2015 IRWM Implementation Grant Comments
Pajaro River Watershed Long Term Drought Preparedness Proposal
November 11, 2015

On behalf of the Pajaro River Watershed IRWM region, San Benito County Water District (SBCWD) submitted the Pajaro River Watershed Long Term Drought Preparedness grant application to the Department of Water Resources for funding consideration. The proposal was scored a total of 20 points and not recommended for funding. However, there was an error in summing the total points awarded to the City of Watsonville project and SBCWD believes there were incorrect assessments of the scoring criteria for the SBCWD project. If the scores are adjusted nine points to account for the criteria as documented below, the proposal score will be in the fundable scoring range.

City of Watsonville Project No. 2
The City of Watsonville project was awarded all possible points with the exception of Question 6 (1 point). The score should have totaled 21 points, not the 20 points awarded. **+1 Project Point**

SBCWD Project No. 1
Included below is a summary of the scoring criterion that we believe were improperly scored and the basis for the scoring change.

Work Plan, Budget and Schedule Criterion
Question 15. Does the applicant discuss the necessary tasks in the Work Plan that will result in a completed project?

- **Tasks that will likely lead to a completed project and a brief description of those tasks.**

The SBCWD Hollister Hexavalent Chromium Compliance Project Work Plan included all the tasks and sub tasks necessary to deliver a complete project as described below. **+1 Project Point**

The tasks were broken out by the following four categories as required in the grant Proposal Solicitation Package (PSP):

- Direct Project Administration
- Land Purchase/Easement
- Planning/Design/Engineering/Environmental Documentation
- Construction/Implementation

Further, the Work Plan contained each of the following items as required in the PSP:

- Each task included a summary of the work already completed, an estimate of the % complete, and a concise description of the task
- Grant reporting tasks including the submittal of Quarterly Progress Reports, Invoices, and Final Reports are described in Tasks A1 and A3
- Procedures for coordinating with Hollister Urban Area partners are included in Task A1
- Standards that will be used in implementation were briefly described in Tasks A2, A3, D2 and D4 as applicable and included DWR Grant Reporting Standards, Labor Code Section 1771.3 requirements, and AWWA performance testing standards.
- Preparation of the Project Performance Monitoring Plan was described in Task C4
- Land acquisition is not applicable to this project and was stated as such in Task B
- There are no environmental permits required for this project as stated in Task C3. The construction contractor will be required to secure a stormwater NPDES permit and this work will begin immediately following award of the contract as stated in Task C3
- As described in Task C2, a Supplemental EIR or Mitigated Negative Declaration will be required to address the new conveyance pipeline to the City of Hollister wells. As described, SBCWD will hire an environmental consultant to prepare the CEQA document, the mitigation monitoring program and all related certification documents including the Notice of Decision.
- The Tribal Notification requirement is included in Task A1
- Submittal of the 100% design plans and specifications was included in Task C1

Question 18. Are the tasks shown in the Budget consistent with the tasks discussed in the Work Plan?

- **A Budget that is organized/outlined identical to the Work Summary**

The budget and work summary are **identical**, as required and summarized below. **+1 Project Point**

Task	Description	Work Summary	Budget
A1	Project Management	Budget, schedule, contract and grant management activities by SBCWD staff.	2% of construction cost with A3
A2	Labor Compliance	Labor compliance plan and payroll certification by consultant	1% of construction cost
A3	Reporting	Progress and grant reporting	2% of construction cost with A1
B	Land Purchase	Facilities located within existing rights of way, no purchase or easement requirements	$0
C1	Design	Complete all design documents from preliminary design through 100% design submittal	4% of construction cost for predesign; 8% of construction cost for final design
C2	Environmental Documentation	Complete supplemental EIR	4% of construction cost
C3	Permitting	No environmental permits required; only the construction related NPDES permit is required and will be submitted by the construction contractor	Construction contractor requirement; included in construction cost estimate
C4	PPMP	Project Performance Monitoring Plan to be prepared by SBCWD staff	$2,000 assumes 25 SBCWD staff hours
C5	Irrigation Efficiency Program	The Resource Conservation District will implement an Irrigation Efficiency Program	$190,000 assumes one RCD staffer at 70% time, $95 per hour, 18 months
D1	Construction Contracting	Activities required to secure a construction contract to be performed by SBCWD staff	$13,000 assumes 100 staff hours at $130 per hour
D2	Construction	All construction activities including mobilization, pipeline installation, performance testing and demobilization.	$2,717,000 based on Basis of Design Report
D3	Environmental Compliance during Construction	Construction activities within existing rights of way and no environmental issues anticipated during construction	$0 no issues anticipated
D4	Construction Administration	Construction management and engineering services during construction.	12% of construction cost

Question 19. Are the costs presented in the Budget reasonable for the project type and the current stage of the project?

