Wilson III Basin Groundwater Recharge and Water Management Proposal

Project Partners:

San Bernardino County Flood Control District; Yucaipa Valley Water District; Inland Empire Resource Conservation District

Applicant: **San Bernardino Valley Municipal Water District**

380 East Vanderbuilt Way

San Bernardino, CA 92408-3593

- ***On Behalf of***

City of Yucaipa

34272 Yucaipa Boulevard

Yucaipa, CA 92399

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Date: January 14, 2014

Applicant name: San Bernardino Valley Municipal Water District, San Bernardino, San Bernardino County, California,

On behalf of the City of Yucaipa, San Bernardino County, California

TECHNICAL PROPOSAL AND EVALUATION CRITERIA

The technical proposal and evaluation criteria includes: (1) the Executive Summary; (2) Background Data; (3) Technical Project Description and (4) Evaluation Criteria.

(1) Technical Proposal: Executive Summary

This project consists of two distinct sites (A and B) located along Wilson Creek in the City of Yucaipa and owned by San Bernardino County Flood Control District (SBCFCD) Site A, Wilson III Basin Project, is located on a 100-acres. The conceptual planning proposes a project that utilizes 50 acres of the site to construct a number of detention/recharge basins providing an excellent location for discharge and percolation of State project water for groundwater recharge in addition to new native water recharge. The 30-acre Site B, with highly productive spreading basins, is currently being used for State Water Project water spreading. The project will provide modifications to basin inlets, outlets, spillways and basin-to-basin drains enabling the facility to expand the capture of native and artificial waters for recharge of the aquifer. The inlet modifications will allow major storm flows, laden with sediment and debris, to bypass the spreading basin area, while allowing the lower and cleaner flows from Wilson Creek to enter into the basin for spreading purposes. There is an existing State Water Project turnout pipeline adjacent to the site, in Bryant Street, used to discharge import water into the facility for recharge purposes. The Yucaipa Valley Water District facility is nearby for recycled water discharge.

This proposal is not located on a Federal facility. The project will include the City of Yucaipa, San Bernardino County Flood Control District (SBCFCD), the San Bernardino Valley Municipal Water District (SBVMWD), the Yucaipa Valley Water District (YVWD) and Inland Empire Resource Conservation District (IERCD) as partners.

This is a standalone project and does not include any phasing. The project will tie into existing regional flood control systems and will be fully functional as intended upon its completion.

An important component of the overall project timing and phasing is the land use alternative and Flood Control contribution of the property deemed surplus after the basin footprint is approved by Flood Control. The surplus property area still needs to be approved by San Bernardino

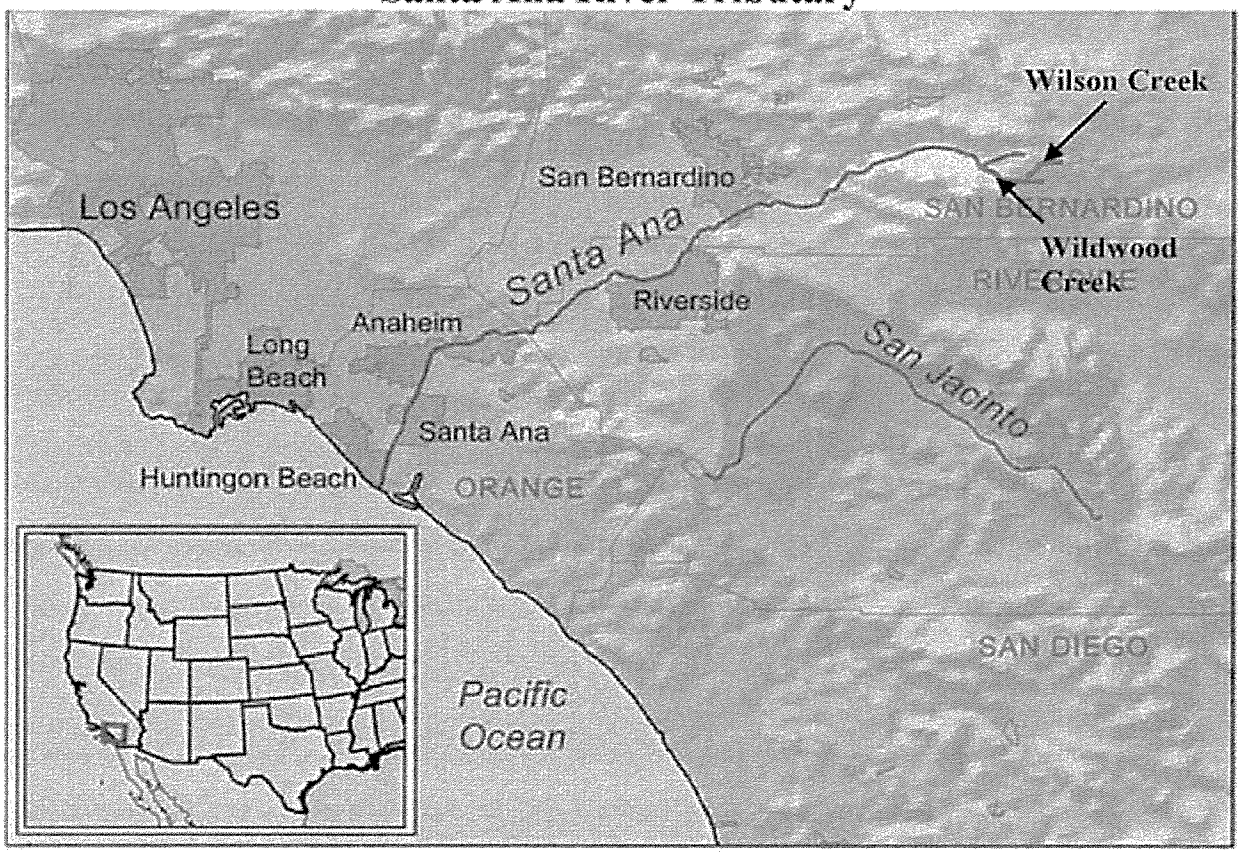
County Flood Control District. This contribution of property will be utilized to help fund the basin construction.

Since the environmental studies and final design is estimated to be completed in March or April, 2014, it is anticipated that this project will take approximately two and a half years to complete, with an estimated completion date of November, 2016. Construction should begin in the fall of 2014.

(2) Technical Proposal: Background Data

The City of Yucaipa is a 24-year old community in San Bernardino County, California, population 52,265. Wilson Creek is a regional facility located on the Santa Ana River Tributary. See the exhibit below.

Santa Ana River Tributary



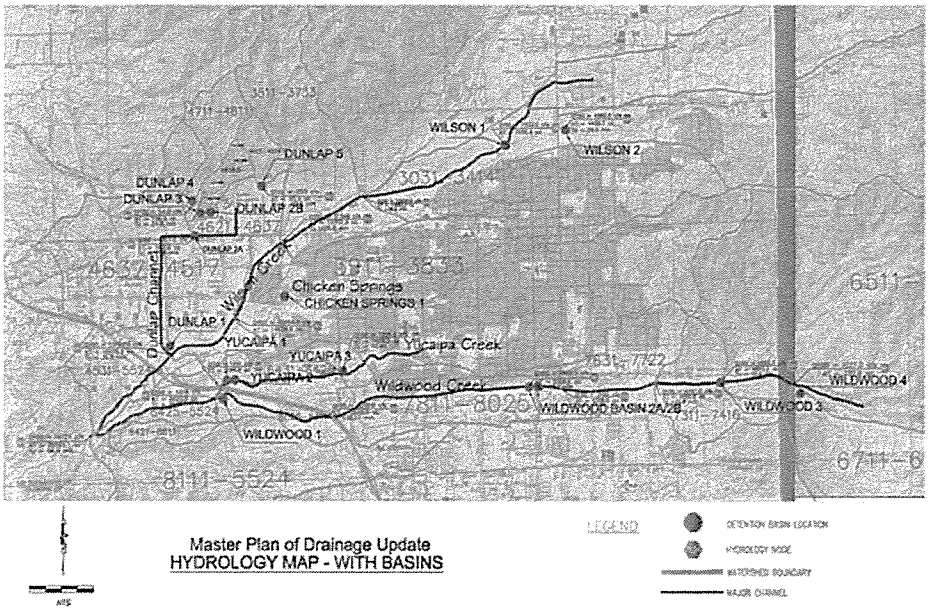
Yucaipa Valley Water District (YVWD) is the water, sewer and recycled water utility provider for the Yucaipa community. San Bernardino Valley Municipal Water District (SBVMWD) was formed in 1954 as a regional agency to plan a long-range water supply for the San Bernardino Valley. It imports water into its service area through participation in the State Water Project (SWP) and manages groundwater storage within its boundaries. Along with several other

communities, Yucaipa is part of the Santa Ana River Water Project Authority (SAWPA), formed in 1968 as a planning agency, and reformed in 1972 with a mission to plan and build facilities to protect the water quality of the Santa Ana River Watershed. SAWPA is a Joint Powers Authority, classified as a Special District (government agency) in which it carries out functions useful to its member agencies. The Inland Empire Resource Conservation District (IERCD) is a special district responsible for the preservation and wise management of the resources of 823,390 acres, or approximately 1,286 square miles, of public and private land in the Inland Empire of San Bernardino and Riverside Counties. The San Bernardino County Flood Control District (SBCFCD), established under State legislation enacted in 1939, manages a very extensive system of facilities, including dams, conservation basins, channels, and storm drains. The principle functions of the SBCFCD are: flood protection on major streams, water conservation and storm drain construction.

This proposal is a component of the Integrated Regional Watershed Management Plan (IRWMP). Partial funding has recently been established through the Department of Water Resources, Proposition 84 and the IRWMP.

City of Yucaipa Drainage System

Wilson Creek is one of two regional drainage systems in the City of Yucaipa (the other being Wildwood Creek) that convey surface water runoff from the San Bernardino Mountains through the City. Oak Glen Creek is a major tributary to Wilson Creek and forms a confluence with Wilson Creek near 2nd Street within the proposed project site. The Master Plan of Drainage Update – Hydrology Map with Basins incorporates the multiple drainage systems within the community.

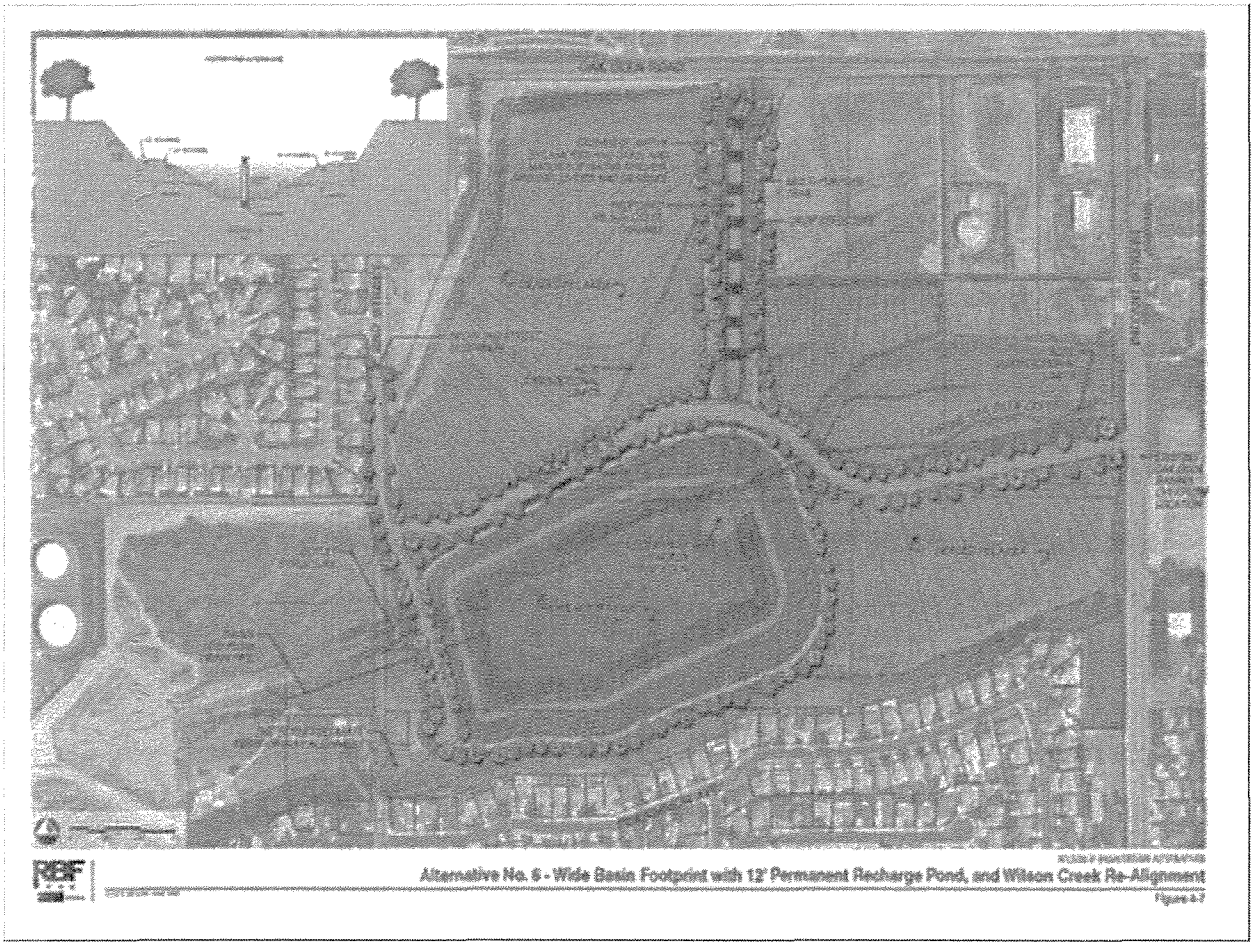


Wilson Creek is a regional channel that provides major flood control protection for a large part of the City, and is critical to the City's flood control plan. Wilson Creek currently has a limited capacity that is below the 100-year design flow rates in some areas which results in the potential for flooding within the City.

