

Appendix B

Mitigation Monitoring and Reporting Plan

James Irrigation District

Mitigation Monitoring and Reporting
Program

for

The Water Augmentation Project

Job No. 1051-0802

July 2009

Adopted: July 14, 2009
James Irrigation District
Board of Directors

JAMES IRRIGATION DISTRICT WATER AUGMENTATION PROJECT
MITIGATION MONITORING AND REPORTING PROGRAM

Project Description

The purpose of the Water Augmentation Project is to provide for water conservation, regulation, recharge, banking, storage and recovery of water for irrigation of crops in the District's service area located in the San Joaquin Valley, Fresno County (see Figure 1). The Project involves the construction and operation of water recharge/banking/regulation basins in the "uplands area" of the Fresno Slough Bypass. Central Valley Project water and waters of the Kings River drainage will be used in the project for regulation, recharge or banking. Three previously constructed regulation basins in the Bypass will be used in this project. Additional excavation is proposed in two of the existing basins. Project construction activities, ranging from water siphon pipeline installation, control boxes, and booster pumps to basin building, are proposed in seven different work areas as described herein. Some of the project features may not be implemented, depending upon results of the feasibility and environmental studies, financing and preliminary design. Also, up to five new wells and associated pipelines will be installed in the project area to recover water from the project. Existing pipelines, control structures, canals and ditches will be used to convey or regulate waters for the project.

This Project has been developed to lessen James Irrigation District's (District) reliance on Central Valley Project (CVP) water from the San Joaquin Delta, to provide capacity for peaking irrigation demands, to provide for the construction of infrastructure improvements designed to capture and conserve excess water in wet years for use in times of drought, the efficient re-regulation of flows, and to allow for groundwater recharge and banking in a critically overdrafted groundwater basin. The proposed Project includes the excavation of two existing basins, construction of new levees and enhancement of existing levees, booster pumps and new pump structures, interconnecting pipelines, a siphon to cross underneath the Fresno Slough (James) Bypass, 5 new wells and associated pipelines, modifications to the existing E Booster check structure, and various appurtenances (see Figure 2).

Existing Regulation/Recharge Basins and Siphon

Existing Basin 3 will be further excavated to a depth of approximately 25 feet. Existing Basin 2 will be excavated slightly to enhance existing operations, the southwesterly embankment of Basin 2 will be widened, and pipelines placed in the embankments. Pump structures will be constructed in the levee between Basins 2 and 3, and a concrete pipeline siphon will be built to cross underneath the Fresno Slough Bypass Main Channel between Basin 2 and the James Main Canal. Operationally, Basins 1, 2, and 3 will be filled and drained multiple times during the year for recharge or regulation of flows.

