



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.

Part 1. Lead Implementing Agency/Organizational Information

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

Implementing Agency/ Organization / Individual:

City of Shafter

Agency / Organization / Individual Address:

336 Pacific Avenue Shafter, CA 93263

Possible Partnering Agencies:

Name:

Michael James

Title:

Public Works Director

Telephone:

661-746-5002

Fax:

661-746-9125

Email:

mjames@shafter.com

Website:

www.shafter.com

Project Name:

Well #15 Arsenic Treatment

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: | 35.4706

Project Longitude: | -119.2791

Location Description:	Southwest corner of Burbank Avenue and Shafter Avenue.
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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 type="checkbox"/> Agency <input type="checkbox"/> Project	Mountains/Foothills
<input checked="" type="checkbox"/> Agency <input checked="" 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

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.

Several disadvantaged communities are served by the City’s water supply and distribution. An existing well (#15) is located in the southwest portion of the City and is currently used for agricultural purposes. Currently levels of arsenic slightly exceed the State and Federal health standard of 10 ppb. This project would enable the City to treat approximately one-half of the well’s pumping capacity for domestic use while still maintaining the current agricultural needs. A dual use well would further ensure cost-effective domestic water service to disadvantaged communities.

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 would commence with a pilot study to assess and ultimately recommend the most cost-effective treatment system for this particular well. A new pump, motor, PLC and SCADA would be designed and installed to facilitate a dual use well site. A new piping system would connect to the City's distribution system, which is less than 100 feet from the well site, and it would include a Fisher and/or Cla Val system to regulate the flow for both domestic and agricultural purposes.</p>
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If applicable, list surface water bodies and groundwater basins associated with the proposed project:

<ul style="list-style-type: none">• The San Joaquin Valley Basin and the Kern County sub-basin.
<ul style="list-style-type: none">•
<ul style="list-style-type: none">•
<ul style="list-style-type: none">•

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

<ul style="list-style-type: none">• Kern County IRWMP
<ul style="list-style-type: none">• City of Shafter 2010 Urban Water Management Plan
<ul style="list-style-type: none">•

Is the proposed project an element or phase of a regional or larger program?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
If yes, please identify the program	_____
Design life of the Project	<u>50 years</u>
Proposed Construction/Implementation Start Date:	<u>07/01/2013</u>
Proposed Construction/Implementation Completion Date	<u>6/30/2014</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>	02/28/2013	(mm/dd/yyyy)
Land Acquisition/ Easements	<u>In Process</u>	03/31/2013	(mm/dd/yyyy)
Preliminary Plans	<u>In Process</u>	05/31/2013	(mm/dd/yyyy)
CEQA/NEPA	<u>Not Initiated</u>	04/30/2013	(mm/dd/yyyy)
Permits	<u>Not Initiated</u>	05/31/2013	(mm/dd/yyyy)
Construction Drawings	<u>Not Initiated</u>	06/30/2013	(mm/dd/yyyy)

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.

<p>The dual use well project will enable the City to further ensure a cost-effective means of meeting the water service needs of multiple disadvantaged communities plus maintaining an existing agricultural use.</p>
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Please describe the dominant existing land use type for the proposed project location.

<p>Existing land use is a combination of open space and agricultural.</p>

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

Upstream:	Agricultural, low density residential
Downstream:	Agricultural, industrial

Does the project address any known environmental justice issues?

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

<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Not Sure
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Does the project include disadvantaged community participation?

<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Not Sure
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If yes, please identify the group or organization: Mexican Colony, Cherokee Strip, Smith's Corner, etc.

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>TBD – Adsorption, Coagulation Filtration or Ion Exchange</u>
Design operational treatment capacity (million gallons/day)	<u>1.0 MGD ±</u>
Targeted Contaminants (Check all that apply):	
<input type="checkbox"/> Chloride <input type="checkbox"/> Nitrogen Compounds <input type="checkbox"/> Coliform Bacteria <input checked="" type="checkbox"/> Other (describe): Arsenic	
Flood Management Benefit Information: N/A	
Maximum volume of temporary storage of storm runoff (acre-feet)	_____
Maximum increased conveyance capacity (cubic feet/second)	_____
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	_____

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 checked="" type="checkbox"/> Groundwater treatment	<input 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>TBD</u>			
Annual Yield of Supply (acre-feet): <u>TBD</u>			
Availability by Water-Year Type (acre-feet per year):			
Average Year	<u>TBD</u>		
Dry Year	<u>TBD</u>		
Wet Year	<u>TBD</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 type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/> Not Sure	

For projects that include detention and groundwater recharge, please complete the following: N/A

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: N/A

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.

