



# KERN IRWMP

Integrated Regional Water Management Plan

## *Project Submittal Form*

To the extent possible this form should be electronically filled out and e-mailed to:

[KernIRWMP@kcwa.com](mailto:KernIRWMP@kcwa.com)

### *Part 1. Lead Implementing Agency/Organizational Information*

**Please provide the following information regarding the project sponsor and proposed project.**

**Implementing Agency/ Organization / Individual:**

Kern Water Bank Authority

**Agency / Organization / Individual Address:**

1620 Mill Rock Way, Suite 500  
Bakersfield, CA 93311

**Possible Partnering Agencies:**

Dudley Ridge Water District, Improvement District 4, Semitropic Water Storage District,  
Westside Mutual Water Company, Wheeler Ridge-Maricopa Water Storage District

**Name:**

Jonathan Parker

**Title:**

General Manager

**Telephone:**

661-398-4900

**Fax:**

661-398-4959

**Email:**

jparker@kwb.org

**Website:**

<http://www.kwb.org/main.htm>

**Project Name:**

Kern Water Bank Recharge Enhancement Project

**Either the latitude/longitude or a location description is required. To determine the latitude/longitude, use the closest address or intersection. If the project is linear, use the furthest upstream latitude/longitude.**

**Project Latitude:**

**Project Longitude:**

<b>Location Description:</b>	Kern Water bank lands located in Township 30S and Ranges 25E and 26E.
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**Regional Grouping: Identify the Regional Grouping your *agency* is located in, and the Regional Grouping your *project* is located in.**

<input type="checkbox"/> Agency <input type="checkbox"/> Project	Greater Bakersfield
<input type="checkbox"/> Agency <input type="checkbox"/> Project	Kern County
<input type="checkbox"/> Agency <input type="checkbox"/> Project	Kern County Water Agency
<input checked="" type="checkbox"/> Agency <input checked="" type="checkbox"/> Project	Kern Fan
<input type="checkbox"/> Agency <input type="checkbox"/> Project	Kern River Valley
<input type="checkbox"/> Agency <input type="checkbox"/> Project	Mountains/Foothills
<input type="checkbox"/> Agency <input type="checkbox"/> Project	North County
<input type="checkbox"/> Agency <input type="checkbox"/> Project	South County
<input type="checkbox"/> Agency <input type="checkbox"/> Project	West Side

**Project Cooperating Agency(ies)/Organization(s)/Individual(s):**

- |   |
|---|
| • |
| • |
| • |
| • |

**Project Status (e.g., new, ongoing, expansion, new phase):**

## *Part 2. Project Need*

**It is important to understand the need(s) or issue(s) that the proposed project will address and the benefits that it will provide. Information provided in this section defines the need(s) or issue(s) that the proposed project will address and will help to catalog existing need(s) or issue(s) in the Tulare Lake Basin Portion of Kern County Region.**

**Please provide a 1-2 paragraph description of the need(s) or problem(s) that the project will address. As applicable, discuss the water supply need, operational efficiency need, water quality need, or resource stewardship need (e.g. ecosystem restoration, floodplain management) need. Discuss critical impacts that will occur if the proposal is not implemented.**

The Kern Water Bank provides critical dry-year water supplies to its members (Dudley Ridge Water District, Kern County Water Agency's Improvement District 4, Semitropic Water Storage District, Tejon-Castac Water District, Westside Mutual Water Company, and Wheeler Ridge-Maricopa Water Storage District) by capturing water available in wet years, storing it in the Kern Water Bank, and then returning those supplies in times of need. This project will increase the ability of the Kern Water Bank to capture wet-year supplies by adding 1,025 acres of recharge basins, two lift stations for two of the basins, and two canal pump stations.

With respect to water supply, the additional recharge basins will provide approximately 8,600 af/mo of recharge capacity. Wet-year supplies (e.g. SWP Article 21, CVP Section 215, and Kern River flood waters) are typically available only during high-flow, short-duration events. If these supplies are not captured during the event, they are lost to Kern County. One of the pump stations will increase the capacity of the KWB Canal pump station by 150 cfs, and the second will delivery water from the KWB Canal to the Strand Area basins via the Strand Pipeline. This additional capacity will allow for the full utilization of the KWB Aqueduct turnout.

With respect to water quality, the project will recharge very good to excellent quality water from the SWP, CVP, and/or Kern River which will have a beneficial impact on groundwater quality in the Kern Fan Area. The project will also provide for flood control measures through the diversion of flood waters for beneficial purposes. With respect to resource stewardship, the additional recharge basins will provide exceptional intermittent wetland habitat for migratory birds along the Pacific Flyway.

*Part 3. Project Description*

**A general description of the proposed project is needed. This section will provide information associated with the project concept, general project information, and readiness to proceed. It is recognized that much of the requested information may not be available for projects that are at a conceptual level of project development. We appreciate and need your ideas.**

**Please provide a 1-2 paragraph description of the project including the general project concept, what will be constructed/implemented, how the constructed project will function, and treatment methods, as appropriate.**

The Kern Water Bank Recharge Enhancement Project will entail constructing an additional 1,025 acres of recharge basins, two lift stations to deliver water to two of the basins, an expansion of the KWB Canal pump station and the construction of a pump station to deliver water into the Strand Area via the Strand pipeline. The recharge basins are constructed by building low berms on the down slope part of the basin – up slope areas simply feather out into existing topography. The average depth of the basins will be about 2 feet. The pumps will consist of electric powered turbines.

The components of the project are contemplated in existing CEQA documents and permits (HCP/NCCP). Construction plans will be completed for the KWB Canal expansion facilities and the Strand Pump Station by May 31, 2019. Design plans are available for the lift stations and recharge basins.

**If applicable, list surface water bodies and groundwater basins associated with the proposed project:**

• Kern County Groundwater Basin of the Tulare Lake Hydrologic Region
• California Aqueduct
• Kern River
• Friant Kern Canal

**Please identify up to three available documents which contain information specific to the proposed project:**

• Kern Water Bank Habitat Conservation Plan/Natural Community Conservation Plan
• KWBA Addendum No. 1 to the 2016 Monterey Plus Revised EIR
•

<b>Is the proposed project an element or phase of a regional or larger program?</b>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
<b>If yes, please identify the program</b>	<u>Kern Water Bank</u>
<b>Design life of the Project</b>	<u>50 years</u>
<b>Proposed Construction/Implementation Start Date:</b>	<u>2019 or when funds are secured</u>
<b>Proposed Construction/Implementation Completion Date</b>	<u>2020 or 18 months after funds secured</u>
<b>Ready for Construction Bid</b>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA

<b>Item</b>	<b>Status (e.g., not initiated, in process, complete)</b>	<b>Date</b>
<b>Conceptual Plans</b>	<b>Complete</b>	<b><u>2018</u></b>
<b>Land Acquisition/ Easements</b>	<b>Complete</b>	<b><u>8/96</u></b>
<b>Preliminary Plans</b>	<b>Complete</b>	<b><u>2018</u></b>
<b>CEQA/NEPA</b>	<b>Complete</b>	<b><u>7/2018</u></b>
<b>Permits</b>	<b>Pending</b>	<b><u>SWPPP and Dust Control Plan upon project start</u></b>
<b>Construction Drawings</b>	<b>Pending</b>	<b><u>May 31, 2019</u></b>

**For projects that do not include construction, please briefly describe the project readiness-to proceed.**

*Part 4. Project Benefits*

**Please provide a 1-2 paragraph description of the benefit(s) that the project will address. Information provided will be used in the assessment of project benefits.**

As discussed in Part 2, the Kern Water Bank provides critical dry-year water supplies to its members by capturing water available in wet years, storing it in the Kern Water Bank, and then returning those supplies in times of need. This project will increase the ability of the Kern Water Bank to capture wet-year supplies significantly. The members of the KWBA are Dudley Ridge Water District, Kern County Water Agency's Improvement District 4, Semitropic Water Storage District, Tejon-Castac Water District, Westside Mutual Water Company, and Wheeler Ridge-Maricopa Water Storage District. These entities provide municipal water supplies to the urban Bakersfield area and irrigation water to hundreds of thousands of acres of farm land in Kern County. Thus the beneficiaries of this project include the residents and businesses of Bakersfield, and farmers throughout Kern County.

With respect to water quality, the project will recharge very good to excellent quality water from the SWP, CVP, and/or Kern River, which will have a beneficial impact on groundwater quality in the Kern Fan Area. The project will also provide for flood control by being able to divert flood waters for beneficial uses. Finally, the additional recharge basins will provide exceptional intermittent wetland habitat for migratory birds along the Pacific Flyway.

**Please describe the dominant existing land use type for the proposed project location.**

Water banking and wildlife conservation.

**Please describe the dominant existing land use type for areas upstream and downstream of the proposed project location**

Upstream: Water banking and urban uses.

Downstream: Wildlife habitat.

**Does the project address any known environmental justice issues?**

Yes  No  Not Sure

**Is the project located within or adjacent to a disadvantaged community?**

Yes  No  Not Sure

**Does the project include disadvantaged community participation?**

Yes  No  Not Sure

**If yes, please identify the group or organization:** \_\_\_\_\_

**Please provide the following project benefit information for all applicable components of the proposed project. Benefit categories include things such as water quality / flood management, water supply, and resource stewardship. PLEASE ATTEMPT TO SUPPLY ALL INFORMATION RELEVANT TO YOUR PROJECT. THIS INFORMATION WILL BE USED TO ANALYZE AND ASSESS PROJECT FOR FUTURE FUNDING.**

**WATER QUALITY BENEFITS / FLOOD MANAGEMENT BENEFITS**

<b>Water Quality Benefit Information</b>	
Treatment technologies	_____
Design operational treatment capacity (million gallons/day)	_____
Targeted Contaminants (Check all that apply):	
<input type="checkbox"/> Chloride <input type="checkbox"/> Nitrogen Compounds <input type="checkbox"/> Coliform Bacteria <input type="checkbox"/> Other (describe): _____	
<b>Flood Management Benefit Information</b>	
Maximum volume of temporary storage of storm runoff (acre-feet)	<u>285 af/d or 8,600 af/mo</u>
Maximum increased conveyance capacity (cubic feet/second)	<u>150 cfs</u>
Estimated area benefiting from flood damage reduction (acres)	_____
Estimated level of flood protection resulting from project implementation	_____
Estimated annual value of flood damage reduction provided by project (\$/year)	_____
Acreage required for project implementation	<u>1,025</u>



**WATER SUPPLY BENEFITS**

Project information provided will help to quantify water supply benefits from enhanced local water supply or reduced potable water demand.

Enhanced Water Supply or Demand Reduction Benefit Information			
<b>Source of Increased Supply or Demand Reduction</b>			
<input type="checkbox"/> Groundwater	<input type="checkbox"/> Groundwater treatment	<input checked="" type="checkbox"/> Increased surface water storage	
<input type="checkbox"/> Recycled water	<input checked="" type="checkbox"/> Conservation/ water use efficiency	<input type="checkbox"/> Ocean desalination	
<input type="checkbox"/> Transfer	<input type="checkbox"/> Other (describe): _____		
Type of enhanced supply or demand reduction: Water banking			
Annual Yield of Supply (acre-feet): 103,200 acre-feet in wet years			
<b>Availability by Water-Year Type (acre-feet per year):</b>			
Average Year	<u>25,000</u>		
Dry Year	<u>0</u>		
Wet Year	<u>103,200</u>		
<b>Availability by Season (check all that apply):</b>			
<input checked="" type="checkbox"/> Summer	<input checked="" type="checkbox"/> Fall	<input checked="" type="checkbox"/> Spring	<input checked="" type="checkbox"/> Winter
<b>Does the project have the potential to displace demands on the Bay/Delta/Estuary?</b>			
<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Not Sure	

**For projects that include detention and groundwater recharge, please complete the following:**

How many acres of land drain into this detention basin? (acres)	
Detention Basin area (acres)	
Detention basin max. operational depth (ft.)	
% of basin covered by wetlands	
Soil type	
If other than infiltration, identify method (e.g., injection) and recharge (acre-feet/year)	
Estimated basin annual inflow (acre-feet/year)	
Estimated basin annual outflow (acre-feet/year)	

**RESOURCE STEWARDSHIP BENEFITS**

**Project information provided will help to quantify the benefits associated with projects related to resource stewardship and land management.**

Non-treatment wetland area (acres)	<u>1,025</u>
Treatment wetland area (acres)	_____
Riparian habitat area (acres)	<u>1,025</u>
Non-developed open space area (acres)	_____
Multiple use/ recreation area (acres) – additionally, select the type of multiple use / recreation and associated acres by type:	
Single Sport Athletics	_____
Multiple Sport Athletics Acres	_____
Other Recreation Acres	_____
Pedestrian Trail Acres	_____
Equestrian Trail Acres	_____
Other Passive Activity	_____
Other Acres (describe)	_____
Description	_____
Total Project area (acres)	<u>1,025</u>

*Part 5. Project Cost Estimate*

**Project cost information is needed to assist in comparing benefits and cost. Additionally, knowledge of the project type and cost will assist in identifying funding sources for potential projects.**

**Please indicate the estimated costs of project implementation and associated funding source(s). These costs should include land purchase/easement, planning/design/engineering, construction/implementation, environmental compliance, administration, and contingency.**

<b>Approximate Total Cost</b> <i>(If project costs are variable, please include lower and upper range estimates.)</i>	\$12,219,000
<b>Funding Source</b> <i>(If multiple sources, list each source and the percent or amount funded by each)</i>	KWBA term loan (≈50%) and grants (≈50%)
<b>Funding Certainty &amp; Longevity</b>	100% & 25 years
<b>Operations &amp; Maintenance Cost</b> <i>(per year)</i>	\$412,800
<b>Operations &amp; Maintenance Funding Source(s)</b> <i>(i.e., annual budget, grant, etc. If multiple sources, list each source and the percent or amount funded by each.)</i>	User fees
<b>Operations &amp; Maintenance Funding Certainty</b> <i>(i.e., already included in organization's budget, contingent upon grant, etc.)</i>	Included in member's budgets

**Part 6. Regional Objectives**

Indicate below whether the project meets any of the Kern IRWMP regional objectives. Where necessary/appropriate, please provide a brief explanation as to how the Project meets the regional objective.

