# FIRST LEVEL SCREENING – *WEEG 2015*

| APPLICANT NAME: City of Yucaipa | CONTROL NUMBER: 100 |
|---|---|
| APPLICANT LOCATION: Yucaipa, CA | TASK AREA: |
| PROJECT NAME: Construction of a detention basin | BOR $: 300,000<br>Cost Share $: 154,000 |

| | SCREENING FACTOR | COMPLETE | COMMENTS |
|---|---|---|---|
| 1 | Eligibility requirements | | |
| | • Eligible applicant in a Reclamation state | ✓YES __NO | |
| | • 50% or more non-Federal cost share | __YES ✓NO | |
| | • Authorized funding amount ($1 Million total – no more than $500,000 a year) | ~~__YES~~ __NO | |
| | • Funding Group I or II | ✓I __II | |
| | • Length of project (9/30/17 – FG I or 9/30/18 – FG II) | ✓YES __NO | 6/30/17 |
| | | | |
| 2 | Proper format and length (75 pages) | ✓YES __NO | |
| | | | |
| 3 | Proposal content | ✓ | |
| | • SF-424 (authorized signature) | __YES __NO | g.gov |
| | • SF-424B or SF-424D (authorized signature) | ✓YES __NO | g.gov |
| | • Title page | ✓YES __NO | |
| | • Table of contents | ✓YES __NO | |
| | TECHNICAL PROPOSAL/EVALUATION CRITERIA (No More Than 50 Pages) | | |
| | • Executive summary | ✓YES __NO | |
| | • Background data | ✓YES __NO | |
| | • Technical Project description | ✓YES __NO | |
| | • Evaluation Criteria | ✓YES __NO | |
| | • Project Benefits/Performance Measures | ✓YES __NO | |
| | • Potential Environmental Impact Desc. | ✓YES __NO | |
| | • Required Permits/Approvals, if applicable | ✓YES __NO | will obtain |
| | • Letters of Project Support | ✓YES __NO | |
| | • Official Resolution (Required 30 Days After) | ✓YES __NO | |
| | PROJECT BUDGET | | |
| | • Funding Plan | ✓YES __NO | |
| | • Letters of Funding Commitment | ✓YES __NO | from Yucaipa |
| | • Budget Proposal | ✓YES __NO | |
| | • Budget Narrative | ✓YES __NO | |
| | • SF-424A or SF-424C | __YES ✓NO | |

**1st Level Screening Comments (Screening Committee Member):**

Cost Share issue

**Summary Comments (Grants Officer):**

**Applicant is eligible for consideration during the Second Level Evaluation phase** ✓ **Yes** ____ **No**

**Grants Officer** **Date** 1/27/15

SAN BERNARDINO Valley MUNICIPAL WATER DISTRICT

*Project Supporters -*

*Congressman Paul Cook, San Bernardino County Flood Control District; Yucaipa Valley Water District; Western Heights Water Company, Inland Empire Resource Conservation District*

CITY OF Yucaipa


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

380 Vanderbuilt Way

San Bernardino, CA 92408-3593

***ON BEHALF OF:***

**City of Yucaipa**

34272 Yucaipa Boulevard

Yucaipa, CA 92399

Project Manager: William B. Hemsley, Director, Public Works

bhemsley@yucaipa.org, (909) 797-2489, Extension 253

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**Date:** January 20, 2015

**Applicant Name:** San Bernardino Valley Municipal Water District, San Bernardino, San Bernardino County, California

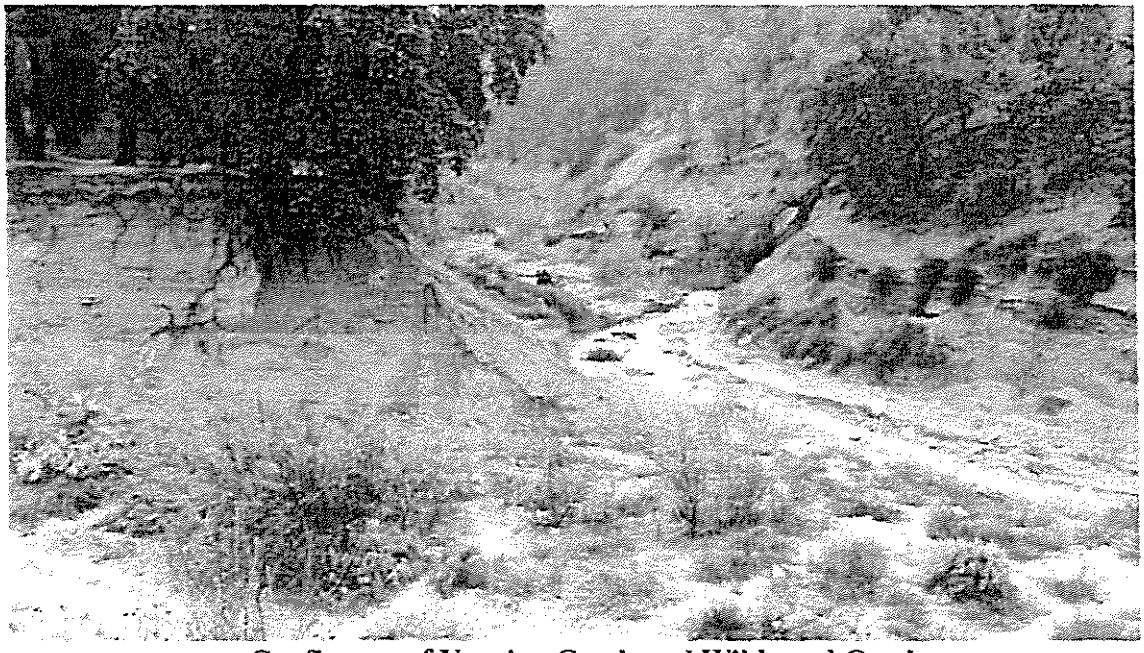
On behalf of City of Yucaipa, San Bernardino County, California

## SECTION 1: 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

The Wildwood Creek Basin 4 Proposal shares multiple objectives, but specifically provides groundwater recharge that will provide savings when surface water storage evaporation is reduced and/or surface runoff is intercepted for recharge. The proposed basin project is located along Wildwood Creek adjacent to Wildwood Canyon Road, south of Wildwood View Drive at the confluence of Wildwood Creek and a smaller canyon tributary and extends to Mesa Grande Drive to the west.

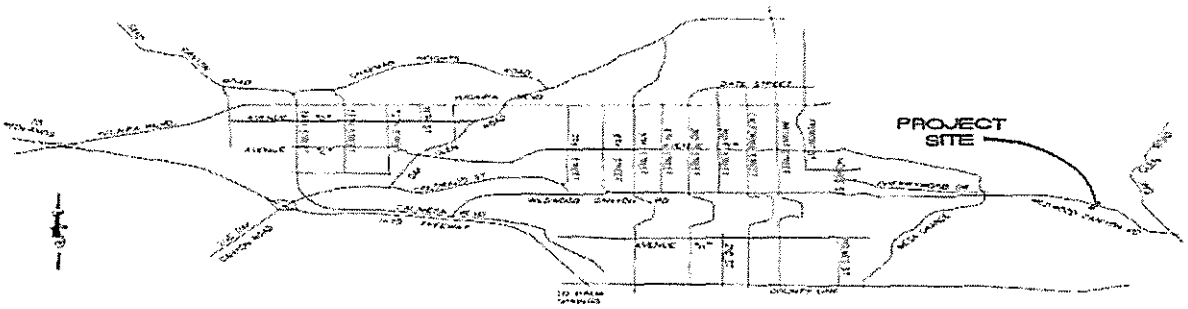


**Confluence of Yucaipa Creek and Wildwood Creek**

The Wildwood Creek Basin 4 Groundwater Recharge and Water Management Proposal was identified in the City's Master Plan of Drainage adopted in an updated version of the plan in 2008 to promote and provide groundwater recharge of natural stream flows, debris control, improved downstream water quality, and environmental restoration and enhancements. The basin is proposed to be a flow-through basin with a capacity of 25 acre-feet. In addition to enhanced recharge, the project will reduce sedimentation and downstream flooding in Wildwood Creek thus providing protection for the existing habitat, including oak trees, along with Wildwood Canyon Road, Wildwood Canyon Park and other public/private property and infrastructure. All of the land within the project site is currently owned by the City of Yucaipa.

**(2) <u>Technical Proposal: Background Data</u>**

PROJECT LOCATION MAP



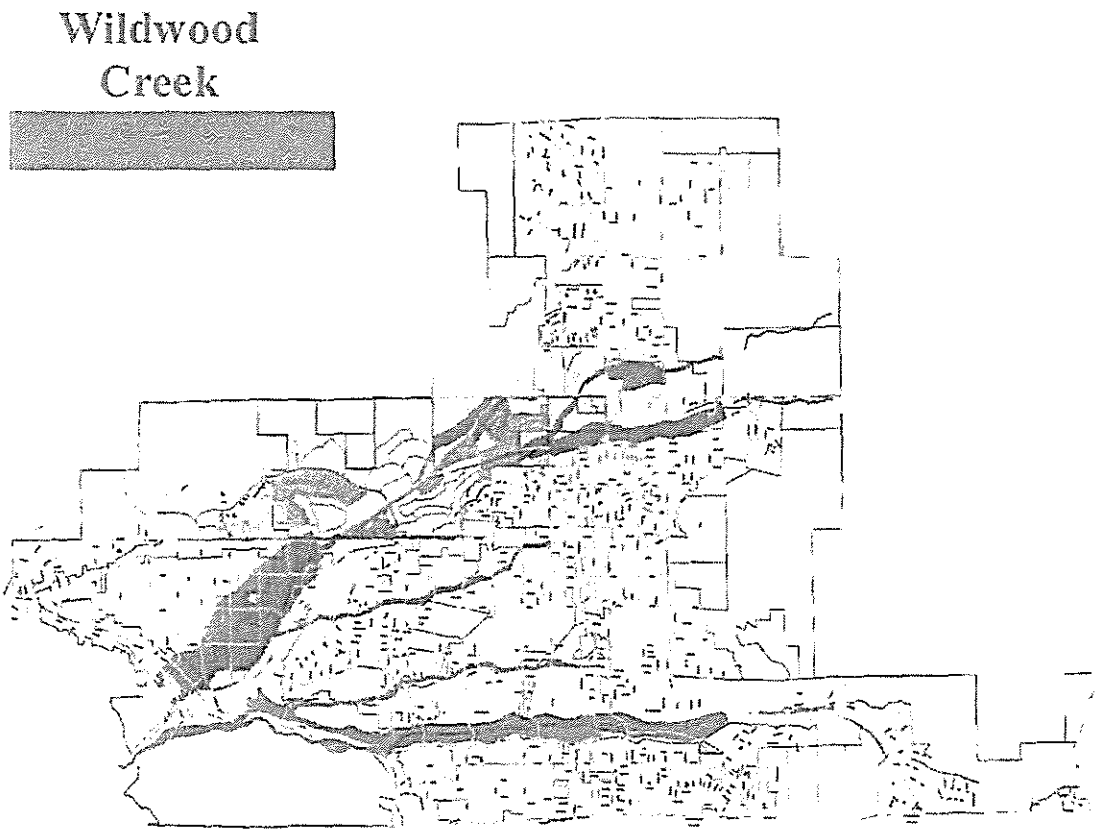

The City of Yucaipa is a community in San Bernardino County, California, incorporated in November 1989 with a population (2013 Census) of 52,536.

Yucaipa Valley Water District (YVWD) is the utility provider for the community, and San Bernardino Valley Municipal Water District (SBVMWD) is the wholesale water provider. With several other communities, Yucaipa is part of the Santa Ana River Water Project Authority (SAWPA). This proposal is a component of the Yucaipa Basin Plan (funded and prepared in part by San Bernardino Valley Municipal Water District, and the City of Yucaipa Master Plan of Drainage, initially prepared by and for the City of Yucaipa in 1993 and updated in 2002, 2008 and 2012.

The proposal is also included in the City of Yucaipa's Draft Updated General Plan (tentative adoption date of April, 2015) and the City of Yucaipa's Draft Updated Local Hazard Mitigation Plan (tentative adoption April, 2015). The Updated Local Hazard Mitigation Plan contains both a Flood Plan Annex and a Climate Action Plan Annex designed to address subcategories of Climate Action Strategies such as drought, extreme heat, greenhouse gas emissions, etc.

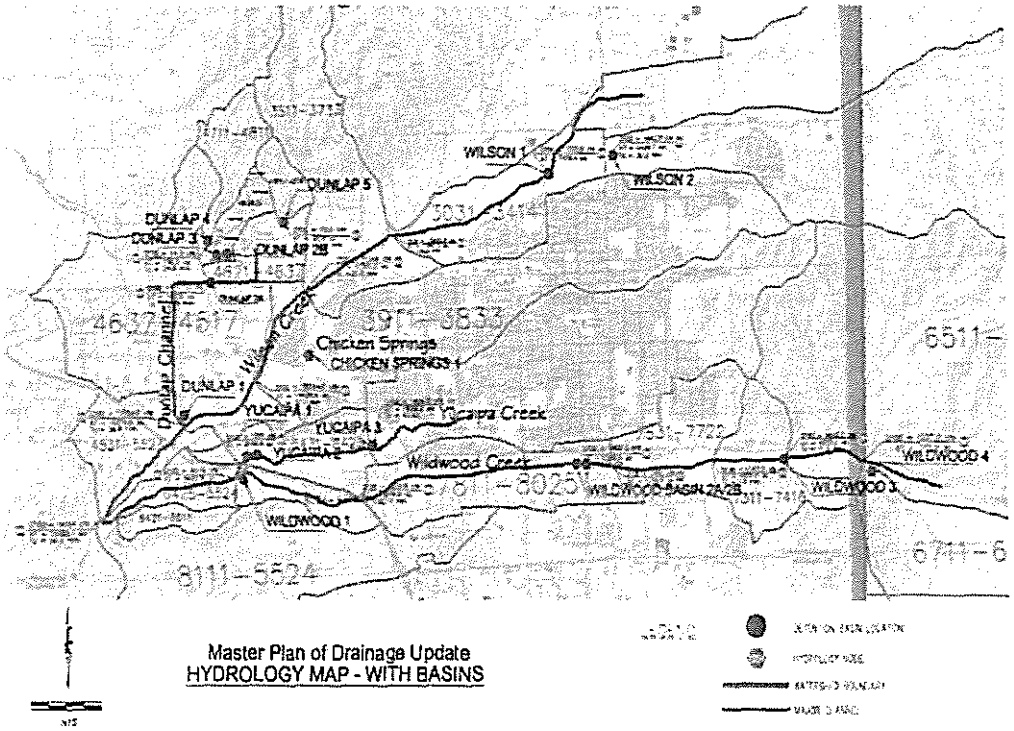
The City of Yucaipa has partnered with YVWD, South Mesa Water Company, Western Heights Water Company, the City of Redlands, San Gorgonio Pass Water Agency and SBVMWD to conduct a study determining the safe yield of the Yucaipa groundwater basins. The study revealed that the groundwater basin (Calimesa) that is underlying the proposed recharge/detention basin is quite extensive with over 120,000 acre-feet of groundwater storage available. A follow-up study was conducted, titled Yucaipa Basins Study which included drilling bore pits to determine the best locations for recharge. The Wildwood Detention Basins, downstream from the Project site, had very good soils characteristics for recharge capability. The proposed site has very similar soils characteristics and therefore, will be a good location for recharging the native rainwater that drains from the local mountains. This project is at the top of the Santa Ana River Watershed, making it the premier location to recharge as is saves energy from offset pumping costs and reduces the amount of sediment carried downstream as the water will be recharged. The SBCFCD recently spent $4,000,000 in removing sediment from their San Timoteo Detention basins which is downstream from this site.