The Wilson III Basin Project was identified in the City's original Master Plan of Drainage (MPD) adopted in 1993, and in the latest update to the MPD approved in 2012. The basin is a proposed flood control facility designed to reduce the peak flow rates to the downstream Wilson Creek channel. This facility was identified as a high priority project to assist in reducing the flood risk in the City.

Technical Project Description:

This project consists of two distinct sites (A and B) located along Wilson Creek in the City of Yucaipa and owned by San Bernardino County Flood Control District (SBCFCD).



Site A, Wilson III Basin Project, is proposed within a 100-acre site.

The conceptual planning proposes a project footprint that utilizes 50 acres of the site to construct a number of detention/recharge basins providing an excellent location for discharge and percolation of State project water for groundwater recharge in addition to new native water recharge. Second Street is currently a dirt road across the Wilson Creek channel bottom with access for agency use only. 2nd St. will function as an embankment for the detention/recharge basin west of the project. The recharge area will also function to preserve the native habitat of the area and function as a passive park for the community with walking trails, boulders, seat walls and educational signage at kiosk locations. Oak Glen Creek and Wilson Creek can readily be utilized for transport of State Water Project water to the site since outfalls are located upstream. Due to the project site locations, with tributaries that extend into the San Bernardino Mountains to elevations of 8,500 feet above sea level, the headwaters of the Santa Ana River Basin, they are a prime candidate for groundwater recharge.

Site A and B illustrating the spreading basins adjacent to the Oak Glen Creek Basins.

The project includes partnerships with the SBCFCD, Valley District, YVWD and IERCD. The project sites are located in close proximity to the City's Community Park and the County's Yucaipa Regional Park making it an ideal location for expansion of and connection to existing master planned recreational trails which provide connectivity to Wildwood Canyon State Park. The 30-acre Site B, with highly productive spreading basins, is currently being used for State Water Project water spreading. The project will provide modifications to basin inlets, outlets, spillways and basin-to-basin drains enabling the facility to expand the capture of native and

artificial waters for recharge of the aquifer. The inlet modifications will allow major storm flows, laden with sediment and debris, to bypass the spreading basin area, while allowing the lower and cleaner flows from Wilson Creek to enter into the basin for spreading purposes. There is an existing turnout pipeline adjacent to the site, in Bryant Street, used to discharge import water into the facility for recharge purposes. YVWD facility is nearby for recycled water discharge.

Studies performed by RBF Consulting provided a discussion of alternatives developed and evaluated for the Wilson III Basin and 2nd Street improvements. The results of the evaluation were presented to the Yucaipa City Council on January 28, 2013. Of six identified alternatives, Alternative 6 was chosen as the recommended project.

V.A.1 EVALUATION CRITERION A: WATER CONSERVATION (28 POINTS)

Up to 28 points may be awarded for a proposal that will conserve water and improve efficiency. Points will be allocated to give consideration to projects that are expected to result in significant water savings.

Subcriterion No. A.1—Water Conservation

For projects with quantifiable and sustained water savings, please respond to Subcriterion No. 1(a)—Quantifiable Water Savings described in this subsection. If the project does not result in quantifiable water savings but will improve water management, please respond to Subcriterion No. 1(b)—Improved Water Management described in this subsection. If the project has separate components that will result in both quantifiable water savings and improved water management, an applicant may respond to both Subcriteria Nos. A.1(a) and (b). However, an applicant is limited to 20 points total under both Subcriteria No. A.1(a) and (b).

Subcriterion No. A.1(a)—Quantifiable Water Savings

Up to 20 points may be allocated based on the quantifiable water savings expected as a result of the project. Funding Opportunity Announcement No. R14AS00001

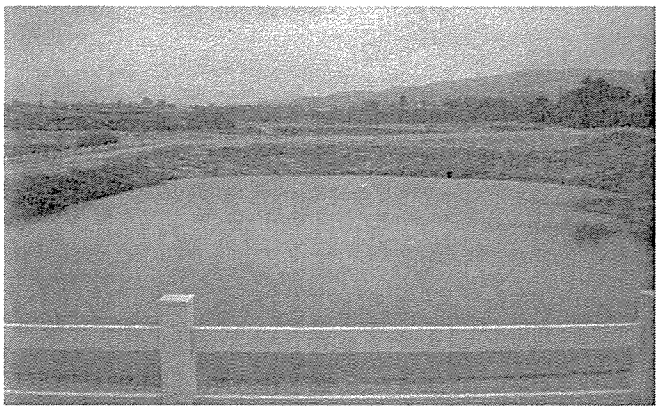
Describe the amount of water saved. For projects that conserve water, please state the estimated amount of water expected to be conserved (in acre-feet per year) as a direct result of this project. Please provide sufficient detail supporting how the estimate was determined, including all supporting calculations. Please be sure to consider the questions associated with your project type (listed below) when determining the estimated water savings, along with the necessary support needed for a full review of your proposal (please note, the following is not an exclusive list of eligible project types. If your proposed project does not align with any of the projects listed below, please be sure to provide support for the estimated project benefits, including all supporting calculations and assumptions made). In addition, all applicants should be sure to address the following:

- **Average annual acre-feet of water supply:** 1,500 acre-feet.
- **Where is that water currently going (e.g., back to the stream, spilled at the end of the ditch, seeping into the ground, etc.):** continues downstream, ultimately to the ocean.
- **Where will the conserved water go:** There is a very productive aquifer below the current stream. The soils in the area are proven to allow for high infiltration rates. The project, when completed, will operate as a passive system. When precipitation occurs, water will be conveyed to the basin, through the Wilson Creek, for recharge.
- **Quantifiable water savings estimate:** Average rainfall year, 1,500 acre-feet of storm water to proposed Wilson III basin for recharge.

Multi-Functionality

This Proposal includes a combination of multi-purpose features that will provide a benefit to the environment and community. The Wilson Creek will deliver runoff from a watershed area of 3,021 acres and during average rainfall years, will deliver 2,009 acre-feet of storm water to the proposed Wilson III basin for recharge. Of this amount, 1,500 acre-feet is expected to be recharged.

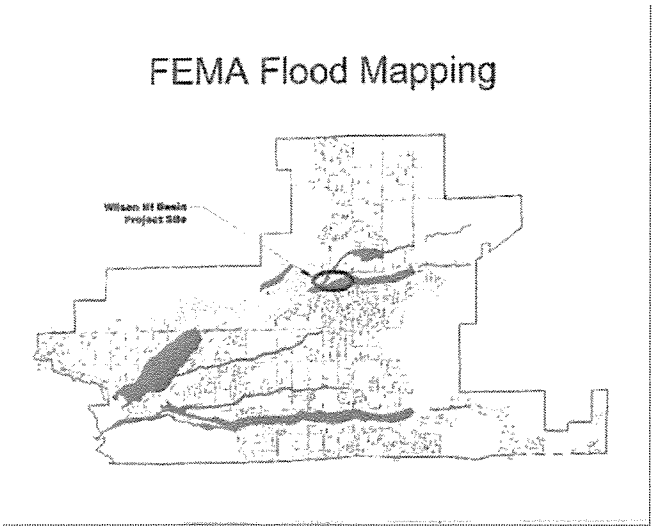
The project provides opportunity for stream restoration along Oak Glen Creek, and includes maintenance roadways around the basin and along Wilson Creek that can be used for recreational trails, and passive open-space parks and trails. Similar to the Oak Glen Creek Basin Project, the open water pond will provide the most benefit for water recharge.



Oak Glen Creek Basins

The area along Oak Glen Creek just upstream of the basin could potentially provide additional de-silting and flood attenuation opportunities. The extension of 2nd Street and the addition of Eucalyptus Avenue will improve traffic circulation and public safety by providing multiple ingress/egress for City's residence and/or emergency vehicles and personnel in the local vicinity. This alternative has the widest variety of multi-purpose facilities.

The Project will eliminate 562 acres of flood inundation area of mixed residential, commercial, and industrial properties, as shown below:



The Project, when completed, will operate as a passive system. When precipitation occurs, water will be conveyed to the basin, through the Wilson Creek, for recharge. The Project will provide immediate flood protection to the existing flood hazard areas. There are no uncertainties related to the project benefits and the Project will not create any adverse effects.

In addition to flood protection, the proposed Wilson III basin and the Fremont Basins will provide additional flood storage for greater aquifer recharge. The Project will provide a water supply benefit through avoided imported water supply costs. The total present value of the recharge benefit is $15.9 million.

Imported water supplies reliability will continue to be at risk. Reducing dependence on these supplies will benefit the entire State. For the cost analysis, MWD Tier 2 water rates are used since Tier 1 water is not available and is not anticipated to be available in the future. MWD's Tier 2 water rate for 2013 is $743 per acre-foot.

Approximately 1,500 acre-feet per year of storm water will be recharged at the basins reducing the City dependence on import water. Without the project, no new yield will be captured. Capture and recharge of the new yield will benefit the entire groundwater basin.

The Project's non-monetized benefit are improving water quality, reducing greenhouse gas (GHG) emissions, improve groundwater management, reduce demand on the Delta, and improving water supply reliability.

Project costs include initial construction and ongoing maintenance. It is estimated that every 5 years the basin will require removal of sediment build-up and scouring of the basin floor. At these 5 year intervals, over the Project's 50 year life, operation and maintenance costs will increase to account for the additional work.

All included tables have been described, qualified, and/or supported here and in the comment section of each table.

Type of Benefit Claimed: Stormwater Recharge **Measure of Benefit Claimed (Name of Units): Acre-Feet per Year** **Additional Information About this Measure: Stormwater inflitrated by Project**			
(a)	**(b)**	**(c)**	**(d)**
	Physical Benefits		
Year	**Without Project**	**With Project**	**Change Resulting from Project (b) – (c)**
2012 - 2063	0	1,500/year	52,000/Project Life

Subcriterion No. A.1(b)—Improved Water Management

Up to 5 points may be awarded if the proposal will improve water management through measurement, automation, advanced water measurement systems, or through implementation of a renewable energy project, or through other approaches where water savings are not quantifiable.

Describe the amount of water better managed. For projects that improve water management but which may not result in measurable water savings, state the amount of water expected to be better managed, in acre-feet per year and as Funding Opportunity Announcement No. R14AS00001 a percentage of the average annual water supply. (The average annual water supply is the amount actually diverted, pumped, or released from storage, on average, each year. This does not refer to the applicant's total water right or potential water supply.) Please use the following formula:

Estimated Amount of Water Better Managed: The Project intends to construct the necessary improvements to enhance regional groundwater recharge. Annual storm runoff for the Project's 3,021 acre tributary area is estimated using the historic annual rainfall of 14 inches and applying a loss rate of 43% to account for evapotranspiration, based on Chino Basin Watermaster's 2010 Recharge Master Plan. Approximately 2,009 acre-feet of storm water is expected to reach the Wilson III Basin annually for recharge. Rather than continuing downstream and causing erosion and flooding problems, the water will be detained and recharged into the groundwater basin. The recharge basin recharge capacity of 240 acre-feet and the enhanced Wilson Spreading Basin recharge capacity of 50 acre-feet will not infiltrate the entire 2,009 acre-feet per year, however, it is estimated that 1,500 acre-feet will be recharged during average rainfall years, assuming 5 or 6 rainfall events per year.

Average Annual Water Supply: As stated above, approximately 2,009 acre-feet of storm water is expected to reach the Wilson III Basin annually for recharge.

Subcriterion No. A.1(b)— (5) Groundwater Recharge: Groundwater recharge can provide savings when surface water storage evaporation is reduced and/or surface runoff is intercepted for recharge. Applicants proposing groundwater recharge projects should address the following:

(a) How have average annual water savings estimates been determined? Please provide all relevant calculations, assumptions, and supporting data.

Annual storm runoff for the Project's 3,021 acre tributary area is estimated using the historic annual rainfall of 14 inches and applying a loss rate of 43% to account for evapotranspiration, based on Chino Basin Watermaster's 2010 Recharge Master Plan. Approximately 2,009 acre-feet of storm water is expected to reach the Wilson III Basin annually for recharge.

Calculations were derived using RBF Consultants analysis leading to Alternative 6 – Wide Basin Footprint – as follows:

Alternative 6 – Wide Basin Footprint with 12' Permanent Recharge Pond and Wilson Creek Re-Alignment

Alternative 6 proposes a project footprint that utilizes 21.2 acres of the site. Alternative 6 includes a 60-foot wide bench with varied slopes and a 12' deep permanent pool. The raised roadway elevation of Sunny Side Street provides opportunity for flood attenuation upstream. The permanent pool provides an excellent location for discharge and percolation of the State project water for groundwater recharge in addition to new native water recharge. Oak Glen Creek and Wilson Creek can readily be utilized for transport of State Water Project water to the site since outfalls are located upstream. Alternative 6 also includes Eucalyptus Avenue, a future collector that runs east-west from 2nd Street to Bryant Street.

General Notes and Analysis Summary

The wide basin footprint encroaches into the lot to the north and provides the largest basin invert area out of all the alternatives. This larger invert provides more storage volume, thereby providing the most optimum groundwater recharge element and the potential for the most hydraulic efficiency. This alternative also works with the planning area concept of an environmental enhancement and groundwater recharge along Oak Glen Creek. Environmental enhancement would be accomplished through the removal of non-native species, and the replacement with native plant materials and the construction of a meandering low flow stream channel. The net area of enhancement would be increased compared with the other alternatives. The overall aesthetics of the Oak Glen stream corridor would be improved and include passive open-space and recreational trails. Naturalized groundwater recharge areas could be

incorporated into the restoration areas. Riprap spillway channels would be constructed to convey flows within the confined section of Wilson Creek and Oak Glen Creek to the invert of the basin. The addition of Sunnyside Street provides additional traffic circulation benefit to the overall project.

Hydraulic Performance

The basin configuration for alternative 6 generally provides the largest basin footprint and storage volume of all the alternatives. The proposed basin meets the requirements identified in the MPD for the 100-year AMC II condition, given that the basin configuration above the 12-foot permanent pool is the same as Alternative 1. The basin storage capacity for the 100-year AMC II event is 240 acre-feet, which includes approximately 75 acre-feet of permanent storage.

