

TO: Water Management Committee
Agenda Item No. 5

FROM: Lauren Bauer

DATE: November 19, 2014

SUBJECT: Adoption of Addendum No. 6 to the Pioneer Groundwater Recharge and Recovery Project Negative Declaration

Issue:

Consider adopting Addendum No. 6 to the Pioneer Groundwater Recharge and Recovery Project Negative Declaration.

Recommended Motion:

Adopt Resolution No. 40-14 adopting Addendum No. 6 to the Pioneer Groundwater Recharge and Recovery Project Negative Declaration.

Discussion:

On December 20, 1996, the Kern County Water Agency (Agency) Board of Directors (Board) adopted a Negative Declaration for the Pioneer Groundwater Recharge and Recovery Project (Project). The Project included the construction and operation of specified recharge and recovery facilities. Agency staff continually performs routine maintenance to maintain functionality of the Project. However, as the Project facilities continue to age, additional maintenance activities will be required to maintain the functionality of the Project. Examples of these activities include replacement of failed groundwater wells or recharge basin levees. Performance of maintenance activities will not alter the overall footprint nor will they alter the operations of the Project from that which is described in the Negative Declaration and associated addenda.

The California Environmental Quality Act Guidelines allow for a lead agency to prepare an addendum to an adopted Negative Declaration, provided the addendum meets certain criteria. An addendum may be prepared if minor changes or additions are necessary that do not involve significant environmental effects or a substantial increase in the severity of previously identified significant effects.

Staff has determined that the proposed changes to the Project are minor in nature and will not result in new significant environmental effects or substantially increase the severity of previously identified environmental effects as described in the Addendum.

Staff has prepared Addendum No. 6 and recommends the Board adopt Resolution No. 40-14 adopting Addendum No. 6 to the Negative Declaration for the Project.

BEFORE THE BOARD OF DIRECTORS
OF THE
KERN COUNTY WATER AGENCY

In the matter of:

DETERMINATIONS AND FINDINGS *
WITH RESPECT TO ADDENDUM NO. 6 *
TO THE NEGATIVE DECLARATION FOR *
THE PIONEER GROUNDWATER *
RECHARGE AND RECOVERY PROJECT *

I, Lucinda J. Infante, Secretary of the Board of Directors of the Kern County Water Agency, of the County of Kern, State of California, do hereby certify that the following resolution proposed by Director Radon, and seconded by Director Hafenfeld, was duly passed and adopted by said Board of Directors at an official meeting hereof this 19th day of November, 2014, by the following vote, to wit:

Ayes: Lundquist, Fast, Mathews, Milobar, Hafenfeld, Radon and Page
Noes: None
Absent: None

Secretary of the Board of Directors
of the Kern County Water Agency

Resolution No. 40-14

WHEREAS, on December 20, 1996, the Kern County Water Agency (Agency) Board of Directors (Board) adopted a Negative Declaration (SCH # 96111037) for the Pioneer Groundwater Recharge and Recovery Project (Project), attached hereto as Exhibit 1; and

WHEREAS, the Agency Board has adopted multiple addenda to the Negative Declaration, attached hereto as Exhibit 2; and

WHEREAS, Agency staff has identified the need to periodically conduct a variety of maintenance activities, as described in Exhibit 3, in order to maintain the functionality of the Project; and

WHEREAS, staff has determined that the proposed changes and additions are minor and do not create a new significant environmental effect or a substantial increase in the severity of a previously identified

environmental effect; and

WHEREAS, staff has determined that an addendum is the appropriate document to prepare and recirculation of the Negative Declaration is not necessary; and

WHEREAS, staff has prepared Addendum No. 6 to the Negative Declaration, which is attached hereto as Exhibit 3 and incorporated herein by reference; and

WHEREAS, the Board has reviewed and considered staff's recommendation and the contents of Addendum No. 6 to the Negative Declaration.

NOW, THEREFORE, BE IT RESOLVED, by the Board of Directors of the Kern County Water Agency that:

1. The foregoing recitals are true and correct.
2. The Board hereby finds that there is no substantial evidence that the changes and additions contemplated by Addendum No. 6 to the Negative Declaration will have a significant effect on the environment or result in a substantial increase in the severity of a previously identified environmental effect.
3. The Board hereby approves Addendum No. 6 to the Negative Declaration.
4. The Board hereby authorizes and directs the General Manager to execute and file Addendum No. 6 and a Notice of Determination with the Kern County Clerk's office. The Notice of Determination shall be in substantially the same form as the Notice of Determination that is attached hereto as Exhibit 4 and incorporated herein by reference.

KERN COUNTY WATER AGENCY
INITIAL STUDY AND
PROPOSED NEGATIVE DECLARATION
FOR THE
PIONEER GROUNDWATER RECHARGE
AND RECOVERY PROJECT

Prepared by the Kern County Water Agency, November 13, 1996

Notice of Environmental Document
Posted by County Clerk on 11/13/96
and for 30 days thereafter, Pursuant to
Section 21152(C), Public Resources Code



KERN COUNTY
WATER AGENCY

Directors

GROUNDWATER
Pioneer

Fred L. Starrh
Division 1

TO: All Responsible Agencies and Interested Parties

Terry Rogers
President
Division 2

FROM: Thomas N. Clark

Peter Frick
Division 3

DATE: November 13, 1996

Michael Radon
Division 4

SUBJECT: California Environmental Quality Act (CEQA) Compliance for the Pioneer Ground Water Recharge and Recovery Project

Adrienne J. Mathews
Division 5

Pursuant to the California Environmental Quality Act (CEQA), the Kern County Water Agency (Agency) will be the Lead Agency and has prepared an Initial Study Checklist and Explanation of Responses and Proposed Draft Negative Declaration for the Pioneer Ground Water Recharge and Recovery Project. We are soliciting the views of your agency as to the scope and content of the environmental information which is applicable to your agency's statutory responsibilities in connection with the proposed project.

Henry C. Garnett
Division 6

Gene A. Lundquist
Division 7

Thomas N. Clark
General Manager

In order to review and consider your comments during the public review period, the Agency requests that all comments be received no later than December 13, 1996. Following the review and comment period, the Initial Study and Negative Declaration will be presented for adoption by the Agency Board of Directors at a public hearing to be held on December 20, 1996. Please submit comments to:

John F. Stovall
General Counsel

Mr. Thomas N. Clark, General Manager
Kern County Water Agency
P.O. Box 58
Bakersfield, CA 93302-0058

If you require any further information, please contact Kane Totzke at (805) 634-1468.

Sincerely,

Thomas N. Clark
General Manager

Enclosures

Mailing Address:
P.O. Box 58
Bakersfield, CA 93302-0058
Phone: 805/634-1400
Fax: 805/634-1428

INITIAL STUDY
ENVIRONMENTAL CHECKLIST

I. PROJECT INFORMATION

1. Project Name and Number: Pioneer Ground Water Recharge and Recovery Project

2. Proponent or Applicant: Kern County Water Agency

3. Project Location: The Project is located west of the City of Bakersfield and includes the Agency Pioneer Property, the Kern Water Bank property, portions of the Kern River Channel, and various other canals and private properties in the vicinity of the Kern River fan area (see attached location map).

4. Agency and Department Preparing Initial Study: Kern County Water Agency, 3200 Rio Mirada Drive, Bakersfield, CA 93308

5. Project Description: See attached Initial Study

6. Environmental Effect: See attached Initial Study

II. **ENVIRONMENTAL IMPACTS**

(Explanation for all "yes" and "maybe" responses are provided on attached sheets. Beneficial impacts shown in parenthesis: (x))

<u>Issue Area</u>	<u>Potential Impact?</u>			<u>Is it Significant?</u>		
	<u>Yes</u>	<u>Maybe</u>	<u>No</u>	<u>Yes</u>	<u>Maybe</u>	<u>No</u>
1. Geology, Soils, and Topography. Will the proposal result in:						
a. Change in topography or ground surface relief features?	<u>X</u>	—	—	—	—	<u>X</u>
b. Disruptions, displacements, Compaction or overcovering of soil?	<u>X</u>	—	—	—	—	<u>X</u>
c. Unstable earth conditions or in changes in geological substructures?	—	—	<u>X</u>	—	—	—
d. The destruction, covering or modification of any unique geological, paleontological or physical features?	—	—	<u>X</u>	—	—	—
e. Any increase in wind or water erosion of soils, either on or off the site?	—	<u>X</u>	—	—	—	<u>X</u>
f. Exposure of people or property to geological hazards such as earthquakes, landslides, fault ruptures, high seismicity, subsidence, liquefaction, expansive soils, mudslides, ground failure, or similar hazards?	—	<u>X</u>	—	—	<u>X</u>	—
g. Changes in deposition or erosion of beach sands, or changes in siltation, deposition or erosion which may modify the channel of a river or stream or bed of the ocean or any bay, inlet or lake?	—	—	<u>X</u>	—	—	—
2. Water Resources. Will the proposal result in:						
a. Changes in currents, or the course or direction of water movements, in either marine or fresh waters?	<u>X</u>	—	—	—	—	<u>X</u>
b. Changes in absorption rates, drainage patterns, or the rate and amount of surface runoff?	<u>(X)</u>	—	—	—	—	<u>X</u>
c. Alteration to the course or level of flood waters?	—	<u>(X)</u>	—	—	—	<u>X</u>

<u>Issue Area</u>	<u>Potential Impact?</u>			<u>Is it Significant?</u>		
	<u>Yes</u>	<u>Maybe</u>	<u>No</u>	<u>Yes</u>	<u>Maybe</u>	<u>No</u>
d. Exposure of people or property to water related hazards such as flooding or tidal waves?	—	—	<u>X</u>	—	—	—
e. Change in the amount of surface water in any water body?	—	—	<u>X</u>	—	—	—
f. Discharge into surface waters, or any alteration of surface water quality?	<u>X</u>	—	—	—	<u>X</u>	—
g. Change in the quantity of ground waters, through additions, withdrawals, change in recharge area, or through exposure of an aquifer by cuts or excavations?	<u>∞</u>	—	—	<u>X</u>	—	—
h. Change in groundwater quality?	<u>X</u>	—	—	—	<u>X</u>	—
i. Alteration of the direction or rate of the flow of ground waters?	<u>X</u>	—	—	—	<u>X</u>	—
j. Reduction in the amount of water otherwise available for public water supplies?	<u>∞</u>	—	—	<u>X</u>	—	—
3. Air Quality. Will the proposal result in:						
a. Air emissions or deteriorations of ambient air quality?	<u>X</u>	—	—	—	—	<u>X</u>
b. The creation of objectionable odors?	—	—	<u>X</u>	—	—	—
c. Alteration of air movement, moisture, or temperature, or any change in climate, either locally or regionally?	<u>X</u>	—	—	—	—	<u>X</u>
4. Botanical Resources. Will the proposal result in:						
a. Change in the diversity of species, or number of any species of plants?	—	—	<u>X</u>	—	—	—
b. Reduction of the numbers of habitat of any rare, endangered, or otherwise sensitive species of plants?	—	—	<u>X</u>	—	—	—
c. Disturbance of any sensitive plant community or valuable tree specimens?	—	—	<u>X</u>	—	—	—
d. Introduction of new species of plants into an area, or an impediment to the normal reproductive and growth of existing species?	—	—	<u>X</u>	—	—	—

<u>Issue Area</u>	<u>Potential Impact?</u>			<u>Is it Significant?</u>		
	<u>Yes</u>	<u>Maybe</u>	<u>No</u>	<u>Yes</u>	<u>Maybe</u>	<u>No</u>
5. Fish and Wildlife. Will the proposal result in:						
a. Alteration or loss of fish or wildlife habitat?	<u>∞</u>	—	—	—	—	<u>X</u>
b. Change in the diversity of species, or numbers of any species of animals (mammals, birds, amphibians, reptiles, fish, shellfish, benthic organisms or insects)?	<u>∞</u>	—	—	—	<u>X</u>	—
c. Reduction of the numbers or habitat of any endangered or otherwise sensitive species?	—	—	<u>∞</u>	—	—	<u>X</u>
d. Introduction of new species of fish or wildlife into an area, or result in a barrier to the migration or movement of species?	—	<u>X</u>	—	—	<u>X</u>	—
6. Agriculture. Will the proposal result in:						
a. Reduction in acreage or production of any agricultural crop?	<u>X</u>	—	—	—	—	<u>X</u>
b. Disruption of agricultural activities, including cropping and grazing?	<u>X</u>	—	—	—	—	<u>X</u>
c. Use of Williamson Act lands for non-agricultural uses?	—	—	<u>X</u>	—	—	—
7. Natural Resources. Will the proposal result in:						
a. Increase in the rate of extraction and use of any natural resources?	—	—	<u>X</u>	—	—	—
8. Cultural Resources. Will the proposal result in:						
a. Alteration or destruction of a prehistoric or historic archaeological site?	—	<u>X</u>	—	—	<u>X</u>	—
b. Adverse physical or aesthetic effects to a prehistoric or historic building, structure, or object?	—	—	<u>X</u>	—	—	—
c. A physical change which would affect unique ethnic cultural values?	—	—	<u>X</u>	—	—	—
d. Restrict existing religious or sacred uses within the potential impact area?	—	—	<u>X</u>	—	—	—
9. Land Use and General Plan Consistency. Will the proposal result in:						
a. Conflicts with existing land uses and community character?	—	—	<u>X</u>	—	—	—

Issue Area	Potential Impact?			Is it Significant?		
	Yes	Maybe	No	Yes	Maybe	No
b. Conflicts with future planned land uses and community character?	—	—	<u>X</u>	—	—	—
c. Inconsistency with General Plan policies?	—	—	<u>X</u>	—	—	—
10. Recreation. Will the proposal result in:						
a. Impact upon the quality or quantity of existing and future recreational opportunities?	<u>(X)</u>	—	—	—	<u>X</u>	—
11. Aesthetics. Will the proposal result in:						
a. Obstruction of any scenic vista or view open to the public, or will the proposal result in the creation of an aesthetically offensive site open to public view?	—	—	<u>X</u>	—	—	—
12. Light and glare. Will the proposal result in:						
a. New light or glare?	—	<u>X</u>	—	—	—	<u>X</u>
13. Noise. Will the proposal result in:						
a. Increases in existing noise levels?	<u>X</u>	—	—	—	—	<u>X</u>
b. Exposure of people to disturbing noise levels?	—	<u>X</u>	—	—	—	<u>X</u>
14. Population. Will the proposal result in:						
a. Alteration of the location, distribution, density, or growth rate of the human population of an area?	—	—	<u>X</u>	—	—	—
15. Housing. Will the proposal result in:						
a. Affect existing housing, or create a demand for additional housing?	—	—	<u>X</u>	—	—	—
16. Transportation/Circulation. Will the proposal result in:						
a. Generation of additional vehicular movement and traffic volume?	<u>X</u>	—	—	—	—	<u>X</u>
b. Impact upon existing automobile transportation systems and circulation patterns?	<u>X</u>	—	—	—	—	<u>X</u>
c. Effects on existing parking facilities, or demand for new parking?	—	—	<u>X</u>	—	—	—
d. Alteration to waterborne, rail or air traffic?	—	—	<u>X</u>	—	—	—
e. Increase in traffic hazards to motor vehicles, bicycles or pedestrians?	—	—	<u>X</u>	—	—	—

<u>Issue Area</u>	<u>Potential Impact?</u>			<u>Is it Significant?</u>		
	<u>Yes</u>	<u>Maybe</u>	<u>No</u>	<u>Yes</u>	<u>Maybe</u>	<u>No</u>
17. Public Services. <i>Will the proposal have an effect upon, or result in a need for new or altered government services in any of the following areas:</i>						
a. Fire protection?	—	—	<u>X</u>	—	—	—
b. Police protection?	—	—	<u>X</u>	—	—	—
c. Schools?	—	—	<u>X</u>	—	—	—
d. Parks or any other recreational facilities?	—	—	<u>X</u>	—	—	—
e. Maintenance of public facilities, including roads?	—	—	<u>X</u>	—	—	—
f. Other governmental services?	<u>X</u>	—	—	—	<u>X</u>	—
18. Utilities. <i>Will the proposal result in:</i>						
a. A need for new systems, or substantial alterations to public utilities?	<u>X</u>	—	—	—	—	<u>X</u>
19. Human Health. <i>Will the proposal result in:</i>						
a. Creation of any health hazard or potential health hazard (excluding mental health)?	—	<u>X</u>	—	—	<u>X</u>	—
b. Exposure of people to potential health hazards?	—	<u>X</u>	—	—	<u>X</u>	—
20. Risk of Upset. <i>Will the proposal result in:</i>						
a. A risk of an explosion or the release of hazardous substances (including, but not limited to, oil, pesticides, chemicals or radiation) in the event of an accident or upset condition?	—	—	<u>X</u>	—	—	—
21. Energy. <i>Will the proposal result in:</i>						
a. Use of substantial amounts of fuel or energy?	—	<u>X</u>	—	—	—	<u>X</u>
22. Mandatory Findings of Significance. <i>Will the proposal result in:</i>						
a. Potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	—	<u>X</u>	—	—	<u>X</u>	—

b. Potential to achieve short-term, to the disadvantage of long-term, environmental goals? (A short-term impact on the environment in one which occurs in a relatively brief, definitive period of time while long-term impacts will endure well into the future.)	—	—	<u>X</u>	—	—	—
c. Impacts which are individually limited, but cumulatively considerable? (A project may impact on two or more separate resources where the impact on each resource is relatively small, but where the effect of the total of those impacts on the environment is significant.)	—	<u>X</u>	—	—	<u>X</u>	—
d. Environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	—	<u>X</u>	—	—	<u>X</u>	—

III. DISCUSSION OF ENVIRONMENTAL EVALUATION

Operation of the Project will not result in any significant impacts to the environment. Other impacts deemed to not be significant are related to noise, traffic, air quality (i.e., equipment emissions and fugitive dust). Project activities will not disturb significant prehistoric archeological sites. Should the Pioneer property be permanently fallowed, measures will be developed in cooperation with U.S. Fish and Wildlife Service and the Department of Fish and Game for endangered species habitat Improvements. Measures to protect archeological sites will also be developed.

IV. DISCUSSION OF LAND USE IMPACTS

All or part of the current farming operations on the Pioneer property will be interrupted by the ground water recharge and recovery activities during future years. Farming operations will continue once ground water recharge activities have ceased. Low levees constructed to pond shallow water will be farmed over. Some clean-up of the linear ditches will be required prior to use for irrigation. Since Project lands are currently or have historically been farmed, no impacts will occur to threatened or endangered species. Should the Pioneer property be permanently fallowed, negotiations with the U.S. Fish and Wildlife Service and the California Department of Fish and Game will be initiated for the purpose of obtaining the appropriate incidental "take" permits and will be obtained prior to water recharge in any area where there is a potential impact to threatened and endangered species.

V. DETERMINATION ON THE BASIS OF THIS INITIAL EVALUATION:

- I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
- I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because the mitigation measures described on the attached sheet have been added to the project.

I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

November 13, 1996

Date

Kern County Water Agency
Agency and Department



Signature

Thomas N. Clark
Name

**EXPLANATION OF RESPONSES
INITIAL STUDY CHECKLIST**

Project: Pioneer Ground Water Recharge and Recovery Project

Agency: Kern County Water Agency

1. Geology, Soils, and Topography.

- a. Much of the levee and pond construction work was completed under the 1995 Ground Water Recharge Project. However, the project involves additional construction of recharge ponds and levees. Construction of these facilities will require grading of local topography. Pond levees will be constructed along existing contours to blend in with the landscape.
- b. As noted above, construction of the ponds and levees will require grading compaction of local surface soils at the location of the project facilities.
- c. The project will not uncover or expose any unstable earth conditions and/or unstable geologic substructures.
- d. The project site contains very deep alluvial materials and is not expected to contain significant paleontological resources in the upper soil where grading would occur. In addition, the lands were formerly devoted to irrigated agriculture which disturbed the upper soil levels where Project grading would occur.
- e. Slight increases in wind generated fugitive dust may occur during initial grading; however, this impact can be minimized by the use of a watering truck. The project site has very little relief and therefore, an increase in local water erosion from surface water runoff resulting in increased off-site sedimentation is not expected to occur.
- f. No major faults are located at the site. However, potential seismic impacts could occur from strong ground motion of the deep unconsolidated sediments at the project site, resulting in liquefaction. This condition would be exacerbated by the increase in groundwater storage and groundwater elevation at the site. Historically, there is no evidence to support that ground water recharge and recovery activities result in impacts on project lands from seismic activity. The large drawdowns expected during project operations indicate that there is some potential for subsidence, however it is not expected to be a significant problem.
- g. No significant changes are foreseen.

2. Water Resources.

- a. The project will cause an increase in the diversion of surface water from the Kern River channel to adjacent recharge ponds under certain circumstances. The water will be diverted to new and existing recharge ponds outside the river when river flows are high.

- b. During recharge periods, the project will substantially change the absorption rate and pattern at the project site because water will be impounded in recharge ponds. Surface runoff patterns at the site will be slightly altered due to construction of the shallow ponds and canals and surface runoff will be reduced.
- c. The project facilities will have a minor beneficial impact on flood levels in the area because flood waters will be diverted from the Kern River under high flow conditions.
- d. The ponds will not represent flood hazards failure conditions because there are no private structures, buildings, or properties near the ponds that could be adversely affected.
- e. The project will have no impact on the water level or surface area of any existing pond, lake or reservoir.
- f. During recovery, water quality from recovery wells may differ from water quality in surface canals.
- g. The project will increase the amount of groundwater at the project site during recharge periods. The project has the potential to enhance local groundwater supplies.
- h. The quality of state water to be used for recharge purposes is very good and is not expected to increase the total dissolved solids and organic constituent concentrations in the local ground water; water from the Friant-Kern and Kern River are of excellent quality. However, the quality of water for recharge will vary and must be monitored in order to avoid degradation of local water quality and exacerbation of negative salt balance in the region. Areas of soil contamination from previous oil and agricultural operations occur at or near several proposed recharge areas. Percolation through these soils could adversely affect groundwater quality; these areas will be avoided to the extent feasible.
- i. The project will cause local mounding of groundwater during extended periods of recharge as well as depression of ground water during recovery operations. These activities would result in changes in the direction and movement of groundwater.
- j. The project would have an indirect impact on the amount and availability of public drinking water supplies. The project will increase the amount and reliability of public water supplies provided by the Agency. Overall, the project is considered to have a net beneficial impact on public water supplies.

3. **Air Quality.**

- a. The project will result in increased air emissions from vehicles and equipment during the construction and operation and maintenance periods. However, the emissions will be short term and no more than from existing agricultural operations.
- b. The project will not result in the generation of objectionable odors.

- c. The project has the potential to increase the levels of humidity at the project site during periods of recharge due to the presence of extensive surface water.

4. **Botanical Resources.**

- a. The project is not expected to reduce or enhance the diversity of native plants at the project site.
- b. No rare, endangered, or other sensitive plant species are known to be present at or near the proposed project sites.
- c. No sensitive plant community or unusual tree specimens (such as heritage oaks) will be affected by the project.
- d. The project includes shallow recharge ponds which may temporarily enhance conditions for certain aquatic species of plants.

5. **Fish and Wildlife.**

- a. Construction and operation on project sites will not impact fish or wildlife because construction and operation will occur on actively farmed areas or in existing project areas.
- b. The project will increase the number and diversity of fish and wildlife at the project site by the impounding of water during recharge events, which will increase habitat heterogeneity and therefore, increase vertebrate diversity.
- c. It is anticipated that no impacts will occur to T&E species on any project facilities during the project construction period, because a recent biological baseline survey conducted on the area showed that no T&E species or their habitat were present. This is because the entire area is farmed when not used for the intended purpose as a groundwater recharge and recovery project. The area is used by the San Joaquin Kit fox for foraging habitat, however the area can remain foraging habitat since the lands will remain open space after project completion. Should the Agency decide to permanently fallow the property, agreements with the Department of Fish and Game and Fish and Wildlife Service would be obtained to provide Endangered Species Act protection for T&E species.
- d. The project will attract waterfowl and wetland-associated birds during periods of recharge. The creation of ponds may inhibit movement of certain wildlife but is not expected to represent a substantial new barrier to wildlife movement because dry land will occur around each pond.

6. **Agriculture.**

- a. On the Pioneer property lands will be taken out of production during recharge and recovery years. However, the project will increase the amount and reliability of agricultural water supplies and contribute beneficially to agricultural production in the region. Approximately 2,300 acres will be taken out of production to provide a dry year supply for over 30,000 acres.
- b. Short term disruption of agricultural production will occur on the Pioneer lands during time when water is available for recharge or as needed for recovery.

- c. None of the lands at the project site are under a Williamson Act contract.

7. Natural Resources.

- a. No increase in the rate of extraction of any natural resource is expected. The location of the proposed ponds and canals will be established to avoid conflicts with existing and future mineral activities.

8. Cultural Resources.

- a. Preliminary field reconnaissance surveys indicate that prehistoric sites are present in areas of higher elevation, and that these sites are also likely to be considered significant under CEQA. Since areas of higher elevation may not be suitable for recharge, no impact to prehistoric sites is anticipated
- b. No historic or prehistoric buildings or structures are present at the sites
- c. Based on information developed to date, no unique ethnic resources are present at the sites.
- d. Based on information developed to date, the sites have not been used for religious purposes.

9. Land Use and General Plan Consistency.

- a. The Pioneer lands were purchased by KCWA for the express purpose of recharge and recovery. Secondary land uses may include wildlife habitat, agricultural activities outside recharge ponds, and possible oil development in between recharge facilities. The proposed project will be consistent with these land uses, and has been designed to specially accommodate them. The proposed uses are consistent with existing land uses on project lands outside the Pioneer property.
- b. See above.
- c. The Kern County General Plan use designations at the project site include Intensive Agriculture (8.1) and Mineral and Petroleum Development (8.5). Water storage is a compatible land use with Intensive Agriculture designation, but is not specifically identified as an allowable use in Mineral and Petroleum areas. The proposed uses are consistent with the General Plan on project lands outside the Pioneer property.

10. Recreation.

- a. The Kern River traverses the project sites. The upstream portions of the Kern River in the 2010 Planning Area are designated as recreational and open space areas in which land uses are regulated by the joint City of Bakersfield and the Kern County Kern River Plan. This plan includes the development of a future bikeway from Bakersfield to the Buena Vista Aquatic Recreational Area. Development of ponds and canals will not impede these plans because the bikeways can be routed through the project site. There is a potential for expansion of existing private hunting clubs on the project site using portions of the new recharge ponds.

11. **Aesthetics.**

- a. The Project will have the potential to increase the aesthetic value of the area during recharge periods through the creation of wetland oriented areas.

12. **Light and Glare.**

- a. No nighttime lighting will be permanently installed as part of the proposed project. Some temporary night lighting may occur during well construction and maintenance activities.

13. **Noise**

- a. Construction of new facilities and operation of well drilling equipment will temporarily increase local noise levels. Operation of wells in dry years may cause noise. However, noise levels are expected to be no greater than existing agricultural activities and there are no noise-sensitive land uses in proximity to the proposed facilities that could be affected.
- b. Persons living south of Stockdale Highway may be able to here elevated noise levels. See above

14. **Population.**

- a. The proposed project will not displace any residents. Construction will not require the importation of and is likely to be accomplished with existing local contractors. The project recovers water during dry years and will regulate existing water supplies and not create new water supplies.

15. **Housing.**

- a. See response # 14.

16. **Transportation.**

- a. There will be additional vehicular and truck traffic on local roads and highways, and on dirt roads within the project sites, during construction. However, the volume of this short-term traffic is expected to be very low and readily accommodated by available capacity on local public roads and highways.
- b. The project will not alter existing public road systems or circulation patterns because no public road will be closed or re-aligned as a result of the project. Construction of the project will increase the number and location of private access roads within the sites.
- c. All parking during construction of the project will occur on site and will have no effect on public facilities.
- d. The project will have no effect on these modes of transportation.
- e. Construction-related traffic will be routed along public roads according to state requirements and is not expected to increase the level of hazards along nearby public roads.

17. **Public Services.**

- a. The proposed project will not increase the level of fire hazard in the area.
- b. The proposed project will not increase the need for patrols or protection by the Sheriff's or Police Department
- c. The proposed project will not result in greater population and need for schools.
- d. The proposed project will not increase the need for public recreational facilities.
- e. The proposed project will not increase the need for maintenance of public facilities including roads.
- f. The proposed project may cause an increase in the local mosquito population, and therefore require additional vector control by the County Mosquito Abatement District.

18. **Utilities.**

- a. The proposed pumps will be powered by electricity provided by PG&E or other utility as available. This power will be delivered within the site by a new system of low-voltage wooden power lines mounted on poles.

19. **Human Health.**

- a. Ponding of water for recharge may result in potential mosquito concerns. However, this vector will be controlled and no adverse human health hazard is expected.
- b. Construction and maintenance workers may be exposed to valley fever during earth moving activities by inhaling spores, if the fungus is present in the soils.

20. **Risk of Upset.**

- a. The project will not involve the use of any hazardous substances.

21. **Energy.**

- a. In general, the new pumps will require electrical energy during recovery periods. Overall, energy usage on a per acre basis is expected to not be substantially different from the cumulative annual energy demands associated with irrigation practices in the area based on drought frequencies of one recovery year, totaled every three years.

22. **Mandatory Findings of Significance.**

- a. The project could have an adverse effect on prehistorical cultural sites. However, mitigation measures will be developed to avoid and minimize significant impacts.

- b. The project is designated to achieve long-term enhancement of local water supplies by increasing reliability of local supplies in the future. As such, the long-term environmental benefits of the project are primary.
- c. The project may be implemented concurrent with similar ongoing projects by City of Bakersfield, Berrenda Mesa WD, Rosedale Rio-Bravo WSD, Buena Vista WSD, West Kern WD and the Kern Water Bank Authority. The proposed project could have cumulative impacts on ground water due to concurrent and overlapping impacts of these similar projects. Formation and operation of the Kern Fan Monitoring Committee under the Memorandum of Understanding regarding operation and monitoring of the Kern Water Bank ground water banking programs is expected to mitigate these impacts.
- d. See 19(b) above.

KERN COUNTY WATER AGENCY
PROPOSED NEGATIVE DECLARATION
FOR THE
PIONEER GROUND WATER RECHARGE
AND RECOVERY PROJECT

November 13, 1996

KERN COUNTY WATER AGENCY
PROPOSED NEGATIVE DECLARATION

This is prepared pursuant to the California Environmental Quality Act, Division 13, of the Public Resources Code, and in accordance with the State CEQA Guidelines.

PROPOSED PROJECT: With sponsorship of the Kern County Water Agency (Agency), the "Pioneer Ground Water Recharge and Recovery Project" provides for the coordinated operation of existing ground water recharge and recovery facilities with specified new recovery wells to be constructed on the Pioneer property for the beneficial purposes of ground water replenishment, recharge, storage, conservation and recovery of surface water supplies from the State Water Project, Central Valley Project, Kern River and other available local supplies.

DESCRIPTION OF THE PROJECT: A brief description of the "Pioneer Ground Water Recharge and Recovery Project" is as follows:

1. The proposed Project is for the beneficial use, by ground water recharge, conservation and subsequent recovery of water from the Kern River, Kaweah River, Kings River, Tule River and Central Valley Project supplies, from the Frait-Kern Canal, or the California Aqueduct and State Water Project supplies consistent with applicable biological opinions. Recharge shall be performed through the coordinated operation of existing ground water recharge facilities along with specified new facilities to be constructed on the Pioneer property. Recovery of water will be by a number of new and existing wells located throughout the Project area (see Project Description and Project map on attached Initial Study).

LOCATION OF PROJECT: The proposed Project would be located in the County of Kern, State of California, west of the City of Bakersfield and includes use of the following project areas for ground water recharge and recovery. They are the City of Bakersfield 2800-Acres, the Berrenda Mesa spreading grounds, the Kern Water Bank property, the Pioneer property, certain private lands south of the Kern River, the James and Pioneer Canal systems, the Alejandro Canal, the Main Canal, and the Kern River Channel as designated in the Initial Study.

FINDINGS WHICH SUPPORT NEGATIVE DECLARATION: After making an assessment of the possible impacts of the proposed Project and reviewing an Initial Study dated November 13, 1996, the Board of Directors of the Kern County Water Agency has determined that the proposed Project as modified will not have any significant effect on the environment, either directly or indirectly.

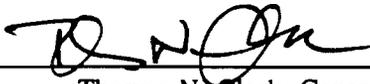
INITIAL STUDY: A copy of an Initial Study, and referenced materials, prepared by Agency staff, dated November 13, 1996, is attached.

MITIGATION MEASURES: Mitigation measures which have been included in the proposed Project to avoid potentially significant environmental effects are as follows:

1. Throughout the term of the proposed Project, Project water quality, ground water monitoring and ground water recharge losses will be addressed consistent with the draft Memorandum Of Understanding, dated 3/30/95 regarding operation and monitoring of the KWB ground water banking program and consistent with the draft Memorandum Of Understanding, regarding Principles Governing Implementation of the Pioneer Project, dated October 16, 1995.

2. Recharge areas will be designed and located to avoid areas suspected to have hydrocarbon contamination and not to interfere with oil or gas pipelines or other sensitive oilfield areas.
3. Project recharge areas will be designed and located so as to avoid any known prehistoric or historic archaeological sites.

CONTACT PERSON. TELEPHONE NUMBER: Mr. Thomas N. Clark, General Manager, Kern County Water Agency, P.O. Box 58, Bakersfield, CA. 93302; (805) 634-1400. If you require additional information regarding this proposed Project, please contact Mr. Kane Totzke, Kern County Water Agency, (805) 634-1468.



Thomas N. Clark, General Manager

November 13, 1996

Date

Kern County Water Agency

INITIAL STUDY

for the

PIONEER GROUND WATER RECHARGE
and
RECOVERY PROJECT

November 13, 1996

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KERN COUNTY WATER AGENCY

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PARTICIPANTS

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Berrenda Mesa Water District
Buena Vista Water Storage District
Henry Miller Water District
Improvement District No. 4 of the Kern County Water Agency
Kern Delta Water District
Lost Hills Water District
Rosedale Rio-Bravo Water Storage District
Semitropic Improvement District
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KERN COUNTY WATER AGENCY PIONEER GROUND WATER RECHARGE AND RECOVERY PROJECT

1. INTRODUCTION

1.1 OBJECTIVES OF PIONEER GROUND WATER RECHARGE AND RECOVERY PROJECT

The Kern County Water Agency (Agency) contracts with the California Department of Water Resources (DWR) for an annual supplemental supply of 1,014,100 acre-feet of municipal/industrial and agricultural State Water Project (SWP) water¹. The SWP is currently unable to meet contractual obligations to its long term contractors and it is predicted that shortages will continue to increase in the future. The cause of these shortages are twofold: 1) an incomplete State Water Project; and 2) environmental regulations that hamper development of additional water supply projects and limit Delta export capability. In large part, because of these surface water supply deficiencies, the southern San Joaquin Valley basin is expected to remain in an overdrafted condition for the foreseeable future.

Large quantities of reasonably priced water may be available in certain years from the SWP and from various rivers in California. Such water occurs on: 1) the Kern River system; 2) the Kings, Tule, Kaweah and San Joaquin rivers which are linked to Kern County by the Friant-Kern Canal; and 3) various rivers in northern California which are linked to Kern County by the California Aqueduct.

However, conversion of this available water to beneficial use requires that it be controlled and placed in storage. There are no current proposals for construction of economically feasible surface storage facilities in the near future. However, the southern San Joaquin Valley portion of Kern County has a large ground water basin with capacity to recharge and store large quantities of water. In addition, a wide variety of facilities are available to convey water to the basin. Hence, the Agency has proposed development of the Pioneer Ground Water Recharge and Recovery Project (Project) to meet two primary objectives as follows:

1. To recharge, store and recover Kern River water, SWP water and other imported supplies for use both inside and outside the ground water basin in dry years.
2. To recharge for overdraft correction, Kern River water, SWP water and other imported supplies.

The Project proposes to achieve these objectives through utilization of existing recharge and recovery facilities and by providing additional recharge ponds, recovery wells and related works on lands that are presently in agricultural production. The Project is sponsored by the Agency for use by Agency member units and others. Use of these facilities would be coordinated with other ongoing recharge and recovery projects including the City of Bakersfield's 2800-Acre Recharge Area, the Berrenda Mesa Project, Kern Water Bank, and member unit projects. Existing Project recharge

¹Excludes 40,500 acre-feet retired under the Monterey Principles of Agreement and includes 130,000 acre-feet that may be transferred pursuant to the Monterey Principles of Agreement.

facilities were used during 1995 as part of the *1995 Ground Water Recharge Project* carried out under an interim one year Negative Declaration. The 1995 Project Negative Declaration expired at the end of March 1996. A second interim Negative Declaration was adopted by the Agency Board in March 1996 extending CEQA compliance through the end of March 1997, providing for continued recharge activities during 1996. The City of Bakersfield 2800-Acres Recharge Project and the Berrenda Mesa Project have completed final Environmental Impact Reports, dated August 1983 and March 1984 respectively. A Draft Environmental Impact Report was completed for the Kern Water Bank in December 1990.

1.2 PURPOSE OF THE PIONEER GROUND WATER RECHARGE AND RECOVERY PROJECT INITIAL STUDY

The California Environmental Quality Act (CEQA) requires that prior to deciding to implement a project, environmental effects of the project must be described and appropriately addressed. This Initial Study and proposed Negative Declaration was prepared for such purpose.

1.3 PROJECT LOCATION

The Project facilities are located in the southern San Joaquin Valley portion of Kern County and are shown generally on the Plate A vicinity map. Areas where the project facilities maybe located include the City of Bakersfield 2800-Acres, the Pioneer property, Sections 4 and 11 owned by Bolthouse Farm, the Berrenda Mesa property, the Kern Water Bank property, the James and Pioneer Canal systems, the portion of the Calloway Canal located in Improvement District No. 4, portions of the Kern River channel. The general Project facility locations are shown on Plate A.

1.4 SUMMARY PROJECT DESCRIPTION

The Project proposes the coordinated operation of existing ground water recharge and recovery facilities located on the City of Bakersfield 2800-Acres, the Berrenda Mesa and Kern Water Bank properties. New facilities to be constructed on the Kern River Fan area include areas designated as Pioneer North, Pioneer South, and other adjacent properties. Canals adjacent to the foregoing areas, including the Pioneer Canal, James Canal, the Wilson Ditch and their laterals, along with portions of the Kern River Channel will also be used for recharge by the Project.

The Project will receive water in wet years from a wide variety of sources including the State Water Project, Central Valley Project, Kern River, floodwaters from outside Kern County and other waters. These waters will be recharged using Project facilities, and stored in the ground water basin in Kern County for subsequent use in dry years. Stored water needed by participants which overlie the ground water basin will be pumped and used within those participating districts. Stored water needed outside the ground water basin will be pumped by Project wells and exchanged with other surface water supplies or conveyed directly to the participants.

2. ENVIRONMENTAL SETTING

The area for the Pioneer Ground Water Recharge and Recovery Project consists of some 25,000 acres of land located in the southern San Joaquin Valley portion of Kern County, the southern most basin of the Central Valley of California. The San Joaquin Valley is bounded by the Sacramento/San Joaquin River

Delta to the north, the Sierra Nevada Mountains to the east, the Tehachapi Mountains to the south, and the Coast Range to the west. The Project area is bisected by the northwest-southeast tending Interstate 5 and by northeast-southwest tending Kern River.

2.1 CLIMATE

The San Joaquin Valley has a Mediterranean climate of cool, moist winters and hot, dry summers. Summer daytime high temperatures frequently exceed 100° F. Mean annual temperature is 65° F. With less than six inches of rainfall annually, much of the Valley is classified as desert. Precipitation normally occurs from September through April. A dense persistent, ground fog known as "Tule Fog" can develop during the winter months resulting in overcast, damp, cool weather (THC 1984).

2.2 HYDROLOGY

The western slopes of the Sierra Nevada Mountains are the source of the numerous rivers and streams that cross the San Joaquin Valley. The Valley is divided into two distinct sub-basins: the San Joaquin Sub-basin to the north and the Tulare Sub-basin to the south. Rivers of the San Joaquin Sub-basin join the San Joaquin River as it drains into the Sacramento River flowing into San Francisco Bay. The rivers of the Tulare Sub-basin have no natural perennial surface outlet and, in the past, formed large temporary, shallow inland lakes (Katibah 1984). The Tulare Sub-basin contains roughly 2.5 million acres of nearly flat valley floor (USFWS 1989).

The Kern River, which bisects the Project area, is the most southern of the major rivers draining into the Tulare Sub-basin. The river is now regulated by Lake Isabella, a reservoir created in 1954 to protect the City of Bakersfield and agricultural lands down stream from flooding. The waters from Lake Isabella are used primarily for irrigation, recreation and power generation.

2.3 TOPOGRAPHY

The Project site is located in the southern San Joaquin Valley trough on the Kern River Fan. This trough, bounded by the Sierra Nevada to the east, the Tehachapi Mountains to the south, and the Coast Range to the west, follows a northwest to southeast course and forms the valley floor.

The Project location is characterized by a gently sloping land surface with a maximum relief of about 120 feet. Land surface elevations over the Project facilities (Kern Water Bank, Pioneer, 2800-Acres, and Berrenda Mesa Property) range from 290 feet above sea level on the west side to 410 above sea level at the Calloway weir on the east side. The slope across the property (measured generally along the Kern River) is about 7 feet per mile. Most of the Project lands have been converted to agricultural use and the land surface exhibits little variation, except for the 2800-Acres which lies in the Kern River primary floodplain.

2.4 SOILS

Soils within the Project area range from highly permeable, coarse sandy soils to silty loam with very low permeability. Generally, most of the 25,000 acres can be characterized as having deep, well-drained sandy loam soils. These soils usually have moderate to rapid permeability with low water-holding capacity. A few pockets of clay loam soils also can be found on the far west side of

the Project lands. These soils have low permeability and are often associated with saline-alkali conditions (DWR 1986).

North Pioneer and the Kern Water Bank property east of I-5 are characterized by Cajon sandy loam soils. These soils have moderate permeability and low available water holding capacity. Kimberlina fine sandy loam soils also found in this area have characteristics similar to the Cajon soils but have slightly lower permeability. The dominant soil south of the Kern River is the Excelsior sandy loam. This deep, well-drained soil has moderate permeability and moderate available water holding capacity (DWR 1986).

North and south of State Highway 119 (Taft Highway), the saline-alkali, Kimberlina fine sandy loam is predominate. This soil is characterized by a moderately low permeability and a low available water holding capacity. Isolated pockets of poorly drained Panoche clay loam with low permeability can be found in this area north of Taft Highway and south of Panama Lane (DWR 1986).

The northwest area is dominated by Kimberlina sandy loam. Soils with low permeability such as Lerdo complex and Garces silt loam are found throughout the area, generally west of Interstate 5. South of the Kern River bypass channel, Kimberlina fine sandy loam and saline-alkali soils are dominant. Farther south, the saline alkali soils predominate with the Hesperia-Hanford, Traver-Pond, and Merced Rossi soils. These soil series are all derived from granitic rocks and have poor to moderate permeability characteristics.

2.5 CULTURAL

Some cultural resources are known to exist within Project areas. Historically, waters from the Sierra Nevada and coastal rivers and streams flowed into the valley lowlands areas, creating Tulare, Buena Vista and Kern Lakes. The lakes which are now usually dry, except during large floods, due to upstream flood control projects and divisions, created ideal areas for several Yokut Indian tribes to live. The Environmental Impact Reports for the Berrenda Mesa and City of Bakersfield 2800-Acre Projects describe cultural resources for the respective areas. The final DWR Environmental Impact Report for *Artificial Recharge, Storage and Overdraft Correction Program Kern County, California*, prepared in December 1986 also describes cultural resources on the Kern Water Bank. Cultural resources for the Pioneer property are described in an Environmental Assessment prepared by consulting firm of Dames and Moore just prior to purchase of the property. Following is a summary of the known cultural resources located on project lands.

2.5.1 Pioneer Property

In October 1992, the Dames and Moore conducted a preliminary cultural resource assessment, consisting of a Site Records Search and a Field Reconnaissance survey. The Site Records Search results showed that two prior surface surveys recorded no sites within the Pioneer property. The preliminary Field Reconnaissance results of the Pioneer property showed that surveys of 15 elevated areas resulted in the discovery of six archaeological sites. These sites, which are all located in the Stevens USGS topographical quadrangle, are

describe in detail in the *Environmental Constraints Analysis - McClung Ranch Property*² prepared by Dames and Moore, October 1992.

2.5.2 Kern Water Bank

An archeological records search of the KWB property (Appendix D) was conducted in April 1986 by the California Archeological Inventory Information Center of Bakersfield College. The search revealed 18 known archeological sites within the property boundaries. Many of these sites, considered significant by archaeologists, were discovered during surveys conducted in conjunction with oil drilling activities, telephone line installations, and related activities (DWR 1986).

2.5.3 City of Bakersfield 2800-Acres

A 1975 investigation of the 2800-Acres by Dr. William Wake indicated that no archeological sites were present in the spreading area or immediate vicinity. However, the 1983 EIR noted that sites may have been published after Dr. Wake's investigation. The 1983 EIR goes on to state that "In all probability, a fairly large number of very small sites have not yet been found. However it is not likely that new major centers will be found."

Since this is an existing ground water recharge and recovery facility that has been used for many years, it is unlikely that any impacts will occur to known or unknown archeological sites.

2.5.4 Berrenda Mesa Property

An archeological records search of the Berrenda Mesa property (Appendix E) was conducted in September 1983 by the California Archeological Inventory Information Center of Bakersfield College. A literature review was also conducted. Both the archeological records search and literature review indicated that there are no known archeological sites on project lands (BM 1984).

2.6 OIL AND GAS RESOURCES

All or portions of North and South Coles Levee, Ten Section, Canal, and Strand Oil Fields are located on the project lands. Numerous pipelines used to transport petroleum products cross the property, resulting in the potential for future soil and possible ground water contamination with petroleum hydrocarbons. The mineral rights for most of the KWB lands are owned by Vintage Petroleum. Aerial inspection of pipeline alignment and pressure testing occurs frequently. However, aerial surveillance has limited utility in detecting leaks involving light crude that could move downward through the soil column. This type of surveillance is more effective with heavy crude, which more readily reaches the surface. Light crude oil lines are pressure tested for leaks periodically to ensure their integrity. Many different oil and gas companies have easements and/or right-of-ways on the project lands. As occurred during 1995, the Agency will actively work with all the Oil and Gas companies operating the Project lands to avoid any potential problems.

² The name of the property has since been changed to the Pioneer Property

2.6.1 Chevron Pipeline

The Wait-Midway pipeline owned by Chevron Pipeline Company traverses both the KWB and the Pioneer property and has leaked light crude oil in the past. Recent investigation have demonstrated that the leaks have contaminated the soil in some places down to a depth of 70 feet. During 1996, ground water levels rose to within 35 feet of the ground surface thereby inundating portions of the contaminated soil. Chevron has constructed a number of monitoring wells in the vicinity of the contaminated soils to monitor ground water levels and quality.

As ordered by the Regional Water Quality Control Board, Chevron is developing plans which will provide a long term solution to the problem. During the interim period, the Agency and Kern Water Bank Authority, which owns and operates the Kern Water Bank, will continue to cooperate with Chevron's ground water mitigation efforts.