- City of Yucaipa Drainage System




**City of Yucaipa Floodplain**

When the City of Yucaipa incorporated in November 1989, it inherited a complex, extensive and costly beneficial flood plain and since then has been methodically approaching a series of solutions designed and constructed to take advantage of potential flood control issues in rainy seasons to establish groundwater recharge capabilities to address milder winter seasons.




Two of the larger projects (Oak Glen Basins and the Wildwood Creek Basin) have been completed and are meeting objectives initially set forth. Another, the Wilson III Basins Project, is well on its way to funding and construction. The Wildwood Creek Basins are located downstream of this current proposal, and are designed to capture and reclaim stormwaters flowing through Yucaipa from nearby mountainous regions upstream.

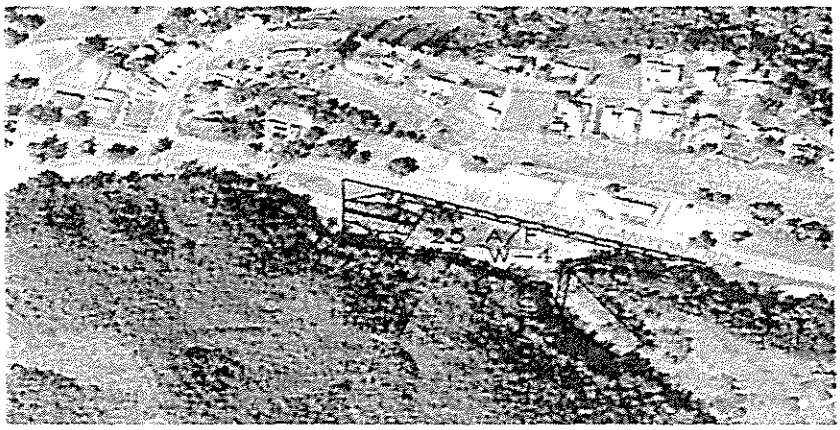
The Wildwood Creek Basin 4 proposal is smaller in scope but similar in purpose to an existing project currently being developed as a result of funding award from the Bureau of Reclamation 2014 WaterSMART grant proposal to construct a groundwater recharge detention basin in Wilson Creek, in the City of Yucaipa.

Wildwood Creek is one of two regional creek systems (the other being Wilson Creek) that collect storm runoff that commences with headwaters in the adjacent San Bernardino Mountains, joins with Wilson Creek in Live Oak Canyon, which in turn flows several miles to a confluence with San Timoteo Creek, flows through the Cities of Redlands and Loma Linda and eventually discharges into the Santa Ana River in the City of San Bernardino.

The City is highly dependent on Wildwood Creek to provide storm water conveyance and associated flood control protection for a large part of the community. At this time a majority of the creek is a graded earthen channel, has limited capacity in some areas, and little or no flood control improvements, supporting the need for new and additional flood control improvements to

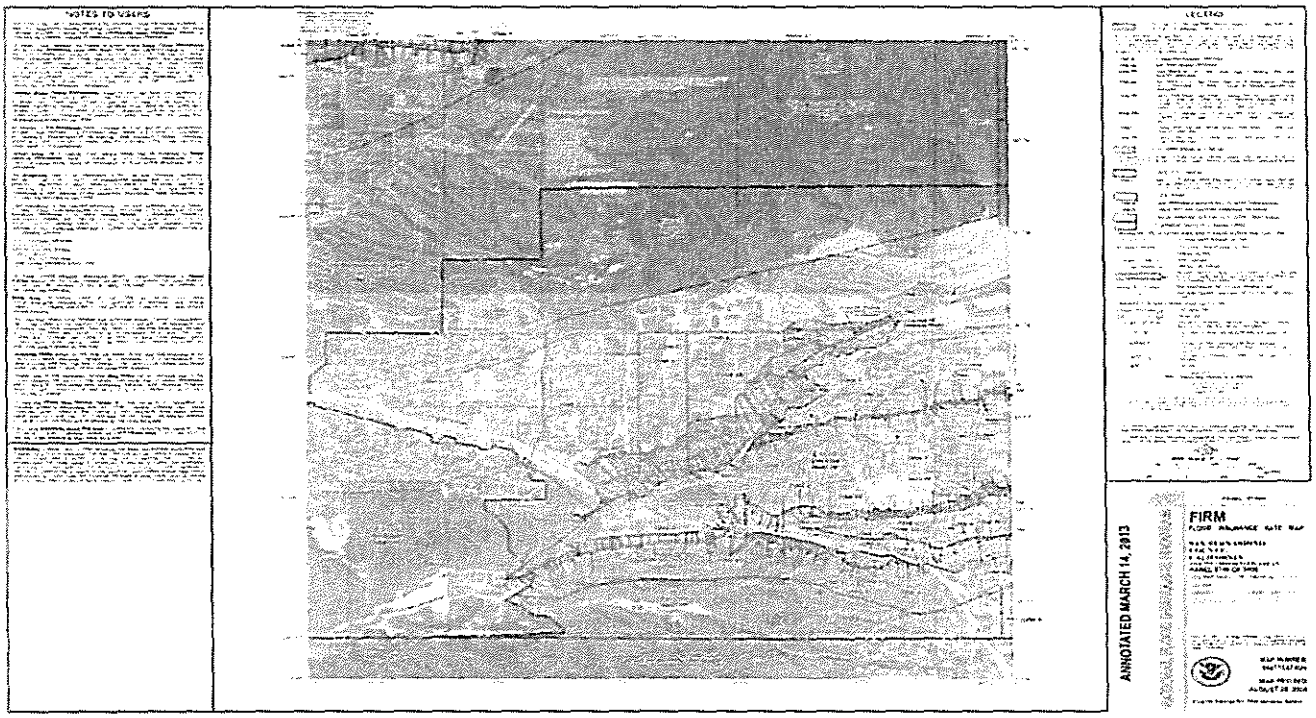
reduce/or eliminate potential flood risk. Wildwood Canyon was cleared of extensive debris after the 1969 floods, resulting in a reasonably straight earthen channel.

As the stream of debris moved out of Wildwood Canyon, it spread out into the Yucaipa Valley area and inundated about 40 homes and business establishments. Debris about 2 feet deep was deposited over an area of about 300 acres. Several streets and many waterlines in Yucaipa Valley were washed out as the debris flow moved westward towards Interstate 10.

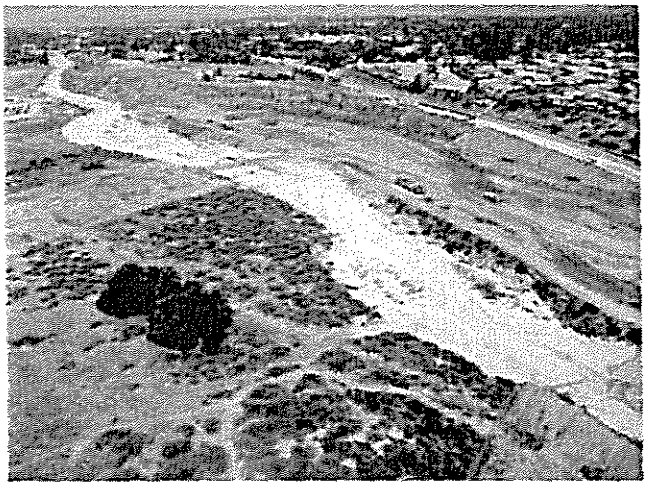


This reach of Wildwood Creek upstream of the newly completed Wildwood Basin, extends from approximately 1,500 feet west of Mesa Grande Drive to approximately 3,500 feet east Mesa Grande Drive to an upstream master plan recharge basin (Wildwood Basin 4) location at the confluence of two canyon tributaries. This area of the creek and surrounding hill sides is forested with coast live oak and has great potential for environmental restoration and enhancement. The restoration project (part of a current Urban Streams Restoration Program grant application) in this area would attempt to focus on the revitalization of the existing riparian vegetation community as with the lower reach of Wildwood Creek, the YVWD's non-potable/recycled water or untreated well water could provide a viable water source to support and sustain environmental restoration and enhancements. Extensions of the existing system infrastructure would be necessary to transport and distribute such non-potable water to the desired areas. The section of creek has little or no channel improvement and has incised slopes that continue to degrade and undermine after significant storm events. The goal for the ecosystem restoration efforts within this reach of the creek will involve a comprehensive examination of the problems contributing to the system degradation and the development of alternative means for their solutions. The intent of restoration in this area would be to partially or fully re-establish the existing creek attributes, including the preservation of numerous ancient oak trees that have or will wash into the degrading creek bed absent any improvements in this area.

Wildwood Creek is an ephemeral stream. As previously noted, this reach of Wildwood Creek upstream of the newly completed Wildwood Basin, extends from Mesa Grande Drive to approximately 3,500 feet east Mesa Grande Drive to an upstream master plan basin (Wildwood Basin 4) location at the confluence of two canyon tributaries. The section of creek has little or no channel improvement and has incised slopes that continue to degrade and undermine after significant storm events. The goal for the ecosystem restoration efforts within this reach of the creek will involve a comprehensive examination of the problems contributing to the system degradation and the development of alternative means for their solutions. The intent of restoration in this area would be to partially or fully re-establish the existing creek attributes, including the preservation of numerous oak trees that have or will wash into the degrading creek bed absent any improvements in this area.




Recent improvements to the Wildwood Creek have included: Reinforced concrete box sections (all weather crossings) at Wildwood Creek at 3rd Street and at Wildwood Creek at Bryant Street. A future all weather crossing is also in the design phase for Wildwood Creek at 6th Place.



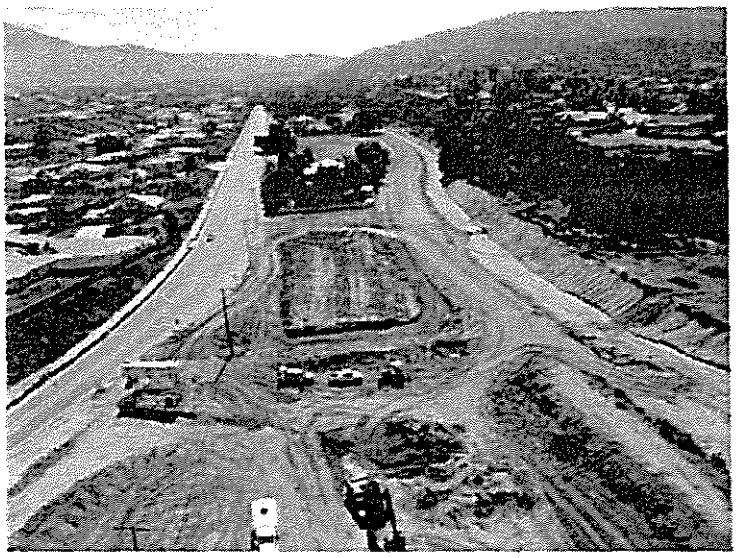
The aforementioned Wildwood Basin Project is located along Wildwood Creek, south of Wildwood Canyon Road and easterly of Holmes Street in the City of Yucaipa, and was awarded the 2014 American Public Works Association – Southern California Chapter – Project of the Year in recognition of the design, mitigation, and groundwater recharge capacity and capabilities associated with its construction.

The primary purpose of the project is to reduce sedimentation and downstream flooding along Wildwood Creek including City roadways, other public infrastructure and private properties. Other project purposes and benefits include groundwater recharge, improved downstream water quality, and implementation of multi-purpose recreational trails.

The tributary drainage area to the Wildwood Basin Project is approximately 4,956 acres (7.74 square miles) and will generate an estimated peak flow of 6,794 cubic feet per second in a 100-

year storm event. The project, in general, included the construction of one de-silting basin, two detention basins, and a natural bottom channel (bio-retention swale) on approximately 25 acres of land in and adjacent to Wildwood Creek. The de-silting basin is sized to have a capacity of approximately 26 acre-feet of storage. The two retention basins, each about 20 feet in depth, are sized with respective storage capacities of 44 and 43 acre-feet. The combined volumes of the basins is sufficient to reduce peak runoff in a 100-year storm event by approximately 25%, which will provide for substantial reduction of downstream flood risk to commercial, residential and public properties and substantial additional groundwater resources in synchronization with annual storm flows.

- **Larger Wildwood Basins Under Construction**



Involved agencies include the City of Yucaipa, San Bernardino County Flood Control District, and Army Corps. The project is fully described in the City of Yucaipa's 2013 Master Plan of Drainage Update, the Hydrology and Hydraulics Study has been approved by both the Army Corps and San Bernardino County Flood Control District, the Corps and the City of Yucaipa have approved a Fiscal Cost Share Agreement for the Santa Ana River Tributary Study, and the agencies are in process with the Study with no defined development plans at this time.