- **A budget that contains costs that are reasonably supported and not significantly higher or lower than industry standard.**

The SBCWD Hollister Hexavalent Chromium Compliance Project cost estimate is based on the Hollister Hexavalent Chromium Compliance Plan Report (July 2015) and industry standards, as documented in Attachment 4. All of the costs were estimated by subtask and based on an industry standard percentage of the estimated construction cost or an estimated level of effort consistent with other similar projects implemented by SBCWD. Those estimates are all summarized in the above table. **+1 Project Point**

Question 20. Are the tasks in the schedule consistent with the tasks described in the Work Plan?

- **A schedule that is organized/outlined identical to the Work Summary**

The schedule and work summary are **identical**, as required and summarized below. **+1 Project Point**

The SBCWD Hollister Hexavalent Chromium Compliance Project was under design at the time of grant submittal. The schedule documentation demonstrated the project would be completed by June 2018.

Task	Description	Work Summary	Schedule
A1	Project Management	Budget, schedule, contract and grant management activities by SBCWD staff.	Begins immediately following grant award with the submittal of required grant contracting documents and continues throughout the project and ends June 2018 at project completion
A2	Labor Compliance	Labor compliance plan and payroll certification by consultant	Begins immediately following grant award with the preparation of the LCP and payroll certification continues throughout the project construction and ends November 2017 when construction activities are complete
A3	Reporting	Progress and grant reporting	Begins immediately following grant award and continues throughout the project and ends June 2018 with the submittal of the Final Project Completion Report
B	Land Purchase	Facilities located within existing rights of way, no purchase or easement requirements	No real estate required.
C1	Design	Complete all design documents from preliminary design through 100% design submittal	Design started in October 2015, as stated in the schedule, and will be completed in a year, as scheduled by the design consultant
C2	Environmental Documentation	Complete supplemental EIR	The environmental documentation work was scheduled to begin in February 2016 and be completed by October 2016; the work will actually begin December 2015 ahead of schedule
C3	Permitting	No environmental permits required; only the construction related NPDES permit is required and will be submitted by the construction contractor	Contractor will obtain construction permit after contract is awarded in December 2016
C4	PPMP	Project Performance Monitoring Plan to be prepared by SBCWD staff	Scheduled to begin immediately following grant award and completed in two months
C5	Irrigation Efficiency Program	The Resource Conservation District will implement an Irrigation Efficiency Program	Scheduled to begin immediately following grant award and implemented over 18 months
D1	Construction Contracting	Activities required to secure a construction contract to be performed by SBCWD staff	Scheduled to begin October 2016 immediately following completion of 100% design plans and specifications and be completed December 2016 consistent with similar SBCWD projects
D2	Construction	All construction activities including mobilization, pipeline installation, performance testing and demobilization.	Construction will begin January 2017 immediately following award of the contract and will be completed by November 2017 consistent with durations of similar projects
D3	Environmental Compliance during Construction	Construction activities within existing rights of way and no environmental issues anticipated during construction	No issues expected but will occur throughout construction if required
D4	Construction Administration	Construction management and engineering services during construction.	Begins in January 2017 concurrent with construction and extends four months beyond completion of construction to allow for the completion of As-Built Drawings and the Notice of Completion

Question 23. Is there sufficient detail in the Work Plan to demonstrate the proposed schedule can be met?

- **Supporting documentation for the proposed schedule that demonstrates the project could be implemented as promised**

The SBCWD Hollister Hexavalent Chromium Compliance Project work plan and schedule included all activities required to implement the project through construction. The schedule included start and end dates, milestones, and illustrated all dependencies and predecessors for all tasks and subtasks. The durations were reasonable and based on engineering estimates and similar SBCWD projects as documented in the schedule. **+1 Project Point**

Quantifying, Supporting and Monitoring Project Benefits

Question 8. Are the anticipated primary and secondary physical benefits of the project described and quantified with the units specified in Table 5?

