job Safety Analysis
- b. Week in Review of JSAs
- c. Week in Review
- d. Tool Training and JSAs

13. Water Banking Activities. The following jobs were completed during the month;

- a. Mowed weeds in the DiGiorgio Basins
- b. Sprayed weeds with spray trailer at the Kern Island and DiGiorgio Basins
- c. Basin clean-up using rental Bobcat in preparation for sterilant spraying on fence lines, roadways, and banks

14. Future Projects. The following projects will be completed as time and scheduling permit:

- a. Trim and remove trees/brush as needed along canals for grader passage
- b. Repair turnouts, gates, piping, and crossings in the Farmers, Smith Judd, and Eastside Canals as they dry out
- c. Remove stockpile of sediment that was dredged from the Eastside Canal in the Gage Street crossing area. Haul soil to an offsite location.
- d. Install meters on the Stine Canal at the Bladder outlet
- e. Evaluate proposals for large-tree removal on the 18N Ditch east of Union Avenue

15. Future Water Banking Projects.

- a. Install permanent staff gauges and signage at all basin properties
- b. Place riprap around eroded intertie structures at the DiGiorgio Basins
- c. Mow and continue removing the balance of trees at the DiGiorgio Basins
- d. Mow weeds at the Kern Island Basins when ponds dry out
- e. Spray weeds and Typha (cattails), with trailer mount system in the Kern Island Basins
- f. Spray sterilant on all roadways and fence lines at all basin properties

Maintenance Report

December 2020

1. **Structure and Turnout Repairs.** The following jobs were completed during the month;
 - a. Remove sediment buildup around turnouts in the Kern Island, Branch 1 & Central Canal
 - b. Install new gate, screen, and trash boom on turnout # 3-0-62
 - c. Install new gate on turnout 3-0-88 on the Kern Island
 - d. Replace Central Canal head gates (2-48" Waterman C-10 gates)
 - e. Repair Head Gate on the Branch 1 at Pacheco
 - f. Repair rusted out portions of I-beams on Kern Island Weirs #3-0-600 and 605
 - g. Repair gate on turnout #3-2-220
 - h. Replace gate stem on turnout #3-0-120
2. **Shop.** The following jobs were completed during the month;
 - a. Normal service and repairs on District vehicles and equipment.
 - b. Fixed intake leak on truck 323 to pass smog
 - c. Repair sloper attachment pins on Motor Grader
 - d. Repairs to trucks 212, 285, 210, and 207 to pass smog
 - e. Repairs to brake system on truck #219
 - f. Replace windshield on truck #221
3. **District Wells.**
 - a. Monthly service and inspection of all District Wells to check dripper operation
4. **Motor Grader # 403** The following canals were sloped, and roads graded;
 - a. Sloping the 18 N&S Ditch and 13 Ditch
5. **Backhoe # 402** The following jobs were completed during the month;
 - a. Clean turnouts, weirs, and built-up areas on the Kern Island, Central and Branch 1 Canal for turnout repairs
 - b. Assist in turnout repair on KI, Central and Branch 1
6. **Backhoe # 404** The following jobs were completed this month;
 - a. Removed mattresses, debris, tumbleweeds, brush and tires from Kern Island, Central and Branch 1 Canals
7. **Weed Spraying.** The following canals were sprayed during the month;
 - a. 13 Ditch
 - b. 18 N&S
8. **Aquatic Treatments.** Treatments including surface spraying for algae mats and injection treatments for control of algae or vascular aquatic weeds; No treatments were made to canals this month
9. **Rodent Control**
 - a. Bait Stations were frequently checked and all locations were filled throughout the District this month

10. Trash Removal.

- a. Daily cleaning of crossings, weirs, and screens on all canals running
- b. Remove discarded debris from the Kern Island, Central, Branch 1; Both trash trucks were used to haul debris to the landfill from brush and trash removed.

11. Fence Repairs. Fences and Gates were repaired at the following locations;

- a. Kern Island – 30th St. and 34th St.
- b. Branch 1 – Hughes
- c. Central – Terrace Way
- d. Stine – California, Chester Lane, and Garnsey
- e. Eastside – Kentucky and Lake St.

12. Safety Meetings. Weekly tailgate safety topics were;

- a. JSA Review
- b. Shutdown Projects
- c. Shutdown Project Review
- d. Covid-19 Updates
- e. Shutdown Review

13. Water Banking Activities. The following jobs were completed during the month;

- a. Spraying sterilant at the Kern Island Basins
- b. Rental water truck used to incorporate sterilant on Kern Island, Stonefield and BV Basins.
- c. Basin clean-up for sterilant spraying using rental Bobcat to clean-up fence lines and roadways

14. Future Projects. The following projects will be completed as time and scheduling permit:

- a. Install meters on Stine Canal at the Bladder basin

15. Future Water Banking Projects.

- a. Install permanent staff gauges and signage in basins
- b. Place riprap around eroded entrance structures as needed at DiGiorgio Basin
- c. Mow weeds at Kern Island basins when dry enough

Maintenance Report

January 2021

1. **Structure and Turnout Repairs.** The following jobs were completed during the month;
 - a. Remove sediment buildup in the Farmers and Eastside Canals.
 - b. Remove farmer installed screening, repair or build and install new pre-screens on the Eastside Canal.
 - c. Remove blown-in sand from the Eastside South of Hermosa Rd. to Panama Ln.
 - d. Replace rails, stems and covers on turnouts 2-0-208, 2-0-24, and 2-0-305.
2. **Shop.** The following jobs were completed during the month;
 - a. Normal service and repairs on District vehicles and equipment.
 - b. Repair electrical cabling, air brakes and emissions on truck # 324.
 - c. Repair sloper blade pins on motor grader.
 - d. Install cross box and repair safety lighting on truck #213.
 - e. Repair brake system on truck #213.
 - f. Repair windshield on trucks 106 & 222.
 - g. Repair ramps and wiring on trailer #T11.
 - h. Start conversion to PTO Drive system on turntable pump.
3. **District Wells.**
 - a. Monthly service and inspection of all District wells to check dripper operation.
4. **Motor Grader # 403** The following canals were sloped and roads graded;
 - a. Sloping the Branch 1, Kern Island and Eastside.
5. **Backhoe # 402** The following jobs were completed during the month;
 - a. Clean sand bars and built-up areas around turnouts and weirs of the Farmers, Branch 1 and Eastside Canals.
 - b. Assist in cleanout of debris on KI, Branch 1 and Eastside
6. **Backhoe # 404** The following jobs were completed this month;
 - a. Removed mattresses, debris, tumbleweeds, brush and tires from Kern Island, Central, Branch 1 and Eastside Canals.
7. **Weed Spraying.** The following canals were sprayed during the month;
 - a. Sterilant application at head walls of the KI.
8. **Aquatic Treatments.** Treatments including surface spraying for algae mats and injection treatments for control of algae or vascular aquatic weeds; No treatments were made to canals this month.
9. **Rodent Control**
 - a. Bait stations were frequently checked, and all locations were filled throughout the District this month.
10. **Trash Removal.**
 - a. Daily cleaning of crossings, weirs, and screens on all running canals.

- b. Remove debris from the Kern Island, Central, Branch 1 and use both trash trucks to haul to the landfill.
11. **Fence Repairs.** Fences and gates were repaired at the following locations;
- a. Kern Island – 30th St. and 34th St.
 - b. Branch 1 – Hughes Lane.
 - c. Stine – California, Chester Lane and Garnsey.
 - d. Basins – Kern Island and Romero.
12. **Safety Meetings.** Weekly tailgate safety topics were;
- a. Slips, Trips and Falls.
 - b. District House Keeping Issues.
 - c. Foul Weather Driving.
 - d. Workstation Risk & Hygiene.
13. **Water Banking Activities.** The following jobs were completed during the month;
- a. Spraying sterilant on all Basin fence lines, roads and upper banks.
 - b. Rental water truck used to incorporate sterilant on basins.
 - c. Removal of tumbleweeds from fences from windstorm.
14. **Future Projects.** The following projects will be completed as time and scheduling permit:
- a. Install meters on the outlet of the Bladder basin on the Stine Canal.
 - b. Replace District yard access gates.
15. **Future Water Banking Projects.**
- a. Install permanent staff gauges and signage in basins.
 - b. Place riprap around eroded intertie structures at DiGiorgio Basins.
 - c. Mow weeds at Kern Island Basins, when dry enough to get equipment in basin.
 - d. Spray weeds and Typha (cattails), with new trailer mount system after mowing Kern Island Basins.
 - e. Spray sterilant on all slopes for weed control where mower can't reach.

Maintenance Report

February 2021

1. **Structure and Turnout Repairs.** The following jobs were completed during the month;
 - a. Remove blown-in sand from Smith and Judd Canal south of Shafter Rd.
 - b. Repair breach caused by plugging and replace board control crossing on Smith and Judd Canal south of Shafter Rd.
 - c. Repair washed-out crossing on Farmers Canal 1/2 mile west of Ash Rd.
 - d. Installed pre-screens on Eastside Canal.
 - e. Reset staff gauge at the head of Central Canal.
2. **Shop.** The following jobs were completed during the month;
 - a. Normal service and repairs on District vehicles and equipment.
 - b. Repair horn on truck #216.
 - c. Fixed air leak and replaced air line on truck #324.
 - d. Repair AC and replace mud flap on truck #322.
 - e. Fixed switch on dumping system on truck #323.
 - f. Replaced purge valve on truck #220.
 - g. Start conversion to PTO Drive system on turntable pump.
3. **District Wells.**
 - a. Monthly service and inspection of all District wells to check dripper operation.
 - b. Replace sight level glass on oil tanks as needed to prep for upcoming running season.
 - c. Replace batteries in clocks/timers as needed.
4. **Motor Grader # 403** The following canals were sloped and roads graded;
 - a. Sloping and removing sand blown-in sand on Smith and Judd canal south of Shafter Rd.
5. **Backhoe # 402** The following jobs were completed during the month;
 - a. Clean sand bars and built-up areas around turnouts and weirs of the Farmers, Stine and 18 North and South.
 - b. Replace board control crossing 546 on Smith and Judd Canal south of Shafter Rd.
6. **Backhoe # 404** The following jobs were completed this month;
 - a. Removed mattresses, debris, tumbleweeds, brush and tires from Kern Island, Central, Branch 1 and Eastside Canals.
 - b. Clean up East Branch Canal in preparation for startup.
7. **Weed Spraying.** The following canals were sprayed during the month;
 - a. Sterilant application at head walls of the KI and Branch 1 including pipped sections though neighborhood.
 - b. Spot treated Stine Canal from Ash to end.
 - c. Farmers Canal from Panama Ln to the end of canal.

8. **Aquatic Treatments.** Treatments including surface spraying for algae mats and injection treatments for control of algae or vascular aquatic weeds; No treatments were made to canals this month.
9. **Rodent Control**
 - a. Bait stations were frequently checked, and all locations were filled throughout the District this month.
10. **Trash Removal.**
 - a. Daily cleaning of crossings, weirs, and screens on all running canals.
 - b. Remove debris from the Kern Island, Central, Branch 1 and use both trash trucks to haul to the landfill.
11. **Fence Repairs.** Fences and gates were repaired at the following locations;
 - a. Kern Island – 30th St. and 34th St.
 - b. Branch 1 – White Ln and Oleander Dr.
 - c. East Branch – Casa Loma and City yard north of Watts.
 - d. Eastside – Oswell St and Edison Rd.
12. **Safety Meetings.** Weekly tailgate safety topics were;
 - a. Accident Action Plan and Procedures.
 - b. Equipment Repair Reporting.
 - c. Storage with Proper Labeling.
 - d. Fire Prevention and Fire Response
13. **Water Banking Activities.** The following jobs were completed during the month;
 - a. Burn tumbleweeds at the Kern Basins (MET).
14. **Future Projects.** The following projects will be completed as time and scheduling permit:
 - a. Install meters on the outlet of the Bladder basin on the Stine Canal.
 - b. Replace District yard access gates.
15. **Future Water Banking Projects.**
 - a. Install permanent staff gauges and signage in basins.
 - b. Place riprap around eroded intertie structures at DiGiorgio Basins.
 - c. Mow weeds at Kern Island Basins, when dry enough to get equipment in basin.
 - d. Spray weeds and Typha (cattails), with new trailer mount system after mowing Kern Island Basins.
 - e. Spray sterilant on all slopes for weed control where mower can't reach.