Approximate Total Cost <i>(If project costs are variable, please include lower and upper range estimates.)</i>	\$2,000,000
Funding Source <i>(If multiple sources, list each source and the percent or amount funded by each)</i>	City of Shafter as Local Match Dependent Upon Grant Received
Funding Certainty & Longevity	Included in Organization's Budget
Operations & Maintenance Cost <i>(per year)</i>	\$200,000 year (staff, utilities, etc.)
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>	City of Shafter Water Enterprise
Operations & Maintenance Funding Certainty <i>(i.e., already included in organization's budget, contingent upon grant, etc.)</i>	Included in Organization 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	
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		X	
2. Pursue and implement cost effective water use efficiency programs	X		
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		X	
4. Integrate management of water banking facilities to maximize conjunctive use over the planning horizon		X	
5. Increase/augment water supplies to meet region demands	X		
Improve Operational Efficiency (OE)			
1. Increase transfers and exchanges flexibility over the planning horizon	X		Water from well site can potentially be utilized for increased agricultural use and exchanges.
2. Create tools to re-regulate water supplies within the region, including storage, storm flows, and operational flows over the planning horizon		X	
3. Increase distribution efficiencies and reduce energy usage over the planning horizon	X		Given the abundance of available land surrounding the site, solar panels are a very viable option.
4. Increase the use of alternate energy sources (e.g. solar)	X		Given the abundance of available land surrounding the site, solar panels are a very viable option.
5. Replace aging infrastructure to reduce system water losses, improve operational efficiencies, and reduce service interruptions	X		Replaces well pump, motor and control systems.
6. Increase the use of recycled water for direct reuse within the Kern Region		X	
7. Optimize local management of water resources to improve water supply reliability over the planning horizon	X		

8. Increase pool of qualified candidates to operate water and wastewater systems	X	
Improve Water Quality (WQ)		
1. Monitor and/or manage headwaters/areas of origin, natural streams, and recharge areas to prevent or mitigate contamination	X	
2. Identify and preserve prime recharge areas in the Kern fan area and other areas	X	
3. Improve water quality for disadvantaged communities and the watershed over the planning horizon	X	
4. Continue to provide drinking water that meets or exceeds water quality standards; and support efforts to attain appropriate standards throughout the planning horizon	X	Lowers arsenic levels below 10 ppb.
5. Maximize the use of lesser quality water for appropriate uses (landscaping, certain ag crops, “aesthetic” projects) throughout the planning horizon	X	Maintains raw water for agricultural use.
6. Coordinate and enhance aquatic pest control efforts from this point forward	X	
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	X	
2. Encourage the removal of non-native invasive plant species that affect water quality, reliability, and operations	X	
3. Identify and promote the regeneration and restoration of native riparian habitat	X	
4. Coordinate agricultural and urban water suppliers to more effectively address land use planning issues from this point forward	X	
5. Improve the linkage between land use planning and water supply in the region throughout the planning horizon	X	
6. Increase educational opportunities to improve public awareness of water supply, conservation, and water quality issues throughout the planning horizon	X	
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	X	

8. Preserve and improve ecosystem/watershed health throughout the planning horizon	X	
Improve Regional Flood Management (FM)		
1. Improve regional flood management by addressing preparedness, response, and post flood actions throughout the planning horizon	X	
2. Reduce the effects of poor quality runoff throughout the planning horizon	X	
3. Identify and promote innovative flood management projects to protect vulnerable areas	X	
4. Plan new developments to minimize flood impacts from this point forward	X	



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Integrated Regional Water Management Plan

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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:

City of McFarland

Agency / Organization / Individual Address:

401 W. Kern Ave.
McFarland, CA 93250

Possible Partnering Agencies:

Name:

John Wooner

Title:

City Manager

Telephone:

661-792-3091

Fax:

661-792-3093

Email:

jwooner@mcfarlandcity.org

Website:

www.mcfarlandcity.org/

Project Name:

Browning Road Storage Tank and Booster Facility

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: | 35°41'08.4" N | **Project Longitude:** | 119°13'15.8" W |

Location Description:	1/8 mile east of Browning Road & 1/4 mile north of E. Perkins Avenue
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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 type="checkbox"/> Agency <input type="checkbox"/> Project	Mountains/Foothills
<input checked="" type="checkbox"/> Agency <input checked="" 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 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.