2.7 PLANT AND WILDLIFE

There are a number of threatened and endangered species, pursuant to both State and Federal Endangered Species Act, that may be found in the Project area. These include the Blunt-nosed leopard lizard (*Gambelia silus*) a federal and state endangered species, the Tipton kangaroo rat (*Dipodomys nitratoides nitratoides*) a federal and state endangered species, and the San Joaquin kit fox (*Vulpes macrotis mutica*) a federal endangered and a state threatened species. Other less likely species that may be found in the Project area are the San Joaquin antelope squirrel (*Ammospermophilus nelsoni*) a state threatened species, and the Giant kangaroo rat (*Dipodomys ingens*) a federal and state endangered species. Plant species include those listed in the tabulation below.

Scientific Name	Common Name	Federal Status	State Status
<i>Atriplex tularensis</i>	Bakersfield saltbush	Category 1 ³	Endangered
<i>Caulanthus californicus</i>	California jewelflower	Endangered	Endangered
<i>Cordylantbus mollis</i> <i>ssp. bispidus</i>	Hispid bird's-beak	Endangered	Endangered
<i>Eremalche parryi</i> <i>ssp. kernensis</i>	Kern mallow	Endangered	n/a
<i>Eriastrum hooveri</i>	Hoover's eriastrum	Threatened	n/a
<i>Lembertia congdonii</i>	San Joaquin woolly threads	Endangered	n/a
<i>Opuntia treeasei</i>	Bakersfield cactus	Endangered	Endangered

³ Category 1 - taxa for which the U.S. Fish and Wildlife Service has on file sufficient information on biological vulnerability and threat (s) to support proposals to list them as endangered or threatened species.

Recent biological surveys of the Pioneer, Berrenda Mesa and adjacent private lands in Sections 4 and 11 have documented that these areas are currently free of any threatened and endangered (T&E) species. This is because the entire area is currently being used as recharge ponds or are in farming operations. The Agency may fallow these lands in the future after obtaining the necessary permits pursuant to State and Federal Endangered Species Acts which would protect use of these lands if species migrate onto them.

The Agency is currently working with both the U.S. Fish and Wildlife Service (USFWS) and the California Department of Fish and Game (CDFG) to develop a long term management plan to address endangered species issues on the Pioneer, Berrenda Mesa and adjacent private property (Sections 4 and 11). The Agency is considering a Section 7 Incidental Take Statement or Section 10(a) Permit from the USFWS and a California Endangered Species Act Memorandum of Understanding from the CDFG prior to permanently fallowing the property.

2.8 KERN RIVER - CALIFORNIA AQUEDUCT INTERTIE OPERATIONS

The Intertie was constructed after agreeing that it can only be operational after all feasible recharge opportunities in the Kern County Ground Water Basin have been maximized. The Intertie would have operated in 13 of the 70 water years between 1922 and 1991 assuming no recharge of Kern River water on the Kern Water Bank and Pioneer properties. The total water excess to the basin and conveyed into the Intertie in these 13 years was estimated (DWR 1992) to be 2,723,000 af. Assuming that monthly Kern River flood flows represent divertable flows, 801,000 af, or about 29% over the 70 year period could have been diverted to the Pioneer Project, as shown in Table 1. Divertable flows are those with peak flows that are less than the capacity of diversion facilities.

Operation of the Intertie may or may not affect pumping from the Delta. If San Luis Reservoir is full and Banks Pumping Plant is operating to meet water demands in Southern California, operation of the Intertie would reduce Delta pumping. However, if San Luis is not full, operation of the Intertie might not affect pumping at Banks Pumping Plant. What is certain however, is that the Intertie only operates in very wet years when there is ample water in the Delta and the impact on Delta outflows is negligible as shown on the tabulation below.

Year	Excess Kern River Flood Flows (TAF)				Delta Outflow ⁴	
	Total	Pioneer	Intertie	Flood ⁵ Channel	Total	Percent ⁶ Diverted
1937	20	20	0	0	21275	.0010
1938	4	4	0	0	52975	.0001
1941	27	25	2	0	44172	.0006
1943	12	12	0	0	30200	.0004
1952	68	35	33	0	41805	.0016
1967	169	50	119	0	33497	.0050
1969	967	100	674	193	38453	.0251
1978	214	86	128	0	21338	.0100
1980	171	126	50	0	28464	.0060
1981	2	2	0	0	7763	.0003
1982	11	11	0	0	40887	.0003
1983	932	210	722	0	64760	.0144
1984	96	90	6	6	27149	.0035
1986	30	30	0	0	25513	.0012
Total	2723	801	1734	199	478251	0.0695

2.9 POTENTIAL SOIL AND WATER CONTAMINATION

2.9.1 Pioneer Property

Potential soil and water contamination on the Pioneer properties was assessed in a two-phase investigation prior to purchase of the property. Phase One was a preliminary site assessment which included:

⁴ Historic Delta outflow, provided by DWR.

⁵ Water diverted to the Kern River flood channel and to Tulare Lake Basin

⁶ The amount of the Kern River flood water diverted onto the Pioneer Property expressed as a percentage of the total Delta Outflow.

- a. Review of historical land use using historical maps and photographs;
- b. Site reconnaissance of the property and adjacent property;
- c. Review of documents held by the California Division of Oil and Gas, Regional Water Quality Control Board, California Department of Health Services, California Department of Water Resources, Kern County Health Department and others.
- d. Interview with tenant operators and health department officials.

The Phase One investigation identified several areas of potential soil contamination. Each of these areas was investigated more thoroughly in Phase Two. These areas included:

- Pipeline Corridors
- Trash Dump Area
- Northern Equipment Yard Area
- Hay Storage Area
- Diesel Tank/Well Pump Area

The investigation included exploratory soil borings using hand augers. Auger cuttings and soil samples were screened using a photoionization detector. No obvious soil contamination was detected along pipeline corridors across the property (other than the previously noted Chevron pipeline). Several hundred cubic yards of contaminated soil were noted at the Northern Equipment Yard area and the Diesel Tank Well Pump area and these areas will be avoided during recharge operations. Only limited evidence of soil contamination was noted at the Trash Dump area or the Hay Storage areas, however, these areas will also be avoided during recharge operations. One soil sample, collected from a test pit in the trash dump, was analyzed for halocarbon volatile organics (method 8260), carbamate pesticides (method 8320), organ phosphorous pesticides (method 8140) and identifiable chlorinated hydrocarbons (method 8080), this area will also be avoided during recharge operations. Constituents in all of these pesticide categories were non detectable except for diazinon at 10 micrograms per kilogram.

Water quality samples have been collected from six wells located on the Pioneer properties listed below and shown in Appendix F.

North Pioneer South Pioneer

5M1 (KCWA 11)	15B1
5Q1	15K1
8B1	16G1

Samples were analyzed for Title 22 constituents and pesticide contamination. Test results show no detectable levels of pesticide contamination. Future water quality samples will be collected pursuant to the KWB MOU.

2.9.2 Kern Water Bank

Numerous studies have been conducted on the KWB property with regard to potential soil water contamination. This information is available from the following reports:

- Department of Water Resources *Technical Information Record on the Kern Water Bank Project Kern Fan Element Exploratory Boring, March 1991.*
- California Department of Water Resources, *Final Environmental Impact Report, Artificial Recharge, Storage and Overdraft Correction Program, Kern County California, December 1986.*
- California Department of Water Resources, *First Stage Kern Fan Element Feasibility Report and Draft Supplemental Environmental Impact Report, December 1990.*
- California Department of Water Resources, *Kern River Fan Element Kern Water Bank Preliminary Technical Report, dated April, 1987.*

Problem areas include the Chevron pipeline leak located in Section 6 of T30S, R26E; the four pesticide mixing and storage facility locations; and the old brine disposal sumps. Ground water quality analysis for a number of wells located on the KWB property are shown in Appendix F.

2.9.3 City of Bakersfield 2800-Acres and Berrenda Mesa Property

There are a number of oil and injection wells located on the City of Bakersfield 2800-Acres. However, water quality analyses show that no contamination has occurred on the property. Ground water quality analysis for the City, KCWA and Olcese wells located on the 2800-Acres are shown in Appendix F. There are no oil related facilities on the Berrenda Mesa property.

2.10 LIQUEFACTION

During operation of the Pioneer Recharge Project, water levels will be monitored in the vicinity of the Cross Valley and Kern River canals and Southern Pacific Railroad to provide sufficient notice to relocate recharge areas and avoid potential liquefaction of existing facilities. Ground water levels will also be monitored in the vicinity of the proposed McAllister Ranch residential sub-division to avoid potential liquefaction in that area as well. As previously stated, once monitoring well data indicate water levels beneath these facilities reaches 25 feet below ground surface, recharge will be decreased or curtailed at locations adjacent to such facilities.

3. PROJECT DESCRIPTION

3.1 GENERAL DESCRIPTION

The Agency proposes to develop and operate the Project in cooperation with participating Member Units as provided in the Statement of Principles Governing Implementation of the Pioneer Project Principles attached as Appendix C, the Memorandum of Understanding regarding operation and monitoring of the Kern Water Bank Ground Water Banking Program attached as Appendix B, and the Pioneer Joint Operating Agreement attached as H. This Project includes the coordinated operation of existing recharge and recovery facilities on the City of Bakersfield's (COB) 2800-Acres, Berrenda Mesa Water District's property, the Kern River channel, areas along the Cross Valley Canal

operation and monitoring of the Kern Water Bank Ground Water Banking Program attached as Appendix B, and the Pioneer Joint Operating Agreement attached as Appendix H. This Project includes the coordinated operation of existing recharge and recovery facilities on the City of Bakersfield's (COB) 2800-Acres, Berrenda Mesa Water District's property, the Kern River channel, areas along the Cross Valley Canal right-of-way, as well as construction and operation of new recharge and recovery facilities on the Pioneer properties. In addition to the properties previously described, the Project includes recharge on private property adjacent to the Pioneer property in Sections 4, 11, 12, 13, and 14 of T30S/R26E, and recovery from existing private wells in Sections 1, 3, 4, 5, 6, 11, 12, 14, 16, 21, 22, and 23 of T30S/R26E, and Section 2, T30S/R25E, all providing suitable arrangements which can be made with the landowners involved. The Project also provides for exercise of Agency and Agency Basic Contact Member Units rights to recharge, store and recover water in the Kern Water Bank pursuant to the Exhibit 3.0 to the Kern Water Bank Transfer and Exchange Agreement, dated October 25, 1995, attached as Appendix I.

The Project will receive water in wet years from a wide variety of sources including the SWP, Central Valley Project (CVP), Kern River, floodwater from outside Kern County and other sources. These waters may be recharged and stored in the ground water basin in Kern County using the Project facilities for overdraft correction or for subsequent recovery by project facilities for use both inside and outside the ground water basin. Project facilities may also be used for seasonal re-regulation.

Existing and proposed recharge, recovery, conveyance and monitoring facilities, which will be a part of the Project, are described in the following sections.

3.2 RECHARGE FACILITIES

3.2.1 Recharge Areas

Properties with new and/or existing recharge facilities are described in the following sections and listed in Tables 1 together with acreage available for recharge and shown on Plates E.

3.2.1.1 City of Bakersfield's 2800-Acre Area

City of Bakersfield Agreement No. 84-232 dated October 17, 1984 provides for Agency use of the 2800-acre recharge area owned and operated by the City of Bakersfield. About 1,350 acres of this facility are presently available for recharge, however, facilities must be shared with the City of Bakersfield and others having access to the City's facilities, including Olcese Water District.

Water for recharge on the City's property can be conveyed directly via the Kern River or from the California Aqueduct in the Cross Valley Canal (CVC) and delivered either through River Turnout No.'s 1 or 2. Water from the Friant-Kern Canal can be discharged into the Kern River upstream of the 2800-Acres area.

3.2.1.2 Berrenda Mesa Property

Berrenda Mesa Water District owns 369 acres of property adjacent to the CVC and the Kern River of which 250 acres has been developed into recharge

ponds. An additional 65 acres in the river channel is also available when Kern River water is not flowing. The Berrrenda Mesa Water District and the Agency have completed an agreement for "Developing and Operating a Joint Water Recharge/Recovery Project."

The agreement allows the Agency to use DWR loan funds obtained from the Water Conservation and Water Quality Bond Law of 1986, to improve the recharge capability of the property as well as to purchase of up to 60 acres for joint use by the Agency and Berrrenda Mesa. Improvements include the construction of six off-site wells, a reinforced concrete turnout at Bellevue Weir on the Kern River, a 1,920 foot pipeline, 72-inches in diameter from the Bellevue Weir to the Wilson Intake Ditch, stilling wells, a meter structure, recharge ponds in the 55 acres in the north slough area, a fabricated steel gate and a 48 inch corrugated pipe weir off the River Channel. All of these facilities, except the six wells, were constructed in late 1994.

3.2.1.3 Kern River Channel and Canals

At certain times, recharge capacity is available in the Kern River Channel and various tributary canals including the Calloway Canal upstream from the City's 2800-Acres, within the Improvement District No. 4 (ID4). These areas are generally used by ID4 for recharge but the Project water may be recharged in these areas when excess capacity is available. Approximately 240 acres are available in the Kern River channel within ID4 and an additional 24 acres are available in the Calloway Canal. Additional recharge capacity is available for use in canals and their laterals adjacent to recharge areas including the Pioneer Canal, James Canal and Main Canal systems.

3.2.1.4 Pioneer Project

In 1992, the Agency purchased 2,253 acres of property to be used for recharge and recovery of water. About 816 acres is located north of the Kern River and the City of Bakersfield's 2800-Acres, south of the CVC and east of the Kern Water Bank. This area is referred to as North Pioneer. Another 1,437 acres is located south of the Kern River and east of the 2800-Acres and north of the Southern Pacific Railroad tracks. The 414 acre portion of this property north of the Kern River Canal is referred to as Central Pioneer and the 1,023 acre portion south of the Kern River Canal and is referred to as South Pioneer. Water from any source described under section 2.6.1 can be delivered onto the Pioneer property.

3.2.1.4.1 North Pioneer

Water for recharge will be conveyed onto North Pioneer at several locations: 1) two 30-inch (Nord siphons) siphons or a turnout from the CVC between Pumping Plant No. 3 and Nord Road; 2) A lateral off the Pioneer Canal; 3) existing turnouts from basin 9 and 10 of the City of Bakersfield 2800-Acres; 4) two 36 inch siphons located east of CVC Pump Plant 3; and 5) two 30-inch siphons located east of CVC Pumping Plant 4. The existing McClung Weir will provide a diversion point through culverts which connect the Kern River Channel with Basin 9 and

10 of the City of Bakersfield 2800-Acres facility. From Basin 10, water will flow through an existing 100 cfs headgate located on the levee separating the 2800-Acres from the Pioneer property. From Basin 9, water will flow through an existing 600 cfs headgate located on the levee separating the 2800-Acres from the Pioneer property. The lateral off the Pioneer Canal can convey up to 60 cfs onto the property in Section 4, Township 30 South, Range 26 East. Two existing 30-inch siphons located between Pumping Plant No. 3 and Nord Road, will convey up to 80 cfs from the CVC onto the property in Section 5, Township 30 South, Range 26 East. The two 36-inch Pump Plant 3 siphons east of Pumping Plant No.3 can convey up to 160 cfs into Pioneer Canal. The two siphons east of Pumping Plant 4 can convey 80 cfs into the Pioneer Canal. Construction of small canals may be required to deliver water from the diversion structures to higher elevations of the property. Approximately 2 miles of levees were constructed in 1995 to create recharge ponds on much of the parcel. An additional 2 miles of new levees may be constructed in the future. Location of North Pioneer recharge ponds are shown in Plate D1.

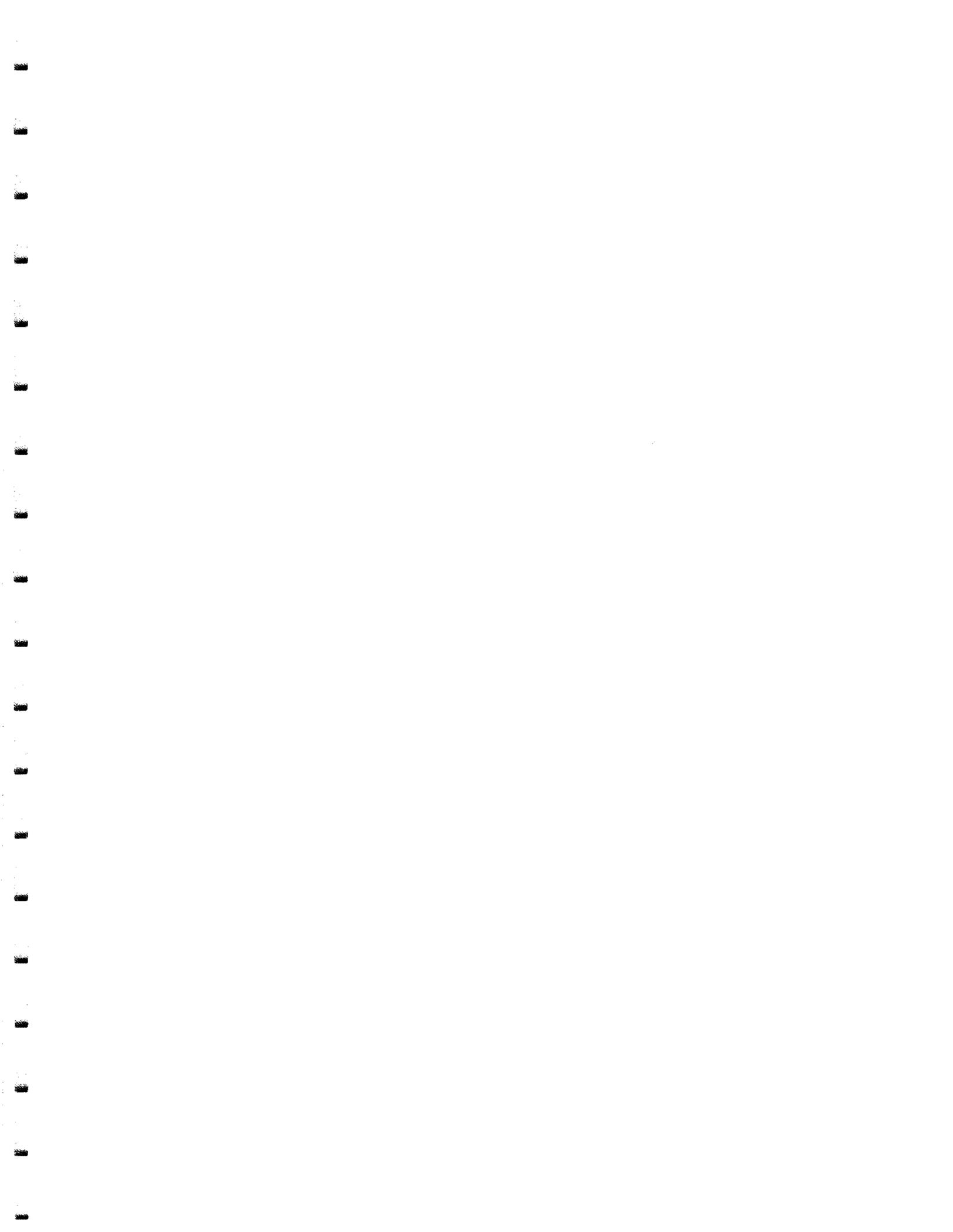
3.2.1.4.2 Central Pioneer (north of the Kern River Canal)

Recharge water can be conveyed to Central Pioneer from the north through the 2800-Acres and/or from the Berrenda Mesa Spreading grounds. Water from the 2800-Acres will be diverted on to the property through an existing 40 cfs turnout operating out of the McClung Pool. A small existing channel leading from the river to the property will allow access from the Kern River channel. In addition, an existing 40 cfs headgate through the exterior levee of the Berrenda Mesa Spreading Grounds ponds conveys water to Central Pioneer. Approximately 3.6 miles of levees were constructed in 1995 to create 220 acres of recharge ponds on much of the parcel. The existing levees may be raised in the future to increase the area of the recharge pond.. Locations of Central Pioneer recharge ponds are shown on Plate D2.

South Pioneer (south of the Kern River Canal)

The existing James Canal will be used to convey water to the South Pioneer property from the Kern River Canal. The James Canal has a capacity of 145 cfs. Water is diverted out of the James Canal onto the South Pioneer property through pipes located in the canal banks upstream from the existing control structures, which are used to regulate the water surface in the canal. Approximately 0.5 miles of levees were constructed in 1995 to create recharge ponds on the parcel. An additional 14 miles of new levees may be constructed in the future.

In addition to service from the James Canal, temporary weirs and/or siphon/turntable pumps could be used to divert water out of the Kern River Canal. Locations of South Pioneer recharge ponds are shown on Plate D3.



Some water from the Central Pioneer can be delivered through an existing siphon under the canal to the South Pioneer. To facilitate larger flows, additional siphons could be used to convey water from the Central parcel to the South parcel. A new 300 cfs turnout from the City's 2800-Acres' McClung Pool may be built in the northwest quarter of Section 10.

3.2.1.5 Kern Water Bank Facility

Section 4.2 to the Declaration of Covenants, Conditions and Restrictions which is Exhibit 3.0 to the Kern Water Bank Transfer and Exchange Agreement dated October 25, 1995 provides for use of the Kern Water Bank Facilities by Agency Basic Contract Member Units including the Agency and its Improvement District when recharge, storage and/or recovery capacity is available beyond that needed by the Kern Water Bank Authority Member Entities.

A total of approximately 3,000 acres of recharge ponds were constructed on the Kern Water Bank (KWB) for the *1995 Ground Water Recharge Project*, designated as follows:

Stage One	1,500 acres
<u>Stage Two</u>	<u>1,500 acres</u>
Total	3,000 acres

The KWB recharge ponds will be supplied by the existing CVC, Pioneer Canal, James Canal, Buena Vista Main Canal and the Kern River. The CVC, which is parallel to the Pioneer Canal for several miles northerly of the KWB property, can be fed from existing diversions connecting the CVC to the Friant-Kern Canal, the Kern River and the SWP. The CVC is designed to operate in both forward or reverse flow as such, water will be conveyed to the reach that is parallel to the Pioneer Canal. Water will be diverted from the CVC to the Pioneer Canal and its tributary system through existing turnouts and siphons.

River diversion structures exist in basins 9 and 10 of the City of Bakersfield 2800-Acre recharge area to convey water flowing in the Kern River channel onto Bolthouse Farms property and then through the North Pioneer property. An existing diversion structure in the Pioneer Project's levee conveys water westerly under a railroad trestle onto the KWB recharge ponds.

3.2.1.6 Private Lands

Certain privately held lands in Sections 4, 11, 12, 13, and 14 of T30S/R26E are currently being farmed and may be available to use for recharge from time to time. Water for recharge can be readily delivered to the lands in Section 4 via the Cross Valley Canal, the Pioneer Canal, and/or existing turnouts from basins 9 and 10 of the 2800-Acres. Similarly, recharge water can be delivered to lands in Section 11 north of the Kern River Canal from the Berrenda Mesa Project, and to lands in Section 11 (south of the Kern River Canal), 12, 13, and 14 via the James Canal. Use of the foregoing private lands would be contingent upon completion of suitable agreements with the landowners involved.

3.3 RECOVERY FACILITIES

3.3.1 Wells

There are a number of new and existing wells which will be used by the Project for the recovery of stored water. These are described in the following sections of the report. Properties with new and/or existing recovery facilities are summarized in Tables 2 and 3 and shown on Plates B. A list of existing and potential new recovery well locations is provided in Appendix A.

3.3.1.1 KCWA Wells on 2800-Acres

Prior to 1991, the Agency constructed five wells on the City's 2800-Acres property. In 1991, four additional wells were constructed and equipped in the City's 2800-acre area. Under the existing agreement between the Agency and the City of Bakersfield, these nine wells on the 2800-acre property can only be used to extract water that is recharged on the 2800-Acres property; or related channels and canals.

3.3.1.2 KCWA Wells on Berrenda Mesa Water District Property

In 1991, the Agency constructed six wells on the Berrenda Mesa property. Use of these wells and two additional wells on the property which are owned by the District is governed by an agreement between the Agency and Berrenda Mesa Water District. The agreement also provides for construction and/or acquisition of six additional off site wells.

3.3.1.3 City of Bakersfield Wells

The City of Bakersfield owns ten wells on the 2800-Acres. Two of the ten City owned wells were constructed to produce domestic quality water and are committed to meet future urban water supplies. The remaining eight agricultural wells are operated under an agreement between the City and Olcese Water District. The City wells are available to the Agency when not needed for other City or Olcese Water District priorities. In dry years, these wells are generally only available to the Agency prior to April 15 and after October 15.

3.3.1.4 KCWA Wells Along the Cross Valley Canal

In 1991, the Agency constructed four wells along the Cross Valley Canal. Two of these wells, 30S/25E-9C and 30S/25E-9E, are located in the Buena Vista Ranch area adjacent to the KWB property. One well (30S/26E-5M1) is located near Pumping Plant No. 3 and one well (30S/26E-4J5) is located one quarter mile west of the 2800-acre boundary.

3.3.1.5 North Pioneer Wells

There are two existing wells (30S/26E-5Q1 and 30S/26E-8B1) on North Pioneer. As many as 9 new wells may be constructed on the property. Two of these sites may be designated for the Berrenda Mesa Project. The locations of these wells are shown on Plate B.

3.3.1.6 Central Pioneer Wells

There is one existing well on Central Pioneer. As many as five new wells may be constructed on the property. One of these sites may be designated for the Berrenda Mesa Project. The location of these wells are shown on Plate B.

3.3.1.7 South Pioneer Wells

There are three existing wells (30S/26E-15B1, 15K1, and 16G1) on South Pioneer. As many as 14 new wells may be constructed on the property. Three of these sites may be designated for the Berrenda Mesa Project. The locations of these wells are shown on Plate B.

3.3.1.8 Kern Water Bank Wells

There are approximately 31 wells currently operational on the Kern Water Bank. Approximately 30 additional wells are located on the Water Bank land but are not currently operational. The 31 operational wells may be used by the Agency and Basic Contract Member Units when not needed by the Kern Water Bank Authority Member entities. The remaining 30 may be used when the KWBA makes them operational.

3.3.1.9 Private Wells

There are a number of privately owned wells in the Kern Fan area that are available to the Agency under certain conditions. In dry years, these wells may be shared with the landowner or the tenant. Twenty-five private wells where 25% to 100% of the well capacity may be available in future dry years are listed below:

Castle & Cooke Wells: 30/26E:	12N1	12L1
	1R	
	1J1	12D1
McAllister Ranch Wells: 30/26E	16N1	21H1
	21D1	22P
	22A	23C
	22J	23L
Strand Ranch: 30/25E	2G	2J
	2H	
Tenneco West Inc. 30/26E	5B1	6B1
Bolthouse Farms 30/26E	11D1	11P1
	14F	4B1
	14H	4E1
	3B1	

3.4 RECHARGE AND RECOVERY CONVEYANCE FACILITIES

3.4.1 Canals

The Project will depend on a variety of conveyance facilities to transport water for recharge and recovery. These include the California Aqueduct, Cross Valley, Friant-Kern, Kern River, James, Pioneer, Main, Outlet and Alejandro canals. These facilities

are briefly described below.

3.4.1.1 California Aqueduct

The California Aqueduct is the main conveyance facility of the SWP. It conveys water from the Banks Pumping Plant at Clifton Court Forebay in the southern portion of the Delta to SWP water contractors located in the South Bay, San Joaquin Valley and Southern California. The Agency has an allocated Aqueduct capacity of 3,277 cfs. The Aqueduct will be used to convey water from the Delta to the CVC and for delivery of water to participating districts.

Recovered water that is conveyed to the California Aqueduct, can be delivered to districts or exchanged, with the DWR. Exchanges with the DWR can be simultaneous, or delayed exchanges. In a simultaneous exchange water delivered from the Aqueduct to an upstream district at the same time the recovered water is transported to the Aqueduct. With a delayed exchange, water might be delivered by the DWR to the receiving district from storage before or after the recovered water is received.

3.4.1.2 Cross Valley Canal

Recharge

The Cross Valley Canal (CVC) extends from the California Aqueduct near Tupman to Bakersfield. It consists of four reaches which have capacities ranging from 890 cfs through the first two pump plants to 342 cfs in the unlined extension near Bakersfield.

The canal is a joint-use facility operated by the Agency for the CVC participants -- a group of districts that paid for the canal's construction. Water can be conveyed through the CVC to the KWB, the 2800 Acres, the Berrenda Mesa Property, the Kern River channel, Pioneer properties and the various member units' recharge sites.

Recovery

The CVC is also used to convey banked water after it is recovered. Once in the CVC, recovered water can be delivered to CVC participants in exchange for water in the California Aqueduct. During periods when water is not available for exchange, the CVC can be operated in reverse flow. When operated in reverse flow, water flows from the CVC directly into the California Aqueduct. In 1991, water levels in the Aqueduct were low enough for the flow to be by gravity. When water levels in the California Aqueduct are too high for gravity flow, the water must be pumped into the Aqueduct. In 1992, the DWR constructed a temporary pump station to lift 80 cfs from the CVC into the California Aqueduct. A similar station may be reconstructed in the future if reverse flows into the California Aqueduct are needed when levels in the California Aqueduct are too high for gravity flow. In addition, raising the lining in the CVC reach adjacent to the California Aqueduct would allow reverse flow without a pump station.

3.4.1.3 Kern River/Alejandro/Outlet canals

Water from the Friant-Kern Canal, the CVC or from the Kern River can be conveyed in the Kern River channel or in the Kern River Canal to the Pioneer properties or other recharge areas. Conveyance of water in the Kern River Canal requires an agreement with the City of Bakersfield. Conveyance of water in the Alejandro Canal requires an agreement with the Buena Vista Water Storage District.

The Kern River Canal can also be used to convey water from the Kern River to the California Aqueduct directly via the Alejandro Canal, the Buena Vista Aquatic Lakes and Outlet Canal and a pumping plant, or indirectly via an exchange.

It should be noted that depending on ground water pumping operations, water in the Buena Vista Aquatic Lake may contain high concentrations of arsenic. These high concentrations are caused when ground water from nearby wells is pumped into the Buena Vista Aquatic lakes for irrigation use and to make up evaporation losses.

3.4.1.4 Friant-Kern Canal

The Friant-Kern Canal is operated by the Friant Water Users Authority to convey water supplies from the San Joaquin River through the Friant Division of the Central Valley Project to several districts in Kern County, including the Kern County Water Agency.

In addition to conveying CVP water, the canal is sometimes used to convey floodwaters from the Kings, Kaweah and Tule rivers which are pumped into the Friant-Kern Canal in major flood years. If not pumped into the Canal these waters would flood Tulare Lake bed. Such floodwaters in the Friant-Kern Canal are released into the Kern River channel downstream of Bakersfield where the water can flow into the California Aqueduct via the Kern River - California Aqueduct Intertie or be diverted and recharged into the ground water basin in Kern County. Alternatively, water from the Friant-Kern Canal can be conveyed to the California Aqueduct or recharge areas via the CVC operating in reverse mode.

3.4.1.5 Other Canals

In addition to the foregoing major lined transport canals, there are a number of unlined canals that will be used from time to time for recharge purposes and to transport water to recharge basins. These include the following:

James Canal - diverts water to the south from the Kern River Canal in Section 1 west of Bakersfield. It is used for recharge and to transport recharge water to South Pioneer, adjacent private property, and the Kern Water Bank south of the Kern River.

Pioneer Canal - Portions of the Pioneer Canal are present along Stockdale Highway and north of the CVC west of Section 2. It is used for recharge

and to transport recharge water to North Pioneer and the Kern Water Bank north of the Kern River.

Main Canal - The Main Canal diverts water to the north-west from the Kern River near Second Point. It is used for recharge and to transport water to recharge basins on the Kern Water Bank.

3.4.2 Pumping Plants

Two pump stations, one at Buena Vista Lake and one at Tupman have been used to pump water into the California Aqueduct.

3.4.2.1 Buena Vista Lake Pumping Plant

The Buena Vista Lake Pumping Plant pumps water out of the Outlet Canal into the California Aqueduct. The pumping plant was constructed in 1991 and has a capacity of 300 cfs. A long-term operational agreement is under negotiation between the Agency and the owners of these facilities. It is contemplated that two-thirds of the capacity will be made available to the Agency under certain circumstances. The plant is owned by Buena Vista Water Storage District and Henry Miller Water District.

3.4.2.2 Tupman Pumping Plant

The Tupman Pumping Plant lifts water from the CVC to the Aqueduct. A temporary pumping plant, which has a capacity of 80 cfs without siphons, was constructed by DWR in 1992. A permanent pumping plant may be constructed in the future.

3.5 MONITORING PROGRAM

The Statement of Principles for the Pioneer Project provides among other things that the Project will be governed by principles substantially similar to those found in the Memorandum of Understanding (MOU) regarding the Operation and Monitoring of the Kern Water Bank Ground Water Banking Programs, attached as appendix "B". The MOU outlines the terms, methods and procedures for the monitoring program appropriate for ground water recharge and recovery projects.

3.5.1 Annual Report

Each year, a report will be published which presents the following information:

- A. A summary of ground water levels collected during the year;
- B. A summary of water quality analyses of water collected during the year from recovery wells and monitoring wells;
- C. Records of water recharged during the year and its source;
- D. Records of water recovered during the year.
- E. The status of current accounts of stored water, including losses, and the quantities of water available for recovery;
- F. Information regarding ongoing concerns including the status of Chevron Pipeline remedial efforts.

3.6 SOURCES OF WATER

A wide variety of water sources may be available to the Project. Waters historically available for recharge for these sources are shown on Table 4. These sources may include:

- ▶ State Water Project water
- ▶ Interruptible Entitlement
- ▶ Central Valley Project Water
- ▶ Unregulated CVP water from Friant-Kern Canal
- ▶ Unregulated water from northern California
- ▶ Kern River water
- ▶ Imported floodwaters
- ▶ Other water

3.6.1 State Water Project Water

Consistent with existing biological opinions, it is anticipated that entitlement and interruptible entitlement water from the SWP will be available for banking or recharge. From time to time, member units have entitlement water excess to their in-district demand. This commonly occurs in wet years when Kern River water is available locally. In 1983, 209,988 acre-feet of entitlement were turned back to the SWP. It can also occur in moderately wet years in districts where water demands have lowered in recent years.

In the past, large quantities of regulated and unregulated surplus water have been available to the Agency from the SWP. Pursuant to the Monterey Agreement these types of water have been replaced by a single category of water called interruptible entitlement. In the future, availability of such water is expected to be significantly reduced because of reduced Delta exports, steadily increasing SWP demands, and the development of banking projects designed to conserve water in wet years to improve dry year yields.

3.6.2 Central Valley Project Water

In the past, the Agency has obtained water from the CVP via the Friant-Kern Canal through temporary contracts with the Bureau of Reclamation. Such water may be available from time to time in the future. In addition, CVP water may be available from northern California via the California Aqueduct on a temporary basis either directly to the Agency or through an exchange. A 1987 contract with the Bureau provided for 100,000 acre-feet of such water. Section 215 water is agricultural water not subject to the ownership limitations of Reclamation law made available on short notice under Section 215 of the Reclamation Reform Act of 1982. CVP water may also be available to the Project via exchanges and through third parties.

3.6.3 Kern River Water

The Kern River interests encourage every effort to maximize the recharge of Kern River water into the ground water basin prior to initiating use of the Intertie to export excess floodwaters from the basin.

Quantities of flow through the Kern River-California Aqueduct Intertie, as well as flows which historically bypassed the Intertie via the Kern River flood channel were

894,538 acre-feet in 1983. These generally represent flows which exceeded the available capacity of then existing recharge facilities in Kern County.

3.6.4 Imported Floodwaters

In the past, the Delta Lands Reclamation District No. 770 has pumped floodwaters from rivers tributary to Tulare Lake bed into the Friant-Kern Canal to reduce farmland flooding. This water is diverted only as a last resort to prevent floodwater damage to lands. This water flowed into Kern County where it was released into the Kern River channel where it can flow through the Intertie into the California Aqueduct. In the past, portions of this water were salvaged by diverting it from the Kern River into recharge areas. If the practice of diverting floodwaters into the Friant-Kern Canal continues in the future, this can be a source of water to the ground water basin in Kern County. In 1983, 155,994 acre-feet of such of floodwaters entered Kern County via the Friant-Kern Canal.

3.6.5 Other Water

Discussions with other agricultural and municipal water users in other parts of the State indicate that quantities of water could be available for purchase and transfer at relatively low costs in certain hydrologic years. Consideration will be given by the Project to purchase such water if available at acceptable prices during times when conveyance and recharge capacity are available. In addition, some entities both inside and outside Kern County have indicated an interest in temporarily storing water in Kern County (third parties) for later payback including seasonal re-regulation.

3.7 CONVEYANCE FACILITIES OPERATION

Conveyance facilities available for use by the Project for the purpose of conveying water for ground water recharge were briefly described in a previous section of this report. When water is available for recharge, transportation of the water will be coordinated with the operators of various canals. Deliveries of SWP, CVP or other water from the California Aqueduct are scheduled with the DWR. Cross Valley Canal deliveries are scheduled with the Agency subject to priorities established by the Cross Valley Canal Participants and the Agency in the Interim Rules in Regard to the Operation of the Cross Valley Canal for Agency and Non-Agency Uses, dated July 1980.

Friant-Kern Canal deliveries are scheduled with the U.S. Bureau of Reclamation and Friant Water Users Authority. Deliveries of water via the Kern River Canal, 2800-Acres and the Kern River, including waters introduced to the Kern River from Friant-Kern Canal and the Cross Valley Canal are scheduled with the City of Bakersfield. Distribution canals include the Pioneer and the James Canals which are coordinated by the Agency and the City of Bakersfield as necessary. Use of the Alejandro and Main canals requires scheduling with Buena Vista Water Storage District.

3.8 RECHARGE LOSSES

Recharge losses will be assessed as described in the MOU shown in appendix B. Generally, surface recharge losses shall be fixed and assessed at a rate of 6% of water diverted for

recharge on Project facilities. To account for all other actual or potential losses (including migration losses), an additional 4% of water recharged for later recovery shall be deducted provided the rechargor is compensated within three years.

An additional 5% loss shall be assessed against any water diverted to Project facilities for banking by, for, or on behalf of any out-of-County person, entity or organization and/or against any banked water sold or transferred to any County person, entity or organization (except current SWP Ag Contractors. These losses are non-bankable and non-recoverable by Project Participants.

4. PROJECT OPERATIONS

Project operations will be based upon the recharge and recovery needs of individuals Project participants. Generally, in wet years one or more Project participants will have water available from one or more of the sources described in Section 2.6.1 and recharge this water in one of the Project recharge facilities. In dry years, one or more banking participants may recovery water from wells located on one or more of the project facilities described in Section 2.3.1. In some years, it is expected that neither recharge or recovery will occur and this is classified as a no activity year. Generally, recharge years are expected to occur approximately one out of every three years or 33% of the years; recovery years are expected to occur approximately one out of every three years or 33% of the years; and no-activity years are expected to occur approximately one out of every three years or 33% of the years. However, future changes in the SWP, the local hydrological conditions, cropping patterns and other factors may all modify these annual recharge and recovery operation frequencies.

4.1 RECHARGE OPERATIONS

The annual quantity of water available for recharge will depend on the in-district demand and the available water supply. Priorities for Project participation are outlined in appendices B and C and cover use of all Project recharge facilities described in Sections 2.2.1.1 through 2.2.1.5.3. Total minimum and maximum monthly recharge capacity by Project facilities is shown on Table 1 to range from 54,000 acre-feet to 123,000 acre-feet. Since many of the facilities are shared with others, the available recharge capacity actually utilized will depend on the number of Project participants participating in a wet year and the water available for ground water recharge. Priorities of use of recharge facilities by Project participants are described in Appendices B and C.

4.2 RECOVERY OPERATIONS

The annual quantity of ground water recovery by Project recovery participants will depend on local and State wide dry year water supply conditions. Rules for Project participation by recovery participants are outlined in both Appendices B and C, for all Project recovery facilities described under Section 3.3. Maximum annual recovery capacity by Project facilities is shown on Table 2 and range from 237,000 acre-feet from existing wells to approximately 341,000 acre-feet with construction of 32 new wells. Priority of use of recovery facilities by Project participants are described in Appendices B and C.

Although the potential annual recovery capacity of 237,000 acre-feet for existing wells and the additional 104,000 acre-feet of annual recovery capacity for the future wells is based on all wells operating at one time. This is unlikely to happen for the following reasons: 1) Agency may

not be able to contract for use of private wells. 2) Private wells, City of Bakersfield wells and KWB wells must be shared with others. 3) Production from and/or construction of some wells may have to be reduced to comply with the KWB MOU (attached as Appendix B).

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Berrenda Mesa Water District, Kern County, California Final Environmental Impact Report, Ground Water Recharge-Extraction Project, March 1984.

California Department of Water Resources, Final Environmental Impact Report, Artificial Recharge, Storage and Overdraft Correction Program, Kern County California, December 1986.

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City of Bakersfield, County of Kern, Metropolitan Bakersfield Habitat Conservation Plan and Final Environmental Impact Report, March 1991.

Kern County Water Agency, Environmental Constraints Analysis - McClung Ranch Property, prepared by Dames and Moore, October 1992.

Kern County Water Agency, Negative Declaration SCH# 95042059, 1995 Ground Water Recharge Project, Bakersfield, California, April 1995.

California Department of Water Resources, Draft Kern Fan Element Habitat Conservation Plan, February 1994, prepared by Jean Hopkins and Associates, Inc.

TABLE 1

Pioneer Ground Water Recharge and Recovery Project
Recharge Facility Characteristics

Recharge Areas	Total Acreage	Wetted Area Factor %	Recharge Pond Acres	Status	Recharge Rate (FT/DY)		Min Recharge Capacity		Max Recharge Capacity	
					Min	Max	(CFS)	(AF/MO)	(CFS)	(AF/MO)
N. Pioneer	816.5	0.66	540	New/Exist	0.33	0.5	90	5414	136	8204
S. Pioneer N.	413.78	0.92	382	New/Exist	0.33	0.5	64	3832	96	5806
S. Pioneer S.	1022.38	0.51	525	New/Exist	0.33	0.5	88	5268	133	7982
KR Channel *	264	1.00	264	Existing	0.50	1.0	67	4013	133	8026
Berrenda Mesa										
Spreading Ponds	250	0.80	200	Existing	0.33	0.5	33	2006	51	3040
River Channel	65	1.00	65	Existing	0.50	1.0	16	988	33	1976
North of River	54.6	0.60	33	New	0.33	0.5	5	329	8	498
Wilson Ditch	45	0.51	23	Existing	0.33	0.5	4	231	6	350
COB 2800 Acres	1350	1.00	1350	Existing	0.33	1.0	225	13543	682	41040
Kern Water Bank										
Stage One	3200	0.47	1500	Existing	0.20	0.5	152	9120	379	22800
Stage Two	5000	0.30	1500	Existing	0.20	0.5	152	9120	379	22800
Total	12481.3		6381.6				894.9	53864.1	2035.5	122520.5

* Includes 24 acres located in Calloway Canal

TABLE 2
Pioneer Ground Water Recharge and Recovery Project
Recovery Wells

Location	New		w/ Berrenda Mesa	Total	Total w/ BM
	Existing	Well Sites			
Pioneer Project					
North Pioneer	2	9	7	11	9 ⁽¹⁾
Central Pioneer	1	5	4	6	5 ⁽¹⁾
South Pioneer	3	14	11	17	14
Along CVC	4	0		4	4
Private Wells	25	0		25	25 ⁽²⁾
Berrenda Mesa Project					
Present Project	8	0		8	8
Off site wells	0	0	6	0	6 ⁽¹⁾
Kern Water Bank					
La Hacienda Wells	23	0		23	23
Expansion Wells	8	0		8	8
Other	0	0		0	0
COB 2800-Acres					
Agency Wells	9	4	4	13	13 ⁽³⁾
COB/Olcese	10	0		10	10
Total	93	32	32	125	125

(1) The 6 off site Berrenda Mesa wells are considered to occupy 6 of the 28 new wells on the Pioneer property.

(2) Private wells include those on McAllister Ranch, Strand Ranch, Kang Ranch, Castle & Cooke, Bolthouse Farms & Tenneco West and the Agency projects use of up to 50% of the capacity of private wells while these wells are also being used for irrigation of overlying lands.

TABLE 3
Pioneer Ground Water Recharge/Recovery Project
Annual Well Capacity (AF)

(All wells used for modeling purposes assume 5CFS & 10% downtime)

Location	New		w/ Berrenda Mesa	Total	Total w/ BM
	Existing	Well Sites			
Pioneer Project					
North Pioneer	6,504	29,269	22,765	35,774	29,269
Central Pioneer	3,252	16,261	13,009	19,513	16,261
South Pioneer	9,756	45,530	35,774	55,287	45,530
Along CVC	13,009	-	-	13,009	13,009
Private Wells	40,652	-	-	40,652	40,652 (2,3)
Berrenda Mesa Project					
Present Project	26,017	-	-	26,017	26,017
Additional Wells	-	-	19,513	-	19,513 (1)
Kern Water Bank					
La Hacienda Wells	74,799	-	-	74,799	74,799
Expansion Wells	26,017	-	-	26,017	26,017
Other	-	-	-	-	-
COB 2800-Acres					
Agency Wells	29,269	13,009	13,009	42,278	42,278
COB/Olcese	8,130	-	-	8,130	8,130
Total	237,407	104,069	104,069	341,476	341,476

(1) The 6 off site Berrenda Mesa wells are considered to occupy 6 of the 28 new wells on the Pioneer property.

(2) Private wells include those on McAllister Ranch, Strand Ranch, Castle & Cooke, Balhouse Farms & Tenneco West and the Agency projects use of up to 50% of the capacity of private wells while these wells are also being used for irrigation of overlying lands.

(3) Wells assumed to be used to recover Pioneer banked water.