Maintenance Report

March 2021

1. **Structure and Turnout Repairs.** The following jobs were completed during the month;
 - a. Cleaning around turnouts, weirs and removing sand bars to improve flow on the canals.
 - b. Repair turnout # 3-0-AE1 in preparation for deliveries to the Arvin Edison intake canal
2. **Shop.** The following jobs were completed during the month;
 - a. Normal service and repairs on District vehicles and equipment.
 - b. Repairs electrical cabling, turbo, and emissions system on truck # 324
 - c. Repairs EGR, DEF and electrical emissions system on truck #322
 - d. Install cross box and safety lighting on new truck #226.
 - e. Repair brake system on truck #214
 - f. Repair ramps on trailer #T12
 - g. Continue conversion of turntable pump to PTO Drive system
3. **District Wells.**
 - a. Monthly service and inspection of all District Wells to check dripper operation, clean well pads, and start/stop wells as needed.
4. **Motor Grader # 403** The following canals were sloped and graded;
 - a. Sloping part of the Kern Island
5. **Backhoe # 402** The following jobs were completed during the month;
 - a. Remove tumbleweeds and debris from turnouts, weirs, and screens on the Farmers, Branch 1, Kern Island and Eastside Canals
 - b. Assist in cleanout of debris on KI, Branch 1, and Eastside Canals
 - c. Repair several different leaks on the Rim Ditch due to high water levels and gopher activity.
6. **Backhoe # 404** The following jobs were completed this month;
 - a. Removed mattresses, debris, tumbleweeds, brush, and tires from Kern Island, Central, Branch 1 and Eastside Canals
7. **Weed Spraying.** The following canals were sprayed during the month;
 - a. Weeds were sprayed on the Central and Stine.
8. **Aquatic Treatments.** Treatments including surface spraying for algae mats and injection treatments for control of algae or vascular aquatic weeds were made to the Randal and Kern Island
9. **Rodent Control**
 - a. Bait Stations were frequently checked, and all locations were filled throughout the District this month.
10. **Trash Removal.**
 - a. Daily cleaning of crossings, weirs, and screens on all flowing canals

- b. Remove debris from the Kern Island, Central, and Branch 1 canals and haul waste to Bena landfill using both trash trucks.
- 11. **Fence Repairs.** Fences and Gates were repaired at the following locations;
 - a. Kern Island - 30th St., 34th St.
 - b. Eastside - Edison
 - c. Branch 1 - Smoke Tree Trailer Park and Harris
 - d. Stine - California, Chester Lane, Garnsey, Pacheco, and White Lane
 - e. Basins - Kern Island, Stonefield and Romero
- 12. **Safety Meetings.** Weekly tailgate safety topics were;
 - a. Fire Prevention Review
 - b. New Forklift Training
 - c. Reporting Accidents and Repairs
 - d. Vehicle Hygiene
- 13. **Water Banking Activities.** The following jobs were completed during the month;
 - a. Spraying weeds on Romero Basins
 - b. Mowing cells at Kern Island Basins
 - c. Removal of tumbleweeds from fences due to windstorms.
 - d. Adjust boards on KI Basins to allow surge flow into regulating pond only.
- 14. **Future Projects.** The following projects will be completed as time and scheduling permit:
 - a. Trim and remove trees/brush as needed along canals for grader passage.
 - b. Install meters on Stine Canal at the Bladder basin outlet.
- 15. **Future Water Banking Projects.**
 - a. Install permanent staff gauges and signage at all basins.
 - b. Mow weeds at all basins.
 - c. Spray weeds and Typha (cattails), with new trailer mount system after mowing Kern Island Basins

Maintenance Report

April 2021

1. **Structure and Turnout Repairs.** The following jobs were completed during the month;
 - a. Repair Rim Ditch seepage issues caused by gopher activity and high-water levels.
 - b. Repair 18 N&S breach on Houghton Road
 - c. Repair wash into the Branch 2 Canal from irrigation water
2. **Shop.** The following jobs were completed during the month;
 - a. Normal service and repairs on District vehicles and equipment.
 - b. Repair cabling and pony motor on spray rig (Truck # 326)
 - c. Repairs light bracket on Truck #217
 - d. Install cross box and safety lighting to Trucks #227 & 228.
 - e. Repairs windshield on Truck #214
 - f. Weld spray frame on spray trailer (#T3)
3. **District Wells.**
 - a. Monthly service and inspection of all District wells to check dripper operation and clean well pads.
4. **Motor Grader # 403** The following canals were sloped and roads graded;
 - a. Sloping parts of the Kern Island and start Central.
5. **Backhoe # 402** The following jobs were completed during the month;
 - a. Excavate, remove, and stockpile concrete pipe at the Sunset Basins property
 - b. Remove debris from the KI, Branch 1, and Eastside Canals
 - c. Repair gopher hole seepage areas on the Rim Ditch and 18 N&S
6. **Backhoe # 404** The following jobs were completed this month;
 - a. Removed mattresses, debris, tumbleweeds, brush, and tires from Kern Island, Central, Branch 1 and Eastside Canals
7. **Weed Spraying.** The following canals were sprayed during the month;
 - a. Weeds were sprayed on Stine & Eastside.
8. **Aquatic Treatments.** Treatments including surface spraying for algae mats and injection treatments for control of algae or vascular aquatic weeds; treatments were made to Randal, Eastside, Farmers, 13 Ditch, Central and Kern Island
9. **Rodent Control**
 - a. Bait Stations were checked and filled throughout the District this month
10. **Trash Removal.**
 - a. Daily cleaning of crossings, weirs, and screens
 - b. Remove debris from the Kern Island, Central, and Branch 1 and use both trash trucks to haul to the landfill.
11. **Fence Repairs.** Fences and Gates were repaired at the following locations;
 - a. Kern Island – 30th St. and 34th St.
 - b. Eastside – Quantico, Columbus and 34th

- c. Branch 1 – Smoke Tree Trailer Park, South Gate and Harris
- d. Stine – California Ave, Chester Lane, Garnsey Lane, Pacheco and White Lane
- e. Basins – KI, Stonefield and Romero

12. **Safety Meetings.** Weekly tailgate safety topics were;

- a. Homeless Encounters & Safety
- b. Driving Safely on Public Highways.
- c. Vehicle Inspection Sheet
- d. Covid Policy Review
- e. Annual Fire Extinguisher Replacement

13. **Water Banking Activities.** The following jobs were completed during the month;

- a. Spraying weeds at Stonefield
- b. Mowing cells at the KI, Stonefield and Romero Basins
- c. Removal of tumbleweeds from fences due to windstorms

14. **Future Projects.** The following projects will be completed as time and scheduling permit:

- a. Install meters on Stine Canal at the Bladder Basin outlet
- b. Finish converting the old Operations office to a multipurpose room

15. **Future Water Banking Projects.**

- a. Install permanent staff gauges and signage at basin properties.
- b. Spray weeds and Typha (cattails), with trailer mount system after mowing
- c. Solicit quotes for vegetation management services at Basin properties.

Maintenance Report

May 2021

1. **Structure and Turnout Repairs.** The following jobs were completed during the month;
 - a. Repair Kern Island breach at Bear Mountain Blvd
 - b. Repair wash ins on BV and Stine
 - c. Repair rodent damage on BV, Rim and Stine
 - d. Clean turnouts on BV and Stine
2. **Shop.** The following jobs were completed during the month;
 - a. Normal service and repairs on District vehicles and equipment.
 - b. Repair smog system sensors/check engine light on truck # 210
 - c. Repair dump bed switches on truck 323
 - d. Service and repair bathroom, coolers and lights in shop and office
 - e. Fuel and service Grader / John Deere
 - f. Repair trailer T12
3. **District Wells.**
 - a. Monthly service and inspection of all District wells to check dripper operation and clean well pads.
 - b. Replace panel lights and dripper glass.
4. **Motor Grader # 403** The following canals were sloped, and roads graded;
 - a. Central, Eastside and 20-Foot
5. **Backhoe # 402** The following jobs were completed during the month;
 - a. Remove and stockpile concrete pipe at Sunset Basins.
 - b. Remove debris prior to startup of the BV and Stine Canals
 - c. Collapse gopher holes on the KI, BV and Stine
6. **Backhoe # 404** The following jobs were completed this month;
 - a. Removed debris from Kern Island, Central, Branch 1, East Branch, Randal, Farmers, BV and Eastside Canals
 - b. Remove and stockpile concrete pipe at Sunset Basins.
7. **Weed Spraying.** The following canals were sprayed during the month;
 - a. Weeds were sprayed on BV, Stine, KI and Eastside
8. **Aquatic Treatments.** Treatments including surface spraying for algae mats and injection treatments for control of algae or vascular aquatic weeds; treatments were made to Central, Randal, Eastside, Farmers, 13 Ditch and Kern Island
9. **Rodent Control**
 - a. Bait Stations were filled throughout the District this month.
10. **Trash Removal.**
 - a. Daily cleaning of crossings, weirs, and screens
 - b. Remove debris from the BV, Stine, Central, East Branch, Kern Island & Branch 1; (Both trash trucks were used to haul debris to the landfill)

11. **Fence Repairs.** Fences and Gates were repaired at the following locations;
 - a. Kern Island – 30th St., 34th St. and Columbus
 - b. Eastside – Quantico, Columbus and 34th
 - c. Branch 1 – Smoke Tree Trailer Park, South Gate and Harris
 - d. Stine – California and Real, Chester Lane & Garnsey, Grisham and White Lane
 - e. Basins – DiGiorgio and Romero
12. **Safety Meetings.** Weekly tailgate safety topics were;
 - a. Chemical Safety – Identifying Hazards
 - b. Proper Tarping of Trash Trucks
 - c. Eye Safety / Safety Glasses
 - d. Tire Safety – ID Hazards / Proper Inflation
13. **Water Banking Activities.** The following jobs were completed during the month;
 - a. Mowing cells at the Kern Island and Romero Basins
 - b. Removal of tumbleweeds from fences due to windstorms at Kern Island Basins
14. **Future Projects.** The following projects will be completed as time and scheduling permit:
 - a. Install meters on Stine at Bladder.
 - b. Finish repairs to Multipurpose Room
15. **Future Water Banking Projects.**
 - a. Remove tumble weeds and debris near housing at the Branch 1 Basins.
 - b. Continue pipe removal at Sunset Basins.
 - c. Pipe Removal at Marlette property
 - d. Pipe removal at AC Electric Property

Maintenance Report

June 2021

1. **Structure and Turnout Repairs.** The following jobs were completed during the month;
 - a. Repair Kern Island breach near Houghton Road
 - b. Dig to repair rodent damage on BV and Kern Island
2. **Shop.** The following jobs were completed during the month;
 - a. Normal service and repairs on District vehicles and equipment.
 - b. Repairs to Trailer T11 air brake system
 - c. Repair #324 repair air brake supply system
 - d. Fuel & service Grader / John Deere
 - e. Install new machined parts on grader sloper.
 - f. Prepare truck # 285 and #293 for sale.
 - g. Repair air conditioning system on truck #214
 - h. Repair shop air hose reel
 - i. Replace bushings on front and rear bucket and ram heads of the backhoe.
3. **District Wells.**
 - a. Monthly service and inspection of all District Wells to check dripper operation and clean well pads.
 - b. Add dripper oil as needed.
4. **Motor Grader # 403** The following canals were sloped, and roads graded;
 - a. Sloping parts of the 20' and BV (after repairs to sloper)
5. **Backhoe # 402** The following jobs were completed during the month;
 - a. Assist in cleanout of debris on KI, Central, BV and Eastside
 - b. Repair gopher hole seepage areas.
6. **Backhoe # 404** The following jobs were completed this month;
 - a. Removed mattresses, debris, tumbleweeds, moss, brush, and tires from Kern Island, Central, Branch 1, East Branch, Randal, Farmers, BV, and Eastside Canals
 - b. Dig to repair rodent holes on KI, BV and Stine
 - c. Dig to repair grower installed berm on the KI below Bear Mountain Blvd.
 - d. Remove palm tree from Romero Basin Area
7. **Weed Spraying.** The following canals were sprayed during the month;
 - a. Weeds were sprayed on KI, Branch 1, 13 Ditch, 18 N&S, Farmers, Rim, Drain, Central and Stine
8. **Aquatic Treatments.** Treatments including surface spraying for algae mats and injection treatments for control of algae or vascular aquatic weeds; treatments were made to BV, Central, Randal, Eastside, Farmers, 13 Ditch and Kern Island.
9. **Rodent Control**
 - a. Bait Stations were frequently checked, and all locations were filled throughout the District this month.

10. Trash Removal.

- a. Daily cleaning of crossings, weirs, trash racks and screens on all canals running
- b. Remove debris from the BV, Stine, Central, East Branch, Kern Island & Branch 1; and haul to the landfill with both trash trucks

11. Fence Repairs. Fences and Gates were repaired at the following locations;

- a. Kern Island – 30th St., 34th St. and Columbus
- b. Eastside – Quantico and Edison, Columbus, Kentucky and 34th
- c. Branch 1 – Smoke Tree Trailer Park
- d. Central -- South Gate and Harris
- e. Stine – California & Real, Chester Lane & Garnsey, Grisham and Part Circle

12. Safety Meetings. Weekly tailgate safety topics were;

- a. Hydration/Heat Illness
- b. Heat Safety Policy and Procedures
- c. JSA Safety Sheets
- d. House Keeping

13. Water Banking Activities. The following jobs were completed during the month;

- a. Mowing cells at the Kern Island and Romero Basins
- b. Removed tumbleweed and debris from the north boundary area of the Branch 1 basins.
- c. Oversee construction of Kern Island and Romero basin expansion projects.

14. Future Projects. The following projects will be completed as time and scheduling permit:

- a. Install meters in the Stine Canal at the outlet of the Bladder basin.
- b. 13 Ditch headgate evaluation and possible replacement
- a. Install permanent staff gauges and signage in basins.