Alternative 6 is designed in accordance with SBCFCD criteria, and provides adequate freeboard for the 100-year AMC III storm event. With the larger volume available for storage during flood attenuation, Alternative 6 provides the most efficient, and cost effective outlet. A secondary outlet is provided to pass the AMC III event without overtopping the 2nd Street roadway embankment. An outlet pipe is also provided to drain the permanent pond that includes a control valve and sluice gate. Basin inlet facilities are provided for both the Wilson Creek and Oak Glen Creek tributaries.

Groundwater Recharge

Alternative 6 includes 12-feet of groundwater recharge storage in the basin itself. Also Alternative 6 provides the most storage, at a volume of 75 acre-feet that can be safety captured and infiltrated by the basin. This storage is in addition to the required storage for flood attenuation and can therefore be maintained year around. Alternative 6 provides opportunity for additional storm water capture and infiltration along Oak Glen Creek. The additional capture and infiltration could be incorporated into the stream restoration component of the project, and would be part of the planning area concepts for the Wilson III site.

Project Title: Wilson III Basins/Spreading Grounds									
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)
Year	**Type of Benefit**	**Measure of Benefit (Units)**	**With-out Project**	**With Project**	**Change Resulting from Project (e) – (d)**	**Unit $ Value [1]**	**Annual $ Value [1] (f) x (g)**	**Discount Factor [1]**	**Discounted Benefits [1] (h) x (i)**
2012	Stormwater Capture/Storage	Acre-Feet	0	1,500	1,500	$743	$1,114,500	1.000	$1,114,500
Full spreadsheet shows discount factor for each year. Only start and final numbers were provided in application.									
2061	Stormwater Capture/Storage	Acre-Feet	0	1,500	1,500	$743	$1,114,500	0.058	$64,641
Total Present Value of Discounted Benefits Based on Unit Value (Sum of the values in Column (j) for all Benefits shown in table)									**$18,623,295**

(b) Describe the source of the water to be used for recharge and what percentage of the recharged water is going to be available for use and how it will be used. Describe how this supply of water will offset other supplies.

Wilson and Oak Glen Creeks are the source of the water to be used for recharge. They are ephemeral streams that generally have water flow during the rainy or wet season plus other minor amounts of local inflow to the creeks through ancillary flow from adjacent urban development. At the project site, Wilson Creek has a tributary drainage area of 3,021 acres (4.7 square miles) and an estimated 100-year flow rate of 5,070 cubic feet per second. Oak Glen Creek at this area as a tributary drainage area of 4,438 acres (6.9 square miles) and a 100-year flow rate of 4,862 cubic feet per second. The combined, clear water, flow rate at the confluence of the two creeks is 7,333 cubic feet per second. Approximately 62 percent of the annual rainfall is expected to be recharged as a result of this project.

The project has significant value to Yucaipa Valley Water District which during the period of September through December 2009, discharged and percolated 2,000 acre-feet of imported State project directly into the Spreading Basins and Oak Glen Creek Basins, which are located near the District's Regional Filtration Plant. The District reported that following this discharge period the depth to ground water in nearby wells decreased from 425 feet to 370 feet or a total decrease of 55 feet. The capture of winter storm flows during 2010 resulted in an additional 5 feet of change. In addition, 273 acre-feet of water was released from the Filtration Plant into Oak Glen Creek during 2010, while 4,603 acre-feet of water was recharged at the nearby Wilson Creek Basins/Spreading Grounds.

In addition, YVWD plans to recharge recycled water, up to 50% of the native water that is recharged per State law requirements. This basin will allow the recharge of the recycled water.

Recycled water will also be used for irrigating the landscaping associated with the project.

(c) If water savings are based on reduced surface water storage evaporation, provide calculations for reduced evaporation losses.

Not applicable.

(d) If water savings are based on recharge from existing surface runoff, provide calculations quantifying the estimated increased deep percolation amount.

Annual storm runoff for the Project's 3,021 acre tributary area is estimating using the historic annual rainfall of 14 inches and applying a loss rate of 43% to account for evapotranspiration, based on Chino Basin Watermaster's 2010 Recharge Master Plan, see attached table. Approximately 2,009 acre-feet of storm water is expected to reach the Wilson III Basin annually for recharge. The basin recharge capacity of 300 acre-feet and the enhanced Wilson Spreading Basin recharge capacity of 50 acre-feet will not infiltrate the entire 2,009 acre-feet per year,

however, it is estimated that 1,500 acre-feet will be recharged by deep percolation during average rainfall years.

(e) How will actual water savings be verified upon completion of the project?

Actual water savings will be verified with the use of stream gauge data. Stream gauges will be placed above the basins and below to measure the amount of infiltration that is occurring in the basins. In addition, there are a few wells within a few hundred feet of the basins which will be used to monitor the increase in basin storage.

Subcriterion No. A.2—Percentage of Total Supply

Up to 4 additional points may be allocated based on the percentage of the applicant's total average water supply (i.e., including all facilities managed by the applicant) that will be conserved directly as a result of the project.

Provide the percentage of total water supply conserved: State the applicant's total average annual water supply in acre-feet. Please use the following formula:

Estimated Amount of Water Conserved

Average Annual Water Supply

1500 acre feet conserved/18,000 acre-feet Average Supply: **8.3%**

Subcriterion No. A.3—Reasonableness of Costs

Up to 4 additional points may be awarded based on the reasonableness of the cost for the benefits gained.

Please include information related to the total project cost, annual acre-feet conserved (or better managed), and the expected life of the improvement. Use the following calculation:

Total Project Cost

(Acre-Feet Conserved, or Better Managed x Improvement Life)

Failure to include this required calculation will result in no score for this section.

For all projects involving physical improvements, specify the expected life of the improvement in number of years and provide support for the expectation (e.g., manufacturer's guarantee, industry accepted life-expectancy, description of corrosion

mitigation for ferrous pipe and fittings, etc.). Failure to provide this information may result in a reduced score for this section.

Using BMPs, the expected life of this project is 50 (fifty) years.

$8.1M/1500 acre-feet x 50 = **$108/acre-ft**

V.A.2 EVALUATION CRITERION B: ENERGY-WATER NEXUS (16 POINTS)

Subcriterion No. B.2—Increasing Energy Efficiency in Water Management

If the project is not implementing a renewable energy component, as described in Subcriterion No. B.1 above, up to 4 points may be awarded for projects that address energy demands by retrofitting equipment to increase energy efficiency and/or through water conservation improvements that result in reduced pumping or diversions. Describe any energy efficiencies that are expected to result from implementation of the water conservation or water management project (e.g., reduced pumping).

Please provide sufficient detail supporting the calculation of any energy savings expected to result from water conservation improvements. If quantifiable energy savings are expected to result from water conservation improvements, please provide sufficient details and supporting calculations. If quantifying energy savings, please state the estimated amount in kilowatt hours per year.

Please describe the current pumping requirements and the types of pumps (e.g., size) currently being used. How would the proposed project impact the current pumping requirements?

Please indicate whether you energy savings estimate originates from the point of diversion, or whether the estimate is based upon an alternate site of origin.

Does the calculation include the energy required to treat the water?

Will the project result in reduced vehicle miles driven, in turn reducing carbon emissions? Please provide supporting details and calculations. Section V. Application Review Information

DWR Bulleting 132013, Appendix B, Table 7 shows 1,958 kWh total for both Greenspot and Crafton Hills pump stations to lift 1 acre-ft of water to the Crafton Hills Reservoir from the valley. The rate for this pumping is $0.04/kWh or $78.32 for 1,958 kWh. DWR also reports that it takes 3,200 kWh or approximately $150 to pump 1 acre-ft from the Delta to Devil Canyon

(DWR Bulletin 132-08 (June 2012), Table B-24). Therefore, it takes 5,158 kWh, or approximately $230 to pump 1 acre-ft from the Delta to the Crafton Hills Reservoir from which it gravity feeds to the Valley District turn-out at Site B (Wilson Spreading Basins) or the YVWD Water Treatment Plant. Therefore, by recharging 1,500 acre-feet naturally, it will save approximately $345,000 per year in pumping costs. There is also an anticipated savings in reduced treatment cost since groundwater is not treated with high pressure nano-filtration or micro-filtration as is the surface water from the State Water Project. The cost to pump the groundwater is less than the cost associated with the water treatment plant.

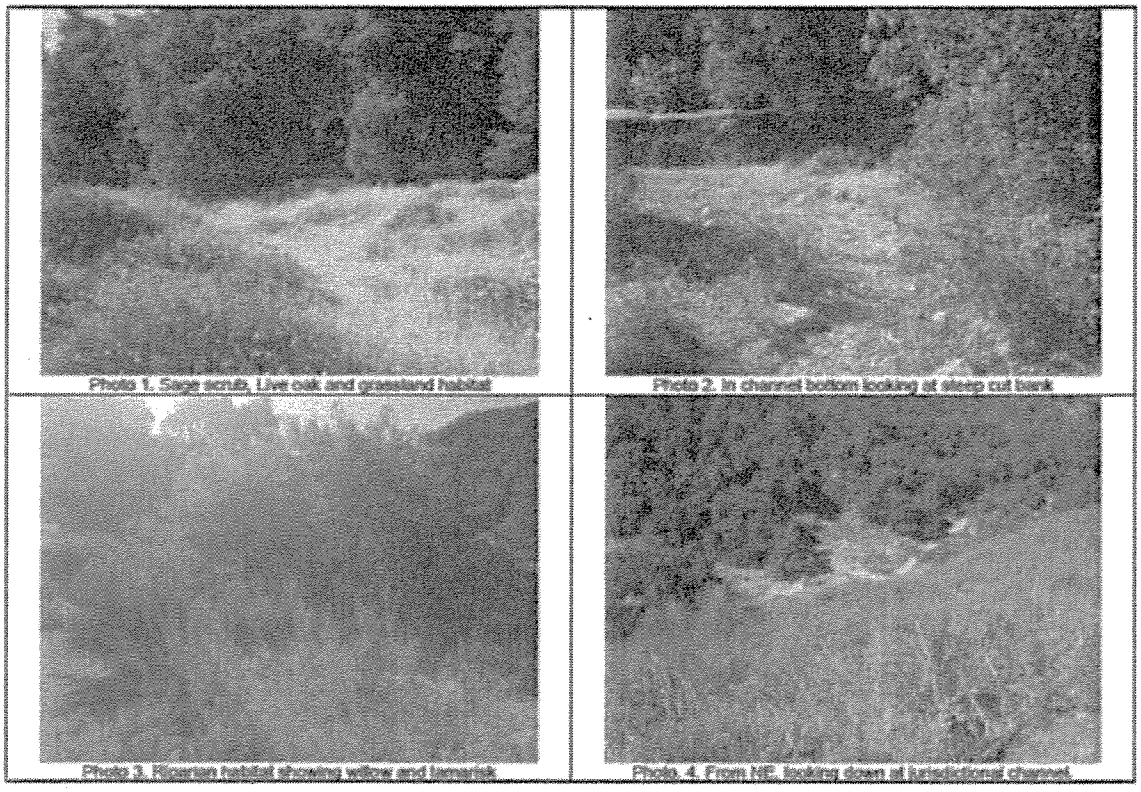
The project will also result in reducing carbon emissions, based upon the following calculations:

Energy Required to bring SWP Water to Southern California	**Conversion Factor**	**Green House Gas Produced**	**Total Green House Gas Reduced[4.)]**	
(kWh/ac-ft)	(kWh to TonsCO_2)	(TonsCO_2/ac-ft)	(TonsCO_2/Yr)	
5,158	0.000400	2.063	2,600	1.)
5,158	0.000430	2.218	2,800	2.)
5,158	0.000400	2.063	2,600	3.)

Note:
1.) per California Air Resource Board
2.) per California Energy Commission Protocol June 20, 2007
3.) per Berkeley Lab Report August 2002
4.) Based on a Total Import Water Reduction of 1,500 AFY

Describe any renewable energy components that will result in minimal energy savings/production (e.g., installing small-scale solar as part of a SCADA system). None are planned with the project.

V.A.3 EVALUATION CRITERION C: BENEFITS TO ENDANGERED SPECIES (12 POINTS)



A Sensitive Species Survey Report was prepared by the Planning Center for the adjacent Wilson Creek Business Park, City of Yucaipa, San Bernardino County, California and produced the following Executive Summary:

"This report presents the methodology and findings of an in-depth sensitive species biological resource study and focused survey effort conducted for the City of Yucaipa – Wilson Creek Business Park study area in San Bernardino County, California. The report focuses on documenting biological resources present or potentially present on site subject to federal and/or state regulation, and local laws, rules, and regulations, including the California Environmental Quality Act (CEQA).

In addition to characterizing the baseline natural resource conditions of the study area, initial habitat assessments for nine (9) federal/ state listed or regionally sensitive species were conducted as directed by the California Department of Fish and Game (CDFG) and USFWS (USFWS 2011, CDFG 2011) including:

- **Slender-horned Spineflower** (*Dodecahema (Centrostegia) leptoceras*) – Federal/State endangered;

- **Santa Ana River Woollystar** (*Eriastrum densifolium* ssp. *sanctorum*) Federal/State endangered;
- **Santa Ana Sucker** (*Catostomus santaanae*) – Federal endangered/State Species of Special Concern;
- **Mountain (Sierra Madre) Yellow-legged Frog** (*Rana muscosa*) – Federal endangered;
- **Southwestern Willow Flycatcher** (*Empidonax traillii extimus*) – Federal/State endangered;
- **Least Bell's Vireo** (*Vireo bellii pusillus*) – Federal/State endangered;
- **Coastal California Gnatcatcher** (*Polioptila californica californica*) – Federal threatened/State species of special concern;
- **Burrowing Owl** (*Athene cunicularia*) – State species of special concern;
- **San Bernardino Kangaroo Rat** (*Dipodomys merriami parvus*) Federal endangered/ State species of special concern.