- **A properly completed Table 5 for at least the primary and secondary benefit of each project. If the primary and secondary physical benefit is were not clearly identified or quantified for each year of the project's lifecycle using the specific units provided in the instructions for Table 5, a response of 'no' will be given.**

An excerpt from the submitted proposal is included below. As shown in the first table, the primary physical benefit is the reduction of Chromium 6 in the drinking water, the specific units are ppb, and the benefit is quantified for each year of the project's lifecycle. As shown in the second table, the secondary physical benefit is the reduced energy usage, the specific units are kWh/year, and the benefit is quantified for each year of the project's lifecycle. Additionally, a detailed technical analysis of each physical benefit claimed was included in the proposal. **+1 Project Point**

- **PRIMARY PHYSICAL BENEFIT WATER QUALITY – REDUCED HEXAVALENT CHROMIUM IN THE DRINKING WATER:** The primary physical benefit of the HHCCP is the reduction of Chromium 6 levels in the HUA drinking water supply. The HHCCP will provide a clean drinking water supply to the HUA and ensure the community's Human Right to Water is satisfied. An extension of the new transmission pipelines from the new West Hills WTP will facilitate the conveyance of treated CVP water directly to the City's contaminated wells in order to blend the supplies and achieve compliance with the Chromium 6 regulation (Table 2.3).

- **SECONDARY PHYSICAL BENEFIT ENERGY SAVINGS:** The secondary physical benefit of the HHCCP is the avoided energy consumption, and associated greenhouse gases, that would be required to treat the City's groundwater to achieve compliance with the Chromium 6 regulation. The avoided energy savings provided by the HHCCP in lieu of wellhead treatment is estimated to be 932,129 kWh/year (Table 2.4).

Table 2.3 – Annual Project Physical Benefits - Benefit A (Primary)

Project Name: West Hills Water Project
Type of Benefit Claimed: Water Quality. Hexavalent Chromium concentration reduction
Units of the Benefit Claimed: Hexavalent Chromium concentration (ppb)
Anticipated Useful Life of Project (years): 50 years

(a)	(b)	(c)	(d)
Physical Benefits			
Year	**Without Project**	**With Project**	**Change Resulting from Project (c) – (b)**
2015	14.1	Under construction	0.0
2016	14.1	Under construction	0.0
2017	14.1	Under construction	0.0
2018 - 2067	14.1	8	-6.1

Comments: The without project Chromium 6 concentration is calculated based on the flow weighted average of the Chromium 6 levels in the four active wells in the Low Pressure Zone. The with project Chromium 6 concentration will be 8 ppb after blending with treated surface water.

Table 2.4 – Annual Project Physical Benefits - Benefit B (Secondary) **Project Name: Hollister Hexavalent Chromium Compliance Project** **Type of Benefit Claimed: Energy Savings** **Units of the Benefit Claimed: kWh/year** **Anticipated Useful Life of Project (years): 50**			
(a)	**(b)**	**(c)**	**(d)**
Physical Benefits			
Year	**Without Project**	**With Project**	**Change Resulting from Project (c) – (b)**
2015	0	Under construction	0
2016	0	Under construction	0
2017	0	Under construction	0
2018 - 2067	932,129	0	-932,129
Comments: The without project energy consumption is calculated based on the annual average energy required for preferred treatment to treat the City's wells in the Low Pressure Zone. The with project energy consumption is 0 kWh/year because the treated CVP water used for blending will be delivered by gravity.			

Question 9. Does the technical analysis support the claimed physical benefit?

- **An explanation of project need**
- **An explanation of without project conditions**
- **A description of how benefits were derived**

As documented below, the proposal provided the explanations and documentation as required. **+2 Project Points**

PROJECT NEED: As described in the proposal, municipal supplies in the HUA are currently served by a blend of local groundwater and imported CVP water treated at the existing Lessalt WTP. On July 1, 2014, the California Division of Drinking Water (DDW) adopted water quality regulations that limit the levels of Chromium 6 to a maximum of 10 parts per billion (ppb) in drinking water. Water quality sampling and testing by the City of Hollister shows that all four of the City's active water supply wells exceed the new maximum contaminant level (MCL). The Chromium 6 levels in ppb and well capacity in gpm were provided in the proposal.

WITHOUT PROJECT CONDITIONS: As described in the proposal, without the HHCCP, the City of Hollister would be forced to either abandon its existing groundwater wells, relying solely on imported CVP water, or construct new, costly, wellhead treatment to maintain system reliability while complying with the Chromium 6 regulation. The City would need to install and operate wellhead treatment at three of its active wells. The fourth well (Well No. 6) would be placed on inactive status, reducing the reliability of the system as well as the available active water supply. Therefore, the HHCCP benefits are measured against the benefits, impacts and costs of wellhead treatment at three of the four City wells. As documented in the City Chromium 6 Compliance Plan, the estimated capital cost for wellhead treatment is $7.71 million and annual O&M costs are estimated to be $1.2 million per year. In addition, if the City were to add wellhead treatment at the contaminated wells to meet the Chromium 6 regulation, it is estimated that over 930,000 kWh/year would be required to treat the contaminated groundwater, as summarized in a table included in the proposal.

