



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.

Part 1. Lead Implementing Agency/Organizational Information

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

Implementing Agency/ Organization / Individual:

Tehachapi-Cummings County Water District

Agency / Organization / Individual Address:

P.O. Box 326
Tehachapi, CA 93561

Possible Partnering Agencies:

Stallion Springs Community Services District
Bear Valley Community Services District
California Correctional Institute, Tehachapi

Name:

Thomas Neisler

Title:

General Manager

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661-822-5504

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Website:

www.tccwd.com

Project Name:

Cummings Basin Westerly Recharge 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:

Location Description:	(1) Parcel 1 of Parcel Map No. 2461, being a portion of the S ½ of the SE ¼ of Section 25, T. 32 S., R. 31 E. MDB&M in the County of Kern.
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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 type="checkbox"/> Agency <input type="checkbox"/> Project	Kern Fan
<input type="checkbox"/> Agency <input type="checkbox"/> Project	Kern River Valley
<input checked="" type="checkbox"/> Agency <input checked="" 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"> • Stallion Springs Community Services District
<ul style="list-style-type: none"> • Bear Valley Community Services District
<ul style="list-style-type: none"> • California Correctional Institute, Tehachapi
<ul style="list-style-type: none"> • Various Agricultural Irrigators, Potentially: SunSelect Produce, Inc., Millenium Pacific Inc., Grimmway Farms

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

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 project is needed because Cummings Basin's current recharge capability is insufficient to meet the current and future demand for the conjunctive use programs operated there. There is a risk that the Basin could be damaged if the facilities to artificially recharge the groundwater are inadequate for the future level of pumping from the Basin. If the project is not built, TCCWD may be unable to provide enough imported recharge supply to the Basin to accommodate the municipal and agricultural purveyors. As climate change precipitates wider variance in annual SWP allocations, it becomes imperative to take advantage of every drop of water in surplus years. TCCWD is actively banking water in-district and out of district to meet demand during drought and insufficient allocation years. This project will allow TCCWD to meet demand with banked water during periods of shortage. Our current recharge capability is inadequate to meet this need.

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.

Cummings Basin is an adjudicated basin under the Kern County Superior Court and is supervised by the Watermaster, Tehachapi-Cummings County Water District. In addition to the intensive agricultural use of the basin, three municipal water purveyors currently use the basin for conjunctive use programs. Under the programs, TCCWD spreads imported SWP water for subsequent extraction by the three purveyors, thereby avoiding the need for expensive surface water treatment plants. Water demand for these municipal uses is forecast to grow. Existing spreading ponds are insufficient for growth of this program. More acreage for spreading of imported water is needed.

TCCWD has three spreading areas in Cummings Basin: (1) Chanac Creek (northeast portion), (2) 19-acres at the corner of Bear Valley Road and Highway 202 and (3) Cummings Ponds. Chanac Creek is currently not used because of the additional lift required to move water to that facility and the higher losses experienced. 19-acres is the main spreading works where 75% of the water is recharged. Cummings Pond receives 25% of the water and is less efficient than 19-acres. The project, Cummings Basin Westerly Recharge, is located approximately in the center of the basin and proximate to the most intense groundwater pumping. Preliminary investigation suggests that the site soil characteristics are ideal for recharge and similar to the very efficient 19-acre site.

This project consists of purchasing approx. 15 acres from Stallion Springs CSD, grading the site to a depth of 5-6' and constructing equalization berms and weirs to maintain water levels, constructing approx. 450' of 8" waterline to provide supply to the ponds.

These improvements will enable TCCWD to (1) spread more imported water for beneficial use of the municipal purveyors as their demand increases, (2) provide additional banked supply to allow agricultural customers to establish dedicated Banked Water Reserve Accounts (3) bank additional supplies of imported water in wet years, which will improve operational flexibility and protect against drought, (4) maintain the recharge areas better, as the existence of multiple areas will allow one to be taken off line for maintenance while the others remain in use, and (5) more evenly distribute recharge water in the Basin.