As presented in the report, no suitable habitat was documented within or adjacent to the study area for the Santa Ana sucker, mountain (Sierra Madre) yellow-legged frog, least Bell's vireo or southwestern willow flycatcher. Focused surveys for these species are not warranted and were not conducted.

No state or federal listed threatened or endangered plant or wildlife species were detected within or immediately adjacent to the study area during focused surveys conducted for sensitive plants, coastal California gnatcatcher (*Polioptila californica*), or San Bernardino kangaroo rat (*Dipodomys merriami parvus*) during the spring of 2011 and 2012. No burrowing owl (*Athene cunicularia*), a State species of special concern was documented within or adjacent to the study area during focused surveys conducted during the spring of 2012. The study area does not occur within or adjacent to a United States Fish and Wildlife Service critical habitat designation for federal listed plants or wildlife species.

In addition to conducting focused surveys for federal/state listed species, mapping of all sensitive resources incidentally observed, including special-status plants/wildlife, and raptor nests were recorded.

One (1) of twenty-nine (29) sensitive plant species known or expected to occur within the region was documented onsite. Specifically, the Parry's spineflower (*Chorizanthe parryi* var. *parryi*, CRPR 1B.1)[1] was identified on site in coastal scrub, chaparral, and grassland habitats. A census of the population was completed and a map showing the locations of

Parry's spineflower within the Study Area is provided.

The northwestern San Diego pocket mouse (*Chaetodipus fallax fallax)*, a State species of special concern was captured throughout the study area during the focused trapping program conducted onsite during the spring of 2012. No additional State species of special concern including the Los Angeles pocket mouse (*Perognathus longimembris brevinasus*) or San Diego desert woodrat (*Neotoma bryanti*) were documented onsite".

V.A.4 Evaluation Criterion D: Water Marketing (12 points)

Up to 12 points may be awarded for projects that propose water marketing elements, with maximum points for projects that establish a new water market.

Note: Water marketing does not include an entity selling conserved water to an existing customer. This criterion is intended for the situation where an entity that is conserving water uses water marketing to make the conserved water available to meet other existing water supply needs or uses. Briefly describe any water marketing elements included in the proposed project. Include the following elements:

(1) Estimated amount of water to be marketed

(2) A detailed description of the mechanism through which water will be marketed (e.g., individual sale, contribution to an existing market, the creation of a new water market, or construction of a recharge facility)

(3) Number of users, types of water use, etc. in the water market

(4) A description of any legal issues pertaining to water marketing (e.g., restrictions under Reclamation law or contracts, individual project authorities, or State water laws)

(5) Estimated duration of the water market

(3) Points may be awarded for projects that include other benefits to water supply sustainability. Projects that do not address a need/adaptation strategy identified in a Basin Study or do not help expedite future on-farm irrigation improvements, may receive maximum points under this criterion by thoroughly explaining additional project benefits. Please provide sufficient explanation of the additional expected project benefits and their significance. Additional project benefits may include, but are not limited to, the following:

(a) Will the project make water available to address a specific concern? For example:

(i) Will the project address water supply shortages due to climate variability and/or heightened competition for finite water supplies (e.g., population growth or drought)? Is the river, aquifer or other source of supply over-allocated?

N/A

Section V. Water Supply Sustainability

(ii) Will the project market water to other users? If so, what is the significance of this (e.g., does this help stretch water supplies in a water-short basin)? No.

(iii) Will the project make additional water available for Indian tribes? No.

(iv) Will the project help to address an issue that could potentially result in an interruption to the water supply if unresolved? (e.g., will the project benefit an endangered species by maintaining an adequate water supply)? Are there endangered species within the basin or other factors that may lead to heightened competition for available water supplies among multiple water uses? No.

(v) Will the project generally make more water available in the water basin where the proposed work is located? Yes.

(b) Does the project promote and encourage collaboration among parties? Yes.

(i) Is there widespread support for the project?

Wilson III Project Partners include the San Bernardino County Flood Control District, the Yucaipa Valley Water District, the San Bernardino Valley Municipal Water District, and the Inland Empire Resource Conservation District. These agencies are the same local partners who participated in the award-winning, multijurisdictional Oak Glen Creek Basin project completed in February 2009. The Oak Glen Creek Basin project includes storm water and sediment control along Wilson Creek and Oak Glen Creek, native and artificial groundwater recharge, improvement of water quality by reducing stream sediment loading, reduction of non-point source pollutants during storm events, environmental restoration and enhancements and enhanced multi-purpose trails for use by equestrians, pedestrians and bicyclists. Therefore, the community sees the project as very beneficial, especially the hundreds of homeowners downstream who will be removed from the 100-year floodplain and the thousands that will have a more reliable water supply.

(ii) What is the significance of the collaboration/support?

The South Coast Hydrologic Region includes an area that encompasses portions of Ventura, Los Angeles, Orange, San Bernardino, Riverside, and San Diego counties. More specifically the Santa Ana Planning Area that included the City of Yucaipa and the proposed Project. The Project

is also within the Regional Water Quality Control Boards Santa Ana Region. The Project is included in the Santa Ana Watershed.

Integration includes implementing the multi-benefit Project that achieve a synergistic approach to watershed management to benefit the region's natural resources and governing entities. The method for achieving full integration is through the careful implementation of multi-benefit Projects. SAWPA considered the Project as part of its IRWM Plan for its multiple benefits, multi-agency approach, regional impact and synergies or linkages to other projects. The Project is an integrated project within the Santa Ana Region. The Project will provide flood protection, capture and reuse of runoff to reduce imported water demands, and improve groundwater quality. The Wilson III Basin is located along the Wilson Creek, which outlets to the San Timoteo Canyon Creek and ultimately the Santa Ana River and Prado Dam Wetlands located in Corona, California.

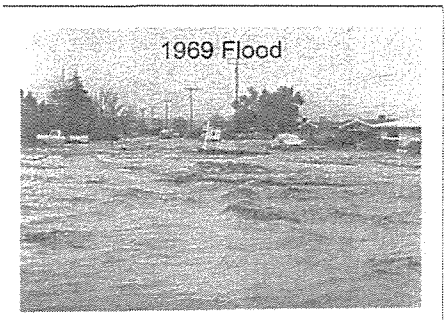
The proposed Project incorporates several complementary benefits. Providing flood protection will reduce urban runoff pollution and increase the quantity of natural runoff water available for groundwater recharge. This will result in protecting the beneficial uses of Santa Ana Watershed, enhancing water supply by offsetting imported water demand, reducing energy consumption and greenhouse gas emissions by increasing urban water capture and reuse, and improve recharge at the proposed basins.

(iii) Will the project help to prevent a water-related crisis or conflict?

The Project effectively helps resolve significant water-related conflicts within or between regions through a collaborative approach in addressing long-term planning of local water supplies. SAWPA has identified ten broad-based resource management strategies including: water quality improvement; flood control and storm water runoff; environment and habitat; climate change; water supply reliability; water recycling; land use; water use efficiency; parks, recreation, and open space; and environmental justice.

The Project will address conflicts through coordination with local, regional, state, and federal (Army Corps) water and land use agencies. Participation in SAWPA's IRWM Plan ensures a joint effort to continue resolving multi-level issues related to flood management, urban runoff management, natural resource preservation and land use planning. Through a collaborative process, the Project addresses these conflicts by providing flood control, enhancing local water supplies to offset imported water supplies, and enhancing water quality.

By recharging the native flows, the community will become more sustainable and less reliable on imported water sources, especially during times of disaster or emergency conditions. Although there will be initial impacts on plant species with construction, the implemented project will include meandering streams which will provide greater area for native plants on the channel slopes. Other mitigation measures will be implemented in conjunction with the project, such as invasive plant species removal which will ultimately provide higher quality riparian and coastal sage habitat.



(iv) Is there frequently tension or litigation over water in the basin?

There does not appear to be much tension or litigation over water. The water purveyors seem to work well together. There are currently six agencies engaging in a study of the Yucaipa groundwater basins and there have been agreements over water service of one purveyor in another's service area.

However, flood attenuation resulting in groundwater recharge capabilities will alleviate potential for litigation. For example, a flood occurring in 1969 resulting in loss of property and caused local economic instability. Had the proposed Wilson III project existed at the time of this flood, the community would not have lost the opportunity associated with beneficial floodwaters.

(v) Is the possibility of future water conservation improvements by other water users enhanced by completion of this project?

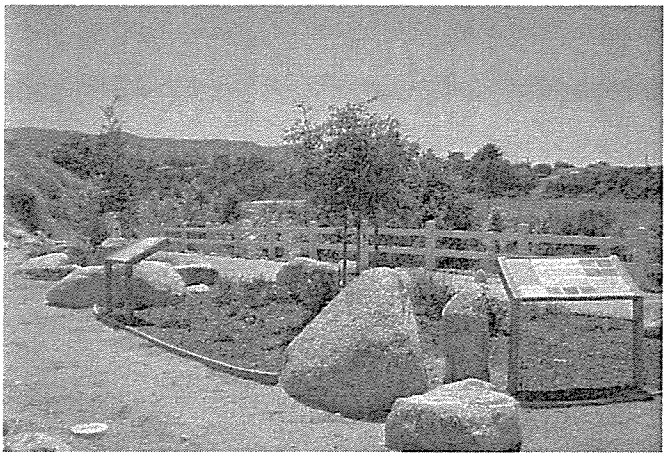
The Project will provide multiple benefits including: providing a reliable water supply, promoting sustainable water solutions, ensuring high quality water for all users, providing economically effective solutions, improving regional integration and coordination, managing rainfall as a resource, and maintaining quality of life through public safety. These benefits will be realized through the Project components. The basin will reduce peak runoff, which historically flood local areas, and increased storage will reduce and naturally treat peak runoff. Attainment of all of these benefits will help to stimulate future water conservation improvements by other water users. Because of other successful projects similar to this one, the City and other agencies are encouraged to look for other opportunities. South Mesa Water Company has approached the City about using a detention basin in their service area for recharge. Also, six agencies in the area have joined in to study other recharge opportunities in the Yucaipa basin. In addition, this project will function to collect urban runoff from overwatering which will then be recharged instead of evaporating down the river.

(c) Will the project increase awareness of water and/or energy conservation and efficiency efforts? Yes.

(i) Will the project serve as an example of water and/or energy conservation and efficiency within a community?

This photo depicts typical water conservation education interpretive panels. These panels are two of many located within the Oak Glen Creek Basins project immediately upstream of the Wilson III Basin proposal. The City of Yucaipa will incorporate identical water conservation education measures explaining how water infiltration panels function. IERCD is an excellent

resource for this type of education opportunities and will be involved with this project as they were with the Oak Glen Creek Basins project.



(ii) Will the project increase the capability of future water conservation or energy efficiency efforts for use by others?

This proposal is significant to all of its project partners because it increases the capability of future water conservation and energy efficiency. The Yucaipa Valley Water District Water Management Plan relies heavily on the groundwater recharge capabilities of this project, as well as two other projects of similar size and capability, the Wildwood Basins Project and the Oak Glen Creek Basins Project. As a regional proposal, the Wilson III project has been recognized as an essential component to the "One Water/One Watershed and the IRWMP.

(iii) Does the project integrate water and energy components?

By saving approximately 6.5 million kWh per year in avoiding pumping costs.

V.A.6 EVALUATION CRITERION F: IMPLEMENTATION AND RESULTS (10 POINTS)

Up to 10 points may be awarded for the following:

Subcriterion No. F.1—Project Planning

Points may be awarded for proposals with planning efforts that provide support for the proposed project.

Does the project have a Water Conservation Plan, System Optimization Review (SOR), and/or district or geographic area drought contingency plans in place? Does the project relate/have a nexus to an adaptation strategy developed as part of a WaterSMART Basin Study)? Please self-certify, or provide copies of these plans where appropriate, to verify that such a plan is in place.

Provide the following information regarding project planning:

(1) Identify any district-wide, or system-wide, planning that provides support for the proposed project. This could include a Water Conservation Plan, SOR, Basin Study, or

other planning efforts done to determine the priority of this project in relation to other potential projects.

This project appears in the following documents: The 2010 Yucaipa Valley Water District Water Management Plan, the 2010 San Bernardino Valley Regional Urban Water Management Plan (and in the draft 2014 Plan due in April), the Yucaipa Master Plan of Drainage approved by the San Bernardino County Flood Control District, and the City of Yucaipa Wilson III Specific Plan. The Yucaipa Basin Study which is sponsored by several water agencies and the City of Yucaipa, is estimated to be completed in February, 2014. It is looking at the safe yield of the Yucaipa Basin along with studying the best locations for recharge. The project (Site B) is already known for excellent recharge capability (the best in the valley). The next phase of the study, starting in February, 2014, includes drilling wells throughout the Yucaipa Basin, with this project site listed as one of ten.

(2) Identify and describe any engineering or design work performed specifically in support of the proposed project.

On August 13, 2012, City Council awarded a design contract to RBF Consulting, a Baker Company, (RBF) for the Wilson III Basin Improvements Project. The design contract included a phased approach to the design. The first phase included an alternatives analysis to evaluate and determine which basin and channel design would be the most feasible, appropriate and cost effective.

The Wilson/Oak Glen Creek Optimization Study prepared by RBF for the Master Plan of Drainage Update, analyzed multiple basin configuration options, basin locations, future channel improvements and locations of other existing and future basins within the watershed. Based on the findings of the study, a single inline (flow through) basin at 200 acre-feet in volume was found to be the most viable basin configuration from a hydraulic performance and efficiency perspective. This configuration was used as the basis for each alternative studied in the Wilson III Project Multi-Purpose Flood Control Basin Alternatives Analysis; however, in order to meet Flood Control Standard design parameters for specific basin design, the volume of the basin in each alternative is larger. With all of the different alternatives, material export from the basin is proposed to remain within the proposed 100-acre site. The various alternatives include keeping the export material on-site in an effort to reduce costs by eliminating the effort required to haul the material off-site and properly disposing the material. The alternatives include a more cost effective grading scenario as part of the analysis.