DESCRIPTION OF HOW BENEFITS WERE DERIVED: Excerpts from the proposal are included below to demonstrate that the proposal adequately described how the water quality and energy saving benefits were derived.

ESTIMATING PHYSICAL BENEFITS - WATER QUALITY: The physical water quality benefit for Chromium 6 concentration is calculated based on the existing flow-weighted average of the Chromium 6 levels in the four active wells in the Low Pressure Zone as compared to the calculated flow-weighted average after the new supply from the

West Hills WTP is blended with the groundwater. As shown in Table 2.7, the current flow-weighted average Chromium 6 level is 14.1 ppb, when using only the four Hollister wells for potable supply.

After the HHCCP comes on-line, treated water will be delivered to three of the four City wells to provide blending for compliance with the Chromium 6 regulations. An approximate 0.9 mile pipeline will be installed north along Westside Blvd and east along South Street to connect to Well No. 4, while a 0.7 mile pipeline will extend east along Nash Road, past Well No. 5, to Sally Street and then south to Well No. 2. The fourth well (Well No. 6) will be put on inactive status to avoid Chromium 6 violations. After introducing the new treated supply from the West Hills WTP, the flow-weighted average Chromium 6 levels drop to 8.6 ppb, below the regulatory limit of 10 ppb (Table 2.8).

Table 2.7 Chromium 6 Concentrations in City of Hollister Groundwater Wells

Well	Well Capacity (gpm)	Range of Chromium 6 (ppb)	Average Chromium 6 (ppb)	Flow Weighted Chromium 6
No. 2 (Bundeson)	1425	11 - 15	13	18525
No. 4 (South)	1670	15 - 17	16	26720
No. 5 (Nash)	1825	12 - 14	13	23725
No. 6 (Airline)	435	15 - 16	15.5	6742.5
FLOW WEIGHTED AVERAGE CHROMIUM 6				**14.1 ppb**
Note: California DDW MCL for Chromium 6 is 10 ppb.				

Table 2.8 Chromium 6 Concentrations in City of Hollister Groundwater Wells plus West Hills

Well/Supply	Well Capacity/WHWP (gpm)	Range of Chromium 6 (ppb)	Average Chromium 6 (ppb)	Flow Weighted Chromium 6
No. 2 (Bundeson)	1425	11 - 15	13	18525
No. 4 (South)	1670	15 - 17	16	26720
No. 5 (Nash)	1825	12 - 14	13	23725
No. 6 (Airline)	0	15 - 16	15.5	0
West Hills	3124.8	0	0	0
FLOW WEIGHTED AVERAGE CHROMIUM 6				**8.6 ppb**
Note: California DDW MCL for Chromium 6 is 10 ppb.				

ESTIMATING PHYSICAL BENEFITS – ENERGY SAVINGS: If the City were to add wellhead treatment at the contaminated wells to meet the Chromium 6 regulation, it is estimated that over 930,000 kWh/year would be required to treat the contaminated groundwater, as described in the City Compliance Plan and summarized in Table 2.6.

Table 2.6 Energy Required to Treat the City of Hollister's Contaminated Groundwater at the Wellhead

Well	Well Capacity (gpm)	Annual Energy Demand (kWh/year)
No. 2 (Bundeson)	1425	269,976
No. 4 (South)	1670	316,393
No. 5 (Nash)	1825	345,759
No. 6 (Airline)	435	N/A
Total		932,129
Note: As described in the Chromium Compliance Plan, the preferred treatment alternative is blending with West Hills treated surface water. Furthermore, it was recommended that Well No. 6 be placed on inactive status due to the low well capacity and high Chromium 6 levels.		

The HHCCP allows the City to use an already planned water supply to blend the contaminated groundwater, thereby avoiding the need to provide wellhead treatment. A key savings in avoiding the wellhead treatment is the avoided energy demand associated with treatment. As described above, the estimated annual energy demand for the preferred treatment alternative is approximately 932,129 kWh/year. Thus the HHCCP avoids this energy requirement as well as the associated greenhouse gases.