Maintenance Report

July 2021

1. **Structure and Turnout Repairs.** The following jobs were completed during the month;
 - a. Repair Farmers and Central Canal wash-ins w/riprap and dirt hauled in from Bladder basin stockpile
 - b. Repair gearing at 3-20-40 weir slide gate on the Rim Ditch
 - c. Repair Turnouts 3-7-27, 5-0-165, 4-0-210 (rails and stems)
 - d. Replace meter register at 551 on Rim Ditch
2. **Shop.** The following jobs were completed during the month;
 - a. Normal service and repairs on District vehicles and equipment.
 - b. Repair air system conditioning on #322
 - c. Fuel and service Cat motor grader and John Deere tractor
 - d. Repair transmission servo on truck #210
 - e. Repair air conditioning system on truck #323
 - f. Repair brakes on truck #225
 - g. Repair hydraulic oil leak under platform on backhoe #402
3. **District Wells.**
 - a. Monthly service and inspection of all District wells to check dripper operation and clean well pads
 - b. Add dripper oil as needed
 - c. Turned off BV wells
4. **Motor Grader # 403** The following canals were sloped and roads graded;
 - a. Stine, Farmers and Smith Judd
5. **Backhoe # 402** The following jobs were completed during the month;
 - a. Assist in cleanout of debris on KI, Central, BV and Eastside
 - b. Repair gopher hole breaches and wash-ins on Central and Rim Ditch
6. **Backhoe # 404** The following jobs were completed this month;
 - a. Removed mattresses, debris, tumbleweeds, moss, brush and tires from Kern Island, Central, Branch 1, East Branch, Randal, Farmers, BV and Eastside Canals
7. **Weed Spraying.** The following canals were sprayed during the month;
 - a. Weeds were sprayed on KI, Branch 1, 13 Ditch, 18 N&S, Farmers, Central and Stine
8. **Aquatic Treatments.** Treatments including surface spraying for algae mats and injection treatments for control of algae or vascular aquatic weeds; treatments were made to BV, Central, Randal, Eastside, Farmers, 13 Ditch and Kern Island
9. **Rodent Control**
 - a. Bait Stations were checked and filled throughout the district this month
10. **Trash Removal.**
 - a. Daily cleaning of crossings, weirs, and screens on all canals

- b. Cleanup of discarded debris and turnout moss from canal banks of the BV, Stine, Central, East Branch, Kern Island & Branch 1. Both trash trucks were used to haul debris to the landfill.
 - c. Brush removal on Kern Island between California Ave. and 4th St. to permit grader to pass without damage
11. **Fence Repairs.** Fences and Gates were repaired at the following locations;
- a. Kern Island - 30th St., 34th St. and Columbus
 - b. Eastside - Sterling, Columbus, Kentucky, 30th and 34th
 - c. Branch 1 - Hughes & White Lane
 - d. Central - South Gate and Harris & Wible
12. **Safety Meetings.** Weekly tailgate safety topics were;
- a. Screen Safety
 - b. Electrical-Power Tool & Cords
 - c. Staying Focused
 - d. Maintenance Emergency Response Plan
 - e. Emergency Action Plan
 - f. Emergency Action Plan for Field and Response
13. **Water Banking Activities.** The following jobs were completed during the month;
- a. Mowing cells at the DiGregorio, Branch 1 and Romero Basins
 - b. Manage sub-contractors performing weed control at basins
14. **Future Projects.** The following projects will be completed as time and scheduling permit:
- a. Trim and remove trees/brush as needed along canals for grader passage
 - b. Repair dilapidated turnouts, gates, screens, piping and crossings as availability of canals are made possible.
 - c. Install meters on the Stine Canal at the bladder basin outlet
 - d. 13 Ditch headgate – Evaluate leak in mid-August, plan for possible replacement
15. **Future Water Banking Projects.**
- a. Install permanent staff gauges and signage at basin properties

Maintenance Report

August 2021

1. **Structure and Turnout Repairs.** The following jobs were completed during the month;
 - a. Treated and cleaned Central Canal inlet into the lake
 - b. Pour concrete panels on 15 Ditch where it was damaged by a vehicle accident
 - c. Patched external pipe joints at 13 Ditch head gate and inspected internal joints
 - d. Repair turnout # 3-6-60 on Branch II where grower's isolation valve failed and caused wash out around the measuring tube.
 - e. Replace rusted out I-beam supports on weir No. 5-3-527 in the Branch 2 Canal
 - f. Install drive gate on west bank of Eastside Canal at Panama Road to stop illegal dumping
2. **Shop.** The following jobs were completed during the month;
 - a. Normal service and repairs on District vehicles and equipment.
 - b. Weld/repair hitch on spray trailer #3
 - c. Fuel and service motor grader and John Deere tractor
 - d. Repair air-conditioning on truck 327
 - e. Repair sloper on motor grader (#403)
 - f. Rebuild dipping bucket for backhoe (#402)
 - g. Repair short in wiring on pony motor of spray rig # 326
 - h. Repair power steering on truck #323
3. **District Wells.**
 - a. Monthly service and inspection of all District Wells to check dripper operation and clean well pads
 - b. Add dripper oil as needed
4. **Motor Grader # 403** The following canals were sloped and roads graded;
 - a. Stine
5. **Backhoe # 402** The following jobs were completed during the month;
 - a. Assist in cleanout of debris on KI, Central & Eastside
 - b. Repair gopher hole breaches and wash-ins on the Rim Ditch
 - c. Excavate behind 13 Ditch head gate and expose pipeline
6. **Backhoe # 404** The following jobs were completed this month;
 - a. Removed mattresses, debris, tumbleweeds, moss, brush, and tires from Kern Island, Central, Branch 1, Randal, Farmers and Eastside Canals
 - b. Assist with excavation of 13 Ditch head gate and pipeline
7. **Weed Spraying.** The following canals were sprayed during the month;
 - a. Weeds were sprayed on KI, Eastside, Central and East Branch
8. **Aquatic Treatments.** Treatments including surface spraying for algae mats and injection treatments for control of algae or vascular aquatic weeds; treatments were made to the Central, Randal, Eastside, Farmers, 18 N&S, 13 Ditch and Kern Island

9. Rodent Control

- a. Check and fill bait stations throughout the District

10. Trash Removal.

- a. Daily cleaning of crossings, weirs, and trash screens on all canals running
- b. Both trash trucks were used to collect debris from the Stine, Central, Kern Island and Branch 1 and haul to the landfill
- c. Brush Removal on Kern Island at California Ave., 4th St., O St. and Brundage Lane to permit grader passage

11. Fence Repairs. Fences and Gates were repaired at the following locations;

- a. Kern Island – 30th St., 34th St. and Columbus
- b. Eastside – Columbus, 30th, 34th and Kentucky
- c. Branch 1 – White Lane and Wible
- d. Central -- South Gate and Bell Terrace

12. Safety Meetings. Weekly tailgate safety topics were;

- a. Fire Extinguisher Inspection
- b. Defensive Driving in School Zones
- c. Respirator Use
- d. Seven Common Accident Causes

13. Water Banking Activities. The following jobs were completed during the month;

- a. Mow pond bottoms at the Kern Island, Stonefield, Stine and BV Basins
- b. Provide and track chemical usage for weed control contractors working at basins
- c. Improve inlet into recently improved pond at the Romero Basins by removing old booster pump and pipeline at turnout #4-0-122
- d. Repair fencing and install signs at all basin properties

14. Future Projects. The following projects will be completed as time and scheduling permit:

- a. Trim and remove trees/brush on the Eastside Canal at Columbus
- b. Repair turnouts, gates, screens, piping and crossings as availability of canals are made possible
- c. Install meters on Stine Canal at the Bladder Basin outlet
- d. Mortar seal internal pipe joints at 13 Ditch headgate during shutdown
- e. Repair gate and measure tube at turnout #3-7-27 in the Kern Island Drain
- f. Remove no longer needed board control inside a standpipe on the East Branch Canal at Casa Loma (#3-2-46) to improve flow
- g. Remove rusted corrugate metal pipe crossing (42-inch dia.) and replace with HDPE pipe (48-inch dia.) on the Eastside Canal at Stenderup Avenue (2-0-508)

15. Future Water Banking Projects.

- a. Install permanent staff gauges in basins
- b. Mow weeds in basins as manpower permits
- c. Remove concrete irrigation lines at Old River Basins property

Maintenance Report

September 2021

1. **Structure and Turnout Repairs.** The following jobs were completed during the month;
 - a. Replace farmer's crossing on the Eastside Canal at Stenderup Ave.
 - b. Repair washout on Rim from rodent damage
 - c. Repair wash in on BV, neighbors draining pool into canal
 - d. Repair screens on turnouts 2-0-262, -267, -268, -290 and -298
 - e. Repair Weir 2-0-301(replace rusted out I Beams w/new)
 - f. Removed diversion wall and waterman gate inside the East Branch Canal standpipe at Casa Loma (#3-2-46) to improve flow
2. **Shop.** The following jobs were completed during the month;
 - a. Normal service and repairs on District vehicles and equipment.
 - b. Repair to Trailer #T11 air relief valve
 - c. Fuel & service Grader / John Deere
 - d. Replace fuel pump in truck #210
 - e. Repair sloper on Grader (#403)
 - f. Repair wiring on dump truck (# 327)
 - g. Build chemical tote stands
 - h. Clean office air conditioners
3. **District Wells.**
 - a. Monthly service and inspection of all District wells to check dripper operation and clean well pads and add dripper oil as needed
4. **Motor Grader # 403** The following canals were sloped and roads graded;
 - a. BV
5. **Backhoe # 402** The following jobs were completed during the month;
 - a. Assist in cleanout of debris on KI and Central
 - b. Repair gopher hole breaches / wash-ins on Rim / BV
 - c. Excavate and remove concrete irrigation pipe from Old River basins property
6. **Backhoe # 404** The following jobs were completed this month;
 - a. Removed mattresses, debris, tumbleweeds, moss, brush and tires from Kern Island, Central, Branch 1, Randal and Eastside Canals
 - b. Assist with removal of concrete irrigation pipe from Old River basins property.
7. **Weed Spraying.** The following canals were sprayed during the month;
 - a. Weeds were sprayed on KI, 18 N&S, 13 Ditch, BV and Eastside
8. **Aquatic Treatments.** Treatments including surface spraying for algae mats and injection treatments for control of algae or vascular aquatic weeds; treatments were made to Central, Randal, 18 N&S, 13 Ditch and Kern Island

9. Rodent Control

- a. Bait Stations were checked, and all locations were filled throughout the district this month

10. Trash Removal.

- a. Daily cleaning of crossings, weirs, and screens on all canals running
- b. Removed debris / moss from canal and banks of the BV, Stine, Central, Kern Island and Branch 1. Used both trash trucks to haul debris to the landfill
- c. Brush Removal on Eastside at Columbus St. to permit grader to pass without damage

11. Fence Repairs. Fences and Gates were repaired at the following locations;

- a. Kern Island – 30th St., 34th St. and Columbus
- b. Eastside – Columbus, 30th, 34th and Kentucky
- c. Branch 1 – White Lane and Hughes
- d. Central – Pacheco

12. Safety Meetings. Weekly tailgate safety topics were;

- a. Ladder Safety
- b. PPE Equipment and It's Importance
- c. Pinch Points and Hand Injuries
- d. Safety Rules and Procedures

13. Water Banking Activities. The following jobs were completed during the month;

- a. Mowing cells at the Met and Romero basins
- b. Manage weed control by others at basin properties
- c. Remove and break up concrete irrigation pipe from Old River Basins property
- d. Removal of short shaft pump from stand at Old River Basin property and place in storage at Stonefield Basin

14. Future Projects. The following projects will be completed as time and scheduling permit:

- a. Trim and remove trees/brush as needed along canals for grader passage (Central)
- b. Repair dilapidated turnouts, gates, screens, piping and crossings as availability of canals are made possible on Eastside, Central and Kern Island
- c. Install meters on Stine Canal at the Bladder basin outflow
- d. 13 Ditch headgate / turnout piping repair to internal joint seams set for shutdown
- e. Repair turnout #3-7-27 (repair gate & measuring tube when farmer lowers reservoir, no check valve on system to prevent backflow)
- f. Repair turnouts and remove debris from Central Canal beginning October 18, 2021.