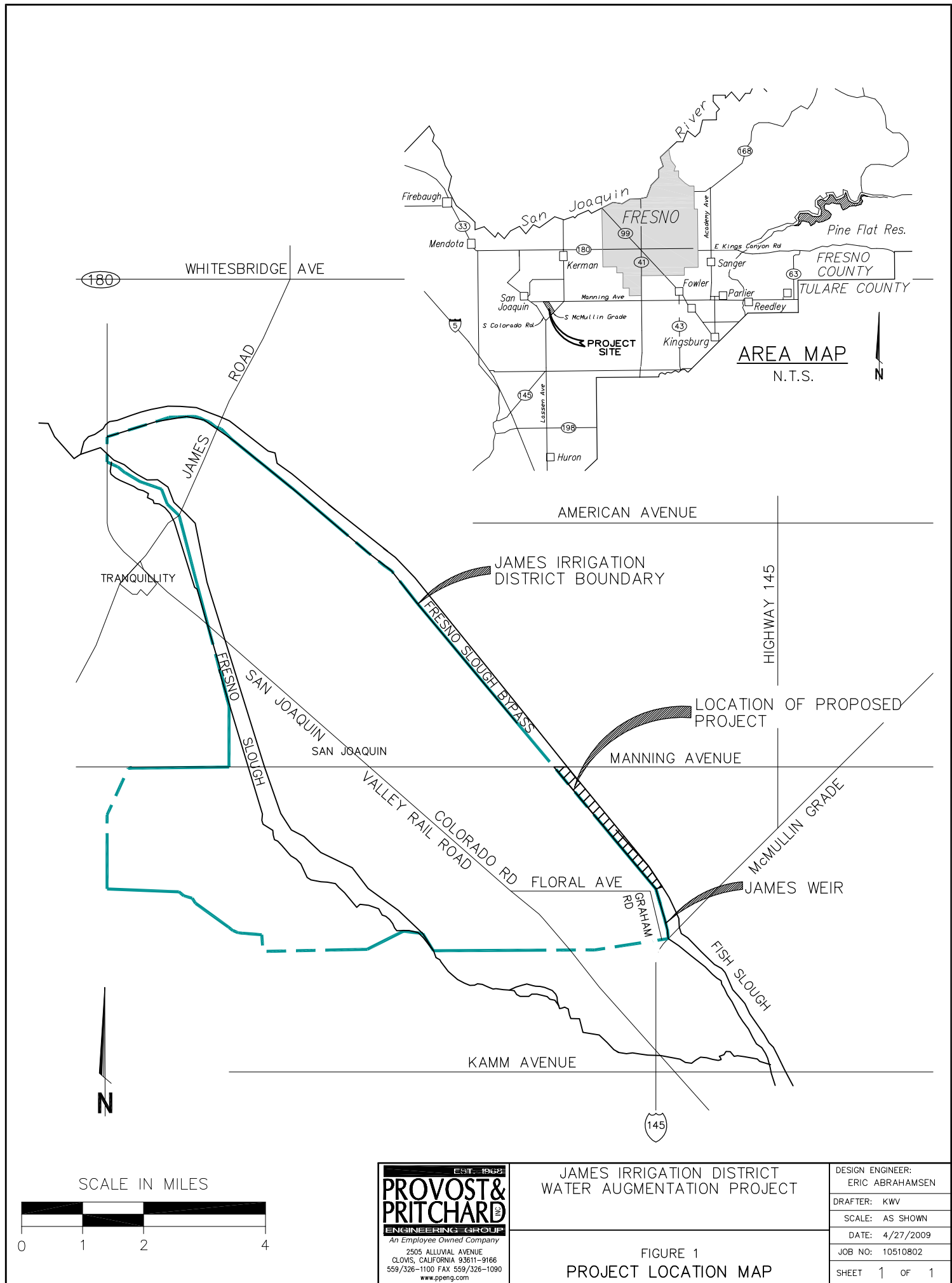
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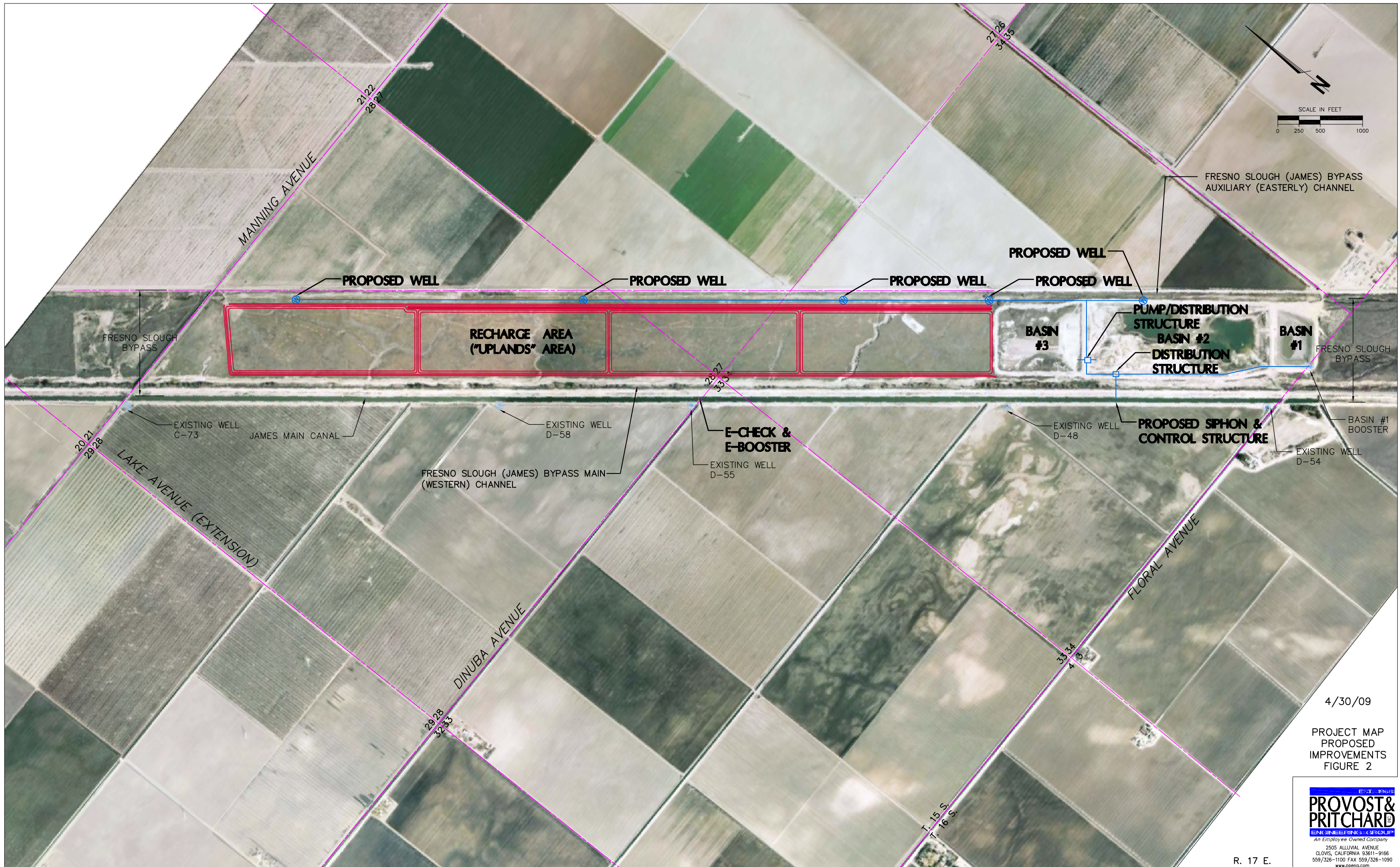
Recharge Area