(3) Technical Proposal: Project Description:

Wildwood Basin 4 is an integral component of the Recharge Investigation of the Yucaipa Ground Water Basin (Yucaipa Basin Study), prepared for the SBVMWD and completed in November of 2014 in partnership with the City of Yucaipa and other local agencies. The Yucaipa Basin Study also supports the City of Yucaipa Master Plan of Drainage, undated in 2012.

The following is the Technical Memorandum – Wildwood Creek Optimization Study (March 2014) developed by RBF Consulting, a Company of Michael Baker, in partnership with the City and the Army Corps of Engineers focusing on the Wildwood Creek System as a part of a feasibility study for Ecosystem Habitat Restoration.

The study places emphasis on Basin 4 as a primarily debris basin. However, because it is located at the confluence of Wildwood Creek and Yucaipa Creek, which drains from higher elevations and collects significant stormwater flows, Basin 4 has the value-added capability to slow the

flow of storm waters and increase groundwater capacity between Basin 4 and the larger Wildwood Basins.

- **Larger Wildwood Basins in Progress**

With channel improvements to include ungrouted rip rap (rock) to stabilize the channel flow line grades and slopes, flows will be gradually metered, capturing additional volume as flow continues to the larger Wildwood Basins project, completed in 2009.

Following is the Technical Memorandum:

*"This study consists of a combination of hydrologic and hydraulic calculations to identify the most feasible and/or economical watershed-wide drainage solution that works with the City's Master Plan of Drainage and future development projects. This iterative process involved completing several evaluations of different combinations of detention basin routing and proposed downstream channel and culvert improvements. The channel improvements focused on the reach of Wildwood Creek from Wildwood Canyon Road to confluence with Live Oak Canyon Road.*

*The first order of the study was to identify a baseline condition for the existing Wildwood Creek channel facilities and basins using the San Bernardino County Flood Control District (SBCFCD) Hydrology methodology. This was performed to identify a "target flowrate", where the channel system between Wildwood Canyon Road and Live Oak Canyon begins to fail. A series of potential basins upstream of these locations (as highlighted in the MPD) were further evaluated in conjunction with improvements within the channel itself to identify the most feasible watershed drainage solution.*

***Hydrology:***
*The hydrology for this study was performed according to the San Bernardino County methodology, or the hydrology established in the approved 2012 MPD Update Addendum 1. Baseline hydrology was completed with the existing Wildwood 3 Detention basin, located along the creek at Holmes Street. The basin rating curve was established using the "Wildwood Basin Design Report" by Webb Associates (Revised November 2009), which consists of a combination of inline (flow-though) and offline (flow-by) basins. This basin consists of three sub-basins, with the first being an in-line facility equipped with a bypass channel. Large flows that top the first basin, are routed into two additional in-line basins. The first basin diversion functions to direct low flows around the other two basins where the confluence just downstream.*

*Regional hydrology models were prepared with concentration points located at four locations along Wildwood Creek; 1) Holmes Street., 2) California Street, 3) Interstate 10 freeway, and 4)*

*confluence with Yucaipa Creek. These nodes were used for comparison and also for the hydraulic calculations for the Wildwood Creek channel optimization.*

*Several potential detention basin locations were initially considered (per the MPD) to attenuate peak flows. These basins included Wildwood 4 (at Wildwood Canyon Road), Wildwood 2a/2b (at California Street), Wildwood 1 (upstream of Yucaipa and Wildwood Creek confluence), and Yucaipa 3 (at 8th Street, within Yucaipa Creek Watershed). These basins are in addition to the existing Wildwood 3 (at Holmes Street).*

*As part of the optimization study, each one of these basins were evaluated to maximize their respective peak flow attenuations. Combinations of all basins were also evaluated to understand how they performed in connection with each other to identify, or maximize, total peak flow reduction as a system of basins. Although many options and combinations of detention basins were considered, the final evaluation was condensed down to five (5) options. Each option consisted of differing combinations of basins, and their sizes. The options are listed below:*

***Option 1:*** *Consists of optimizing basins WW4, and WW2b only. Basin WW2b is modeled as a flow-by basin and WW4 and WW3 were modeled as flow-thru basins.*

***Option 2:*** *Consists of optimizing basins WW4 WW2b, WW1 and Y3. Basin WW2b and WW1 are modeled as a flow-by basin and WW4, WW3, and Y3 is modeled as a flow-thru.*

***Option 3:*** *- Consists of optimizing basins WW1 and Y3 only. WW1 is modeled as flow-by basin and Y1 is modeled as flow-thru. WW4 assumed as a debris basin.*

***Option 4:*** *- Consists of optimizing basins WW2a and WW2b only. These basins were modeled as flow-through. WW4 assumed as a debris basin.*

***Option 5*** *– Consists of optimizing basins WW2b, WW1 and Y3. WW2b and Y3 are modeled as flow-thru and WW1 as flow-by. WW4 assumed as a debris basin.*

*Baseline Conditions – Existing conditions, or the "do nothing" alternative. This option focuses on optimizing the channel improvements only.*

*Several basin configurations were evaluated for each option. Some of the configurations considered include the following:*

*Wildwood 1 (Used in Option 2, 3 and 5)*
*Storage: 42.5 ac-ft (Offline Basin)*
*Max Depth: 10-ft*
*Outlet Culvert: 3 – 54" RCP*

*Wildwood 2a (Used in Option 4)*
*Storage: 32 ac-ft (Modified In-line Basin)*
*Max Depth: 10-ft*
*Outlet Culvert: Triple 10'W x 10'H RCB (Spillway at 6-ft)*

*Wildwood 2b (Configuration 1 - Used in Option 1 and 2)*
*Storage: 38.4 ac-ft (off-line basin)*
*Max Depth: 8-ft*
*Outlet Culvert: 4-48" RCP in-line with the existing channel. (Spillway at 7-ft)*

*Wildwood 2b (Configuration 2 - Used in Option 4 and 5)*
*Storage: 44 ac-ft (Modified In-line Basin) includes channel area*
*Max Depth: 10-ft*
*Outlet Culvert: Triple 10'W x 10'H RCB (Spillway at 6-ft)*

*Wildwood 3 (Used in all options) – Existing Basin*
*Rating curve obtained from the Wildwood Basin Design Report*

***Wildwood 4 (As a flood attenuation basin: Used in Option 1 and 2, otherwise used as debris basin)***
***This basin is located along Wildwood Creek, south of Wildwood View Drive. Upstream of WW-3 Basin.***
***Storage: 38.4 ac-ft***
***Max Depth: 10-ft***
***Outlet Culvert: 4-48" RCP***

*Yucaipa 3 (Used in Option 2, 3 and 5)*
*Storage: 45 ac-ft*
*Max Depth: 13-ft*
*This proposed basin is similar configuration to the approved MPD Addendum 1.*

***Nodes were established along Wildwood Creek for scenario, or "Option" comparison. The node locations were identified at:***
*1 – Holmes Street*
*2 – California Street*
*3 – Interstate 10*
***4 – Yucaipa Creek Confluence***

*For each Option, hydrology models were calculated using the appropriate depth-area reductions for the tributary watersheds. Each basin was evaluated based on these parameters for each option. A bulking factor of 1.30 were used for Wildwood Creek for the entire channel section from Wildwood Canyon road to confluence with Yucaipa Creek per the findings of the Wildwood 3 Basin design report prepared by Exponent.*

*RBF evaluated an option maximizing the proposed detention basins. This was completed in order to understand the "maximum attenuation" possible. This alternative included Wildwood 1, Wildwood 2b, Yucaipa 3, and the existing Wildwood detention basins. Coordinating with the*

*City, concept layouts for these basins were maximized, including sizes that would require right-of-way purchases. Several basin alignments and outlet configurations were evaluated to yield the maximize attenuation at each site. Flow through and flow by, and combinations of both, where evaluated at each basin site.*

*Once the maximum basin attenuation alternative and the existing capacity of the channel are evaluated, the iterative calculations begin.*

*Several basin configurations "Options" were created for comparison. These options consist of only a few of the many scenarios run but were selected due to their relevance and ease of comparison in identifying how each basin impacted the system flows.*

***Table 1: Wildwood Creek Options 100-Year Flow Results***

| MPD Node | Location | Baseline | Option 1 | Option 2 | Option 3 | Option 4 | Option 5 |
|---|---|---|---|---|---|---|---|
| 7416 | Holmes Street | 3,072 | 3,001 | 3,001 | 3,072 | 3,072 | 3,072 |
| 7821 | California Street | 3,499 | 3,222 | 3,222 | 3,499 | 3,137 | 3,242 |
| 8025 | At I-10 | 4,085 | - | - | - | 3,402 | 3,646 |
| 8311 | At Yucaipa Creek | 5,865 | 5,654 | 5,144 | 5,342 | - | 5,085 |

*Baseline – The baseline condition consists of only Wildwood 3 Basin.*

***Channel Hydraulics***

*Using the USACE topography, cross sections were cut between Wildwood Canyon Road and Live Oak Canyon Road for the HEC-RAS model development. An existing condition capacity analysis was performed to identify the sensitive (or worst capacity) locations within the creek. The initial target flowrate is the existing channel capacity, assuming the culvert crossing at Calimesa Blvd and Live Oak Canyon would be upsized. This flowrate was used as the starting point of the detention basin evaluations. For example, if the maximized detention basins could reduce the 100-year peak flowrate to the "target" flowrate in Wildwood Creek, theoretically, no improvements would need to be performed in Wildwood Creek. As a result, the channel improvement costs would be zero, but the basin costs would potentially be very high.*

*Wildwood Creek from the Wildwood Canyon Road to Live Oak Canyon Road was divided into five reaches for analysis purposes based on the flow characteristics observed in the model. They are as follows:*

- *Reach 1: Live Oak Canyon to I-10*
- *Reach 2: I-10 to 6th Street*
- *Reach 3: 6th Street – 5th Street*
- *Reach 4: 5th Street to California Street*
- *Reach 5: California Street to Bryant Street*

*Using the resulting flowrates from the hydrology scenarios (multiple basin configurations), HEC-RAS calculations were performed. Where flows breached the channel, improvements were proposed in the model to contain the peak flows. Each scenario resulted in a cost for channel versus basin improvements. These totals were summed to yield a watershed improvement total cost. Multiple iterations were performed using various scenarios to yield the multiple facility costs for City review and Option selection.*

*All hydraulic calculations were performed per the SBCFCD guidelines including freeboard requirements for structures and channel sections. The resulting channel improvements were evaluated for costs, which included excavation, material type, and right-of-way purchase.*

*Channel geometries were evaluated based on existing footprint. When possible, natural linings were used for entire sections or inverts.*

*The HEC-RAS models were run using several differing Manning's roughness coefficients, depending on what proposed material was to be used. The evaluation resulted in following sections:*

- *RC Rectangular*
- *Soil Cement fully lined*
- *Natural or Earthen extension of side slope.*

*Each proposed section was evaluated with a 3' freeboard section. In some cases, less freeboard was found, but in every case, more than 2' of freeboard was established.*

***Results***

*The flow results in Table 1 reflect the alternative for optimizing the basins within the Wildwood Creek watershed. Option 5 is the preferred alternative. This alternative includes implementing a 44 ac-ft basin at California Street (WW-2b), 43 ac-ft basin at the confluence with Yucaipa Creek (WW-1) and Yucaipa 3 basin along Yucaipa Creek. WW-2b was modeled as in in-line facility but can be constructed off-line from the main channel by allowing larger flows to overtop the left bank (looking downstream). These three basins provided the most feasible results when coupled with downstream channel improvements.*

*Wildwood 4 is located along Wildwood Creek, south of Wildwood View Drive. This basin did not provide large watershed attenuation relative to the estimated cost and major issues with constructability. The City is considering using this location as a debris basin to capture some of the debris that currently makes its way into the newly constructed Wildwood 3 Basin. Based on preliminary site evaluations, a 7 acre-foot basin could be excavated below the surface of the existing channel at the fork between Wildwood Creek and the tributary. Lowering the invert of the channel to capture sediment will not impact the hydraulic performance of the channel. Another option is adding berms within the channel to capture sediment, although not suggested for this location, since the velocities are relatively fast and could cause flows to jump over the banks, causing flooding along the roadway and adjacent houses.*

*Based on the Fire Factor of 4.0, the estimated debris yield in the Wildwood Creek watershed was 5,328,204 cf (per the "Wildwood Creek Eco-System Restoration Project, Technical Hydrology Study" prepared by RBF Consulting in 2013. The previously calculated Bulking Factor for the flows tributary to Wildwood 3 basin was 1.37. With 7 acres of debris capture, or approximately 300,000 cf, this factor could theoretically be reduced to 1.30. The capture capacity of this facility should be refined during the design process.*

*The Wildwood 2a basin has been allocated as an equestrian center per the requirement of the City. As a result, this basin was not considered in the study.*

*Initial channel hydraulic calculations revealed the existing capacity of the channel is approximately 3,000 cfs upstream of Calimesa Blvd. The existing culvert under Calimesa Blvd is undersized as well with a capacity of approximately 1,200 cfs.*

*In general, it was found that channel improvements along Wildwood Creek between California Street and Live Oak Canyon were required even during maximum detention upstream. The cost associated with the channel improvements for reduced flows upstream versus non-reduced flow scenarios were relatively similar compared to the construction costs of the upstream detention basins.*