15. Future Water Banking Projects.

- a. Install permanent staff gauges and signage in basins for pipelines/levels
- b. Mow weeds in basins as manpower permits
- c. Continue removal of concrete irrigation lines at Old River Basins property
- d. Repair air vent at Kern Island basins when wells are turned off

Maintenance Report

October 2021

1. **Structure and Turnout Repairs.** The following jobs were completed during the month;
 - a. Repair concrete panel and cable on the Central Canal near Hosking Road
 - b. Repair rails, stem, and screen on turnout # 3-0-146
 - c. Repair catwalk on 3-2-296
 - d. Repair screens on turnouts 3-2-190 and 226
 - e. Repair/replace rusted I-beams on Weirs 3-2-534, 535 and 536
2. **Shop.** The following jobs were completed during the month;
 - a. Normal service and repairs on District vehicles and equipment.
 - b. Repair sloper extension pull bar on motor grader
 - c. Repair stabilizers on backhoe #402 (line bore frame pins by Coastline Equip.)
 - d. 6,000-hour service on motor grader
 - e. Convert turntable pump to PTO drive to comply with CARB rules
 - f. Tire repair and service to trucks 226, 223, and 224
3. **District Wells.**
 - a. Monthly service and inspection of all District wells to check dripper operation and clean well pads
 - b. Add dripper oil as needed
4. **Motor Grader # 403** The following canals were sloped and roads graded;
 - a. Sloping BV East and Eastside Canals
5. **Backhoe # 402** The following jobs were completed during the month;
 - a. Assist in debris removal on Eastside, Stine and Central
 - b. Repair wash-ins on Kern Island
 - c. Excavate concrete pipeline from Old River Basins property
 - d. Load and remove brush on Central at Ming Avenue
 - e. Repair wash in erosion on the Central Canal caused by broken sprinkler at Wayside Park
6. **Backhoe # 404** The following jobs were completed this month;
 - a. Removed mattresses, debris, tumbleweeds, moss, brush and tires from Kern Island, Central, Stine and Eastside Canals.
 - b. Assist with removal of concrete pipe and hauling of riprap at Old River Basins property.
7. **Weed Spraying.** The following canals were sprayed during the month;
 - a. Both truck and trailer spray units were used to spray weeds on the KI, Branch 1, BV and Eastside Canals
 - b. Weed spray crew attend CAPCA training for weed control

8. **Aquatic Treatments.** Treatments including surface spraying for algae mats and injection treatments for control of algae or vascular aquatic weeds; treatments were made to Randal, 18 N&S, 13 Ditch, and Kern Island
9. **Rodent Control**
 - a. Bait Stations were frequently checked and all locations were filled throughout the district this month
10. **Trash Removal.**
 - a. Daily cleaning of crossings, weirs, and screens on all canals running
 - b. Remove debris from the Stine, Central, Kern Island, Branch 1 and Eastside. Both trash trucks were used to haul to the landfill.
 - c. Brush Removal on Central Canal at Ming and South Gate to permit grader passage.
 - d. Work with County Code Enforcement to remove debris at Wilson on the Central
11. **Fence Repairs.** Fences and Gates were repaired at the following locations;
 - a. Kern Island – 30th St
 - b. Stine – Ash
 - c. Branch 1 – White Lane and Hughes
 - d. Central – Pacheco, Wilson and Union at Planz
12. **Safety Meetings.** Weekly tailgate safety topics were;
 - a. Used Tire Disposal Program
 - b. Maintenance Department Adjustments
 - c. Safety Labeling
 - d. Be Safe (everyone's job)
 - e. CPR Classes
13. **Water Banking Activities.** The following jobs were completed during the month;
 - a. Mowing cells at the Kern Island Basins
 - b. Manage weed control sub-contractors at basin properties
 - c. Removal of old concrete pipeline and debris from Old River Basins property
 - d. Break concrete pipe into riprap at Old River Basins and haul to Bladder Basin.
 - e. Coordinate installation of ET station by Land IQ at Buena Vista Basins property
14. **Future Projects.** The following projects will be completed as time and scheduling permit:
 - a. Repair dilapidated turnouts, gates, screens, piping and crossings as availability of canals are made possible on 18 N&S, 13 Ditch and Kern Island
 - b. Upgrade East Branch turnout 3-2-71 to 36" board control overflow w/36" pipe
 - c. 13 Ditch headgate / turnout piping repair to internal joint seams set for shutdown
 - d. Repair turnout #3-7-27 (repair gate and measuring tube when farmer lowers reservoir, no check valve on system to prevent backflow)
15. **Future Water Banking Projects.**
 - a. Repair air vent at KI Basins for well 3-0-KB4
 - b. Lower feeder ditch at KI Basins and dredge out sediment deposits
 - c. Install new turnout from feeder ditch to the north

Maintenance Report

November 2021

1. **Structure and Turnout Repairs.** The following jobs were completed during the month;
 - a. Install new turnout and build a new pre-screening and catwalk system on the 13 Ditch adjacent to turnout 3-6-07
 - b. Repair turnout 3-2-296
 - c. Install catwalk, boards, and screen on East Branch turnout 3-2-71
 - d. Repair catwalks and screens on 3-2-190 and 296
 - e. Repair prescreen on turnout and 3-2-226
 - f. Replace rusted I-beams on weirs 3-6-618 and 3-2-534
2. **Shop.** The following jobs were completed during the month;
 - a. Normal service and repairs on District vehicles and equipment.
 - b. Replace lifting ball of sloper blade of motor grader
 - c. Convert turntable pump to PTO drive to comply with CARB rules
 - d. Repair tires and service trucks 327, 218, 221 and trailer T-12
 - e. Repair brakes on trucks 220 and 222
3. **District Wells.**
 - a. Monthly service and inspection of all District Wells to check dripper operation and clean well pads
4. **Motor Grader # 403** The following canals were sloped and roads graded;
 - a. Sloping to finish Eastside, head of Kern Island and start Central
5. **Backhoe # 402** The following jobs were completed during the month;
 - a. Assist in moving pipe and equipment to staging sites
 - b. Install turnout in new pond at the Kern Island basins
 - c. Repair gopher hole breaches on Rim Ditch
 - d. Replace old 24" turnout with new 36" turnout on East Branch (#71)
 - e. Bury tumbleweeds at various locations
6. **Backhoe # 404** The following jobs were completed this month;
 - a. Removed mattresses, debris, tumbleweeds, moss, brush and tires from Kern Island, Central and Eastside Canals
 - b. Remove concrete pipe from Branch 1 at Hosking Road
 - c. Installation of new pre-screen and catwalk on 13 Ditch
7. **Weed Spraying.** The following canals were sprayed during the month;
 - a. Both trucks and trailer spray units were used to spray weeds KI, Farmers and Eastside
 - b. Weed spray crew assisted with cleaning basins for preparation of sterilant spray
8. **Aquatic Treatments.** Treatments including surface spraying for algae mats and injection treatments for control of algae or vascular aquatic weeds; treatments were made to Randal and Kern Island

9. Rodent Control

- a. Bait Stations were checked and filled.

10. Trash Removal.

- a. Daily cleaning of crossings, weirs, trash racks and screens on all canals running
- b. Removed debris and moss from canals and banks of the Stine, Central, Kern Island, Branch 1 and Eastside and hauled debris to the landfill.
- c. Work with City Code Enforcement to remove debris at Panama Lane on Farmers Canal and Central Canal at 4th Street

11. Fence Repairs. Fences and Gates were repaired at the following locations;

- a. Kern Island – 30th St, 34th, Columbus and LaFrance
- b. Stine – Stine Road and Garnsey Lane
- c. Branch 1 – Hughes Lane
- d. Central – P St., Wilson, Southgate, and Ming

12. Safety Meetings. Weekly tailgate safety topics were;

- a. Time Change
- b. Common Sense Safety
- c. CPR Classes

13. Water Banking Activities. The following jobs were completed during the month;

- a. Mowing cells at DiGiorgio Basins
- b. Install board control turnout in feeder ditch at Kern Island Basins
- c. Manage weed control by sub-contractors on basin properties
- d. Cleaning basins for future sterilant application
- e. Remove sediment from feeder ditch at Kern Island Basins

14. Future Projects. The following projects will be completed as time and scheduling permit:

- a. Trim and remove trees/brush as needed along canals for grader passage (Central)
- b. Repair dilapidated turnouts, gates, screens, piping and crossings as availability of canals are made possible on 18 N&S and Kern Island
- c. Repair internal joint seams on 13 Ditch headgate
- d. Repair gate and measuring tube on turnout 3-7-27 (no check valve on system to prevent backflow)
- e. Modify Branch 1 return and replace crossing for more efficient operation

15. Future Water Banking Projects.

- a. Install permanent staff gauges and signage in basins for pipelines/levels
- b. Repair air vent on well No. KB4 at Kern Island Basins
- c. Spray sterilant at all basin properties to prevent weed growth

Maintenance Report

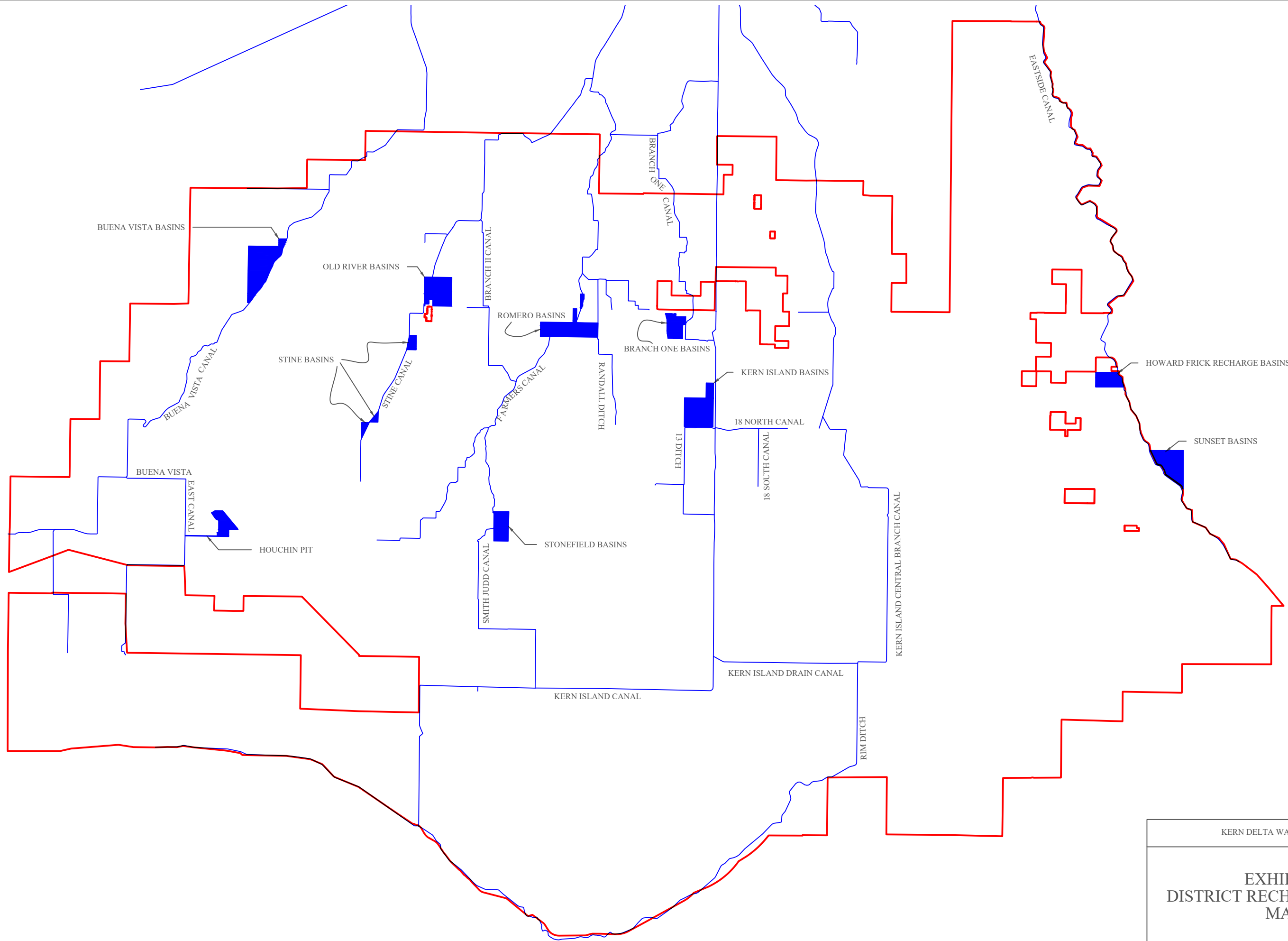
December 2021

1. **Structure and Turnout Repairs.** The following jobs were completed during the month;
 - a. Mortar and repair pipe joints of 13 Ditch head gate
 - b. Repair turnout box I-beams and screen at 3-0-79
 - c. Repair I-beams on KI weirs #600, 603 and 605
 - d. Repair and replace damaged screens at KI Basins Backup Weir 3-0-607
 - e. Replace screens on turnouts 3-0-64, 70, 79 & 86
 - f. Repair weir wall-support at 3-0-603
 - g. Rebuild Branch 1 Return Box area; Remove basin back up structure, old gate/crossing, and overflow return box. Install new return box, backup board control box w/40' of pipe, basin overflow box w/160' of pipe and riprap the entire bowl area.
2. **Shop.** The following jobs were completed during the month;
 - a. Normal service and repairs on District vehicles and equipment.
 - b. Repair valving switch backhoe #402
 - c. Tune and repair trucks #210, 220, 221, 217 and 223
3. **District Wells.**
 - a. Monthly service and inspection of all District Wells to check dripper operation and clean well pads
 - b. Replace panel lights and cracked dripper glass as needed
 - c. Blow out electrical boxes and check for electrical repairs
4. **Motor Grader # 403** The following canals were sloped and roads graded;
 - a. Sloping south end of Central
5. **Backhoe # 402** The following jobs were completed during the month; Assist with rebuilding the Branch 1 return box area.
6. **Backhoe # 404** The following jobs were completed this month;
 - a. Removed mattresses, debris, tumbleweeds, moss, brush and tires from Kern Island as part of annual cleaning
7. **Weed Spraying.** The following canals were sprayed during the month;
 - a. Weeds were sprayed on BV, Stine, KI and Branch 1
8. **Aquatic Treatments.** Treatments including surface spraying for algae mats and injection treatments for control of algae or vascular aquatic weeds;
 - a. No treatments were made is month
9. **Rodent Control**
 - a. Bait Stations were checked and filled throughout the district this month.
10. **Trash Removal.**
 - a. Daily cleaning of crossings, weirs, trash racks and screens on all canals running at beginning of month.