At its January 28, 2013 meeting the City Council reviewed the analysis and determined the preferred design as Alternative 6. As of February, 2012, the consultant is proceeding with the final design and completing the environmental review, final design plans and construction contract specifications for the project. Since Wilson and Oak Glen Creek are under the jurisdiction of the San Bernardino County Flood Control District, the final design phase work will include processing the design through the District for their review and approval, including their encroachment permits process.

Valley District is the lead agency with six agencies involved in a study of the Yucaipa Basin, titled Yucaipa Basin Study. The study is due to be finalized in February, 2014. The findings show that the Wilson subbasin is very effective for storing and infiltrating groundwater.

Existing Data and Studies:

Following is a list of existing and ongoing studies that have been completed relative to this Proposal:

1. Yucaipa Basin Study by Geoscience, February, 2014
2. Yucaipa Valley Water District 2010 Urban Water Management Plan
3. Yucaipa Master Plan of Drainage Update by RBF Consulting, January 2012
4. Technical Memorandum Wilson/Pak Glen Creek Optimization Study by RBF Consulting, August, 2011
5. Alternatives Analysis Report, Wilson Creek Multi-Purpose Channel by Albert A. Webb Associates, September 2012
6. Wildwood Basin Final Hydrology Report by Albert A. Webb Associates, November 2009
7. Wildwood Basin Debris Yield and Sediment Impact Study by Exponent Inc., January 2009
8. Oak Glen Detention Basins Hydraulic and Sediment Transport Analysis by West Consultants, January, 2007

(3) Describe how the project conforms to and meets the goals of any applicable planning efforts, and identify any aspect of the project that implements a feature of an existing water plan(s).

City of Yucaipa:

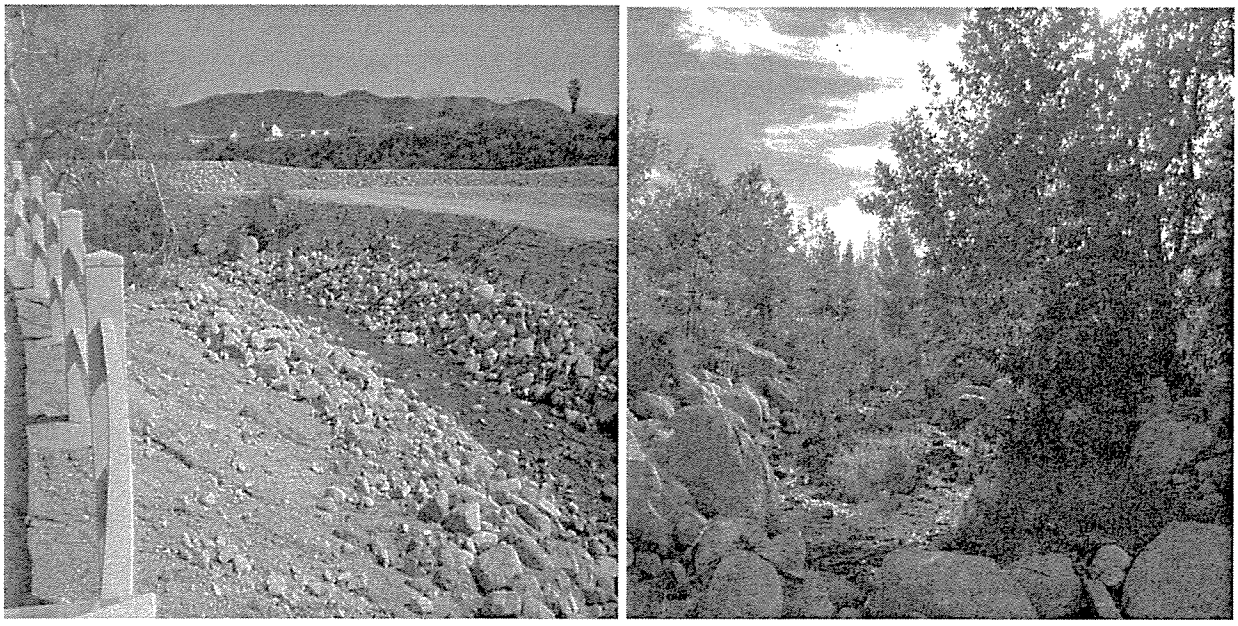
The project is listed as part of the 2010 San Bernardino Valley Regional Urban Water Management Plan and meets several of the goals listed by the State to qualify as a Tier 1 project. The project is regional as it is at the headwaters of the Santa Ana River and impacts other communities downstream. The project helps to offset climate change impacts by recharging

rainwater into the ground. It reduces the community's use of energy and greenhouse gasses by not pumping up to $300,000 in energy costs. It reduces flooding to those in disadvantaged communities. It helps to improve water quality by trapping sediments and recharging impaired water which is treated in the soil column. It protects and enhances habitat with mitigation banks and on-site habitat conservation. It provides education to the public about habitat conservation along with water conservation and flood control.

The Yucaipa Valley Water District 2010 Urban Water Management Plan describes many of these same project benefits.

The City is currently underway on the development of a Specific Plan for the proposed Wilson Business Park, shown on the concept plan (Attachment 3-4). The Specific Plan will provide for a mixture of commercial and institutional development on approximately 40-50 acres, the development of the Wilson III Basin project, and the extension of 2nd Street across Oak Glen Creek, together with community amenities such as a multi-purpose trail network, institutional/office space, open space areas (habitat set-aside), and flood control facilities. Institutional and business development will provide employment opportunities for those living within the community. The City has undertaken a comprehensive approach to planning the land uses and public facilities of this unique land area to ensure a cohesive, integrated relationship of future uses within a highly visible corridor through the City.

The Wilson III Basin proposal will incorporate the same habitat conservation as integrated in the Oak Glen Creek Basins project.



Before and After Habitat Conservation Landscaping

Subcriterion No. F.2—Readiness to Proceed

Points may be awarded based upon the extent to which the proposed project is capable of proceeding upon entering into a financial assistance agreement. Describe the implementation plan of the proposed project. Please include an estimated project schedule that shows the stages and duration of the proposed work, including major tasks, milestones, and dates. (Please note, under no circumstances may an applicant begin any ground-disturbing activities—including grading, clearing, and other preliminary activities—on a project before environmental compliance is complete and Reclamation explicitly authorizes work to proceed).

Work Plan Outline:

Task 1 Project Administration

The City will administer the project. Project administration will include City staff managing consultants, preparing reports for Council actions, reviewing and authorizing payments to consultants and contractors, processing payments, tracking the project budget, tracking the project schedule, scheduling and attending project meetings, preparing meeting minutes, coordinating with project, partners and resource agencies, reviewing reports and submittals, preparing necessary reports for funding as well as other duties necessary for the successful implementation of the project. Deliverables include invoices, supporting documents (e.g. consultant invoices, contractor payments, etc.), and other documents as required by DWR.

Task 2 Labor Compliance

The City will retain labor compliance assistance from a local firm to verify Davis-Bacon prevailing wage requirements. A payroll summary report will be prepared and submitted to the State.

Task 3 Reporting

The City will prepare all required quarterly, annual, final and post completion reports in accordance with grant agreement specifications. All reports will be delivered to the State.

Task 4 Land Purchase

The City has hired an appraisal and is completing the CEQA document necessary for the transfer of land from SBCFCD to the City for the benefit of the project. This work will be completed prior to the design being complete. The property where the proposed project is located is owned by SBCFCD and will stay under their ownership after the project is complete. YVWD does own some property which the City will negotiate to acquire prior to the design being completed.

All appraisal and related acquisition documents will be provided to the State as required.

Task 5 Assessment and Evaluation

The City has already completed preliminary evaluation of the Wilson Creek including an update to the master plan of drainage, creek optimization studies, and alternative analysis. The City has approved the Wilson Creek conceptual plan and design is underway. The technical study will be provided to the State for review.

Task 6 Project Design and Engineering

The City will prepare contract documents for construction. The contract documents will include drawings, specifications and estimates for construction of the basin, recharge pond, channel modifications, inlet and outlet structures, trails, and related improvements. To prepare the documents, a series of steps will be performed as follows:

a. **Records Research** - the City will research utility and survey records for the basin site.
b. **Design Surveys** - the City will collect field topographic data for the basin site.
c. **Base Construction Drawings** - using the data assembled during records research and field surveys, base construction drawings will be prepared for the basin.
d. **Preliminary Design** - using the base drawings, preliminary design for the basin will be prepared. It will include basin earthwork and structure design. The design will be consistent with technical study requirements presented above.
e. **Coordination with Agencies** - after the preliminary design is complete, the City will provide drawings to agencies that have an interest in the project and agencies that will be impacted by construction. We will request that they verify that existing facilities are mapped correctly.
f. **Geotechnical Investigation** - site conditions at the basin site will be performed to assess site conditions and to present construction requirements including material suitability, gradations and processing, compaction, percolation, and other requirements. The geotechnical report will be submitted to the State.
g. **90% Design** - 90% contract documents (plans, specifications, and estimates) for the basin will be submitted for consideration to the State.
h. **Final Design** - final contract documents (plans, specifications, and estimates) will be completed and submitted for consideration to the State.

Task 7 Environmental Documentation

Public works projects are subject to environmental compliance processing in accordance with California Environmental Quality Act (CEQA). The City has already begun the process of preparing the initial study check list to determine significance of potential environmental impact that the project may create. Upon completion of the check, a determination will be made by City planning staff that will either result in a negative declaration, a mitigated negative declaration, or a comprehensive environmental impact report (EIR). Whichever process is required, the City will endeavor to complete it and have its compliance documentation approved and adopted by

the City's council. Final CEQA documents including: Air Quality, Greenhouse Gases, Biological Resources, Cultural Resources, Geotechnical Resources, Hazard and Hazardous Materials, Noise, Traffic, and Sensitive Species Surveys, will be delivered to the State.

In addition to CEQA, the project will be subject to environment assessment related to construction of the basin site. The report will be submitted to the State and to the Regional Water Quality Control Board to permit recharge into the basins; see Task 10 for further information.

Task 8 Permitting

Permits anticipated for project include right-of-way encroachment permits from the City, the County of San Bernardino, and a Regional Water Quality Control Board Permit. As mentioned previously, since impacts exceed ½ acre, a US Army Corps Individual Permit will be required for the recharge basin. Depending upon the evaluation of the Department of Dam Safety, the project may require a permit from their agency. Also, due to the nature of the project, the City will be obtaining Section 1602, 401 and 402 permits. Upon acquisition of permits, copies will be submitted to the State.

Task 9 Construction Contracting

Once the plans, specifications and technical reports are approved by the City and SBCFCD and once all the required permits are issued, City staff will prepare an advertisement for bids, conduct a pre-bid contractors meeting, receive bids, review bids to determine the lowest responsible bidder, prepare a Council agenda report recommending award to the lowest responsive bidder, receive all necessary documentation from the contractor such as insurance, bonds and signed agreements and notify the contractor of Council's action to award. Prior to the 90% final design, the City will advertise for construction management services and will hire a consultant to provide a constructability review and construction management services. All activities will be documented and copies will be submitted to the State. Deliverables include: advertisement for bids, pre-bid contractors meeting, evaluation of bids, and award contract

Task 10 Construction

City staff and construction manager will conduct a preconstruction meeting to go over all the project requirements, including regulatory requirements, environmental requirements, obtain submittals and ensure of proper notifications. Depending upon the time of year, a sensitive species survey will be done and then the site which is planned to be disturbed will be cleared of vegetation and then mass graded. City staff and construction manager will oversee construction work and conduct weekly progress meetings to ensure compliance with public contract regulations and the project schedule. The selected contractor will perform all work on the project as follows:

Subtask 10.1 Mobilization and Site Preparation

Mobilization and site preparation include mobilizing grading and trenching equipment and site clearing of vegetation and debris for off-site disposal.

Subtask 10.2 Basin Earthwork

Construction of the basin begins with mass grading of approximately 965,000 cubic-yards including placing of and compacting fill per plans, precise grading, and disposing of materials at the basin site and all related work.

Subtask 10.3 Inlet, Outlet, and Spillway Structures

Basin structure construction includes grading channel inlet connections to the recharge basin, constructing the basin outlet and recharge basin piping, construction of the recharge/detention basin spillway, erosion control measures, and all related work.

Subtask 10.4 Roadway Embankment

Construction includes grading and filling 2nd Street road embankment, roadway, erosion control measures, and all related work.

Subtask 10.5 Landscape, Irrigation, and Trails

After the basin and structure construction is complete, irrigation and vegetation systems will be constructed. Additionally, construction of hiking trails with tie-ins to existing trails, including installation of information kiosks.

Subtask 10.6 Performance Testing and Demobilization

City staff and construction manager will oversee the performance testing for the project including soils compaction testing, concrete strength testing, steel strength testing, soils gradation testing, asphalt gradation and compaction testing, rock size testing, and water discharge testing per NPDES requirements during rain storm events. The construction management team will provide a punch list and include the punch list generated by the SBCFCD. Final payment will be with-held in accordance with public contracting policy until final approval by the construction management team.

Demobilization includes removal of all equipment used for construction, surplus project materials, spoils, and construction debris.

Task 11 Environmental Compliance/Mitigation/Enhancement

Environmental mitigation requirements will be determined during Task 6. City staff and construction manager will ensure that the contractor's work is done in compliance with the environmental permit regulations. All requirements in the permits will be made a part of the specifications and pay items will be associated with work. A habitat conservation and monitoring

plan, consistent with EIR requirements, will be developed as part of the permitting process which will show the mitigation that is required for the project along with any enhancement that will be allowed in lieu of offsite mitigation. Much of the enhancement work will be done as part of the construction work. Offsite mitigation will be either be on City-owned conservation land which will be enhanced to offset the project "take" areas, or the City will buy into an approved mitigation bank. If City-owned conservation land is used, a survey will be conducted to differentiate it from the other conservation area and a separate bid process will be conducted for the enhancement work. All required reporting during and after the project is complete will be handled by City staff or consulting staff.