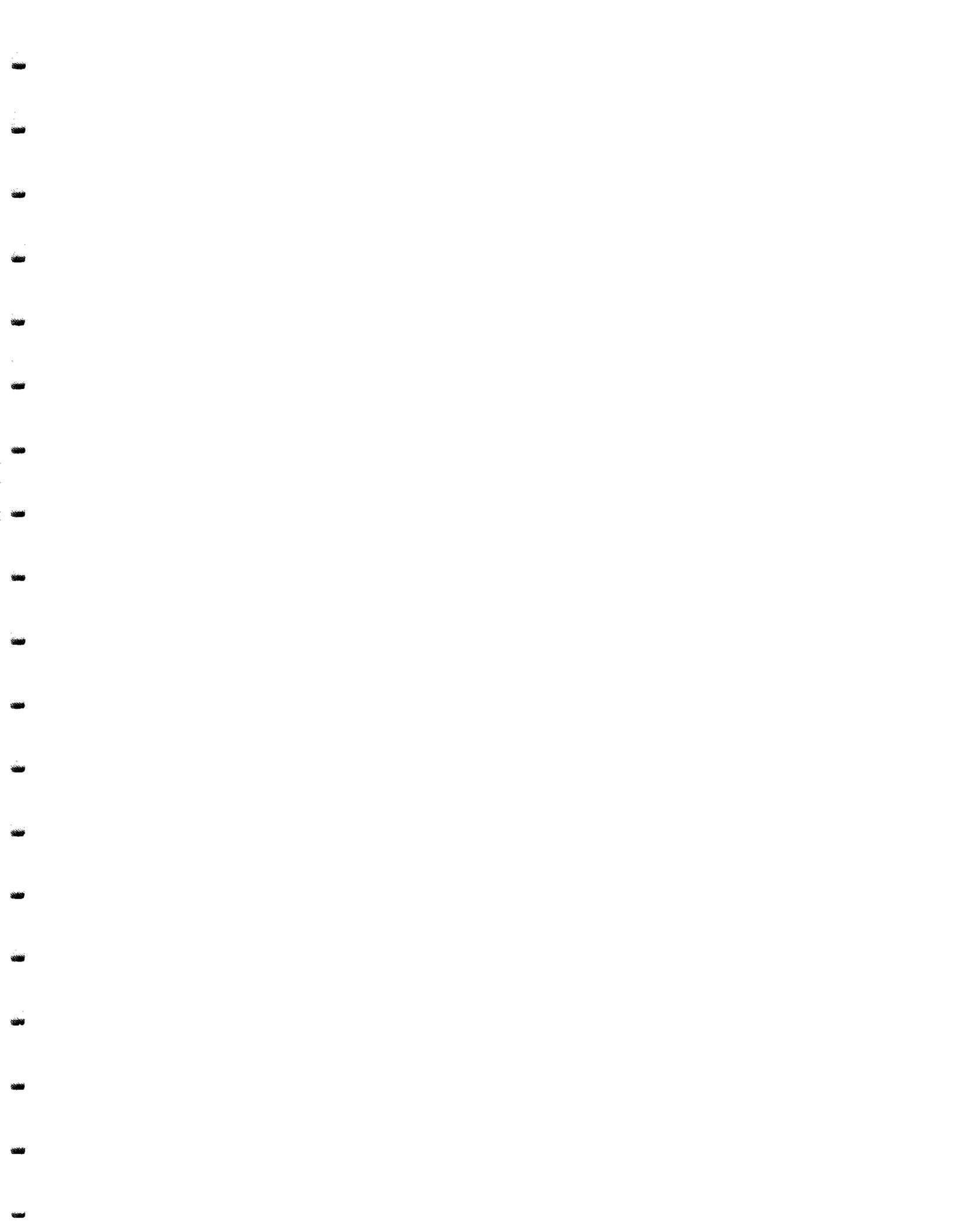


TABLE 4

Pioneer Ground Water Recharge and Recovery Project
ESTIMATED WATER AVAILABLE FOR RECHARGE
 (Quantities in Acre-Feet)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
CALENDAR YEAR	Estimated SW Water Available for Recharge	CVP WATER	DWR KFE SWP WATER	KERN RIVER INTERTIE FLOWS	KERN RIVER FLOOD CHANNEL FLOWS	THIRD PARTY Water	FRIANT-KERN CANAL FLOOD WATERS		TOTAL WATER AVAILABLE FOR RECHARGE (Col 1,2,3,4,5, & 6)
							IMPORTED TO COUNTY	EXPORTED IN INTERTIE	
1978	228,000	1,616	323,000	168,818	36,200	122,800	19,716	9,113	880,434
1979	47,300	10,507	0	0	0	104,730	0	0	162,537
1980	228,000	3,461	124,000	138,816	33,604	122,800	0	0	650,681
1981	1,200	480	0	0	0	100,120	0	0	101,800
1982	198,300	2,309	0	10,339	0	119,830	115,358	11,968	330,778
1983	349,800	0	0	664,038	230,500	134,980	155,994	96,200	1,379,318
1984	92,900	0	612,000	26,720	0	109,290	0	0	840,910
1985	0	0	0	0	0	100,000	0	0	100,000
1986	102,300	0	15,675	1,867	12,200	110,230	116,891	15,580	242,272
1987	0	0	0	0	0	100,000	0	0	100,000
1988	0	0	0	0	0	100,000	0	0	100,000
1989	0	0	0	0	0	100,000	0	0	100,000
1990	0	0	0	0	0	100,000	0	0	100,000
1991	0	0	0	0	0	100,000	0	0	100,000
1992	0	0	0	0	0	100,000	0	0	100,000
TOTAL	1,247,800	18,373	1,074,675	1,010,598	312,504	1,424,780	407,959	132,861	5,088,730

Column 1 based on DWR study NMFSEPAC.188

Column 3 based on DWR operation study based on no South Delta facilities, Biological Opinion in place for the Winter Run Salmon and Delta Smelt and EPA standards

Column 6 - Third party use is based on 10% of column 1 +100,000 AF non SWP water for seasonal regulation

Column 7 & 8 are not included in the total

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Berrenda Mesa Water District, Kern County, California Final Environmental Impact Report, Ground Water Recharge-Extraction Project, March 1984.

California Department of Water Resources, Final Environmental Impact Report, Artificial Recharge, Storage and Overdraft Correction Program, Kern County California, December 1986.

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California Department of Water Resources, Draft Kern Fan Element Habitat Conservation Plan, February 1994, prepared by Jean Hopkins and Associates, Inc.

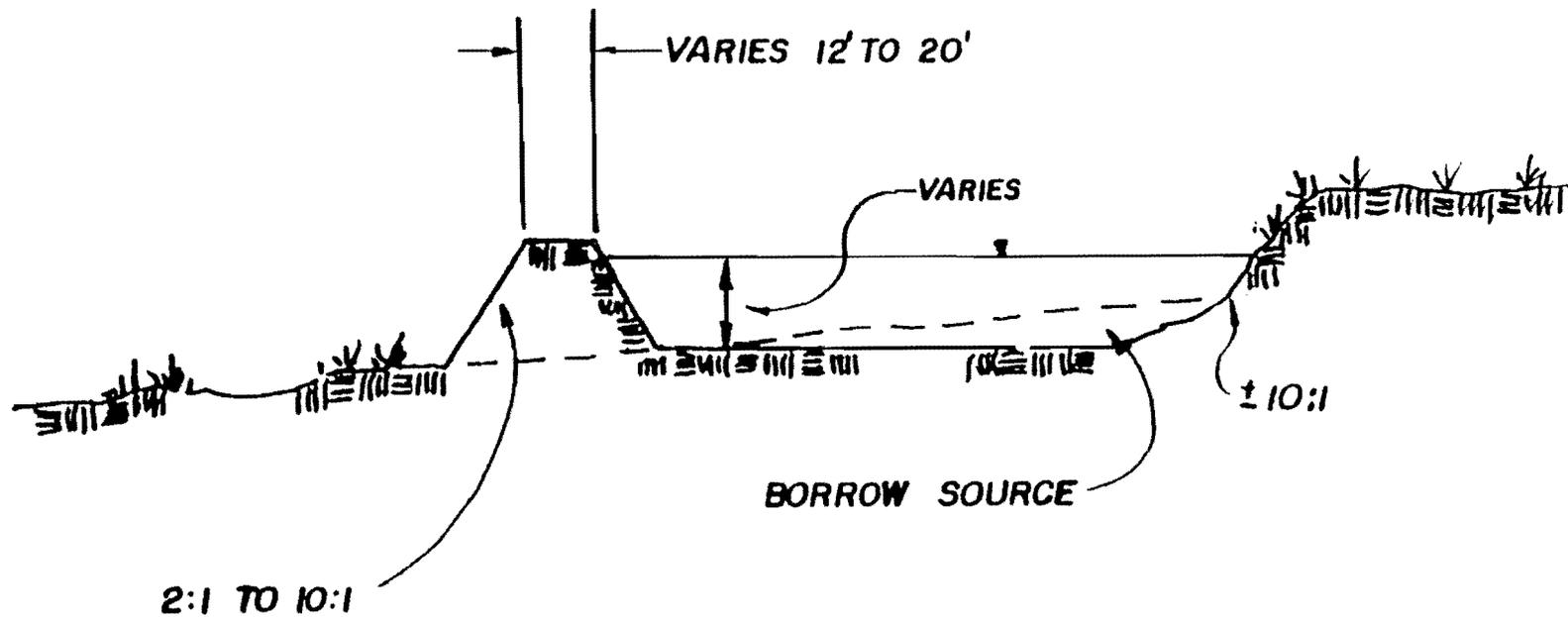
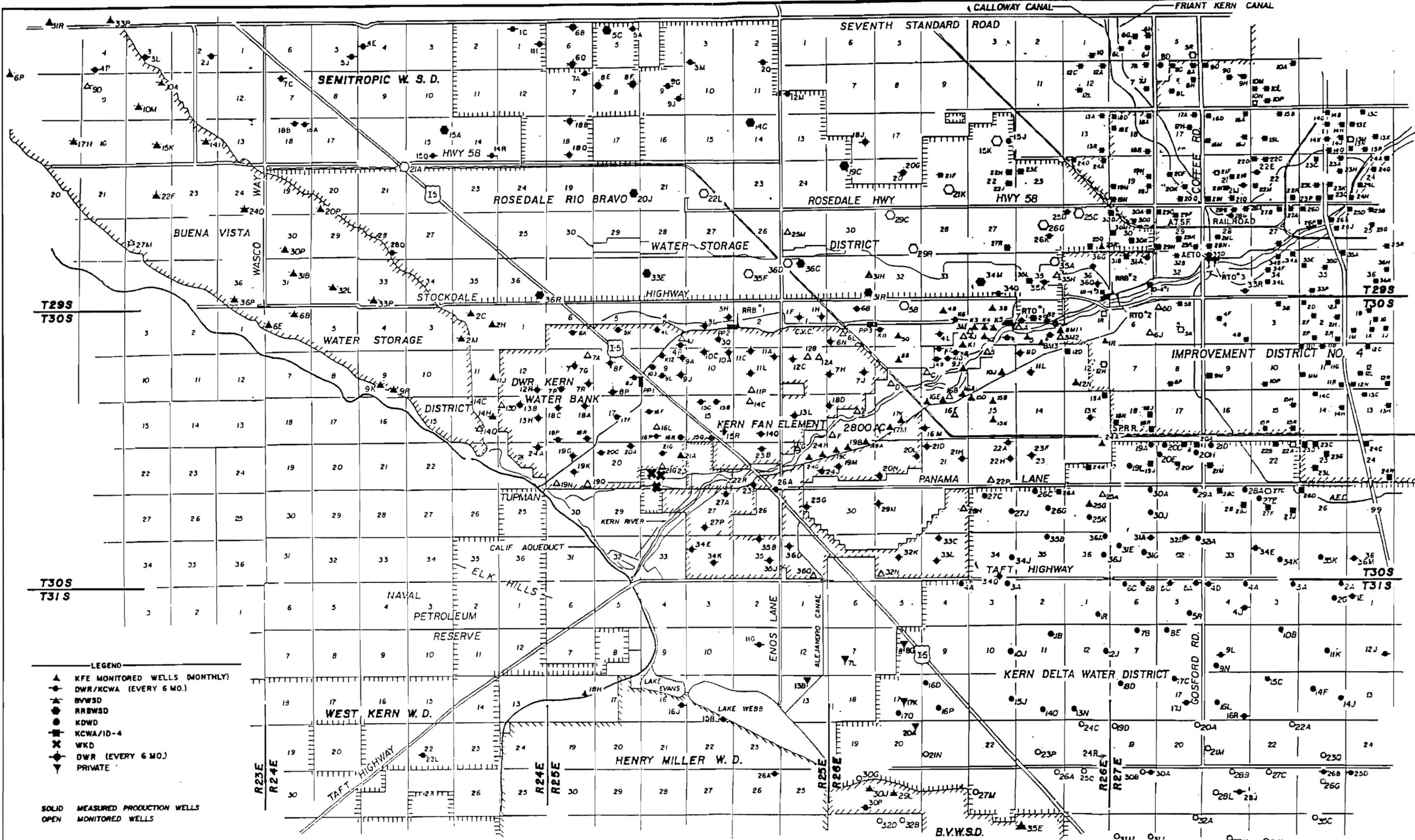


FIGURE 1

Kern County Water Agency
 Kern County, California

Pioneer Groundwater Recharge & Recovery Project

TYPICAL RECHARGE FACILITY
 CROSS SECTION

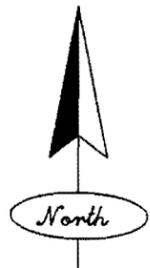


- LEGEND**
- ▲ KFE MONITORED WELLS (MONTHLY)
 - DWR/KCWA (EVERY 6 MO.)
 - ▲ BVWSD
 - RRBWSD
 - KDWD
 - ▲ KCWA/ID-4
 - ▲ WKD
 - DWR (EVERY 6 MO.)
 - ▼ PRIVATE

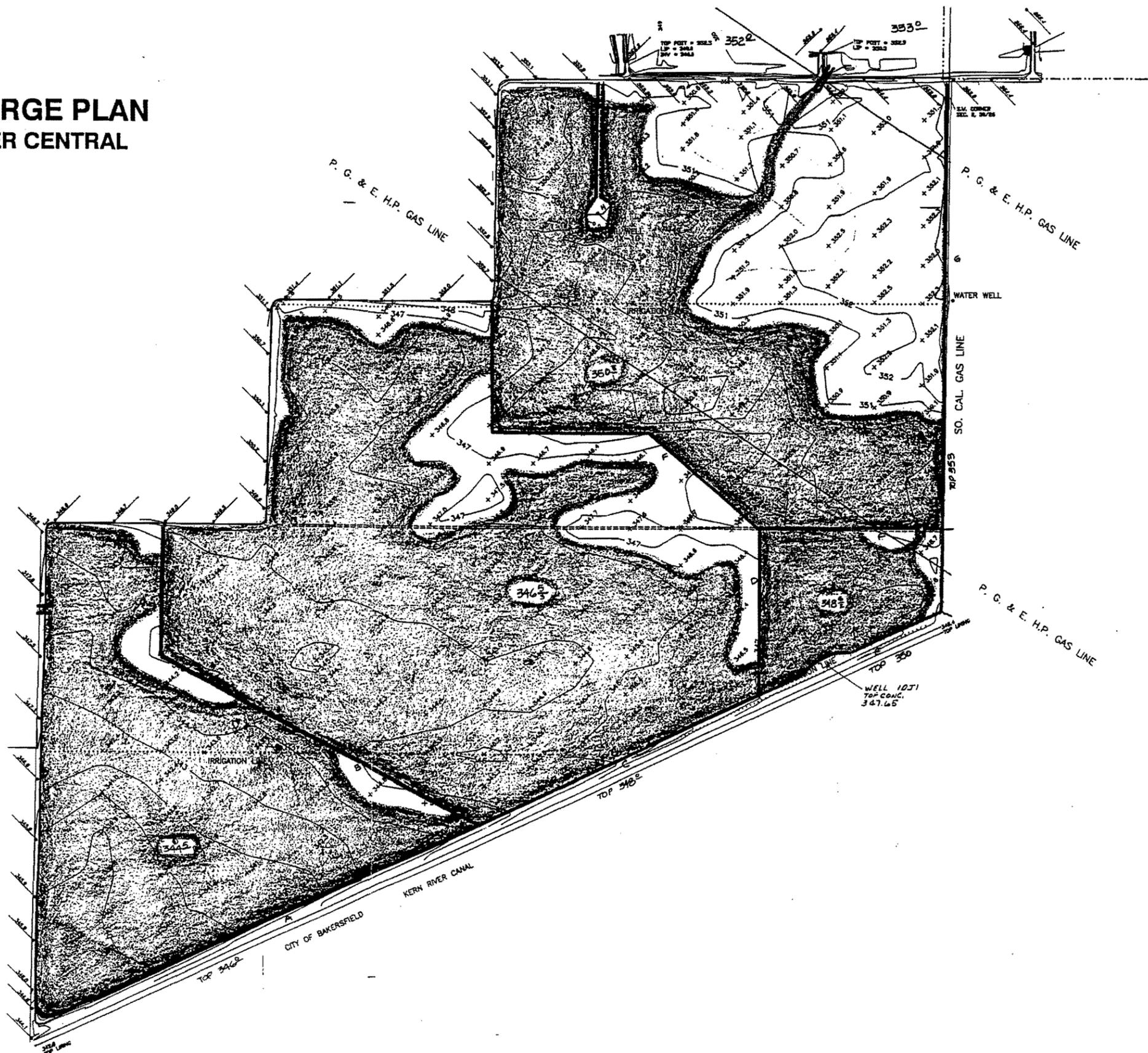
- SOLID MEASURED PRODUCTION WELLS
- OPEN MONITORED WELLS

PIONEER GROUNDWATER RECHARGE AND RECOVERY PROJECT
GROUNDWATER MONITORING WELLS

RECHARGE PLAN PIONEER CENTRAL



SCALE 1" = 300'

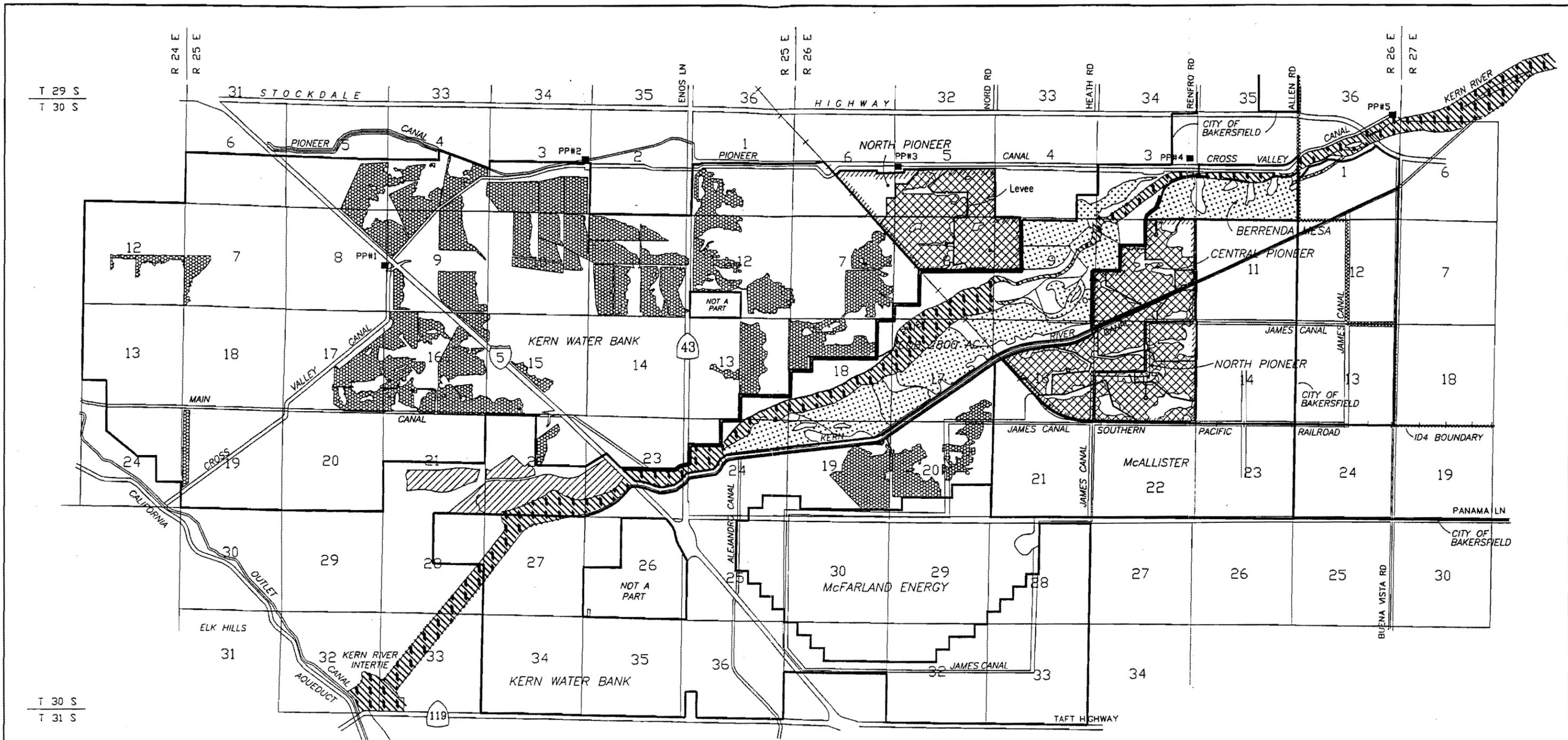


PLYLER LAND SURVEYING
11600 SNOW ROAD, BAKERSFIELD, CA.
(805) 393-7399 93312

1" CONTOUR MAP OF SECTION 10, T. 30 S., R. 26 E., M.D.M.
KERN COUNTY CALIFORNIA

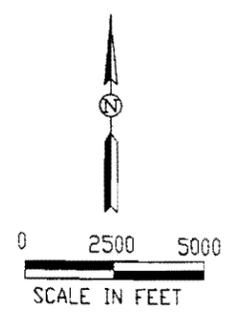
KERN COUNTY WATER AGENCY
3200 RIO MIRADA DRIVE
BAKERSFIELD, CA 93308
805-634-1400

FILE: S10C.DWG	DATE: 1-24-93
DESIGN:	SCALE: 1" = 300'
DRAWN BY: R.V.P.	CHECKED BY:
JOB NO: C031	



LEGEND

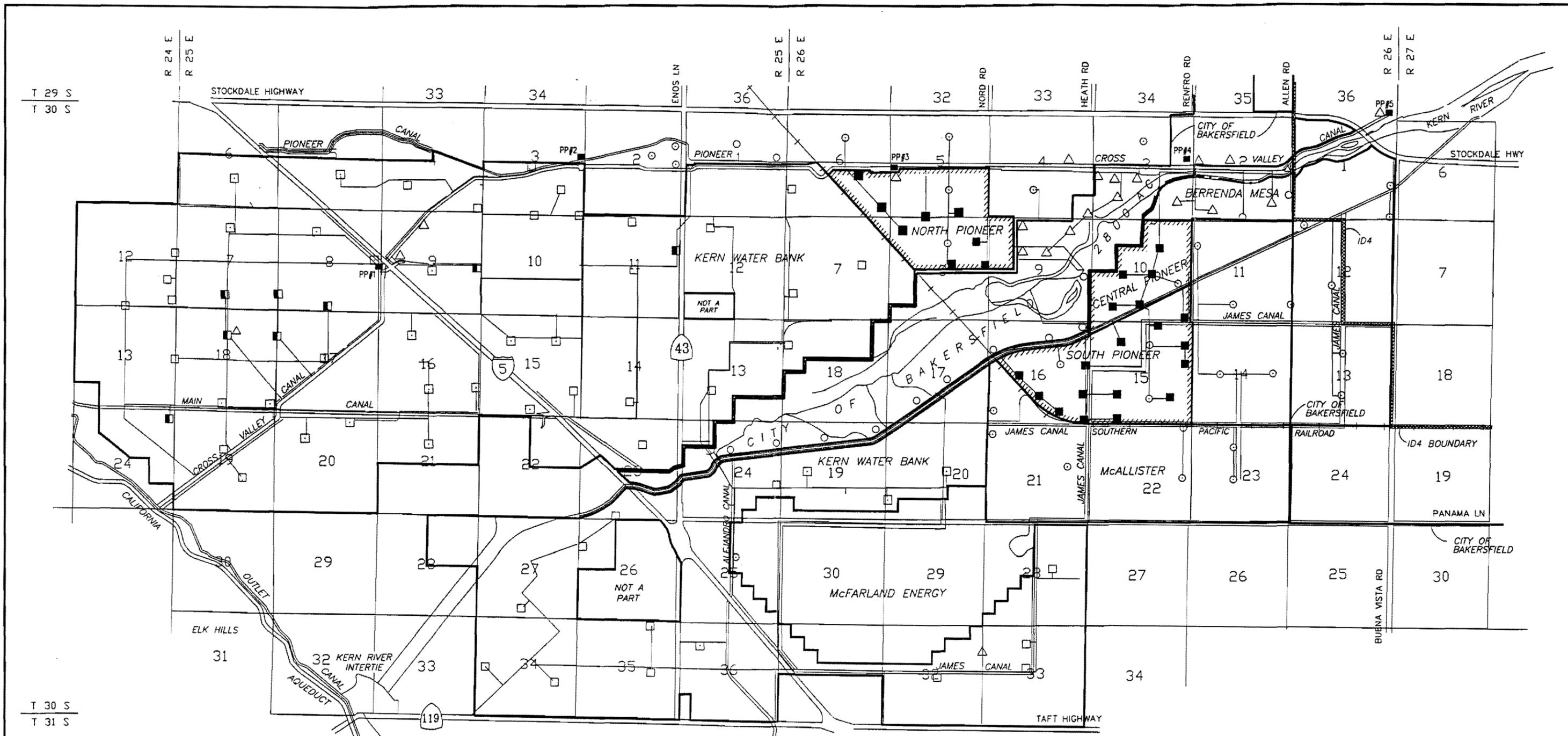
-  Kern River Recharge
-  Existing COB Ponds
-  BV/WK Ponds
-  KCWA Pioneer Ponds
-  KWB Recharge Ponds
-  Property Line, other than Pioneer
-  KCWA North, South, Central Pioneer



Kern County Water Agency
 Kern County, California

**PIONEER GROUND WATER RECHARGE
 AND RECOVERY PROJECT**

RECHARGE FACILITIES

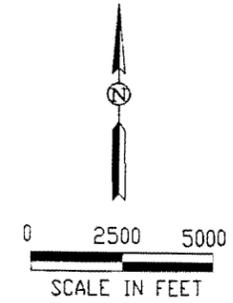


T 29 S
T 30 S

T 30 S
T 31 S

LEGEND

- Existing Ag Wells
- Future Wells
- △ Existing Agency Wells
- Existing La Hacienda Wells
- Existing KFE Wells
- Existing KFE Expansion Wells
- Existing Wells Owned by Others
- Agency Pipeline
- ▨ KCWA North, Central & South Pioneer
- Property Line, other than Pioneer



Kern County Water Agency
Kern County, California

**PIONEER GROUNDWATER RECHARGE
AND RECOVERY PROJECT**

RECOVERY FACILITIES

APPENDIX A

List of Existing and Future Recovery Well Locations

Recovery Well Locations For the Pioneer Ground Water Recharge and Recovery Project

Existing wells								Future wells							Total 125
Berrenda Mesa	City of Bakersfield 2800-Acres	North Pioneer	Central Pioneer	South Pioneer	Private*	CVC	KFE	Berrenda **	ID4	North Pioneer	Central Pioneer	South Pioneer	KFE		
8	19	2	1	3	25	4	31	0	4	9	5	14	0		
BM 1, 30/26-2J2	KCWA 1, 30/26-4R1	30/26-5Q1	30/26-10J	30/26-15B1	30/26-16N	30/26-4J5	30/25-6K1		In the 2800-Acres	30/26-6K	30/26-10G	30/26-16L			
BM 3, 30/26-2P1	KCWA 2, 30/26-3P1	30/26-8B1		30/26-15K1	30/26-21D	30/26-5M1	30/25-7G1		In the 2800-Acres	30/26-6R	30/26-10K	30/26-16P			
BK 1, 30/26-2M1	KCWA 3, 30/26-3M4			30/26-16G1	30/26-22A	30/25-9C	30/25-8F1		In the 2800-Acres	30/26-8D	30/26-10L	30/26-15N			
BK 2, 30/26-2L1	KCWA 4, 30/26-3L1				30/26-22J	30/25-9E	30/25-8J1		In the 2800-Acres	30/26-8G	30/26-10P	30/26-16Q			
BK 3, 30/26-2J1	KCWA 5, 30/26-3L2				30/26-12N		30/25-15B1			30/26-8H	30/26-10N	30/26-15P			
BK 4, 30/26-3R1	KCWA 7, 30/26-9C				30/26-2G		30/25-15C1			30/26-8C		30/26-15J			
BK 5, 30/26-2N	KCWA 8, 30/26-8A1				30/26-2H		30/25-15Q1			30/29-8A01		30/26-16J			
BK 6, 30/26-2R	KCWA 9, 30/26-9F1				30/26-2J		30/25-16F1			30/26-8A02		30/26-15M			
	KCWA 10, 30/26-9G1				30/26-21H		30/25-16P1			30/26-8B		30/26-15E			
	CBK 22, 30/26-16A1				30/26-23C		30/25-16R1					30/26-15B			
	CBK 23, 30/26-PJ1				30/26-23L		30/25-17F1					30/26-10R			
	CO 1, 30/26-16B4				30/26-5B1		30/25-18P1					30/26-15A			
	CO 2, 30/26-16E4				30/26-6B1		30/25-18R1					30/26-15H			
	CO 3, 30/26-17K1				30/26-1R		30/25-20A1					30/26-15G			
	CO 4, 30/26-17M1				30/26-1J1		30/25-20C1								
	CO 5, 30/26-19A1				30/26-11D		30/25-21G1								
	CO 6, 30/26-19C1				30/26-14F		30/25-4L1								
	CO 7, 30/25-24H1				30/26-14H		30/25-5K1								
	CO 8, 30/25-24G				30/26-3B1		30/25-9L1								
					30/26-12L1		30/25-36D1								
					30/26-11P		30/26-19M								
					30/26-4B1		30/26-20L1								
					30/26-4E1		30-26-20N								
					30/26-12D		30/24-24A1								
							30/25-7P1								
							30/25-7R1								
							25/30-8P1								
							30/25-18A1								
							30/25-18C1								
							30/25-9J1								
							30/25-11A1								

* Private wells include Mcallister, Strand, Kang Ranch, Tenneco West, Castle and Cooke, Bolthouse Farms and McFarland Energy Co., @ 50% use.

** The 6 offsite wells are designated as the 6 existing wells located on the Pioneer property.

APPENDIX B

Memorandum of Understanding
Regarding Operation and Monitoring
of the
Kern Water Bank
Ground Water Banking Program
(October 24, 1995)

Appendix "B"

10/24/95 Final

MEMORANDUM OF UNDERSTANDING

**REGARDING OPERATION AND MONITORING
OF THE
KERN WATER BANK
GROUNDWATER BANKING PROGRAM**

This Memorandum of Understanding is entered into the 26th day of October, 1995, by and among DUDLEY RIDGE WATER DISTRICT, KERN COUNTY WATER AGENCY, SEMITROPIC WATER STORAGE DISTRICT, TEJON CASTAC WATER DISTRICT & WESTSIDE MUTUAL WATER COMPANY, LLC, and WHEELER RIDGE-MARICOPA WATER STORAGE DISTRICT, which have collectively formed the KERN WATER BANK AUTHORITY ("KWBA") hereinafter collectively referred to as "Project Participants," and BUENA VISTA WATER STORAGE DISTRICT ("BVWSD"), ROSEDALE-RIO BRAVO WATER STORAGE DISTRICT ("RRBWS"), KERN DELTA WATER DISTRICT ("KDWD"), HENRY MILLER WATER DISTRICT ("HMWD"), and WEST KERN WATER DISTRICT ("WKWD"), hereinafter collectively referred to as "Adjoining Entities."

R E C I T A L S

WHEREAS, Project Participants expect title to that certain real property more particularly shown on the map attached hereto as Exhibit "A" and incorporated herein by this reference ("Project Site") to be transferred to the KWBA as provided for in the "Statement of Principles . . . for the Development, Operation and Maintenance of the Kern Fan Element of the Kern Water Bank" ("Statement of Principles") agreed to March 30, 1995; and

WHEREAS, the KWBA intends to develop and improve the Project Site as necessary to permit the importation, percolation and storage of water in underground aquifers for later extraction, transportation and use for the benefit of Project Participants, all as more fully described in Exhibit "B" attached hereto and incorporated herein by this reference ("Project"); and

WHEREAS, Adjoining Entities encompass lands and/or operate existing projects lying adjacent to the Project Site as shown on said Exhibit A; and

WHEREAS, in recent years, water banking, extraction and transfer programs in Kern County have become increasingly numerous and complex; and

WHEREAS, it is appropriate and desirable to mitigate or eliminate any short-term and long-term significant adverse impacts of new programs upon potentially affected projects and landowners within the boundaries of Adjoining Entities; and

WHEREAS, Adjoining Entities and Project Participants desire that the design, operation and monitoring of the Project be conducted and coordinated in a manner to insure that the beneficial effects of the Project to the Project Participants are maximized but that the Project does not result in significant adverse impacts to water levels, water quality or land subsidence within the boundaries of Adjoining Entities, or otherwise interfere with the existing and ongoing programs of Adjoining Entities;

NOW THEREFORE, BE IT RESOLVED that, based upon the mutual covenants contained herein, the parties hereto agree as follows:

1. Project Design and Construction. Project Participants have completed a preliminary design of the Project described in Exhibit B hereto representing the maximum facilities for the Project. Said preliminary design has been reviewed and approved by the Parties hereto. The KWBA intends to, and if it does so will, construct all or a portion of the Project

consistent with such preliminary design. Any major modifications of the facilities and/or significant changes from that described in Exhibit B and in the environmental documentation for the Project will be subject to additional environmental review pursuant to CEQA and will be subject to review of the Monitoring Committee prior to implementation.

2. Project Operation. The Project shall be operated to achieve the maximum water storage and withdrawal benefits for Project Participants consistent with avoiding, mitigating or eliminating, to the greatest extent practicable, significant adverse impacts resulting from the Project. To that end, the Project shall be operated in accordance with the Statement of Principles and the following Project Objectives and the Minimum Operating Criteria:

a. Project Objectives. Consistent with the Project Description, the Project Participants will make a good faith effort to meet the following objectives, which may or may not be met:

(1) The Parties should operate their projects in such manner as to maintain and, when possible, enhance the quality of groundwater within the Project Site and the Kern Fan Area, as shown at Exhibit C.

(2) If supplies of acceptable recharge water exceed recharge capacity, all other things being equal, recharge priority should be given to the purest or best quality water.

(3) Each project within the Kern Fan Area should be operated with the objective that the average concentration of total dissolved salts in the recovered water will exceed the average concentration of total dissolved salts in the recharged water, at a minimum, by a percentage equal to or greater than the percentage of surface recharge losses. The average shall be calculated from the start of each Project.

(4) To maintain or improve groundwater quality, recovery operations should extract poorer quality groundwater where practicable. Blending may be used to increase

extraction of lesser quality groundwater unless doing so will exacerbate problems by generating unfavorable movement of lesser quality groundwater. It is recognized that the extent to which blending can help to resolve groundwater quality problems is limited by regulatory agency rules regarding discharges into conveyance systems used for municipal supplies, which may be changed from time to time.

(5) All groundwater pumpers should attempt to control the migration of poor quality water. Extensive monitoring will be used to identify the migration of poor quality water and give advance notice of developing problems. Problem areas may be dealt with by actions including, but not limited to:

(a) limiting or terminating extractions that tend to draw lesser quality water toward or into the usable water areas:

(b) increasing extractions in areas that might generate a beneficial reverse gradient:

(c) increasing recharge within the usable water area to promote favorable groundwater gradients.

(6) It is intended that all recovery of recharged water be subject to the so-called "golden rule." In the context of a banking project, the "golden rule" means that, unless acceptable mitigation is provided, the banker may not operate so as to create conditions that are worse than would have prevailed absent the project giving due recognition to the benefits that may result from the project, all as more fully described at paragraph 2(b)12 below.

(7) The Project should be developed and operated so as to prevent, eliminate or mitigate significant adverse impacts. Thus, the Project shall incorporate mitigation measures as necessary. Mitigation measures to prevent significant adverse impacts from occurring include but are not limited to the following: (i) spread out recovery area; (ii) provide

buffer areas between recovery wells and neighboring overlying users: (iii) limit the monthly, seasonal, and/or annual recovery rate: (iv) provide sufficient recovery wells to allow rotation of recovery wells or the use of alternate wells: (v) provide adequate well spacing: (vi) adjust pumping rates or terminate pumping to reduce impacts, if necessary: (vii) impose time restrictions between recharge and extraction to allow for downward percolation of water to the aquifer, and (viii) provide recharge of water that would otherwise not recharge the Kern Fan Basin. Mitigation measures that compensate for unavoidable adverse impacts include but are not limited to the following: (i) with the consent of the affected overlying user, lower the pump bowls or deepen wells as necessary to restore groundwater extraction capability to such overlying user: (ii) with the consent of the affected overlying user, provide alternative water supplies to such overlying user, and (iii) with the consent of the affected overlying user, provide financial compensation to such overlying user.

b. Minimum Operating Criteria.

(1) The Monitoring Committee shall be notified prior to the recharge of potentially unacceptable water, such as "produced water" from oilfield operations, reclaimed water, or the like. The Monitoring Committee shall review the proposed recharge and make recommendations respecting the same as it deems appropriate. Where approval by the Regional Water Quality Control Board is required, the issuance of such approval by said Board shall satisfy this requirement.

(2) Recharge may not occur in, on or near contaminated areas, nor may anyone spread in, on or near an adjoining area if the effect will be to mound water near enough to the contaminated area that the contaminants will be picked up and carried into the uncontaminated groundwater supply. When contaminated areas are identified within or adjacent to the Project, the KWBA and the Project Participants shall also:

(a) participate with other groundwater pumpers to investigate the source of the contamination;

(b) work with appropriate authorities to ensure that the entity or individual, if any, responsible for the contamination meets its responsibilities to remove the contamination and thereby return the Project Site to its full recharge and storage capacity;

(c) operate the Project in cooperation with other groundwater pumpers to attempt to eliminate the migration of contaminated water toward or into usable water quality areas.

(3) Operators of projects within the Kern Fan Area will avoid operating recharge projects in a fashion so as to significantly diminish the natural, normal and unavoidable recharge of water native to the Kern Fan Area as it existed in a pre-project condition. If and to the extent this occurs as determined by the Monitoring Committee, the parties will cooperate to provide equivalent recharge capacity to offset such impact.

(4) The mitigation credit for fallowed Project land shall be .3 acre-feet per acre per year times the amount of fallowed land included in the Project Site in the year of calculation (which for the present approximately 19,890 acre Project Site is 5.967 acre-feet per year).

(5) The lands described in Exhibit A (19,883 acres) may be utilized for any purpose consistent with the Statement of Principles, by the KWBA provided, however, the use of said property shall not cause or contribute to overdraft of the groundwater basin. In this connection, any consumptive use of water on the Property which exceeds .3 acre-feet per acre (i.e., the mitigation credit) on a acre by acre basis shall be provided from supplemental sources that do not create or contribute to overdraft.

(6) Each device proposed to measure recharge water to be subsequently recovered and/or recovery of such water will be initially evaluated and periodically reviewed by the Monitoring Committee. Each measuring device shall be properly installed, calibrated, rated, monitored and maintained by and at the expense of the owner of the measuring device.

(7) It shall be the responsibility of the user to insure that all measuring devices are accurate and that the measurements are provided to the Monitoring Committee at the time and in the manner required by the Monitoring Committee.

(8) A producer's flow deposited into another facility, such as a transportation canal, shall be measured into such facility by the operator thereof and the measurement reported to the Monitoring Committee at the time and in the manner required by such Monitoring Committee.

(9) The Monitoring Committee or its designee will maintain official records of recharge and recovery activities, which records shall be open and available to the public. The Monitoring Committee will have the right to verify the accuracy of reported information by inspection, observation or access to user records (i.e., P.G.&E. bills). The Monitoring Committee will publish or cause to be published annual reports of operations.

(10) Losses shall be assessed as follows:

(a) Surface recharge losses shall be fixed and assessed at a rate of 6% of water diverted for recharge.

(b) To account for all other actual or potential losses (including migration losses), a rate of 4% of water placed in a bank account shall be deducted to the extent that the Project Participant has been compensated within three (3) years following the end of the calendar year in which the water was banked at the SWP Delta Water Rate charged by DWR at

the time of payment: provided further, however, that the water purchased and subtracted from a groundwater bank account pursuant to this provision shall only be used for overdraft correction.

(c) An additional 5% loss shall be assessed against any water diverted to the Project Site for banking by, for, or on behalf of any out-of-County person, entity or organization and/or against any banked water sold or transferred to any out-of-County person, entity or organization (except current SWP Ag Contractors).

(d) All losses provided for herein represent amounts of water that are non-bankable and non-recoverable by Project Participants.

(11) Recovery of banked water shall be from the Project Site and recovery facilities shall be located therein. Recovery from outside the Project Site may be allowed with the consent of the District or entity having jurisdiction over the area from which the recovery will occur and upon review by the Monitoring Committee.

(12) Recovery of banked water may not be allowed if not otherwise mitigated if it will result in significant adverse impacts to surrounding overlying users. "Adverse impacts" will be evaluated using data applicable in zones including the area which may be affected by the Project of approximately five miles in width from the boundaries of the Project as designated by the Monitoring Committee. In determining "adverse impacts," as provided at this paragraph and elsewhere in this MOU, consideration will be given to the benefits accrued over time during operation of the Project to landowners surrounding the Project Site including higher groundwater levels as a result of operation of the Project. In determining non-Project conditions vs Project conditions, credit toward mitigation of any otherwise adverse impacts shall be recognized to the extent of the 4% loss and 5% loss recognized under paragraphs 2.b.(10) (b) and (c), for the mitigation credit recognized under paragraph 2.b.(4), if any, and to the extent of recharge on the Project Site for overdraft correction.

(13) To the extent that interference, other than insignificant interference, with the pumping lift of any existing active well as compared to non-Project conditions, is attributable to pumping of any wells on the Project Site, KWBA will either stop pumping as necessary to mitigate the interference or compensate the owner for such interference, or any combination thereof. The Monitoring Committee will establish the criteria necessary to determine if well interference, other than insignificant interference, is attributable to pumping of Project wells by conducting pumping tests of Project wells following the installation of monitoring wells (if not already completed) and considering hydrogeologic information.

(14) The Kern Fan Element Groundwater Model, with input from the Project Participants and Adjoining Entities, and utilizing data from a comprehensive groundwater monitoring program, may be used by the Monitoring Committee as appropriate to estimate groundwater impacts of the Project.

3. Project Monitoring. Adjoining Entities agree to participate in a comprehensive monitoring program and as members of a Monitoring Committee, as hereinafter more particularly described, in order to reasonably determine groundwater level and water quality information under Project and non-Project conditions. The monitoring program will more particularly require the following:

a. Monitoring Committee. A Monitoring Committee shall be established, comprised of one representative of each of the Adjoining Entities (initially 5) and one representative of each of the Project Participants (initially 6). The Committee shall:

(1) Engage the services of a suitable independent professional groundwater specialist who shall, at the direction of the Committee, provide assistance in the performance of the tasks identified below;

(2) Meet and confer monthly or at other intervals deemed to be appropriate in furtherance of the monitoring program:

(3) Establish a groundwater evaluation methodology or methodologies:

(4) Prepare a monitoring plan and two associated maps, "Well Location, Water Quality Network," and "Well Location, Water Level Network," which plan and maps depict the location and types of wells anticipated to be used in the initial phase of groundwater monitoring (said plan and maps are expected to be modified from time to time as the monitoring program is developed and operated):

(5) Specify such additional monitoring wells and ancillary equipment as are deemed to be necessary or desirable for the purposes hereof:

(6) Prepare annual water balance studies and other interpretive studies, which will designate all sources of water and the use thereof within the study area:

(7) Develop criteria for determining whether excessive mounding or withdrawal is occurring or is likely to occur in an area of interest:

(8) Annually or as otherwise needed determine the impacts of the Project on each of the Adjoining Entities by evaluating with and without Project conditions: and

(9) Develop procedures, review data, and recommend Project operational criteria for the purpose of identifying, verifying, avoiding, eliminating or mitigating, to the extent practicable, the creation of significant imbalances or significant adverse impacts.

b. Collection and Sharing of Data. The Adjoining Entities will make available to the Monitoring Committee copies of all relevant groundwater level, groundwater quality, and other monitoring data currently collected and prepared by each. KWBA shall annually report, by areas of interest, water deliveries for banking and other purposes and groundwater withdrawals.

c. Monitoring Costs.

(1) The cost of constructing monitoring wells and ancillary equipment, as identified in Exhibit B, shall be borne by Project Participants. The cost of any additional monitoring wells and ancillary equipment shall be borne as may be determined by separate agreement of the Project Participants and Adjoining Entities.

(2) Each of the parties shall be responsible for the personnel costs of its representative on the Monitoring Committee. In addition, the Adjoining Entities shall be responsible for all costs of monitoring operations and facilities within their respective boundaries and the Project Participants shall be responsible for all costs of monitoring operations and facilities within the Project Site.

(3) All other groundwater monitoring costs, including employment of the professional groundwater specialist, collection, evaluation and analyses of data as adopted by the Monitoring Committee, shall be allocated among and borne by the parties as follows: Project Participants - 50%; Adjoining Entities - 50%. Cost sharing among Project Participants shall be as agreed by them. Cost sharing among Adjoining Entities shall be as agreed by them. Any additional monitoring costs shall be determined and allocated by separate agreement of those parties requesting such additional monitoring.

(4) It is intended that one Monitoring Committee shall deal with all projects operating within the Kern Fan Area. If, as and when existing or additional projects are brought within the purview of the Monitoring Committee, the participants in said projects and the adjoining entities for said projects may join the Monitoring Committee and, upon doing so, shall share in the costs of monitoring operations on the same basis as provided herein for the original parties.

4. Modification of Project Operations. The Monitoring Committee may make recommendations to the KWBA and Project Participants, including without limitation recommendations for modifications in Project operations based upon evaluation(s) of data which indicate that excessive mounding or withdrawal is occurring or is likely to occur in an area of interest. The Monitoring Committee and its members shall not act in an arbitrary, capricious or unreasonable manner.

5. Dispute Resolution.

a. Submission to Monitoring Committee. All disputes regarding the operation of the Project or the application of this agreement, or any provision hereof, shall first be submitted to the Monitoring Committee for review and analysis. The Monitoring Committee shall meet and review all relevant data and facts regarding the dispute and, if possible, recommend a fair and equitable resolution of the dispute. The Monitoring Committee and its members shall not act in an arbitrary, capricious or unreasonable manner. In the event that (1) the Monitoring Committee fails to act as herein provided, (2) any party disputes the Monitoring Committee's recommended resolution or (3) any party fails to implement the Monitoring Committee's recommended resolution within the time allowed, any party to this agreement may seek any legal or equitable remedy available as hereinafter provided.

b. Arbitration. If all of the parties agree that a factual dispute exists regarding any recommendation of the Monitoring Committee made pursuant hereto, or implementation thereof, such dispute shall be submitted to binding arbitration before a single neutral arbitrator appointed by unanimous consent and, in the absence of such consent, appointed by the presiding judge of the Kern County Superior Court. The neutral arbitrator shall be a registered civil engineer, preferably with a background in groundwater hydrology. The arbitration shall be called and conducted in accordance with such rules as the contestants shall agree upon, and, in the

absence of such agreement. In accordance with the procedures set forth in California Code of Civil Procedure section 1282. et seq. Any other dispute may be pursued through a court of competent jurisdiction as otherwise provided by law.

c. Burden of Proof. In the event of arbitration or litigation under this Agreement, all parties shall enjoy the benefit of such presumptions as are provided by law but, in the absence thereof, neither party shall bear the burden of proof on any contested legal or factual issue.

d. Landowner Remedies. Nothing in this agreement shall prevent any landowner within the boundaries of any party from pursuing any remedy at law or in equity in the event such landowner is damaged as a result of projects within the Kern Fan Area.

6. Term. This agreement shall commence on the day and year first above written and shall continue in force and effect until terminated by (1) operation of law, (2) unanimous consent of the parties, or (3) abandonment of the Project and a determination by the Monitoring Committee that all adverse impacts have been fully eliminated or mitigated as provided in this agreement.

7. Complete Agreement/Incorporation Into Banking Agreements. This agreement constitutes the whole and complete agreement of the parties regarding Project operation, maintenance and monitoring. Project Participants shall incorporate this agreement by reference into any further agreement they enter into respecting banking of water in or withdrawal of water from the Project Site.