Low lying levees will be constructed exclusively from the excavation of earth removed from Basins 2 and 3, on the non-irrigated pasture land/grassland located approximately between Huntsman Avenue extension and Manning Avenue between the Main (westerly) and Auxiliary (easterly) Channels of the Fresno Slough Bypass (“uplands” portion of Reclamation District 1606 property). These proposed recharge basins between Huntsman and Manning will typically be filled when Kings River releases occur from Pine Flat Dam, that travel into the North Fork of the Kings River as far as Fish Slough at the James Weir near McMullin Grade. Depths will typically be up to 3 feet. Basin levees will be lower than the existing exterior levees of the Fresno Slough Bypass, to allow water from very large flow events over the “uplands area” of the Bypass prior to breaking out of the exterior levees in high flow events.

Wells

Along the northeasterly levees of existing Basins 1, 2, 3, and the proposed recharge area located approximately between Huntsman extension and Manning Avenue, up to 5 new wells and associated pipelines will be constructed. These wells will recover recharged or banked water in this area and return the water to the Main Canal through the proposed siphon.





4/30/09

PROJECT MAP
PROPOSED
IMPROVEMENTS
FIGURE 2

PROVOST & PRITCHARD
ENGINEERING GROUP
An Employee Owned Company
2505 ALLUVIAL AVENUE
CLOVIS, CALIFORNIA 93611-9166
559/326-1100 FAX 559/326-1090
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Public Resources Code Section 21081.6(a) provides, in part, that when adopting a mitigated negative declaration pursuant to paragraph (2) of subdivision (c) of Section 21080, the “public agency shall adopt a reporting or monitoring program for the changes made to the project or conditions of project approval, adopted in order to mitigate or avoid significant effects on the environment.” A mitigation monitoring program has been prepared for the proposed project pursuant to the Public Resources Code. Implementation of the Water Augmentation Project will be subject to the mitigation measures and monitoring program outlined in Table 1.

Table 1- Mitigation Monitoring Program

Affected Resources	Mitigation Measures	Implementation	Monitoring	Time Span
Biology- San Joaquin kit fox, and the American Badger	<ol style="list-style-type: none"> 1. An informal consultation with the US Fish and Wildlife Service to discuss the adequacy of the mitigation measures proposed herein. If required, the project proponent will go through the Formal Consultation and permitting process of the Endangered Species Act. 2. The USFWS and CDFG shall be consulted and their protective and mitigative measures as noted in the USFWS's <i>Standard Recommendations for Protection of the San Joaquin Kit Fox (USFWS 1999)</i> shall be enacted. Such measures will completely avoid the take of the species and its habitat. If complete avoidance is not possible and mitigation is required, it will fully compensate for all losses and meet the requirements of the state and federal resource and regulatory agencies. 3. Standard Recommendations #1 thru #13 of the USFWS's (1999) guidelines are incorporated into the project and shall be implemented to avoid potential impacts to kit fox. As per Standard Recommendation #8 of USFWS (1999), the representative is Mr. Jeffrey A. Halstead and he can be contacted at (559) 298-2334 or (559) 903-5703. 4. A preconstruction survey shall be conducted not more than 30 days prior to construction activities for each construction area. This will ensure that kit fox has not moved onto and 	To be the responsibility of the James Irrigation District	To be the responsibility of the James Irrigation District	Completed prior to and during construction activities