McFarland is a disadvantaged community. Residents are served by the City’s water supply and distribution system. An existing well (Garzoli) is located in the northwest portion of the City and currently has levels of arsenic that exceed the State and Federal health standard of 10 ppb. This project would enable the City to make use of the excess capacity of the wells that meet the arsenic water quality standard. These wells will be used to fill the tank during periods of off-peak demand. The booster plant will be used to pump out of the tank during periods of peak demand, reducing the need to pump the Garzoli well. The well is currently a candidate for arsenic treatment - however - arsenic treatment is expensive to operate. It is not known when treatment for this well will be installed, if ever. The tank will provide water storage on the east side of town in the event that there is a power outage or other emergency that would isolate the east side of town (with just one well) from the west side of town (which has three wells) - including the Garzoli well. In addition, the storage tank will provide operational efficiency by allowing the City to take advantage of time of use pumping rates to fill the tank with their wells in off-peak hour periods and turn wells off in peak hour periods.

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 IMG storage tank and booster facility is to be built on the current site of the Browning Road Well. The tank will be built on a pad that has been provided for it. The booster facility will be built in close proximity to the tank. This facility will provide the benefits described in the description in Part 2, above.</p>

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

<ul style="list-style-type: none">• The San Joaquin Valley Basin and the Kern County sub-basin.
<ul style="list-style-type: none">•
<ul style="list-style-type: none">•
<ul style="list-style-type: none">•

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

<ul style="list-style-type: none">• Kern County IRWMP
<ul style="list-style-type: none">•
<ul style="list-style-type: none">•

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	The Browning Road Well has been drilled and is currently being equipped. The second phase will be the subject Tank and Booster facility.
Design life of the Project	<u>50 years</u>
Proposed Construction/Implementation Start Date:	<u>07/01/2013</u>
Proposed Construction/Implementation Completion Date	<u>6/30/2014</u>
Ready for Construction Bid	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA (+/- 90% design)

Item	Status (e.g., not initiated, in process, complete)	Date	
Conceptual Plans	<u>Complete</u>		
Land Acquisition/ Easements	<u>Complete</u>		
Preliminary Plans	<u>90% Complete</u>	9/30/2012	12/31/2012
CEQA/NEPA	<u>In Process</u>		
Permits	<u>Not Initiated</u>	12/31/2012	1/30/2013
Construction Drawings	<u>100% Complete</u>	01/30/2013	2/28/2013

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.

The project will enable the City to provide cost-effective good quality, water service to the residents of this disadvantaged community.

- The project will allow the City to inactivate a well that has arsenic which exceeds the MCL.
- The project will allow the City to increase operational efficiency and take advantage of time of use pumping with the IMG storage tank.
- The project will provide redundancy in the event of a system emergency as the utility provider on the west side of Hwy 99 is PG&E and on the east side of Hwy 99 is SCE. If the PG&E grid goes down the City will be able to utilize the storage tank and pumping plant to provide water to the entire community while the power is out.

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

Existing land use around the facility site is a combination of City park and agricultural.

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

Upstream: Agricultural, low density residential

Downstream: Low density residential

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?		
<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Not Sure
If yes, please identify the group or organization: City of McFarland		

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>N/A</u>
Design operational treatment capacity (million gallons/day)	<u>1.0 MGD</u>
Targeted Contaminants (Check all that apply):	
<input type="checkbox"/> Chloride <input type="checkbox"/> Nitrogen Compounds <input type="checkbox"/> Coliform Bacteria <input checked="" type="checkbox"/> Other (describe): <u>Arsenic (Project allows City to reduce or eliminate pumping of a well with arsenic contamination above the MCL.</u>	
Flood Management Benefit Information: N/A	
Maximum volume of temporary storage of storm runoff (acre-feet)	_____
Maximum increased conveyance capacity (cubic feet/second)	_____
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	_____

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 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>N/A</u>			
Annual Yield of Supply (acre-feet): <u>N/A</u>			
Availability by Water-Year Type (acre-feet per year):			
Average Year	<u>YES</u>		
Dry Year	<u>YES</u>		
Wet Year	<u>YES</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 type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/> Not Sure	

For projects that include detention and groundwater recharge, please complete the following: N/A

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: N/A

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.