8. Future Projects. With respect to any future project within the Kern Fan Area, the Parties hereto shall use good faith efforts to negotiate an agreement substantially similar in substance to this MOU.

9. Notice Clause. All notices required by this agreement shall be sent via first class

United States mail to the following and shall be deemed delivered three days after deposited in

the mail:

Project Participants

Dale Melville
Dudley Ridge Water District
286 W. Cromwell Avenue
Fresno, California 93711-6162

William Taube
Wheeler Ridge-Maricopa
Water Storage District
P.O. Box 9429
Bakersfield, CA 93389-9429

Tom Clark
Kern County Water Agency
P.O. Box 58
Bakersfield, California 93312

Bill Phillimore
Westside Mutual Water Company
33141 Lerdo Highway
Bakersfield, California 93302-0058

Will Boschman
Semitropic Water District
P.O. Box Z
Wasco, California 93280

Dennis Mullins
Tejon-Castac Water District
P.O. Box 1000
Lebec, CA 93243

Bill Phillimore, Chairman
Kern County Water Bank Authority
c/o YOUNG WOOLDRIDGE
1800 - 30th Street, Fourth Floor
Bakersfield, CA 93301

Adjoining Entities

Martin N. Milobar
Buena Vista Water Storage District
P.O. Box 756
Buttonwillow, CA 93206

Hal Crossley
Rosedale-Rio Bravo
Water Storage District
P.O. Box 867
Bakersfield, CA 93302-0867

L. Mark Mulkay
Kern Delta Water District
501 Taft Highway
Bakersfield, CA 93307

Joe Lutje
Henry Miller Water District
P.O. Box 9759
Bakersfield, CA 93389

Jerry Pearson
West Kern Water District
P.O. Box MM
Taft, CA 93268-0024

Notice of changes in the representative or address of a Party shall be given in the same manner.

10. California Law Clause. All provisions of this agreement and all rights and obligations of the parties hereto shall be interpreted and construed according to the laws of the State of California.

11. Amendments. This agreement may be amended by written instrument executed by all of the parties. In addition, recognizing that the parties may not now be able to contemplate all the implications of the Project, the parties agree that on the tenth anniversary of implementation of the Project, if facts and conditions not envisioned at the time of entering into this agreement are present, the parties will negotiate in good faith amendments to this agreement. If the parties cannot agree on whether conditions have changed necessitating an amendment and/or upon appropriate amendments to the agreement, such limited issues shall be submitted to an arbitrator or court, as the case may be, as provided above.

12. Successors and Assigns. This agreement shall bind and inure to the benefit of the successors and assigns of the parties.

13. Severability. The rights and privileges set forth in this agreement are severable and the failure or invalidity of any particular provision of this agreement shall not invalidate the other provisions of this agreement; rather all other provisions of this agreement shall continue and remain in full force and effect notwithstanding such partial failure or invalidity.

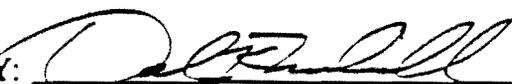
14. Force Maieure. All obligations of the parties shall be suspended for so long as and to the extent the performance thereof is prevented, directly or indirectly, by earthquakes, fires, tornadoes, facility failures, floods, drownings, strikes, other casualties, acts of God, orders of court or governmental agencies having competent jurisdiction, or other events or causes beyond the control of the parties. In no event shall any liability accrue against a party, or its

officers, agents or employees, for any damage arising out of or connected with a suspension of performance pursuant to this paragraph.

IN WITNESS WHEREOF the parties have executed this agreement the day and year first above written at Bakersfield, California.

PROJECT PARTICIPANTS

DUDLEY RIDGE WATER DISTRICT

BY: 
Dale Melville, Manager

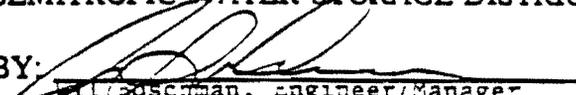
BY: _____

WHEELER RIDGE-MARICOPA
WATER STORAGE DISTRICT

BY: 
William Faube, Engineer/Manager

BY: _____

SEMITROPIC WATER STORAGE DISTRICT

BY: 
Bill Goschman, Engineer/Manager

BY: _____

KERN COUNTY WATER AGENCY

BY: 
Adrienne J. Matthews, President

BY: October 25, 1995

WESTSIDE MUTUAL WATER COMPANY

BY: 
Bill Phillimore, Executive
Vice-President

BY: _____

TEJON-CASTAC WATER DISTRICT

BY: 
Dennis Mullins, President

BY: _____

KERN WATER BANK AUTHORITY

BY: 
Bill Phillimore, Chairman

BY: _____

ADJOINING ENTITIES

BUENA VISTA WATER STORAGE DISTRICT

BY: *Martin Milobar*
Martin Milobar, Engineer-Manager

BY: _____

WEST KERN WATER DISTRICT

BY: *Bob G. Bledsoe*
Bob G. Bledsoe, President

BY: _____

ROSEDALE RIO BRAVO WATER STORAGE DISTRICT

BY: *Hal Crossley*
Hal Crossley, Manager

BY: _____

KERN DELTA WATER DISTRICT

BY: *L. Mark Mulkay*
L. Mark Mulkay, Engineer-Manager

BY: _____

HENRY MILLER WATER DISTRICT

BY: *Joe Lutje*
Joe Lutje, Manager

BY: _____

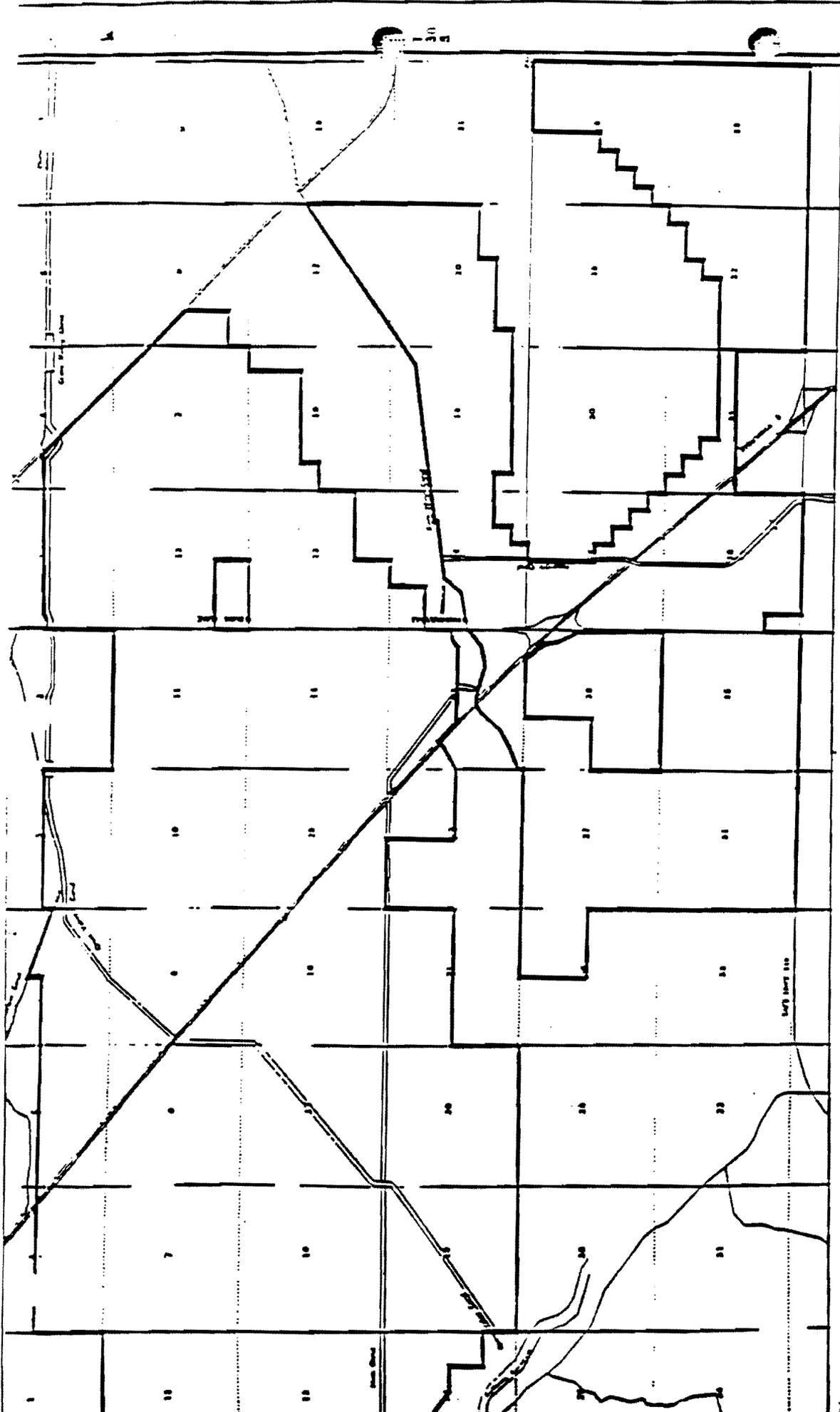


EXHIBIT A

Kern Water Bank Project Site



PROJECT DESCRIPTION

Purposes

The primary water management objective of the Kern Water Bank (KWB) is to enhance water supplies for SWP contractors and entities in Kern County. Water would be stored in aquifers during times of surplus and either recovered during times of shortage or remain in the ground to assist with overdraft correction.

Sources of Water

It is anticipated that water from numerous sources will be recharged on the property in cooperation with the water rights holders and the approval of the necessary authorities. Such sources include: the Kern River, Friant-Kern, SWP, CVP, flood water and other sources that may be available from time to time.

Facilities

To achieve its water management objectives, the KWB will require the construction of recharge ponds, water conveyance facilities, and water wells. The ponds will be created by constructing low levees along contours. The ponds bottoms would be left, as far as possible, in their natural condition. The habitat surrounding and between ponds may be modified and enhanced depending on the outcome of negotiations with resources agencies and other habitat management objectives.

Of the 19,883 acres that presently constitute the Kern Water Bank property, approximately 5,000 acres are proposed for routine recharge, although, during high flow conditions, additional acreage may be utilized which would also serve to prevent flooding elsewhere in the Valley. In the wettest of years, it is hoped that close to a million acre feet can be recharged on the property. The ponds would be formed by constructing approximately 35 miles of levees with a maximum height of 3 feet.

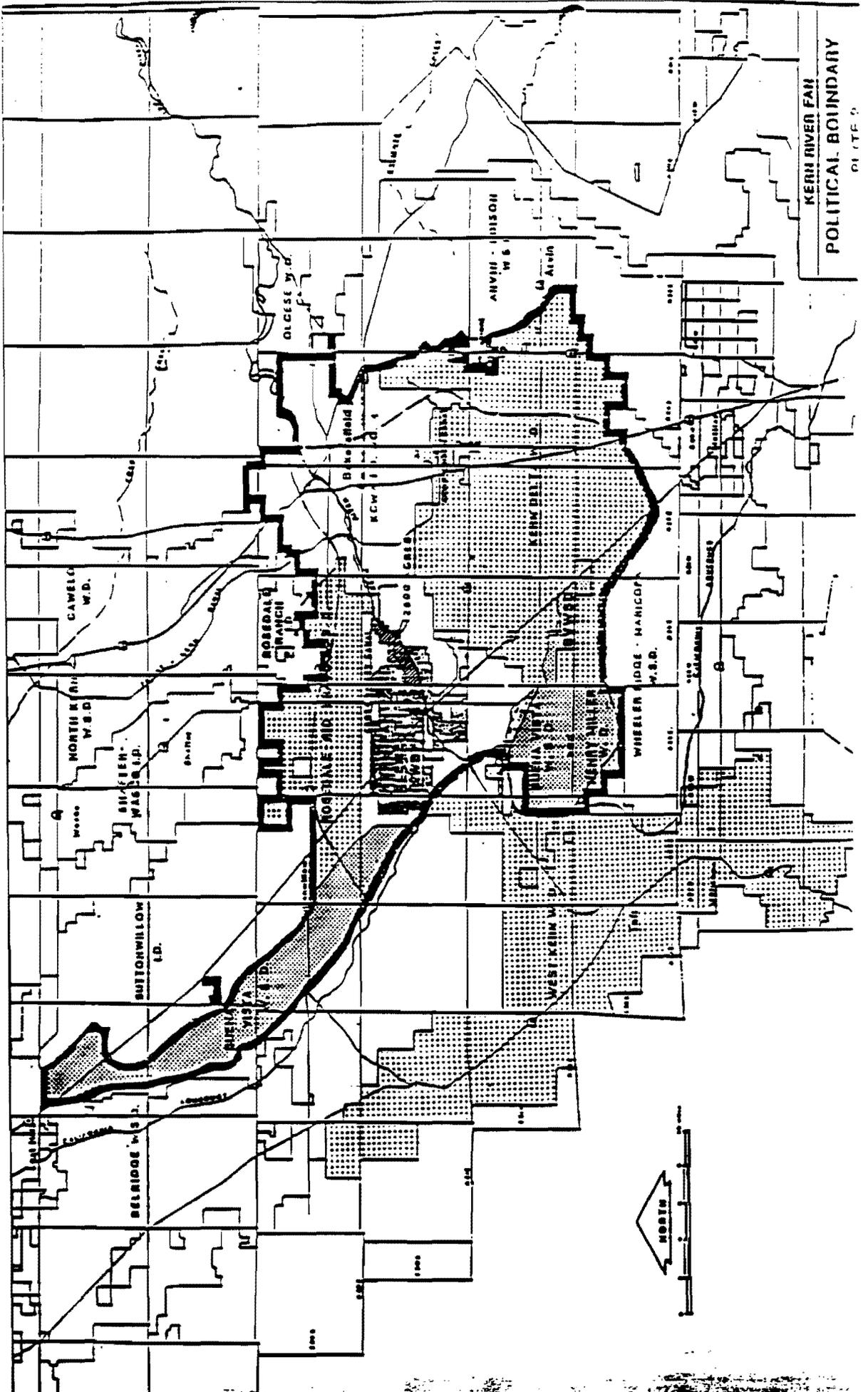
It is proposed that water would be conveyed to and from the property using available capacity in any of the canals and conveyance facilities that may serve the property including: the Cross Valley Canal, the Friant Kern Canal, the California Aqueduct, the Pioneer Canal, the River Canal, the Kern River, Buena Vista's Main Canal and the Alejandro Canal. In each case the permission of the relevant authority will be sought for the use of each facility. It is also proposed to build a new canal that would link the River Canal to the California Aqueduct and would convey water to and from the property. Additionally, it is proposed that a diversion and conveyance facility be constructed that would divert water from the Kern River to the eastern end of the property. Such a conveyance facility would probably cross the north Pioneer property and, as such, is subject to approval from the KCWA and the City of Bakersfield.

Fifty-seven water wells currently exist on the property. Another 43 may be added before the project is complete to provide adequate recovery capacity and the necessary operational flexibility to avoid or minimize adverse impacts. Once build out of the recovery facilities is complete, the

recovery capacity will be maintained by constructing new wells to replace the capacity of older wells as they fail. New wells shall be placed no closer than one third mile from any functioning wells off the property. Wells on the property shall be located and operated so as to prevent significant non-mitigable adverse impacts to neighboring land owners.

Operation

The project shall be managed by the Kern Water Bank Authority. Day-to-day operation of the project may be contracted to other parties. Operation of the project shall be coordinated with adjoining projects.



KERR RIVER FAIR
POLITICAL BOUNDARY
PAGE 2

APPENDIX C

Memorandum of Understanding
Regarding
Principles Governing Implementation of
the Pioneer Project
(December 1995

STATEMENT of PRINCIPLES
Governing Implementation of the Pioneer Project

December 1995

The Kern County Water Agency ("KCWA" herein) and those member units of KCWA who wish to participate in the Pioneer Project ("Project") as evidenced by their signatures hereto, agree to the following Statement of Principles which will form the basis for a final written agreement to be entered subject to paragraph 13.

1. Participation in the Project shall be determined according to each individual entities' choice of either recharge capacity for overdraft correction as a first priority, or recovery capacity as a first priority. Participants who choose recharge for overdraft correction as a first priority are herein referred to as "Recharge Priority Participants." Participants who choose recovery capacity as a first priority are herein referred to as "Recovery Priority Participants." It is recognized that Recharge Priority Participants may also bank and recover water and that Recovery Priority Participants may also recharge water for overdraft correction, all as hereinafter provided.
2. Recharge Priority Participants shall prepare a plan to be coordinated with the Recovery Priority Participants' plan, to provide for full development of the recharge capacity on the Pioneer Project. Recharge Priority Participants will finance and construct recharge facilities on the Pioneer property and in return, receive a first priority use of recharge facilities for overdraft correction purposes. There will be a three to five year build up period during which Recharge Priority Participants should construct and finance recharge facilities consistent with the coordinated plan. The plan for recharge facilities will incorporate the following:
 - A. The water sources that qualify for a first priority are any waters spread by Recharge Priority Participants for the purpose of overdraft correction. An overdraft correction account shall be maintained for each Recharge Priority Participant.
 - B. Any other supplies, on a second priority, will equally share available recharge capacity at 50% for Recharge Priority Participants to create a recoverable bank account and 50% for Recovery Priority Participants. Each participant may use another's unused recharge capacity, thus ensuring that the maximum use of recharge capacity occurs on a daily basis.
 - C. Any KCWA rights to recharge water on or in the City of Bakersfield's 2800-acre spreading area and/or the properties owned by Castle & Cooke that KCWA has a right to use shall be shared 35% by Recharge Priority Participants and 65% by Recovery Priority Participants.
 - D. KCWA and participants shall agree on recharge operation and maintenance requirements (including scheduling, budgeting and KCWA staff costs) and develop cost allocation procedures for operation and maintenance including credits for "in-kind" services. Costs shall be uniformly applied on a unit user fee basis to both Recharge Priority Participants and Recovery Priority Participants.
3. Recovery Priority Participants shall prepare a plan, to be coordinated with the Recharge Priority Participants' plan, to provide for full development of the recovery facilities on the Pioneer Project. Recovery Priority Participants, through KCWA, will finance and construct recovery facilities on the Pioneer property and, in return, receive a first priority use of recovery facilities to supply water for use

within their respective boundaries directly or by exchange. The plan for recovery facilities will provide for the following:

- A. Operation and maintenance requirements and related costs (including budgeting, KCWA staffing costs and in-kind services).
- B. Repayment of costs and financing of new wells, possibly with a user charge on the use of existing KCWA wells and new wells. The user charge would be sufficient to repay, as a minimum, the variable and fixed operation, and maintenance costs of existing wells (as designated by KCWA and participants) as well as provide funding for new well construction. This charge would apply to the following KCWA wells:
 - 1) Four wells along the Cross Valley Canal constructed in 1991 (subject to a long-term agreement with CVC participants).
 - 2) Nine wells located in the City of Bakersfield's 2800-acre spreading area (five wells constructed by KCWA in 1986 and four wells constructed in 1991).
 - 3) Six wells located on KCWA's Pioneer property (would become seven if the exchange with Castle & Cooke is completed).
 - 4) New wells.
 - 5) Existing agricultural wells owned by Castle & Cooke Homes Inc. that KCWA has rights to use.
- C. Principles and procedures for apportioning recovery facilities costs among the various categories of Project participants and users, with specific recognition of district participants in the 1991 Groundwater Recovery Project.
- D. Six new wells to be paid for by Berrenda Mesa Project participants would be located on Pioneer property. The user charge noted above would not apply to these wells; rather the user fee established by the Berrenda Mesa Project participants shall apply.
- E. Recognition of KCWA commitments to Improvement District No. 4 regarding use of four new well sites on the City of Bakersfield's 2800-acre spreading area and deliveries to meet the minimum water needs of the citizens in ID4. These commitments are described in Appendix 1 attached to these Principles. An estimate of the need by ID4 for KCWA wells is shown in Table 1, attached to these Principles as Appendix 2.
- F. Recharge Priority Participants shall have a second priority use of either existing wells or new wells constructed by Recovery Priority Participants.
- G. Recovery Priority Participants shall first recover water from their own groundwater bank accounts within the Kern Fan Area and, when such accounts are depleted, may borrow water from the overdraft correction accounts of one or more Recharge Priority Participants. Any water borrowed from the overdraft correction account of a Recharge Priority Participant shall be replaced by the Recovery Priority Participant at mutually agreeable times and flow rates.

The Recovery Priority Participant borrowing from an overdraft correction account and all affected Recharge Priority Participants shall cooperate with one another, in good faith, to enable the return of borrowed water to occur within a five (5) year period. Further, the Recovery

Priority Participant borrowing from an overdraft correction account and all affected Recharge Priority Participants shall cooperate with one another, in good faith, to enable the return of borrowed water to occur, to the greatest extent practicable, within the boundaries of the affected Recharge Priority Participant. Recharge Priority Participants may accept additional quantities of water within their boundaries delivered by Recovery Priority Participants for the purposes of supplementing the groundwater bank accounts established by such Recovery Priority Participants.

Water to be returned to Recharge Priority Participants via direct recharge shall include an additional six percent for evaporation and miscellaneous losses. Water to be returned via surface deliveries within the boundaries of the Recharge Priority Participant will not be subject to the six percent evaporation and miscellaneous loss.

4. Upon completion of each plan, any participant therein dissatisfied therewith may withdraw from the Project. A withdrawing participant will incur no penalty for such withdrawal, will not be liable for any Project costs incurred after the date of withdrawal, and will not be entitled to any refund of monies paid prior to the date of withdrawal. Remaining Recharge Priority Participants are responsible for building recharge facilities and remaining Recovery Priority Participants are responsible for building recovery facilities, all in accordance with their respective plans. Facilities will be built out over time pursuant to the particular plan. However, if any facilities are not constructed as called for in the approved plan, then any participant may construct the same at such participant's cost and expense. A participant who proposes to construct facilities pursuant to this paragraph must offer all other participants an opportunity to share in the Project prior to the commencement of construction. All participants sharing in the Project shall be entitled to first priority use of the facility so constructed until such time as any disproportionate share of the cost of construction advanced by such participants has been reimbursed.
5. The initial costs for existing recharge facilities, recovery facilities on the Pioneer Property and land will not be recovered from member unit Project participants. The Project, including recharge and recovery facilities, will be Agency-owned facilities that shall be used by Project Participants who plan, finance, and construct Project facilities as agreed herein. This approach preserves the Project for its intended purpose of replenishing water shortages within the county for future generations.
6. The primary purpose of the Pioneer Project is to diminish water shortages within participants' respective boundaries through use of Project facilities for participants' banking and overdraft correction. A secondary purpose of the Pioneer Project is use of the facilities by out-of-Agency interests or non-member unit interests. Such interests may use facilities which have been reserved for KCWA use as provided for in paragraph 8 at not less than full cost or may use non reserved Project facilities with the approval of KCWA and the Project Participants at not less than full cost. Any out-of-Agency or non-member unit programs (including land lease revenues) on the Pioneer Project shall benefit all participants for the primary purpose of reimbursing the capital outlays made by KCWA and all participants for the purchase of the property and the construction of facilities in the following order: first, to reimburse KCWA 75% of its "land costs" (\$ 11,380,000), amounting to \$8,535,000; second, to reimburse KCWA and all Project participants the principal amount of all capital outlays, exclusive of land costs, on a pro-rata basis including, in order, (1) all costs incurred after January 1, 1995 and (2) costs incurred prior to January 1, 1995; third, to reimburse the KCWA the remaining 25% of its land costs; and, fourth, to reduce all participants' operation and maintenance expenses in proportion to use as determined by participants and KCWA. After covering operations and improvement expenses, all Project revenues shall belong to KCWA to be used at the discretion of the KCWA Board of Directors.

7. Pioneer Project operations shall be governed by principles substantially similar in substance to those outlined in the Memorandum of Understanding developed for the Kern Water Bank (a copy of which is attached hereto, marked Appendix 3 and incorporated herein by this reference), including the following:
- A. The loss formula shall be as per the MOU, or 6% for evaporation and miscellaneous losses and 4% for migration. Banking by participants will be assessed the 4% migration loss which may be purchased by overlying users within a three-year period, and any unpurchased amounts will be retained within their account and thus be recoverable by the banking entity. Out-of-Agency activities will be assessed an additional 5% loss which will be dedicated to the groundwater basin to offset overdraft.
 - B. Subject to the review and approval of the Monitoring Committee, bank accounts may be transferred for recovery purposes to wells other than Pioneer Project wells including, to the extent possible, the City of Bakersfield's 2800-acre spreading area, the Berrenda Mesa Project, the Rosedale-Rio Bravo Water Storage District spreading areas, and the Kern Water Bank, to provide flexibility in banking and extraction operations, thus minimizing potential groundwater impacts. Similarly, Pioneer Project wells may be used for recovery from accounts recharged at other project locations including but not limited to the City of Bakersfield's 2800 acre spreading area, the Berrenda Mesa Project, the Kern Water Bank, and the Kern River Channel, such recovery also being subject to the review and approval of the Monitoring Committee. Separate accounts will be maintained for water stored in the Pioneer Project as well as other projects, including the Berrenda Mesa Project, the City of Bakersfield's 2800 acre spreading area, and water spread in the Kern River Channel (which includes water banked in the Kern River Channel within ID4 when capacity is not being used by others).
 - C. Participants will be represented on the Monitoring Committee but, assuming that the Kern Water Bank Monitoring Committee will be expanded to cover other projects such as the Pioneer Project, those already participating under the Kern Water Bank will represent their interests for both projects and not require a second representative for the Pioneer Project in order to maintain a reasonable committee size.
 - D. No participant may claim normal, natural and unavoidable losses of native waters as part of its groundwater bank account.
 - E. Production of the original five KCWA wells on the City of Bakersfield's 2800 acre spreading area will not be limited except as provided by the Monitoring Committee.
8. In recognition of KCWA's ownership of the Pioneer property, 25% of any and all Project facilities now existing or hereafter constructed by participants within the City of Bakersfield's 2800 acre spreading area (exclusive of ID4 wells referred to in paragraph 3. E.), the Pioneer property, the Castle & Cooke lands, etc., shall be available to the KCWA for KCWA use as determined by the KCWA Board of Directors and no capital repayment costs shall be paid by KCWA for use of its 25% share of the spreading and recovery facilities ("KCWA Reserved Rights"). KCWA may only exercise the recharge portion of the KCWA Reserved Rights to the exclusion of Recharge Priority Participants seeking to recharge for overdraft correction if and to the extent that KCWA recharge is for the purpose of reducing overdraft by or on behalf of persons, entities or organizations overlying the groundwater basin.

9. The term of the final agreement shall be to and including December 31, 2035. At the end of said term the Pioneer Project, as defined by these principles, will terminate and the ownership of all facilities shall remain with the KCWA. Member units will have ten years thereafter to withdraw water from Pioneer accounts.
10. Allocation of capacity during times when demand for facility capacity exceeds available capacity shall be as follows:
 - A. Allocation of recharge and recovery capacity among Recharge Priority Participants shall be as determined by participating KCWA member units selecting the recharge priority.
 - B. Allocation of recharge capacity among Recovery Priority Participants shall be as determined by participating KCWA member units selecting the recovery priority.
 - C. Allocation of recovery capacity among Recovery Priority Participants shall be as determined by participating KCWA member units selecting the recovery priority, except as to the Agency's commitment to meet minimum treatment plant needs as provided herein.
 - D. Allocation of KCWA Reserved Rights shall be as determined by the KCWA Board of Directors, except as otherwise provided herein.
11. Costs not directly related to recharge and/or recovery operations, such as CEQA and ESA compliance, land management, monitoring, and Project development costs, shall be allocated via a uniform fee applicable to all participants chargeable as part of the general fee structure for recharge and/or recovery activities. Each participant signatory hereto shall pay to KCWA a non-refundable deposit of \$2,000.00 to be used by KCWA to offset such costs.
12. The Agency and participants acknowledge that in order for the Project to meet its primary purpose of diminishing water shortages within participant's respective boundaries, reliable access to the Cross Valley Canal, or other such delivery facilities or programs, will need to be established. The Agency and participants will endeavor to cooperate to work toward development of agreements and any other necessary actions to provide conveyance access to and from the Project.
13. This document is a Statement of Principles. The parties hereto shall promptly undertake to negotiate, prepare and execute, after compliance with all applicable laws, a formal contract for the construction, operation, maintenance and replacement of facilities for the Pioneer Project. The contract shall contain provisions consistent with the Statement of Principles unless the parties otherwise agree.

STATEMENT OF PRINCIPLES

Governing Implementation of the Pioneer Project
(Signatories)

IN WITNESS WHEREOF the parties have executed this document the date first above written.

OWNER:

Kern County Water Agency

Signature

Title

Date

PARTICIPANTS:

Belridge Water Storage District

Signature

Title

Priority

Date

Berrenda Mesa Water District

Signature

Title

Priority

Date

STATEMENT OF PRINCIPLES

Governing Implementation of the Pioneer Project
(Signatories)

Buena Vista Water Storage District

Signature

Title

Priority

Date

Henry Miller Water District

Signature

Title

Priority

Date

Kern Delta Water District

Signature

Title

Priority

Date

Cawelo Water District

Signature

Title

Priority

Date

Improvement District No. 4

Signature

Title

Priority

Date

Lost Hills Water District

Signature

Title

Priority

Date

STATEMENT OF PRINCIPLES

Governing Implementation of the Pioneer Project
(Signatories)

Rosedale Rio Bravo WSD

Signature

Title

Priority

Date

Tehachapi Cummings County WD

Signature

Title

Priority

Date

West Kern Water District

Signature

Title

Priority

Date

Semitropic Improvement District

Signature

Title

Priority

Date

Tejon Castac Water District

Signature

Title

Priority

Date

Wheeler Ridge Maricopa WSD

Signature

Title

Priority

Date

**Appendix 1
to Statement of Principles
Governing Implementing
the Pioneer Project.**

TO: Local Monterey Negotiators

FROM: Bill Miller and Tom Clark

DATE: March 30, 1995

SUBJECT: Consideration to ID4 for Restriction on Use of AG Trust Fund Moneys to AG Member Units Only

The four remaining Agency well sites located in the City's 2,800 Acres will be dedicated to ID4 for its use on a priority basis. It is understood ID4 will pay the cost to construct the four wells and appurtenant pipelines to convey water to the CVC. Second priority use by other Member Units of the four wells will be subject to normal capital and operational cost reimbursement.

The Agency agrees that a first priority will be given to ID4 from the Agency's 2,800 Acres and/or Pioneer Projects of ID4's existing or expanded treatment plant to ensure deliveries to meet the minimum water needs of the citizens of ID4. Capacity for an expanded plant shall be limited to flows necessary on an emergency basis to meet peaking demands of a 38,500 acre-foot plant (existing voter approved ID4 project). The costs to construct wells, pipelines and other facilities to provide ID4 said first priority will be borne by ID4. The first priority will be conditioned upon maximum possible use of wells within ID4 operated by purveyors contracting with the Agency for treated water, pursuit of alternative water supply sources, and promulgation of emergency conservation measures. This first priority will not be used to meet future ID4 demands beyond a 38,500 af plant. Second priority use by other Member Units of these facilities will be subject to normal capital and operational cost reimbursement. The Agency will consider ways to document and provide for the implementation of these provisions.

**Appendix 2
to Statement of Principles
Governing Implementing
the Pioneer Project.**

Table 1

**Estimated Need by Improvement District No. 4
for
Kern County Water Agency Wells
During Drought Years**

	Existing 25,000 af treatment plant (cfs)	Expanded 38,500 af treatment plant (cfs)
1. Estimated peak demand need in summer.	68	102
2. Estimated loss in CVC extension.	15	15
3. Estimated quantity to be provided by:		
a. Purveyor wells	35	35
b. Two existing ID4 wells along CVC	10	10
c. Four ID4 well sites in 2800-Acres	20	20
4. Remaining need with no SWP entitlement	16	52
5. SWP entitlement of 10% delivered during four months	32**	32**
6. Remaining need from KCWA wells during summer months	0	20

*Historic July Average flow

** $(77,000 \times 0.10) / 4 = 1925$ af/month or 32 cfs

APPENDIX D

Archeological records search of the KWB property

California
Archaeological
Inventory

Information
Center Kern
Tulare

Bakersfield College
1801 Panorama Drive
Bakersfield, CA 9330
(805) 395-4391

ARCHAEOLOGICAL RECORDS SEARCH

Project: Record Search for the Dept. of Water Resources

Location: T. _____ R. _____ Sections: _____

U.S.G.S. Quads.: Tupman, Millux, Mouth of Kern, Stevens

Requested by: Department of Water Resources

P. O. Box 388

Sacramento, Calif. 95802 Phone 209-445-5278

Environmental Setting:

Valley Floor Foothills Mountains Desert Other

Previous Studies: There have been five prior investigations on

or within project boundary. (See continuation sheet)

Recorded Archaeological Sites: There are eighteen recorded sites on
or within project boundary. These sites consist of beads, flakes
handtools, projectile points, bowl fragments, housepits and burials.

Archaeological Sensitivity: High Moderate Low

Reason: High is due to known sites in project boundary. Low is
due to lack of known sites and prior impacts.

The Following Actions Are Recommended:

No additional action is necessary unless cultural materials are located during any construction or development of area.

Whether or not an EIR is required, a field survey is required to determine if any cultural resources are present.

Additional Comments and Recommendations: Known sites and environmental
setting make a survey necessary for this project, plus the study
conducted by Mr. Wallace is more of a literature search rather than
a actual foot survey.

Robert A. Schiffman, Coordinator
South Central Information Center

By: Evelyn Brown
Title: Staff Assistant

Date: 4-9-86

APPENDIX D (cont.)

Continuation Sheet

Millux Quad -

1. Wallace, William 1971 - Archaeological Investigation at Buttonwillow Water Management Project.

Stevens Quad -

1. Schiffman, R. 1976 - Archaeological Survey for the Ten Section Oil Field.
2. Ancient Enterprise 1979 - Archaeological Resources Assessment of the Proposed Alternate Rts. for Gosford Intertie Pipeline.
3. Wallace, William 1971 - See Wallace above.

Tupman Quad -

1. Wallace, William 1979 - See Wallace above.
2. Woodward, J. 1983 - Proposed Capture Pen and Buried Telephone Lines.
3. Ancient Enterprise 1979 - See Ancient Enterprise above.
4. McManus, J. 1985 - Archaeological Survey Report for Proposed Widening Project 06-Ker-119, PM 14.9/19.8 254400.

APPENDIX E

Archeological records search of the Berrenda Mesa property

California
Archaeological
Inventory

Information
Center

Kern
Tulare

RECEIVED

SEP 23 1983

Bakersfield College
1801 Panorama Drive
Bakersfield, CA 93305
(805) 395-4391

SE

Survey Recommended

SITE RECORDS SEARCH AND LITERATURE REVIEW

Project: Groundwater Recharge-Extraction Project for Berrenda Mesa Water District.

Location: T. 30S R. 26E Section(s) 3, & 2 County Kern

U.S.G.S. Quads: Stevens 7.5' USGS Topographic map.

Requested by: Philip L. Wagner/Leedshill-Herekenhoff, INC.

1275 Market Street

San Francisco, California 94103 Phone (415) 626-2070

Natural Environment:

Valley Floor Foothills Mountain Desert Other

Historical Modifications:

Agriculture Urban Mining Other Unknown

Ethnographic Groups: Southern Valley Yokuts Group.

Previous Archaeological Studies: None recorded within proposed project area.

Surveys have been recorded adjacent to and within close proximity to the project.

Recorded Archaeological Sites: None recorded within project area. Five plus archaeological sites, previously recorded, exist within a three-mile radius of the project boundary.

National Register Properties: None

Prehistoric Complexes: None

Special Research Problems: None

Area Sensitivity: High Moderate Low Unknown

Additional Comments: Project area is situated within similar environmental setting, supportive of aboriginal sites and/or complexes. Archaeological survey is recommended in order to determine the location of any Cultural Resources.

Robert A. Schiffman
Coordinator

By: Jim Uli/Staff Archaeologist

Jim Uli Date: 9/20/83

APPENDIX F

Ground Water Quality Data

1991 Emergency Ground Water Recovery Program
 SUMMARY OF WATER QUALITY IN PUMPING WELLS

Date: Feb 5, 1992

Well Location	30S/26E-02P01	29S/27E-32G01	29S/27E-24X01	29S/27E-31J01	30S/26E-05M01	30S/26E-02L01	
Well Name	Berrenda Mesa3	Bartell	Kern River	ID4#1	KCWA-PP#3	BM/KCWA 2	
Flow (cfs)	3.2	5.6	45	6	6	6	
Direction of Flow	W	W	W	W	W	W	
Parameter (mg/L)	Sample Date	910207-2	910207-3	1/2/90	910314-1	910320-6	910326-2
ALUMINUM		0.20	<.1	0.02	<.10	0.42	<.10
ALKALINITY (TOTAL)		82	63				
ARSENIC		<.01	<.01	<.01	<.01	<.01	<.010
BARIUM		<.1	<.1	<.08	0.14	0.10	<.10
BICARBONATE		100	77	81	95	89	85
BORON		0.16	0.21	0.15	0.16	0.28	0.21
CADMIUM		0.001	<.001	<.001	<.001	<.001	<.001
CALCIUM		26	21	20	30	32	22
CARBONATE		1	<.5	<.5	<.5	2	<.5
CHLORIDE		9	20	41	16	23	13
CHROMIUM(HEXAVALENT)		<.01	<.01	<.03	<.01	<.01	<.010
COLOR		5	3	15	<3.0	5.0	5.0
COPPER		<.05	<.05	<.02	<.05	<.05	<.050
CYANIDE				<.006			
FLUORIDE		0.32	0.37	0.90	0.22	0.26	0.30
IRON		0.45	<.10	0.23	<.10	0.11	<.010
LEAD		0.027	<.005	<.005	<.005	<.005	<.005
MAGNESIUM		3.4	5.1	4.4	2.0	1.7	2.4
MANGANESE		0.03	<.030	<.02	<.030	<.030	<.030
MERCURY		<.001	<.001	<.001	<.001	<.001	<.001
MBAS				<.05			
NITRATE		3.8	3.4	6.7	13.0	8.1	8.2
ODOR T.O.N.		1.4	1.4	1.4	1.4	1.4	1.4
POTASSIUM		1.3	1.4				
pH		8.1	7.6	8.3	8.3	8.5	8.6
SELENIUM		<.005	<.005	<.005	<.005	<.005	<.005
SPECIFIC CONDUCTANCE		192	216	205	192	270	205
SILVER		0.01	<.010	<.02	<.010	<.010	<.01
SODIUM		20	22	28	22	26	27
STRONTIUM							
SULFATES		12	17	36	16	13	15
TOTAL DISSOLVED SOLIDS		124.8	140.4	220.0	171.0	188.0	151.0
HARDNESS		80	74	68	82	87	66
TURBIDITY		4.4	0.2	2.6	0.2	2.1	0.3
ZINC		<.005	<.005	<.02	0.22	0.17	<.050

Parameter (ug/L)

Chlorinated Hydrocarbons:							
ENDRIN		0.02	<.02	<.0002	<.02	<.02	<.02
LINDANE		0.4	<.4	<.0004	<.4	<.4	<.4
METHOXYCHLOR		<10.0	<10.0	<.01	<10.0	<10.0	<10.0
TOXAPHENE		<.5	<.5	<.005	<.5	<.5	<.5
CHLORDANE							
HEPTACHLOR							
HEPTACHLOR EPOXIDE							
Chlorophenoxy:							
2,4-D		10.0	<10.0	<.01	<10.0	<10.0	<10.0
2,4,5-TP		1.00	<1.0	<.001	<1.0	<1.0	<1.0

1994 Emergency Ground Water Recovery Program
 SUMMARY OF WATER QUALITY IN PUMPING WELLS

Date: Feb 5, 1992

Discharge to: CVC

Well Location	30S/26E-02P01	29S/27E-32G01	29S/27E-24X01	29S/27E-31J01	30S/26E-05M01	30S/26E-02L01	
Well Name	Berrenda Mesa3	Bartell	Kern River	ID4#1	KCWA-PP#3	BM/KCWA 2	
Flow	3.2	5.6	45	6	6	6	
Direction of Flow	W	W	W	W	W	W	
Parameter (ug/L)	Sample Date	910207-2	910207-3	1/2/90	910314-1	910320-6	910326-2
Trihalomethanes:							
TTHM			<.002	<.5	<.5	<.5	
Radiological:							
GROSS ALPHA (pCi/L)			3	7	6	13	
GROSS BETA (pCi/L)			4	0	0	3	
NATURAL URANIUM (pCi/L)							
Volatiles:							
BENZENE	<0.2	<0.2		<.5	<.5	<.5	
CARBON TETRACHLORIDE				<.5	<.5	<.5	
CHLOROBENZENE	<0.2	<0.2					
BROMOMETHANE							
CHLOROETHANE							
2-CHLOROETHYL VINYL ETHER							
CHLOROMETHANE							
1,2-DICHLOROBENZENE	<0.2	<0.2					
1,3-DICHLOROBENZENE	<0.2	<0.2					
DICHLORODIFLUOROMETHANE							
1,4-DICHLOROBENZENE	<0.2	<0.2		<.5	<.5	<.5	
1,1-DICHLOROETHANE(1,1 DCA)				<.5	<.5	<.5	
1,2-DICHLOROETHANE(1,2 DCA)				<.5	<.5	<.5	
1,2-DICHLOROETHYLENE(1,2 DCE)							
trans-1,2-DICHLOROETHANE							
1,2-DICHLOROPROPANE							
ETHYL BENZENE	<0.2	<0.2					
METHYLENE CHLORIDE							
1,1,2,2-TETRACHLOROETHANE							
TETRACHLOROETHENE(PCE)							
TOLUENE	<0.2	<0.2					
BROMACIL							
DIAZINON							
PROMETRYN							
1,1,1-TRICHLOROETHANE				<.5	<.5	<.5	
1,1,2-TRICHLOROETHANE							
TRICHLOROETHANE(TCE)				<.5	<.5	<.5	
TRICHLOROFLUOROMETHANE							
TRICHLOROTRIFLUOROETHANE							
VINYL CHLORIDE				<.5	<.5	<.5	
XYLENES	<0.6	<0.6					
ETHYLENE DIBROMIDE				<.01	<.01	<.01	
DIBROMOCHLOROPROPANE				<.01	<.01	<.01	
THIOBENCARB	<.5	<.5		<.5	<.5	<.5	
MOLINATE							
BENTAZON							
ATRAZINE	<1.0	<1.0		<1.0	<1.0	<1.0	
SIMAZINE	<.5	<.5		<.5	<.5	<.5	

1991 Emergency Ground Water Recovery Program
 SUMMARY OF WATER QUALITY IN PUMPING WELLS

Date: Feb 5, 1992

Well Location:	29S/26E-36R01	30S/26E-19B01	30S/26E-19B01	30S/26E-19B01	30S/26E-09G01	30S/26E-09C01	
Well Name:	ID4#3(PP5)	(S)	(M)	(D)	KCWA 10	KCWA 7	
Flow (cfs)							
Direction of Flow							
Parameter (mg/L)	Sample Date	910421-1	910508-1	910508-2	910508-3	910516-4	910518-1
ALUMINUM		<.10				0.11	<.05
ALKALINTY (TOTAL)							
ARSENIC		<.010					
BARIUM		0.1				<.1	<.1
BICARBONATE		85					
BORON		0.10					
CADMIUM		<.001				<.001	0.001
CALCIUM		20					
CARBONATE		<.5					
CHLORIDE		6				17	17
CHROMIUM(HEXAVALENT)		<.010				<.010	<.010
COLOR		<3				2	1
COPPER		<.050				<.010	<.010
CYANIDE							
FLUORIDE		0.16				0.18	0.18
IRON		<.10				0.08	<.05
LEAD		<.005				<.005	<.005
MAGNESIUM		0.5					
MANGANESE		<.030				<.010	<.010
MERCURY		<.001				<.0002	<.0002
MBAS						<.02	0.02
NITRATE		5.4				2.2	2.2
ODOR T.O.N.		1.4				nd	nd
POTASSIUM							
pH		8.4					
SELENIUM		<.005				<.002	<.002
SPECIFIC CONDUCTANCE		172				300	310
SILVER		<.010				<.010	<.010
SODIUM		24					
STRONTIUM							
SULFATES		15				20	20
TOTAL DISSOLVED SOLIDS		146.0				205.0	240.0
HARDNESS		52					
TURBIDITY						3.4	0.1
ZINC		<.050				<.010	0.02
Parameter (ug/L)							
Chlorinated Hydrocarbons:							
ENDRIN		<.02				<.007	<.007
LINDANE		<.4				<.02	<.02
METHOXYCHLOR		<10.0				<.01	<.01
TOXAPHENE		<.5				<1	<1
CHLORDANE						<.1	<.1
HEPTACHLOR						<.01	<.01
HEPTACHLOR EPOXIDE							
Chlorophenoxys:							
2,4-D		<10.0				<.3	<.3
2,4,5-TP		<1.0				<.1	<.1

1991 Emergency Ground Water Recovery Program
 SUMMARY OF WATER QUALITY IN PUMPING WELLS

Date: Feb 5, 1992

Well Location	29S/26E-36R01	30S/26E-19B01	30S/26E-19B01	30S/26E-19B01	30S/26E-09G01	30S/26E-09C01	
Well Name	ID4#3(PP5)	(S)	(M)	(D)	KCWA 10	KCWA 7	
Flow		0	0	0	0	0	
Direction of Flow		0	0	0	0	0	
Parameter (ug/L)	Sample Date:	910421-1	910508-1	910508-2	910508-3	910516-4	910518-1
Trihalomethanes:							
TTHM	<.5				<.8	<.8	
Radiological:							
GROSS ALPHA (pCi/L)					3.3	7.3	
GROSS BETA (pCi/L)					4.1	2.8	
NATURAL URANIUM (pCi/L)					4.8	0.7	
Volatiles:							
BENZENE	<.5	<.5	<.5	<.5	<.2	<.2	
CARBON TETRACHLORIDE	<.5	<.5	<.5	<.5	<.2	<.2	
CHLOROENZENE					<.2	<.2	
BROMOMETHANE					<.2	<.2	
CHLOROETHANE					<.2	<.2	
2-CHLOROETHYL VINYL ETHER					<.2	<.2	
CHLOROMETHANE					<.2	<.2	
1,2-DICHLOROENZENE					<.2	<.2	
1,3-DICHLOROENZENE					<.2	<.2	
DICHLORODIFLUOROMETHANE					<.2	<.2	
1,4-DICHLOROENZENE	<.5	<.5	<.5	<.5	<.2	<.2	
1,1-DICHLOROETHANE(1,1 DCA)	<.5	<.5	<.5	<.5			
1,2-DICHLOROETHANE(1,2 DCA)	<.5	<.5	<.5	<.5	<.2	<.2	
1,2-DICHLOROETHYLENE(1,2 DCE)					<.2	<.2	
trans-1,2-DICHLOROETHANE					<.2	<.2	
1,2-DICHLOROPROPANE					<.2	<.2	
ETHYL BENZENE					<.2	<.2	
METHYLENE CHLORIDE					<.2	<.2	
1,1,2,2-TETRACHLOROETHANE					<.2	<.2	
TETRACHLOROETHENE(PCE)					<.2	<.2	
TOLUENE					<.2	<.2	
BROMACIL					<1	<1	
DIAZINON					<.5	<.5	
PROMETRYN					<.7	<.7	
1,1,1-TRICHLOROETHANE	<.5	<.5	<.5	<.5	<.2	<.2	
1,1,2-TRICHLOROETHANE					<.2	<.2	
TRICHLOROETHANE(TCE)	<.5	<.5	<.5	<.5	<.2	<.2	
TRICHLOROFLUOROMETHANE					<.2	<.2	
TRICHLOROTRIFLUOROETHANE					<.2	<.2	
VINYL CHLORIDE	<.5	<.5	<.5	<.5	<.2	<.2	
XYLENES					<.6	<.6	
ETHYLENE DIBROMIDE	<.01	<.01	<.01	<.01	<.01	<.01	
DIBROMOCHLOROPROPANE	<.01	<.01	<.01	<.01	<.01	<.01	
THIOBENCARB	<.5	<.5	<.5	<.5	<.7	<.7	
MOLINATE					<.3	<.3	
BENTAZON					<.5	<.5	
ATRAZINE	<1.0	<1.0	<1.0	<1.0	<.5	<.5	
SIMAZINE	<.5	<.5	<.5	<.5	<1	<1	