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Affected Resources	Mitigation Measures	Implementation	Monitoring	Time Span
Biology- San Joaquin kit fox, and the American Badger	inhabits the project site. The survey protocol will follow the USFWS's (1999) guidelines. Results of the preconstruction survey shall be prepared in a report and given to the CDFG for their review prior to any construction activities.	To be the responsibility of the James Irrigation District	To be the responsibility of the James Irrigation District	Completed prior to and during construction activities
	5. To avoid burying of kit fox and American Badger, all potential burrows/dens in construction and work areas will be monitored for three nights using tracking medium at the burrow entrance to determine the current use. If no kit fox activity is observed during this period, the den will be destroyed immediately to preclude subsequent use. If kit fox activity is observed at the den during this period, the den should be monitored for at least five consecutive days from the time of the observation to allow any resident foxes to move to another den during its normal activity. Only when the den is determined to be unoccupied will the den be excavated under the direction of qualified biologists. If the fox is still present after five consecutive days of monitoring, the den will be excavated when in the judgment of a biologist, it is temporarily vacant, for example during the fox's normal foraging activities. The USFWS encourages hand excavation, but realizes that soil conditions may necessitate the use of excavating equipment. Such excavation work will be conducted with extreme caution as to not harm the kit fox.			
	6. Den monitoring and filling activities noted in Measure #4 above will be conducted outside the denning period (February thru May), if possible.			
	7. Construction and work areas in the recharge basin area will be enclosed with lath and colored caution tape to prevent driving on sensitive lands. The flagging will be sighted and overseen by the project biologist and project			

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Affected Resources	Mitigation Measures	Implementation	Monitoring	Time Span
Biology- San Joaquin kit fox, and the American Badger	<p>engineer.</p> <p>8. Signs will be erected approximately every 1,000 feet along the above fencing with the following information: "This area is habitat of the San Joaquin Kit Fox, an endangered species, and must not be disturbed. This species is protected by both State and Federal Endangered Species Acts. Violators are subject to prosecution, fines, and imprisonment." The signs will be clearly readable from a distance of 20 feet and will be maintained for the duration of the construction period.</p> <p>9. A qualified biologist will periodically be on-sight and visually view and inspect that the kit fox avoidance measures and their compliance during construction activities.</p> <p>10. Standard dust prevention measures (such as use of water spray trucks) will be implemented during construction to prevent and reduce dust.</p> <p>11. Standard noise reduction measures (such as functioning mufflers on equipment) will be implemented during construction to reduce noise levels and prevent and reduce disturbance to kit fox and wildlife.</p> <p>12. Upon completion of construction, all flagging and fencing will be removed.</p> <p>13. A post-construction, monitoring survey will be conducted by a qualified biologist to evaluate the preventive avoidance measures. A report will be prepared and sent to Provost & Pritchard Consulting Group, James ID, USFWS, and CDFG upon completion of construction.</p> <p>14. Standard Recommendations #7, 8, 11-13 of the USFWS's (1999) guidelines are incorporated into the project and shall be implemented to avoid potential impacts to kit fox.</p> <p>15. As per Standard Recommendation #8 of USFWS (1999) guidelines, the representative is</p>	To be the responsibility of the James Irrigation District	To be the responsibility of the James Irrigation District	Completed prior to and during construction activities