*Based on the hydrology and hydraulic results for each scenario, the selected alternative included the geometries listed in Table 2 for Wilson Creek between California Street and Live Oak Canyon.*

| *Table 2: Wildwood Creek Optimized Channel Sections (Option 5 – Recommended Alternative)* | | |
|---|---|---|
| ***HECRAS Channel Reach*** | ***Segment*** | ***Description*** |
| *1* | *Live Oak Canyon to I-10* | *Raise and re-grade channel at 2.5% slope. 26'(W)x14'(H) soil-cement trapezoidal channel (z=1)* |
| *1* | *I-10 Culvert* | *Add additional cell to Triple 12'(W)x10'(H) RCB* |
| *1* | *Calimesa Blvd Culvert* | *Triple 12'(W)x10'(H) RCB* |
| *2* | *Calimesa Blvd to 6th Place* | *Soil Cement Trap channel, 60'(W) x 8.5'(H), z=1. 2'-3' Levee on left and right bank for freeboard* |
| *3* | *6th Place to 5th Street* | *Soil Cement Trap channel, 60'(W) x 8.5'(H), z=1. 2'-3' Levee on left and right bank for freeboard* |
| *4* | *5th Street to 3rd Street* | *Soil Cement Trap channel, 30'(W) x 10'(H), z=2.5.* |
| *4* | *Sta. 18457* | *Soil Cement Trap channel, 30'(W) x 10'(H), z=2.5. 4' High Levee on the left and right bank – for freeboard* |
| *4* | *3rd Street to California Street* | *Soil Cement Trap channel, 30'(W) x 10'(H), z=2.* |
| *4* | *Sta. 23244, Sta 22844, Sta 22654, Sta 21403* | *2'-3' High Levee on the left and right bank – for freeboard* |

*The preliminary comparison for construction costs can be seen in the Appendix for all Options. These values are just preliminary and were used for alternative comparison purposes (Table 3). These costs do not include the estimated construction costs of the WW4 debris basin.*

| *Table 3: Preliminary Cost Summary* | | | |
|---|---|---|---|
| ***Option*** | ***Basins*** | ***Channel Improvements*** | ***Total*** |
| ***MPD*** | - | *$16,879,340* | *$16,880,000* |
| *Baseline* | | *$12,591,000* | |
| *1* | *$4,407,511* | *$9,436,000* | *$13,840,000* |
| *2* | *$9,515,325* | *$9,436,000* | *$18,950,000* |
| *3* | *$5,107,813* | *$9,437,000* | *$14,540,000* |
| *4* | *$7,618,104* | *$9,422,000* | *$17,040,000* |
| *5* | *$9,023,667* | *$9,388,000* | *$18,410,000* |

*The County currently has preliminary plans for approximately 7,700 linear feet of channel improvements from 5th Street up to just past Bryant Street. The plans call for a hardened engineered trapezoidal channel. Since these plans are very preliminary, they were not considered in the evaluation of the costs, but they do match the sections proposed in this study (hardened side slopes & natural bottom).*

*Based on the results from a cost summary perspective, the most cost effective solution was found to be no basins, and only channel improvements. The reason being, that channel improvements would need to be constructed regardless of the basin improvements. This is primarily a result of the steepness of the channel and the locations within the watershed of the future proposed basin locations.*

*Implementation of detention basins can provide benefits in other ways, such as; groundwater replenishment, multi-use open space, habitat restoration, and potential floodplain mapping benefits. These benefits cannot be conveyed monetarily, but rather on a project specific basis. For example, Wildwood 2b basin was identified by the City's as a high priority project to assist in providing groundwater replenishment and provide a multiple-use open space for a sports facility. The City also requested this facility be constructed as a flow-by facility, to keep the sports facilities dry during smaller storm events. Designing this basin with a lower channel and restricted outlet culvert, can allow larger flows to backup and overtop into the sport fields for retention.*

*Option 5 shows that the combination of existing and proposed basins, in combination with downstream channel improvements, will result in a reduction of peak flows of approximately 13% at Yucaipa Boulevard. Other benefits to the upstream basins include reduced sedimentation downstream, groundwater recharge of natural stream flows, improved downstream water quality, economic development opportunities and environmental restoration and enhancements.*

*The City is currently moving forward with improvement plans for the Wildwood 2b basin. Plans for a soccer fields is proposed for this basin area. These potential cost savings will not be accurately identified until a detailed site plan and analysis is performed during the design process. Consequently, Option 5, which includes the implementation of the Wildwood 2b and Wildwood 1 basins, has been identified as the recommended alternative. Included in this alternative would be the replacement of WW4 flood attenuation basin with a proposed 7 ac-ft debris basin. "*

The Wildwood 4 Basin has been planned as part of the City's ongoing effort to provide flood control improvements and ground water recharge opportunities in high priority locations throughout the City. The project was initially identified in the City's Master Plan of Drainage update that was adopted by the City Council in 2008.

The project is conceptually planned to provide for multiple purposes and benefits for the Yucaipa community including: The reduction of flooding along Wildwood Creek downstream of the project; the collection of earthen debris and sediment in the basin to improve downstream channels and culverts; providing for groundwater recharge of the Yucaipa Groundwater Basin

through the percolation of natural stream flows and also possibly imported waters; providing open space in the community and habitat for a wide variety of native plants and animals; and providing passive recreation in the form of multi-use trails.

The basin will be designed to capture water runoff and sediments from a 722 acre tributary drainage area. The basin will be designed to reduce the peak flow in a 100-year storm event to meet the Master Plan of Drainage numbers, thereby lessening the amount of potentially damage flow in downstream areas of the community.

The City of Yucaipa believes that similar benefits will accrue and support the considerably larger downstream Wildwood Basins Project, which included

- Phase I Fully Operational, Enhanced Flood and Sediment Control – 2011/2012 Winter Storm Season
- Several properties completely removed from FEMA flood zoning designations
- Flood zoning along much of Wildwood Creek reduced in width, reducing the burden on many landowners to carry and pay for flood insurance
- Application prepared to FEMA for revisions to flood maps for the area.
- Habitat protection
- Multimodal trails connectivity and improvements completed in 2014

**(4) <u>Evaluation Criteria</u>**

## 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: Quantifiable Water Savings*

*Up to **24 points** may be allocated based on the quantifiable water savings expected as a result of the project.*

**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:

- What is the applicant's average annual acre-feet of water supply?
  - Where is that water currently going (e.g., back to the stream, spilled at the end of the ditch, seeping into the ground, etc.)?
- Where will the conserved water go?

*Please include a specific quantifiable water savings estimate; do not include a range of potential water savings.*

(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.

(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.

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

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

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

The City of Yucaipa's water supply portfolio is comprised of local groundwater (60%), imported water (28%), recycled water (9%), and local surface water (3%). The City's 2010 water demand was 11,371 acre-feet, of which 3,184 acre-feet was met through imported water supplies. (*2010 YVWD UWMP pp. 48 to 49*) Annual demand is expected to reach 13,593 acre-feet this year. (*2010 YVWD UWMP pp. 36 to 37*) To meet this demand the City will need to import approximately 3,806 acre-feet costly State Water Project water. The proposed Project creates new groundwater yield through stormwater capture and recharge.

Stormwater runoff is collected in the Wildwood Creek's 773 acre tributary area and is conveyed through the natural, unlined creek. The proposed Project will construct a 25 acre-foot retention basin along the Wildwood Creek to capture and recharge a portion of this stormwater runoff that is currently lost to the Santa Ana River, and ultimately the Pacific Ocean. The captured runoff will collect in the proposed Wildwood Basin 4 and percolate into the Wildwood groundwater basin. Recharged stormwater will increase local groundwater supplies, while offsetting and decreasing the dependence on supplemental water supplies (i.e. State Water Project). The Project will capture and recharge approximately 250 acre-feet of stormwater during an average rainfall year, as described below.

Annual storm runoff for the Project's 773 acre tributary area is estimating using the historic annual rainfall of 18 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 661 acre-feet of storm water is expected to reach the Basins annually for recharge. The proposed total basin recharge capacity is approximately 25 acre-feet. Historically, there are multiple rainfall events per year in this drainage tributary. As such, it is assumed that 10 rainfall events per year will deliver enough water to fill the Wildwood basin 4. More specifically, the Wildwood Basin 4 will capture and recharge 38% of Wildwood Creek flows, after accounting for losses; which is conservative for the estimated stormwater runoff that will reach the basin annually during average rainfall years. Without the project, no new yield will be captured with projected amounts as presented above.

Water saving will be verified based on field readings by City staff after storm events. Additionally, as recharge continues within the Wildwood groundwater basin, groundwater elevation will respond.

**City of Yucaipa Wildwood Basin 4**

**Project Stormwater Recharge Estimate**

| Basin | Drainage Tributary Area (ac) | Average Rainfall (in) | Loss 1.) (%) | Annual Wildwood Creek Flow (ac-ft) | Annual Storm Water Recharge 2.) (ac-ft) |
|---|---|---|---|---|---|
| Wildwood Basin 4 | 773 | 18 | 43% | 661 | 250 |

**Notes:**

1.) Based on Chino Basin Watermaster, 20101 Recharge Master Plan

2.) There is a total of 661 ac-ft of storm water runoff that will flow to the Wildwood Basin 4 annually. The Wildwood Basin 4 storage capacity is 25 ac-ft. historically, there are multiple rainfall events per year in this drainage tributary. As such, it is assumed that 10 rainfall events per year will deliver enough water to fill the Wildwood Basin 4. More specifically, the Wildwood Basin 4 will capture and recharge 38% of Wildwood Creek flows, after accounting for evapotranspiration and infiltration losses.

### *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:*

$$\frac{\text{Estimated Amount of Water Conserved}}{\text{Average Annual Water Supply}}$$

As described above, the City's 2010 water supplies totaled 11,371 acre-feet and is expected to increase to reach 13,593 acre-feet this year. The proposed Project is expected to conserve 250 acre-feet annually. Therefore, the percentage of total water supply conserved is 2% on average.

$$2010\ Total\ Supply\ Conserved = \frac{250\ acre-feet}{11{,}371\ acre-feet} = 2.2\%$$

$$2015\ Total\ Supply\ Conserved = \frac{250\ acre-feet}{13{,}593\ acre-feet} = 1.8\%$$

## V.A.2 EVALUATION CRITERION B: Energy-Water Nexus 16 Points)

*Up to **16 points** may be awarded based on the extent to which the project increases the use of renewable energy or otherwise results in increased energy efficiency.*

For projects that include construction or installation of renewable energy components, please respond to Subcriterion No. B.1: Implementing Renewable Energy Projects Related to Water Management and Delivery. If the project does not implement a renewable energy project but will increase energy efficiency, please respond to Subcriterion No. B.: Increasing Energy Efficiency in Water Management. If the project has separate components that will result in both implementing a renewable energy project and increasing energy efficiency, an applicant may respond to both. However, an applicant may receive no more than16 points total under both Subcriteria No. B.1 and B.2.

The Project provides for reduction in energy consumption and greenhouse gas emissions through development of local water supplies that eliminates the need for imported water to be delivered from the Bay-Delta of the same quantity. The Project conserves local water reducing dependence on imported water in the amount of approximately 250 acre-feet per year. By avoiding delivery through the State Water Project system, a significant reduction in energy and greenhouse gas emissions is attained. According to studies by Southern California Edison and University of California, Santa Barbara, the energy required to deliver State Water Project water to Southern California is 3,519 kWh per acre-foot and 3,000 kWh per acre-foot, respectively. The pumping cost is estimated to be 36,500 kWh per year. Therefore, by reducing imported water supplies by 250 acre-feet per year, the proposed Project will save an average of 778,375 kWh each year, see attached table.

Additionally, that energy savings has quantifiable emissions reductions savings. Using the recommended conversion unit amount of 0.0004 kWh to tons of CO2, green house gas emissions reduction of approximately 334 tons $CO_2$ per year for the Project will be achieved. The emissions reduction is equal to removing 777 barrels of oil from consumption. Three different sources and conversion factors were used to ensure accuracy, as shown on the following table.

**City of Yucaipa**

**Wildwood Basin 4 Project**

**Energy Savings**

| **Energy Required to bring SWP Water to Southern California** | **Annual Storm Water Recharge** | **Annual Energy Savings** |
|---|---|---|
| (kWh/ac-ft | (ac-ft) | kWh/Year |
| 3,373 | 250 | 843,250 |
| 2,854 | 250 | 713,500 |

**AVERAGE:** **778,575**

### *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. **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).

**City of Yucaipa**
**Wildwood Basin 4 Project**
**Green House Gas Calculations**

| Annual Energy Savings | Conversion Factor | Total Green House Gas Reduced (4) |
|---|---|---|
| KWh/Year | kWh to TonsCO2 | TonsCO2/Yr) |
| 778,375 | 0.000400 | 311 (1) |
| 778,375 | 0.000439 | 341 (2) |
| 778,375 | 0.000400 | 311 (3) |

**AVERAGE: 321**

**Notes:**

1.) Per California Air Recource 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 250 AFY

V.A.3 EVALUATION CRITERION C: Benefits to Endangered Species (12 points)

*Up to **12 points** may be awarded for projects that will bnefit federally-recognized candidate species or up to **12 points** may be awarded for projects expected to accelerate the recovery of threatened or endangered species, or addressing designated critical habitat.*

For projects that will directly benefit *federally-recognized candidate species*, please include the following elements: **NOT APPLICABLE**

- What is the relationship of the species to water supply?
- What is the extent to which the proposed project would reduce the likelihood of listing or would otherwise improve the status of the species?

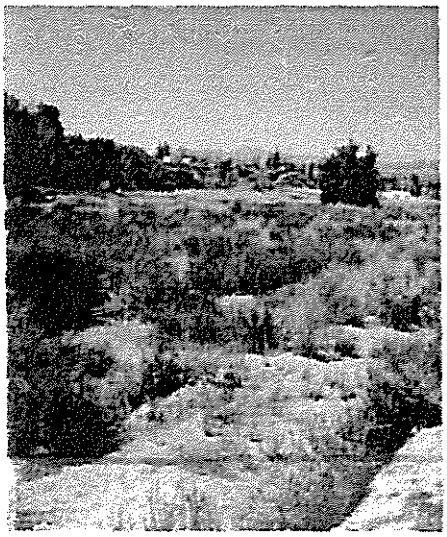
For projects that will directly accelerate the recovery of *threatened or endangered species or address designated critical habitats*, please include the following elements:

(1) How is the species adversely affected by a Reclamation project?

(2) Is the species subject to a recovery plan or conservation plan under the ESA?

(3) What is the extent to which the proposed project would reduce the likelihood of listing or would otherwise improve the status of the species?