1991 Emergency Ground Water Recovery Program
 SUMMARY OF WATER QUALITY IN PUMPING WELLS

Date: Feb 5, 1992

Well Location	30S/25E-17F01	30S/25E-18P01	30S/25E-18R01	30S/26E-09F01	30S/25E-09E01	30S/25E-09C01	
Well Name	DWR WELL	DWR WELL	DWR WELL	KCWA 9	BV2-9E	BV1-9C	
Flow (cfs)							
Direction of Flow							
Parameter (mg/L)	Sample Date	910520-11	910520-9	910520-10	910602-1	910603-1	910614-1
ALUMINUM		0.11	<.05	<.05	<.05	<.05	<.05
ALKALINITY (TOTAL)							
ARSENIC					<.002	0.02	0.015
BARIUM		<.1	<.1	<.1	<.1	<.1	<.1
BICARBONATE					2	1	
BORON							
CADMIUM		<.001	<.001	<.001	<.005	<.005	<.001
CALCIUM					46	5	
CARBONATE							
CHLORIDE		10	34	1	25	20	26.6
CHROMIUM (HEXAVALENT)		<.01	<.01	<.01	<.01	<.01	<.01
COLOR		2	1	1	1	1	1
COPPER		<.01	<.01	<.01	<.01	<.01	<.01
CYANIDE							
FLUORIDE		0.12	0.09	0.10	0.16	0.35	0.39
IRON		0.41	0.25	<.05	<.05	<.05	<.05
LEAD		<.05	<.05	<.05	<.005	<.005	<.005
MAGNESIUM				<.010	3.5	0.0	
MANGANESE		0.04	0.01	0.01	0.01	0.01	<.01
MERCURY		<.0002	<.0002	<.0002	<.0002	<.0002	<.0002
MBAS		0.02	0.02	0.02	0.02	0.02	<.02
NITRATE		1.3	4.0	4.9	2.2	2.7	7.5
ODOR T.O.N.		nd	nd	nd	nd	nd	nd
POTASSIUM					1.3	1.3	
pH					8.1	9.3	
SELENIUM		<.002	<.002	<.002	<.002	<.002	<.002
SPECIFIC CONDUCTANCE		280	600	480	400	240	280
SILVER		<.01	<.01	<.01	<.01	<.01	<.01
SODIUM					29	29	
STRONTIUM							
SULFATES		19	132	70	27	16	22
TOTAL DISSOLVED SOLIDS		220.0	390.0	300.0	260.0	160.0	185
HARDNESS							
TURBIDITY		0.1	0.5	0.2	0.3	0.3	0.28
ZINC		0.01	0.01	0.01	0.05	<.01	<.01

Parameter (ug/L)

Chlorinated Hydrocarbons:						
ENDRIN	<.007	<.007	<.007	<.007	<.007	<.007
LINDANE	<.02	<.02	<.02	<.02	<.02	<.02
METHOXYCHLOR	<.01	<.01	<.01	<.01	<.01	<.01
TOXAPHENE	<1	<1	<1	<1	<1	<1
CHLORDANE	<.1	<.1	<.1	<.1	<.1	<.1
HEPTACHLOR	<.01	<.01	<.01	<.01	<.01	<.002
HEPTACHLOR EPOXIDE	<.003	<.003	<.003	<.003	<.003	<.003
Chlorophenoxy:						
2,4-D	<.5	<.5	<.5	<.5	<.5	<1
2,4,5-TP	<.1	<.1	<.1	<.1	<.1	<1

1991 Emergency Ground Water Recovery Program
 SUMMARY OF WATER QUALITY IN PUMPING WELLS

Date: Feb 5, 1992

Well Location	30S/25E-24G01	30S/24E-24A01	30S/25E-19G01	30S/25E-08P01	30S/26E-21D01	30S/25E-24H01	
Well Name	OLCESE 8	DWR-24A1	DWR-19G1	DWR-8P1	DWR-2101	OLCESE 7	
Flow (cfs)							
Direction of Flow							
Parameter (mg/L)	Sample Date	910615-1	910624-8	910624-9	910624-10	910627-1	910627-8
ALUMINUM		<.05	<.05	<.05	<.05	<.1	0.10
ALKALINITY (TOTAL)							
ARSENIC		0.008	<.002	<.002	0.002	<.01	0.012
BARIUM		<.1	<.1	<.1	<.1		<.1
BICARBONATE							
BORON							
CADMIUM		<.001	<.005	<.005	<.005	<.001	<.001
CALCIUM							
CARBONATE							
CHLORIDE			16	24.1	12.1	25.5	15.6
CHROMIUM(HEXAVALENT)		<.01	<.01	<.01	<.01	<.01	<.01
COLOR			1	1	1	1	1
COPPER		<.01	<.01	<.01	<.01	<.05	0.016
CYANIDE							
FLUORIDE			<.05	0.07	0.11	0.09	0.13
IRON		<.05	0.087	0.398	0.157	<.1	128
LEAD		<.005	<.005	<.005	<.005	<.005	<.005
MAGNESIUM							
MANGANESE		<.01	<.01	<.01	<.01	<.03	<.03
MERCURY		<.0002	<.0002	<.0002	<.0002	<.001	<.001
MBAS			0.02	<.02	<.02	0.02	0.02
NITRATE		1.3	1.8	3.5	7.1	8	3.5
ODOR T.O.N.			ND	2	2	nd	ND
POTASSIUM							
pH							
SELENIUM		<.002	<.002	<.002	<.002	<.005	<.005
SPECIFIC CONDUCTANCE			610	700	270	310	340
SILVER		<.01	<.01	<.01	<.01	<.01	<.01
SODIUM							
STRONTIUM							
SULFATES			167	213	26	36	35
TOTAL DISSOLVED SOLIDS			425	460	160	175	185
HARDNESS							
TURBIDITY			0.14	0.11	0.15	0.06	2.6
ZINC		<.01	<.01	0.012	<.01	21	<.05

Parameter (ug/L)

Chlorinated Hydrocarbons:						
ENDRIN	<.007	<.007	<.007	<.007	<.007	<.007
LINDANE	<.02	<.02	<.02	<.02	<.02	<.02
METHOXYCHLOR	<.01	<.01	<.01	<.01	<.01	<.01
TOXAPHENE	<1	<1	<1	<1	<1	<1
CHLORDANE	<.1	<.1	<.1	<.1	<.1	<.1
HEPTACHLOR	<.002	<.002	<.002	<.002	<.002	<.002
HEPTACHLOR EPOXIDE	<.003	<.003	<.003	<.003	<.003	<.003
Chlorophenoxy:						
2,4-D	<1	<1	<1	<1	<7	<1
2,4,5-TP	<1	<1	<1	<1	<1	<1

1991 Emergency Ground Water Recovery Program
 SUMMARY OF WATER QUALITY IN PUMPING WELLS

Date: Feb 5, 1992

Well Location	Well Name	CVC at Ca Aq
Flow (cfs)	Direction of Flow	
Parameter (mg/L)	Sample Date	910307-1
ALUMINUM		0.01
ALKALINITY (TOTAL)		
ARSENIC		<.010
BARIUM		<.10
BICARBONATE		75.6
BORON		0.27
CADMIUM		<.001
CALCIUM		44
CARBONATE		38.4
CHLORIDE		164.4
CHROMIUM(HEXAVALENT)		<.010
COLOR		10
COPPER		0.06
CYANIDE		
FLUORIDE		0.5
IRON		0.12
LEAD		<.005
MAGNESIUM		12.2
MANGANESE		<.030
MERCURY		<.001
MBAS		
NITRATE		2.7
ODOR T.O.N.		4
POTASSIUM		
pH		9.53
SELENIUM		<.005
SPECIFIC CONDUCTANCE		640
SILVER		<.005
SODIUM		104.3
STRONTIUM		
SULFATES		71.5
TOTAL DISSOLVED SOLIDS		416
HARDNESS		160
TURBIDITY		2
ZINC		<.050

Parameter (ug/L)	
Chlorinated Hydrocarbons:	
ENDRIN	<.02
LINDANE	<.04
METHOXYCHLOR	<10.0
TOXAPHENE	<.5
CHLORDANE	
HEPTACHLOR	
HEPTACHLOR EPOXIDE	
Chlorophenoxy:	
2,4-D	<10.0
2,4,5-TP	<1.0

1991 Emergency Ground Water Recovery Program
 SUMMARY OF WATER QUALITY IN PUMPING WELLS

Date: Feb 5, 1992

Well Location:	Well Name:	Flow Direction of Flow:	Sample Date:
	CVC at Ca Aq		910307-1
Trihalomethanes:			
TTHM			<.5
Radiological:			
GROSS ALPHA (pCi/L)			3
GROSS BETA (pCi/L)			0.4
NATURAL URANIUM (pCi/L)			
Volatiles:			
BENZENE			<.5
CARBON TETRACHLORIDE			<.5
CHLOROBENZENE			
BROMOMETHANE			
CHLOROETHANE			
2-CHLOROETHYL VINYL ETHER			
CHLOROMETHANE			
1,2-DICHLOROBENZENE			
1,3-DICHLOROBENZENE			
DICHLORODIFLUOROMETHANE			
1,4-DICHLOROBENZENE			<0.5
1,1-DICHLOROETHANE(1,1 DCA)			<0.5
1,2-DICHLOROETHANE(1,2 DCA)			<0.5
1,2-DICHLOROETHYLENE(1,2 DCE)			
trans-1,2-DICHLOROETHANE			
1,2-DICHLOROPROPANE			
ETHYL BENZENE			
METHYLENE CHLORIDE			
1,1,2,2-TETRACHLOROETHANE			
TETRACHLOROETHENE(PCE)			
TOLUENE			
BROMACIL			
DIAZINON			
PROMETRYN			
1,1,1-TRICHLOROETHANE			<0.5
1,1,2-TRICHLOROETHANE			
TRICHLOROETHANE(TCE)			<0.5
TRICHLOROFUOROMETHANE			
TRICHLOROTRIFLUOROETHANE			
VINYL CHLORIDE			<0.5
XYLENES			
ETHYLENE DIBROMIDE			<.01
DIBROMOCHLOROPROPANE			<.01
THIOBENCARB			<0.5
MOLINATE			
BENTAZON			
ATRAZINE			<1.0
SIMAZINE			<0.5

APPENDIX G

Sensitive Species Wildlife Survey of Pioneer and Berrenda Mesa property, portions of Sections 1,4, and
11

332 North Stine Rd.
Bakersfield, California 93309

William J. Vanherweg
Senior Biologist

FAX (805) 839-0375
(805) 322-8056

29 September 1995

Mr. Kane Totzke
Kern County Water Agency
3200 Rio Mirada Dr.
P.O. Box 58
Bakersfield, CA 93302-0058

Dear Kane:

As you requested, I have completed a baseline sensitive wildlife species survey at the North and South Pioneer, Berrenda Mesa Water Recharge Basins and the Castle and Cooke Exchange Properties. I consulted with Ms. Jody Brown of the United States Fish and Wildlife Service and Mr. Dale Mitchell of the California Department of Fish and Game to determine the intensity of the surveys. Figure 1 shows current land-use conditions and sensitive resources that I found on the properties. General descriptions of the parcels are as follows:

North Pioneer Property - Most of this parcel is currently under water and supporting a wide variety of waterfowl. All lands being used for water recharge were farmed prior to being flooded. Sensitive resources include: fresh tracks of kit foxes (*Vulpes macrotis mutica*) (Figure 1), and three potential kit fox dens along the southern boundary of the parcel. A small area along the southern boundary is natural habitat disturbed by oil well development. The present value of the property to sensitive wildlife species would generally be limited to use for foraging. The Cross Valley Canal right-of-way (Figure 1) is not part of the project and not included in the survey.

Mr. Kane Totzke
23 September 1995
Page 2

South Pioneer and Berrenda Mesa Property - These properties are currently under water or are being farmed (Figure 1). All lands being used for water recharge were farmed prior to being flooded. I found no sign of kit foxes during my cursory survey, however, foxes from adjoining properties probably forage on the property. I suspect the kangaroo rats along the northern boundary of the Berrenda Mesa ponds (Figure 1) are Heermann's kangaroo rats (*Dipodomys heermanni*). The present value of the property to sensitive wildlife species would be use as foraging habitat. The Kern River Canal and Southern Pacific Railroad right-of-ways (Figure 1) are not part of the project and not included in the survey.

Castle and Cooke Exchange Property - With the exception of approximately 60 acres in Section 1 (Figure 1) (part of the secondary flood plain of the Kern River), these properties are currently being farmed. I found no sign of kit foxes during my cursory survey, however, foxes from adjoining lands probably forage on the property. The kangaroo rat burrows shown in Section 4 (Figure 1) are along the edge of the property in an area that has not been disturbed by the farming operation.

I found no evidence of blunt-nosed leopard lizards (*Gambelia Sila*) or San Joaquin antelope squirrels (*Amмосpermophilus nelsoni*) at either location.

If you have any questions please feel free to give me a call at (805) 839-0375 or 324-3584.

Sincerely,



William J. Vanherweg
Senior Biologist

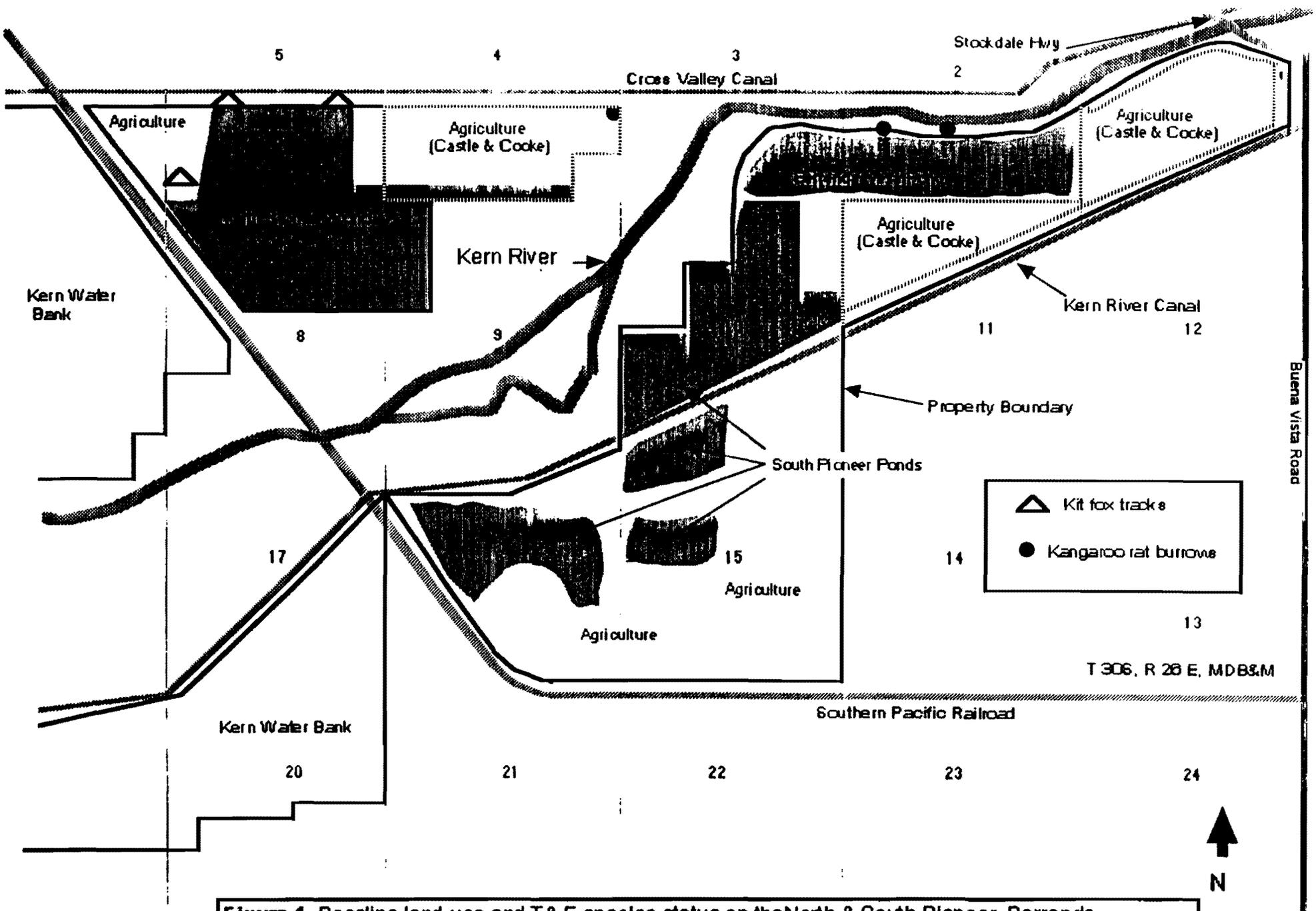


Figure 1. Baseline land-use and T & E species status on the North & South Pioneer, Berrenda Mesa water recharge lands and Castle & Cooke Exchange Lands, September 1995.

APPENDIX H
Pioneer Joint Operations Agreement

AGREEMENT NO. _____

PIONEER PROJECT JOINT OPERATING AGREEMENT

THIS AGREEMENT is made and entered into on _____, 1996, by and between the **CITY OF BAKERSFIELD**, a chartered municipal corporation, referred to herein as "CITY," and **KERN COUNTY WATER AGENCY**, a special act public entity, referred to herein as "AGENCY."

RECITALS

A. CITY owns certain contiguous parcels of real property situated within and along the natural channel of the Kern River located west of CITY between Buena Vista Road and Interstate "5", consisting of approximately 2,800 acres, which is commonly referred to as the "2800 Acres" ("2800 Acres" herein), and more fully shown on **Exhibit "A"** attached hereto and incorporated herein by reference; and

B. CITY, since 1976, has operated a water spreading and recovery project on the 2800 Acres ("City Project" herein), the primary use of which is for the spreading, percolation, storage, banking and recovery of CITY owned Kern River water for use by its citizens and residents to meet the demands and services required of those citizens and residents, including, but not limited to, drinking water; and

C. CITY has heretofore entered into contracts with Olcese Water District, Buena Vista Water Storage District ("Buena Vista" herein), and AGENCY, for use of the 2800 Acres, which provide for the spreading, percolation, storage, banking and recovery of various waters (including Kern River water, Friant-Kern and State Water Project water) owned by said contractors; and

D. AGENCY owns certain non-contiguous parcels of real property situated adjacent to the 2800 Acres, consisting of approximately 2,253 acres, which is commonly referred to as the "Pioneer Property," and which is more fully shown on **Exhibit "A,"** attached hereto and incorporated herein by reference; and

E. AGENCY plans to develop and manage a water spreading and recovery operation on the Pioneer Property, as well as other locations on the Kern River alluvial fan, and establish a Project ("Pioneer Project" herein), the primary use of which is for spreading, percolation, storage, banking and recovery of Kern River and other water owned by the AGENCY and certain member units ("Pioneer Project Participants" herein) which, as of this date, include Buena Vista, Henry Miller Water District, Kern Delta Water District, Rosedale-Rio Bravo Water Storage District, Wheeler Ridge-Maricopa Water

Storage District, Tejon-Castac Water District, Semitropic Water Storage District, Lost Hills Water District, Belridge Water Storage District, Berrenda Mesa Water District and Improvement District No. 4 of the AGENCY ("ID4" herein); and

F. CITY and AGENCY acknowledge that the operation of their projects may have an impact or influence on the project of the other for which reason both parties desire, by this Agreement, to determine and provide certain reciprocal operating criteria which will avoid, to the greatest extent practicable, future conflicts; and

G. AGENCY has entered into an agreement with the Pioneer Project Participants concerning the operation of the Pioneer Project entitled "Pioneer Project Participation Agreement," a copy of which is attached hereto as Exhibit "D," and incorporated herein by this reference; and

H. AGENCY has executed a "Transfer and Exchange Agreement" with the Kern Water Bank Authority (Exhibit "E"), Exhibit 3 (Declaration of Covenants, Conditions and Restrictions) of which provides for, among other things, the AGENCY and its Member Units to use the capacity of the Kern Water Bank that is determined to be surplus by the Board of the Kern Water Bank Authority, and it is on that basis that the Kern Water Bank is included in the Project Area described below. The Kern Water Bank Authority has entered into a Memorandum of Understanding with Adjoining Entities regarding the operation and monitoring of the Kern Water Bank; and

I. CITY completed an Environmental Impact Report for the 2800 Acres in 1983, and has operated the City Project under this Environmental Impact Report since that time; and

J. CITY and AGENCY believe it is to the mutual benefit of both parties that incentives be developed to increase recharge in the Kern River Channel to improve water management and the urban environment of the metropolitan Bakersfield area.

NOW, THEREFORE, incorporating the foregoing recitals herein, CITY and AGENCY agree as follows:

1. PARTIES.

a. CITY executes this Agreement as the owner and operator of the 2800 Acres (City Project) and other CITY-owned facilities required under the operation of this Agreement.

b. AGENCY executes this Agreement on behalf of itself and on behalf of each of the Pioneer Project Participants identified in Recital E above, each of whom have consented in writing to be bound by the terms and provisions of this Agreement as

it affects the Pioneer Project only. For purposes of this Agreement, the term "AGENCY" shall mean the Kern County Water Agency and the Project Participants (identified in Recital E above), unless otherwise specified.

2. **NO ALTERATION.** Nothing in this Agreement shall change or supersede any previous agreement between any party hereto, unless specifically set forth herein.

3. **PROJECT AREA.** The Project Area shall be defined as the 2800 Acres, the Kern River Channel easterly from the 2800 Acres extending to the Rocky Point Weir, the Pioneer Property (including portions of the existing James and Pioneer Canal systems) and Kern Water Bank. The recharge areas of said facilities are located as shown on the map attached hereto as Exhibit "B," which is incorporated herein by this reference. Unless otherwise stated, the combined area of the 2800 Acres, the Kern River Channel easterly from the 2800 Acres extending to the Rocky Point Weir, the Pioneer Property (including portions of the existing James and Pioneer Canal systems) and the Kern Water Bank shall be referred to as the "Project Area" for purposes of this Agreement.

4. **RELATIONSHIP TO ENVIRONMENTAL STUDIES.** This Agreement shall become a part of any Environmental Impact Report, Negative Declaration, or other environmental document prepared by the AGENCY for the Pioneer Project. New urban developments in unincorporated areas of the County utilizing the AGENCY's reserved capacity in the Pioneer Project will require additional environmental review for such developments before implementation.

5. **USE OF FACILITIES.**

a. **Kern River Canal.** For purposes of this Agreement, the CITY owns and controls the Kern River Canal and structures appurtenant thereto, including headgates diverting water therefrom, and has the right to operate said facilities at CITY's sole discretion subject only to existing rights of third parties arising by law or contract. Subject to the rights of CITY and the rights of any other entity under the 1964 Amendment to the Miller-Haggin Agreement, or other CITY contracts, AGENCY may use the River Canal for transportation of water to be diverted into the Pioneer Property or Kern Water Bank. AGENCY acknowledges that any AGENCY request for delivery downstream of the terminus of the River Canal must be coordinated and verified with Buena Vista.

b. **Pioneer Canal.** For the purposes of this Agreement, the CITY owns and/or controls the Pioneer Canal from and including the headgate westerly to the Stockdale Highway bridge overcrossing subject only to existing rights of third parties arising by law or contract, and CITY shall continue to operate said portion of Pioneer Canal subject to available capacity as determined by CITY. AGENCY may make arrangements to use the Pioneer Canal, which includes reaches downstream from the Cross Valley Canal, for recharge, banking, and for transportation of AGENCY water to be diverted into the Pioneer Property or Kern Water Bank.

c. 2800 Acres. The CITY owns and controls the 2800 Acres (City Project). The CITY and AGENCY have heretofore entered into an agreement providing for AGENCY use of the 2800 Acres under certain terms and conditions, to wit: Agreement No. 84-232 dated October 17, 1984. Said agreement will expire on July 1, 2012, subject to an option to extend for an additional period of twenty (20) years. A copy of said Agreement No. 84-232 is attached hereto as **Exhibit "F"** and incorporated herein by this reference. This Agreement neither replaces nor amends Agreement No. 84-232 but merely supplements the same. In the event of any conflict between this Agreement and Agreement No. 84-232, Agreement 84-232 shall govern. AGENCY acknowledges that any AGENCY request for conveyance of water past Second Point of Measurement in the Kern River Channel, located in the northwest quarter (NW 1/4) of Section 24, Township 30 South, Range 25 East, M.D.B. & M., must be coordinated with Buena Vista.

- (1) The CITY shall permit AGENCY to utilize the 2800 Acres for transportation of AGENCY water to the Pioneer Property and the Kern Water Bank subject to available capacity as determined by CITY with the following provisions:
 - (a) AGENCY water supply spread or recharged in the 2800 Acres as a result of transportation of AGENCY water via the 2800 Acres will be recorded as spread in the Pioneer Property, the 2800 Acres and/or the Kern Water Bank as determined by the AGENCY.
 - (b) CITY charges to AGENCY for water spread under this provision will consist of the Operations and Maintenance fee and Facilities Improvement Component of the Spreading Fee as set forth in Agreement No. 84-232, for the Pioneer Project and Kern Water Bank accounts.
- (2) CITY shall permit AGENCY access to the 2800 Acres for the purpose of construction of turnout facilities at AGENCY expense which may divert from the 2800 Acres onto the Pioneer Property and the Kern Water Bank. Any plans for such construction shall be delivered to CITY by AGENCY in writing prior to the date of commencement of said construction. CITY shall have final approval of any plans or specifications. Upon completion of construction to the satisfaction of CITY, AGENCY will convey any such structure or turnout to CITY and CITY shall thereafter own, operate and maintain the installed facilities. For the term of this Agreement, AGENCY shall have first priority to use any facilities constructed by it pursuant to this paragraph and shall pay operation and maintenance charges only (i.e., AGENCY shall not be required to pay a capital component or replacement charge).

d. Kern River Channel. For the purposes of this Agreement, the CITY controls the operation of a major portion of the Kern River Channel downstream of Rocky Point Weir, extending to the Interstate "5" crossing of the Kern River Channel subject to the rights of third parties arising by law or contract. Use of said portion of the Kern River Channel by AGENCY shall be governed by the following:

- (1) AGENCY may deliver water into the Kern River Channel at points easterly of 2800 Acres for spreading and banking purposes; however, AGENCY shall be responsible for determining the accounting for such water, including designation of project accounts and related recharge losses. CITY shall have access to such accounting records..
- (2) Use of the Kern River Channel by AGENCY for spreading and banking purposes shall not diminish or interfere with ongoing AGENCY/ID4 spreading operations, and for the purpose of this Agreement, the ID4 spreading operation shall not be considered banked within the ID4 boundaries, unless otherwise agreed to between the CITY and the Kern County Water Agency on behalf of ID4. Also, deferral of ID4 spreading operations to allow for banking by another entity shall not be deemed to diminish or interfere with ID4 spreading operations as long as the deferred quantities are eventually spread in ID4.
- (3) To encourage use of the Kern River Channel upstream of the 2800 Acres at times the Kern River Channel would otherwise be dry, CITY may, by mutual agreement with AGENCY, request delivery of AGENCY water into the Kern River Channel at points easterly of the 2800 Acres that, absent such request, would otherwise be spread by AGENCY in the 2800 Acres, Pioneer Property or Kern Water Bank. CITY shall reimburse AGENCY for the actual cost increase, if any, necessary to deliver AGENCY water into the Kern River Channel as set forth herein.
- (4) The Statement of Principles for the Establishment of a Water Recreation and Recharge Program for the Kern River Parkway adopted by the Water Board for the CITY and Kern County Water Agency on _____ is included herein by reference as though fully set forth.

e. Operations. CITY may operate the Kern River Canal, the Pioneer Canal at its point of diversion from the Kern River Channel, the 2800 Acres and the Kern River Channel for the benefit of the AGENCY, subject to available capacity as determined by CITY and the rights of third parties arising out of law or contract, and with the following understandings:

- (1) The cost to AGENCY for use of CITY facilities shall be as described in certain pre-existing agreements which are incorporated by reference herein, as follows:
 - (a) For use of the Kern River Canal - 1964 Amendment to the Miller-Haggin Agreement dated January 1, 1964; and
 - (b) For use of the 2800 Acres to transport AGENCY water - Agreement No. 84-232 dated October 17, 1984; and
 - (c) For use of the Kern River Channel to bank in the 2800 Acres - Agreement No. 84-232 dated October 17, 1984; provided, however, the operation and maintenance fee and Facility Improvement Component of the Spreading Fee shall not apply to water spread in the Kern River Channel easterly of the 2800 Acres; and
 - (d) For use of the Kern River Channel to bank for the Pioneer Project and Kern Water Bank accounts, no fee shall apply; and
 - (e) For use of the Pioneer Canal - Agreement No. 93-158 dated August 25, 1993 (a copy of which is attached hereto as **Exhibit "G,"** and incorporated herein by this reference).

f. Waiver of Charges. CITY may waive any or all of the aforementioned charges to the extent that AGENCY has spread water, after giving advance written notice to the CITY, for overdraft correction rather than storage for later sale, assignment or extraction.

g. Payment of Charges. All charges herein are due and payable by AGENCY to CITY forty-five (45) days after the mailing of the notice that such charges are due to CITY. No oversight by CITY in making such demand shall relieve AGENCY from such payments.

6. **PRIORITY FOR USE.** AGENCY hereby grants to CITY a first right of refusal to use any and all unused recharge and recovery capacity of the Pioneer Project after the AGENCY and Kern County Water Agency Member Units. CITY's right shall, at all times, be subject to the first priority rights of AGENCY and Kern County Water Agency Member Units and shall further be subject to the payment of all fees and compliance with all rules, regulations, restrictions and limitations applicable to such use by AGENCY and its Member Units.

7. **WATER QUALITY ASSURANCES.**

a. **Quality Enhancement.** CITY and AGENCY agree to operate their respective projects in such manner so as to maintain and, when possible, enhance the quality of groundwater in the basin underlying the Project Area. To this end, each party agrees to make a good faith effort to meet the following objectives:

- (1) If supplies of acceptable recharge water exceed recharge capacity, all other things being equal, recharge priority should be given to the purest or best quality water.
- (2) Each project should be operated with the objective that the average concentration of total dissolved salts in the recovered water will exceed the average concentration of total dissolved salts in the recharged water. The average shall be calculated for a given project from the date of filing notice of determination to proceed with such project under the California Environmental Quality Act.
- (3) To maintain or improve groundwater quality, recovery operations should extract poorer quality groundwater where practicable. Blending may be used to increase extraction of lesser quality groundwater unless doing so will exacerbate problems by generating unfavorable movement of lesser quality groundwater.
- (4) All parties to this Agreement should attempt to control the migration of poor quality groundwater. Problem areas may be dealt with by limiting or terminating extractions that tend to draw lesser quality groundwater toward or into the useable groundwater areas, by increasing extractions in areas that might generate a beneficial gradient, by increasing recharge within the useable groundwater area to promote favorable groundwater gradient, and the like.

- (5) Recharge should not occur in, on or near contaminated areas, nor should water be spread in, on or near an adjoining area if the effect will be to mound water near enough to the contaminated area that the contaminants will be picked up and carried into the uncontaminated groundwater supply.
- (6) Within the Project Area, the parties may recharge Kern River and other high quality waters as high on the Kern River Fan as possible and may recharge State Water Project water as far to the west as possible, through reciprocal use of facilities if necessary, in order to enhance water quality in the upper Kern River Fan area.

b. Hydraulic Gradient. In addition to the foregoing, the parties agree to use best efforts in operating their respective projects to maintain a hydraulic gradient which slopes away from the Kern River Channel within the Project Area. Such efforts may include, but are not limited to, prioritizing recharge along the Kern River Channel within the Project Area, limiting operation of recovery wells within the Project Area, and active monitoring of water levels.

8. OPERATING CRITERIA.

a. Recharge Priority. In order to preserve the historical high quality groundwater supplies underlying the Kern River Channel, it shall be the goal of the parties to this Agreement to maintain a positive hydraulic gradient sloping away from the existing mound underlying the Kern River Channel. In recognition of this goal, AGENCY agrees that, at those times when water is not otherwise being recharged in the 2800 Acres CITY may call for up to twenty percent (20%) of water scheduled by AGENCY for spreading and/or banking purposes on the Pioneer Property to be spread in the 2800 Acres. Said recharge delivery will be monitored, reviewed and coordinated on a daily basis by CITY and AGENCY contact person. Water spread by AGENCY under this provision may be conveyed from North Pioneer to the 2800 Acres by gravity through a turnout to be constructed by the CITY. Water recharged in the 2800 Acres under this provision shall be credited to the accounts of the Pioneer Project Participants and not subject to CITY fees. CITY shall reimburse AGENCY for the actual cost increase, if any, necessary to deliver AGENCY water as set forth herein.

b. Use of Easement. The CITY and AGENCY have entered into a permanent agreement providing for an easement across CITY-owned property, to wit: Agreement No. 93-158 dated August 25, 1993. CITY hereby consents to the assignment of said agreement as necessary to enable the AGENCY to use said easement in connection with its operation of the Pioneer Project if necessary.

c. Recovery Area. The AGENCY has developed a recovery plan for the Project Area that will afford maximum recovery capability within the Project Area while minimizing adverse impacts to others within the Project Area or other areas adjacent thereto. A copy of the map showing the recovery area is attached hereto as **Exhibit "C,"** and incorporated herein by reference.

d. Adverse Impact Avoidance/Mitigation. With Monitoring Committee oversight, each project should be operated so as to prevent, eliminate or mitigate significant adverse impacts. Mitigation measures to prevent significant adverse impacts from occurring include, but are not limited to, the following:

- (1) Limit recovery from wells situated on Pioneer Property to water previously spread and banked on the Pioneer Property (including portions of the existing James and Pioneer Canal systems), the Berrenda Mesa property, the Kern Water Bank, the 2800 Acres and/or the Kern River Channel easterly of the 2800 Acres;
- (2) In any given year, the recovery from the Pioneer Project shall not exceed the total quantity of AGENCY water previously spread and/or banked less that amount of water previously recovered on the Pioneer Property (including portions of the existing James and Pioneer Canal systems), the Berrenda Mesa property, the 2800 Acres, the Kern River Channel easterly of the 2800 Acres, and any water recharged on the Kern Water Bank via the Pioneer Property.
- (3) Expand the recovery area to include areas located westerly of the Pioneer Property;
- (4) Maintain a positive bank account balance at all times;
- (5) Provide buffer areas between recovery wells and neighboring overlying users;
- (6) Limit the monthly, seasonal and/or annual recovery rate;
- (7) Provide sufficient recovery wells to allow rotation of recovery wells or the use of alternate wells;
- (8) Adjust pumping rates or terminate pumping to reduce impacts, if necessary;

- (9) Impose time restrictions between recharge and extraction to allow for percolation of water to the aquifer; and
- (10) Provide recharge of water that would not otherwise recharge the Project Area.

e. Compensation for Adverse Impacts. Mitigation measures that compensate for unavoidable adverse impacts include, but are not limited to, the following;

- (1) With the consent of the affected overlying user, lower the pump bowls or deepen wells as necessary to restore groundwater extraction capability to such overlying user;
- (2) With the consent of the affected overlying user, provide alternative water supplies to such overlying user; and
- (3) With the consent of the overlying user, provide financial compensation to such overlying user.

f. Well Spacing. New wells shall be placed no closer than one-third (1/3) mile from any existing wells located off the Pioneer Property;

g. Additional CITY Wells. AGENCY acknowledges that CITY has heretofore planned to construct three (3) wells in the 2800 Acres to be situated in Sections 9, 10 and 16 of Township 30 South, Range 26 East, M.D.B. & M., and AGENCY agrees to provide well spacing of at least one-third (1/3) mile from said planned wells.

h. Losses. Losses will be applicable to all water spread under this Agreement and at a minimum shall be assessed as follows:

- (1) Surface recharge losses shall be fixed and assessed at a rate of six percent (6%) of water diverted for recharge.
- (2) An additional five percent (5%) loss shall be assessed against any water diverted to the Project Area for banking by, for or on behalf of any out-of-County person, entity or organization and/or against any banked water sold or transferred to any out-of-County person, entity or organization.

- (3) Effective the date of this Agreement and except as otherwise limited by prior agreement, losses assessed under this Agreement represent amounts of water that are non-bankable and non-recoverable by CITY or AGENCY.

i. Definitions Applicable to Fees and Charges. To provide for uniformity with respect to fees and charges under this Agreement, it is agreed as follows:

- (1) Operations and maintenance fees and facility improvement fees shall be charged against total diversions into the facility (i.e., the amount of water diverted before losses).
- (2) Spreading fees shall be charged against net water recharge. Net recharge shall be understood to be the total amount of water spread, less losses.
- (3) Recovery or extraction fees shall be charged against total water recovered.

j. Friant-Kern Canal Flood Flows. The parties agree that the first priority of Friant-Kern flood flows that spill into the Kern River Channel shall be to establish and maintain a continuous (uninterrupted) stream channel from the terminus of the Friant-Kern Canal to the Kern River Intertie. Said continuous stream flow shall be dedicated to overdraft correction of the groundwater basin.

k. Delivery Point of AGENCY Water. Except as provided in the 1964 Amendment to the Miller-Haggin Agreement, the delivery point for all Kern River water pertaining to operation of this Agreement owned or acquired by AGENCY shall be at the diversion point of the Beardsley Canal from the Kern River or, at the option of AGENCY, at other points of delivery downstream on the Kern River so long as AGENCY accepts all losses and costs associated with transportation of such water between the Beardsley Canal point of delivery and the other delivery point requested by AGENCY. AGENCY will be permitted to take delivery of all or portions of its Kern River water through the Carrier Canal during periods when CITY determines that sufficient CITY capacity is available and CITY and AGENCY agree to the time, place, duration and cost of such deliveries.

9. COORDINATION AND RECORD KEEPING.

a. Coordination. The AGENCY is responsible for the day-to-day operation of the Pioneer Project. The AGENCY will designate a contact person to coordinate AGENCY activities with the CITY. Water deliveries to the Project Area via the Kern River Channel or via any CITY-owned facility shall be regulated through CITY operation and shall be scheduled forty-eight (48) hours in advance through the CITY

Water Dispatcher by the AGENCY contact person. Unless otherwise agreed, the AGENCY contact person shall meet regularly with CITY to coordinate Pioneer Project operations. Delivery and recovery of water to and from the Kern Water Bank shall be coordinated by the AGENCY with the manager of the Kern Water Bank.

b. Records. The CITY will be responsible for, and shall maintain records of all points of diversion from the Kern River Channel and CITY-owned canals arising from operation of this Agreement. The AGENCY shall have access to such records. The AGENCY contact person will provide such assistance and information as is necessary for CITY to meet its obligations hereunder.

10. MONITORING COMMITTEE. The Pioneer Project Participants have consented to formation of a Monitoring Committee composed of representatives of such Pioneer Project Participants. The Monitoring Committee is charged with the duty and responsibility of reviewing project operations and activities, of making recommendations with respect thereto to insure compliance with the project objectives, and of providing a forum for dispute resolution. The CITY agrees to cooperate with the Monitoring Committee through contribution of records, identified herein, and 2800 Acre recharge and recovery data, collected by CITY, which will be supplied in the normal course of business.

11. OVERDRAFT REDUCTION. All parties to this Agreement agree that the use of the Pioneer Property shall not cause or contribute to overdraft of the groundwater basin. In this connection, any consumptive use of water on the Pioneer Property which exceeds .3 acre-feet per acre on an acre-by-acre basis shall be provided from supplemental surface water or previously recharged water that does not create or contribute to overdraft.

12. NO CHANGE TO KERN RIVER RIGHTS. The Pioneer Project shall not change or affect rights to use Kern River water. Should any court of competent jurisdiction determine any use of Kern River water rights is affected by this Agreement, the parties shall meet and negotiate whatever modifications are necessary to re-establish those rights which have been affected, or void any part, or all, of this Agreement necessary to re-establish said rights. The parties shall negotiate in good faith to maintain Kern River water rights whenever a modification or voiding of the terms of this Agreement becomes necessary.

13. INDEMNIFICATION.

a. Indemnity. CITY and AGENCY agree to indemnify and hold each other harmless from any and all claims, demands, liabilities, losses or causes of action which arise by virtue of its own acts or omissions (either directly or through or by its agents, officers, or employees) to such extent and in such part as the respective parties are found by reason of law to have proximately caused the injury or damage.

b. Notice of Claim. The party against whom any claim arising from any subject matter of this Agreement is filed shall give prompt notice of the filing of the claim to the other party.

14. EFFECTIVE DATE. This Agreement is effective the day and year first above written regardless of the date of actual execution.

15. NOTICES. All notices relative to this Agreement shall be given in writing and shall be personally delivered or sent by certified or registered mail, in which latter case service will be effective upon depositing in the United States mail. The parties shall be addressed as follows, or at any other address designated by notice given in the manner herein provided:

CITY: CITY OF BAKERSFIELD
WATER RESOURCES DEPARTMENT
1000 Buena Vista Road
Bakersfield, CALIFORNIA 93311

AGENCY: KERN COUNTY WATER AGENCY
P.O. Box 58
Bakersfield, CALIFORNIA 93302-0058

16. FORUM. Any lawsuit pertaining to any matter arising under, or growing out of, this Agreement shall be instituted in Kern County, California.

17. ASSIGNMENT. This Agreement shall not be assigned by CITY or AGENCY, without the prior written consent of the other.

18. BINDING EFFECT. The rights and obligation of this Agreement shall inure to the benefit of, and be binding upon, the parties to the agreement and their heirs, administrators, executors, personal representative, successors and assigns.

19. CORPORATE AUTHORITY. Each party executing this Agreement represents and warrants that it is duly authorized to execute and deliver this Agreement on behalf of the organization named herein and that this Agreement is binding upon said organization in accordance with its terms.

20. WAIVER OF DEFAULT. The failure of any party to enforce against another a provision of this Agreement shall not constitute a waiver of that party's right to enforce such a provision at a later time, and shall not serve to vary the terms of this Agreement.

21. MERGER AND MODIFICATION. All prior oral agreements or understandings between the parties with respect to the matters covered by this Agreement are incorporated in this Agreement which constitutes the entire agreement. Its terms are intended by the parties as a final expression of their agreement with respect to such terms as are included herein and may not be contradicted by evidence of any prior or contemporaneous oral agreement. The parties further intend this Agreement constitutes the complete and exclusive statement of its terms and no extrinsic evidence whatsoever may be introduced in any judicial or arbitration proceeding involving this Agreement. This Agreement may be modified only in a writing approved by the City Council, the Agency Board, and signed by all the parties.

22. NEGATION OF PARTNERSHIP. No party shall become or be deemed a partner or joint venturer with any other party or associate in any such relationship with any other party by reason of the provisions of this Agreement. AGENCY shall not for any purpose be considered an agent, officer or employee of CITY, and CITY shall not for any purpose be considered an agent, officer or employee of AGENCY.

23. ACCOUNTING RECORDS. All parties shall maintain accurate accounting records and other written documentation pertaining to all costs incurred in performance of this Agreement. Such records and documentation shall be kept at each party's office during the term of this Agreement. Said records shall be made available to CITY or AGENCY representatives upon request at any time during regular business hours.

24. EXHIBITS. In the event of a conflict between the terms, conditions or specifications set forth in this Agreement and those in exhibits attached hereto, the terms, conditions, or specifications set forth in this Agreement shall prevail. All exhibits to which reference is made in this Agreement are deemed incorporated in this Agreement, whether or not actually attached.

25. ENVIRONMENTAL QUALITY. The CITY has various environmental concerns relating to the Pioneer Project which have been addressed to the CITY's satisfaction in this Agreement; however, the CITY does not warrant or guarantee the environmental quality of the Pioneer Project and does not warrant or guarantee the Pioneer Project will be without environmental effects.

26. TERM. The term of this Agreement shall be the same as the term of the Agreement No. 84-232.

27. AUTHORSHIP. It is understood and agreed that this Agreement is the product of negotiation between the parties, with each party represented by independent counsel of its choice and each party's counsel contributing to the drafting hereof. In construing this Agreement, neither party shall be deemed its author.

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be executed the day and year first above written.

"CITY"

"AGENCY"

By: _____
BOB PRICE
Mayor

By: _____
Title: _____

By: _____
Title: _____

APPROVED AS TO CONTENT:
WATER RESOURCES DEPARTMENT

APPROVED AS TO FORM:

By: _____
GENE BOGART
Water Resources Manager

By: _____
Attorney for AGENCY

APPROVED AS TO FORM:

JUDY K. SKOUSEN
City Attorney

By: _____
ALAN D. DANIEL
Assistant City Attorney

COUNTERSIGNED:

By: _____
GREGORY J. KLIMKO
Finance Director

ADD:dlr

PIONEER PROJECT JOINT OPERATING AGREEMENT
LIST OF EXHIBITS AND ATTACHMENTS

Exhibits

- Exhibit "A" -- 2800 Acre Recharge Facility and Pioneer Property
- Exhibit "B" -- Project Area Recharge Map
- Exhibit "C" -- Project Area Recovery Map
- Exhibit "D" -- Pioneer Project Participation Agreement
- Exhibit "E" -- Exhibit 3: "Declaration of Covenants, Conditions and Restrictions" of the "Transfer and Exchange Agreement" between the Kern County Water Agency and the Kern Water Bank Authority.
- Exhibit "F" -- CITY/AGENCY Agreement No. 84-232
- Exhibit "G" -- CITY/AGENCY Agreement No. 93-158

APPENDIX I
Kern Water Bank Transfer and Exchange Agreement

TRANSFER AND EXCHANGE AGREEMENT

This Transfer and Exchange Agreement ("Agreement") is entered into this 13th day of December, 1995, by and between Kern County Water Agency, a California public agency ("Agency"), and Kern Water Bank Authority, a California joint powers agency ("KWBA").

Recitals

A. Agency has entered into, or contemplates entering into, that certain "Agreement for the Exchange of the Kern Fan Element of the Kern Water Bank" by and between the Department of Water Resources ("DWR"), as Transferor, and Kern County Water Agency as Transferee (the "Master Agreement"). A copy of the Master Agreement is attached hereto as Exhibit A.

B. Pursuant to the terms of the Master Agreement, Agency may transfer all or any portion of the property to be transferred to Agency pursuant to the terms of the Master Agreement. The parties hereto wish to convey a portion of such property to KWBA immediately upon the close of escrow under the Master Agreement. This Agreement is intended to be such an agreement as provided for in the Master Agreement.