Kern IRWMP Objectives	Does the project meet the objective?		Comments/Explanation
	Yes	No	
<b>Increase Water Supply (WS)</b>			
1. Through cooperation and collaboration with other regions restore water supplies to levels that will mitigate for water lost from the region and eliminate overdraft	Yes		The project captures up to 103,200 af/y of water that otherwise would be lost to the region. Project loss measures also help eliminate overdraft.
2. Pursue and implement cost effective water use efficiency programs	No		
3. Increase water storage capacity in the region by increasing recharge acreage and expanding groundwater banking programs before all prime recharge land has been developed	Yes		The project increases recharge capacity which in turn increases storage capacity on prime recharge land.
4. Integrate management of water banking facilities to maximize conjunctive use over the planning horizon	Yes		
5. Increase/augment water supplies to meet region demands	Yes		The project will help sustain recovery programs in dry years.
<b>Improve Operational Efficiency (OE)</b>			
1. Increase transfers and exchanges flexibility over the planning horizon	Yes		The project provides a mechanism to provide for transfers and exchanges.
2. Create tools to re-regulate water supplies within the region, including storage, storm flows, and operational flows over the planning horizon	Yes		Water banking re-regulates supplies so they are available in times of need.
3. Increase distribution efficiencies and reduce energy usage over the planning horizon	No		
4. Increase the use of alternate energy sources (e.g. solar)	No		
5. Replace aging infrastructure to reduce system water losses, improve operational efficiencies, and reduce service interruptions	No		
6. Increase the use of recycled water for direct reuse within the Kern Region	No		
7. Optimize local management of water resources to improve water supply reliability over the planning horizon	Yes		The project captures and stores wet-year supplies

8. Increase pool of qualified candidates to operate water and wastewater systems	No	
<b>Improve Water Quality (WQ)</b>		
1. Monitor and/or manage headwaters/areas of origin, natural streams, and recharge areas to prevent or mitigate contamination	Yes	The project monitors groundwater throughout the recharge area.
2. Identify and preserve prime recharge areas in the Kern fan area and other areas	Yes	The project area consists of prime recharge areas on the Kern Fan.
3. Improve water quality for disadvantaged communities and the watershed over the planning horizon	Yes	The project will improve groundwater quality in the region.
4. Continue to provide drinking water that meets or exceeds water quality standards; and support efforts to attain appropriate standards throughout the planning horizon	No	
5. Maximize the use of lesser quality water for appropriate uses (landscaping, certain ag crops, “aesthetic” projects) throughout the planning horizon	No	
6. Coordinate and enhance aquatic pest control efforts from this point forward	No	
<b>Promote Land Use Planning and Resource Stewardship (LU)</b>		
1. Promote stewardship of the Kern River by applying appropriate measures in various reaches of the river from this point forward	No	
2. Encourage the removal of non-native invasive plant species that affect water quality, reliability, and operations	Yes	The project’s HCP/NCCP mandates an adaptive management program that encourages the removal of non-native invasive plants.
3. Identify and promote the regeneration and restoration of native riparian habitat	Yes	The project will create more than 1,000 acres of intermittent wetland habitat.
4. Coordinate agricultural and urban water suppliers to more effectively address land use planning issues from this point forward	No	
5. Improve the linkage between land use planning and water supply in the region throughout the planning horizon	No	
6. Increase educational opportunities to improve public awareness of water supply, conservation, and water quality issues throughout the planning horizon	No	
7. Improve and coordinate integrated land use planning to support stewardship of environmental resources, such as the Kern River and Kern Fan, and integrate with habitat conservation plans and other ongoing planning efforts from this point forward	Yes	The project will create more than 1,000 acres of intermittent wetland habitat within the KWB HCP/NCCP.

8. Preserve and improve ecosystem/watershed health throughout the planning horizon	Yes	The project will create more than 1,000 acres of intermittent wetland habitat.
<b>Improve Regional Flood Management (FM)</b>		
1. Improve regional flood management by addressing preparedness, response, and post flood actions throughout the planning horizon	Yes	The project will provide up 8,600 af/mo of capacity to divert floodwater to beneficial uses.
2. Reduce the effects of poor quality runoff throughout the planning horizon	No	
3. Identify and promote innovative flood management projects to protect vulnerable areas	Yes	The project will help protect farmlands subject to flooding.
4. Plan new developments to minimize flood impacts from this point forward	No	



# KERN IRWMP

Integrated Regional Water Management Plan

## *Project Submittal Form*

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[KernIRWMP@kcwa.com](mailto:KernIRWMP@kcwa.com).

### **Part 1. Lead Implementing Agency/Organizational Information**

Please provide the following information regarding the project sponsor and proposed project.

**Implementing Agency/ Organization / Individual:**

Rosedale-Rio Bravo Water Storage District

**Agency / Organization / Individual Address:**

849 Allen Road  
P.O. Box 20820  
Bakersfield, CA 93390

**Possible Partnering Agencies:**

Buena Vista Water Storage District

**Name:**

Dan Bartel

**Title:**

Assistant General Manager-Engineer

**Telephone:**

661 589-6045

**Fax:**

661-589-1867

**Email:**

dbartel@rrbwsd.com

**Website:**

www.rrbwsd.com

**Project Name:**

The James Groundwater Storage and Recovery Project

**Either the latitude/longitude or a location description is required. To determine the latitude/longitude, use the closest address or intersection. If the project is linear, use the furthest upstream latitude/longitude.**

**Project Latitude:**

**Project Longitude:**

<b>Location Description:</b>	The Project property, known locally as McAllister Ranch, is located in the City of Bakersfield, Kern County, California within Sections 16, 21, 22, and 23, Township 30 South, Range 26 East, Mount Diablo Meridian (MDM)
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**Regional Grouping: Identify the Regional Grouping your agency is located in, and the Regional Grouping your project is located in.**

<input type="checkbox"/> Agency <input type="checkbox"/> Project	Greater Bakersfield
<input type="checkbox"/> Agency <input type="checkbox"/> Project	Kern County
<input type="checkbox"/> Agency <input type="checkbox"/> Project	Kern County Water Agency
<input checked="" type="checkbox"/> Agency <input checked="" type="checkbox"/> Project	Kern Fan
<input type="checkbox"/> Agency <input type="checkbox"/> Project	Kern River Valley
<input type="checkbox"/> Agency <input type="checkbox"/> Project	Mountains/Foothills
<input type="checkbox"/> Agency <input type="checkbox"/> Project	North County
<input type="checkbox"/> Agency <input type="checkbox"/> Project	South County
<input type="checkbox"/> Agency <input type="checkbox"/> Project	West Side