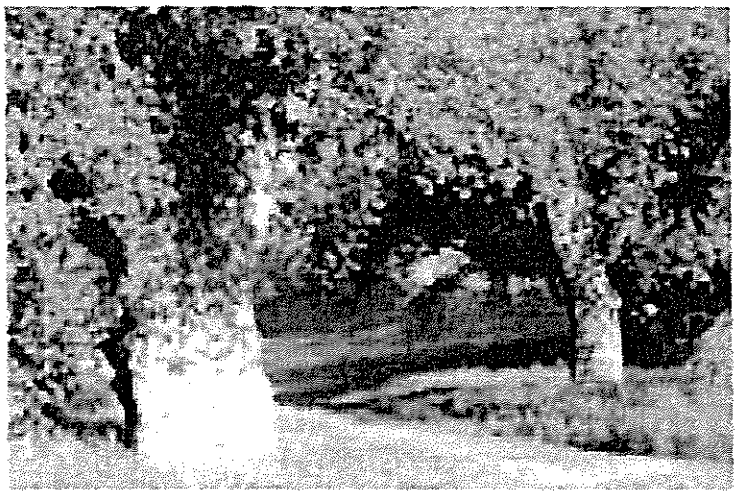
Projects that benefit both federally-recognized candidate species and federally- listed threatened or endangered species or designated critical habitat will receive additional consideration under this criterion. Please see <www.fws.gov/ endangered/index.html> for a complete listing of federally-recognized candidate species and federally-listed threatened or endangered species in your area.



Significant habitat is at risk if this project does not occur. A portion of Wildwood Creek lies within Wildwood Canyon State Park (established in 2003), and flows adjacent to Yucaipa's Wildwood (city) Park. According to the State's website, "After a flood threatened developers' plans to build subdivisions, California State Parks (supported by local conservationists) acquired Wildwood Canyon's 900 acres". A dedication ceremony was held on May 9, 2003. State Park's website continues, "Wildwood Canyon State Park currently consists of 900 acres in east Yucaipa and is home to wild animals, ancient oaks, wide open wildlands, trails and, soon, facilities for the public to enjoy the land's splendor".

California State Parks has determined: Species dependent upon the habitat include California quail, western meadowlark, towhee, phainopepla, red-tailed hawk, Bewick's wren, Bullock's oriole and white-tailed kit. Other bird species found include the Cooper's hawk, sharp-shinned hawk and rufous-crowned sparrow. The San Diego pocket mouse found at Wildwood is a mammal species of special concern – its population is declining due to habitat loss or breeding problems. Visitors may also see the deer mouse, cactus deed mouse, California vole and dusky-footed wood rat. Mule deer and desert cottontail share Wildwood Canyon with bobcats, black bears, gray foxes and skunks. Cougars use the canyon as a travel corridor. Reptiles include several types of lizards, the coastal western whiptail, western skink and California whipsnake. The red-diamond rattlesnake is a reptile species of special concern.

State Parks also affirms that the dominant plant community is Riversidian sage scrub, with valley grasslands present in most open areas. Interior live oaks (Quercus wislizenii) and sycamore woodlands grow along drainages and canyon bottoms. The oaks appear to be 150 to 250 years old; in some canyons the branches have interlaced so thickly that they form a welcome shade canopy. Dominant plants found among the chamise chaparral are scrub oak, California lilacs, sage varieties, buckwheat, monkey flower, Lord's candle and silk tassel bush.



If this project does not occur, the aforementioned habitat is significantly threatened. One large storm could render the loss of numerous additional ancient oaks. Many large, ancient oaks have fallen during recent storms where the creek has scoured the banks. The oaks and similar trees provide safety, shelter, and migratory potential that would be significant interrupted. Much of Yucaipa's habitat could be threatened, for that matter, considering the interdependency of the City's Master Drainage. Oaks, for example, frame Yucaipa and the surrounding area: Oak Glen Creek Basins, Live Oak Canyon, Oak Glen (tourist attraction), Oak Glen Road.

Insofar as Wildwood Creek, thousands of lineal feet of embankment and countless trees were lost in winter storm events. Recent storms occurring in December 2014 again threatened habitat and created additional stress upon the watershed. Photos dated and attached are examples of the types of flows that can occur from a mild- to moderate storm system. January of 2010 storms and subsequent December 2010/January 2011 winter storm saw destruction and erosion following fires that burned the watershed tributary areas in 2009. Prior to that time the last major event affecting the entire Wildwood Creek watershed area was the 1969 flood were major damage occurred in this reach of channel. Although California is officially in a drought, it is important to consider that this area's average annual rainfall is 14 inches. Given the current and

projected length of drought, to facilitate the restoration and enhancement of vegetal growth along the channel and in the widened areas, the City proposes to utilize non-potable/recycled water distribution system that is located near Wildwood Creek. Extensions of the existing system infrastructure would be necessary to transport and distribute such non-potable water to the desired areas.

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

*Up to **12 points** may be awarded for projects that propose developing 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.*

**NOT APPLICABLE.**

### *Subcriterion E.1: Addressing Adaptation Strategies in a WaterSMART Basin Study*

*Up to **14 points** may be awarded for projects that address an adaptation strategy identified **in a completed WaterSMART Basin Study.***

*Proposals that provide a detailed description of how a project is addressing an adaptation strategy specifically identified in a completed Basin Study (i.e., a strategy to mitigate the impacts of water shortages resulting from climate change, drought, increased demands, or other causes) may receive maximum points under this criterion. Applicants should provide as much detail as possible about the relationship of the proposed project to the adaptation strategy identified in the Basin Study, including, but*

*not limited to, the following:*

- *Identify the specific WaterSMART Basin Study where this adaptation strategy was developed. Describe in detail the adaptation strategy that will be implemented through this WaterSMART Grant project, and how the proposed WaterSMART Grant project would help implement the adaptation strategy.*

- *Describe how the adaptation strategy and proposed WaterSMART Grant project will address the imbalance between water supply and demand identified by the Basin Study.*

- *Identify the applicant's level of involvement in the Basin Study (e.g., cost- share partner, participating stakeholder, etc.).*

- *Describe whether the project will result in further collaboration among Basin Study partners.*

*Through the WaterSMART Basin Study Program, Reclamation is working with State and local partners, as well as other stakeholders, to comprehensively evaluate the ability to meet future water demands within a river basin. The Basin Studies allow Reclamation and its partners to evaluate potential impacts of climate change to water resources within a particular river basin, and to identify adaptation strategies to address those impacts. For more information on Basin Studies, please visit: <www.usbr.gov/WaterSMART/bsp>.*

The Wildwood Basin 4 project is part of a study entitled, Recharge Investigation of the Yucaipa Groundwater Basin prepared for the San Bernardino Valley Municipal Water District in November 2014 in partnership with the City of Yucaipa, Yucaipa Valley Water District, Western Heights Water Company, San Gorgonio Pass Water Agency and the City of Redlands.

The Wildwood Basin 4 proposal ranked highly in groundwater recharge:

The study was done at Wildwood Basin which is very close by. It showed that the soils in the area have very good recharge capability as they are sandy.

The study is in the Safe Yield Study

Please include this language under Technical Proposal: Background Data:

The City of Yucaipa has partnered with YVWD, South Mesa Water Company, Western Heights Water Company, the City of Redlands, San Gorgonio Pass Water Agency and SBVMWD to conduct a study determining the safe yield of the Yucaipa groundwater basins. The study revealed that the groundwater basin (Calimesa) that is underlying the proposed recharge/detention basin is quite extensive with over 120,000 acre-feet of groundwater storage available. A follow-up study was conducted, titled Yucaipa Basins Study which included

drilling bore pits to determine the best locations for recharge. The Wildwood Detention Basins, downstream from the Project site, had very good soils characteristics for recharge capability. The proposed site has very similar soils characteristics and therefore, will be a good location for recharging the native rainwater that drains from the local mountains. This project is at the top of the Santa Ana River Watershed, making it the premier location to recharge as is saves energy from offset pumping costs and reduces the amount of sediment carried downstream as the water will be recharged. The SBCFCD recently spent $4,000,000 in removing sediment from their San Timoteo Detention basins which is downstream from this site.

As a partner, the City of Yucaipa is highly involved in both the Valley District and City of Yucaipa in the study development process.

As evidenced by the follow-up drilling study, the fact that the partners are applying for other grant programs to implement the recommendations of aforementioned studies.

### *Subcriterion E.2: Expediting Future On-Farm Irrigation Improvements*

*Up to **14 points** may be awarded for projects that describe in detail how they will directly expedite future **on-farm irrigation improvements**, including future on- farm improvements that may be eligible for NRCS funding.*

**NOT APPLICABLE**

### *Subcriterion E.3: Building Drought Resiliency*

*Up to **14 points** may be awarded for projects that will **build long-term drought resilience** in an area affected by drought.*

If the proposed project will make water available to alleviate water supply shortages resulting from drought, please address the following:

- Explain in detail the existing or recent drought conditions in the project area. Describe the severity and duration of drought conditions in the project area. Describe how the water source that is the focus of this project (river, aquifer, or other source of supply) is impacted by drought.

- Describe the impacts that are occurring now or are expected to occur as a result of drought conditions. Provide a detailed explanation of how the proposed WaterSMART Grant project will improve the reliability of water supplies during times of drought. For example, will the proposed project prevent the loss of permanent crops and/or minimize economic losses from drought conditions? Will the project improve the reliability of water supplies for people, agriculture, and/or the environment during times of drought? Please note that all proposed projects must meet the project eligibility requirements described in Section III.B. of this FOA. In accordance with those requirements, project proposals requesting compensation for economic losses

resulting from drought, and proposals for the purchase of water are not eligible for funding under this program. Please see Section III.B. of this FOA for a detailed description of the types of projects eligible for funding.

With California facing one of the most severe droughts on record, Governor Brown declared a drought State of Emergency in January 2014 and directed state officials to take all necessary actions to prepare for water shortages. The state has continued to lead the way to make sure California is able to cope with an unprecedented drought.

The San Bernardino County Board of Supervisors issued an Emergency Proclamation on August 5, 2014 relating to the existence of a local drought emergency resulting from record dry conditions since 2012. Since the original Proclamation, the Board of Supervisors has continually extended the Proclamation, as recently as January 6, 2015.

A recent press release best explains the status of drought in the State of California, and in essence explains that water conservation, public and private, is the best case scenario to build drought resiliency for the very foreseeable future:

# Individual Water Use Also Continues to Decline According To Per Capita Daily Water Use Numbers

**Contact: George Kostyrko**
gkostyrko@waterboards.ca.gov

**For Immediate Release**
**January 6, 2015**

SACRAMENTO – Against the backdrop of early season rainfall that has delivered only a third of what would be needed to end the prolonged drought, statewide residential water conservation in November climbed to a 9.8 percent reduction in year-over-year water use. This change was an improvement from the October data, which indicated conservation efforts were slipping, compared to previous months.

In the most recent survey of nearly 400 urban water retailers, while the amount of water conserved by residential and commercial customers statewide continues to hover at around 10 percent, many of the State's hydrologic regions are seeing marked increases in conservation efforts. Conservation reporting by the State's largest retail water suppliers began in July, when the State Water Board adopted the Emergency Water Conservation Regulation which requires water suppliers and residents to work together to save water during the drought, primarily through reduced outdoor water use.

Since data collection began in July, more than 105 billion gallons of water have been saved compared to last year – enough to supply 1.37 million California residents for a year. For

November, most of the state's hydrologic regions exhibited the best water conservation numbers since data reporting began.

"In many parts of California, it is clear that residents understand we are in a prolonged drought. And many continue to conserve water, even as we enjoy welcome rain and runoff that is beginning to recharge our reservoirs and groundwater supplies," said State Water Board Chair Felicia Marcus. "That is good news because it will take far more rain and snow to get us back to normal. Conservation is still the smartest and most cost effective way to deal with this difficult drought. We need to treat water as the precious resource that it is."

As part of its efforts to institutionalize conservation gains statewide, State Water Board members directed staff to review ideas discussed at a Dec. 17 water conservation workshop in Los Angeles to see if additional conservation measures suggested by water districts, environmentalists, and water policy experts should be considered in future rulemaking. The workshop was intended to solicit suggestions on what, if any, additional conservation measures should be adopted in 2015 to increase water conservation statewide. The Board will consider such further actions at its second Board meeting in January 2015.

**Water Conservation Efforts Net Water Savings**

Year over year monthly residential water savings statewide increased to 9.8 percent in November, from 6.8 percent in October.

While board members were pleased to see improved water conservation in numbers in November, they acknowledged that significant precipitation in some parts of the state, as well as the time of year, could have contributed to less water used – rather than residents consciously conserving water in anticipation of continued drought conditions.

Broken down by hydrologic region, some parts of the state saved more water in November than any month prior since reporting requirements began over the summer.

For example, the Sacramento River hydrologic region decreased water use by 25.6 percent in November compared to the same time in 2013, charting the most savings of any hydrologic region. Sacramento was followed by: Central Coast hydrological region (20.9 percent water use decrease over November 2013); North Coast hydrologic region (19.5 percent water use decrease over November 2013); San Joaquin River hydrologic region (18.6 percent water use decrease over November 2013); and San Francisco Bay hydrologic region (18.3 percent water use decrease over November 2013).

The South Coast hydrologic region mildly improved with 3.2 percent water conservation for November, as compared to October's 1.2 percent. The October and November savings rates for this region are disappointing when compared to the 7.5 percent savings reported for the region in September. With 56 percent of all the residential water customers statewide in the South Coast region, this conservation result significantly affected the November statewide average for residential water savings.

"While the South Coast has been a water conservation leader for several decades, we remain concerned the current drought effort has not translated into more aggressive conservation there," Marcus said. "That said, we are encouraged by what we have heard from water districts in the South Coast hydrologic region, including LA Mayor Garcetti's ambitious 20 percent reduction goal, and we expect to see better in 2015."

Water conservation efforts reached a peak of 11.6 percent of water savings in August, compared with August 2013 water use. Statistically, California urban water use is generally the highest June through October.

The report also found that in November, 93 percent of the water agencies reporting had instituted outdoor water use restrictions. Outdoor water use restrictions are a key requirement for urban water suppliers under the Emergency Water Conservation Regulation because outdoor watering accounts for as much as 80 percent of urban water use in some areas.