C. Agency and representatives of certain other parties approved that certain document entitled "Implementation of the Monterey Agreement among the Kern County Water Agency, State Water Project Agricultural Contractors, and Member Units of the Kern County Water Agency" dated as of March 30, 1995 ("Implementation Agreement"). On March 30, 1995, representatives of the Agency and certain members of the KWBA namely, Dudley Ridge Water District, Wheeler Ridge Maricopa Water Storage District, Paramount Farming Company (in its capacity as predecessor-in-interest to Westside Mutual Water Company, LLC) and Cawelo Water District (which has withdrawn from the project) agreed to that certain document entitled "STATEMENT OF PRINCIPLES BY THE KERN COUNTY WATER AGENCY, ACTING FOR ITSELF AND ITS IMPROVEMENT DISTRICT NO. 4, DUDLEY RIDGE WATER DISTRICT, CAWELO WATER DISTRICT [SEMITROPIC WATER STORAGE DISTRICT], WHEELER RIDGE-MARICOPA WATER STORAGE DISTRICT AND PARAMOUNT FARMING COMPANY FOR THE DEVELOPMENT, OPERATION AND MAINTENANCE OF THE KERN FAN ELEMENT OF THE KERN WATER BANK" dated as of March 30, 1995 ("Statement of Principles"). This Agreement is intended to implement the Statement of Principles and those provisions of the Implementation Agreement pertaining to the transfer of the Kern Fan Element of the Kern Water Bank from Agency to KWBA for the purpose of constructing and operating a groundwater recharging project (the "Project") on the Property.

D. As part of the Statement of Principles the Agency was authorized to approve the initial type and structure of a public agency to which the property would be conveyed and to this end, the Agency has approved the "Joint Powers Agreement for the Kern Water Bank Authority," dated October 16, 1995, and pursuant to such agreement the Kern Water Bank Authority was duly formed.

E. Capitalized terms not otherwise defined herein shall have the meaning given to such term in the Master Agreement.

Agreement

In consideration of the mutual covenants contained herein, the parties agree as follows:

1. Transfer and Exchange of Property.

1.1 Agency hereby agrees to transfer and exchange to KWBA the following property (collectively the "Property"):

1.1.1 Approximately 19.890 acres of real property together with all Improvements (including the Monitoring Wells listed on Exhibit 1.8 of the Master Agreement) thereon located within Kern County, California, and other items of property (collectively, the "Real Property"), as more fully described in Exhibit 1.1A hereto. The Real Property to be conveyed to KWBA generally consists of all of the lands to be conveyed to Agency under the Master Agreement; but excluding approximately 573.18 acres located in the Rosedale-Rio Bravo Water Storage District, as more fully described in Exhibit 1.1B (the "Excluded Property").

1.1.2 The Personal Property, and Property Rights associated with the Real Property, all as described in the Master Agreement.

1.2 In connection with and pursuant to the exchange for the Property, KWBA agrees to transfer or cause the transfer for and on behalf of KWBA of the following like-kind property:

1.2.1 The 45,000 acre-feet of "Retired Water Entitlement" referred to in Section 1.17 of the Master Agreement consisting of:

(a) 36,340 acre-feet in the aggregate from the Table 1 Contract Entitlements of the Belridge Water Storage District, Lost Hills Water District, Semitropic Water Storage District, Tejon-Castac Water District and Wheeler Ridge Maricopa Water Storage District in their respective long term member unit water supply contracts with the Agency;

(b) 4,330 acre-feet of the Agency's allocation of annual entitlement to State Project water allocated to the Agency's Improvement District No. 4; and.

(c) 4,330 acre-feet from the Table A of the Entitlement of the Dudley Ridge Water District set forth in its long term water supply contract with the State.

1.2.2 Transfer to Agency all rights of KWBA to the supply, to the lands described in Exhibit 1.2.2 attached hereto, of water from Belridge Water Storage District (such rights having been exchanged and transferred to KWBA from Westside Mutual Water Company ("Westside")).

1.2.3 Transfer to Agency all rights of KWBA to the supply, to the lands described in Exhibit 1.2.3 attached hereto, of water from Lost Hills Water District (such rights having been exchanged and transferred to KWBA from Westside).

1.3 The transfer and exchange shall be subject to each of the terms and conditions provided for in this Agreement.

1.4 Agency shall take title to the Property from DWR, and immediately thereafter convey the Property to KWBA. KWBA shall accept title to the Property in the manner required by law.

1.5 The transfer and exchange contemplated by this section shall be consummated through an escrow at Chicago Title Insurance Company, 4700 Stockdale Highway, Bakersfield, California, as provided in Section 4 hereof. Prior to close of escrow, KWBA and Agency shall execute, acknowledge as necessary and deposit with the escrow holder for delivery at closing the following documents:

1.5.1 Agency shall transfer fee simple title to the Real Property to KWBA by executing, acknowledging and recording a Deed (the "Deed") in the form attached to this Agreement as Exhibit 1.5.1;

1.5.2 The Agency shall transfer title to the Personal Property to KWBA by executing a Bill of Sale in the form attached to this Agreement as Exhibit 1.5.2 ("Bill of Sale"), (or such other appropriate instrument of conveyance conveying title to any portion of the Property which can not be transferred by deed).

1.5.3 Agency shall transfer and assign all of Agency's rights in and to the Property Rights to KWBA by executing a recordable Assignment of Property Rights ("Assignment of Property Rights") in the form attached to this Agreement as Exhibit 1.5.3.

1.5.4 Agency shall transfer to KWBA all of Agency's right, title and interest in and to the Leases and any security deposits by executing the Assignment of Leases and Security Deposits in the form attached hereto as Exhibit 1.5.4.

1.5.5 KWBA shall effect the transfers described in Sections 1.2.1, 1.2.2 and 1.2.3 pursuant to an Assignment in the form attached to this Agreement as Exhibit 1.5.5.

1.5.6 KWBA and Agency shall cause to be effected the transfer of the Retired Water Right Entitlement described in Section 1.2 by appropriate amendments to the SWP water supply contracts between Agency and the subject water districts and water storage districts (collectively the "Water Supply Contracts Amendments"). Said districts referred to in Section 1.2.1(a) shall deliver to the Agency appropriate documents agreeing to execute and deposit with the escrow holder for delivery at closing of the Master Agreement such amendments upon meeting the conditions to close the Monterey Amendments.

1.5.7 Prior to the close of escrow KWBA shall cause Dudley Ridge Water District to effect the transfer described in Section 1.2.1(c) by appropriate amendments to its water supply contract with the State (the "Dudley Water Supply Contract Amendment").

1.6 Prior to the transfer and exchange of the Property, the Agency and KWBA shall execute and deposit with the escrow holder for delivery at closing an Assignment, Assumption & Indemnity in the form attached hereto as Exhibit 1.6.

1.7 Pursuant to the terms of the Master Agreement, DWR is paying the sum of Three Million Dollars (\$3,000,000) to Agency in exchange for the assumption by Agency of the Known Environmental Conditions and the Unknown Environmental Conditions, as defined in the Master Agreement, provided, however, in the event that by close of escrow the Agency has identified Environmental Conditions associated with the Excluded Property, the reasonably estimated cost of remediation of such Environmental Conditions required under applicable law, up to but not exceeding \$80,000 of the \$3,000,000, may be retained by the Agency for such remediation. At the closing of the transfer and exchange of the Property to KWBA, Agency shall transfer such funds to KWBA. Such funds shall be restricted as provided in the Assignment, Assumption & Indemnity attached hereto as Exhibit 1.6.

1.8 Upon close of escrow, KWBA and Agency shall execute, acknowledge as necessary and deliver any other documents, instruments, data, records, correspondence or agreements required under this Agreement which have not previously been delivered.

2. Due Diligence Review.

2.1 KWBA acknowledges that it has reviewed, investigated, and approved in advance all matters contained in the Master Agreement and that, with respect to the Property, Agency relied on the approval and conduct of due diligence by KWBA in entering into the Master Agreement. The parties acknowledge that due to the "pass through" nature of the transactions contemplated in the Master Agreement and this Agreement, Agency will conduct no due diligence investigation of its own, and that KWBA in not relying upon any such investigation by Agency in taking the Property and consummating the transaction contemplated by this Agreement. KWBA shall conduct its own due diligence investigation of the Property, including, but not limited to, the state of title, its suitability for use for the Project, the environmental condition of the Property, and the applicability of any federal, state or local laws, regulations, ordinances, judgments, decrees or agreements pertaining to the Property and the project contemplated by KWBA for such Property. KWBA represents and warrants that it shall rely solely upon its own due diligence investigation, and not upon Agency, in connection with the closing of the transaction contemplated by this Agreement, except to the extent the Agency has made representations in this Agreement. No knowledge of conditions affecting the Property which the Agency has shall be imputed to the KWBA as a result of the Agency being a Member Entity of KWBA. With respect to the Property, KWBA agrees to hold the Agency, its officers, employees and agents harmless from all liability directly arising from the Agency's execution of the Master Agreement: provided, however, nothing in this sentence shall be deemed to modify Section 8 or the Assignment, Assumption and Indemnity at Exhibit 1.6.

2.2 KWBA shall take the Property on an "as is", "where-is" basis. Agency makes no representations or warranties with respect to the Property, whether express or implied, except as are expressly made in this Agreement or any document delivered pursuant to this Agreement; and Agency expressly disclaims any such representations or warranties. Agency further expressly disclaims any warranty, express or implied, as to the suitability of the Property for any use contemplated by KWBA, including, but not limited to, any representation or warranty as to those matters listed as (i) through (x) at Section 5 of the Master Agreement, except as otherwise provided in this Agreement.

2.3 KWBA shall complete its due diligence investigation, and shall notify Agency of its approval or disapproval of the results of such investigation, no later than two (2) business days prior to the last day that Agency may disapprove the results of Agency's due diligence review under the terms of the Master Agreement.

2.4 Nothing in this Section 2 shall be construed to limit or modify the representations, warranties or covenants of DWR contained in the Master Agreement; but rather the provisions of this Section 2 (except Section 2.5) shall be solely for the benefit of Agency.

2.5 The Agency shall cooperate with and assist the KWBA in conducting its due diligence review of the Property by making available to KWBA information in its files relating to the Property and by making its employees, agents and contractors available for interviews and to provide information relating to the Property.

3. Restrictions Upon Use and Transfer of Property.

The parties hereto agree that the unique nature of this transaction, including the public benefits to result from the construction and implementation of the Project contemplated for the Property, justify the imposition of certain restrictions upon the use and transfer of the Property by KWBA, any successors in interest to KWBA and any transferees of any interest in the Property. The Parties recite and agree that Agency would not convey the Property to KWBA in the manner provided in this Agreement without imposition of restrictions provided for herein. These restrictions are reasonable and necessary to insure that the Property will continue to be used and operated for the purposes contemplated by this Agreement and that such restrictions are reasonable to protect the interest of Agency and the general public benefits to be conferred by the construction and operation of the Project upon the Property. Accordingly, upon transfer and exchange of the Property, Agency and KWBA shall execute, acknowledge and record a Declaration of Covenants, Conditions & Restrictions in the form attached hereto as Exhibit 3, which shall also be referenced in the Deed.

4. Escrow.

The conveyance of the Property herein, shall be effected through an escrow with Chicago Title Insurance Company, 4700 Stockdale Highway, Bakersfield, California (the "Escrow Holder:). The Closing hereunder shall be held at the offices of Escrow Holder. Closing shall occur immediately following the Closing under the Master Agreement provided that all conditions precedent set forth in Sections 7.1 and 7.3 of this Agreement have been satisfied; provided that if Closing has not occurred by October 1, 1996, or as extended in writing by mutual agreement of the parties, any party hereto which is not in default under this Agreement may at any time thereafter cancel this Agreement and the escrow by written notice to the other party and Escrow Holder. All escrow and title costs and fees incurred under the Master Agreement or this Agreement and not otherwise paid by DWR pursuant to the Master Agreement, shall be paid by KWBA. In the event that this transaction shall not close for any reason other than the Agency's default or misrepresentation, KWBA shall be responsible for all escrow or title costs incurred. Each party shall be liable for its own attorney's fees, and other costs and fees directly incurred by such party in connection with such transaction. In the event of cancellation of this Agreement, Escrow Holder shall return all documents and items to the party which deposited such document or item. In the event no party cancels the Escrow by February 1, 1997, Escrow Holder shall return all documents and items to the party which deposited such documents and items. Agency shall cause DWR to procure at DWR cost the policy of title insurance described in the Master Agreement in the name of the KWBA, rather than the Agency, in an amount equal to \$31,466,812.00.

5. Representations and Warranties of KWBA.

KWBA hereby represents and warrants to Agency as follows:

5.1 KWBA is a California joint powers agency, duly formed, and legally existing under the laws of the State of California. KWBA has the full power and authority to execute, enter into, and deliver this Agreement, and to consummate the transactions contemplated hereunder.

5.2 This Agreement constitutes a valid and binding obligation of KWBA, enforceable in accordance with its terms.

5.3 The execution and delivery of the Agreement by KWBA has been duly authorized and approved by the Board of Directors of KWBA in accordance with the organizational documents of KWBA. No further action is necessary on the part of KWBA or its members to make this Agreement valid and binding upon KWBA.

5.4 Except for the matters covered by the Agency's representations, warranties and indemnities under this Agreement or documents Agency delivers pursuant to this Agreement, KWBA has conducted or will conduct its own due diligence investigation and review in connection with the Property.

6. Representations and Warranties of Agency.

The Agency represents and warrants to KWBA as follows:

6.1 Kern County Water Agency is a California Water Agency, duly formed, and legally existing pursuant to the Kern County Water Agency Act, California Statutes of 1961, chapter 1003 as amended. Kern County Water Agency has the full power and authority to execute, enter into and deliver this Agreement, and to consummate the transactions contemplated hereunder.

6.2 This Agreement constitutes a valid and binding obligation of Agency, enforceable in accordance with its terms.

6.3 The execution, delivery and performance of this Agreement and the Master Agreement by Agency have been duly authorized and approved by the Board of Directors of Agency in accordance with the organizational documents of Agency. No further action is necessary on the part of Agency to make this Agreement and the Master Agreement valid and binding upon Agency.

6.4 Prior to the time of closing the Agency will not have conveyed the Property, nor any right, title or interest therein, to any other person or entity, and the Property will be free from any encumbrance done, made or suffered by the Agency.

7. Conditions.

7.1 Each of the following shall be a condition precedent to Agency's obligation to close the transaction contemplated in this Agreement:

7.1.1 That all documents required to be executed pursuant to the terms of the Master Agreement shall have been executed, and that all conditions to the close of escrow contained in the Master Agreement shall have been satisfied;

7.1.2 That the Agency and its counsel shall have reviewed and approved the form and substance of all agreements, schedules, exhibits, deeds and other documents to be executed in connection with this Agreement;

7.1.3 That DWR is not in breach of any of the terms and conditions of the Master Agreement;

7.1.4 That all the representations and warranties of KWBA contained herein are true and correct at the close of escrow, and that KWBA is not in breach of any of the terms or conditions of this Agreement;

7.1.5 That KWBA shall have delivered to Agency fully executed copies of all agreements, schedules, exhibits, memoranda, and any other documents required pursuant to the terms of this Agreement.

7.2 The foregoing conditions contained in Section 7.1 are intended solely for the benefit of Agency. If (i) any of the foregoing conditions are not satisfied, or (ii) in the event of a breach by KWBA of any of its covenants, representations, warranties or other agreements set forth in this Agreement, Agency shall have the right in its sole discretion to elect either to (x) proceed with the exchange of the Property pursuant to all of the other terms of this Agreement, reserving all of its other rights and remedies available to it under this Agreement or otherwise at law or in equity by reason of such failure of condition or breach, or (y) in the alternative, terminate this Agreement, and upon such termination Agency shall be relieved of all further obligations under this Agreement.

7.3 Each of the following shall be a condition precedent to KWBA's obligation to close the transaction contemplated in this Agreement:

7.3.1 That all documents required to be executed pursuant to the terms of the Master Agreement shall have been executed, and that all conditions to the close of escrow contained in the Master Agreement shall have been satisfied;

7.3.2 That KWBA and its counsel shall have reviewed and approved the form and substance of all agreements, schedules, exhibits, deeds and other documents to be executed in connection with this Agreement and the Master Agreement.

7.3.3 That DWR is not in breach of any of the terms and conditions of the Master Agreement:

7.3.4 That all the representations and warranties of Agency contained herein are true and correct at the close of escrow, and that Agency is not in breach of any of the terms or conditions of this Agreement:

7.3.5 That Agency shall have delivered to KWBA fully executed copies of all agreements, schedules, exhibits, memoranda, and any other documents required pursuant to the terms of this Agreement.

7.4 The foregoing conditions contained in Section 7.3 are intended solely for the benefit of KWBA. If (i) any of the foregoing conditions are not satisfied, or (ii) in the event of a breach by Agency of any of its covenants, representations, warranties or other agreements set forth in this Agreement, KWBA shall have the right in its sole discretion to elect either to (x) proceed with the exchange of the Property pursuant to all of the other terms of this Agreement, reserving all of its other rights and remedies available to it under this Agreement or otherwise at law or in equity by reason of such failure of condition or breach, or (y) in the alternative, terminate this Agreement, and upon such termination KWBA shall be relieved of all further obligations under this Agreement.

7.5 Each of the following shall be a condition precedent to Agency's and KWBA's obligation to close the transaction contemplated in this Agreement:

7.5.1 That all of the conditions precedent set forth in Sections 4.1.1 through 4.1.7, inclusive, 4.3.1 and 4.3.2 of the Master Agreement shall have been satisfied in the good faith opinion of the KWBA, and for this purpose such conditions precedent are hereby incorporated herein by reference and are expressly for the benefit and protection of the Agency and KWBA where ever the Agency appears in such sections.

7.5.2 That (i) amendments to the long term water supply contracts between the State and the Agency and between the State and The Metropolitan Water District of Southern California implementing the Monterey Principles shall have been duly approved and executed by the parties to such contracts; (ii) no legal challenge or action involving validity or enforceability of such amendments has been filed within 60 days of such execution or, if filed, a final judgment of a court of competent jurisdiction has been entered sustaining or validating said amendments or, if a court of competent jurisdiction has determined that any part of said amendments are invalid or unenforceable, that invalidity or unenforceability has been waived by the entities specified in the Monterey Amendments; and (iii) all such amendments state in substance and without qualification that they and the transactions effected thereby shall be rescinded and rendered void if and when the transactions contemplated or effected under this Agreement or the Master Agreement are rescinded, invalidated or rendered void for any reason.

8. Indemnification.

8.1 From and after the close of escrow under this Agreement, KWBA shall indemnify and hold Agency (and Agency's members, officers, directors, agents, employees, and attorneys) harmless against any and all claims, demands, damages, liabilities, losses, judgments, assessments, costs and expenses (including reasonable attorney's fees) of any kind or nature whatsoever which may be asserted by anyone against Agency or such other indemnified parties:

8.1.1 By reason of any act, omission, or event arising, or occurring on or after the close of escrow relating to the Property, unless otherwise provided by written agreement between KWBA and the Agency, or unless and only to the extent arising out of the Agency's capacity as a member of the KWBA.

8.1.2 Based upon or related to a breach of any representation, warranty, or covenant made by KWBA in this Agreement, or in any exhibit, document, schedule or certificate delivered pursuant to this Agreement:

8.1.3 By reason of any matter relating to the ownership of the Property it being the intent of the parties herein that in the event Agency owns the Property for any period of time as an incident to the ultimate transfer of such ownership to KWBA, that such ownership shall be solely for the purpose of such transfer to KWBA.

8.2 From and after the close of escrow under this Agreement, Agency shall indemnify and hold KWBA (and KWBA's members, officers, directors, agents, employees, and attorneys) harmless against any and all claims, demands, damages, liabilities, losses, judgments, assessments, costs and expenses (including reasonable attorney's fees) of any kind or nature whatsoever which may be asserted by any one against KWBA or such other indemnified parties:

8.2.1 Based upon or related to a breach of any representation, warranty, or covenant made by Agency in this Agreement, or in any exhibit, document, schedule or certificate delivered pursuant to this Agreement.

8.3 With respect to Sections 6.2.2 and 6.2.8 of the Master Agreement, for any Environmental Tort Claim not assumed by the State the Agency shall defend, indemnify and hold harmless the KWBA and its directors, officers, employees, agents and attorneys for any such Environmental Tort Claims asserted by any person who was an employee of the Agency at the time of the physical exposure giving rise to the cause of action occurred. For any other such Environmental Tort Claim not so assumed by the State or Agency, the KWBA shall defend, indemnify and hold harmless the Agency and its directors, employees, agents and attorneys.

9. Access to Property and Possession.

9.1 Agency hereby assigns to KWBA Agency's right under Section 12 of the Master Agreement to reasonable access to the Property prior to Closing for the purpose of satisfying KWBA with respect to the representations, warranties and covenants of State in the Master Agreement and with respect to satisfaction of any conditions precedent to Closing in favor of KWBA set forth in this Agreement. KWBA shall indemnify, defend, hold harmless and reimburse Agency for any liability Agency may incur to the State in connection with KWBA's access to the Property.

9.2 Possession of the Property shall be delivered to KWBA on the Closing Date, subject to the rights of any tenants or other parties with an interest in the Property as disclosed on Exhibit 3.1B of the Master Agreement.

10. Further Agreements.

The Agency and KWBA shall enter into a Joint Use of Facilities Agreement at the earliest possible date to incorporate the principles set forth at Exhibit 10 hereto, and a recordable easement over the Agency's Pioneer Project, as it may be modified, for the benefit of the Property, KWBA and its successors and assigns, for the purpose of constructing, operating, maintaining, retaining and replacing a water conveyance facility and related equipment as set forth in the principles at Exhibit 10. This section shall survive the close of escrow and recording of the Deed.

11. Entire Agreement.

This Agreement constitutes the only agreement between the parties hereto concerning the nomination of KWBA to take title to the Property, or the transfer of such title from Agency to KWBA. Any prior or other agreements or representations between the parties with respect to such matters are null and void unless as expressed and set forth in this Agreement. To the extent any provisions of this Agreement conflict with the Implementation Agreement and/or Statement of Principles, the provisions of this Agreement shall prevail. Furthermore, this Agreement shall not supersede the April 27, 1995 letter agreement regarding 1995 operations.

12. Governing Law.

This Agreement shall be construed in accordance with and governed by the laws of the state of California.

13. Notices and Demands.

All notices and demands of any kind which either party may be required or may wish to serve upon the other party, shall be in writing and shall be served on such other party by personal service by facsimile transmission, or by mailing a copy thereof, certified or registered mail, postage prepaid, addressed as follows:

If to Agency
P.O. Box 58
Bakersfield, CA 93302-0058

If to KWBA or any of
its members:

Kern Water Bank Authority
c/o Young Wooldridge
1800 30th Street, Fourth Floor
Bakersfield, CA 93301

Service shall be deemed complete (i) on the date of delivery if by personal service; (ii) by facsimile transmission on the date of actual delivery as shown on the facsimile transmission, provided that a hard copy of such facsimile transmission is mailed to the addressee by first class mail; (iii) three business days after mailing if sent by certified or registered mail. Addresses to which notices and demands may be delivered or sent may be changed from time to time by notice to the party.

14. Other Agency Rights and Obligations.

Nothing in this Agreement or any documents delivered pursuant to this Agreement shall be construed to limit or modify in any way the rights, obligations and liabilities of Agency in its capacity as a Member Entity of KWBA.

15. Amendment.

No amendment or modification of this Agreement shall be valid or effective unless in writing signed by both parties to this Agreement. Agency shall not amend the Master Agreement or waive any of its rights, benefits and protections thereunder without the prior written consent of KWBA.

16. Counterparts.

This Agreement may be executed in two or more counterparts, each of which shall be deemed an original and all of which together shall constitute one and the same agreement.

17. Construction of Agreement.

All parties to this Agreement have been represented by attorneys. For the purpose of interpretation of this Agreement, all parties shall be deemed to have an equal role in the drafting and preparation of this Agreement.

18. Plans and Specifications; Leases.

18.1 After the close of escrow, Agency shall cooperate with KWBA to obtain State's consent to KWBA's review and copying of any plans and specifications prepared by or for State for the construction of a groundwater recharge operation upon the Real Property to the extent permitted by law. If the State does not permit KWBA to directly review and copy such plans and specifications, then Agency agrees to perform such review and copying on behalf of KWBA to the extent Agency has the right to do so under the Master Agreement and promptly deliver to KWBA the information and copies the Agency so obtains.

18.2 Agency shall promptly deliver to KWBA any and all original Leases it may receive from the State. After close of escrow, Agency shall cooperate with KWBA to diligently pursue delivery by State of the original Leases.

19. Continuation and Survival of Representations, Warranties and Covenants.

All representations, warranties and covenants and indemnities by the respective parties contained herein or made in writing pursuant to this Agreement are intended to and shall remain true and correct as of the Closing Date, shall be deemed to be material, and shall survive the Closing.

Signed this date hereinabove first mentioned.

KERN COUNTY WATER AGENCY

By: [Signature]
Its President

KERN WATER BANK AUTHORITY

By: [Signature]
Its [Signature]

FILED
KERN COUNTY

AUG 15 2005

ADDENDEUM TO NEGATIVE DECLARATION
(14 CCR 15164)
Kern County Water Agency

ANN K. BARNETT
AUDITOR-CONTROLLER, COUNTY CLERK
BY [Signature] DEPUTY

Project: Pioneer Groundwater Recharge and Recovery (SCH# 96111037)
Lead Agency: Kern County Water Agency (KCWA)
Location: Located in Section 3,4,11, & 14 T30/R26, MDBM, just west of the intersection of Allen Rd and Ming Ave Extensions, west of CSUB.

50.3 Environmental
EIR/EIS Addendum
Negative Declaration
Pioneer GWR Recharge
& Recovery
x Ref 1503 Well Permit
GWR - Pioneer

Description: The Pioneer is a groundwater recharge and recovery Project developed to recharge water in the underground from various sources and using a number of recovery wells to pump out previously recharged water for delivery to meet shortages in surface water supplies. There are eleven local water districts participating in the Pioneer Project that are also Member Units of the Kern County Water Agency. The Participants include 10 agricultural and one urban water district that use the facility as part of their regional water management operations. The Negative Declaration for the Project analyzed the potential environmental impacts for the construction of up to 28 new wells on the Pioneer property. To date, eleven wells have been constructed. There has existed a concern that a high density of wells located on the Pioneer property may have the potential to create impacts on the recovery capability of the wells due to intra-well drawdown interference. In order to minimize groundwater impacts during a recovery cycle (drought), the Agency is proposing to re-locate ten well sites as identified in the Negative Declaration. This Addendum describes the new location for construction of up to ten wells. These wells would be located off the Pioneer property on property owned by Castle and Cooke, Inc., through a Letter Agreement involving a land exchange between the two parties. The approximate location of the ten new well sites is shown on the attached map. The proposed new locations are less than a mile east from the locations identified in the Negative Declaration. Further, a Report conducted by Kenneth D. Schmidt and Associates on the *Maximum Recovery Plan for the Pioneer Kern Fan Project*, dated December 21, 1998 indicated that spreading out recovery wells from locations identified in the Negative Declaration for the Project will minimize groundwater impacts due to drawdown of the groundwater levels during recovery.

RECEIVED - Kern County Water Agency
JMC
BEW
~~DML~~
GCB
CIC
DMM
LWF
~~KFT~~
All
ATM
RBI
ELA
MMV
JWP
DML
SMR
Scan
Orig to file
NOV 17 2005

Staff, having undertaken and completed a review of this proposed Addendum to the Negative Declaration in accordance with the Agency's "Objectives, Criteria and Procedures for Evaluation of Projects for Agency Compliance with CEQA" pursuant to Public Resources Code section 21082, has determined that an Addendum is the appropriate CEQA action. The KCWA Board of Directors, having conducted a careful and independent review of the proposed change to the Pioneer Groundwater Recharge and Recovery Project, described above, does hereby find and

Notice of Environmental Document
Posted by County Clerk on 8/15/05
and for 30 days thereafter, Pursuant to
Section 21152(C), Public Resources Code

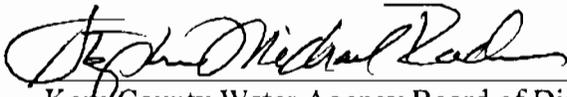
20766

declare that said changes are minor in nature and do not result in new significant environmental effects or substantially increase the severity of previously identified environmental effects, and do not call for the preparation of a subsequent negative declaration or environmental impact report pursuant to CEQA Guidelines §15162. A brief statement of the reasons supporting the Board's findings is as follows:

The proposed change to the Negative Declaration involves moving the location of well sites from the Pioneer property approximately one mile east in order to accommodate a land exchange and to spread out the well field which will lessen the impacts to groundwater levels and drawdown effects compared to the original well site locations. The same amount of water will be pumped on the new well sites as the original well sites. No increase in biological impacts will occur because the revised well sites are located on actively farmed lands. The lands have been re-zoned for residential development and are located within the Metropolitan Bakersfield Habitat Conservation Plan which permits and mitigates for urban development on prior agricultural lands. As such there is no material difference in the project with the change in well site location as compared to the Negative Declaration.

The Board of Directors hereby finds that this Addendum to the KCWA Pioneer Groundwater and Recovery Project reflects its independent judgment.

Dated: August 15, 2005

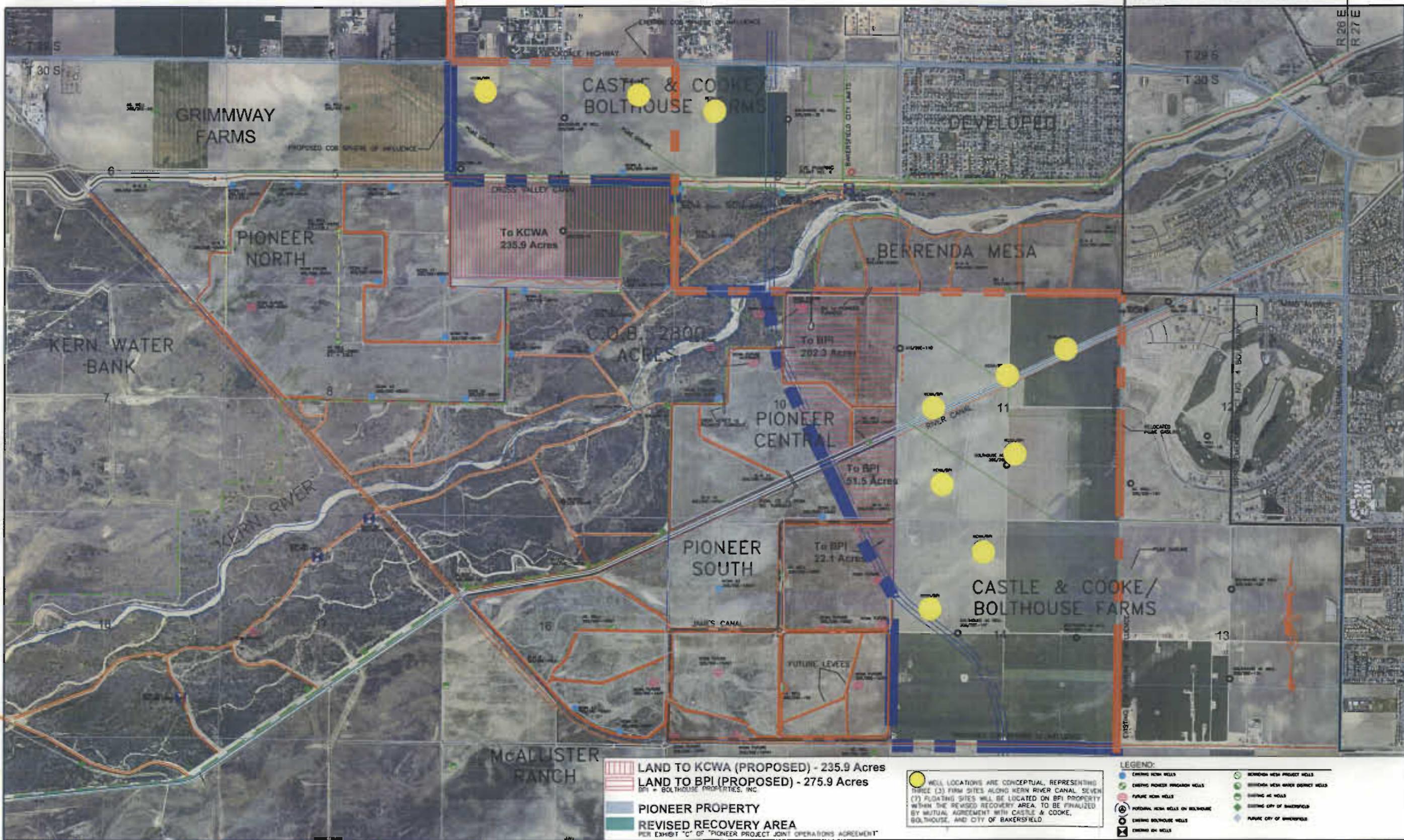
 , President
Kern County Water Agency Board of Directors

Attachments:

1. Well construction specifications
2. Well location map

Supporting Documents

1. *Pioneer Groundwater Recharge and Recovery Project Negative Declaration*, dated November 1996
2. *Maximum Recovery Plan for the Pioneer Kern Fan Project*, prepared by Kenneth D. Schmidt and Associates, groundwater quality consultants, dated December 1998.



LAND TO KCWA (PROPOSED) - 235.9 Acres
 LAND TO BPI (PROPOSED) - 275.9 Acres
 BPI = BOLTHOUSE PROPERTIES, INC.
 PIONEER PROPERTY
 REVISED RECOVERY AREA
 PER EXHIBIT "C" OF "PIONEER PROJECT JOINT OPERATIONS AGREEMENT"

WELL LOCATIONS ARE CONCEPTUAL, REPRESENTING THREE (3) FIRM SITES ALONG KERN RIVER CANAL. SEVEN (7) FLOATING SITES WILL BE LOCATED ON BPI PROPERTY WITHIN THE REVISED RECOVERY AREA, TO BE FINALIZED BY MUTUAL AGREEMENT WITH CASTLE & COOKE, BOLTHOUSE, AND CITY OF BAKERSFIELD.

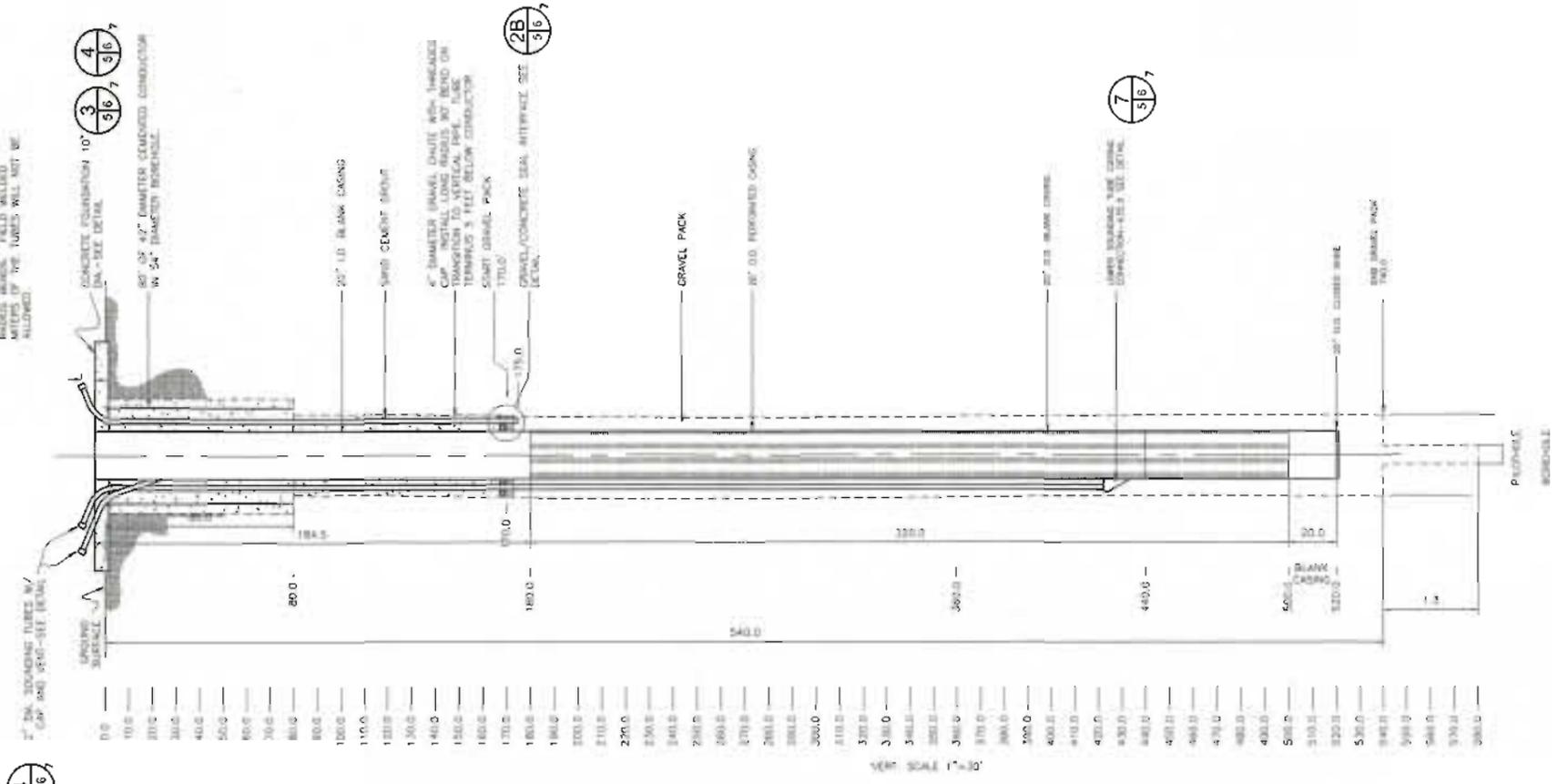
LEGEND:
 EXISTING KERN WELLS
 EXISTING PIONEER PROGRAM WELLS
 FUTURE KERN WELLS
 FUTURE KERN WELLS ON BOLTHOUSE
 EXISTING BOLTHOUSE WELLS
 EXISTING SH WELLS
 BERRENDA MESA WATER DISTRICT WELLS
 BAKERSFIELD WELLS
 EXISTING CITY OF BAKERSFIELD
 FUTURE CITY OF BAKERSFIELD

DATE: FEBRUARY 11, 2004	FILE NAME: Sphere of Influence - 038 (02/11/04)	REV:
SCALE: 1"=1000'	NOTES:	REV:
DRAWN BY: J. SMITH		REV:
CHECKED BY:		REV:
PROJECT CODE:		REV:

PIONEER PROJECT
KCWA/CASTLE & COOKE/BOLTHOUSE LAND EXCHANGE
 DECEMBER 1, 2003

KERN COUNTY WATER AGENCY
 BAKERSFIELD, CALIFORNIA

NOTE: THE DRAMEL CHUTE AND THE SOUNDING TUBES SHALL BE DIRECTED AWAY FROM THE CASING DURING LONG RIGGING WORK. FIELD WELDED JOINTS OF THE TUBES WILL NOT BE ALLOWED.



4
5/6

DETAIL 1B
WELL CASING
SCALE 1/8\"/>

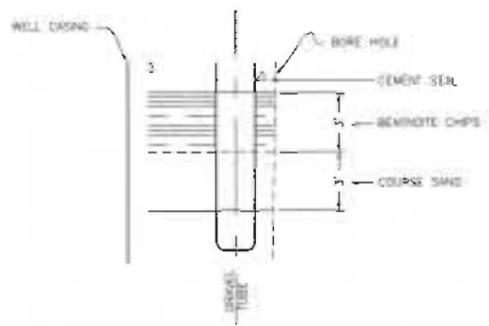
1B
5/6

CONSTRUCTION NOTES

1. THE CASING DEPTH INTERVALS NOTED HEREON ARE FOR BIDDING PURPOSES ONLY. THE DISTRICT RESERVES THE RIGHT TO MOVE OR CHANGE DEPTHS AND LOCATION OF CASING SECTIONS UPON REVIEW OF DRILL CUTTINGS AND C-LOGS. SEE SPECIFICATIONS FOR MEASUREMENT AND PAYMENT REQUIREMENTS FOR SAND CHANGES.
2. THE MINIMUM TIME THAT MUST BE ALLOWED FOR MATERIALS CONTAINING CEMENT TO SET BEFORE CONSTRUCTION OPERATIONS ON THE WELL MAY BE REQUIRED SHALL BE 6 HOURS FOR TYPE V CEMENT. WHEN NECESSARY THESE TIMES MAY BE REDUCED BY THE USE OF ADDITIVES DECIDED SPECIFICALLY TO SHORTEN SETTING TIME.
3. SOUNDING AND DRAMEL TUBES SHALL BE STAMPED "SHALLOW" AND "DEEP".
4. SEE DRAWINGS "S-04" AND "S-05" FOR WELL DETAILS.
5. TWO 2-INCH (DIAMETER) SOUNDING TUBES SHALL BE INSTALLED FOR THE WELL AND SHALL BE LOCATED AS DETAILED ON THE DRAWINGS-SEE DETAIL.

4
5/6

5
5/6



DETAIL 2B
GRAVEL SEAL INTERFACE
SCALE 1/8\"/>

2B
5/6

CAUTION:
THE CONTRACTOR SHALL CALL U.S.A. FOR LOCATION OF UNDERGROUND UTILITIES 48 HOUR PRIOR TO EXCAVATION.
CALL 1-800-642-2444

REVISED	DESCRIPTION	SUBMIT	APPROV	DATE

FILE NAME: X.DWG DRAWN BY: J. TORRES

REFERENCE INFORMATION AND NOTES

1. NONE

DESIGNED BY: M.M.V.

DRAWN BY: J.T.

CHECKED BY: J.T.

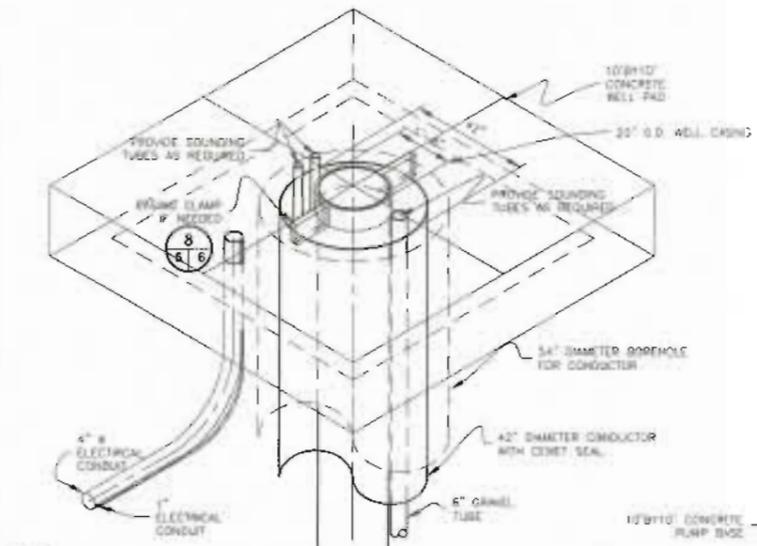
DATE: 7-25-05

IMPROVEMENT DISTRICT NO. 4
CONTRACT NO. KCWA 2004-11
10 CFS WELL CASING LAYOUT



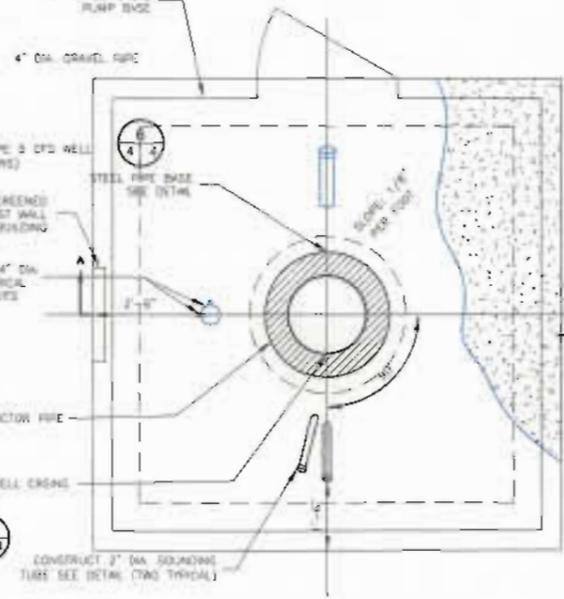
KERN COUNTY WATER AGENCY
BAKERSFIELD, CALIFORNIA

SCALE: AS SHOWN
SHEET NO: 430E
OF: G-5



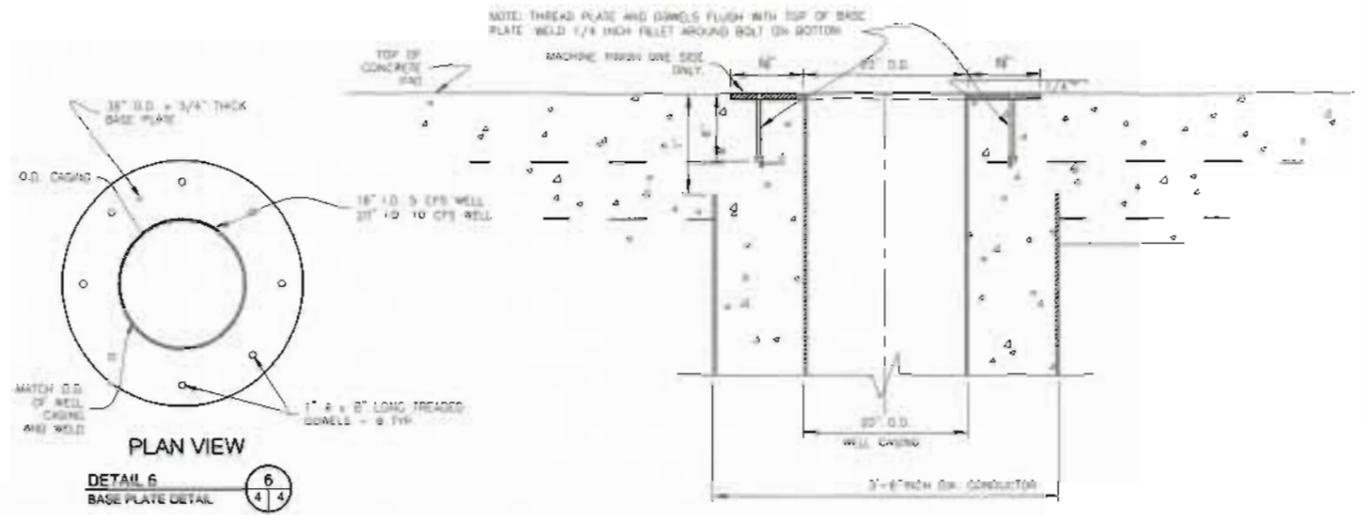
NOTES:
 1. CASING AND PERFORATED SECTIONS SHALL BE CONSTRUCTED AS REQUIRED IN THE SPECIFICATIONS.
 2. CONTRACTOR SHALL BE SUBMIT MILL CERTIFICATES, MANUFACTURER'S DATA SHEETS AND SHOP DRAWINGS TO THE ENGINEER FOR REVIEW AND APPROVAL PRIOR TO DELIVERING ANY PORTION OF CONSTRUCTED ITEMS TO THE WELL SITE.
 3. DIRECTION OF GRAVEL AND SOUNDING TUBES SHALL BE DETERMINED BY THE ENGINEER IN THE FIELD.