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Affected Resources	Mitigation Measures	Implementation	Monitoring	Time Span
Biology- San Joaquin kit fox, and the American Badger	<p>Mr. Jeffrey A. Halstead and he can be contacted at (559) 298-2334 or (559) 903-5703.</p> <p>16. As per Standard Recommendation #8 of USFWS (1999) guidelines, the representative is Mr. Jeffrey A. Halstead and he can be contacted at (559) 298-2334 or (559) 903-5703.</p> <p>17. To avoid impacts to kit fox foraging habitat in the Fresno Slough Bypass where the recharge basin berms will be built, the bed of the bypass will not be leveled or graded, and will remain in its current state except where berms are constructed. This will preserve existing potential dens and small mammal prey of the kit fox living in that area.</p> <p>18. To avoid the take of kit fox habitat by construction of the berms in the proposed recharge area, the sides of the berm will be allowed to naturally revegetate to provide habitat for kit fox and its prey.</p> <p>19. To offset the loss of potential kit fox dens due to construction of the berms in the proposed recharge area, four multi-burrowed artificial kit fox/burrowing owl dens will be installed in the upland area of the bypass. The artificial dens will be located just outside of the project area, within the upland area of the bypass, and immediately north of Manning Avenue.</p> <p>20. To prevent the flooding and take of kit foxes potentially occurring in the recharge area cells during the natal denning season (February thru May), a preconstruction type survey will be conducted for each recharge area cell prior to its filling. The survey would only be conducted if a dry cell were to be filled during the February to May period. If a natal den is found in a cell, the cell will not be filled and the CDFG and USFWS will be consulted.</p>	To be the responsibility of the James Irrigation District	To be the responsibility of the James Irrigation District	Post-Construction

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Affected Resources	Mitigation Measures	Implementation	Monitoring	Time Span
Biology-Burrowing Owl	<ol style="list-style-type: none"> 1. An informal consultation has been proposed with the US Fish and Wildlife Service to discuss the adequacy of the mitigation measures proposed herein. If required, the project proponent will go through the Formal Consultation and permitting process of the Endangered Species Act. 2. The USFWS and CDFG shall be consulted regarding protective and mitigative measures for the Burrowing Owl. Such measures will completely avoid the take of the species and its habitat. If complete avoidance is not possible and mitigation is required, it will fully compensate for all losses and meet the requirements of the state and federal resource and regulatory agencies. 3. A preconstruction survey shall be conducted by a qualified biologist to determine the existence of Burrowing Owl nesting sites on project construction areas. The survey shall be conducted not more than 30 days prior to any construction activities for each construction area. This will ensure that Burrowing Owl has not moved onto and inhabits the project site. Results of the preconstruction survey shall be prepared in a report and given to the CDFG for their review prior to any construction activities. 4. If nesting sites are found, the CDFG's (1994) Staff Report on Burrowing Owl Mitigation guidelines and The Burrowing Owl Consortium's (1993) guidelines shall be consulted, the CDFG shall be consulted, and the project proponent shall select one of the following measures for implementation by a qualified biologist. <ol style="list-style-type: none"> a). Destroy vacant burrows prior to March 1 and/or after August 31f 	To be the responsibility of the James Irrigation District	To be the responsibility of the James Irrigation District	Completed prior to and during construction activities

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Affected Resources	Mitigation Measures	Implementation	Monitoring	Time Span
Biology- Burrowing Owl	b). Redesign the project temporarily or permanently to avoid occupied burrows or nest sites until after the nesting/fledgling season.	To be the responsibility of the James Irrigation District	To be the responsibility of the James Irrigation District	Completed prior to and during construction activities
	c). Delay the project construction until after the nesting/fledgling season (March 1 thru August 31).			
	d). Install artificial burrows in open-space areas of the project site and wait for passive relocation of the Burrowing Owl.			
	e). Active relocation of Burrowing Owl with conditions. The project proponent shall fund relocation of Burrowing Owl to unoccupied, suitable perpetuity which is permanently preserved (up to 6.5 acres per nesting pair) in the open-space on or near the project site or off-site at a recognized Burrowing Owl mitigation bank. Details are specified in CDFG (1994).			
	5. To avoid burying of owls, all potential burrows in construction and work areas will be monitored for three nights using tracking medium at the burrow entrance to determine the current use. If no owl activity is observed during this period, the burrow will be destroyed immediately to preclude subsequent use. If owl activity is observed at the burrow during this period, a one-way door will be installed at the burrow entrance. Additional monitoring will occur to ensure all owls are excluded from the burrow. Only when the burrow is determined to be unoccupied will it be filled under the direction of a qualified biologist.			
	6. Burrow monitoring and filling activities noted in Measure #4 above will be conducted outside the nesting period (March thru August), if possible.			