**Project Cooperating Agency(ies)/Organization(s)/Individual(s):**

<ul style="list-style-type: none"> <li>• Buena Vista Water Storage District</li> <li>•</li> <li>•</li> <li>•</li> </ul>
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**Project Status (e.g., new, ongoing, expansion, new phase):**

New
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## **Part 2. Project Need**

**It is important to understand the need(s) or issue(s) that the proposed project will address and the benefits that it will provide. Information provided in this section defines the need(s) or issue(s) that the proposed project will address and will help to catalog existing need(s) or issue(s) in the Tulare Lake Basin Portion of Kern County Region.**

**Please provide a 1-2 paragraph description of the need(s) or problem(s) that the project will address. As applicable, discuss the water supply need, operational efficiency need, water quality need, or resource stewardship need (e.g. ecosystem restoration, floodplain management) need. Discuss critical impacts that will occur if the proposal is not implemented.**

The Project provides a benefit to the lands, landowners, and water users within their respective boundaries by providing a reliable, affordable, and usable water supply through economic and efficient storage, distribution, and use of available water supplies, while facilitating programs that protect and benefit the groundwater basin.

The Project is intended to provide water storage and recovery capacity for RRBWSD and BVWSD for the efficient management of water supplies in their respective service areas. The Project will allow wet year water supplies to be conserved for use during dry years or when needed.

The Project's specific objectives are:

- To increase water supply reliability in the area, in a cost-effective and environmentally sound manner, by providing a means to store wet year water, that is not needed for immediate use, in the groundwater aquifer and provide a means to extract and use stored groundwater during dry years or when needed; and
- To reduce the Districts' dependence on the Sacramento-San Joaquin River Delta (also referred to herein as the Delta), from programs such as the SWP and CVP, by locally storing water in the groundwater aquifer during wet years for later extraction and use.

### **Part 3. Project Description**

**A general description of the proposed project is needed. This section will provide information associated with the project concept, general project information, and readiness to proceed. It is recognized that much of the requested information may not be available for projects that are at a conceptual level of project development. We appreciate and need your ideas.**

**Please provide a 1-2 paragraph description of the project including the general project concept, what will be constructed/implemented, how the constructed project will function, and treatment methods, as appropriate.**

The James Groundwater Storage and Recovery Project (the Project) consists of construction and operation of shallow percolation ponds totaling approximately 1,850 acres, levees surrounding the proposed percolation ponds, up to 14 groundwater extraction wells and well pumping plants (combination of the operation of 6 existing wells onsite, plus construction and operation of 8 proposed new wells), water conveyance facilities, 4 pumping plants and 9 gravity turnouts, and up to 8 groundwater monitoring wells.

The full Project also includes some offsite improvements, which include two new siphon crossings along the James Canal (paralleling the existing siphon crossings at the Kern River Canal and the Burlington Northern Santa Fe (BNSF) Railroad tracks); modifications to the existing James Canal prism (cross-section); improvements to the intake structure from the Buena Vista Canal to the Canfield Lateral; and modifications to the existing Canfield Lateral prism (cross-section).

This initial application is for the Phase 1 of the overall project includes the design and construction of 720 acres of recharge basins, the installation of a siphon under the railway, and improvements to the James canal system. No recovery facilities are proposed in this phase of the project.

**If applicable, list surface water bodies and groundwater basins associated with the proposed project:**

<ul style="list-style-type: none"><li>• California Aqueduct</li></ul>
<ul style="list-style-type: none"><li>• Friant-Kern Canal</li></ul>
<ul style="list-style-type: none"><li>• Kern River</li></ul>
<ul style="list-style-type: none"><li>•</li></ul>

**Please identify up to three available documents which contain information specific to the proposed project:**

<ul style="list-style-type: none"><li>• 2015 Draft Environmental Impact Report</li></ul>
<ul style="list-style-type: none"><li>• GEI Technical Memorandum, Preliminary Layout of Project Facilities</li></ul>
<ul style="list-style-type: none"><li>•</li></ul>

<b>Is the proposed project an element or phase of a regional or larger program?</b>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<b>If yes, please identify the program</b>	
<b>Design life of the Project</b>	<u>50 years</u>
<b>Proposed Construction/Implementation Start Date:</b>	<u>Fall 2020 (first phase)</u>
<b>Proposed Construction/Implementation Completion Date</b>	<u>Fall 2021 (first phase)</u>
<b>Ready for Construction Bid</b>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA

<b>Item</b>	<b>Status (e.g., not initiated, in process, complete)</b>	<b>Date</b>
<b>Conceptual Plans</b>	Complete	<b>(06/10/2013)</b>
<b>Land Acquisition/ Easements</b>	Complete	<b>(12/10/2018)</b>
<b>Preliminary Plans</b>	Complete	<b>(06/10/2013)</b>
<b>CEQA/NEPA</b>	In process	<b>(08/01/2019)</b>
<b>Permits</b>	In Process	
<b>Construction Drawings</b>	On Hold Pending Funding	

**For projects that do not include construction, please briefly describe the project readiness-to proceed.**

N/A
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## **Part 4. Project Benefits**

**Please provide a 1-2 paragraph description of the benefit(s) that the project will address.**

**Information provided will be used in the assessment of project benefits.**

Water quality benefits would not apply as a primary benefit for this project. However, recharge basins within the District allow for direct recharge of surface water originating from the SWP, the CVP, Kern River usually suitable for irrigation. The sources vary in quality but are all typically suitable for irrigation and do not degrade the groundwater basin from its designated use. This project also has the potential to improve water quality as follows:

- Enhancement of groundwater quality due to decreased pumping lifts and stabilization of the water table, which reduces the chances of water quality changing due to pumping from zones of less quality; and
- Enhancements to water quality due to the importation of surface water to the District in wet years, which delivers surface water of quality suitable for the beneficial uses within the region.

Additionally, the District, project is within the Kern Fan. The water quality benefits produced by the Project are shared with other nearby municipal entities.

The Project is expected to absorb surface supplies up to approximately 200,000 AFY ultimately, and Phase 1 of the project would be 78,000 AFY.

Additionally, the project would:

- Improve the regional reliability of water supply.
- Increase operational flexibility.
- Increase direct spreading and basin absorptive capability.
- Increase local unconfined groundwater storage.
- Make use of available groundwater storage.
- Contribute to the groundwater basin for use during periods of peak demand.

The Project provides a flood management benefit inasmuch as the water delivered to the direct recharge facility during times of Stormwater management will be diverted and not contribute to increased downstream flows and flood risks.

The Project will provide waterfowl with a place to rest and nest, intermittently, when there is water in the ponds and are being utilized for recharge purposes.