DETAIL 3
CASING DETAIL
1"=2'



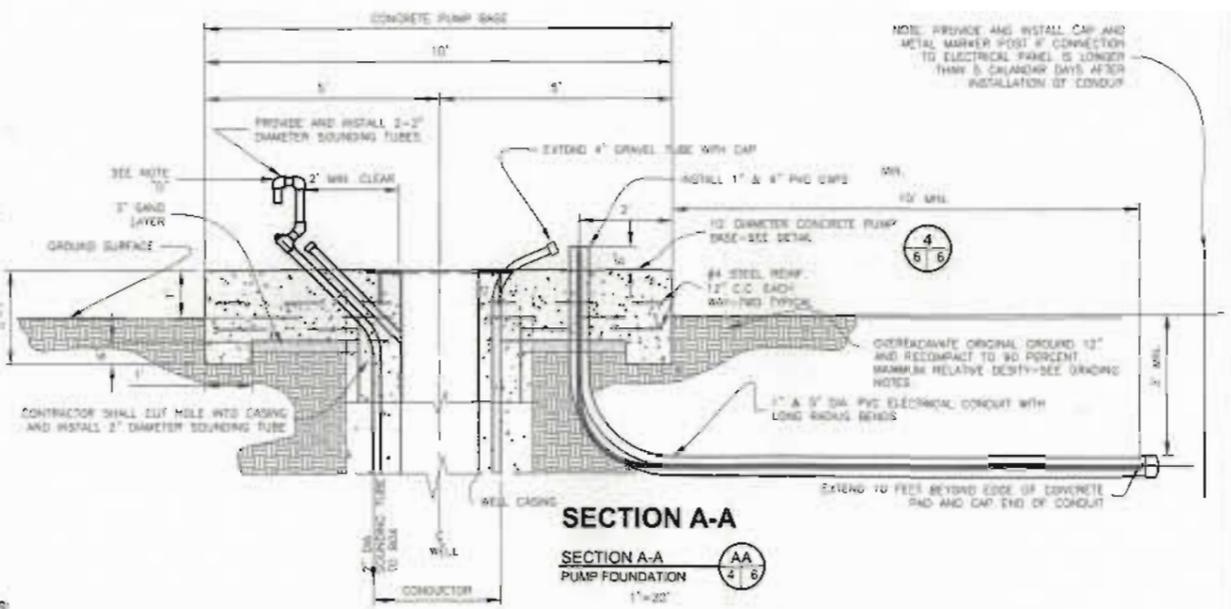
DETAIL 4
PUMP FOUNDATION
1"=4'

CONCRETE PUMP BASE NOTES:
 A. CONTRACTOR SHALL EXTEND GRAVEL TUBE, SOUNDING TUBES, CONDUCTOR AND CASING AS REQUIRED TO MEET TOP OF CONCRETE ELEMENTS.
 B. THE BOTTOM OF THE SOUNDING TUBES SHALL BE TERMINATED IN THE CASING AND THE GRAVEL PACK IN THE LOCATIONS SHOWN ON DRAWINGS "D-D" AND "E-E".
 C. THE CONTRACTOR SHALL COORDINATE THE ORIENTATION AND FINAL LOCATIONS OF TUBES ABOVE CONCRETE WITH ENGINEER.
 D. ALL CONCRETE USED FOR THE CONSTRUCTION OF CONCRETE PUMP BASES SHALL DEVELOP A MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI AT THE AGE OF 28 DAYS. CONCRETE MIX DESIGN SHALL BE SUBMITTED TO THE ENGINEER.
 E. ALL CONCRETE CONSTRUCTION SHALL CONFORM TO ACI-318 (MOST RECENT VERSION) UNLESS SPECIFIED OTHERWISE.
 F. ALL REINFORCING BARS SHALL HAVE A MINIMUM LENGTH OF LESS THAN 1.7 TIMES THE TENSION DEVELOPMENT LENGTH.
 G. HOOK BARS AT TOP OF BASE SHALL BE AS SHOWN.
 H. NO WELDING OF REINFORCING BARS SHALL BE PERMITTED UNLESS APPROVED BY THE ENGINEER PRIOR TO CONSTRUCTION.
 I. MINIMUM STEEL REINFORCEMENT DIAMETER SHALL BE NO. 3.
 J. MINIMUM THICKNESS OF CONCRETE COVER FOR REINFORCING STEEL SHALL BE AS FOLLOWS:
 - BOTTOM SPLICES CAST AGAINST EARTH 3-INCHES
 - FORMED SIDES AND TOP SPACES AGAINST EARTH 2 1/2-INCHES
 - TOP AND BOTTOM ALL OTHER EXPOSURE 1 INCH



DETAIL 6
BASE PLATE DETAIL
1"=2'

NOTES:
 1. BASE PLATE DIMENSIONS ARE FOR BIDDING PURPOSES ONLY. DIMENSIONS AND ALIGNMENT OF RECEIPTABLE HOLES MAY CHANGE BASED ON INFORMATION DEVELOPED FROM GEOPHYSICAL LOGS.
 2. CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS SHOWN HEREON AND PROVIDE A SHOP DRAWING FOR THE BASE PLATE PRIOR TO CONSTRUCTION UPON COMPLETED REVIEW OF SUBMITTALS BY THE ENGINEER. THE CONTRACTOR SHALL CONTACT AND NOTIFY THE BASE PLATE ANY DISCREPANCIES OR CHANGES SHALL BE BROUGHT TO THE ENGINEER'S ATTENTION FOR APPROVAL PRIOR TO FABRICATION.
 3. SEE PUMP FOUNDATION DETAIL FOR STRUCTURAL CONCRETE AND STEEL REINFORCEMENT DETAILS.



SECTION A-A
PUMP FOUNDATION
1"=20'

NOTES:
 A. GRAVEL (WHITE) AND SOUNDING TUBES SHALL BE DIRECTED AWAY FROM CASING USING LONG RADII BOWEL FIELD WELDED METERS OF THE TUBES WILL NOT BE ALLOWED.
 B. CONTRACTOR SHALL INSTALL NEW SOUNDING TUBES AS SHOWN HEREON.
 C. VENTED SOUNDING TUBE SHALL BE SCREENED AND SECURED WITH A STAINLESS STEEL CLAMP.
 D. SOUNDING TUBE VENT SHALL BE INSTALLED ON ONE TUBE ONLY.
 E. CONTRACTOR SHALL BE INSTALLED ON ONE TUBE BOX AT DEPTH SHOWN ON DRAWINGS "D-D" AND "E-E". SOUNDING TUBE BOX SHALL BE CONSTRUCTED AS SHOWN ON THE DRAWINGS.

REVISION	DESCRIPTION	DATE	BY	APP'D

NO.	DESCRIPTION
1.	NONE

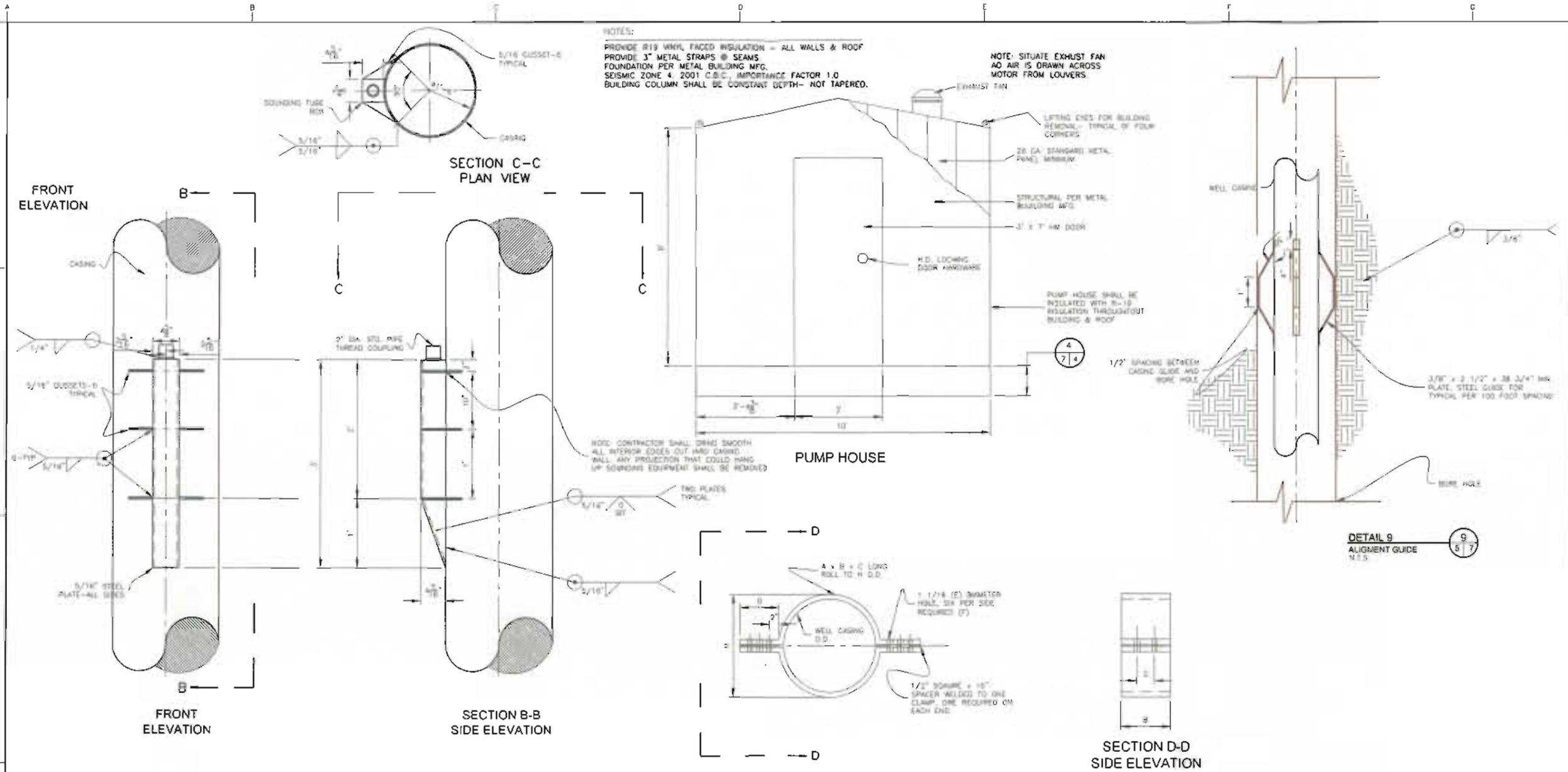
DESIGNED BY: MAFU
 CHECKED BY: WBT
 DRAWN BY: J. TORRES
 DATE: 7-26-04

IMPROVEMENT DISTRICT NO. 4
 CONTRACT NO. KCWA 2004-11
 WELL CONSTRUCTION DETAILS



KERN COUNTY WATER AGENCY
 BAKERSFIELD, CALIFORNIA

SCALE: AS SHOWN
PROJECT NO: 430E
SHEET: G-06
OF 3



NOTES:
 PROVIDE R19 VINYL FACED INSULATION - ALL WALLS & ROOF
 PROVIDE 3" METAL STRAPS @ SEAMS
 FOUNDATION PER METAL BUILDING MFG.
 SEISMIC ZONE 4 2001 C.B.C., IMPORTANCE FACTOR 1.0
 BUILDING COLUMN SHALL BE CONSTANT DEPTH - NOT TAPERED.

NOTE: SITUATE EXHUST FAN
 SO AIR IS DRAWN ACROSS
 MOTOR FROM LOUVERS.

NOTE: CONTRACTOR SHALL DRILL SMOOTH
 ALL INTERIOR EDGES OUT INTO CASING
 SHALL ANY PROJECTION THAT COULD HANG
 UP SOUNDING EQUIPMENT SHALL BE REMOVED

DIMENSIONS - INCHES (1)

CASING O.D.	A	B	C	D	E	F	G	H	ALLOWABLE WT. TONS
18 5/8"	1	12	61-5/16"	8	1-1/16"	8	4-1/2"	20-5/8"	83
20"	1	12	63-5/8"	8	1-1/16"	8	4-1/2"	22	82
20 5/8"	1	12	67-19/32"	8	1-1/16"	8	4-1/2"	22-5/8"	83 ¹⁸

NOTES:
 1. HANDBOOK OF GROUND WATER DEVELOPMENT, ROSSIGNOL MOSS COMPANY (JOHN WILEY & SONS, 1990, FIGURE 11.3)
 2. FOR DIAMETERS LARGER 20 5/8" THE CONTRACTOR SHALL SUBMIT CALCULATION SHEET
 3. CASING CLAMP SHALL REMAIN IN PLACE UNTIL THE CEMENT SEAL HAS BEEN PLACED AND CURED.

REVISED	DESCRIPTION	SUBMIT	APPROV	DATE

FILE NAME: QUANTITY TAKEOFF

REFERENCE INFORMATION AND NOTES:
 1. NONE

DESIGNED BY: MMV
 CHECKED BY: RSI
 APPROVED BY: [Signature]
 DATE: 8-31-00

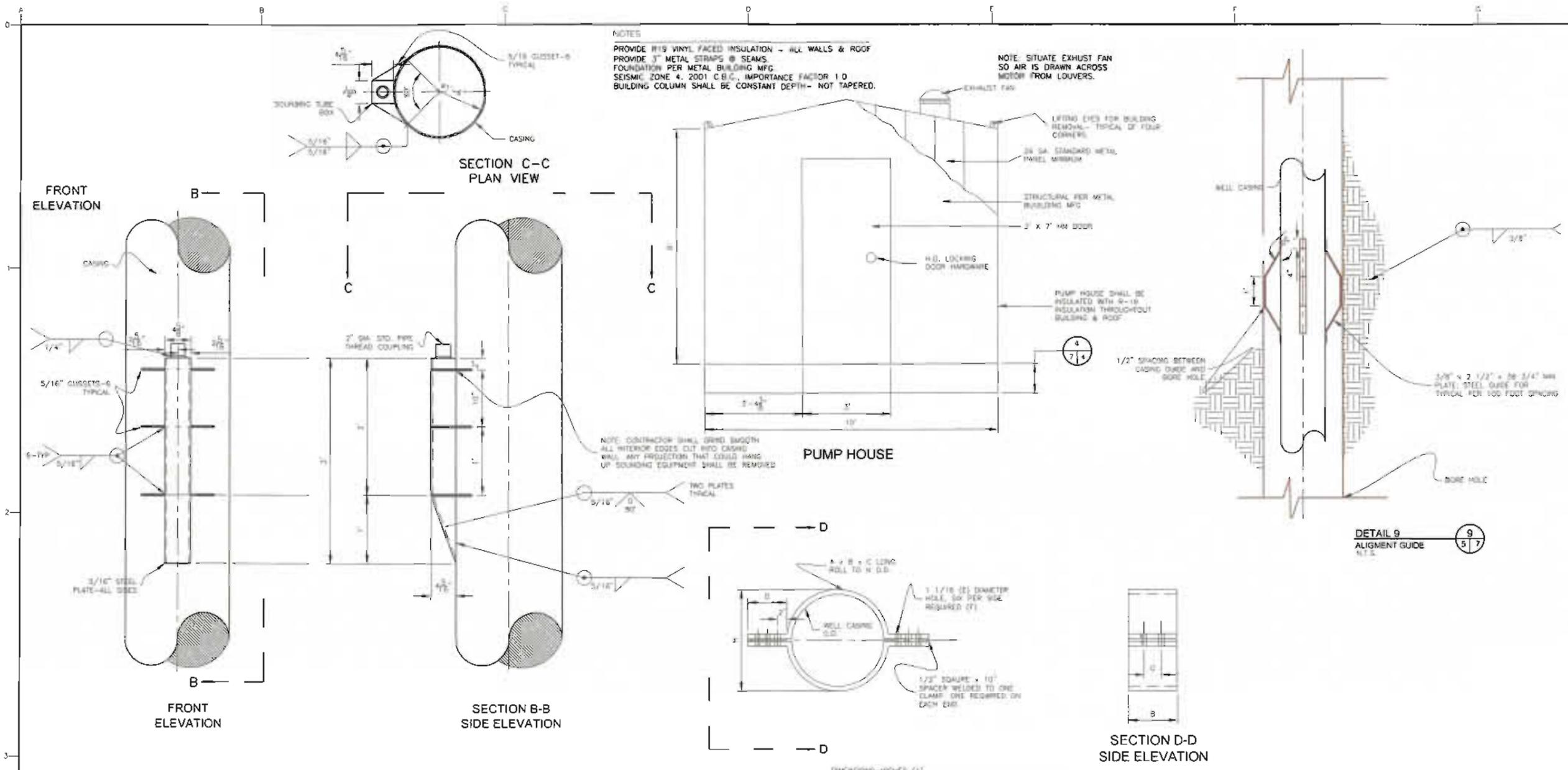


IMPROVEMENT DISTRICT NO. 4
 CONTRACT NO. KCWA 2004-11
 WELL CASING CONSTRUCTION DETAILS



KERN COUNTY WATER AGENCY
 BAKERSFIELD, CALIFORNIA

SCALE: AS SHOWN
 PROJECT NO: 430E
 SHEET: G-7
 OF 3



NOTES

PROVIDE #19 VINYL FACED INSULATION - ALL WALLS & ROOF
 PROVIDE 3" METAL STRAPS @ SEAMS
 FOUNDATION PER METAL BUILDING MFG.
 SEISMIC ZONE 4, 2001 C.B.C., IMPORTANCE FACTOR 1.0
 BUILDING COLUMN SHALL BE CONSTANT DEPTH - NOT TAPERED.

NOTE: SITUATE EXHAUST FAN SO AIR IS DRAWN ACROSS MOTION FROM LOUVERS.

NOTE: CONTRACTOR SHALL GRIND SMOOTH ALL INTERIOR EDGES OF WELDED CASING WITH ANY PROJECTIONS THAT COULD HANG UP SOUNDING EQUIPMENT SHALL BE REMOVED

DIMENSIONS - INCHES (1)

CASING O.D.	A	B	C	D	E	F	G	H	ALLOWABLE WT. TONS
18 5/8"	1	12	51-5/16"	8	1-1/16	6	4-1/2	20-5/8	65
20"	1	12	49-1/8"	8	1-1/16	6	4-1/2	22	82
20 3/8"	1	12	47-15/32"	8	1-1/16	6	4-1/2	22-5/8	85

NOTES:

1. HANDBOOK OF GROUND WATER DEVELOPMENT, ROGGE WESS COMPANY (JOHN WILEY & SONS, 1981, FIGURE 11.3)

2. FOR DIAMETERS LARGER 20 5/8" THE CONTRACTOR SHALL SUBMIT CALCULATION SHEET

3. CASING CLAMP SHALL REMAIN IN PLACE UNTIL THE O-RING SEAL HAS BEEN PLACED AND CURED

REVISION	DESCRIPTION	SUBMIT	APPROV	DATE

DRAWN BY J. TORES

REFERENCE APPROVALS AND NOTES

1. NONE

DESIGNED	MMV
CHECKED	RBI
APPROVED	
DATE	8-31-00



IMPROVEMENT DISTRICT NO. 4
CONTRACT NO. KCWA 2004-11
 WELL CASING CONSTRUCTION DETAILS



KERN COUNTY WATER AGENCY
 BAKERSFIELD, CALIFORNIA

AS SHOWN
 SHEET NO. 430E
 G-7
 OF 3

RECEIVED WITH FEE
RECEIPT # 00580

IF YOU WISH TO VIEW THIS DOCUMENT,
PLEASE ASK A COUNTY CLERK DEPUTY.

~~SEALED~~

NOTICE OF DETERMINATION

FILED
KERN COUNTY
110.2
Notice of Determination
JAN 22 2009

Ref SCH# 9611037

TO:
County Clerk
County of Kern
1115 Truxtun Avenue, 1st floor
Bakersfield, CA 93301-4639

FROM:
Kern County Water Agency
P.O. Box 58
Bakersfield, CA 93302

ANN K. BARNETT
AUDITOR CONTROLLER COUNTY CLERK
BY [Signature] DEPUTY

SUBJECT: Filing of Notice of Determination regarding Addendum No. 2 to the Negative Declaration for the Pioneer Groundwater Recharge and Recovery Project

PROJECT TITLE: Pioneer Groundwater Recharge and Recovery Project - SCH#9611037

PROJECT LOCATION: Generally west of the City of Bakersfield between Stockdale Highway and Panama Lane

PROJECT DESCRIPTION: The Project was developed to recharge and store water in the groundwater basin and to recover water to meet shortages in surface water supplies. The proposed changes revise the Project Description to reflect the current status of the Project facilities, and add to the Project specified facilities.

This is to advise that the Kern County Water Agency has approved the above described changes to the project on January 21, 2009, and has made the following determinations regarding the above described project:

1. The project will will not have a significant effect on the environment.
2. A Negative Declaration was prepared for this project pursuant to the provisions of CEQA.
3. An Addendum to the Negative Declaration was prepared for this project pursuant to the provisions of CEQA.
4. Mitigation measures were were not made a condition of approval for this project.
5. A statement of Overriding Considerations was was not adopted for this project.

This is to certify that a copy of the Addendum No. 2 along with the Negative Declaration with comments and responses and record of project approval is available to the general public at:

Stuart T. Pyle Water Resources Center, Kern County Water Agency, 3200 Rio Mirada Drive, Bakersfield, CA 93308.

Date Received for Filing: Jan. 22, 2009

[Signature]
James M. Beck
General Manager

COPY

Notice of Environmental Document
Posted by County Clerk on 01/22/09
and for 30 days thereafter, Pursuant to
Section 21152(C), Public Resources Code

#A047

ADDENDUM NO. 2 TO NEGATIVE DECLARATION
(14 CCR 15164)
Kern County Water Agency

Project: Pioneer Groundwater Recharge and Recovery (SCH# 96111037)

Lead Agency: Kern County Water Agency

Location: Generally west of the City of Bakersfield between Stockdale highway and Panama Lane, including various Sections in T30S/R26E and T/30S/R25E, MDBM

Description: The Pioneer Groundwater Recharge and Recovery Project (Project) was developed to recharge and store water in the groundwater basin and to recover water to meet shortages in surface water supplies. A Negative Declaration for the Project was adopted by the Kern County Water Agency (Agency) Board of Directors on December 20, 1996. This addendum revises the Negative Declaration to reflect the current status of the Project recharge and recovery facilities.

The Negative Declaration for the Project analyzed the potential environmental impacts of recharging water on specified lands, including privately held lands in Section 4, Township 30 South, Range 36 East (Section 4). Use of these lands for recharge was made contingent upon agreement of the landowner(s). These lands were recently acquired by the Agency as part of the Land Exchange and Water Development Agreement between the Agency, Bolthouse Properties, LLC, Castle and Cooke California, Inc., and the City of Bakersfield (Land Exchange). The Land Exchange included, among other things, an exchange of 236 acres in Section 4 that were owned by Bolthouse Properties, LLC (Bolthouse) for 276 acres in Sections 10, 11 and 15, T30S/R26E (Sections 10, 11 and 15), that were owned by the Agency. Prior to the Land Exchange, the property granted to Bolthouse contained recharge facilities that were used for the Project. This property will not be available in the future for Project recharge activities unless arrangements are made with the landowner(s) and further CEQA analysis is performed if necessary. Through this addendum, the Agency is revising the Project Description to reflect the current status of the Project recharge facilities that are located on Project lands. This addendum describes the Project recharge facilities that will be constructed and used on the Section 4 property that was acquired by the Agency in the Land Exchange. It also describes a levee that may be constructed in order to recharge water on property in Sections 10 and 15 that continues to be owned by the Agency.

The Agency plans to construct approximately 10,000 feet of levees on the Section 4 property acquired by the Agency through the Land Exchange. These levees will create three recharge ponds. The total wetted area of the ponds will cover approximately 220 acres. The levees will be approximately 5-ft above existing ground with a 15-ft wide road at the top and 4:1 inboard slopes and 2:1 outboard slopes. Interbasin structures will be constructed between ponds to allow for gravity flow from east to west. Flow between ponds will be controlled by the use of weir boards. Water will be delivered to the ponds through a turnout from the Cross Valley Canal.

The Agency may also construct approximately 3,000 feet of levees on property in Sections 10 and 15. These levees will provide for continued recharge activities on those lands. The levees will be similar in nature to those that will be constructed in Section 4. Deliveries to the ponds will not change from current (and historical) methods.

The Negative Declaration also described the Project as including the recovery of up to 341,000 acre feet of water annually. This recovery was to be accomplished through the use in varying degrees of the following facilities: 28 new and 9 existing wells on the Pioneer Property; 19 existing and 4 new wells in the City of Bakersfield's 2800-Acres (2800-Acres); 4 existing wells along the Agency's Cross Valley Canal; 6 existing and 2 new wells on Berrenda Mesa Water District property; 31 existing and 30 new wells on the Kern Water Bank property; and 25 privately owned wells in the Kern Fan area. Some of the wells that were contemplated in the Negative Declaration were not constructed in the precise locations shown in the Negative Declaration. Addendum No. 1 to the Negative Declaration, which was adopted on August 15, 2005, changed the location of up to ten well sites. The Agency also acquired two existing wells and three future well sites as part of the Land Exchange, and proposes to construct two wells on the land acquired by the Agency in Section 4. Through this addendum, the Agency is revising the Project description to reflect the current status of the Project recovery facilities.

Exhibit A to this addendum shows the current location of the Project recharge facilities, including facilities that currently exist as well as those facilities which will be constructed on Sections 4, 10 and 15.

Exhibit B to this addendum shows the current location of the Project recovery facilities, excluding the Kern Water Bank and privately owned wells. For ease of reference, Exhibit B does not reflect one existing Project well in the 2800-Acres (Olcese 08 - T30S/25E, Section 24) and two Project wells located along the Agency's Cross Valley Canal (KCWA 12 and 13 - T/30S/25E, Section 9). These three wells will continue to be used for Project purposes.

The Agency Board of Directors, having conducted a careful and independent review of the proposed changes to the Pioneer Groundwater Recharge and Recovery Project, described above, does hereby find and declare that said changes and additions are minor in nature and do not result in new significant environmental effects or substantially increase the severity of previously identified environmental effects, and do not call for the preparation of a subsequent negative declaration or environmental impact report pursuant to CEQA Guidelines §15162. A brief statement of the reasons supporting the Board's findings is as follows:

This addendum revises the Negative Declaration to accurately reflect the location and description of the Project facilities. The recharge and recovery activities described herein were contemplated by the Negative Declaration.

Impacts associated with recharge activities on the Section 4 property were analyzed in the Negative Declaration. The Section 4 land has consistently been used for farming operations since the inception of the Project. These lands are bordered on three sides by existing recharge ponds and on the north side by the Cross Valley Canal.

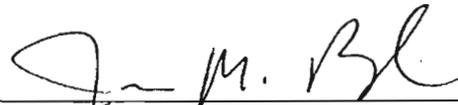
Use of the lands in Sections 10 and 15 will not change as a result of this addendum. The levees in Sections 10 and 15 will be constructed upon lands which were included in the original Project Description and which have been used for Project purposes.

Only two existing wells and five future well sites were not described in the Negative Declaration or Addendum No. 1 to the Negative Declaration. The remainder of the recovery facilities described herein were included in the Negative Declaration and Addendum No. 1 to the Negative Declaration; this addendum corrects the location of some of those facilities.

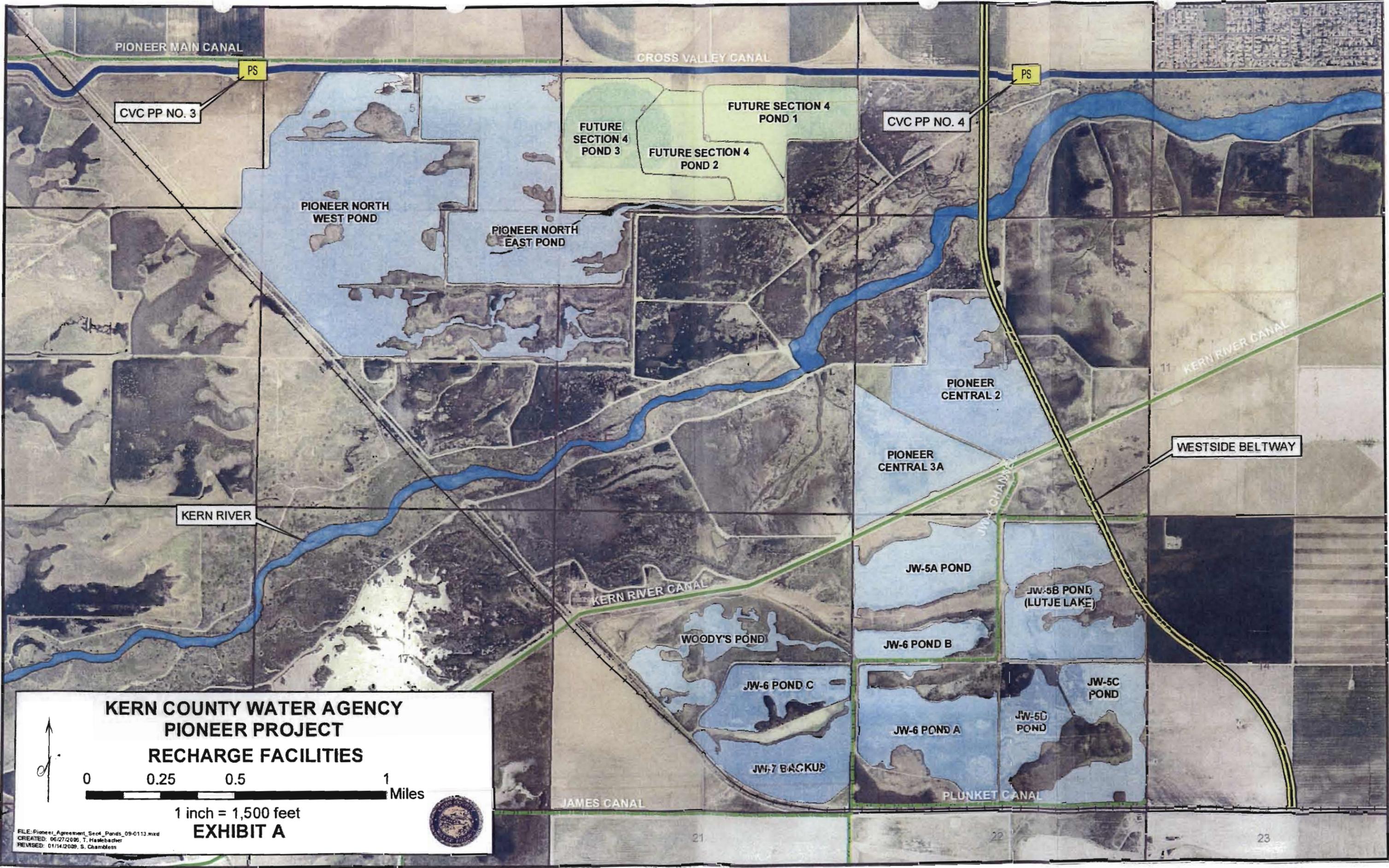
Use of the previously-undescribed wells and well sites will not result in an increase in the amount of recovery described in the Negative Declaration. Project recovery has consistently been significantly less than was described in the Negative Declaration. Assuming maximum recovery from the previously-undescribed wells, Project recovery will continue to remain significantly less than described in the Negative Declaration.

The Board of Directors hereby finds that this Addendum No. 2 to the Pioneer Groundwater and Recovery Project Negative Declaration reflects its independent judgment.

Dated: January 22, 2009



James M. Beck, General Manager



**KERN COUNTY WATER AGENCY
PIONEER PROJECT
RECHARGE FACILITIES**

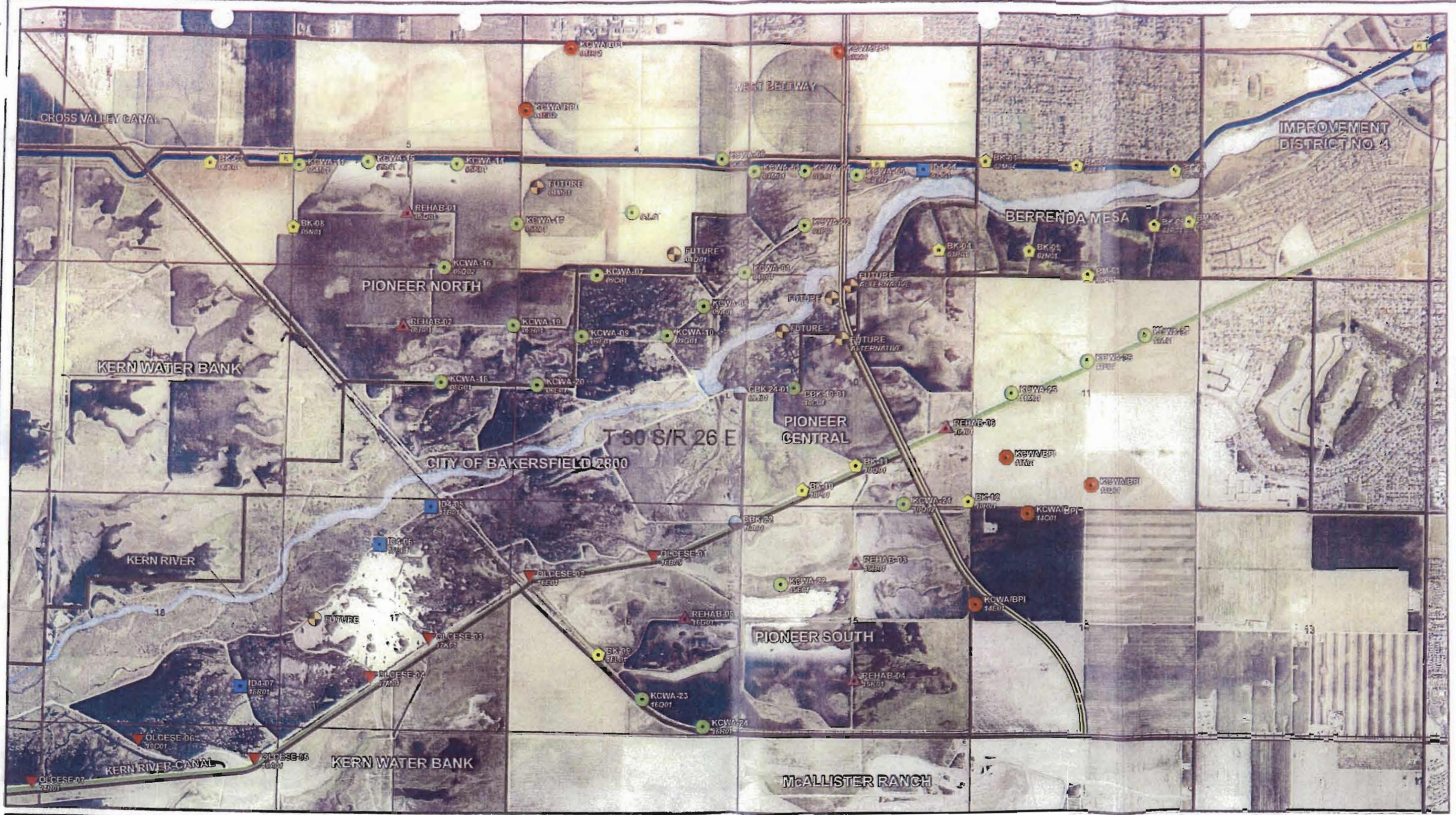
0 0.25 0.5 1 Miles

1 inch = 1,500 feet

EXHIBIT A

FILE: Pioneer_Agreement_Sect_Ponds_09-0113.mxd
 CREATED: 06/27/2009, T. Haselbacher
 REVISED: 01/14/2009, S. Chambless





LEGEND

CITY OF BAKERSFIELD	IMPROVEMENT DISTRICT NO. 4
REHAB WELLS	BERRENDA MESA
KERN COUNTY WATER AGENCY	OLCSE
KCWA, FUTURE	10 WELL PROJECT (LAND EXCHANGE)

KERN COUNTY WATER AGENCY - KERN COUNTY, CALIFORNIA

PIONEER PROJECT WELLSITE LOCATION MAP - 2009

ADDENDUM 2 TO NEGATIVE DECLARATION

EXHIBIT B

N

0 0.125 0.25 0.5 0.75 1 Miles

1 inch = 1,000 feet

CREATED: 2009-08-22, 3:00 PM
 REVISION: 2009-01-12, 2:00 PM
 FILE: Kern Well Site CEQA (Rev) 08-01-09.dwg

STATE OF CALIFORNIA-THE RESOURCES AGENCY

DEPARTMENT OF FISH AND GAME

00580

ENVIRONMENTAL DOCUMENT APPLICATION/FILING FEE

CASH RECEIPT

Lead Agency: KC Water Agency

Date: 11/15/96

County/State Agency: KC Water Agency

Document No. _____

Project Title: Pioneer Ground Water Recharge & Recovery Project

Project Applicant: KC Water Agency

CHECK ONE:

<input type="checkbox"/>	Environmental Impact Report	\$850.00	\$ _____
<input checked="" type="checkbox"/>	Negative Declaration	\$1,250.00	\$ <u>1250 -</u>
<input type="checkbox"/>	Application Fee Water Diversion (Water Resources Control Board Only)	\$850.00	\$ _____
<input type="checkbox"/>	Projects Subject to Certified Regulatory Programs (DFG & CDF Only)	\$850.00	\$ _____
<input type="checkbox"/>	County Administrative Fee	\$25.00	\$ _____
TOTAL RECEIVED			\$ <u>1250 -</u>

Signature of person receiving payment RJ Gattien

KERN COUNTY
CLERKS OFFICE
1115 TRUXTON AVE.

YOUR RECEIPT
THANK YOU

0047
CEQA-CC Fee 50.00

ITEMS 1
TOTAL \$50.00
CASH 50.00

004 BRENDA 2170-004
2629 3:46PM 1/22/09

RECEIVED WITH FEE
RECEIPT # 15120106

NOTICE OF DETERMINATION

FILED
KERN COUNTY

TO:
County Clerk
County of Kern
1115 Truxtun Avenue
Bakersfield, CA 93301

RECEIVED - Kern County Water Agency

JMB	<input type="checkbox"/>
BEW	<input type="checkbox"/>
DMB	<input type="checkbox"/>
CLC	<input type="checkbox"/>
DWM	<input type="checkbox"/>
HLM	<input type="checkbox"/>
MLC	<input type="checkbox"/>
LAB	<input type="checkbox"/>

JUL 03 2012

FROM:
Kern County Water Agency
P.O. Box 58
Bakersfield, CA 93302-0058

MAY 30 2012

ANN K. BARNETT
AUDITOR CONTROLLER-COUNTY CLERK
BY J DEPUTY

SUBJECT: All Orig to file Scan Filing of Notice of Determination regarding Addendum No. 3 to the Negative Declaration for the Pioneer Groundwater Recharge and Recovery Project

PROJECT TITLE: Pioneer Groundwater Recharge and Recovery Project (SCH#96111037)

PROJECT LOCATION: Generally west of the City of Bakersfield between Stockdale highway and Panama Lane, including various Sections in T30S/R26E and T/30S/R25E, MDBM

PROJECT DESCRIPTION: The Pioneer Groundwater Recharge and Recovery Project (Project) was developed to recharge and store water in the groundwater basin and to recover water to meet shortages in surface water supplies. Changes to the Project include periodic modifications to the height of Project levees.

This is to advise that the Kern County Water Agency (Lead Agency) has approved the above described changes to the project on April 26, 2012, and has made the following determinations regarding the above described project:

1. The project will will not have a significant effect on the environment.
2. An Environmental Impact Report was prepared for this project pursuant to the provisions of CEQA.
3. An Addendum to the Negative Declaration was prepared for this project pursuant to the provisions of CEQA.
4. Mitigation measures were were not made a condition of approval for this project.
5. A statement of Overriding Considerations was was not adopted for this project.

This is to certify that a copy of the Addendum No. 3 along with the Negative Declaration with comments and responses and record of project approval is available to the general public at:

Stuart T. Pyle Water Resources Center, Kern County Water Agency, 3200 Rio Mirada Drive, Bakersfield, CA 93308.

Date Received for Filing: 5/8/12

J. M. Bl
Signature
Title General Manager

Notice of Environmental Document
Posted by County Clerk on 5/30/12
and for 30 days thereafter, Pursuant to
Section 21152(C). Public Resources

RECEIVED WITH FEE
RECEIPT # 15120166

NOTICE OF DETERMINATION

FILED
KERN COUNTY

TO:
County Clerk
County of Kern
1115 Truxtun Avenue, 1st floor
Bakersfield, CA 93301-4639

FROM:
Kern County Water Agency
P.O. Box 58
Bakersfield, CA 93302-0058

MAY 30 2012

ANN K. BARNETT
AUDITOR CONTROLLER-COUNTY CLERK
BY J DEPUTY

SUBJECT: Filing of Notice of Determination regarding Addendum No. 3 to the Negative Declaration for the Pioneer Groundwater Recharge and Recovery Project

PROJECT TITLE: Pioneer Groundwater Recharge and Recovery Project (SCH#96111037)

PROJECT LOCATION: Generally west of the City of Bakersfield between Stockdale highway and Panama Lane, including various Sections in T30S/R26E and T/30S/R25E, MDBM

PROJECT DESCRIPTION: The Pioneer Groundwater Recharge and Recovery Project (Project) was developed to recharge and store water in the groundwater basin and to recover water to meet shortages in surface water supplies. Changes to the Project include periodic modifications to the height of Project levees.

This is to advise that the Kern County Water Agency (Lead Agency) has approved the above described changes to the project on April 26, 2012, and has made the following determinations regarding the above described project:

1. The project will will not have a significant effect on the environment.
2. An Environmental Impact Report was prepared for this project pursuant to the provisions of CEQA.
3. An Addendum to the Negative Declaration was prepared for this project pursuant to the provisions of CEQA.
4. Mitigation measures were were not made a condition of approval for this project.
5. A statement of Overriding Considerations was was not adopted for this project.

This is to certify that a copy of the Addendum No. 3 along with the Negative Declaration with comments and responses and record of project approval is available to the general public at:

Stuart T. Pyle Water Resources Center, Kern County Water Agency, 3200 Rio Mirada Drive, Bakersfield, CA 93308.

Date Received for Filing: 5/8/12



Signature

Title General Manager

Notice of Environmental Document
Posted by County Clerk on 5/30/12
and for 30 days thereafter, Pursuant to
Section 21152(C), Public Resources Code

ADDENDUM NO. 3 TO NEGATIVE DECLARATION
(14 CCR 15164)
Kern County Water Agency

Project: Pioneer Groundwater Recharge and Recovery (SCH# 96111037)

Lead Agency: Kern County Water Agency

Location: Generally west of the City of Bakersfield between Stockdale highway and Panama Lane, including various Sections in T30S/R26E and T/30S/R25E, MDBM

Description: The Pioneer Groundwater Recharge and Recovery Project (Project) was developed to recharge and store water in the groundwater basin and to recover water to meet shortages in surface water supplies. A Negative Declaration for the Project was adopted by the Kern County Water Agency (Agency) Board of Directors on December 20, 1996.

The Negative Declaration, and subsequent addenda, for the Project analyzed the potential environmental impacts of the construction and operation of groundwater recharges facilities on the subject property. The Agency has identified the need to periodically modify the height of one or more of the Project levees, or a portion thereof, to maintain the functionality of the Project. Modifications of the height of the levees may require modification of the levee embankments as well; however, these modifications will not alter the overall footprint of the Project. Additionally, modification of the levees will not alter the operations of the Projects from that which is described in the Negative Declaration and associated addenda.

Exhibit A to this addendum shows the current location of the Project facilities.

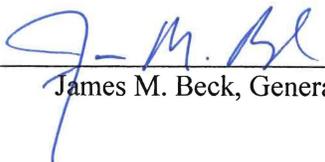
The Agency Board of Directors, having conducted a careful and independent review of the proposed changes to the Pioneer Groundwater Recharge and Recovery Project, described above, does hereby find and declare that said changes and additions are minor in nature and do not result in new significant environmental effects or substantially increase the severity of previously identified environmental effects, and do not call for the preparation of a subsequent negative declaration or environmental impact report pursuant to CEQA Guidelines §15162. A brief statement of the reasons supporting the Board's findings is as follows:

This addendum revises the Negative Declaration to accurately reflect the periodic modification of the Project facilities.

Impacts associated with the modification of said facilities were analyzed in the Negative Declaration.

The Board of Directors hereby finds that this Addendum No. 3 to the Pioneer Groundwater and Recovery Project Negative Declaration reflects its independent judgment.

Dated: 5/8/12, 2012



James M. Beck, General Manager



**KERN COUNTY WATER AGENCY
PIONEER PROJECT
RECHARGE FACILITIES**

1 inch = 1,500 feet

EXHIBIT A



FILE: Pioneer_Agreement_Rech_Ponds_09-0113.mxd
 CREATED: 05/27/2008, T. Haselbacher
 REVISED: 01/14/2009, G. Chambliss





State of California—The Resources Agency
 DEPARTMENT OF FISH AND GAME
2012 ENVIRONMENTAL FILING FEE CASH RECEIPT

PRINT **CLEAR**

RECEIPT# 15120166
STATE CLEARING HOUSE # (if applicable)

SEE INSTRUCTIONS ON REVERSE. TYPE OR PRINT CLEARLY

LEAD AGENCY KERN COUNTY WATER AGENCY			DATE 05/30/2012
COUNTY/STATE AGENCY OF FILING KERN			DOCUMENT NUMBER 2191
PROJECT TITLE PIONEER GROUNDWATER RECHARGE AND RECOVERY PROJECT			
PROJECT APPLICANT NAME KERN COUNTY WATER AGENCY			PHONE NUMBER (661) 634-1400
PROJECT APPLICANT ADDRESS P.O. BOX 58	CITY BAKERSFIELD	STATE CA	ZIP CODE 93302-0058

PROJECT APPLICANT (Check appropriate box):

Local Public Agency
 School District
 Other Special District
 State Agency
 Private Entity

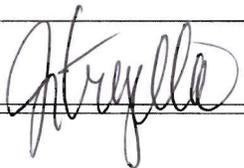
CHECK APPLICABLE FEES:

<input type="checkbox"/> Environmental Impact Report (EIR)	\$2,919.00	\$	0.00
<input type="checkbox"/> Negative Declaration (ND)(MND)	\$2,101.50	\$	0.00
<input type="checkbox"/> Application Fee Water Diversion (State Water Resources Control Board Only)	\$850.00	\$	0.00
<input type="checkbox"/> Projects Subject to Certified Regulatory Programs (CRP)	\$992.50	\$	0.00
<input checked="" type="checkbox"/> County Administrative Fee	\$50.00	\$	50.00
<input type="checkbox"/> Project that is exempt from fees			
<input type="checkbox"/> Notice of Exemption			
<input type="checkbox"/> DFG No Effect Determination (Form Attached)			
<input type="checkbox"/> Other _____		\$	_____

PAYMENT METHOD:

Cash
 Credit
 Check
 Other _____

TOTAL RECEIVED \$ 50.00

SIGNATURE X 	TITLE CPT
---	--------------

Kern County
Clerks Office
1115 Truxtun Ave
Bakersfield CA 93301
661-868-3588

EE
57

RECEIVED Kern County Water Agency
JMB
BEW
DMB
CLC
DWM
HLM
MLC
LAB
ATM
DRB
MMV
CMW
SMA
NLP
Scan

SEP 05 2013

FILED
KERN COUNTY

JUL 26 2013

NOTICE OF DETERMINATION

FROM:
Kern County Water Agency
P.O. Box 58
Bakersfield, CA 93302-0058

MARY D. BEDARD
AUDITOR CONTROLLER COUNTY CLERK
DEPUTY

CEQA
County Clerk
Fee
#2942
1.000 @
\$50.000
\$50.00
1st floor
-4639

Total \$50.00
Cash \$50.00
Change \$0.00

Filing of Notice of Determination regarding Addendum No. 4 to the Negative Declaration for the Pioneer Groundwater Recharge and Recovery Project

Pioneer Groundwater Recharge and Recovery Project (SCH#96111037)

ORDER NO: 26615
7/26/2013 3:24:19 PM
BAKERSFIELD
ELIZABETH DELVILLAR

IN: Generally west of the City of Bakersfield between Stockdale highway and Panama Lane, including various Sections in T30S/R26E and T/30S/R25E, MDBM

PROJECT DESCRIPTION: The Pioneer Groundwater Recharge and Recovery Project (Project) was developed to recharge and store water in the groundwater basin and to recover water to meet shortages in surface water supplies. Changes to the Project include construction of up to three monitoring wells.

