

August 20, 2020

Project File No.: 902020-007

Shandon-San Juan Water District

P. O. Box 150

Shandon, CA 93461

SUBJECT: Letter Proposal to the District Board of Directors

This letter proposal is for the following two tasks:

- Task 1 - Inventory Water Resource Reference Documents for the Paso Robles Basin
- Task 2 – Initial Screening Assessment of Water Improvement Projects

I recall that the Paso Robles Blue Ribbon Committee (BRC) performed some or all of the effort associated with these two tasks. I have reached out to past members of that BRC and the County Public Works Department (Department) to locate the inventory of reference documents. I did locate the screening assessment produced by the BRC. The BRC dissolved about 2013 or 2014; thus, any post-BRC project developments would be added to this list.

Proposed Scope and Budget

Task 1 – Reference Documents. The scope is for the development of a comprehensive inventory list of water resources documents that are about, concern, affect, are near and/or are within the Paso Robles Basin. The topics include, and may not be limited to, the following: Shandon Community Services Area No. 16, Paso Robles Groundwater Basin, State Water Project, Salinas River, and Nacimiento Water Project. This list is expected to be dynamic and modified over time; thus, a digital file (Excel) will be a deliverable to the District.

The Department provided an Excel database of reference documents. A brief review of the list indicates that it will be useful in generating an inventory for the District. The scope assumes that a visit to their library located in the basement of the old Courthouse will be necessary to conduct research on some report content. I was instructed by a Department staff member that the District would need to make a formal Public Records Request to gain access to the Department's library.

The budget for this task is estimated at \$4,800.

Task 2 – Screening Assessment of Projects. The proposed starting point for this task is to revisit the work product developed by the BRC circa 2013. **Attachment A** is the work product developed by the Steering Subcommittee of the BRC listing 96 water solutions for the Basin. This work product by the BRC appears to be in line with the District's requested scope for this task; thus, the proposed work for the task will be refining and/or updating this list of solutions. The course screening criteria is presented within Attachment A, and my recommendation is to continue its use at this level of project development (subject to the District's concurrence).

The proposed scope for this task is:

- Update the BRC's list of projects with any new and/or missing projects.
- Initial screening any added projects using the BRC's screening method.
- Identify a list of the top ten (plus/minus) ranked and/or priority projects.

- Develop a brief “at-a-glance” project specific summary writeup for each top project, identifying the following:
 - Project Description, including a Rough Order of Magnitude (ROM) of the annual water benefit to the Paso Robles Basin.
 - ROM of the capital cost, providing details where possible.
 - ROM for project scheduling, providing details on the various phases of the schedule.
 - Identify the agency most likely or best suited to serve as the lead agency to advance the project from concept to completion and identify sister-agencies that may serve as cosponsors.
- Prepare and submit a technical memorandum that presents the project specific summary, and an appendix of the full listing of projects (majority previously identified by the BRC).
- Prepare and make a presentation to the District and assist in the development of next steps.

The budget for this task is estimated at \$6,800.

Please contact me at (805) 458-7268, or e-mail at JohnHollenbeckPE@gmail.com with questions or suggested changes to the proposal.

Sincerely,



HOLLENBECK CONSULTING
JOHN R. HOLLENBECK, P. E.
Owner/Sole Proprietor

Enclosures:

Proposed Budget Estimate for Tasks 1 and 2

ATTACHMENTS

- A - Paso Robles Groundwater Basin Management Plan Solutions, Steering Subcommittee of the Paso Robles Blue Ribbon Committee, 5 AUG 2013

Shandon-San Juan Water District
 Budget Estimate for As-Needed Engineering Services
 John R. Hollenbeck d.b.a. Hollenbeck Consulting

Task Description	Labor Hours	Unit Cost	Labor Cost	ODC (Comm Fee)	ODC (Other)	Cost	Comment
Reference Documents							
Inventory Known Documents	4	\$195	\$780	\$23	\$0	\$803	
SLO Co Public Works Library Research	8	\$196	\$1,568	\$47	\$0	\$1,615	
Organize Digital Copies	4	\$195	\$780	\$23	\$0	\$803	
Obtain Cost Proposal for Scanning of Hardcopies	4	\$195	\$780	\$23	\$0	\$803	
Deliverable - Manifest of Documents	4	\$195	\$780	\$23	\$0	\$803	
	24		\$4,688	\$141	\$0	\$4,827	
Screen Assessment of Projects							
Update PRC Inventory Project List	4	\$195	\$780	\$23	\$0	\$803	
Review Ref Docs/Update Project Inventory List	8	\$195	\$1,560	\$47	\$0	\$1,607	
Cursory Screening of Projects	4	\$195	\$780	\$23	\$0	\$803	
Deliverable - TM of Screening Assessment	16	\$195	\$3,120	\$94	\$0	\$3,214	
Presentation to District	2	\$195	\$390	\$12	\$0	\$402	
	34		\$6,630	\$199	\$0	\$6,829	