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Biology- Burrowing Owl	7. Construction and work areas in the recharge basin area will be enclosed with lath and colored caution tape to prevent driving on sensitive lands. The flagging will be sighted and overseen by the project biologist and project engineer.	To be the responsibility of the James Irrigation District	To be the responsibility of the James Irrigation District	Completed prior to and during construction activities
	8. Signs will be erected approximately every 1,000 feet along the above fencing with the following information: "This area is habitat of the Burrowing Owl, a sensitive species, and must not be disturbed. This species is protected by both State and Federal Endangered Species Acts. Violators are subject to prosecution, fines, and imprisonment." The signs will be clearly readable from a distance of 20 feet and will be maintained for the duration of the construction period.			
	9. A qualified biologist will periodically be on-sight and visually view and inspect that the owl avoidance measures and their compliance during construction activities.			
	10. Upon completion of construction, all flagging and fencing will be removed.			
	11. A post-construction monitoring survey will be conducted by a qualified biologist to Provost & Pritchard Consulting Group, James ID, USFWS, and CDFG upon completion of construction.			
	12. Standard dust prevention measures (such as use of water spray trucks) will be implemented during construction to prevent and reduce dust.			
	13. Standard noise reduction measures (such as functioning mufflers on equipment) will be implemented during construction to reduce noise levels and prevent and reduce disturbance to owls and wildlife.			
	14. To avoid impacts to owl foraging habitat in the Fresno Slough Bypass where the recharge area berms will be built, the bed of the recharge cells			

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Biology- Burrowing Owl	<p>will not be leveled or graded, and will remain in its current state. This will preserve existing potential burrows and small mammal and insect prey of the owl.</p> <p>15. To avoid the take of owl habitat by construction of the berms in the proposed recharge area, the sides of the berm will be allowed to naturally revegetate to provide habitat for the owl and its prey.</p> <p>16. To offset the loss of potential owl burrows due to construction of the berms in the proposed recharge area, four multi-burrowed artificial burrowing owl/kit fox burrows will be installed in the upland area of the bypass. The artificial burrows will be located just outside of the project area, within the upland area of the bypass.</p> <p>17. To prevent the flooding and take of owls potentially occurring in the recharge area cells during the breeding season (March thru August), a preconstruction type survey will be conducted for each recharge area cell prior to its filling. The survey would only be conducted if a dry cell were to be filled during the March thru August period. If an owl nesting burrow is found in a cell, the cell will not be filled and the CDFG and USFWS will be consulted.</p>	To be the responsibility of the James Irrigation District	To be the responsibility of the James Irrigation District	Post-Construction
Biology – Sensitive Plants	<p>1. A spring plant survey will be conducted for the Recurved Larkspur and Munz's Tidy-tips to evaluate their potential presence on the project site prior to construction. Results of the surveys will be prepared in a letter report. This measure is to comply with the California Fish and Game Code, the Native Plant Protection Act, and the CEQA Guidelines. Said survey has been completed as of May 2009.</p> <p>2. If the plants are found on the project site, the</p>	To be the responsibility of the James Irrigation District	To be the responsibility of the James Irrigation District	Pre-Construction

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Biology – Sensitive Plants	CDFG shall be consulted. If complete avoidance is not possible and mitigation is required, it will fully compensate for all losses and meet the requirements of the CDFG. After the completion of the survey, in May of 2009, it was concluded that the Recurved Larkspur and Munz's Tidy-tips do not occur on the project site, and will not be impacted by the proposed project.	To be the responsibility of the James Irrigation District	To be the responsibility of the James Irrigation District	Pre-Construction
Biology – Nesting Raptors and Birds	<ol style="list-style-type: none"> 1. If construction activities will occur during the nesting season of February thru August including nest tree removal, a preconstruction survey shall be conducted by a qualified biologist for nesting birds (which includes migratory birds covered under the Migratory Bird Treaty Act) on the project site. Also, adjacent lands will be surveyed with emphasis on large trees which have potential for nesting raptors. Results of the preconstruction survey shall be prepared in a letter and given to the CDFG for their review and approval prior to any construction activities. This measure is to comply with Sections 3503 and 3503.5 of the California Fish and Game Code if required. 2. If any active nests are observed, the nests shall be designated as an Environmentally Sensitive Area and protected (while occupied) during the construction activities. The CDFG shall be contacted, consulted, and avoidance measures, specific to each incident, shall be developed in cooperation with the project proponent, and a qualified biologist. No birds or their nests (including migratory birds covered under the Migratory Bird Treaty Act) will be impacted and no take will occur. 	To be the responsibility of the James Irrigation District	To be the responsibility of the James Irrigation District	Throughout the life of the project