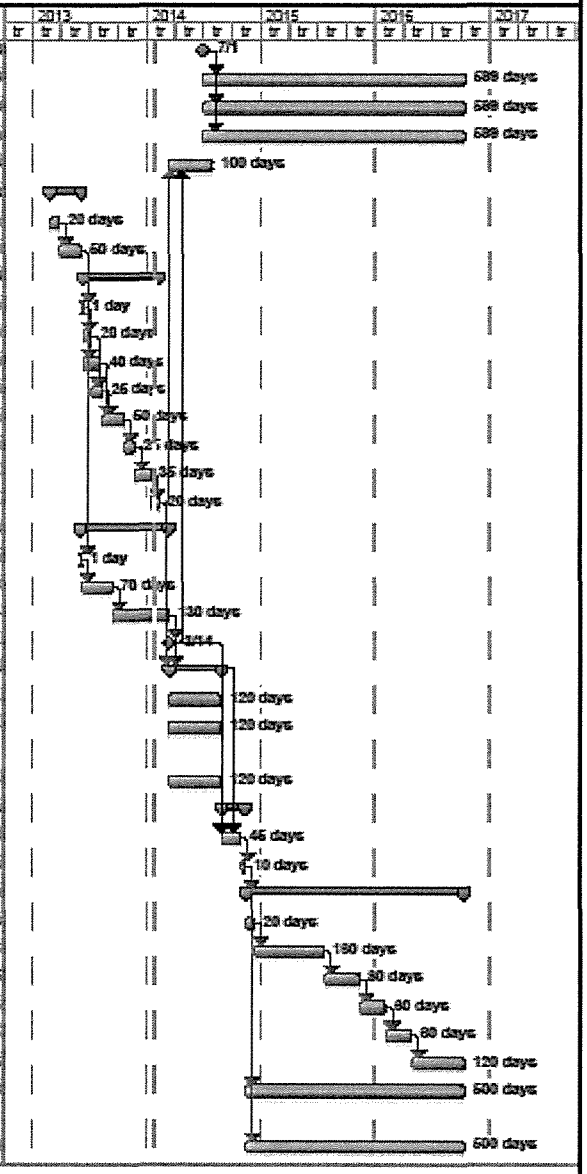
Task 12 Construction Administration

City staff and construction manager will both be involved in construction administration which will include daily inspection reports, weekly meetings, processing submittals including shop drawings, requests for information, extra work requests and change order requests, reviewing and approving invoices, tracking the project schedule, ensuring compliance with all regulatory and environmental requirements listed in the plans and specifications such as storm water pollution prevention plan, water quality management plan, traffic control plan. In the event that change orders require Council action, a Council agenda report will be prepared with recommendations. The project will closed out with a final report to City Council to authorize the recordation of the notice of completion and allow for the release of retention. A final grant close-out report will be prepared and sent to DWR. All paperwork related to the project will be kept for the required time frame.

WaterSMART
Schedule

Wilson III Basins and Spreading Grounds Project

ID	Task Name	Start	Finish
1	**Execution of Grant Agreement**	Tue 7/1/14	Tue 7/1/14
2	**Task 1 - Project Administration**	Tue 7/1/14	Fri 10/14/16
3	**Task 2 - Labor Compliance**	Tue 7/1/14	Fri 10/14/16
4	**Task 3 - Reporting**	Tue 7/1/14	Fri 10/14/16
5	**Task 4 - Land Purchase**	Mon 3/17/14	Fri 8/1/14
6	**Task 5 - Assessment and Evaluation**	Fri 3/1/13	Thu 8/8/13
7	Assessment and Evaluation	Fri 3/1/13	Thu 3/28/13
8	Hydrology and Hydraulics	Fri 3/29/13	Thu 6/6/13
9	**Task 6 - Project Design and Engineering**	Tue 8/11/13	Tue 2/11/14
10	Records Research	Tue 6/11/13	Tue 6/11/13
11	Design Surveys	Wed 6/12/13	Tue 7/9/13
12	Geotechnical Investigation	Wed 6/12/13	Tue 8/6/13
13	Base Construction Drawings	Wed 7/10/13	Tue 8/13/13
14	Preliminary Design	Wed 8/14/13	Tue 10/22/13
15	Coordination with Agencies	Wed 10/23/13	Tue 11/26/13
16	90% Design	Wed 11/27/13	Tue 1/14/14
17	Final Design	Wed 1/15/14	Tue 2/11/14
18	**Task 7 - Environmental Documentation**	Fri 6/7/13	Fri 3/14/14
19	Initial Study	Fri 6/7/13	Fri 6/7/13
20	Draft EIR	Mon 6/10/13	Fri 9/13/13
21	Appeal	Mon 9/16/13	Fri 3/14/14
22	Adoption	Fri 3/14/14	Fri 3/14/14
23	**Task 8 - Permitting**	Mon 3/17/14	Fri 8/29/14
24	Right-of-Way Encroachments	Mon 3/17/14	Fri 8/29/14
25	San Bernardino County Flood Control District (SBCFCD)	Mon 3/17/14	Fri 8/29/14
26	US Army Corps of Engineers (CORPS)	Mon 3/17/14	Fri 8/29/14
27	**Task 9 - Construction Contracting**	Mon 9/1/14	Fri 11/14/14
28	Bidding	Mon 9/1/14	Fri 10/31/14
29	Construction Contract Execution	Mon 11/3/14	Fri 11/14/14
30	**Task 10 - Construction**	Mon 11/17/14	Fri 10/14/16
31	Mobilization and Site Preparation	Mon 11/17/14	Fri 12/12/14
32	Basin Earthwork	Mon 12/15/14	Fri 7/24/15
33	Inlet, Outlet, and Spillway Structures	Mon 7/27/15	Fri 11/13/15
34	Roadway Embankment	Mon 11/16/15	Fri 2/5/16
35	Landscape, Irrigation, and Trails	Mon 2/8/16	Fri 4/29/16
36	Performance Testing and Demobilization	Mon 5/2/16	Fri 10/14/16
37	**Task 11 - Environmental Compliance / Mitigation / Enhancement**	Mon 11/17/14	Fri 10/14/16
38	**Task 12 - Construction Administration**	Mon 11/17/14	Fri 10/14/16



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Date: Thu 1/23/14

Task — Milestone — External Tasks
Split — Summary — External Milestone
Progress — Project Summary — Deadline

Note: Project kick-off will occur immediately following execution of grant agreement.

Page 1

Subcriterion No. F.3 – Performance Measures

Points may be awarded based on the description and development of performance measures to quanity actual project benefits upon completion of the project.

Provide a brief summary describing the performance measure that will be used to quantify actual benefits upon completion of the project (e.g.., water saved, marketed, or better managed, or energy saved.

Actual water savings will be verified with the use of stream gauge data. Stream gauges will be placed above the basins and below to measure the amount of infiltration that is occurring in the basins. In addition, there are a few wells within a few hundred feet of the basins which will be used to monitor the increase in basin storage. The amount of native recharge will be tracked each year and the amount of energy saved as a result of not recharging with State Water Project water will be calculated.

V.A.7 EVALUATION CRITERION G: ADDITIONAL NON-FEDERAL FUNDING

(4 POINTS)

Up to 4 points may be awarded to proposals that provide non-Federal funding in excess of 50 percent of the project costs. State the percentage of non-Federal funding provided.

92%

V.A.8 EVALUATION CRITERION H: CONNECTION TO RECLAMATION PROJECT ACTIVITIES (4 POINTS)

Up to 4 points may be awarded if the proposed project is in a basin with connections to Reclamation project activities. No points will be awarded for proposals without connection to a Reclamation project or Reclamation activity.

(1) How is the proposed project connected to Reclamation project activities? N/A

(2) Does the applicant receive Reclamation project water? N/A

(3) Is the project on Reclamation project lands or involving Reclamation facilities? N/A

(4) Is the project in the same basin as a Reclamation project or activity? N/A

(5) Will the proposed work contribute water to a basin where a Reclamation project is located? No.

SECTION 2. DESCRIPTION OF PERFORMANCE MEASURES

Actual water savings will be verified with the use of stream gauge data. Stream gauges will be placed above the basins and below to measure the amount of infiltration that is occurring in the basins. In addition, there are a few wells within a few hundred feet of the basins which will be used to monitor the increase in basin storage. The amount of native recharge will be tracked each year and the amount of energy saved as a result of not recharging with State Water Project water will be calculated.

SECTION 3. ENVIRONMENTAL AND CULTURAL RESOURCES COMPLIANCE

To allow Reclamation to assess the probable environmental and cultural resources impacts and costs associated with each application, all applicants must respond to the following list of questions focusing on the NEPA, ESA, and NHPA requirements. Please answer the following questions to the best of your knowledge. If any question is not applicable to the project, please explain why. Additional information about environmental compliance is provided in Section IV.D.4. "Project Budget," under the discussion of "Environmental and Regulatory Compliance Costs," and in Section VIII.B., "Overview of Environmental and Cultural Resources Compliance Requirements." Funding Opportunity Announcement No. R14AS00001
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Note: Applicants proposing a Funding Group II project must address the environmental and cultural resources compliance questions for their entire project, not just the first 1-year phase.

NOTE: Environmental documents already prepared include: Cultural Resources Assessment for the Wilson Creek Business Park Project, City of Yucaipa, San Bernardino County, California, August 2012; Geological Constraints Study, July 2011; Wilson Creek Initial Study, July 2011; Biological Resources Alternative Analysis, November 2012; Wilson Creek Draft Environmental Impact Report, December 2013.

(1) Will the project impact the surrounding environment (e.g., soil [dust], air, water [quality and quantity], animal habitat)? Please briefly describe all earth-disturbing work and any work that will affect the air, water, or animal habitat in the project area. Please also explain the impacts of such work on the surrounding environment and any steps that could be taken to minimize the impacts.

Mobilization and site preparation include mobilizing grading and trenching equipment and site clearing of vegetation and debris for off-site disposal. Construction of the basin begins with mass grading of approximately 965,000 cubic-yards including placing of and compacting fill per plans, precise grading, and disposing of materials at the basin site and all related work. Basin structure construction includes grading channel inlet connections to the recharge basin, constructing the basin outlet and recharge basin piping, construction of the recharge/detention basin spillway, erosion control measures, and all related work. Construction includes grading and filling 2nd Street road embankment, roadway, erosion control measures, and all related work. After the basin and structure construction is complete irrigation and begetation systems will be constructed. Additionally, construction of hiking trails with tie-ins to existing trails, including installation of informational kiosks. During the construction period, the project will temporarily impact the surrounding

environment. Mitigation measures will be used as contained in Wilson Business Park Environmental Assessment.

(2) Are you aware of any species listed or proposed to be listed as a Federal threatened or endangered species, or designated critical habitat in the project area? If so, would they be affected by any activities associated with the proposed project?

The Yucaipa General Plan designates a portion of the proposed project site as an Area of Biological Significance, as noted in Exhibit XII-2. It is traversed by two blue-line streams identified as the Wilson Creek and Oak Glen Wash drainage courses. Previous biological habitat assessments in the project vicinity for sensitive species, including the slender-horned spineflower, San Bernardino kangaroo rat, yellow-billed cockatoo, southwestern willow flycatcher, coastal California gnatcatcher, least Bell's vireo, and the burrowing owl, have indicated that the project site may support sensitive plant and animal species.

(3) Are there wetlands or other surface waters inside the project boundaries that potentially fall under CWA jurisdiction as "waters of the United States?" If so, please describe and estimate any impacts the project may have.

Alternative 6 will impact approximately 1.05 acres, and greater than 300 linear feet, of Corps jurisdictional waters. Since impacts exceed ½ acre, a Corps Individual Permit will be required for this alternative. Corps jurisdictional waters are shown as impacted on a project where any fill that occurs within the jurisdictional limits. Although the footprint of this project alternative is not the smallest, it has the least impact to the waters of the U.S. The restoration elements along Oak Glen Creek, as part of the planning area concept, could provide some mitigation to offset the environmental impacts. Further information is contained in the Wilson Business Park Specific Plan: Jurisdictional Delineation Report, July 2011.

(4) When was the water delivery system constructed?

Not applicable. This historical diversion canal or berm lined with rock was observed running in a north-south direction in the southeast portion of the project area (Figure 12, 13). It is likely related to Oak Glen Creek but could not be followed due to dense vegetation. The majority of the observed length of berm is four feet high, although some areas are as low as two feet in height. The width of the berm is approximately two feet and the length of the observable portion is 290 feet. An additional small section of berm was observed to the east and is of equal height and width as the longer berm. It is 58 feet in length. Cogstone considers this site as ineligible for listing on the CRHR since the berm has no potential to yield additional information. A formal site record was filed at the SBAIC (Appendix D).

(5) Will the project result in any modification of or effects to, individual features of an irrigation system (e.g., headgates, canals, or flumes)? If so, state when those features were constructed and describe the nature and timing of any extensive alterations or modifications to those features completed previously.

Not applicable. This is an unimproved creek; however a historical diversion canal was noted in the Cultural Resources Assessment which states that "This historical diversion canal or berm lined with rock was observed running in a north-south direction in the southeast portion of the project area (Figure 12, 13). It is likely related to Oak Glen Creek but could not be followed due to dense vegetation. The majority of the observed length of berm is four feet high, although some areas are as low as two feet in height. The width of the berm is approximately two feet and the length of the observable portion is 290 feet. An additional small section of berm was observed to the east and is of equal height and width as the longer berm. It is 58 feet in length. Cogstone considers this site as ineligible for listing on the CRHR since the berm has no potential to yield additional information. A formal site record was filed at the SBAIC (Appendix D).

(6) Are any buildings, structures, or features in the irrigation district listed or eligible for listing on the National Register of Historic Places? A cultural resources specialist at your local Reclamation office or the State Historic Preservation Office can assist in answering this question.
AND
(7) Are there any known archeological sites in the proposed project area?

A portion of the project site is within an area designated by the Yucaipa General Plan, Figure XII-3, as an area of "High Sensitivity" for paleontological resources and historical sites. Construction activities could impact paleontological resources and could disturb historical and archaeological resources that may be present. Potential impact to cultural resources will be analyzed in the EIR.

(8) Will the project have a disproportionately high and adverse effect on low income or minority populations?