Paso Robles Groundwater Basin Management Plan Steering Committee
Solutions Ranking Key
August 5, 2013

Best outcome assigned highest points

Example:

	Numeric Points	Weighting*	Final Score
H - Highest acre feet per year	3	30%	0.90
L - Lowest estimated cost	3	25%	0.75
H - Highest feasibility	3	45%	1.35
Total Scores	Raw 9	Weighted	3.00

Weighting*	Alpha Description	Numeric Points
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Acre Feet per Year (AFY)	30%		Acre-feet per year, potential or actual number, if known
		L/U - Lowest/Unknown	1 < 1,000
		M - Medium	2 1,000 - 5,000
		H - Highest	3 > 5,000

Estimated Cost	25%		Based on knowledge of similar projects
		L - Lowest	3 < \$1,000,000
		M - Medium	2 \$1,000,000 to \$10,000,000
		H - Highest	1 > \$10,000,000

Feasibility	45%		Based on knowledge of similar projects
		L - Low	1 Difficult due to technical, political, environmental issues
		M - Moderate	2 Will take some negotiations, public acceptance
		H - High	3 Could be implemented immediately

*Weighting was determined by discussion in the subcommittee as to the relative importance of each of the categories.

Paso Robles Groundwater Basin Management Plan Steering Committee
Top Ranked Solutions
August 5, 2013

Short Term Solutions (Implementation in 1 to 5 years)			
Index	Solution Category	Solution	Time Frame
1	Management	Create a Basin-wide groundwater management district management system.	S
2	Conservation	Identify and implement specific Best Management Practices.	S
3	Supplemental	Utilize the full allocation (2,000 AFY) by fully utilizing the existing percolation ponds.	S
4	Conservation	Reduce water usage on a per acre basis for perennial crops.	S
5	Conservation	Install water meters on irrigation and ag processing wells.	S
6	Conservation	Participate in California Urban Water Conservation Council policies and practices.	S
7	Conservation	Conduct outreach for County's groundwater level monitoring program.	S
8	Conservation	Identify Best Management Practices and set targets to measure success.	S
9	Conservation	Conduct regular outreach activities.	S
10	Conservation	Conduct regular outreach activities.	S
11	Conservation	Conduct regular outreach activities.	S
12	Management	Provide a potable water source for use in trucking water to homes for emergency purposes.	S
13	Management	Implement ordinances to prohibit subdivisions of land or General Plan Amendments in the Basin.	S
14	Management	Implement landscaping ordinance.	S
15	Management	Require new development to be water neutral.	S

AFY	Est. Cost	Feasi - bility	Total Score
H	L	H	3.00
M	L	H	2.70
M	L	H	2.70
H	L	M	2.55
H	L	M	2.55
L	L	H	2.40
U	L	H	2.40
U	L	H	2.40
U	L	H	2.40
U	L	H	2.40
U	L	H	2.40
L	L	H	2.40
L	L	H	2.40
L	L	H	2.40
L	L	H	2.40

Paso Robles Groundwater Basin Management Plan Steering Committee
Top Ranked Solutions
August 5, 2013

Index	Solution Category	Solution	Time Frame
16	Management	Establish baseline conditions.	S
17	Management	Continuously monitor status of Basin to determine whether solutions are effective.	S
18	Management	Implement landscaping ordinance (ag processing).	S
19	Management	Encourage projects that detain or slow runoff.	S
20	Management	Implement Low Impact Development standards.	S
21	Management	Require hold harmless notice when land sold that Basin in decline and not rely on for intensive use.	S
22	Management	Encourage projects that detain or slow runoff.	S
23	Supplemental	Maximize or increase the use of the full allocation.	S
24	Supplemental	Connect Shandon to State Water Project and set up distribution system.	S
25	Conservation	Reduce per capita consumption to offset growth in service area.	S
26	Conservation	Identify and implement Best Management Practices, including frost protection Best Management Practices, for perennial crops.	S
27	Conservation	Identify and implement specific Best Management Practices for annual crops.	S
28	Conservation	Reduce water usage on a per household basis.	S
29	Conservation	Reduce water usage on a per acre basis applicable to each annual crop.	S
30	Management	Develop an equitable allocation of safe yield for all overlayers.	S
31	Supplemental	Exchange or bank Nacimiento water with Santa Margarita Lake to benefit Basin.	S

AFY	Est. Cost	Feasi - bility	Total Score
L	L	H	2.40
L	L	H	2.40
U	L	H	2.40
U	L	H	2.40
U	L	H	2.40
U	L	H	2.40
U	L	H	2.40
L	L	H	2.40
L	L	H	2.40
M	L	M	2.25
M	L	M	2.25
M	L	M	2.25
M	L	M	2.25
M	L	M	2.25
M	L	M	2.25
M	L	M	2.25

Paso Robles Groundwater Basin Management Plan Steering Committee
Top Ranked Solutions
August 5, 2013