Once constructed the facility provides a habitat for various birds and waterfowl, which also provides an opportunity for the public to view birds. The Project will reduce groundwater pumping lifts and resulting energy savings. The savings will be share with municipal and private well owners alike.

This project considers climate change forecasts and will benefit the region by providing new groundwater recharge capabilities to capture more high flow runoff. This increased ability will play an important role for meeting Groundwater Sustainability Management Act (SGMA) goals.

**Please describe the dominant existing land use type for the proposed project location.**

Idled farmland

**Please describe the dominant existing land use type for areas upstream and downstream of the proposed project location**

Upstream: N/A

Downstream: Recharge Facilities

**Does the project address any known environmental justice issues?**

Yes

No

Not Sure

**Is the project located within or adjacent to a disadvantaged community?**

Yes

No

Not Sure

**Does the project include disadvantaged community participation?**

Yes

No

Not Sure

**If yes, please identify the group or organization: \_\_\_\_\_**

**Please provide the following project benefit information for all applicable components of the proposed project. Benefit categories include things such as water quality / flood management, water supply, and resource stewardship. PLEASE ATTEMPT TO SUPPLY ALL INFORMATION RELEVANT TO YOUR PROJECT. THIS INFORMATION WILL BE USED TO ANALYZE AND ASSESS PROJECT FOR FUTURE FUNDING.**

**WATER QUALITY BENEFITS / FLOOD MANAGEMENT BENEFITS**

<b>Water Quality Benefit Information</b>	
Treatment technologies	_____
Design operational treatment capacity (million gallons/day)	_____
Targeted Contaminants (Check all that apply):	
<input type="checkbox"/> Chloride <input type="checkbox"/> Nitrogen Compounds <input type="checkbox"/> Coliform Bacteria <input type="checkbox"/> Other (describe): _____	
<b>Flood Management Benefit Information</b>	
Maximum volume of temporary storage of storm runoff (acre-feet)	200,000 Full Project 78,000 Phase 1
Maximum increased conveyance capacity (cubic feet/second)	360; based on preliminary evaluation
Estimated area benefiting from flood damage reduction (acres)	Unknown
Estimated level of flood protection resulting from project implementation	Unknown
Estimated annual value of flood damage reduction provided by project (\$/year)	Unknown
Acreage required for project implementation	2,076

**WATER SUPPLY BENEFITS**

**Project information provided will help to quantify water supply benefits from enhanced local water supply or reduced potable water demand.**

<b>Enhanced Water Supply or Demand Reduction Benefit Information</b>		
<b>Source of Increased Supply or Demand Reduction</b>		
<input checked="" type="checkbox"/> Groundwater	<input type="checkbox"/> Groundwater treatment	<input checked="" type="checkbox"/> Increased surface water storage
<input type="checkbox"/> Recycled water	<input checked="" type="checkbox"/> Conservation/ water use efficiency	<input type="checkbox"/> Ocean desalination
<input type="checkbox"/> Transfer	<input type="checkbox"/> Other (describe): _____	
Type of enhanced supply or demand reduction: Flood water will be used to recharge groundwater		
Annual Yield of Supply (acre-feet): 40,500 full project, 16,800 for Phase 1		
<b>Availability by Water-Year Type (acre-feet per year):</b>		
Average Year	40,500 AF; [40,500 AFY = 200,000 AF* (2 wet years / 10 years)]	
Dry Year		
Wet Year	200,000 AF full project, 78,000 AF Phase 1	
<b>Availability by Season (check all that apply):</b>		
<input checked="" type="checkbox"/> Summer	<input checked="" type="checkbox"/> Fall	<input checked="" type="checkbox"/> Spring <input checked="" type="checkbox"/> Winter
<b>Does the project have the potential to displace demands on the Bay/Delta/Estuary?</b>		
<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Not Sure



**For projects that include detention and groundwater recharge, please complete the following:**

How many acres of land drain into this detention basin? (acres)	N/A
Detention Basin area (acres)	1,850
Detention basin max. operational depth (ft.)	1 to 4
% of basin covered by wetlands	Unknown
Soil type	Loam
If other than infiltration, identify method (e.g., injection) and recharge (acre-feet/year)	
Estimated basin annual inflow (acre-feet/year)	40,500
Estimated basin annual outflow (acre-feet/year)	26,100

**RESOURCE STEWARDSHIP BENEFITS**

**Project information provided will help to quantify the benefits associated with projects related to resource stewardship and land management.**

Non-treatment wetland area (acres)	1,850 ac, intermittent use when filled with water for recharge. (720 ac Phase 1)
Treatment wetland area (acres)	N/A
Riparian habitat area (acres)	N/A
Non-developed open space area (acres)	N/A
Multiple use/ recreation area (acres) – additionally, select the type of multiple use / recreation and associated acres by type:	
Single Sport Athletics	N/A
Multiple Sport Athletics Acres	N/A
Other Recreation Acres	N/A
Pedestrian Trail Acres	N/A
Equestrian Trail Acres	N/A
Other Passive Activity	Bird Viewing
Other Acres (describe)	N/A
	Description N/A
Total Project area (acres)	2,076

## **Part 5. Project Cost Estimate**

Project cost information is needed to assist in comparing benefits and cost. Additionally, knowledge of the project type and cost will assist in identifying funding sources for potential projects.

Please indicate the estimated costs of project implementation and associated funding source(s). These costs should include land purchase/easement, planning/design/engineering, construction/implementation, environmental compliance, administration, and contingency.

<b>Approximate Total Cost</b> <i>(If project costs are variable, please include lower and upper range estimates.)</i>	Full Project: Approximately \$60,000,000 is a preliminary estimate.  Phase 1: \$7,000,000
<b>Funding Source</b> <i>(If multiple sources, list each source and the percent or amount funded by each)</i>	RRBWSD and BVWSD Funding at 50% Grant Funding at 50%
<b>Funding Certainty &amp; Longevity</b>	Certain
<b>Operations &amp; Maintenance Cost</b> <i>(per year)</i>	\$100,000
<b>Operations &amp; Maintenance Funding Source(s)</b> <i>(i.e., annual budget, grant, etc. If multiple sources, list each source and the percent or amount funded by each.)</i>	Annual Budget from RRBWSD and BVWSD
<b>Operations &amp; Maintenance Funding Certainty</b> <i>(i.e., already included in organization's budget, contingent upon grant, etc.)</i>	Will be included in budget.

## Part 6. Regional Objectives

Indicate below whether the project meets any of the Kern IRWMP regional objectives. Where necessary/appropriate, please provide a brief explanation as to how the Project meets the regional objective.