No. In fact, construction of this project will mitigate the short- and long-term effects of flooding downstream, where there is a large segment of the low income and minority populations that have been repeatedly affected by flooding.

(9) Will the project limit access to and ceremonial use of Indian sacred sites or result in other impacts on tribal lands?

A Sacred Lands File search was requested from the Native American Heritage Commission on March 31, 2011. The Commission responded on April 5, 2011 that there were no know sacred lands within a one-mile radius of the proposed project area (Appendix C). Based on recommendations made by the Commission, Cogstone subsequently sent letters and maps on April 8, 2011 to six Native American contacts requesting any information related to cultural resources heritage sites within or immediately adjacent to the project area. No responses were received.

SECTION 4. REQUIRED PERMITS AND APPROVALS

Permits anticipated for project include right-of-way encroachment permits from the City, the County of San Bernardino, and a Regional Water Quality Control Board Permit. As mentioned previously, since impacts exceed ½ acre, a US Army Corps Individual Permit will be required for the recharge basin. Depending upon the evaluation of the Department of Dam Safety, the project may require a permit from their agency. Also, due to the nature of the project, the City will be obtaining Section 1602, 401 and 402 permits. Upon acquisition of permits, copies will be submitted to the State.

SECTION 5. FUNDING PLAN

The total project cost for the project is approximately $8,171,261 (with the construction portion estimated to be $6,507,841). The total cost includes the Environmental Impact Mitigation requirements. The environmental mitigation area is calculated at a ratio of 3:1 for the jurisdictional area within the project that is considered waters of the U.S. The estimated cost of environmental impact mitigation is $327,400.

The City of Yucaipa will utilize the $750,000 Proposition 84 funding toward project construction costs. The current approved FY 2012/2013 Capital Improvement Program (CIP) includes $970,000 in Drainage Facility Fee funds, $200,000 from the General Fund, the value of excess property from SBCFCD (estimated at $2.5 million), $300,000 from SBCFCD for spreading basin enhancements and $61,000 in 2010 TAB funds for a total of $4,781,000. Additional funding is being sought and is expected to be finalized, including the $750,000 Proposition 84 funding before construction is started. The City Council is committed to move forward with the project and have it completed within the proposed schedule.

SECTION 6. OFFICIAL RESOLUTIONS

San Bernardino Municipal Water District: Report and Resolution

SAN BERNARDINO Valley MUNICIPAL WATER DISTRICT

DATE: January 6, 2014

TO: Board of Directors

FROM: Bob Tincher, Manager of Engineering & Planning

Wilson III Basin Groundwater Recharge and Water Management Proposal

SUBJECT: WaterSMART Grant Application for Wilson III Groundwater Recharge and Water Management Project

The City of Yucaipa has requested that Valley District support the Wilson III Detention/Retention Basin Project by partnering in the WaterSmart Grant application. Valley District will be responsible for receiving and distributing the grant funding for the project, if it is awarded. The City will complete the application. Staff believes that Wilson III project is beneficial and consistent with Valley District's goals and objectives.

The Bureau of Reclamation is making funding available through its WaterSMART program to support new Water and Energy Efficiency Grant projects. Proposals are being sought from states, Indian tribes, irrigation districts, water districts and other organizations with water or power delivery authority to partner with Reclamation on projects that increase water conservation or result in other improvements that address water supply sustainability in the West.

Proposals must seek to conserve and use water more efficiently, increase the use of renewable energy, improve energy efficiency, benefit endangered and threatened species, facilitate water markets, carry out activities to address climate-related impacts on water or prevent any water-related crisis or conflict. In 2013, Reclamation awarded more than $20 million for 44 Water and Energy Efficiency Grants. These projects were estimated to save about 100,000 acre-feet of water per year -- enough water to serve a population of about 400,000 people.

The WaterSMART Program focuses on improving water conservation, sustainability and helping water resource managers make sound decisions about water use. It identifies strategies to ensure that this and future generations will have sufficient supplies of clean water for drinking, economic activities, recreation and ecosystem health. The program also identifies adaptive measures to address climate change and its impact on future water demands.

Proposals must be submitted as indicated on www.grants.gov by 4 p.m., Mountain Standard Time, Jan. 23, 2014. It is anticipated that awards will be made this spring.

Applicants must be water providers in order to be eligible for this grant opportunity.

FISCAL IMPACT:

Applications may be submitted to one of two funding groups:

- Funding Group I: Up to $300,000 will be available for smaller projects that may take up to two years to complete. It is expected that a majority of awards will be made in this funding group.
- Funding Group II: Up to $1,000,000 will be available for larger, phased projects that will take up to three years to complete. No more than $500,000 in federal funds will be provided within a given fiscal year to complete each phase. This will provide an opportunity for larger, multiple-year projects to receive some funding in the first year without having to compete for funding in the second and third years.

The City of Yucaipa has evaluated the benefits of both Funding Group I and Funding Group II, discussed the options with the United States Bureau of Reclamation (USBR), and is recommending an application be submitted under both Funding Groups. USBR will evaluate each individually and will only award one, with higher priority to the Funding Group II.

There is no fiscal impact to Valley District in submitting this application besides the necessary staff time to assist the City in reviewing their application submittal and in managing the grant funds if the grant is awarded to Valley District.

Staff Recommendation

Authorize application for the 2013 WaterSMART Conservation Program.

3938

RESOLUTION NO. 1014

RESOLUTION OF THE BOARD OF DIRECTORS OF THE SAN BERNARDINO VALLEY MUNICIPAL WATER DISTRICT AUTHORIZING APPLICATION FOR THE WaterSMART: 2014 WATER AND ENERGY EFFICIENCY GRANT PROGRAM

WHEREAS, IN November 2013 the 2014 WaterSMART: Water and Energy Efficiency Grant Program was posted by the federal government as an available source of grant funding through the Bureau of Reclamation, and;

WHEREAS, a conceptual plan has already developed for the groundwater resource project entitled Wilson III Retention Basin Project ("Project"); and

WHEREAS, significant but as yet incomplete funding is available to construct the Project which will serve as a groundwater recharge basin in support of the WaterSMART Water and Energy Efficiency Grant; and

WHEREAS, the eligible applicant for this grant opportunity must have a Water Distribution Number;

WHEREAS, the San Bernardino Valley Municipal Water District has a Water Distribution Number and is the eligible applicant;

WHEREAS, construction of the "Project" will serve the greater watershed management goals and objectives of the Upper Santa Ana River Watershed Integrated Regional Water Management Plan (IRWMP) and the One Water One Watershed (OWOW) Integrated Regional Water Management Plan for the Santa Ana River watershed;

NOW, THEREFORE, BE IT RESOLVED by the San Bernardino Valley Municipal Water District as follows:

1. The General Manager is given the legal authority to enter into an agreement with the U. S. Department of the Interior, Bureau of Reclamation on its behalf;

2. The San Bernardino Valley Municipal Water District has the matching funds required by the Grant Program;

3. The San Bernardino Valley Municipal Water District will work with the Bureau of Reclamation to meet established deadlines for entering into a Cooperative Agreement.

3939

PASSED, APPROVED and ADOPTED on this 7th day of January, 2014.

Patrick Milligan, President

ATTEST:

Ed Killgore, Secretary

City of Yucaipa Resolution

RESOLUTION NO. 2014-01

RESOLUTION OF THE CITY OF YUCAIPA TO SUPPORT AN APPLICATION SUBMITTED BY THE SAN BERNARDINO MUNICIPAL WATER DISTRICT ENTITLED 2013 WaterSMART: WATER AND ENERGY EFFICIENCY GRANT PROGRAM

WHEREAS, on November 14, 2013 the 2013 Water SMART: Water and Energy Efficiency Grant Program was posted by the federal government as an available source of grant funding through the Bureau of Reclamation, and:

WHEREAS, the City of Yucaipa has already developed a conceptual plan for the subject grant, entitled Wilson Creek Basin Project ("Project"); and

WHEREAS, the City of Yucaipa has significant but as yet incomplete funding to construct the Project which will serve as a groundwater recharge basin in support of the WaterSMART Water and Energy Efficiency Grant: and

WHEREAS, the eligible applicant for this grant opportunity must have a Water Distribution Number;

WHEREAS, the San Bernardino Municipal Water District (Valley District) has a Water Distribution Number and is the eligible applicant;

WHEREAS, construction of the "Project" will serve the greater watershed management goals and objectives of the Santa Ana River Integrated Regional Water Management Plan (IRWMP) and One Water One Watershed (OWOW) Plan;

WHEREAS, the City of Yucaipa and the Valley District have agreed to co-join efforts to seek funding for the "Project";

NOW, THEREFORE, BE IT RESOLVED by the City of Yucaipa as follows:

That the City Council of the City of Yucaipa supports and adopts the Valley District application for the WaterSMART: Water and Energy Efficiency Grant.

PASSED, APPROVED and ADOPTED on this 13th day of Jan, 2014.

Denise Hoyt, Mayor

ATTEST:

Jennifer Shankland, City Clerk

SECTION 7. BUDGET

WaterSMART GRANT PROGRAM - BUDGET SUMMARY Project: Wilson III Basin Project and Wilson Basin Spreading Grounds					
	Requested Grant	Local Match	Other Funding	Total	% Local Match
1. Direct Project Administration Costs	**$0**	**$266,358**	**$0**	**$266,358**	**100%**
Direct Project Administration Costs		$266,358		$266,358	
2. Planning/Design/Engineering/ Environmental	**$0**	**$510,700**	**$0**	**$510,700**	**100%**
Engineering		$460,700		$460,700	
Environmental		$50,000		$50,000	
3. Construction Administration	**$0**	**$394,070**	**$0**	**$394,070**	**100%**
Construction Administration		$394,070		$394,070	
4. Construction/Implementation	**$300,000**	**$5,892,841**	**$375,000**	**$6,567,841**	**90%**
4.1 Wilson III Basin/Spreading Basins	$166,528	$3,271,070	$208,160	$3,645,758	
4.2 Wilson Creek Improvements	$47,425	$931,560	$59,281	$1,038,266	
4.3 Oak Glen Creek Improvements	$5,694	$111,848	$7,118	$124,660	
4.4 2nd Street Improvements	$21,576	$423,808	$26,970	$472,353	
4.5 Park/Habitat Area and Landscaping	$58,777	$1,154,555	$73,472	$1,286,804	
5. Environmental Compliance / Mitigation / Enhancement	**$0**	**$376,510**	**$0**	**$376,510**	**100%**
Environmental Compliance / Mitigation / Enhancement		$376,510		$376,510	
6. Monitoring/Performance	**$0**	**$24,182**	**$0**	**$24,182**	**100%**
Monitoring/Performance		$24,182		$24,182	
7. Education/Outreach	**$0**	**$32,300**	**$0**	**$32,300**	**100%**
Education/Outreach		$32,300		$32,300	
Grand Total:	**$300,000**	**$7,496,961**	**$375,000**	**$8,171,961**	**92%**

Other Funding Sources: Under the Santa Ana Watershed Project Authority (SAWPA), the City applied for $750,000 in funding under the Proposition 84 Implementation Round 2 grant program. On September 25, 2013 DWR released the draft funding recommendations and SAWPA has been selected for 50% of requested funding. As of October 2013, the City is anticipating to receive $375,000 in grant funding from the Proposition 84 Implementation Round 2 grant program, which is subject to change upon final funding recommendations from DWR.

B. Budget Narrative

Budget Category (a): Direct Project Administrative Costs

Task 1 Project Administration

The City will administer the project. Project administration will include City staff managing consultants, preparing reports for Council actions, reviewing and authorizing payments to consultants and contractors, processing payments, tracking the project budget, tracking the project schedule, scheduling and attending project meetings, preparing meeting minutes, coordinating with project, partners and resource agencies, reviewing reports and submittals, preparing necessary reports for funding as well as other duties necessary for the successful implementation of the project. Deliverables include invoices, supporting documents (e.g. consultant invoices, contractor payments, etc.), and other documents as required by DWR.

Task 2 Labor Compliance

The City will retain labor compliance assistance from a local firm to verify Davis-Bacon prevailing wage requirements. A payroll summary report will be prepared and submitted to the State.

Task 3 Reporting

The City will prepare all required quarterly, annual, final and post completion reports in accordance with grant agreement specifications. All reports will be delivered to the State.

Budget Category (b): Land Purchase/Easement

Task 4 Land Purchase

The City has hired an appraisal and is completing the CEQA document necessary for the transfer of land from SBCFCD to the City for the benefit of the project. This work will be completed prior to the design being complete. The property where the proposed project is located is owned by SBCFCD and will stay under their ownership after the project is complete. YVWD does own some property which the City will negotiate to acquire prior to the design being completed.

All appraisal and related acquisition documents will be provided to the State as required.

Budget Category (c): Planning/Design/Engineering/ Environmental Documentation

Task 5 Assessment and Evaluation

The City has already completed preliminary evaluation of the Wilson Creek including an update to the master plan of drainage, creek optimization studies, and alternative analysis. The City has approved the Wilson Creek conceptual plan and design is underway. The technical study will be provided to the State for review.

Task 6 Project Design and Engineering

The City will prepare contract documents for construction. The contract documents will include drawings, specifications and estimates for construction of the basin, recharge pond, channel modifications, inlet and outlet structures, trails, and related improvements. To prepare the documents, a series of steps will be performed as follows:

a. **Records Research** - the City will research utility and survey records for the basin site.
b. **Design Surveys** - the City will collect field topographic data for the basin site.
c. **Base Construction Drawings** - using the data assembled during records research and field surveys, base construction drawings will be prepared for the basin.
d. **Preliminary Design** - using the base drawings, preliminary design for the basin will be prepared. It will include basin earthwork and structure design. The design will be consistent with technical study requirements presented above.
e. **Coordination with Agencies** - after the preliminary design is complete, the City will provide drawings to agencies that have an interest in the project and agencies that will be impacted by construction. We will request that they verify that existing facilities are mapped correctly.
f. **Geotechnical Investigation** - site conditions at the basin site will be performed to assess site conditions and to present construction requirements including material suitability, gradations and processing, compaction, percolation, and other requirements. The geotechnical report will be submitted to the State.
g. **90% Design** - 90% contract documents (plans, specifications, and estimates) for the basin will be submitted for consideration to the State.
h. **Final Design** - final contract documents (plans, specifications, and estimates) will be completed and submitted for consideration to the State.