- b. Cleanup on Kern Island canal to remove debris and use both trash trucks to haul debris to the landfill.
11. **Fence Repairs.** Fences and Gates were repaired at the following locations;
- a. Kern Island – 30th St., 34th St. and Columbus
 - b. Eastside – Lake Street
 - c. Branch 1 – Smoke Tree Trailer Park, South Gate and Harris
 - d. Stine – Chester Lane and Garnsey Lane
 - e. Basins – DiGiorgio and Romero
12. **Safety Meetings.** Weekly tailgate safety topics were;
- a. Do the Right Thing
 - b. Eliminate Them
 - c. How to be a Good Driver
13. **Water Banking Activities.** The following jobs were completed during the month;
- a. Mowing cells at Branch 1 basins
 - b. Removal of tumbleweeds from fences due to windstorms at KI, BV and Romero Basins
 - c. Repair air vent on well discharge in the KI Basins
14. **Future Projects.** The following projects will be completed as time and scheduling permit:
- a. Trim and remove trees/brush as needed along canals for grader passage
 - b. Install white board in multipurpose room for training
 - c. Repair gate on the KI Drain and coordinate with farmer to install backflow prevention
 - d. Spray pre-emergence on strategic location of district
15. **Future Water Banking Projects.**
- a. Install permanent staff gauges and signage in basins
 - b. Spraying pre-emergence at all basins

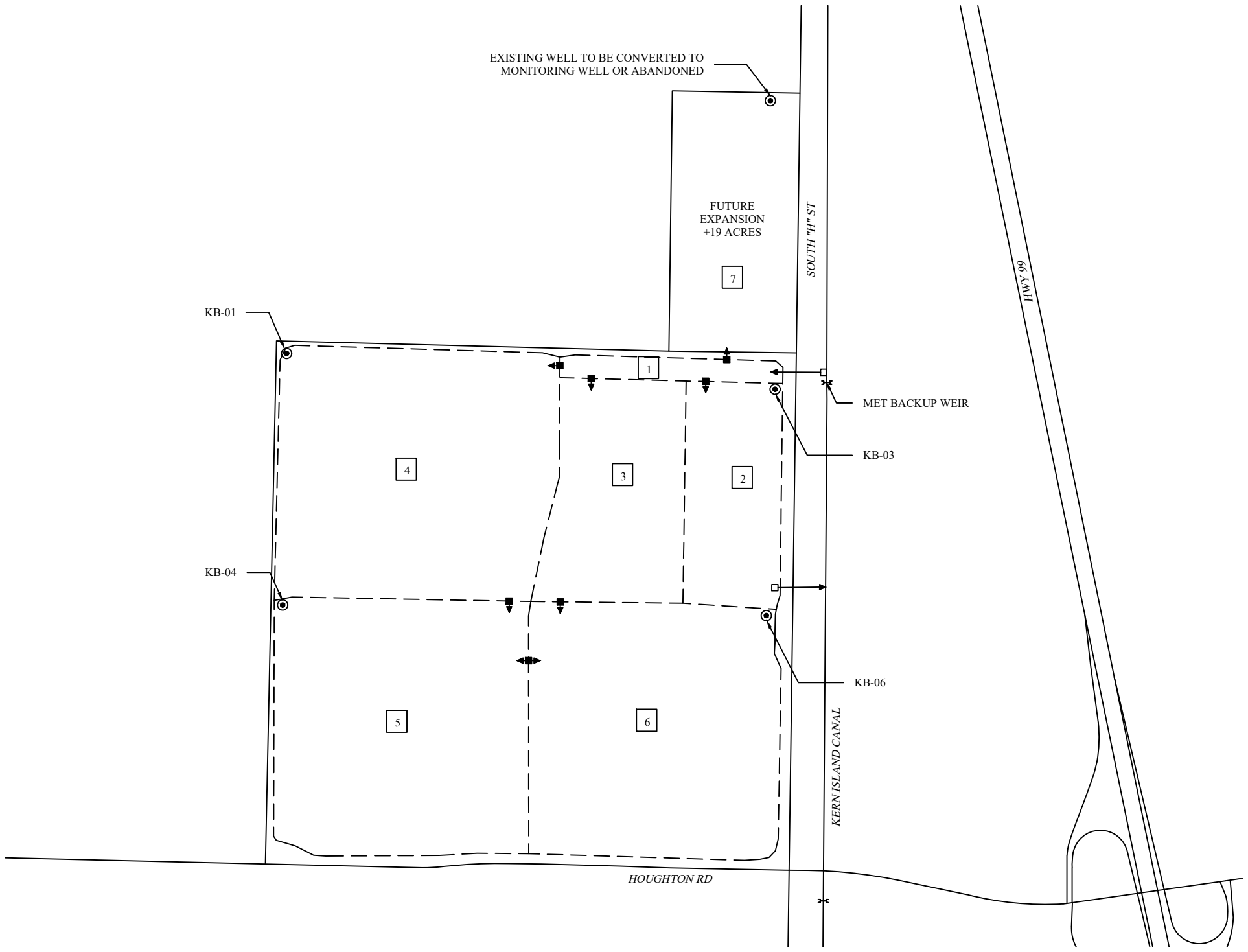


Appendix B



KERN DELTA WATER DISTRICT

EXHIBIT 1
DISTRICT RECHARGE BASINS
MAP

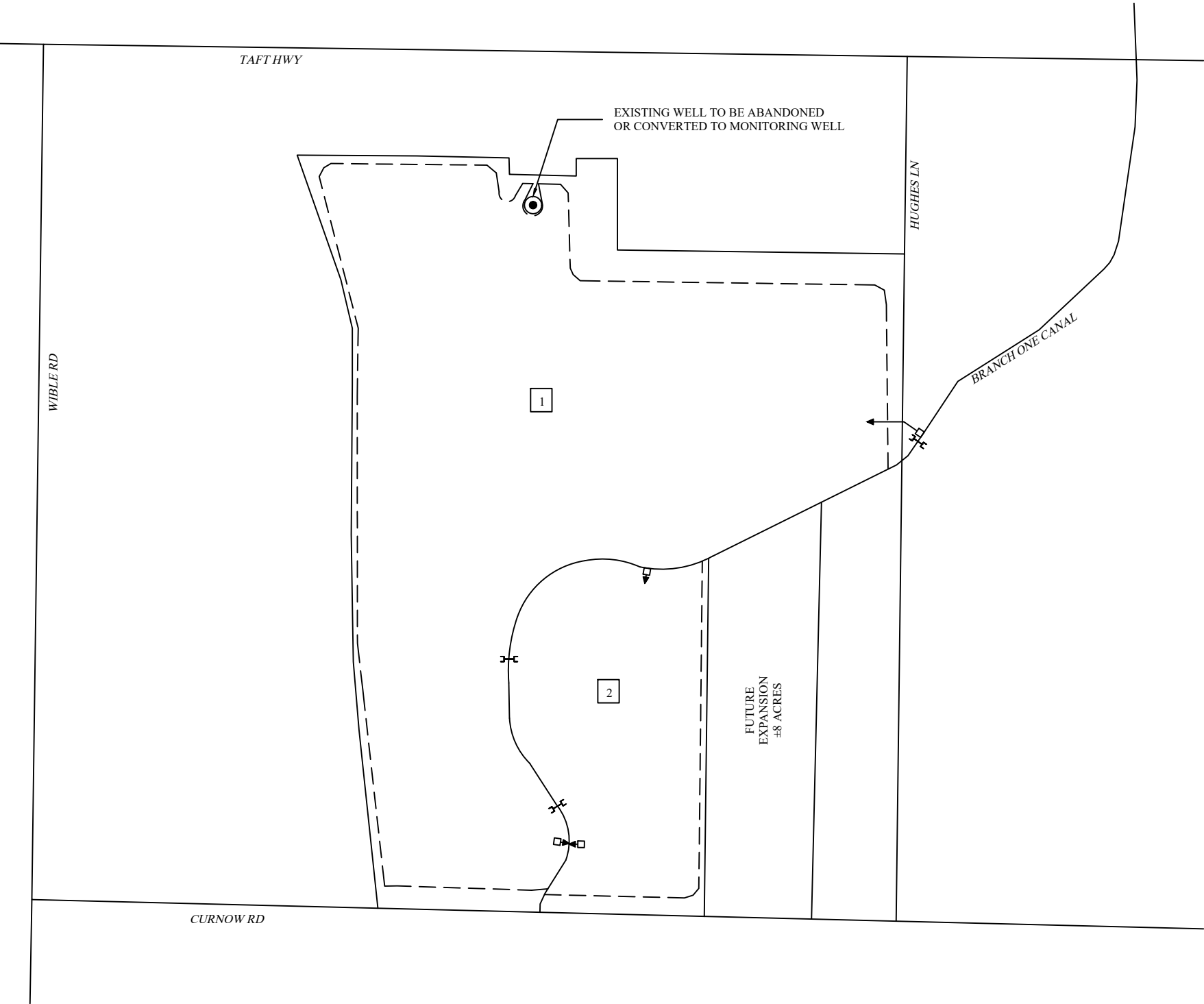


LEGEND

- OF EXISTING LEVEE
- # POND NUMBER
- ABANDONED WELL
- SCALE: NOT TO SCALE
- ◀ INTERBASIN STRUCTURE
- ◀◻ INLET/OUTLET STRUCTURE
- ⊙ EXISTING WELL

KERN DELTA WATER DISTRICT

**EXHIBIT 2
KERN ISLAND BASINS**

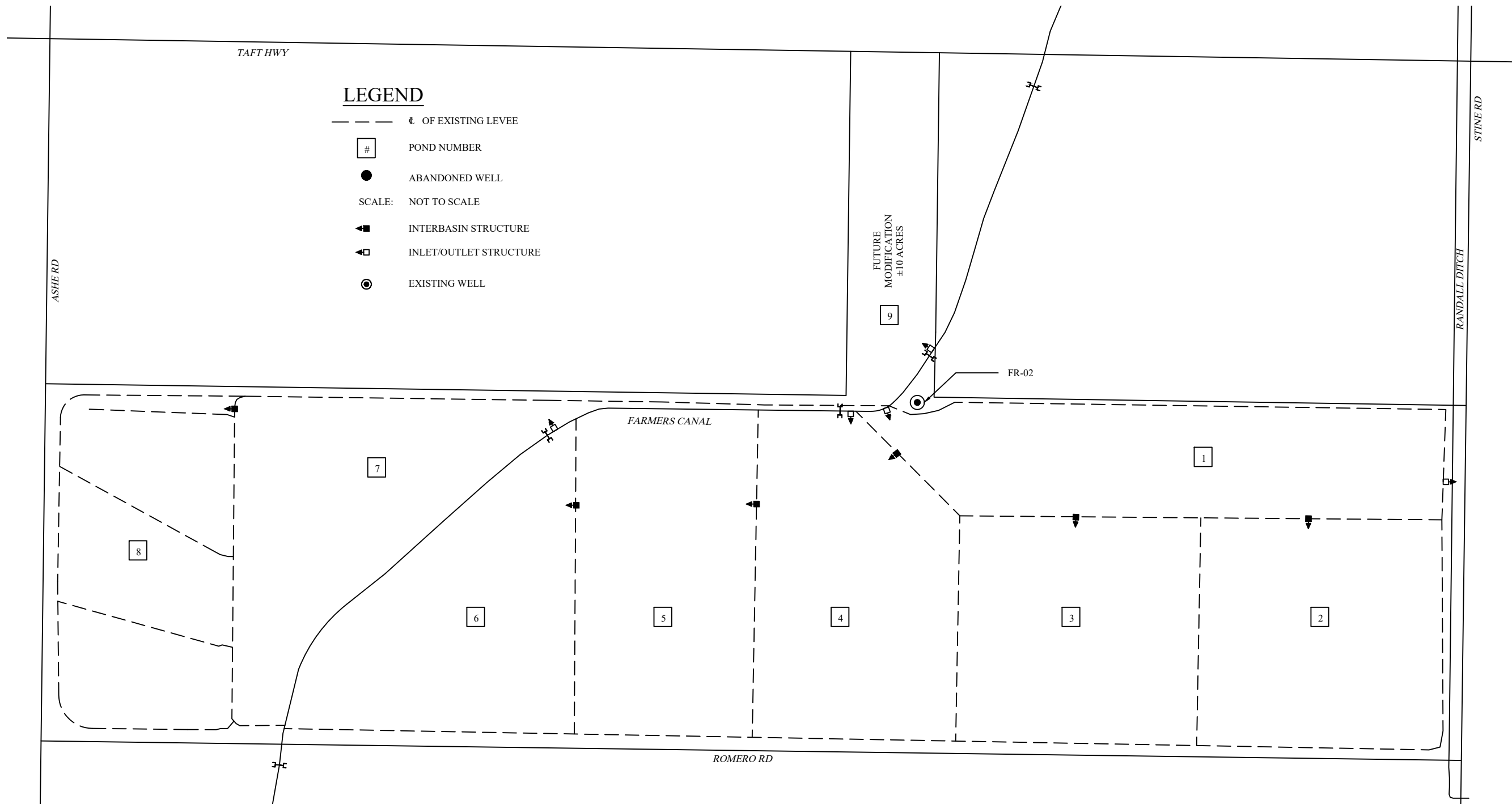


LEGEND

- OF EXISTING LEVEE
- # POND NUMBER
- ABANDONED WELL
- SCALE: NOT TO SCALE
- ◀ INTERBASIN STRUCTURE
- ◀◻ INLET/OUTLET STRUCTURE
- ⊙ EXISTING WELL

KERN DELTA WATER DISTRICT

**EXHIBIT 3
BRANCH ONE BASINS**



KERN DELTA WATER DISTRICT

EXHIBIT 4
ROMERO BASINS

LEGEND

--- OF EXISTING LEVEE



POND NUMBER



ABANDONED WELL

SCALE:

NOT TO SCALE



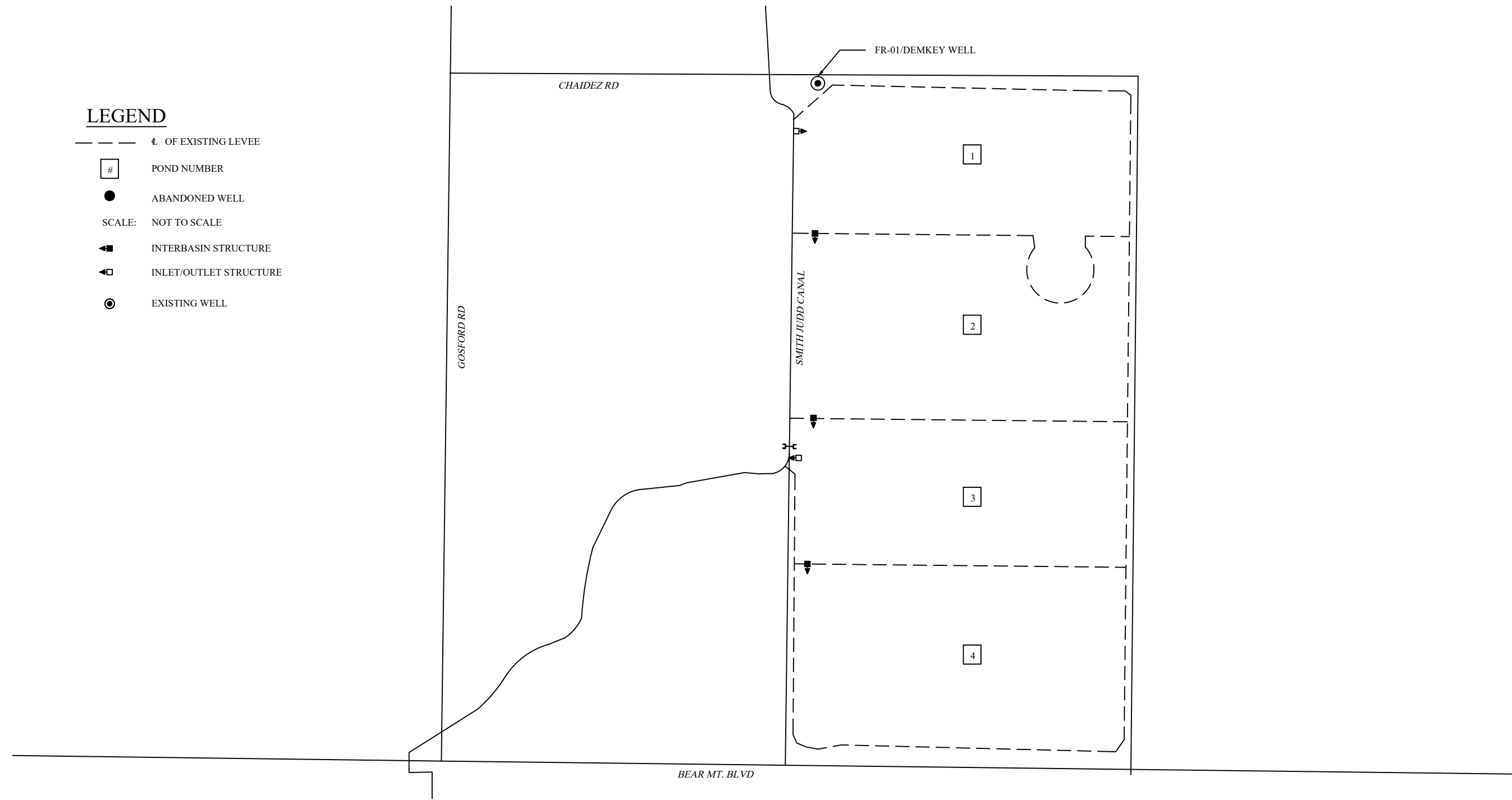
INTERBASIN STRUCTURE



INLET/OUTLET STRUCTURE



EXISTING WELL

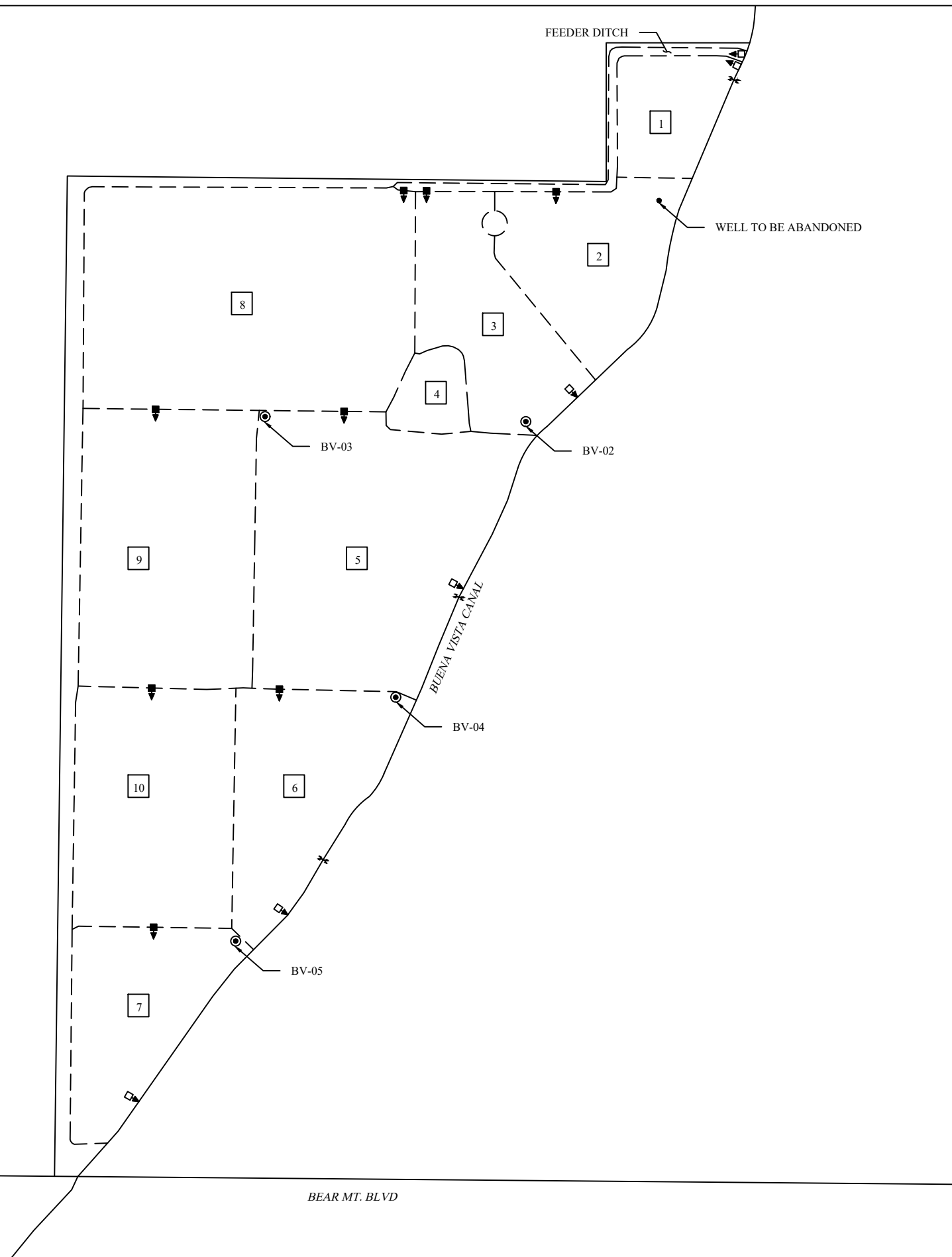


KERN DELTA WATER DISTRICT

EXHIBIT 5
STONEFIELD BASINS

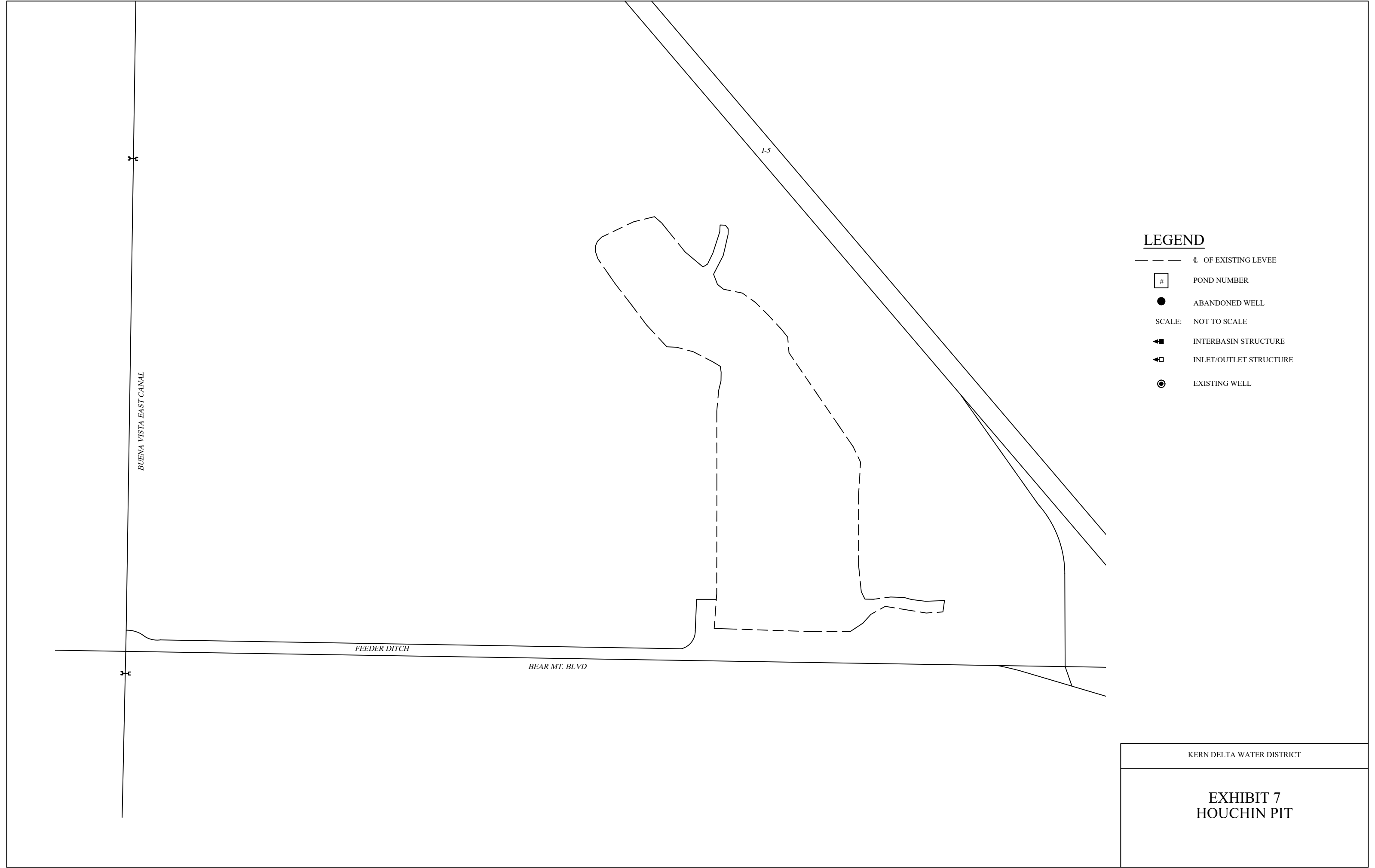
LEGEND

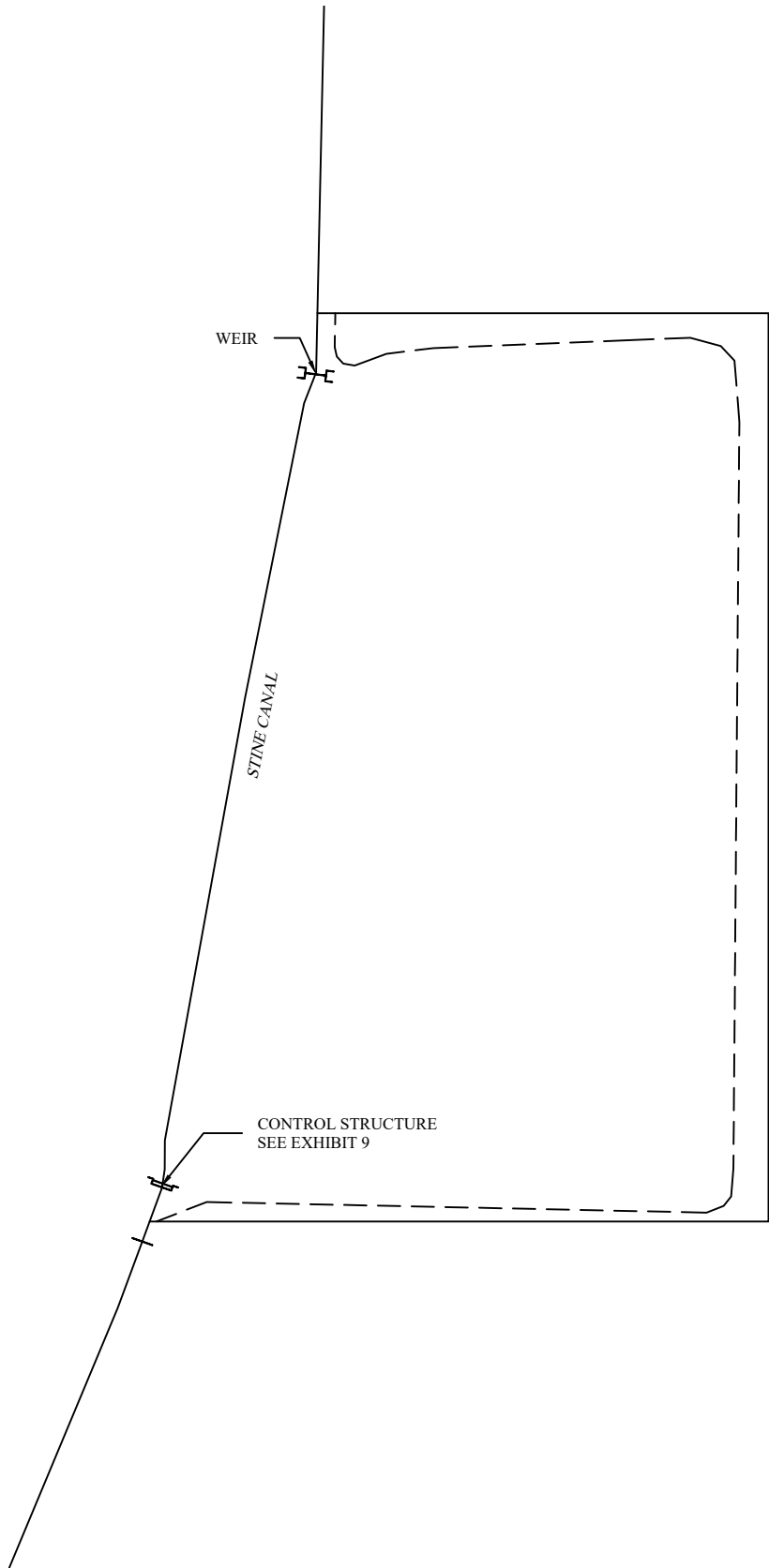
- OF EXISTING LEVEE
- # POND NUMBER
- ABANDONED WELL
- SCALE: NOT TO SCALE