Kern IRWMP Objectives	Does the project meet the objective?		Comments/Explanation
	Yes	No	
<b>Increase Water Supply (WS)</b>			
1. Through cooperation and collaboration with other regions restore water supplies to levels that will mitigate for water lost from the region and eliminate overdraft	Yes		The project is a collaboration between Districts which will increase ability to work with other regions.
2. Pursue and implement cost effective water use efficiency programs	Yes		The provides the region with greater capability for costs effective water supply management.
3. Increase water storage capacity in the region by increasing recharge acreage and expanding groundwater banking programs before all prime recharge land has been developed	Yes		The project increases recharge facilities in the region.
4. Integrate management of water banking facilities to maximize conjunctive use over the planning horizon	Yes		This project expands conjunctive use programs for the region.
5. Increase/augment water supplies to meet region demands	Yes		This project will increase water supplies for the region.
<b>Improve Operational Efficiency (OE)</b>			
1. Increase transfers and exchanges flexibility over the planning horizon	Yes		By increasing storage capacity this increases flexibility for the region.
2. Create tools to re-regulate water supplies within the region, including storage, storm flows, and operational flows over the planning horizon	Yes		This additional storage capacity will increase ability to re-regulate water supplies and flood control.
3. Increase distribution efficiencies and reduce energy usage over the planning horizon	Yes		The project provides for cost effective approach for increasing water supply.
4. Increase the use of alternate energy sources (e.g. solar)		No	
5. Replace aging infrastructure to reduce system water losses, improve operational efficiencies, and reduce service interruptions		No	
6. Increase the use of recycled water for direct reuse within the Kern Region		No	
7. Optimize local management of water resources to improve water supply reliability over the planning horizon	Yes		The project adds capability for capture of high flow and flood water that will improve water supply reliability.

8. Increase pool of qualified candidates to operate water and wastewater systems	No	
<b>Improve Water Quality (WQ)</b>		
1. Monitor and/or manage headwaters/areas of origin, natural streams, and recharge areas to prevent or mitigate contamination	Yes	The project captures and utilizes high quality water for groundwater recharge, thereby improving groundwater quality.
2. Identify and preserve prime recharge areas in the Kern fan area and other areas	Yes	This project preserves prime recharge areas of the Kern fan area.
3. Improve water quality for disadvantaged communities and the watershed over the planning horizon	No	
4. Continue to provide drinking water that meets or exceeds water quality standards; and support efforts to attain appropriate standards throughout the planning horizon	No	
5. Maximize the use of lesser quality water for appropriate uses (landscaping, certain ag crops, “aesthetic” projects) throughout the planning horizon	No	
6. Coordinate and enhance aquatic pest control efforts from this point forward	No	
<b>Promote Land Use Planning and Resource Stewardship (LU)</b>		
1. Promote stewardship of the Kern River by applying appropriate measures in various reaches of the river from this point forward	No	
2. Encourage the removal of non-native invasive plant species that affect water quality, reliability, and operations	No	
3. Identify and promote the regeneration and restoration of native riparian habitat	No	
4. Coordinate agricultural and urban water suppliers to more effectively address land use planning issues from this point forward	No	
5. Improve the linkage between land use planning and water supply in the region throughout the planning horizon	No	
6. Increase educational opportunities to improve public awareness of water supply, conservation, and water quality issues throughout the planning horizon	No	
7. Improve and coordinate integrated land use planning to support stewardship of environmental resources, such as the Kern River and Kern Fan, and integrate with habitat conservation plans and other ongoing planning efforts from this point forward	Yes	This project preserves prime recharge areas of the Kern fan area.

8. Preserve and improve ecosystem/watershed health throughout the planning horizon	Yes	The Project will provide waterfowl with a place to rest and nest, intermittently, when they have water in the ponds and are being utilized for recharge purposes.
<b>Improve Regional Flood Management (FM)</b>		
1. Improve regional flood management by addressing preparedness, response, and post flood actions throughout the planning horizon	Yes	This project provides additional flood controls tools for the region.
2. Reduce the effects of poor quality runoff throughout the planning horizon	No	
3. Identify and promote innovative flood management projects to protect vulnerable areas	Yes	This project provides additional flood controls tools for the region.
4. Plan new developments to minimize flood impacts from this point forward	No	



# KERN IRWMP

Integrated Regional Water Management Plan

## ***Project Submittal Form***

To the extent possible this form should be electronically filled out and e-mailed to:

[KernIRWMP@kewa.com](mailto:KernIRWMP@kewa.com).

### ***Part 1. Lead Implementing Agency/Organizational Information***

Please provide the following information regarding the project sponsor and proposed project.

**Implementing Agency/ Organization / Individual:**

Rosedale-Rio Bravo Water Storage District

**Agency / Organization / Individual Address:**

849 Allen Road  
P.O. Box 20820  
Bakersfield, CA 93390

**Possible Partnering Agencies:**

None

**Name:**

Dan Bartel

**Title:**

Assistant General Manager-Engineer

**Telephone:**

661-589-6045

**Fax:**

661-589-1867

**Email:**

dbartel@rrbwsd.com

**Website:**

www.rrbwsd.com

**Project Name:**

Western Rosedale In-Lieu Service Area Project

**Either the latitude/longitude or a location description is required. To determine the latitude/longitude, use the closest address or intersection. If the project is linear, use the furthest upstream latitude/longitude.**

**Project Latitude:**

**Project Longitude:**

<b>Location Description:</b>	Between East Side Canal and Interstate 5, south of Bowerbank, and within the District
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**Regional Grouping: Identify the Regional Grouping your *agency* is located in, and the Regional Grouping your *project* is located in.**

<input type="checkbox"/> Agency <input type="checkbox"/> Project	Greater Bakersfield
<input type="checkbox"/> Agency <input type="checkbox"/> Project	Kern County
<input type="checkbox"/> Agency <input type="checkbox"/> Project	Kern County Water Agency
<input checked="" type="checkbox"/> Agency <input checked="" type="checkbox"/> Project	Kern Fan
<input type="checkbox"/> Agency <input type="checkbox"/> Project	Kern River Valley
<input type="checkbox"/> Agency <input type="checkbox"/> Project	Mountains/Foothills
<input type="checkbox"/> Agency <input type="checkbox"/> Project	North County
<input type="checkbox"/> Agency <input type="checkbox"/> Project	South County
<input type="checkbox"/> Agency <input type="checkbox"/> Project	West Side

**Project Cooperating Agency(ies)/Organization(s)/Individual(s):**

•
•
•
•

**Project Status (e.g., new, ongoing, expansion, new phase):**

New
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**Part 2. Project Need**

**It is important to understand the need(s) or issue(s) that the proposed project will address and the benefits that it will provide. Information provided in this section defines the need(s) or issue(s) that the proposed project will address and will help to catalog existing need(s) or issue(s) in the Tulare Lake Basin Portion of Kern County Region.**

**Please provide a 1-2 paragraph description of the need(s) or problem(s) that the project will address. As applicable, discuss the water supply need, operational efficiency need, water quality need, or resource stewardship need (e.g. ecosystem restoration, floodplain management) need. Discuss critical impacts that will occur if the proposal is not implemented.**

The intent of the Project is to deliver surface water supplies to farmers in-lieu of pumping groundwater, allow growers to convert from existing inefficient irrigation practices to more efficient irrigation practices (such as drip irrigation). The Project is expected to absorb surface supplies up to the in-lieu system design amount of 5,630 AFY in 80 percent of the years, providing surface water for use by farmers in the Project Area in-lieu of groundwater that would otherwise be pumped, thus, conserving an average annual amount of 4,500 AF.