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

• Cummings Valley Groundwater Basin (DWR #5-27)
• Chanac Creek (eastern portion)
•
•

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

• Cummings Basin Recharge Facility Evaluation, GEI Consultants, Sept. 9, 2011
• Summary Appraisal Report, Merriman Hurst & Assoc., Apr. 12, 2012 (outdated)
• Cummings Basin Groundwater Model Update, Fugro Consultants, March 2015

Is the proposed project an element or phase of a regional or larger program?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
If yes, please identify the program	<u>TCCWD groundwater banking for multiple public agencies and agricultural users</u>
Design life of the Project	<u>50 years</u>
Proposed Construction/Implementation Start Date:	<u>03-01-2020</u>
Proposed Construction/Implementation Completion Date	<u>10-31-2020</u>
Ready for Construction Bid	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA

Item	Status (e.g., not initiated, in process, complete)	Date
Conceptual Plans	<u>In process</u>	<u>02/04/19</u>
Land Acquisition/ Easements	<u>In process</u>	<u>02/20/19</u>
Preliminary Plans	<u>Not initiated</u>	
CEQA/NEPA	<u>Not initiated</u>	
Permits	<u>Not initiated</u>	
Construction Drawings	<u>Not initiated</u>	

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

This project includes construction.

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.

The project primarily benefits the three municipal water purveyors because it enables them to receive sufficient quantities of imported SWP water to meet their water demand growth forecast without the need to construct expensive surface water treatment facilities. However, the project also benefits the basin generally by increasing water levels in the basin, which provides lower pumping costs for all groundwater users in the basin. It also allows the district to take delivery of flood-stage water (Article 21 and/or Lower Kern River water) when available, which augments the total supply available. Finally, since the project will enable the district to put water into the basin more quickly and in greater quantities, it will be able to achieve its water banking targets more quickly, which could possibly allow it to exchange water with other districts during dry years.

Having access to additional quantities of imported SWP water will alleviate demand to pump native groundwater from Cummings Basin. This basin is currently in overdraft and the Watermaster is working to reduce consumption to within sustainable limits. This project is a major component of this effort.

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

Agriculture.

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?
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Not Sure

Is the project located within or adjacent to a disadvantaged community?
<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Not Sure

Does the project include disadvantaged community participation?
<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Not Sure
If yes, please identify the group or organization: California Correctional Institute, Tehachapi

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

Water Quality Benefit Information	
Treatment technologies	<u>None</u>
Design operational treatment capacity (million gallons/day)	<u>None</u>
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): _____	
Flood Management Benefit Information	
Maximum volume of temporary storage of storm runoff (acre-feet)	<u>75</u>
Maximum increased conveyance capacity (cubic feet/second)	<u>0</u>
Estimated area benefiting from flood damage reduction (acres)	<u>0</u>
Estimated level of flood protection resulting from project implementation	<u>0</u>
Estimated annual value of flood damage reduction provided by project (\$/year)	<u>0</u>
Acreage required for project implementation	<u>15</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		
Source of Increased Supply or Demand Reduction		
<input checked="" type="checkbox"/> Groundwater	<input type="checkbox"/> Groundwater treatment	<input type="checkbox"/> Increased surface water storage
<input type="checkbox"/> Recycled water	<input 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>Groundwater banking of imported SWP supply and Article 21, Turnback Pool and Lower Kern River high-flow water.</u>		
Annual Yield of Supply (acre-feet): <u>4,000</u>		
Availability by Water-Year Type (acre-feet per year):		
Average Year	<u>4,000</u>	
Dry Year	<u>4,000</u>	
Wet Year	<u>4,000</u>	
Availability by Season (check all that apply):		
<input checked="" type="checkbox"/> Summer	<input checked="" type="checkbox"/> Fall	<input checked="" type="checkbox"/> Spring <input checked="" type="checkbox"/> Winter
Does the project have the potential to displace demands on the Bay/Delta/Estuary?		
<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)	<u>500</u>
Detention Basin area (acres)	<u>15</u>
Detention basin max. operational depth (ft.)	<u>5</u>
% of basin covered by wetlands	<u>0</u>
Soil type	<u>SP – Sand and SM – Silty Sand</u>
If other than infiltration, identify method (e.g., injection) and recharge (acre-feet/year)	<u>Infiltration</u>
Estimated basin annual inflow (acre-feet/year)	<u>4,000</u>
Estimated basin annual outflow (acre-feet/year)	<u>0</u>