**Decline in Per Capita Daily Water Use Continues Statewide**

Along with the November conservation data is the residential gallons per-capita per day (R-GPCD) report, which estimates daily water use by residential customers for nearly 400 urban water agencies statewide.

The statewide R-GPCD average for November was 88.9 gallons per person – a significant drop from the September data, which showed statewide average use of 123 gallons per person, per day. The October numbers dropped to 109 gallons per person, per day. State Water Board staff continues to study this trend in an effort to understand what is driving the reduction in water use in some hydrologic regions, but not others. In addition, some of the R-GPCD drop is to be expected as outdoor watering goes down along with the summer temperatures.

The water use reports are a requirement of the Emergency Water Conservation Regulation adopted by the State Water Board in July and are provided to the Board monthly by urban water suppliers, along with total water conservation for each month. The complete report is posted here.

According to the R-GPCD data, water use varies widely by hydrologic region and showed consistent declines in water use during this third month of reporting. At the low end, the North Coast region averaged 59 gallons per person per day. On the high end, the Colorado River region averaged 204 gallons per person per day.

Example of some communities with respective R-GPCD averages in November 2014, versus the same time in 2013, in various hydrologic areas (in parenthesis) include: City of Santa Cruz (Central Coast) with 41 R-GPCD; California-American Water Company Monterey District (Central Coast) with 42 R-GPCD; San Francisco Public Utilities Commission (San Francisco Bay) with 45 R-GPCD; City of Santa Rosa (North Coast) with 49 R-GPCD; City of San Diego (South Coast), with 65 R-GPCD; San Jose Water Company (San Francisco Bay), with 67 R-GPCD; City of Sacramento (Sacramento River) with 74 R-GPCD; City of Stockton (San Joaquin River) with 76 R-GPCD, Los Angeles Department of Water and Power (South Coast), with 77

R-GPCD; City of Fresno (Tulare Lake), with 78 R-GPCD; Sacramento County Water Agency (Sacramento River), with 93 R-GPCD; California Water Services Company, Bakersfield (Tulare Lake) with 97 R-GPCD), and City of Riverside (South Coast), with 102 R-GPCD.

**Background**

In his Jan. 17, 2014, Emergency Drought Proclamation, Governor Brown called for Californians to voluntarily reduce their water use by 20 percent. The trend of increasing reductions and specific local data shows that many California communities have met and exceeded the call to conserve, but more can and must be done to protect water supplies should the drought persist. Current forecasts indicate that Californians cannot count upon a wet winter to end the drought.

The State Water Board will closely monitor the implementation of the regulations and the weather over the coming months to determine if further restrictions are needed.

The Emergency Water Conservation Regulation will be in effect until April 25, 2015, and will likely be extended if drought conditions persist.

Visit SaveOurWater.com to find out how everyone can do their part, and visit Drought.CA.Gov to learn more about how California is dealing with the effects of the drought.

- **City of Yucaipa and Drought Resiliency**

In the City of Yucaipa, the Yucaipa Valley Water District has built Drought Resiliency into its program by specifying days when rate payers may, for example, water lawns as well as other methods to continue water conservation, including recycling.

The City of Yucaipa is also in the final stages of preparing its Draft Updated Hazard Mitigation Plan, which now includes a new hazard: Climate Change. Built into the hazard the City has included drought, extreme heat, GHG Emissions, Extreme Fire Hazard and similar risks and mitigation measures to encourage, promote and produce drought resiliency. The draft will also be integrated into Yucaipa's first 20-year Updated General Plan, set for adoption in May 2015.

This proposal will improve the reliability of water supplies as California continues in the drought, because any similar project in Yucaipa will serve to make the community less reliant on other water resources.

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. he 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 Wildwood Basin 4 is located along the Wildwood Creek, which ultimately outlets to the San Timoteo Canyon Creek and 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.

### *Subcriterion E.4: Other Water Supply Sustainability Benefits*

*Up **10 points** may be awarded for projects that include **other benefits** to water supply sustainability.*

Projects may receive up to 10 points under this sub-criterion by thoroughly explaining additional project benefits, *not already described above*. 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:

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

o Will the project directly address a heightened competition for finite water supplies and over-allocation (e.g., population growth)?

o Describe how the water source that is the focus of this project (river, aquifer, or other source of supply) is impacted by climate variation.

o Will the project help to address an issue that could potentially result in an interruption to the water supply if unresolved?

The project will directly address a growing heightened competition for finite water supplies by continuing to provide and capture all potential groundwater resources as they become available.

Yucaipa has generally warm to dry weather and averages an estimated 19- 20 inches of rainfall annually. Therefore, most of the creeks are dry during most of the year, except along their upper reaches, which may have small, sustained year-round flow. Yucaipa is also subject to intense local storms. Floodwaters from the upper reaches of the mountains converge in Yucaipa's waterways, creating the potential for flooding and safety hazards – and logically,serve as potential for increased groundwater resources.

The City of Yucaipa General Plan Advisory Committee (GPAC) is in the process of reviewing its Draft 20-Year General Plan Update wherein build out is considered at 70,000.

Extensive housing construction has not occurred over the past five to 7 years due to economic downturn. However, there has been a noticeable uptick in permitting and

development that will affect potential water supply challenges if the City does not explore, plan and construct adequate facilities now, to insure future capability.

- Will the project make additional water available for Indian tribes?

**NOT APPLICABLE**

- Will the project make water available for rural or economically disadvantaged communities?

**YES**

Flood attenuation capability at the confluence of Yucaipa Creek and Wildwood Creek will capture additional flow rather than being lost to evaporation as it flows downstream to the large Wildwood Basins. The City of Calimesa is also served by Yucaipa Water Valley District, and Calimesa is a Disadvantaged Community.

- Does the project promote and encourage collaboration among parties?

**YES**

- Is there widespread support for the project?

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.

- 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 Wildwood 4 Basin project is located at the confluence of the Yucaipa and Wildwood Creeks, 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

- 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.

- 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.

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

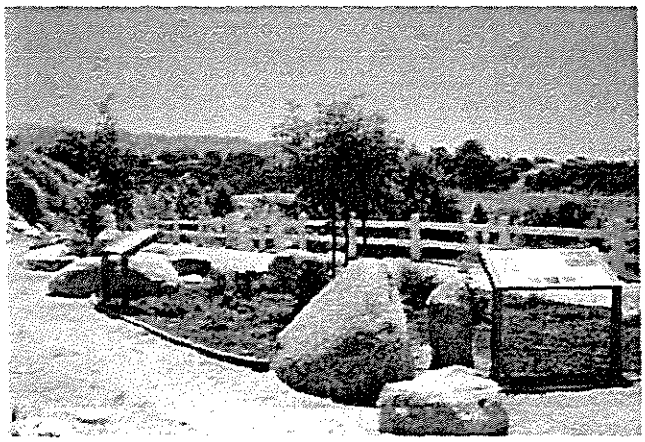
The Project will provide multiple benefits including: providing a reliable water supply, promoting sustainable water solutions, ensuring high quality water for all users, providing economically effective solutions, improving regional integration and coordination, managing rainfall as a resource, and 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.

o Will the project increase awareness of water and/or energy conservation and efficiency efforts?

**YES**

o 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 used extensively throughout Yucaipa's groundwater resource projects. 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 and as they will be in the future Wilson III Basins Project.



- 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 on the groundwater recharge capabilities of this project, as well as two other projects of similar capability, the Wildwood Basins Project and the Oak Glen Creek Basins Project. .

- Does the project integrate water and energy components?

By saving approximately 778,375 kWh 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, drought contingency plan, or other planning efforts done to determine the priority of this project in relation to other potential projects.

(2) 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).

This project appears in the following documents: The Upper Santa Ana River Integrated Regional Water Management Plan, the 2010 Yucaipa Valley Water District Water Management Plan, the 2010 San Bernardino Valley Regional Urban Water Management Plan and the Yucaipa Master Plan of Drainage approved by the San Bernardino County Flood Control. The Yucaipa

Basin Study which is sponsored by several water agencies and the City of Yucaipa, was completed in 2014. It is looking at the safe yield of the Yucaipa Basin along with studying the best locations for recharge. The next phase of the study included drilling wells throughout the Yucaipa Basin, and was completed in December, 2014.

## *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 Bureau of Reclamation in accordance with Grant requirements..

**Task 4 Land**

The City owns the land involved in this Project.

**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). As a federally funded project, the City of Yucaipa will conform to the requirements of NEPA. (Note: NEPA studies have already been completed downstream as a result of the Wildwood Creek Basins Project. The City of Yucaipa

received $3 million dollars of the total project cost of $7.3 million through the Pre-Disaster Mitigation Grant Program sponsored by the Federal Emergency Management Agency). 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 encroachment permits from the City. 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 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 30,000 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, Erosion Controls 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 Multi-Purpose Trails/Access Roads***

After the basin and structure construction is complete construction of access/maintenance roads and multipurpose trails with tie-ins to existing trails will take place.

***Subtask 10.5 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. 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. 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.

## *Subcriterion No. F.3: Performance Measures*

*Points may be awarded based on the description and development of performance measures to quantify 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). For more information calculating performance measure, see Section VIII.A.1 "FY2015 WaterSMART Water and Energy Efficiency Grants: Performance Measures."

Note: All WaterSMART Grant applicants are required to propose a "performance measure" (a method of quantifying the actual benefits of their project once it is completed). A provision will be included in all assistance agreements with WaterSMART Grant recipients describing the performance measure, and
requiring the recipient to quantify the actual project benefits in their final report to Reclamation upon completion of the project. If information regarding project benefits is not available immediately upon completion of the project, the financial assistance agreement may be modified to remain open until such information is available and until a Final Report is submitted. Quantifying project benefits is an important means to determine the relative effectiveness of various water management efforts, as well as the overall effectiveness of WaterSMART Grants.

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.

The Project Schedule is located on Page 53.

### *Subcriterion No. F.4: Reasonableness of Costs*

*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, energy capacity, or other project benefits and the expected life of the improvement(s).

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.

TOTAL PROJECT COST: $454,000

ANNUAL ACRE-FEET CONSERVED: 250

ENERGY CAPACITY: 778,375

ADDITIONAL PROJECT BENEFITS: Habitat Preservation

EXPECTED LIFE OF IMPROVEMENTS (YEARS): 100 Years

SUPPORT FOR EXPECTATION OF EXPECTED PROJECT LIFE:

With necessary maintenance of cleanout and debris, this projected life conforms with other of Yucaipa's other basin life expectancies.

ADDITIONAL INFORMATION:

The Wildwood Basins Project is located one mile downstream of the proposed project. Completed in 2012, the project was funded at a cost of $7,180,966 by several sources, including:

- Federal Emergency Management Agency - $2,572,000
- City Drainage Facilities Fund - $1,611,000
- Developer Contribution - $60,000
- San Bernardino County Flood Control District - $1,457,000
- San Bernardino Valley Municipal Water District - $589,000
- Stater Bros. (Purchase of excess soil) - $550,000
- Queen Chuang (Purchase of excess soil) - $170,000
- Measure I Road Funding for Road Widening - $171,966
- TOTAL PROJECT FUNDING, PHASE I - $7,180,966

The project was within weeks of completion when the City of Yucaipa experienced an intense storm that affected the Wildwood Basins Project. During the storm event approximately 30,000 cubic yards of silt and sediments washed from the upstream tributary. The 8-foot by 14-foot reinforced concrete box between the debris basin and the bypass channel had approximately 4 to 6 feet of silt deposits. In addition, the 60-inch RCP Wildwood Storm Drain was plugged because of the silt the debris basin deposited above the flow line of the storm drain. The City is seeking $140,346.92 for the cost associated with the removal of the debris. The work done included removal of the silt deposits from the basin and the storm drains.

During the exit interview the FEMA and CALEMA representatives indicated that it was the contractor's responsibility to protect the job site. The contractor has stated that they could not have reasonably avoided the damage that was caused due to the extraordinary magnitude of the storms. The upstream debris basin received an excessively large volume of sediment and debris from the creek, estimated at approximately 30,000 cubic yards. The sediment covered the bottom of the basin by an approximate depth of 10 feet.

**Had Wildwood Basin 4 been in place, debris and subsequent floodwaters could have minimized or even prevented the level of damage incurred, and retained additional groundwater recharge rather than losing its potential downstream, subsequently protecting a $3 million dollar Federal investment.**

## 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.*

| | |
|---|---|
| Non-Federal Funding | $154,000 |
| Total Project Cost | $454,000 |

The City of Yucaipa is committing $154,000 toward constructing this basin project. Additionally, the City of Yucaipa has recently submitted an application through the State of California, Department of Water Resources, Urban Streams Restoration Program to construct improvements associated with this proposal, in the sum of $1,358,223. If this grant is awarded (tentatively April 2015) State funding will greatly exceed 50% of the anticipated project cost and the project will not be limited to the Wildwood 4 Basin project.

## 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.*

**NOT APPLICABLE.**

(1) How is the proposed project connected to Reclamation project activities? (2) Does the applicant receive Reclamation project water?

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

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

(5) Will the proposed work contribute water to a basin where a Reclamation project is located?

(5) Will the project help Reclamation meet trust responsibilities to Tribes?

# VI. PROJECT BUDGET/FUNDING PLAN

## A. LETTERS OF COMMITMENT

A Letter of Matching Funds Commitment is attached, as are official resolutions from the San Bernardino Valley Municipal Water District and the City of Yucaipa, at the end of this document.

## B. BUDGET PROPOSAL/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.

**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 Bureau of.Reclamation.

**Budget Category (b): Planning/Design/Engineering/ Environmental Documentation**

**Task 5 Assessment and Evaluation**

The City has already completed preliminary evaluation of the Wildwood Creek including an update to the master plan of drainage, creek optimization studies, and alternative analysis.

**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 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 Bureau of Reclamation.
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). As a federally funded project, the City of Yucaipa will conform to the requirements of NEPA. (Note: NEPA studies have already been completed downstream as a result of the Wildwood Creek Basins Project. The City received $3 million dollars of the total project cost of $7.3 million through the Pre-Disaster Mitigation Grant Program sponsored by the Federal Emergency Management Agency. 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 Bureau of Reclamation.