**Part 3. Project Description**

A general description of the proposed project is needed. This section will provide information associated with the project concept, general project information, and readiness to proceed. It is recognized that much of the requested information may not be available for projects that are at a conceptual level of project development. We appreciate and need your ideas.

Please provide a 1-2 paragraph description of the project including the general project concept, what will be constructed/implemented, how the constructed project will function, and treatment methods, as appropriate.

<p>The Project consists of the following:</p> <ul style="list-style-type: none"> <li>• Construction and operation of up to ten (10) miles of water conveyance pipelines, ranging in diameter from 12 inches to 40 inches; the pipelines would extend from the East Side Canal to various locations within the Project Area, which are termed North Coverage Area, Central Coverage Area, and South Coverage Area (Figure 5). The alignments and pipe diameters shown in Figure 5 may be modified during Project design.</li> <li>• Construction and operation of appurtenant facilities, such as pumps, valves, flow meters, air vents, connections to the East Side Canal (proposed turnouts), and connections to BVWSD's Supervisory Control and Data Acquisition (SCADA) system.</li> </ul>
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If applicable, list surface water bodies and groundwater basins associated with the proposed project:

<ul style="list-style-type: none"> <li>• California Aqueduct</li> </ul>
<ul style="list-style-type: none"> <li>• Friant-Kern Canal</li> </ul>
<ul style="list-style-type: none"> <li>• Kern River</li> </ul>
<ul style="list-style-type: none"> <li>•</li> </ul>

Please identify up to three available documents which contain information specific to the proposed project:

<ul style="list-style-type: none"> <li>• 2016 Agricultural Water Conservation and Efficiency Grants</li> </ul>
<ul style="list-style-type: none"> <li>•</li> </ul>
<ul style="list-style-type: none"> <li>•</li> </ul>

<p><b>Is the proposed project an element or phase of a regional or larger program?</b></p>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
<p><b>If yes, please identify the program</b></p>	Kern IRWM
<p><b>Design life of the Project</b></p>	50 years

<b>Proposed Construction/Implementation Start Date:</b>		
<b>Proposed Construction/Implementation Completion Date</b>		
<b>Ready for Construction Bid</b>	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No <input type="checkbox"/> NA

<b>Item</b>	<b>Status (e.g., not initiated, in process, complete)</b>	<b>Date</b>
<b>Conceptual Plans</b>	Complete	(mm/dd/yyyy)
<b>Land Acquisition/ Easements</b>	Complete	(mm/dd/yyyy)
<b>Preliminary Plans</b>	Complete	(mm/dd/yyyy)
<b>CEQA/NEPA</b>	Complete	(mm/dd/yyyy)
<b>Permits</b>	Complete	(mm/dd/yyyy)
<b>Construction Drawings</b>	On Hold Pending Funding	(mm/dd/yyyy)

**For projects that do not include construction, please briefly describe the project readiness-to proceed.**

Following the completion of design drawings and specs, the project will be ready to bid and construct.

**Part 4. Project Benefits**

Please provide a 1-2 paragraph description of the benefit(s) that the project will address.

Information provided will be used in the assessment of project benefits.

It is recognized in the IRWMP area that the majority of recharge and in-lieu recharge facilities are constructed, operated, and used by the agricultural districts and the City of Bakersfield and not by the small disadvantaged communities or the environmental water users, this project also has the potential to improve water quality as follows:

- Enhancement of groundwater quality due to decreased pumping lifts and stabilization of the water table, which reduces the chances of water quality changing due to pumping from zones of less quality; and
- Enhancements to water quality due to the importation of surface water to the District in wet years, which delivers surface water of quality suitable for the beneficial uses within the region.

The Project is expected to absorb surface supplies up to the in-lieu system design amount of 5,630 AFY in 80 percent of the years, providing surface water for use by farmers in the Project Area in-lieu of groundwater that would otherwise be pumped, thus, conserving an average annual amount of 4,500 AF.

The Project provides a flood management benefit inasmuch as the water stored will not contribute to increased downstream flows and flood risks from where the water is diverted.

By providing in-lieu groundwater recharge, the Project will reduce groundwater pumping lifts and resulting energy savings. The savings will be shared with municipal and private well owners alike.

Please describe the dominant existing land use type for the proposed project location.

Agricultural

**Please describe the dominant existing land use type for areas upstream and downstream of the proposed project location**

Upstream: Agriculture

Downstream: Agriculture

**Does the project address any known environmental justice issues?**

Yes                       No                       Not Sure

**Is the project located within or adjacent to a disadvantaged community?**

Yes                       No                       Not Sure

**Does the project include disadvantaged community participation?**

Yes                       No                       Not Sure

**If yes, please identify the group or organization:**

**Please provide the following project benefit information for all applicable components of the proposed project. Benefit categories include things such as water quality / flood management, water supply, and resource stewardship. PLEASE ATTEMPT TO SUPPLY ALL INFORMATION RELEVANT TO YOUR PROJECT. THIS INFORMATION WILL BE USED TO ANALYZE AND ASSESS PROJECT FOR FUTURE FUNDING.**

**WATER QUALITY BENEFITS / FLOOD MANAGEMENT BENEFITS**

<b>Water Quality Benefit Information</b>	
Treatment technologies	_____
Design operational treatment capacity (million gallons/day)	_____
Targeted Contaminants (Check all that apply):	
<input type="checkbox"/> Chloride <input type="checkbox"/> Nitrogen Compounds <input type="checkbox"/> Coliform Bacteria <input type="checkbox"/> Other (describe): _____	
<b>Flood Management Benefit Information</b>	
Maximum volume of temporary storage of storm runoff (acre-feet)	900; assumes 20% of avg. annual water delivered as in-lieu recharge will occur during the “shoulder” months of irrigation demand, late fall or early spring, coincident with Stormwater events.
Maximum increased conveyance capacity (cubic feet/second)	72
Estimated area benefiting from flood damage reduction (acres)	Unknown
Estimated level of flood protection resulting from project implementation	Unknown
Estimated annual value of flood damage reduction provided by project (\$/year)	Unknown
Acreage required for project implementation	3,002

**WATER SUPPLY BENEFITS**

**Project information provided will help to quantify water supply benefits from enhanced local water supply or reduced potable water demand.**