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)	_____
Treatment wetland area (acres)	_____
Riparian habitat area (acres)	_____
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)	_____

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>Approximate Total Cost <i>(If project costs are variable, please include lower and upper range estimates.)</i></p>	<p>\$1,500,000 - \$1,750,000</p>
<p>Funding Source <i>(If multiple sources, list each source and the percent or amount funded by each)</i></p>	<p>Water rates</p>
<p>Funding Certainty & Longevity</p>	<p>Permanent funding source</p>
<p>Operations & Maintenance Cost <i>(per year)</i></p>	<p>\$20,000</p>
<p>Operations & Maintenance Funding Source(s) <i>(i.e., annual budget, grant, etc. If multiple sources, list each source and the percent or amount funded by each.)</i></p>	<p>Water rates</p>
<p>Operations & Maintenance Funding Certainty <i>(i.e., already included in organization's budget, contingent upon grant, etc.)</i></p>	<p>Permanent funding source</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	
Increase Water Supply (WS)			
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		As a Member Unit of the Kern County Water Agency, TCCWD collaborates with other water districts to maximize water supplies to the region and eliminate overdraft. Project provides additional in-district storage and greater flexibility.
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		This is the primary purpose of this project. The proposed recharge site is prime recharge area.
4. Integrate management of water banking facilities to maximize conjunctive use over the planning horizon	Yes		All of the municipal water delivered from Cummings Basin is via conjunctive use and the municipal agencies are the primary beneficiaries of this project.
5. Increase/augment water supplies to meet region demands	Yes		If TCCWD had more recharge capacity, we could receive more surplus water when available in wet years to be stored in the Basin and recovered in dry years.
Improve Operational Efficiency (OE)			
1. Increase transfers and exchanges flexibility over the planning horizon	Yes		If the water banking goals are met or are ahead of schedule we could make surface water available in dry years to other agencies.
2. Create tools to re-regulate water supplies within the region, including storage, storm flows, and operational flows over the planning horizon	Yes		The project will be able to capture small amounts of storm flows, as the proposed ponds will be able to hold 75 AF of water and infiltration will be 0.5 – 1.0 feet/day.
3. Increase distribution efficiencies and reduce energy usage over the planning horizon	Yes		Additional recharge capacity will enable us to keep all of the conjunctive use recharge water within pressure zone 1, which will reduce energy usage for pumping to pressure zone 2 (reservoir level).
4. Increase the use of alternate energy sources (e.g. solar)		No	
5. Replace aging infrastructure to reduce system water losses, improve operational	Yes		Additional recharge basins will relieve current necessity to use 19-acre facility to

efficiencies, and reduce service interruptions		maximum capacity. Eventually, 19-acre facility will fail if operated at max. capacity.
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	Our Tehachapi Regional Urban Water Management Plan recommends that all municipal water purveyors have a banked water reserve account of 5-years of SWP demand. This project will allow us to progress toward that goal.
8. Increase pool of qualified candidates to operate water and wastewater systems	No	
Improve Water Quality (WQ)		
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	
Promote Land Use Planning and Resource Stewardship (LU)		
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	Yes	Additional banked reserves will allow for more informed estimates of available water supply for planning as well as additional emergency supply.
5. Improve the linkage between land use planning and water supply in the region throughout the planning horizon	Yes	Additional banked reserves will allow for more informed estimates of available water supply for planning as well as additional emergency supply.

6. Increase educational opportunities to improve public awareness of water supply, conservation, and water quality issues throughout the planning horizon	Yes	We will publicize the project in the Tehachapi News, on tccwd.com and other outlets. We will provide educational signage.
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	Although not the focus of this project, we would certainly be open to coordinate this project with plans for habitat conservation. The land in question will be protected from development in perpetuity.
8. Preserve and improve ecosystem/watershed health throughout the planning horizon	No	
Improve Regional Flood Management (FM)		
1. Improve regional flood management by addressing preparedness, response, and post flood actions throughout the planning horizon	No	
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	No	
4. Plan new developments to minimize flood impacts from this point forward	No	