Task 7 Environmental Documentation

Public works projects are subject to environmental compliance processing in accordance with California Environmental Quality Act (CEQA). The City has already begun the process of preparing the initial study check list to determine significance of potential environmental impact that the project may create. Upon completion of the check, a determination will be made by City planning staff that will either result in a negative declaration, a mitigated negative declaration, or

a comprehensive environmental impact report (EIR). Whichever process is required, the City will endeavor to complete it and have its compliance documentation approved and adopted by the City's council. Final CEQA documents including: Air Quality, Greenhouse Gases, Biological Resources, Cultural Resources, Geotechnical Resources, Hazard and Hazardous Materials, Noise, Traffic, and Sensitive Species Surveys, will be delivered to the State.

In addition to CEQA, the project will be subject to environment assessment related to construction of the basin site. The report will be submitted to the State and to the Regional Water Quality Control Board to permit recharge into the basins; see Task 10 for further information.

Task 8 Permitting

Permits anticipated for project include right-of-way encroachment permits from the City, the County of San Bernardino, and a Regional Water Quality Control Board Permit. As mentioned previously, since impacts exceed ½ acre, a US Army Corps Individual Permit will be required for the recharge basin. Depending upon the evaluation of the Department of Dam Safety, the project may require a permit from their agency. Also, due to the nature of the project, the City will be obtaining Section 1602, 401 and 402 permits. Upon acquisition of permits, copies will be submitted to the State.

Budget Category (d): Construction/Implementation

Task 9 Construction Contracting

Once the plans, specifications and technical reports are approved by the City and SBCFCD and once all the required permits are issued, City staff will prepare an advertisement for bids, conduct a pre-bid contractors meeting, receive bids, review bids to determine the lowest responsible bidder, prepare a Council agenda report recommending award to the lowest responsive bidder, receive all necessary documentation from the contractor such as insurance, bonds and signed agreements and notify the contractor of Council's action to award. Prior to the 90% final design, the City will advertise for construction management services and will hire a consultant to provide a constructability review and construction management services. All activities will be documented and copies will be submitted to the State. Deliverables include: advertisement for bids, pre-bid contractors meeting, evaluation of bids, and award contract

Task 10 Construction

City staff and construction manager will conduct a preconstruction meeting to go over all the project requirements, including regulatory requirements, environmental requirements, obtain submittals and ensure of proper notifications. Depending upon the time of year, a sensitive species survey will be done and then the site which is planned to be disturbed will be cleared of vegetation and then mass graded. City staff and construction manager will oversee construction work and conduct weekly progress meetings to ensure compliance with public contract

regulations and the project schedule. The selected contractor will perform all work on the project as follows:

Subtask 10.1 Mobilization and Site Preparation

Mobilization and site preparation include mobilizing grading and trenching equipment and site clearing of vegetation and debris for off-site disposal.

Subtask 10.2 Basin Earthwork

Construction of the basin begins with mass grading of approximately 965,000 cubic-yards including placing of and compacting fill per plans, precise grading, and disposing of materials at the basin site and all related work.

Subtask 10.3 Inlet, Outlet, and Spillway Structures

Basin structure construction includes grading channel inlet connections to the recharge basin, constructing the basin outlet and recharge basin piping, construction of the recharge/detention basin spillway, erosion control measures, and all related work.

Subtask 10.4 Roadway Embankment

Construction includes grading and filling 2nd Street road embankment, roadway, erosion control measures, and all related work.

Subtask 10.5 Landscape, Irrigation, and Trails

After the basin and structure construction is complete, irrigation and vegetation systems will be constructed. Additionally, construction of hiking trails with tie-ins to existing trails, including installation of information kiosks.

Subtask 10.6 Performance Testing and Demobilization

City staff and construction manager will oversee the performance testing for the project including soils compaction testing, concrete strength testing, steel strength testing, soils gradation testing, asphalt gradation and compaction testing, rock size testing, and water discharge testing per NPDES requirements during rain storm events. The construction management team will provide a punch list and include the punch list generated by the SBCFCD. Final payment will be with-held in accordance with public contracting policy until final approval by the construction management team.

Demobilization includes removal of all equipment used for construction, surplus project materials, spoils, and construction debris.

Budget Category (e): Environmental Compliance/Mitigation/Enhancement

Task 11 Environmental Compliance/Mitigation/Enhancement

Environmental mitigation requirements will be determined during Task 6. City staff and construction manager will ensure that the contractor's work is done in compliance with the environmental permit regulations. All requirements in the permits will be made a part of the specifications and pay items will be associated with work. A habitat conservation and monitoring plan, consistent with EIR requirements, will be developed as part of the permitting process which will show the mitigation that is required for the project along with any enhancement that will be allowed in lieu of offsite mitigation. Much of the enhancement work will be done as part of the construction work. Offsite mitigation will be either be on City-owned conservation land which will be enhanced to offset the project "take" areas, or the City will buy into an approved mitigation bank. If City-owned conservation land is used, a survey will be conducted to differentiate it from the other conservation area and a separate bid process will be conducted for the enhancement work. All required reporting during and after the project is complete will be handled by City staff or consulting staff.

Budget Category (f): Construction Administration

Task 12 Construction Administration

City staff and construction manager will both be involved in construction administration which will include daily inspection reports, weekly meetings, processing submittals including shop drawings, requests for information, extra work requests and change order requests, reviewing and approving invoices, tracking the project schedule, ensuring compliance with all regulatory and environmental requirements listed in the plans and specifications such as storm water pollution prevention plan, water quality management plan, traffic control plan. In the event that change orders require Council action, a Council agenda report will be prepared with recommendations. The project will closed out with a final report to City Council to authorize the recordation of the notice of completion and allow for the release of retention. A final grant close-out report will be prepared and sent to DWR. All paperwork related to the project will be kept for the required time frame.

Budget Category (g): Other Costs

Not a part of this work plan

Budget Category (h): Construction/Implementation Contingency

A construction / implementation contingency of approximately $817,200 is estimated for this Project. The contingency is not a part of the match funding and thus will not affect the match funding requirement.

SECTION 8. LETTERS OF SUPPORT

INLAND EMPIRE
RESOURCE CONSERVATION DISTRICT

909.799.7407 | PHONE
909.799.1438 | FAX
25864-K Business Center Drive, Redlands, CA. 92374
www.ierCD.org

January 22nd, 2014

Bureau of Reclamation
Denver Federal Center
6th Avenue and Kipling Street
Denver, CO 80225

RE: WaterSMART - Water and Energy Efficiency Grant, 2014-2015

To Whom It May Concern,

This letter is in reference to the application of funding for the Wilson III Basin Groundwater Recharge and Management Proposal, submitted by the City of Yucaipa in cooperation with the San Bernardino Valley Municipal Water District. I am writing today on behalf of the Board of Directors of the Inland Empire Resource Conservation District, a local public agency charged with performance of conservation, restoration and education work within our service area. As part of the performance of the these elements of our mission, the IERCD has partnered on numerous occasions with area public agencies focused on provision of similar services to the public; these include but are not limited to the City of Yucaipa, the San Bernardino Valley Municipal Water District, and the San Bernardino County Flood Control District. Most recently, we signed on to partner with these entities in the conceptualization and execution of the Wilson III Basin Groundwater Recharge Project, with our role slated to consist primarily of site vegetation management and performance of public education and outreach on behalf of the project. The facilitation of this outreach will ensure area residents understand its multiple levels of benefits to local water supply and dependent environs; performance of invasive vegetation control and encouragement of recruitment of native species will lessen water required to support site landscaping while providing educational recreational opportunities and support for nesting and foraging needs of area wildlife.

The benefits derived from this and similar past projects will and have provided the Yucaipa Valley and regional groundwater resources with the capability to sustain a region that is currently in a state of extreme drought. This proposal addresses statewide priorities including drought preparedness, the ability to use and reuse water more efficiently, climate change adaptation measures, integrated flood management, protection of surface and groundwater quality, and equitable distribution of benefits.

The Inland Empire Resource Conservation District is in strong support of this project as a means to contribute to local groundwater recharge sustainability, improve water quality, and support statewide priorities. We encourage and support the success of this proposal and are available to answer any questions that the Bureau may pose with respect to local groundwater management and sustainability efforts on behalf of the City and our Agency.

Sincerely,

Mandy Parkes, District Manager
Inland Empire Resource Conservation District
mparkes@ierCD.org
909-799-7407 x108

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DEPARTMENT OF PUBLIC WORKS
FLOOD CONTROL • LAND DEVELOPMENT & CONSTRUCTION • OPERATIONS
SOLID WASTE MANAGEMENT • SURVEYOR • TRANSPORTATION

COUNTY OF SAN BERNARDINO

825 East Third Street • San Bernardino, CA 92415-0835 • (909) 387-8104
Fax (909) 387-8130

GERRY NEWCOMBE
Director of Public Works

January 22, 2014

File: 3-600

Bureau of Reclamation
Denver Federal Center
6th Avenue and Kipling Street
Denver, CO 80225

RE: WaterSMART: Water and Energy Efficiency Grant, 2014-2015

The City of Yucaipa, through the San Bernardino Valley Municipal Water District, is applying for project funding assistance related to the Wilson III Basin Groundwater Recharge and Management Proposal.

The San Bernardino County Flood Control District has partnered on several occasions with the City of Yucaipa to design and construct similar projects the Wilson III Basin project. We are a stakeholder and partner in this proposal, providing funding and land for the project. The benefits derived from this and similar past projects will serve to provide the Yucaipa Valley with much needed regional groundwater resources which will increase the capability to sustain a region that is currently in a state of extreme drought. This proposal addresses statewide priorities including drought preparedness, the ability to use and reuse water more efficiently, climate change adaptation measures, integrated flood management, protection of surface and groundwater quality, and equitable distribution of benefits.

The Flood Control District is in strong support of this project as a means to contribute to local groundwater recharge sustainability, improve water quality, and support statewide priorities. We encourage and support the success of this proposal and are available to answer any questions that the Bureau may pose with respect to local groundwater management and sustainability efforts on behalf of the City and our Agency.

Sincerely,

KEVIN BLAKESLEE, P.E., Deputy Director
San Bernardino County Flood Control District

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GERRY NEWCOMBE
Director of Public Works

September 28, 2012

File: 3-601

Santa Ana Watershed Project Authority
11615 Sterling Avenue
Riverside, California 92503

RE: Support Letter for the City of Yucaipa – Wilson III Detention Basin/Wilson Creek Spreading Grounds Phase I Improvement projects

Ms. Celeste Cantu:

Please accept this letter as the San Bernardino County Flood Control District (District) support of the City of Yucaipa's Wilson III Detention Basin/Wilson Creek Spreading Grounds Phase I Improvement projects for submittal for inclusion in SAWPA's Integrated Regional Watershed Plan.

The District is partnering with the City on the Phase I improvements which include construction of a regional Flood Control District detention basin at the confluence of Wilson Creek and Oak Glen Creeks and modifications to the existing Wilson Creek Spreading Grounds along Wilson Creek upstream of Bryant Street. This project has been in the City's Master Plan of Drainage, approved by the District, for several years and we are excited about it being implemented.

The goal of these two projects is to provide similar multiple community benefits as the award-winning Oak Glen Creek three-basin project which was completed in February 2009. Each of the sites include storm water and sediment control along Wilson Creek and/or Oak Glen Creek, opportunities for ground water recharge, improvement of water quality by reducing stream sediment loading, reduction of non-point source pollutants during storm events, environmental restoration and enhancements as well as providing enhanced multi-purpose trails for use by equestrians, pedestrians and bicyclists.

The District and the City of Yucaipa have been jointly pursuing these and similar type projects to reduce flooding, enhance and preserve habitat and open space and promote water quality and recharge opportunities for many years within the Yucaipa Community.

The District is working with the City of Yucaipa to fund this project through a property transfer of approximately 45 acres, subject to Board approval, from which the funds (from the property sale) will be used to help construct the project. The District also has $300,000 set aside in the FY 2013/2014 budget for the modification of the Wilson Spreading Basins which will be utilized toward the project match.

Support Letter for the City of Yucaipa – Wilson III Detention Basin/Wilson Creek Spreading Grounds Phase I Improvement projects
September 28, 2012
File: 3-601
Page 2

Please accept this letter evidence of our strong support of this applicant for the One World One Watershed Round 2 Project Solicitation.

If you have any questions or need additional information, please call Melissa Walker, Chief of Flood Control Planning at (909) 387-8120.

Sincerely,

GERRY NEWCOMBE
Director - Department of Public Works

GN:KBB:MLW

cc: Bill Hemsley – City of Yucaipa
Kevin Blakeslee – Deputy Director, Flood Control
Melissa Walker – Chief, Flood Control Planning

Yucaipa Valley Water District
12770 Second Street • P. O. Box 730 • Yucaipa, California 92399-0730
(909) 797-5117 • Fax: (909) 797-6381 • www.yvwd.dst.ca.us

January 23, 2014

Bureau of Reclamation
Denver Federal Center
6th Avenue and Kipling Street
Denver, Colorado 80225

Subject: WaterSMART - Water and Energy Efficiency Grant, 2014-2015

The City of Yucaipa, through the San Bernardino Valley Municipal Water District, has applied for funding assistance related to the Wilson III Basin Groundwater Recharge Project.

The Yucaipa Valley Water District works closely with the City of Yucaipa, San Bernardino Valley Municipal Water District, San Bernardino County Flood Control District and the Inland Empire Resource Conservation District on a number of projects including the proposed Wilson III Basin Groundwater Recharge Project.

The Yucaipa Valley Water District is a strong partner and advocate for this project as a means for achieving long-term water resource sustainability in our region.

We encourage and support the success of this proposal and are available to answer any questions with respect to our local groundwater management and sustainability efforts.

Should you have any questions, please contact me directly at (909) 797-5119.

Sincerely,

Joseph B. Zoba
General Manager