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 encroachment permits from the City. 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 (c): 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 Bureau of Reclamation. 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 30,000 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, Erosion Controls 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 10.5 Multi Purpose Trails/Access Roads***

After the basin and structure construction is complete, construction of access/maintenance roads and multipurpose trails with tie-ins to existing trails will take place.

***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. 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 (d): 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. 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 (e): 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 (f): Other Costs**

Not a part of this work plan

**Budget Category (g): 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.

# WaterSMART GRANT PROGRAM - BUDGET SUMMARY

**Project: Wildwood 4 Basin Project**

| | Requested Grant | Local Match | Other Funding | Total | % Local Match |
|---|---|---|---|---|---|
| **1. Direct Project Administration Costs** | | | | | |
| Staff Time | 0 | $3,360 | | $3,360 | **100 %** |
| Incidental Cost | 0 | $2,500 | | $2,500 | **100%** |
| Consultants | 0 | $9,660 | | $9,960 | **100%** |
| **2. Planning/Design/Engineering/ Environmental** | | | | | |
| Staff Time | 0 | $4,200 | | $4,200 | **100%** |
| Consultants | 0 | $38,000 | | $38,000 | **100%** |
| Environmental/Permitting | 0 | $12,000 | | $12,000 | **100%** |
| CEQA Processing | 0 | $4,100 | | $4,100 | **100%** |
| **3. Construction Administration** | | | | | |
| Construction Administration | | $25,880 | | $25,880 | **100%** |
| **4. Construction/Implementation** | | | | | |
| Mobilization | $ 3,000 | 0 | | $3,000 | **0** |
| Traffic Control | $ 2,000 | 0 | | $2,000 | **0** |
| SWPPP | $15,000 | 0 | | $15,000 | **0** |
| Filling and Compacting (grading) | $175,000 | 0 | | $175,000 | **0** |
| Rip Rap/Spillway | $105,000 | 0 | | $105,000 | **0** |
| **5. Environmental Compliance / Mitigation / Enhancement** | | | | | |
| Environmental Compliance / Mitigation / Enhancement | | $10,000 | | $10,000 | **100 %** |
| Mitigation/Conservation Easement | | $15,000 | | $15,000 | **100%** |
| **6. Monitoring/Performance** | | | | | |
| Monitoring/Performance | | $5,000 | | $5,000 | **100 %** |
| City Operations and Maintenance | | $20,000 | | $20,000 | **100%** |
| **7. Education/Outreach** | | | | | |
| Education/Outreach | | $2,000 | | $2,000 | **100%** |
| Contract Staff | | $2,000 | | $2,000 | **100%** |
| **Grand Total:** | **$300,000** | **$154,000** | | **$454,000** | |

**Other Funding Sources: The City of Yucaipa has made application through the State of California Water Resources Department, Urban Streams Program to fund creek restoration in association with basin construction in the amount of $1,358,223. Department of Water Resources anticipates announcing funding awards in late Spring/early Summer. This application applies to construction of Wildwood Basin 4 only.**

# PROJECT SCHEDULE

Wildwood Creek Restoration/ Recharge Project

Schedule

| | 2015 | | | | 2016 | | | | 2017 | | | | 2018 | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Project Elements | 1st Qtr | 2nd Qtr | 3rd Qtr | 4th Qtr | 1st Qtr | 2nd Qtr | 3rd Qtr | 4th Qtr | 1st Qtr | 2nd Qtr | 3rd Qtr | 4th Qtr | 1st Qtr | 2nd Qtr | 3rd Qtr | 4th Qtr |
| **Project Administration** | | | | | | | | | | | | | | | | |
| Quarterly & Final Report Preparation | | | D | D | D | D | D | D | D | D | D | D | D | D | | |
| Public Meetings and Notices | | | | | | | | | | | | | | | | |
| Labor Compliance Program | | | | | | | | | | | | | | | | |
| **Pre-Implementation: Designs, CEQA/ Permitting, Bidding, etc.** | | | | | | | | | | | | | | | | |
| Finish Final Designs | | | | D | | | | | | | | | | | | |
| CEQA & Regulatory Compliance | | | D | | | | D | | | | | | | | | |
| Contractor Bidding Selection | | | | | | | | | | | | | | | | |
| Site Preparation | | | | | | | | | | | | | | | | |
| **Implementation/ Construction** | | | | | | | | | | | | | | | | |
| Completion of Grading | | | | | | | | | | | | | | | | |
| Slope Protection | | | | | | | | | | | | | | | | |
| RIP-RAP | | | | | | | | | | | | | | | | |
| Filling & Compacting | | | | | | | | | | | | | | | | |
| **Post Construction Monitoring** | | | | | | | | | | | | | | | | |
| Maintenance | | | | | | | | | | | | D | D | D | D | |
| Plant Replacement | | | | | | | | | | | | D | D | D | D | |
| Surveying | | | | | | | | | | | | D | D | D | D | |
| Mitigation & Monitoring | | | | | | | | | | | | D | D | D | D | |
| Environmental Monitoring | | | | | | | | | | | | D | D | D | D | |

*Legend: D- Denotes a deliverable*

January 21, 2015

United States Department of the Interior

Bureau of Reclamation

Financial Assistance Management Branch

Mail Code 84-27852

P. O. Box 25007

Denver, CO 80225

**Letter of Commitment: WaterSMART: Water and Energy Efficiency Grant – San Bernardino Valley Municipal Water District (District) and City of Yucaipa (City), California**

The City of Yucaipa is once again partnering with the San Bernardino Valley Municipal Water District and submitting a grant application to fund construction of the Wildwood 4 Basin Groundwater Recharge and Water Management Proposal.

Attached is Resolution No. 2015-09 affirming commitment on the part of the City Council of the City of Yucaipa to provide $154,000 in matching funds associated with this project.

Matching funds are currently available in the City of Yucaipa's 2014-2015 Budget, and identified as Capital Improvement Funds.

There are no contingencies associated with this funding commitment.

Raymond A. Casey

City Manager

Attachment: City of Yucaipa Resolution No. 2015-09

SAN BERNARDINO Valley MUNICIPAL WATER DISTRICT

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**DATE:** January 20, 2014

**TO:** Board of Directors

**FROM:** Bob Tincher, Manager of Water Resources

**SUBJECT:** Consider WaterSMART Grant Applications for City of Yucaipa Wildwood Basin 4 Retention Basin Project

---

In January 2014, the Board agreed to submit a WaterSMART grant application, on behalf of the City of Yucaipa (City), for the Wilson III Retention Basin Project, at no cost to Valley District. The City was awarded a grant for the project and is grateful for the Board's assistance.

The City would like to apply for another WaterSMART grant to help fund the 22-acre Wildwood 4 Retention Basin project that would increase flood protection for portions of the City and can be used for groundwater recharge. The City is asking Valley District to consider submitting a $300,000 grant application for this project under the Bureau of Reclamation WaterSMART program at no cost to Valley District. The WaterSmart program is available to Indian tribes, irrigation districts, water districts and other organizations with water or power delivery authority. The City has offered to complete the grant application for submittal by Valley District. If awarded, staff will return to the Board with an agreement between the City and Valley District whereby the City would agree to pay the matching funds requirement ($154,000.00) and Valley District would agree to administer the grant funds.

**BACKGROUND**

The San Bernardino Valley Municipal Water District (Valley District) has historically taken a leadership role in studying and managing groundwater resources within its service area. Valley District funded a large portion of the study of the San Bernardino Basin Area by the United States Geological Survey (USGS) which resulted in a groundwater flow model that has been extremely useful in assisting with management decisions and estimating the benefit of various water management strategies. Valley District has also been funding a large portion of the ongoing USGS study of the Yucaipa Basin area (Basin) including the following USGS tasks:

1. Construct a multi-level monitoring well near Wilson Creek
2. Track the path of State Water Project water recharged at Wilson Creek spreading basins.
3. Develop lithologic descriptions
4. Develop electronic versions of geophysical logs
5. Use existing information to define groundwater subbasins
6. Use gravity model to determine the depth and configuration of the basin and subbasins

Starting around 2011, Valley District, Western Heights Water Company and Yucaipa Valley Water District began to develope a basin management plan in Yucaipa. Later, other agencies were invited to join this process including City of Redlands, San Gorgonio Pass Water Agency, South Mesa Water Company and City of Yucaipa. It is anticipated that basin management in Yucaipa will include the recharge of stormwater and imported water. The Wildwood 4 Retention Basin may be one of the locations used for recharge in the Yucaipa Basin.

In September 2012, City of Redlands, San Gorgonio Water Agency, South Mesa Water Company, City of Yucaipa, Western Heights Water Company, Yucaipa Valley Water District and Valley District contracted with Geoscience Support Services to complete the first step in the process to develop a groundwater management plan: a study to determine the usable capacity and safe yield for each sub-basin within the Yucaipa Basin Area. In 2014, the agencies took the next step in the development of a groundwater management plan by calculating the change in storage for each sub-basin and conducting soil borings throughout the basin to determine the areas most suitable for groundwater recharge.

The Bureau of Reclamation WaterSMART Grant Program provides 50/50 cost share funding to irrigation and water districts, Tribes, States and other entities with water or power delivery authority. Eligible projects conserve and use water more efficiently, increase the use of renewable energy, protect endangered species, or facilitate water markets. Projects are selected through a competitive process and the focus is on projects that can be completed within 24 months that will help develop sustainable water supplies in the western United States. In 2013, Reclamation awarded more than $20 million for 44 Water and Energy Efficiency Grants.

Grant applications may be submitted to one, or both of the following WaterSMART funding groups (only one award would be made):

- Funding Group I: Grant amount up to $300,000 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: Grant amount up to $1,000,000 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, has discussed the options with the Bureau, and is recommending that one application be submitted under Funding Group I.

There is no fiscal impact to Valley District other than the staff time needed to assist the City in reviewing the grant applications and administering the grant funds, if awarded.

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

**Staff Recommendation**

Authorize staff to work with the City of Yucaipa on a WaterSMART grant application for the Wildwood 4 Retention Basin Project at no cost to Valley District. If awarded, staff will return to the Board with an agreement between the City and Valley District whereby the City would agree to pay the matching funds requirement ($154,000) and Valley District would agree to administer the grant funds.

**Attachments**

1. Draft Resolution
2. Figure showing the Wildwood 4 Retention Basin Project

# RESOLUTION NO. 1024

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

WHEREAS, IN October 2014 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 Wildwood Creek Basin 4 ("Project"); and

WHEREAS, significant but as yet incomplete funding is available to construct the Project which will provide flood control and 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.

PASSED, APPROVED and ADOPTED on this 20th day of January, 2015.

Mark Bulot, President

ATTEST:

Gil Navarro, Secretary

**CITY OF YUCAIPA**
**AGENDA REPORT**

**TO:** Honorable Mayor and City Council

**FROM:** Bill Hemsley, Director of Public Works

**FOR:** City Council Meeting on January 26, 2015

**SUBJECT:** Funding Opportunity Available to Increase Water Conservation or Improve Water Supply Sustainability: 2014 WaterSMART Conservation Program

---

**RECOMMENDATION:**

That the City Council:

1. Approve and adopt Resolution No. 2015-03 to support the application to be submitted by San Bernardino Valley Municipal Water District entitled 2014 WaterSMART: Wildwood Creek Basin 4 Groundwater Recharge and Water Management Proposal; and

2. Authorize staff to prepare the application for the 2014 WaterSMART Conservation Program on behalf of San Bernardino Municipal Water District for the Wildwood Creek Basin 4 Groundwater Recharge and Water Management Proposal; and

3. Authorize the City Manager, or his designee, to conduct all negotiations, execute and submit all documents which may be necessary for the completion of the project.

**BACKGROUND:**

The Bureau of Reclamation (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 Western United States.

Proposals must represent projects that 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 2014, 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 City of Yucaipa received a $300,000 grant through this program to help fund the Wilson III Basins Project and has since been working effectively with the Bureau of Reclamation to finalize funding details.

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, 2015. It is anticipated that awards will be made this spring. However, the resolution may be submitted up to 30 days after the application deadline.

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

**DISCUSSION:**

On January 20, 2015, the San Bernardino Valley Municipal Water District (Valley District) Board approved a support resolution and authorized their staff to submit an application on the City of Yucaipa's behalf to provide additional funding components for construction of the Wildwood Creek Basin 4 Groundwater Recharge and Water Management Proposal. The City of Yucaipa will write and submit the grant application.

Stormwater runoff is collected in the Wildwood Creek's 773 acre tributary area and is conveyed through the natural, unlined creek. The proposed Project will construct a 25 acre-foot retention basin along the Wildwood Creek to capture and recharge a portion of this stormwater runoff that is currently lost to the Santa Ana River, and ultimately the Pacific Ocean. The captured runoff will collect in the proposed Wildwood Basin 4 and percolate into the Wildwood groundwater basin. Recharged stormwater will increase local groundwater supplies, while offsetting and decreasing the dependence on supplemental water supplies (i.e. State Water Project). The Project will capture and recharge approximately 250 acre-feet of stormwater during an average rainfall year.

Staff is recommending that Council authorize staff to process the application for the Wildwood Creek Basin 4 Groundwater Recharge and Water Management Proposal project on behalf of the City, with Valley District as the sponsor.

**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.

Staff 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 Funding Group I as the better opportunity for funding approval.

The entire Wildwood Creek Basin 4 Groundwater Recharge and Water Management Proposal is estimated to cost approximately $1,358,223. However, for the WaterSMART application, staff is proposing that only the detention basin portion be constructed with this application as it will provide the most protection for the amount of funding available. The summary table below provides an estimated funding plan for the Wildwood Creek Basin 4 Groundwater Recharge and Water Management Proposal:

| Funding Description | Amount |
|---|---|
| Wildwood Creek Basin 4 Groundwater Recharge | $154,000 |
| Potential Funding Sources: | |
| WaterSMART (Application with Valley District – Pending. Current Staff Report) | $300,000 |
| Total Revenue (Current and Potential): | $454,000 |

At its November 10, 2014 meeting, the City Council also approved the submittal of a similar grant application through the Urban Streams Restoration Grant Program. Prior to recent December storm events, the City of Yucaipa addressed the need to help secure portions of the Wildwood Creek Channel as a means to abate potential damage to the historic and ancient oak trees that line Wildwood Creek. Concurrently, these two grant application programs became available, providing opportunity for funding assistance.