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Affected Resources	Mitigation Measures	Implementation	Monitoring	Time Span
Biology-Riparian Habitat	<ol style="list-style-type: none"> Any project construction in the bypass channels shall occur when the channel is dry (i.e. not flowing) to incur as few impacts to the sensitive community as possible. A Streambed Alteration Agreement (1602 Agreement) will be obtained from the CDFG prior to the start of construction activities. If required, the agreement will have several standard measures to preserve riparian habitat and water quality, and to monitor the implementation and success of the measures. Riparian habitat will be avoided. If trees larger than 4 inches in diameter are removed, their loss will be mitigated by planting like species at suitable sites along the bypass. If required, other revegetation requirements may be specified in the CDFG Stream Alteration Agreement. An educational program shall be conducted by a qualified biologist for all project managers, engineers, contractors, and construction crews prior to work to inform them of the sensitive habitat and wildlife resources on and adjacent to the project site, the need to avoid damaging sensitive habitats, and the possible penalties for not complying with the measures. After construction, the channels of the bypass shall be contoured back to their existing grade to maintain the hydrology and integrity of flood bypass channel. Runoff from construction zones shall be captured via trenches or other structures and drained away from the bypass subchannels (and their riparian and wetland habitats) to prevent their contamination. Equipment, materials and supplies, and 	To be the responsibility of the James Irrigation District	To be the responsibility of the James Irrigation District	Completed prior to and during construction activities

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Biology-Riparian Habitat	substances such as fuels, oil, fluids, chemicals, and other such substances which could cause contamination shall not be stored in or near the bypass subchannels.			
	8. Standard dust prevention measures (such as use of water spray trucks) shall be implemented during construction to prevent and reduce dust.	To be the responsibility of the James Irrigation District	To be the responsibility of the James Irrigation District	Completed prior to and during construction activities
	9. Compacted haul roads and construction staging areas in the non-native grassland habitat shall be plowed or disced and then rough graded upon the completion of construction activities. This work shall be supervised, inspected, and approved by a qualified biologist. Non-native grassland vegetation will then naturally recolonize the disturbed areas.			
	10. Ingress and egress to the subchannels and non-native grassland habitat by vehicles and equipment shall be restricted to the fewest number and smallest size of roads that are practical.			
Biology – Federally Protected Wetlands	1. That channel portion of the Fresno Slough Bypass disturbed by Project construction is assumed to be jurisdictional Waters of the State. The Project requires that a Streambed Alteration Agreement be obtained from the CDFG for work in the Western (Main) Channel of the Bypass. This agreement would be for Section 1600 of the California Fish and Game Code as required.	To be the responsibility of the James Irrigation District	To be the responsibility of the James Irrigation District	Completed prior to and during construction activities
	2. That portion of the Fresno Slough Bypass disturbed by Project construction is assumed to be jurisdictional Waters of the United States. The Project requires that an Individual and/or Nationwide Permit be obtained from the Corps for construction work in the Western (Main) Channel of the Bypass and possible fill of up to 6 potential vernal pool wetlands in the recharge			

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Biology – Federally Protected Wetlands	area. This permit would be for Sections 10 and 404 of the Clean Water Act as required.			
	<ol style="list-style-type: none"> The Project requires that a permit for a Water Quality Certification (Waiver) pursuant to Section 401 of the Clean Water Act be obtained from the RWQCB if any of the 6 potential vernal pool wetlands in the recharge area cannot be avoided and are filled in. An informal consultation has been proposed with the US Fish and Wildlife Service to discuss the adequacy of the mitigation measures proposed herein. If required, the project proponent will go through the Formal Consultation and permitting process of the Endangered Species Act. 	To be the responsibility of the James Irrigation District	To be the responsibility of the James Irrigation District	Completed prior to and during construction activities
Cultural Resources – Historical Resources	<ol style="list-style-type: none"> Prior to construction, archeological site P-10-00559 shall be flagged and earth moving activities shall not take place within the flagged area. Should cultural resources, either historic or prehistoric, be discovered during development, work must halt in the area of the finds until they can be assessed by a qualified archaeologist. 	To be the responsibility of the Construction Contractor and James Irrigation District	To be the responsibility of the Construction Contractor and James Irrigation District	Completed prior to and during construction activities