- ◀ INTERBASIN STRUCTURE
- ◀ INLET/OUTLET STRUCTURE
- ⊙ EXISTING WELL



KERN DELTA WATER DISTRICT

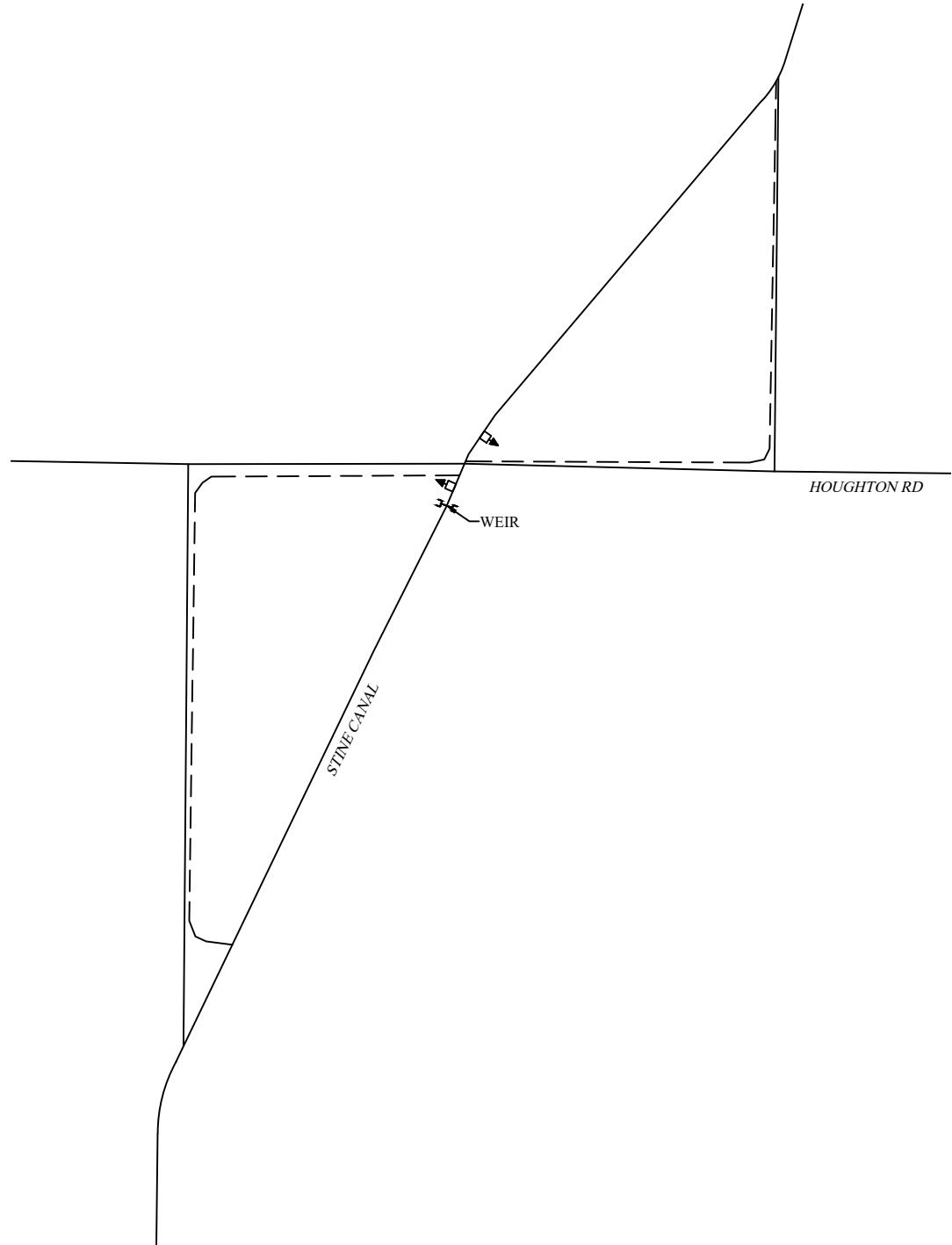
**EXHIBIT 6
BUENA VISTA BASINS**





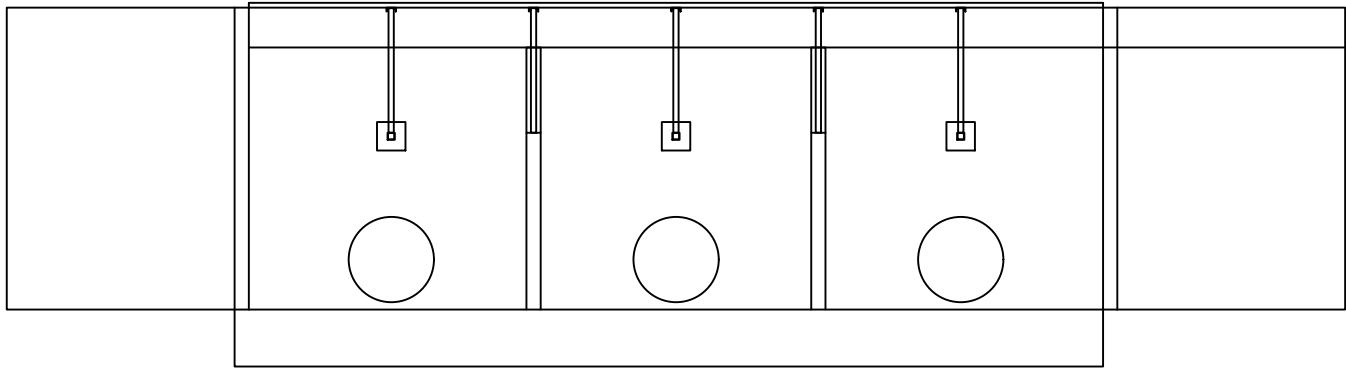
LEGEND

- OF EXISTING LEVEE
- # POND NUMBER
- ABANDONED WELL
- SCALE: NOT TO SCALE
- ◀ INTERBASIN STRUCTURE
- ◀ INLET/OUTLET STRUCTURE
- ⊙ EXISTING WELL