Approximate Total Cost <i>(If project costs are variable, please include lower and upper range estimates.)</i>	\$2,300,000
Funding Source <i>(If multiple sources, list each source and the percent or amount funded by each)</i>	City of McFarland as Local Match Dependent Upon Grant Received
Funding Certainty & Longevity	Included in Organization's Budget
Operations & Maintenance Cost <i>(per year)</i>	\$100,000 year (staff, utilities, etc.)
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>	City of McFarland Water Rates
Operations & Maintenance Funding Certainty <i>(i.e., already included in organization's budget, contingent upon grant, etc.)</i>	Included in Organization 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	
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		X	
2. Pursue and implement cost effective water use efficiency programs	X		
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		X	
4. Integrate management of water banking facilities to maximize conjunctive use over the planning horizon		X	
5. Increase/augment water supplies to meet region demands	X		The project will augment existing supplies by utilizing the existing supplies more efficiently.
Improve Operational Efficiency (OE)			
1. Increase transfers and exchanges flexibility over the planning horizon		X	
2. Create tools to re-regulate water supplies within the region, including storage, storm flows, and operational flows over the planning horizon		X	
3. Increase distribution efficiencies and reduce energy usage over the planning horizon	X		The project has the potential to reduce energy use by storing water in off-peak periods and reducing the energy and chemicals utilized to provide treatment and dispose of generated waste products.
4. Increase the use of alternate energy sources (e.g. solar)		X	
5. Replace aging infrastructure to reduce system water losses, improve operational efficiencies, and reduce service interruptions	X		Replaces older well pump, motor and control systems.
6. Increase the use of recycled water for direct reuse within the Kern Region		X	

7. Optimize local management of water resources to improve water supply reliability over the planning horizon	X	Improves water supply reliability, provides water supply management flexibility.
8. Increase pool of qualified candidates to operate water and wastewater systems	X	
Improve Water Quality (WQ)		
1. Monitor and/or manage headwaters/areas of origin, natural streams, and recharge areas to prevent or mitigate contamination	X	
2. Identify and preserve prime recharge areas in the Kern fan area and other areas	X	
3. Improve water quality for disadvantaged communities and the watershed over the planning horizon	X	Reduces the demand on water source with arsenic over the MCL.
4. Continue to provide drinking water that meets or exceeds water quality standards; and support efforts to attain appropriate standards throughout the planning horizon	X	Lowers arsenic levels below 10 ppb.
5. Maximize the use of lesser quality water for appropriate uses (landscaping, certain ag crops, “aesthetic” projects) throughout the planning horizon	X	Maintains raw water for agricultural use.
6. Coordinate and enhance aquatic pest control efforts from this point forward	X	
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	X	
2. Encourage the removal of non-native invasive plant species that affect water quality, reliability, and operations	X	
3. Identify and promote the regeneration and restoration of native riparian habitat	X	
4. Coordinate agricultural and urban water suppliers to more effectively address land use planning issues from this point forward	X	
5. Improve the linkage between land use planning and water supply in the region throughout the planning horizon	X	
6. Increase educational opportunities to improve public awareness of water supply, conservation, and water quality issues throughout the planning horizon	X	Provides the community an example of efficient water use and improves water quality.
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	X	

planning efforts from this point forward		
8. Preserve and improve ecosystem/watershed health throughout the planning horizon	X	
Improve Regional Flood Management (FM)		
1. Improve regional flood management by addressing preparedness, response, and post flood actions throughout the planning horizon	X	
2. Reduce the effects of poor quality runoff throughout the planning horizon	X	
3. Identify and promote innovative flood management projects to protect vulnerable areas	X	
4. Plan new developments to minimize flood impacts from this point forward	X	