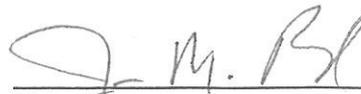
This is to advise that the Kern County Water Agency (Lead Agency) has approved the above described changes to the project on July 25, 2013, and has made the following determinations regarding the above described project:

1. The project will will not have a significant effect on the environment.
2. An Environmental Impact Report was prepared for this project pursuant to the provisions of CEQA.
3. An Addendum to the Negative Declaration was prepared for this project pursuant to the provisions of CEQA.
4. Mitigation measures were were not made a condition of approval for this project.
5. A statement of Overriding Considerations was was not adopted for this project.

This is to certify that a copy of the Addendum No. 4 along with the Negative Declaration with comments and responses and record of project approval is available to the general public at:

Stuart T. Pyle Water Resources Center, Kern County Water Agency, 3200 Rio Mirada Drive, Bakersfield, CA 93308.

Date Received for Filing: 7/26/13


Signature
Title General Manager Environmental Document

Posted by County Clerk on 7/26/13
and for 30 days thereafter, Pursuant to
Section 21152(C), Public Resources Code

2942

RECEIVED WITH FEE
RECEIPT # 15130307

FILED
KERN COUNTY

NOTICE OF DETERMINATION

JUL 26 2013

TO:
County Clerk
County of Kern
1115 Truxtun Avenue, 1st floor
Bakersfield, CA 93301-4639

FROM:
Kern County Water Agency
P.O. Box 58
Bakersfield, CA 93302-0058
MARY B. BEDARD
AUDITOR CONTROLLER-COUNTY CLERK
ed DEPUTY

SUBJECT: Filing of Notice of Determination regarding Addendum No. 4 to the Negative Declaration for the Pioneer Groundwater Recharge and Recovery Project

PROJECT TITLE: Pioneer Groundwater Recharge and Recovery Project (SCH#96111037)

PROJECT LOCATION: Generally west of the City of Bakersfield between Stockdale highway and Panama Lane, including various Sections in T30S/R26E and T/30S/R25E, MDBM

PROJECT DESCRIPTION: The Pioneer Groundwater Recharge and Recovery Project (Project) was developed to recharge and store water in the groundwater basin and to recover water to meet shortages in surface water supplies. Changes to the Project include construction of up to three monitoring wells.

This is to advise that the Kern County Water Agency (Lead Agency) has approved the above described changes to the project on July 25, 2013, and has made the following determinations regarding the above described project:

1. The project will will not have a significant effect on the environment.
2. An Environmental Impact Report was prepared for this project pursuant to the provisions of CEQA.
3. An Addendum to the Negative Declaration was prepared for this project pursuant to the provisions of CEQA.
4. Mitigation measures were were not made a condition of approval for this project.
5. A statement of Overriding Considerations was was not adopted for this project.

This is to certify that a copy of the Addendum No. 4 along with the Negative Declaration with comments and responses and record of project approval is available to the general public at:

Stuart T. Pyle Water Resources Center, Kern County Water Agency, 3200 Rio Mirada Drive, Bakersfield, CA 93308.

Date Received for Filing: 7/26/13

J. M. Bl
Signature

Title General Manager

Environmental Document
Posted by County Clerk on 7/26/13
and for 30 days thereafter, Pursuant to
Section 21152(C), Public Resources Code

2942

ADDENDUM NO. 4 TO NEGATIVE DECLARATION
(14 CCR 15164)
Kern County Water Agency

Project: Pioneer Groundwater Recharge and Recovery (SCH# 96111037)

Lead Agency: Kern County Water Agency

Location: Generally west of the City of Bakersfield between Stockdale highway and Panama Lane, including various Sections in T30S/R26E and T/30S/R25E, MDBM

Description: The Pioneer Groundwater Recharge and Recovery Project (Project) was developed to recharge and store water in the groundwater basin and to recover water to meet shortages in surface water supplies. A Negative Declaration for the Project was adopted by the Kern County Water Agency (Agency) Board of Directors on December 20, 1996.

The Negative Declaration, and subsequent addenda, for the Project analyzed the potential environmental impacts of the construction and operation of groundwater recharges facilities on the subject property. Multiple Project monitoring wells have or are showing signs of collapsed well casings. Therefore, the Agency has identified the need to construct up to three monitoring wells on the property to maintain the monitoring well network. Construction of these additional monitoring wells will not alter the overall footprint nor will it alter the operations of the Project from that which is described in the Negative Declaration and associated addenda.

Exhibit A to this addendum shows the location of the Project facilities and proposed monitoring well sites.

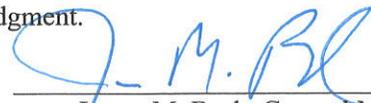
The Agency Board of Directors, having conducted a careful and independent review of the proposed changes to the Pioneer Groundwater Recharge and Recovery Project, described above, does hereby find and declare that said changes and additions are minor in nature and do not result in new significant environmental effects or substantially increase the severity of previously identified environmental effects, and do not call for the preparation of a subsequent negative declaration or environmental impact report pursuant to CEQA Guidelines §15162. A brief statement of the reasons supporting the Board's findings is as follows:

This addendum revises the Negative Declaration to accurately reflect the modification of the Project facilities.

Impacts associated with the modification of said facilities were analyzed in the Negative Declaration.

The Board of Directors hereby finds that this Addendum No. 4 to the Pioneer Groundwater and Recovery Project Negative Declaration reflects its independent judgment.

Dated: 7/26/13, 2013



James M. Beck, General Manager

NOTICE OF DETERMINATION

TO: Office of the Governor
Office of Planning and Research
State Clearinghouse
1400 Tenth Street, Room 12
Sacramento, Ca 95814

FROM: Kern County Water Agency
P.O. Box 58
Bakersfield, CA 93302

ENDORSED
FILED
KERN COUNTY
DEC 23 1996
JAMIEA. REIDARD...
BY

RECEIVED WITHOUT FEE
BILLED ON 12-26-96

FEE RECEIVED
RECEIPT # 00580

01-15-96

SUBJECT: Filing of Notice of Determination in compliance with Section 21152 of the Public Resources Code.

PROJECT TITLE: Kern County Water Agency Interim Pioneer Ground Water Project (SCH# 96111037)

PROJECT LOCATION: Generally west of the City of Bakersfield between Stockdale Hwy and Panama Ln, as shown on attached map

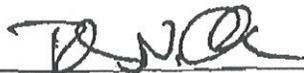
PROJECT DESCRIPTION: Property will be used for groundwater recharge and recovery

This is to advise that the Kern County Water Agency (Lead Agency) has approved the above described project on December 20, 1996, and has made the following determinations regarding the above described project:

1. The project will, will not, have a significant effect on the environment.
2. An Environmental Impact Report was prepared for this project pursuant to the provisions of CEQA.
 A Negative Declaration was prepared for this project pursuant to the provisions of CEQA.
3. Mitigation measures were, were not, made a condition of approval for this project.
4. A statement of Overriding Considerations was, was not, adopted for this project.

This is to certify that a copy of the Negative Declaration with comments and responses and record of project approval is available to the general public at:
Administrative Offices, Kern County Water Agency, 3200 Rio Mirada Drive, Bakersfield, CA 93308.

Date Received for Filing: _____


Signature

General Manager
Title

Notice of Environmental Document
Posted by County Clerk on 12-26-96
and for 30 days thereafter, Pursuant to
Section 21152(C), Public Resources Code



State of California—Natural Resources Agency
 DEPARTMENT OF FISH AND WILDLIFE
2013 ENVIRONMENTAL FILING FEE CASH RECEIPT

PRINT **CLEAR**

RECEIPT# 15130307
STATE CLEARING HOUSE # (if applicable)

SEE INSTRUCTIONS ON REVERSE. TYPE OR PRINT CLEARLY

LEAD AGENCY KERN COUNTY WATER AGENCY	DATE 07/26/2013
COUNTY/STATE AGENCY OF FILING Kern County, California	DOCUMENT NUMBER 2942

PROJECT TITLE
PIONEER GROUNDWATER RECHARGE AND RECOVERY PROJECT (SCH#9611037)

PROJECT APPLICANT NAME KERN COUNTY WATER AGENCY	PHONE NUMBER (661) 634-1400
--	--------------------------------

PROJECT APPLICANT ADDRESS P O BOX 58	CITY BAKERSFIELD	STATE CA	ZIP CODE 93302
---	---------------------	-------------	-------------------

PROJECT APPLICANT (Check appropriate box):

Local Public Agency
 School District
 Other Special District
 State Agency
 Private Entity

CHECK APPLICABLE FEES:

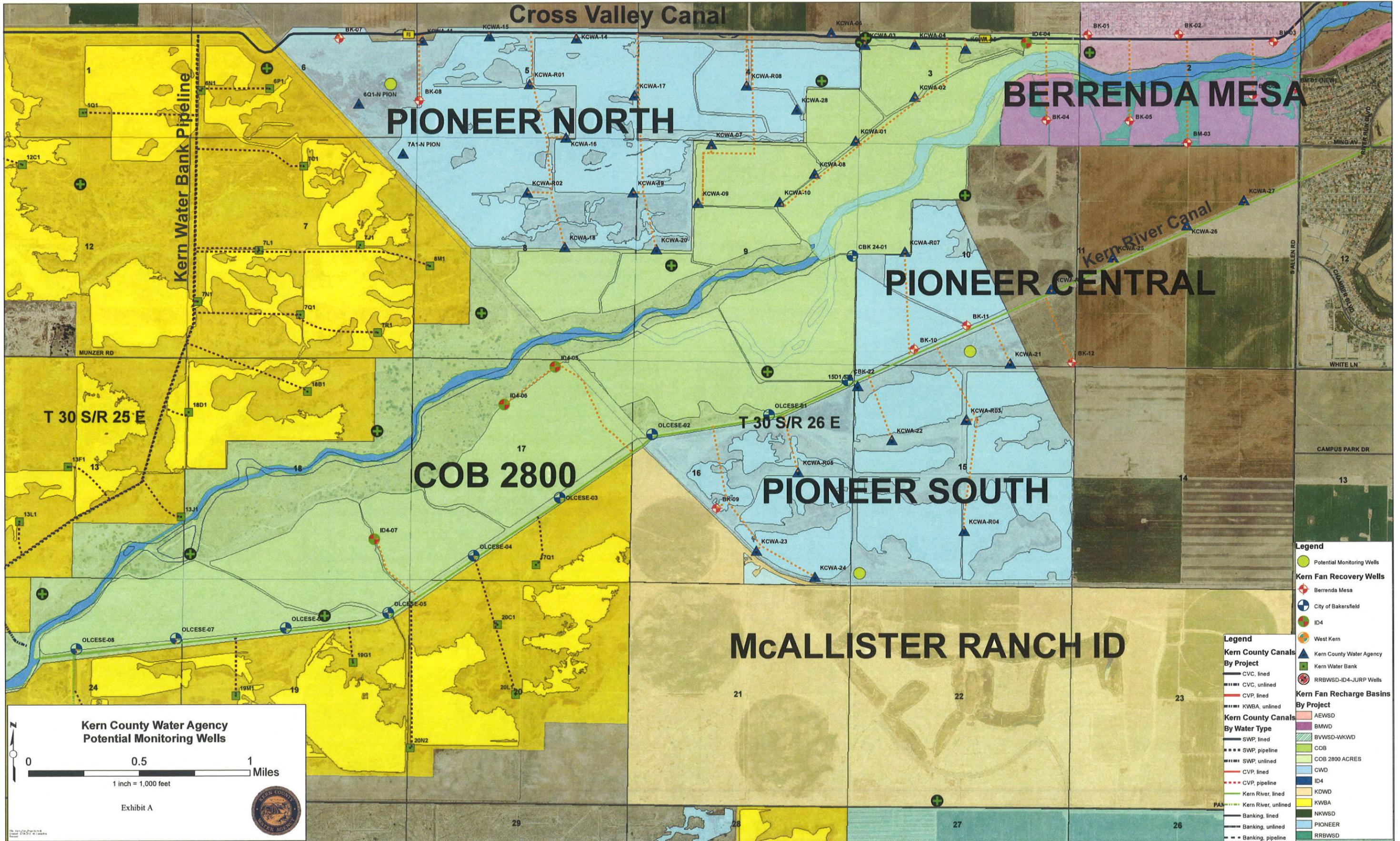
<input type="checkbox"/> Environmental Impact Report (EIR)	\$2,995.25	\$	0.00
<input type="checkbox"/> Mitigated/Negative Declaration (ND)(MND)	\$2,156.25	\$	0.00
<input type="checkbox"/> Application Fee Water Diversion (State Water Resources Control Board Only)	\$850.00	\$	0.00
<input type="checkbox"/> Projects Subject to Certified Regulatory Programs (CRP)	\$1,018.50	\$	0.00
<input checked="" type="checkbox"/> County Administrative Fee	\$50.00	\$	50.00
<input type="checkbox"/> Project that is exempt from fees			
<input type="checkbox"/> Notice of Exemption			
<input type="checkbox"/> DFW No Effect Determination (Form Attached)			
<input type="checkbox"/> Other _____		\$	_____

PAYMENT METHOD:

Cash
 Credit
 Check
 Other _____

TOTAL RECEIVED \$ 50.00

SIGNATURE X <i>[Handwritten Signature]</i>	TITLE <i>[Handwritten Initials]</i>
--	--



**Kern County Water Agency
Potential Monitoring Wells**

0 0.5 1 Miles
1 inch = 1,000 feet

Exhibit A

- Legend**
- Potential Monitoring Wells
 - Kern Fan Recovery Wells
 - Berrenda Mesa
 - City of Bakersfield
 - ID4
 - West Kern
 - Kern County Water Agency
 - Kern Water Bank
 - RRBWS-ID4-JURP Wells
 - Kern Fan Recharge Basins
 - By Project
 - AEWSD
 - BMWD
 - BVWSD-KWWD
 - COB
 - COB 2800 ACRES
 - CWD
 - ID4
 - KDWD
 - KWBA
 - NKWS
 - PIONEER
 - RRBWS
 - By Water Type
 - SWP, lined
 - SWP, pipeline
 - SWP, unlined
 - CVP, lined
 - CVP, pipeline
 - Kern River, lined
 - Kern River, unlined
 - Banking, lined
 - Banking, unlined
 - Banking, pipeline

- Kern County Canals**
- By Project
 - CVC, lined
 - CVC, unlined
 - CVP, lined
 - KWBA, unlined
 - By Water Type
 - SWP, lined
 - SWP, pipeline
 - SWP, unlined
 - CVP, lined
 - CVP, pipeline
 - Kern River, lined
 - Kern River, unlined
 - Banking, lined
 - Banking, unlined
 - Banking, pipeline

RECEIVED WITH FEE
RECEIPT # 15130864

FILED
KERN COUNTY

JUN 27 2014

NOTICE OF DETERMINATION

TO:
County Clerk
County of Kern
1115 Truxtun Avenue, 1st floor
Bakersfield, CA 93301-4639

FROM:
Kern County Water Agency
P.O. Box 58
Bakersfield, CA 93302-0058

MARY B. BEDARD
AUDITOR CONTROLLER-COUNTY CLERK
BY MB DEPUTY

SUBJECT: Filing of Notice of Determination regarding Addendum No. 5 to the Negative Declaration for the Pioneer Groundwater Recharge and Recovery Project

PROJECT TITLE: Pioneer Groundwater Recharge and Recovery Project (SCH#96111037)

PROJECT LOCATION: Generally west of the City of Bakersfield between Stockdale highway and Panama Lane, including various Sections in T30S/R26E and T/30S/R25E, MDBM

PROJECT DESCRIPTION: The Pioneer Groundwater Recharge and Recovery Project (Project) was developed to recharge and store water in the groundwater basin and to recover water to meet shortages in surface water supplies. Changes to the Project include construction of right-of-way fencing.

This is to advise that the Kern County Water Agency (Lead Agency) has approved the above described changes to the project on June 26 2014, and has made the following determinations regarding the above described project:

1. The project will will not have a significant effect on the environment.
2. An Environmental Impact Report was prepared for this project pursuant to the provisions of CEQA.
3. An Addendum to the Negative Declaration was prepared for this project pursuant to the provisions of CEQA.
4. Mitigation measures were were not made a condition of approval for this project.
5. A statement of Overriding Considerations was was not adopted for this project.

This is to certify that a copy of the Addendum No. 5 along with the Negative Declaration with comments and responses and record of project approval is available to the general public at:

Stuart T. Pyle Water Resources Center, Kern County Water Agency, 3200 Rio Mirada Drive, Bakersfield, CA 93308.

Date Received for Filing: 6-27-14

J. M. BL
Signature
Title/General Manager

Notice of Environmental Document
Posted by County Clerk on 6/27/14
and for 30 days thereafter, Pursuant to
Section 21152(C), Public Resources Code

CEQA# 3690



State of California—Natural Resources Agency
CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE
2014 ENVIRONMENTAL FILING FEE CASH RECEIPT

RECEIPT#	15130866
STATE CLEARING HOUSE # (if applicable)	

SEE INSTRUCTIONS ON REVERSE. TYPE OR PRINT CLEARLY

LEAD AGENCY KERN COUNTY WATER AGENCY			DATE 06/27/2014
COUNTY/STATE AGENCY OF FILING Kern			DOCUMENT NUMBER 3696
PROJECT TITLE PIONEER GROUNDWATER RECHARGE AND RECOVERY (SCH# 96111037)			
PROJECT APPLICANT NAME KERN COUNTY WATER AGENCY			PHONE NUMBER (661) 634-1400
PROJECT APPLICANT ADDRESS P.O BOX 58	CITY BAKERSFIELD	STATE CA	ZIP CODE 93302
PROJECT APPLICANT (Check appropriate box):			
<input checked="" type="checkbox"/> Local Public Agency <input type="checkbox"/> School District <input type="checkbox"/> Other Special District <input type="checkbox"/> State Agency <input type="checkbox"/> Private Entity			

CHECK APPLICABLE FEES:

<input type="checkbox"/> Environmental Impact Report (EIR)	\$3,029.75	\$	0.00
<input type="checkbox"/> Mitigated/Negative Declaration (MND)(ND)	\$2,181.25	\$	0.00
<input type="checkbox"/> Application Fee Water Diversion (State Water Resources Control Board only)	\$850.00	\$	0.00
<input type="checkbox"/> Projects Subject to Certified Regulatory Programs (CRP)	\$1,030.25	\$	0.00
<input checked="" type="checkbox"/> County Administrative Fee	\$50.00	\$	50.00
<input type="checkbox"/> Project that is exempt from fees			
<input type="checkbox"/> Notice of Exemption (attach)			
<input type="checkbox"/> CDFW No Effect Determination (attach)			
<input type="checkbox"/> Other _____		\$	_____

PAYMENT METHOD:

<input checked="" type="checkbox"/> Cash <input type="checkbox"/> Credit <input type="checkbox"/> Check <input type="checkbox"/> Other _____	TOTAL RECEIVED	\$	50.00
--	----------------	----	-------

SIGNATURE X	PRINTED NAME AND TITLE J. BOJORQUEZ OSA
----------------	--

Kern County
Clerks Office
1115 Truxtun Ave
Bakersfield CA 93301
661-868-3588

CEQA

County Clerk

Fee

#3696

1 @ \$50.00

\$50.00

Total

\$50.00

Cash

\$50.00

Change

\$0.00

ORDER NO: 49341
6/27/2014 2:50:37 PM
BAKERSFIELD
JASMIN BOJORQUEZ

ADDENDUM NO. 5 TO NEGATIVE DECLARATION
(14 CCR 15164)
Kern County Water Agency

Project: Pioneer Groundwater Recharge and Recovery (SCH# 96111037)

Lead Agency: Kern County Water Agency

Location: Generally west of the City of Bakersfield between Stockdale highway and Panama Lane, including various Sections in T30S/R26E and T/30S/R25E, MDBM

Description: The Pioneer Groundwater Recharge and Recovery Project (Project) was developed to recharge and store water in the groundwater basin and to recover water to meet shortages in surface water supplies. A Negative Declaration for the Project was adopted by the Kern County Water Agency (Agency) Board of Directors on December 20, 1996.

The Negative Declaration, and subsequent addenda, for the Project analyzed the potential environmental impacts of the construction and operation of groundwater recharge facilities on the subject property. Since the Project's development there has been a significant increase in trespassing and unlawful activities by pedestrians and a variety of motor vehicles. Trespassing incidents are resulting in safety concerns for Project staff and people accessing the property. Therefore, the Agency has identified the need to construct right-of-way fencing and access gates along all or a portion of the Project property. It is anticipated that the fencing and access gates will be constructed at strategic locations on an as needed basis to discourage and prevent trespassing incidents on the property; however, as the surrounding area continues to be developed, it may be necessary to fully fence the Project. The type of right-of-way fencing and access gates may be dependent on the location and type of existing fencing and access gates adjacent to the new installations. As such, the fencing may include any combination of the following:

1. Four feet six inches high right-of-way fence consisting of two feet eight inches of 8-bar galvanized steel mesh, three strands of barbed wire for the remaining one foot six inches of fence height and steel posts set either directly in the ground or in concrete footings;
2. Four feet six inches high right-of-way fence consisting of three strands of barbed wire equally spaced and steel posts set either directly in the ground or in concrete footings;
3. Four feet six inches high right-of-way fence consisting of five strands of barbed wire equally spaced and steel posts set either directly in the ground or in concrete footings; and/or
4. Six feet high galvanized chain link fence with three strands of barbed wire and steel posts in concrete footings.

The access gates may include one or more of the following:

1. Three feet six inches high galvanized chain link gate;
2. Six feet high chain link gate with three strand barbed wire; and/or
3. Four feet six inches high fusion-bond epoxy steel cattle gate.

Attachments 1, 2 and 3 to this addendum show the Project location and depict the maximum extent of right-of-way fencing that may be constructed.

Construction of the right-of-way fencing will not alter the overall footprint nor will it alter the operations of the Project from that which is described in the Negative Declaration and associated addenda.

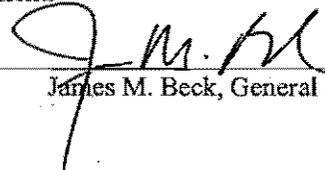
The Agency Board of Directors, having conducted a careful and independent review of the proposed changes to the Pioneer Groundwater Recharge and Recovery Project, described above, does hereby find and declare that said changes and additions are minor in nature and do not result in new significant environmental effects or substantially increase the severity of previously identified environmental effects, and do not call for the preparation of a subsequent negative declaration or environmental impact report pursuant to CEQA Guidelines §15162. A brief statement of the reasons supporting the Board's findings is as follows:

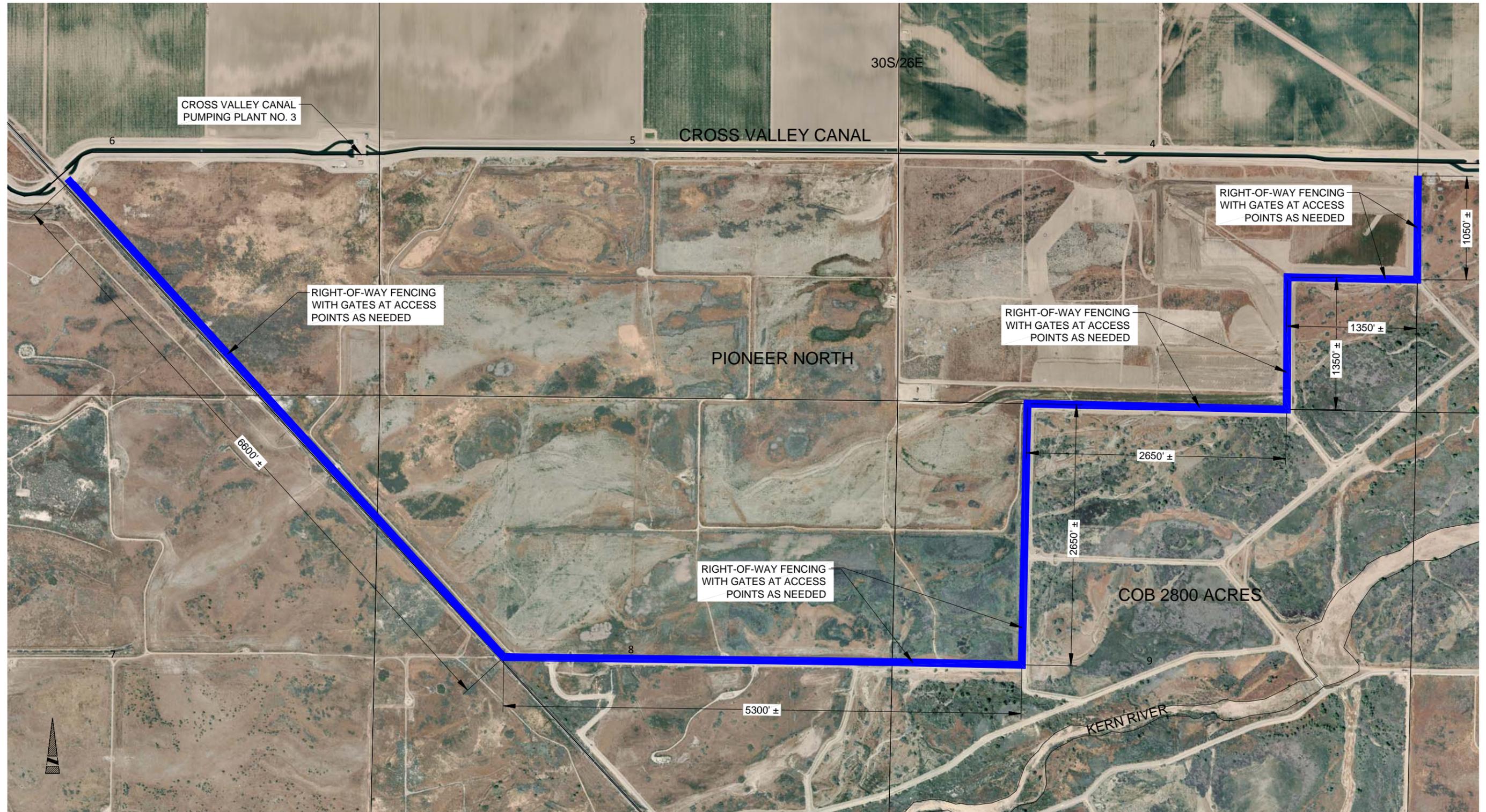
This addendum revises the Negative Declaration to accurately reflect the modification of the Project facilities.

Impacts associated with the modification of said facilities were analyzed in the Negative Declaration.

The Board of Directors hereby finds that this Addendum No. 5 to the Pioneer Groundwater and Recovery Project Negative Declaration reflects its independent judgment.

Dated: June 26, 2014


James M. Beck, General Manager



SITE PLAN
SCALE: 1" = 1500'

1

FILENAME: 02-Vicinity & Location.dwg LAST UPDATED: 5/29/2014 3:57 PM LAST SAVED BY: SCHAMBLESS

REV	DATE	BY	DESCRIPTION

DESIGNED BY
STC
DRAWN BY
STC
CHECKED BY
MMV
DATE
5/29/2014



PRELIMINARY DOCUMENT
NOT FOR CONSTRUCTION
DRAWINGS ARE FOR REVIEW
PURPOSES ONLY.

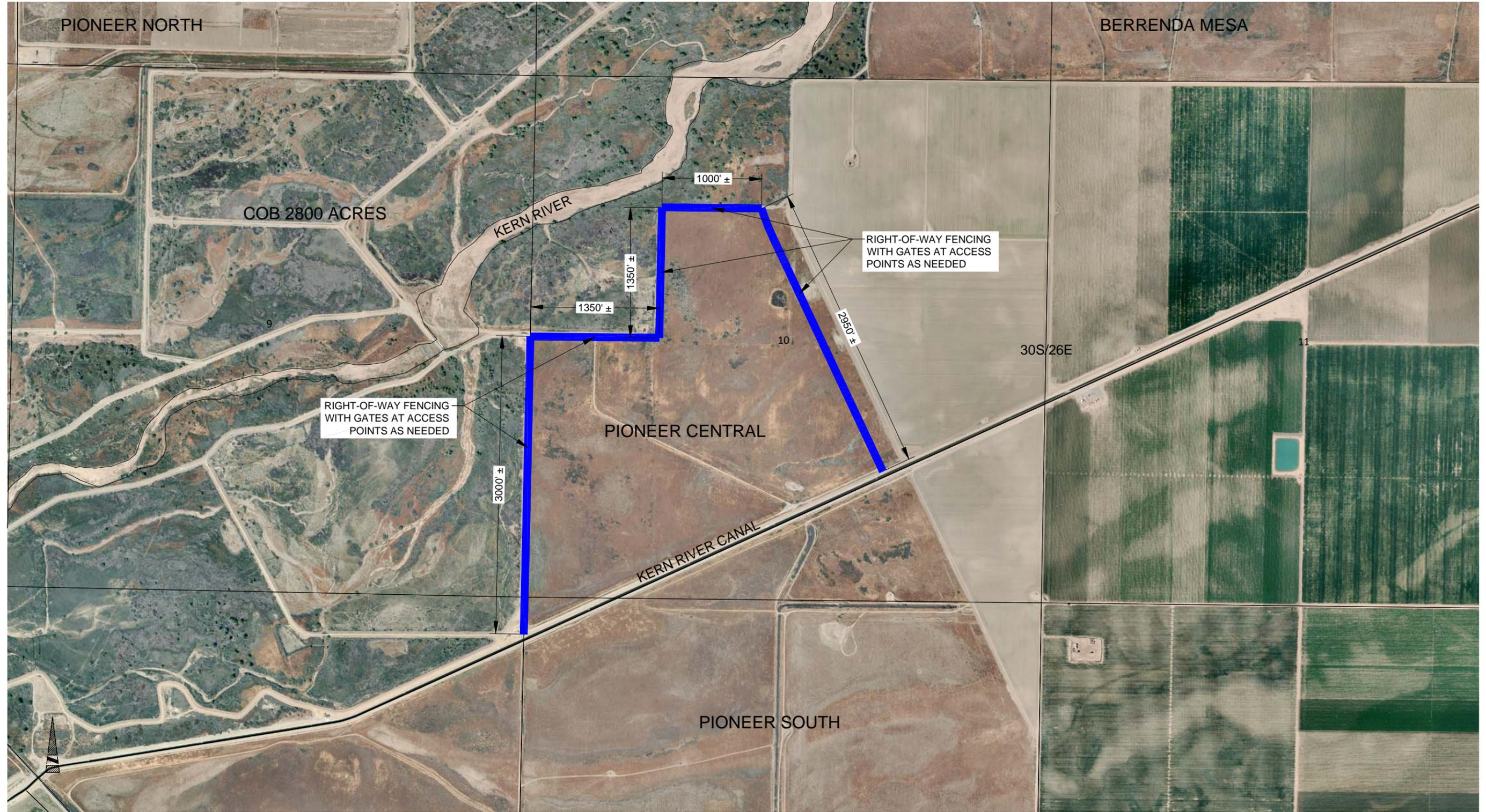


KERN COUNTY WATER AGENCY
BAKERSFIELD, CA

ENGINEERING GROUNDWATER SERVICES
PIONEER SECURITY FENCING
GENERAL
PERIMETER FENCING FOR PIONEER NORTH

VERIFY SCALES
BAR IS ONE INCH ON ORIGINAL DRAWING
0 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

CONTRACT NO. -
DRAWING NO. **1**
SHEET NO. 1 OF 3



SITE PLAN 1
SCALE: 1" = 500'

FILENAME: 02-Vicinity & Location.dwg LAST UPDATED: 5/29/2014 3:57 PM LAST SAVED BY: SCHAMBLESS

REV	DATE	BY	DESCRIPTION

DESIGNED BY
STC
DRAWN BY
STC
CHECKED BY
MMV
DATE
5/29/2014



PRELIMINARY DOCUMENT
NOT FOR CONSTRUCTION
DRAWINGS ARE FOR REVIEW PURPOSES ONLY.

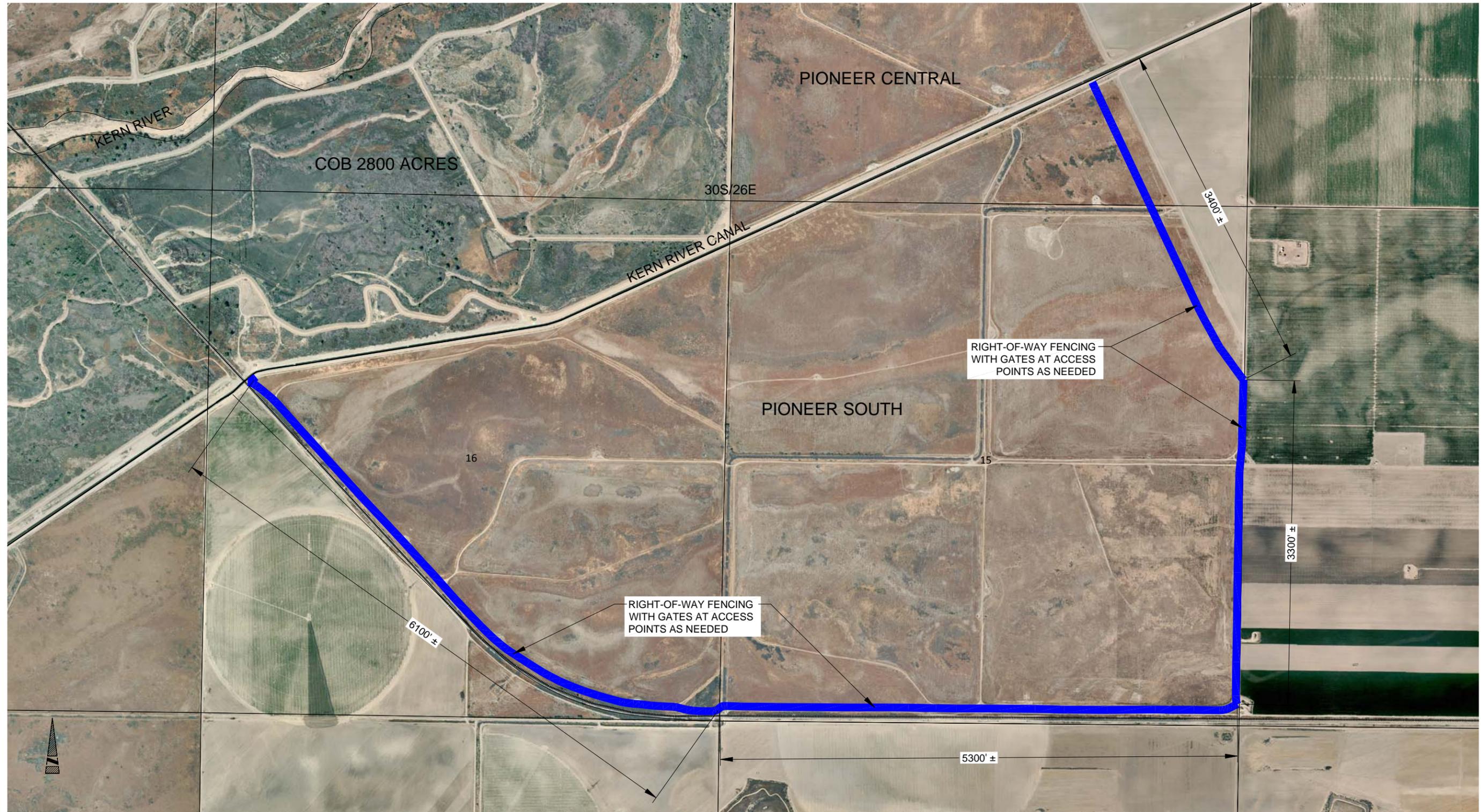


KERN COUNTY WATER AGENCY
BAKERSFIELD, CA

ENGINEERING GROUNDWATER SERVICES
PIONEER SECURITY FENCING
GENERAL
PERIMETER FENCING FOR PIONEER CENTRAL

VERIFY SCALES
BAR IS ONE INCH ON ORIGINAL DRAWING
0 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

CONTRACT NO.	-
DRAWING NO.	2
SHEET NO.	2 OF 3



SITE PLAN 1
SCALE: 1" = 1500'

FILENAME: 02-Vicinity & Location.dwg LAST UPDATED: 5/29/2014 3:55 PM LAST SAVED BY: SCHAMBLESS

REV	DATE	BY	DESCRIPTION

DESIGNED BY
STC
DRAWN BY
STC
CHECKED BY
MMV
DATE
5/29/2014



PRELIMINARY DOCUMENT
NOT FOR CONSTRUCTION
DRAWINGS ARE FOR REVIEW
PURPOSES ONLY.



KERN COUNTY WATER AGENCY
BAKERSFIELD, CA

ENGINEERING GROUNDWATER SERVICES
PIONEER SECURITY FENCING
GENERAL
PERIMETER FENCING FOR PIONEER SOUTH

VERIFY SCALES
BAR IS ONE INCH ON ORIGINAL DRAWING
0 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

CONTRACT NO. -
DRAWING NO. **3**
SHEET NO. 3 OF 3

**ADDENDUM NO. 6 TO NEGATIVE DECLARATION
(14 CCR 15164)
Kern County Water Agency**

Project: Pioneer Groundwater Recharge and Recovery (SCH# 96111037)

Lead Agency: Kern County Water Agency

Location: Generally west of the City of Bakersfield between Stockdale highway and Panama Lane, including various Sections in T30S/R26E and T/30S/R25E, MDBM

Description: The Pioneer Groundwater Recharge and Recovery Project (Project) was developed to recharge and store water in the groundwater basin and to recover water to meet shortages in surface water supplies. A Negative Declaration for the Project was adopted by the Kern County Water Agency (Agency) Board of Directors on December 20, 1996.

The Negative Declaration, and subsequent addenda, for the Project analyzed the potential environmental impacts of the construction and operation of groundwater recharge and recovery facilities on the subject property. Routine maintenance, such as rodent abatement, herbicide application and groundwater well maintenance, is continuously performed to maintain functionality of the Project. However, as the Project facilities continue to age, additional maintenance activities are required to maintain the functionality of the Project. Therefore, it may be periodically necessary to conduct the following maintenance activities:

1. Repair, replace or otherwise modify fencing or access gates;
2. Replace, rebuild or otherwise modify weirs;
3. Replace, rebuild or otherwise modify groundwater recharge basin turnouts and other interbasin structures;
4. Replace, rebuild or otherwise modify groundwater recharge basin levees that are structurally compromised and/or have failed;
5. Replace, rebuild or otherwise modify groundwater recovery well pumps, discharge pipelines or other well equipment;
6. Construct temporary discharge pipelines and trenching during periods of groundwater recovery for groundwater recovery wells that do not have permanent discharge pipelines;
7. Replace groundwater recovery wells that have structurally failed, including construction of new well housing, well pad sites and dirt access roads, as necessary;
8. Convert failed groundwater recovery wells to groundwater monitoring wells, if feasible, or abandon failed groundwater recovery wells as specified in local ordinance;
9. Remove vegetation from roads, levees and groundwater recharge basins via livestock grazing, mowing, disking or other method, including disposal via transport to an offsite waste management facility or permitted onsite burning, as necessary; and
10. Minor resurfacing or grading of well pad sites, levee roads and access roads.

These maintenance activities will not increase the groundwater recharge or recovery capacity of the Project as described in the 1996 Negative Declaration and associated addenda.

Exhibit A to this addendum shows the location of the Project facilities.

The Agency Board of Directors, having conducted a careful and independent review of the proposed changes to the Pioneer Groundwater Recharge and Recovery Project, described above, does hereby find and declare that said changes and additions are minor in nature and do not result in new significant environmental effects or substantially increase the severity of previously identified environmental effects, and do not call for the preparation of a subsequent negative declaration or environmental impact report pursuant to CEQA Guidelines §15162. A brief statement of the reasons supporting the Board's findings is as follows:

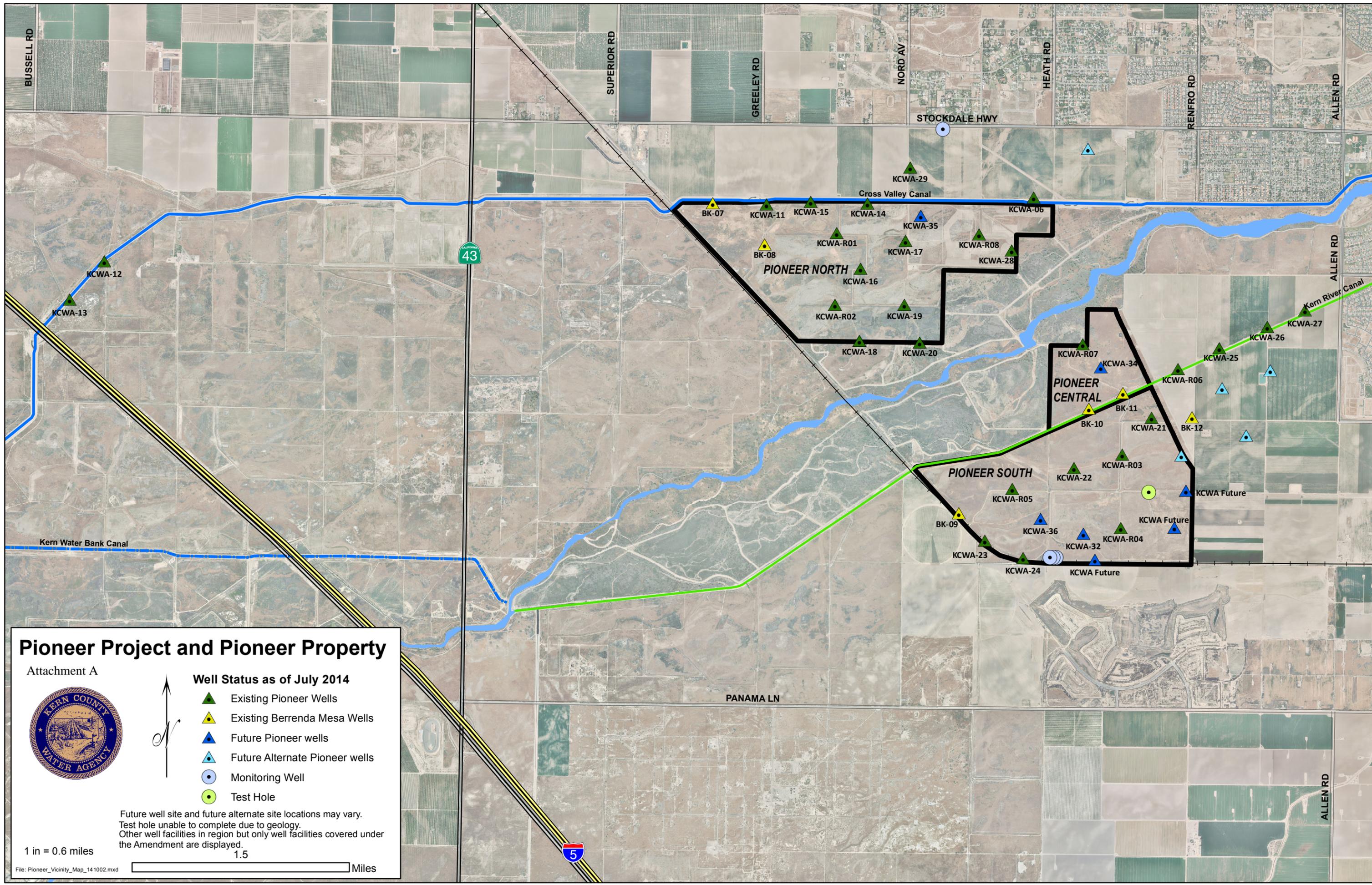
This addendum revises the Negative Declaration to accurately reflect the modification and maintenance of the Project facilities.

Impacts associated with the modification and maintenance of said facilities were analyzed in the Negative Declaration.

The Board of Directors hereby finds that this Addendum No. 6 to the Pioneer Groundwater and Recovery Project Negative Declaration reflects its independent judgment.

Dated: _____, 2014

James M. Beck, General Manager



Pioneer Project and Pioneer Property

Attachment A



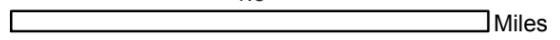
Well Status as of July 2014

- ▲ Existing Pioneer Wells
- ▲ Existing Berrenda Mesa Wells
- ▲ Future Pioneer wells
- ▲ Future Alternate Pioneer wells
- Monitoring Well
- Test Hole

Future well site and future alternate site locations may vary.
 Test hole unable to complete due to geology.
 Other well facilities in region but only well facilities covered under the Amendment are displayed.

1 in = 0.6 miles

1.5



NOTICE OF DETERMINATION

TO:

County Clerk
 County of Kern
 1115 Truxtun Avenue, 1st floor
 Bakersfield, CA 93301-4639

FROM:

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

SUBJECT:

Filing of Notice of Determination regarding Addendum No. 6 to the Negative Declaration for the Pioneer Groundwater Recharge and Recovery Project

PROJECT TITLE:

Pioneer Groundwater Recharge and Recovery Project (SCH#96111037)

PROJECT LOCATION:

Generally west of the City of Bakersfield between Stockdale highway and Panama Lane, including various Sections in T30S/R26E and T/30S/R25E, MDBM

PROJECT DESCRIPTION:

The Pioneer Groundwater Recharge and Recovery Project (Project) was developed to recharge and store water in the groundwater basin and to recover water to meet shortages in surface water supplies. Changes to the Project include performance of maintenance activities, as described in the addendum. These maintenance activities include, but are not limited to, removal of vegetation, resurfacing or grading of well pad sites and roads and the replacement, repair or modification of fencing, recharge basin structures, recharge basin levees and groundwater recovery wells and associated infrastructure.

This is to advise that the Kern County Water Agency (Lead Agency) has approved the above described changes to the project on November 19, 2014, and has made the following determinations regarding the above described project:

1. The project will will not have a significant effect on the environment.
2. An Environmental Impact Report was prepared for this project pursuant to the provisions of CEQA.

 An Addendum to the Negative Declaration was prepared for this project pursuant to the provisions of CEQA.
3. Mitigation measures were were not made a condition of approval for this project.
4. A mitigation reporting or monitoring plan was was not adopted for this project.
5. A statement of Overriding Considerations was was not adopted for this project.
6. Findings were were not made pursuant to the provisions of CEQA

This is to certify that a copy of the Addendum No. 6 along with the Negative Declaration with comments and responses and record of project approval is available to the general public at:

Stuart T. Pyle Water Resources Center, Kern County Water Agency, 3200 Rio Mirada Drive, Bakersfield, CA 93308.

Date Received for Filing: _____

Signature
Title General Manager _____