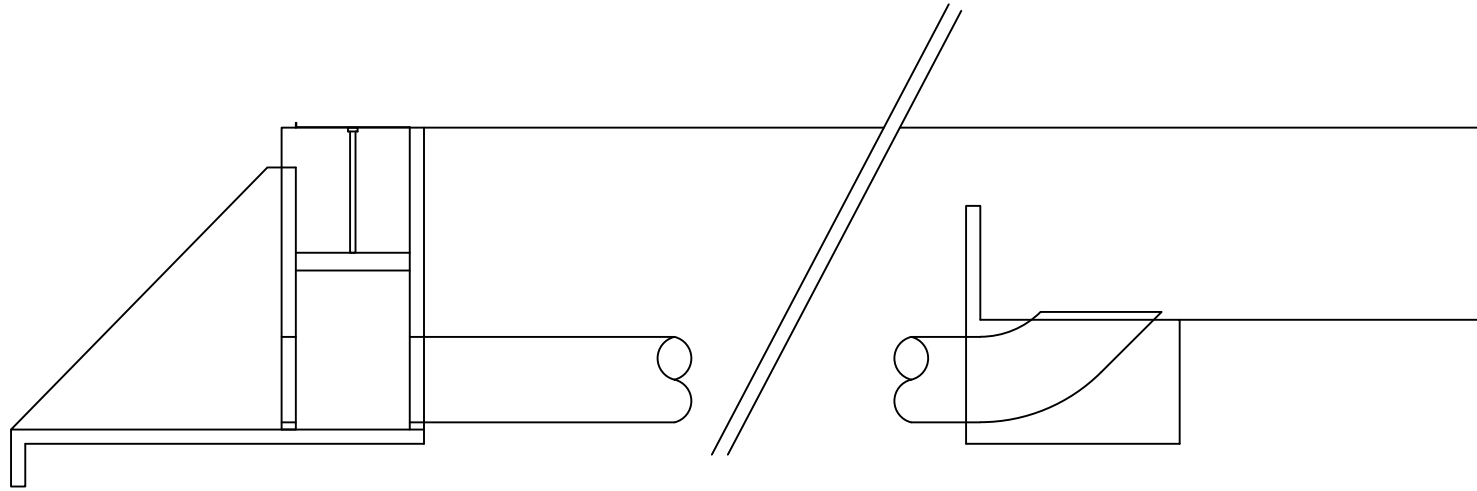


KERN DELTA WATER DISTRICT

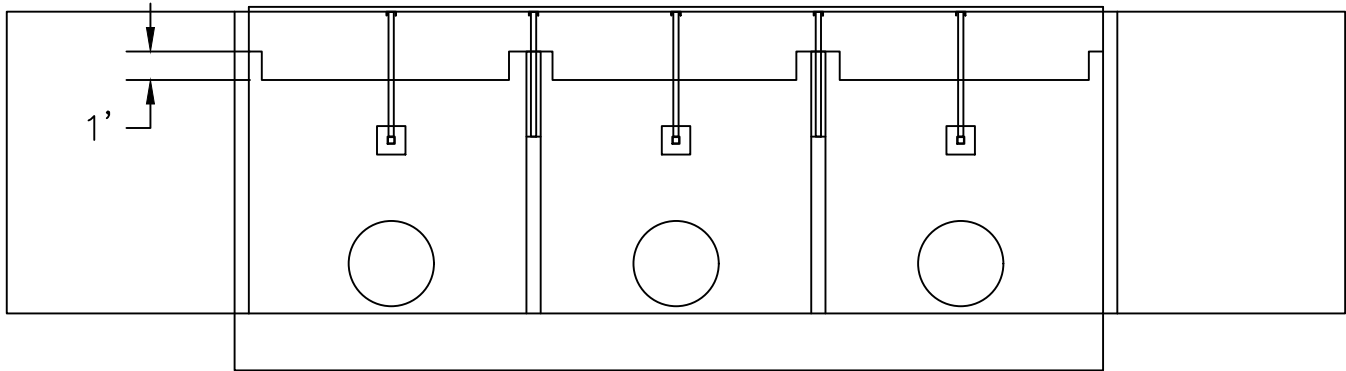
EXHIBIT 8 STINE BASINS



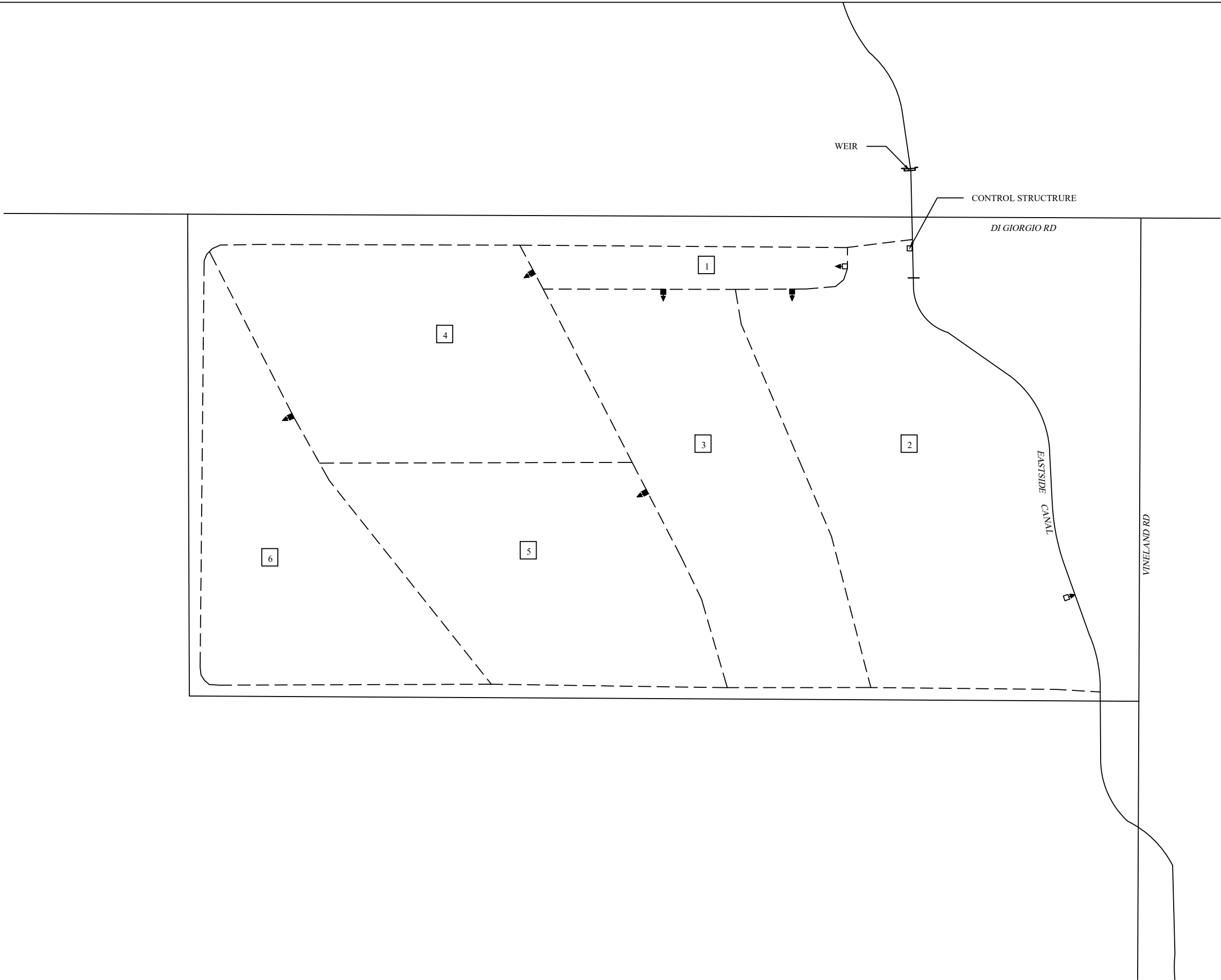
ORIGINAL STRUCTURE - FRONT VIEW



ORIGINAL STRUCTURE - PROFILE VIEW



MODIFIED STRUCTURE - FRONT VIEW



LEGEND

- — — — — OF EXISTING LEVEE
- # POND NUMBER
- ABANDONED WELL
- SCALE: NOT TO SCALE
- ◀ INTERBASIN STRUCTURE
- ◻ INLET/OUTLET STRUCTURE
- ⊙ EXISTING WELL

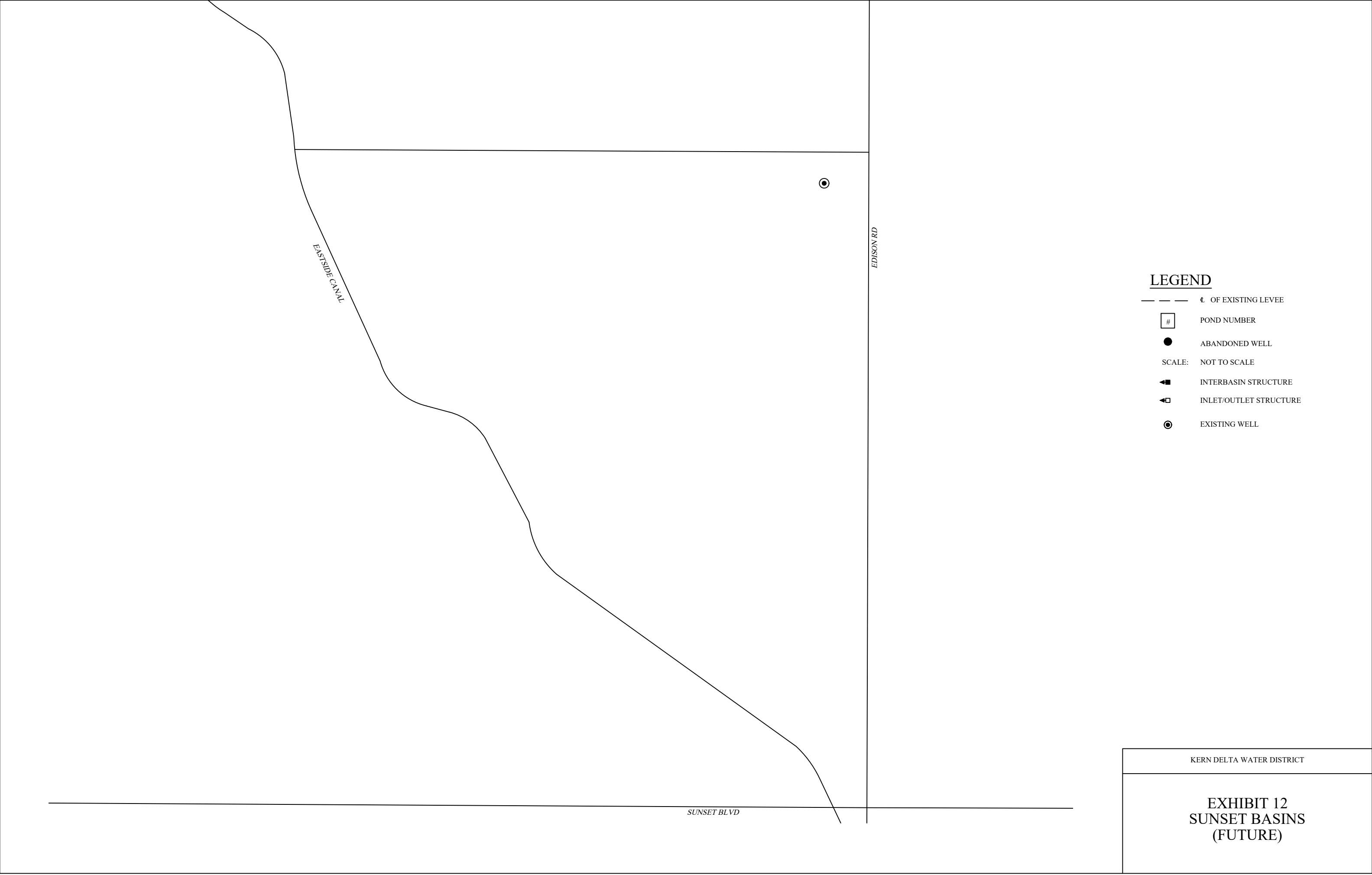
KERN DELTA WATER DISTRICT

**EXHIBIT 10
H. FRICK RECHARGE FACILITY**



KERN DELTA WATER DISTRICT

EXHIBIT 11
KERN ISLAND & CENTRAL
PROPOSED MODIFICATIONS

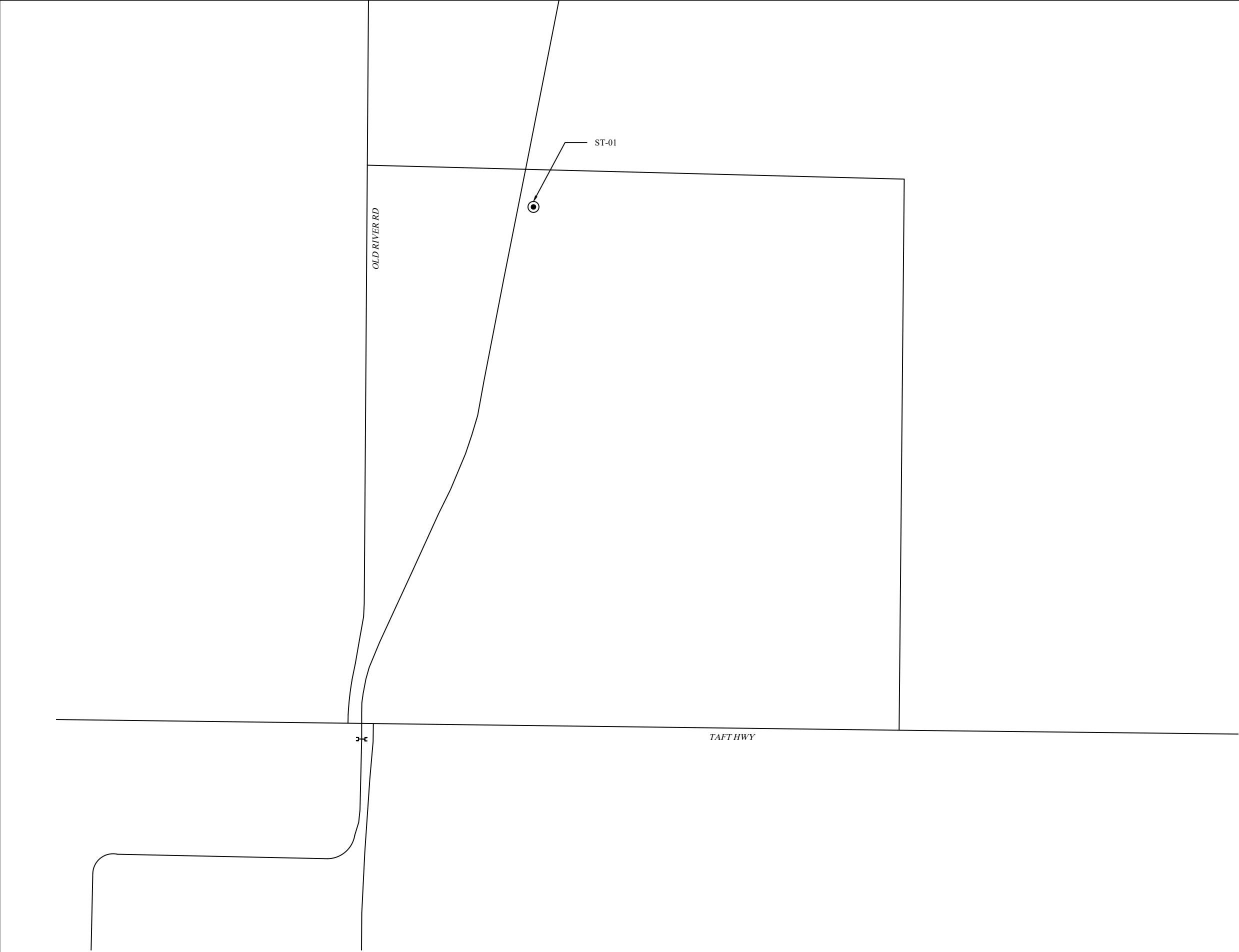


LEGEND

- OF EXISTING LEVEE
- POND NUMBER
- ABANDONED WELL
- SCALE: NOT TO SCALE
- INTERBASIN STRUCTURE
- INLET/OUTLET STRUCTURE
- EXISTING WELL

KERN DELTA WATER DISTRICT

EXHIBIT 12
SUNSET BASINS
(FUTURE)



LEGEND

OF EXISTING LEVEE

#

POND NUMBER

ABANDONED WELL

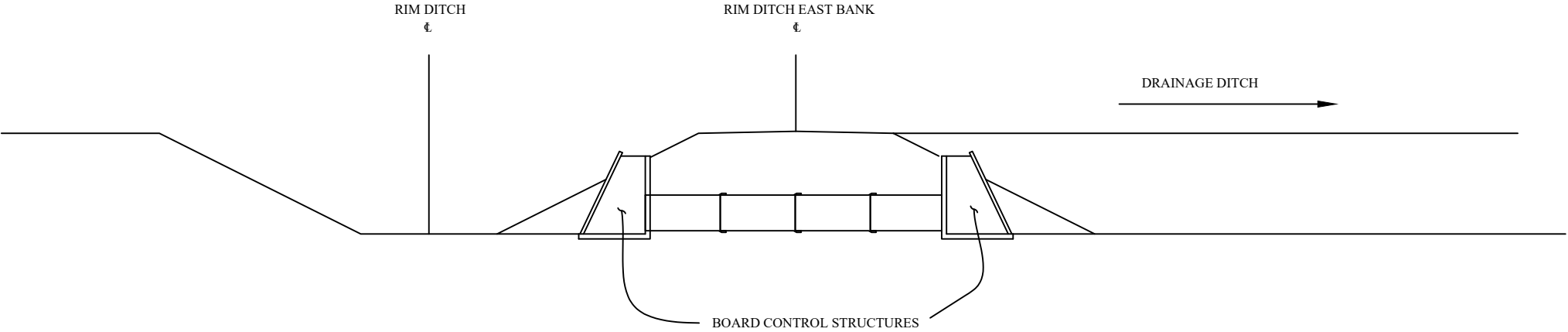
SCALE:

NOT TO SCALE

INTERBASIN STRUCTURE

INLET/OUTLET STRUCTURE

EXISTING WELL



KERN DELTA WATER DISTRICT

EXHIBIT 14
NOTCH STRUCTURE
CONCEPTUAL DESIGN



KERN DELTA WATER DISTRICT

EXHIBIT 15
STINE CANAL
NORTH OF CALIFORNIA AVE