On November 10, 2014, City Council transferred the amount of $154,000 in Drainage Facility Funds from the Wilson II Project to the proposed Wildwood Creek Basin 4 Groundwater Recharge and Water Management Proposal for the local match of the Urban Streams Restoration Grant Program; however, staff is recommending using this same funding for the WaterSMART Grant match if the Urban Streams Restoration Grant Program is not awarded to the City. In the event that both grants are awarded, staff will return to Council with an updated funding plan as part of the grant execution. The Urban Streams funding is non-federal so it can be used as a match for the WaterSMART grant application so no additional City funding will be needed to complete the project.

## CONCLUSION:

Staff recommends that the City Council approve and adopt Resolution No. 2015-03 to support the application to be submitted by San Bernardino Valley Municipal Water District entitled 2015 WaterSMART: Water and Energy Efficiency Grant Program for the Wildwood Creek Basin 4 Groundwater Recharge and Water Management Proposal; authorize staff to prepare the application for the 2015 WaterSMART Conservation Program on behalf of San Bernardino Municipal Water District for the Wildwood Creek Basin 4 Groundwater Recharge and Water Management Proposal and appoint the City Manager, or his designee, as agent to conduct all negotiations, execute and submit all documents which may be necessary for the completion of the project.

Attachments: Valley District Draft Staff Report and Resolution on WaterSMART Grant Application

Resolution No. 2015-03

Approved by: _____

**RESOLUTION NO. 2015-03**

RESOLUTION OF THE CITY OF YUCAIPA TO SUPPORT AN APPLICATION SUBMITTED BY THE SAN BERNARDINO MUNICIPAL WATER DISTRICT ENTITLED 2014 WaterSMART: WATER AND ENERGY EFFICIENCY GRANT PROGRAM

WHEREAS, on November 14, 2014 the 2014 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 Wildwood Creek Basin 4 Groundwater Recharge and Water Management Proposal ("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 San Bernardino Municipal Water District (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 26th day of January, 2015.

_____

Denise Hoyt, Mayor

ATTEST:

_____

Jennifer Shankland, City Clerk

PAUL COOK
8TH DISTRICT, CALIFORNIA

1222 LONGWORTH HOUSE OFFICE BUILDING
WASHINGTON, DC 20515
(202) 225-5861

# Congress of the United States
## House of Representatives
### Washington, DC 20515–0508

January 15, 2015

United States Department of the Interior
Bureau of Reclamation
Financial Assistance Management Branch
Mail Code 84-27852
P. O. Box 25007
Denver, CO 80225

**RE: WaterSMART: Water and Energy Efficiency Grant – San Bernardino Valley Municipal Water District (District) and City of Yucaipa (City), California**

To Whom It May Concern:

The purpose of this letter is to express my support for a grant application being submitted by the San Bernardino Valley Municipal Water District (District) on behalf of the City of Yucaipa (City).

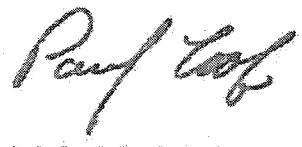
The City of Yucaipa and the District often partner on projects that provide common benefits not only to the community, but to the Yucaipa Groundwater Basin and ultimately to California's groundwater resource capabilities.

The Wildwood Creek Basin 4 Proposal shares multiple objectives, but specifically provides groundwater recharge that will provide savings when surface water storage evaporation is reduced and/or surface runoff is intercepted for recharge. The proposed basin project is located along Wildwood Creek adjacent to Wildwood Canyon Road, south of Wildwood View Drive at the confluence of Wildwood Creek and a smaller canyon tributary and extends to Mesa Grande Drive to the west. The Wildwood 4 Basin Project was identified in the City's Master Plan of Drainage adopted in an updated version of the plan in 2008 to promote and provide groundwater recharge of natural stream flows, debris control, improved downstream water quality, and environmental restoration and enhancements. The basin is proposed to be a flow-through basin with a capacity of 25 acre feet. The project will reduce sedimentation and downstream flooding along Wildwood Creek thus providing protection for the existing habitat, specifically oak trees, Wildwood Canyon Road, Wildwood Canyon Park and other public/private property and infrastructure.

This grant application will serve as yet another example of ways in which both the City and the District partner to fulfill the needs of the local communities and ultimately state and federal objectives to use reclaimed water resources at a time when especially California is in continuing need to conserve water resources.

I ask that you give strong consideration to this joint application. If you have any questions regarding this letter of support, please contact my office at 760-247-1815.

Sincerely,



Col. Paul Cook (ret)
Congressman, 8th District of California

825 East Third Street, San Bernardino, CA 92415-0835 | Phone: 909.387.8104 Fax: 909.387.8130
www.SBCounty.gov

SAN BERNARDINO COUNTY

Department of Public Works
• Environmental & Construction • Flood Control
• Operations • Solid Waste Management
• Surveyor • Transportation

Gerry Newcombe
Director

January 15, 2015

United States Department of the Interior
Bureau of Reclamation
Financial Assistance Management Branch
Mail Code 84-27852
P. O. Box 25007
Denver, CO 80225

**WATERSMART: WATER AND ENERGY EFFICIENCY GRANT – SAN BERNARDINO VALLEY MUNICIPAL WATER DISTRICT (DISTRICT) AND CITY OF YUCAIPA (CITY), CALIFORNIA**

Please consider this a letter of support from the San Bernardino County Flood Control District (SBCFCD) concerning a grant application being submitted by the San Bernardino Valley Municipal Water District (SBVMWD) on behalf of the City of Yucaipa (City).

The City and the SBVMWD often partner on projects that provide common benefits not only to the community, but also to the Yucaipa Groundwater Basin and ultimately to California's groundwater resource capabilities. The City, SBVMWD and the SBCFCD have also partnered in the past on successful multi-purpose projects that provide flood protection, groundwater recharge and recreational use as open space.

The Wildwood Creek Basin 4 Proposal shares multiple objectives, such as groundwater recharge, sediment management, flood protection, along with environmental restoration. The proposed basin project is located along Wildwood Creek adjacent to Wildwood Canyon Road, south of Wildwood View Drive at the confluence of Wildwood Creek and a smaller canyon tributary and extends to Mesa Grande Drive to the west. The Wildwood 4 Basin Project was identified in the City's Master Plan of Drainage adopted in an updated version of the plan in 2008 to promote and provide groundwater recharge of natural stream flows, flood protection, debris control, improved downstream water quality, and environmental restoration and enhancements. The basin is proposed to be a flow-through basin with a capacity of 25-acre feet. As mentioned above, the project will reduce sedimentation and downstream flooding along Wildwood Creek thus

providing protection for the existing habitat, specifically oak trees, Wildwood Canyon Road, Wildwood Canyon Park and other public/private property and infrastructure.

This grant application will serve as yet another example of ways in which both the City and the SBVMWD partner to fulfill the needs of the local communities and ultimately state and federal objectives to use reclaimed water resources at a time when especially California is in continuing need to conserve water resources.

The SBCFCD was formed by the State of California in 1939 and was given the mission to "To provide for the control of flood and storm waters in order to protect watercourses, public highways, life and property; to conserve such waters for beneficial purposes by spreading, storing and causing to percolate in the soil". The SBCFCD, as owner of downstream portions of Wildwood Creek, wholeheartedly endorses this project and respectfully requests consideration of this application and appreciates the opportunity to comment and support the Wildwood Basin 4 project. Please contact me at 909-387-7918 should you have any questions.

Thank you,

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

# 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 22, 2015

United States Department of the Interior
Bureau of Reclamation
Financial Assistance Management Branch
Mail Code 84-27852
P. O. Box 25007
Denver, CO 80225

**WaterSMART: Water and Energy Efficiency Grant – San Bernardino Valley Municipal Water District (District) and City of Yucaipa (City), California**

Please consider this a letter of support concerning a grant application being submitted by the San Bernardino Valley Municipal Water District on behalf of the City of Yucaipa.

The Wildwood Creek Basin is located along Wildwood Creek adjacent to Wildwood Canyon Road, at the confluence of Wildwood Creek and a smaller canyon tributary and extends to Mesa Grande Drive to the west. The Wildwood Basin Project was identified in the City's Master Plan of Drainage adopted in an updated version of the plan in 2008 to promote and provide stormwater protection, groundwater recharge of natural stream flows, debris control, improved downstream water quality, and environmental restoration and enhancements.

Specifically, the proposed basin will be a flow-through basin with a capacity of 25 acre feet. The project will reduce sedimentation and downstream flooding along Wildwood Creek thus providing protection for the existing habitat, specifically oak trees, Wildwood Canyon Road, Wildwood Canyon Park and other public/private property and infrastructure.

The Yucaipa Valley Water District respectfully requests your consideration of this application and appreciates the opportunity to support the Wildwood Basin project.

Sincerely,

Joseph B. Zoba
General Manager

Western Heights Water Company
32352 Avenue D • Yucaipa, CA 92399-1899
Office (909) 790-1901 • Fax (909) 797-2619 • www.westernheightswater.org

January 15, 2015

United States Department of the Interior Bureau of Reclamation
Financial Assistance Management Branch
Mail Code 84-27852
P.O. Box 25007
Denver, CO 80225

**WaterSMART: Water and Energy Efficiency Grant – San Bernardino Valley Municipal Water District (District) and City of Yucaipa (City), California**

Please consider this a letter of support concerning a grant application being submitted by the San Bernardino Valley Municipal Water District (District) on behalf of the City of Yucaipa (City).

The City of Yucaipa and the District often partner on projects that provide common benefits not only to the community, but to the Yucaipa Groundwater Basin and ultimately to California's groundwater resource capabilities.

The Wildwood Creek Basin 4 Proposal shares multiple objectives, but specifically provides groundwater recharge that will provide savings when surface water storage evaporation is reduced and/or surface runoff is intercepted for recharge. The proposed basin project is located along Wildwood Creek adjacent to Wildwood Canyon Road, south of Wildwood View Drive at the confluence of Wildwood Creek and a smaller canyon tributary and extends to Mesa Grande Drive to the west. The Wildwood 4 Basin Project was identified in the City's Master Plan of Drainage adopted in an updated version of the plan in 2008 to promote and provide groundwater recharge of natural stream flows, debris control, improved downstream water quality, and environmental restoration and enhancements. The basin is proposed to be a flow-through basin with a capacity of 25 acre feet. The project will reduce sedimentation and downstream flooding along Wildwood Creek thus providing protection for the existing habitat, specifically oak trees, Wildwood Canyon Road, Wildwood Canyon Park and other public/private property and infrastructure.

This grant application will serve as yet another example of ways in which both the City and the District partner to fulfill the needs of the local communities and ultimately state

and federal objectives to use reclaimed water resources at a time when especially California is in continuing need to conserve water resources.

The Western Heights Water Company respectfully requests consideration of this application and appreciates the opportunity to comment and support the Wildwood Basin 4 project.

Very truly yours,

Robert J. Zappia, MD
Board of Directors President
Western Heights Water Company

INLAND EMPIRE
RESOURCE
CONSERVATION DISTRICT

909 .799.7407 | PHONE
909.799.1438 | FAX
25864-K Business Center Drive, Redlands, CA. 92374
www.ierca.org

January 16th 2015

United States Department of the Interior
Bureau of Reclamation
Financial Assistance Management Branch
Mail Code 84-27852
P. O. Box 25007
Denver, CO 80225

**RE: WaterSMART: Water and Energy Efficiency Grant – San Bernardino Valley Municipal Water District (District) and City of Yucaipa (City), California**

I am writing today on behalf of the Board of Directors of the Inland Empire Resource Conservation District, in support of submittal of a grant application by the San Bernardino Valley Municipal Water District (SBVMWD) on behalf of the City of Yucaipa (City). The City of Yucaipa and SBVMWD have a long history of partnering on projects focused on enhancing local and regional water resources; resulting benefits of such work have included improved water quality, elevated flood control capacity, and reinforcement of available local supply for long-term support of all dependent species.

The City and SBVMWD have worked together to conceptualize and submit for funding consideration the Wildwood Creek Basin 4 Proposal. This multi-partner project has several major objectives, with the most critical consisting of the provision of groundwater recharge opportunities designed to provide savings when surface water storage evaporation is reduced and/or surface runoff is intercepted for recharge. The proposed basin project is located along Wildwood Creek adjacent to Wildwood Canyon Road, south of Wildwood View Drive at the confluence of Wildwood Creek and a smaller canyon tributary and extends to Mesa Grande Drive to the west. The Wildwood 4 Basin Project was identified in the City's Master Plan of Drainage adopted in an updated version of the plan in 2008 to promote and provide groundwater recharge of natural stream flows, debris control, improved downstream water quality, and environmental restoration and enhancements. The basin is proposed to be a flow-through basin with a capacity of 25 acre feet. The project will reduce sedimentation and downstream flooding along Wildwood Creek thus providing protection for the existing habitat, specifically oak trees, Wildwood Canyon Road, Wildwood Canyon Park and other public/private property and infrastructure.

The aging infrastructure of the California State Water Project, ongoing climate change, and expanding population in this state are all threats to its ability to meet growing water needs of all species. For this reason, there is a critical need for public agencies throughout California to work together to identify and plan for long-term sustainability of local water supplies to the greatest extent possible. This grant application is an excellent example of a partnership between two public agencies, designed to prioritize groundwater recharge as a method of development and protection of local water supply. Its implementation in critical on both a local and regional scale for ongoing capture and use of stormwater that is otherwise wasted in the absence of infrastructure designed to catch and direct it to enhance groundwater supply.

RESOURCE
CONSERVATION DISTRICT

The Inland Empire Resource Conservation District respectfully requests consideration of this application and appreciates the opportunity to comment and support the Wildwood Basin 4 project.

Sincerely,

Mandy Parkes, District Manager
Inland Empire Resource Conservation District
909-799-7407 x106
mparkes@iercd.org