Enhanced Water Supply or Demand Reduction Benefit Information			
<b>Source of Increased Supply or Demand Reduction</b>			
<input checked="" type="checkbox"/> Groundwater	<input type="checkbox"/> Groundwater treatment	<input checked="" type="checkbox"/> Increased surface water storage	
<input type="checkbox"/> Recycled water	<input checked="" type="checkbox"/> Conservation/ water use efficiency	<input type="checkbox"/> Ocean desalination	
<input type="checkbox"/> Transfer	<input type="checkbox"/> Other (describe): _____		
Type of enhanced supply or demand reduction: <u>Flood water will be used to recharge groundwater</u>			
Annual Yield of Supply (acre-feet): <u>4,500 AFY</u>			
<b>Availability by Water-Year Type (acre-feet per year):</b>			
Average Year	4,500		
Dry Year			
Wet Year	5,630 AFY		
<b>Availability by Season (check all that apply):</b>			
<input checked="" type="checkbox"/> Summer	<input checked="" type="checkbox"/> Fall	<input checked="" type="checkbox"/> Spring	<input checked="" type="checkbox"/> Winter
<b>Does the project have the potential to displace demands on the Bay/Delta/Estuary?</b>			
<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Not Sure	

**For projects that include detention and groundwater recharge, please complete the following:**

How many acres of land drain into this detention basin? (acres)	N/A
Detention Basin area (acres)	N/A
Detention basin max. operational depth (ft.)	N/A
% of basin covered by wetlands	N/A
Soil type	N/A
If other than infiltration, identify method (e.g., injection) and recharge (acre-feet/year)	N/A
Estimated basin annual inflow (acre-feet/year)	N/A
Estimated basin annual outflow (acre-feet/year)	N/A

**RESOURCE STEWARDSHIP BENEFITS**

**Project information provided will help to quantify the benefits associated with projects related to resource stewardship and land management.**

Non-treatment wetland area (acres)	N/A
Treatment wetland area (acres)	N/A
Riparian habitat area (acres)	N/A
Non-developed open space area (acres)	N/A
Multiple use/ recreation area (acres) – additionally, select the type of multiple use / recreation and associated acres by type:	
Single Sport Athletics	N/A
Multiple Sport Athletics Acres	N/A
Other Recreation Acres	N/A
Pedestrian Trail Acres	N/A
Equestrian Trail Acres	N/A
Other Passive Activity	N/A
Other Acres (describe)	N/A
Description	N/A
Total Project area (acres)	N/A

**Part 5. Project Cost Estimate**

Project cost information is needed to assist in comparing benefits and cost. Additionally, knowledge of the project type and cost will assist in identifying funding sources for potential projects.

Please indicate the estimated costs of project implementation and associated funding source(s). These costs should include land purchase/easement, planning/design/engineering, construction/implementation, environmental compliance, administration, and contingency.

<p><b>Approximate Total Cost</b> <i>(If project costs are variable, please include lower and upper range estimates.)</i></p>	<p>\$4,100,000</p>
<p><b>Funding Source</b> <i>(If multiple sources, list each source and the percent or amount funded by each)</i></p>	<p>RRBWSD</p>
<p><b>Funding Certainty &amp; Longevity</b></p>	<p>Certain</p>
<p><b>Operations &amp; Maintenance Cost</b> <i>(per year)</i></p>	<p>\$37,000</p>
<p><b>Operations &amp; Maintenance Funding Source(s)</b> <i>(i.e., annual budget, grant, etc. If multiple sources, list each source and the percent or amount funded by each.)</i></p>	<p>Annual Budget</p>
<p><b>Operations &amp; Maintenance Funding Certainty</b> <i>(i.e., already included in organization's budget, contingent upon grant, etc.)</i></p>	<p>Will be included in budget.</p>



**Part 6. Regional Objectives**

Indicate below whether the project meets any of the Kern IRWMP regional objectives. Where necessary/appropriate, please provide a brief explanation as to how the Project meets the regional objective.

Kern IRWMP Objectives	Does the project meet the objective?		Comments/Explanation
	Yes	No	
<b>Increase Water Supply (WS)</b>			
1. Through cooperation and collaboration with other regions restore water supplies to levels that will mitigate for water lost from the region and eliminate overdraft	Yes		
2. Pursue and implement cost effective water use efficiency programs	Yes		
3. Increase water storage capacity in the region by increasing recharge acreage and expanding groundwater banking programs before all prime recharge land has been developed	Yes		
4. Integrate management of water banking facilities to maximize conjunctive use over the planning horizon	Yes		
5. Increase/augment water supplies to meet region demands	Yes		
<b>Improve Operational Efficiency (OE)</b>			
1. Increase transfers and exchanges flexibility over the planning horizon	Yes		
2. Create tools to re-regulate water supplies within the region, including storage, storm flows, and operational flows over the planning horizon	Yes		
3. Increase distribution efficiencies and reduce energy usage over the planning horizon	Yes		
4. Increase the use of alternate energy sources (e.g. solar)		No	
5. Replace aging infrastructure to reduce system water losses, improve operational efficiencies, and reduce service interruptions		No	
6. Increase the use of recycled water for direct reuse within the Kern Region		No	
7. Optimize local management of water resources to improve water supply reliability over the planning horizon	Yes		

8. Increase pool of qualified candidates to operate water and wastewater systems	No	
<b>Improve Water Quality (WQ)</b>		
1. Monitor and/or manage headwaters/areas of origin, natural streams, and recharge areas to prevent or mitigate contamination	No	
2. Identify and preserve prime recharge areas in the Kern fan area and other areas	No	
3. Improve water quality for disadvantaged communities and the watershed over the planning horizon	No	
4. Continue to provide drinking water that meets or exceeds water quality standards; and support efforts to attain appropriate standards throughout the planning horizon	No	
5. Maximize the use of lesser quality water for appropriate uses (landscaping, certain ag crops, “aesthetic” projects) throughout the planning horizon	No	
6. Coordinate and enhance aquatic pest control efforts from this point forward	No	
<b>Promote Land Use Planning and Resource Stewardship (LU)</b>		
1. Promote stewardship of the Kern River by applying appropriate measures in various reaches of the river from this point forward	No	
2. Encourage the removal of non-native invasive plant species that affect water quality, reliability, and operations	No	
3. Identify and promote the regeneration and restoration of native riparian habitat	No	
4. Coordinate agricultural and urban water suppliers to more effectively address land use planning issues from this point forward	No	
5. Improve the linkage between land use planning and water supply in the region throughout the planning horizon	No	
6. Increase educational opportunities to improve public awareness of water supply, conservation, and water quality issues throughout the planning horizon	No	
7. Improve and coordinate integrated land use planning to support stewardship of environmental resources, such as the Kern River and Kern Fan, and integrate with habitat conservation plans and other ongoing planning efforts from this point forward	Yes	

8. Preserve and improve ecosystem/watershed health throughout the planning horizon	No	
<b>Improve Regional Flood Management (FM)</b>		
1. Improve regional flood management by addressing preparedness, response, and post flood actions throughout the planning horizon	Yes	
2. Reduce the effects of poor quality runoff throughout the planning horizon	No	
3. Identify and promote innovative flood management projects to protect vulnerable areas	Yes	
4. Plan new developments to minimize flood impacts from this point forward	No	