Index	Solution Category	Solution	Time Frame
32	Supplemental	Structure operations to use alluvial water first, Nacimiento water second and Basin last.	S
33	Supplemental	Cloud seeding	S

AFY	Est. Cost	Feasi - bility	Total Score
M	L	M	2.25
M	L	M	2.25

Medium and Long Term Solutions (Implementation in 6-10 years (Medium) and greater than 10 years (Long Term))

61	Management	Manage pumping from all wells in the Basin.	M
62	Supplemental	Turnout the State Water Project Coastal Branch at the City of San Luis/Nacimiento junction.	M
63	Management	Create irrigation districts or other management authorities to convey water to agricultural users.	L
64	Supplemental	Negotiate with Monterey Co for additional Nacimiento water to utilize full hydraulic capacity of pipeline.	L
65	Supplemental	Agriculture to use Nacimiento water.	L
66	Supplemental	Direct delivery of Nacimiento or State Water Project water.	L
67	Supplemental	Deliver unsubscribed Nacimiento/State Water Project allocation directly to area of concern for Ag/Golf/Rural Res.	L
68	Management	Prohibit groundwater exports from the Basin.	M
69	Management	Establish ordinances to protect recharge areas and watersheds.	M
70	Management	Create small community systems for rural communities.	M
71	Recycling	Install grey water reuse systems onsite.	M

M	L	M	2.25
H	L	L	2.10
H	H	M	2.05
H	H	M	2.05
H	H	M	2.05
H	H	M	2.05
H	H	M	2.05
U	L	M	1.95
U	L	M	1.95
L	L	M	1.95
L	L	M	1.95

Paso Robles Groundwater Basin Management Plan Steering Committee
Solutions Ranked by Short Term and Medium/Long Term and by Total Score
August 5, 2013

Short Term Solutions (Implementation in 1 to 5 years)										
Index	Solution Category	Solution	Time Frame	AFY	Est. Cost	Feasi - bility	AFY	Cost	Feas.	Total Score
							30%	25%	45%	
1	Management	Create a Basin-wide groundwater management district management system.	S	H	L	H	0.90	0.75	1.35	3.00
2	Conservation	Identify and implement specific Best Management Practices.	S	M	L	H	0.60	0.75	1.35	2.70
3	Supplemental	Utilize the full allocation (2,000 AFY) by fully utilizing the existing percolation ponds.	S	M	L	H	0.60	0.75	1.35	2.70
4	Conservation	Reduce water usage on a per acre basis for all perennial crops.	S	H	L	M	0.90	0.75	0.90	2.55
5	Conservation	Install water meters on irrigation and ag processing wells.	S	H	L	M	0.90	0.75	0.90	2.55
6	Conservation	Participate in California Urban Water Conservation Council policies and practices.	S	L	L	H	0.30	0.75	1.35	2.40
7	Conservation	Conduct outreach for County's groundwater level monitoring program.	S	U	L	H	0.30	0.75	1.35	2.40
8	Conservation	Identify Best Management Practices and set targets to measure success.	S	U	L	H	0.30	0.75	1.35	2.40
9	Conservation	Conduct regular outreach activities.	S	U	L	H	0.30	0.75	1.35	2.40
10	Conservation	Conduct regular outreach activities.	S	U	L	H	0.30	0.75	1.35	2.40
11	Conservation	Conduct regular outreach activities.	S	U	L	H	0.30	0.75	1.35	2.40
12	Management	Provide a potable water source for use in trucking water to homes for emergency purposes.	S	L	L	H	0.30	0.75	1.35	2.40
13	Management	Implement ordinances to prohibit subdivisions of land or General Plan Amendments in the Basin.	S	L	L	H	0.30	0.75	1.35	2.40
14	Management	Implement landscaping ordinance.	S	L	L	H	0.30	0.75	1.35	2.40
15	Management	Require new development to be water neutral.	S	L	L	H	0.30	0.75	1.35	2.40
16	Management	Establish baseline conditions.	S	L	L	H	0.30	0.75	1.35	2.40
17	Management	Continuously monitor status of Basin to determine whether solutions are effective.	S	L	L	H	0.30	0.75	1.35	2.40
18	Management	Implement landscaping ordinance (ag processing).	S	U	L	H	0.30	0.75	1.35	2.40
19	Management	Encourage projects that detain or slow runoff.	S	U	L	H	0.30	0.75	1.35	2.40

Index	Solution Category	Solution	Time Frame	AFY	Est. Cost	Feasi - bility	AFY	Cost	Feas.	Total Score
							30%	25%	45%	
20	Management	Implement Low Impact Development standards.	S	U	L	H	0.30	0.75	1.35	2.40
21	Management	Require hold harmless notice when land sold that Basin in decline and not rely on for intensive use.	S	U	L	H	0.30	0.75	1.35	2.40
22	Management	Encourage projects that detain or slow runoff.	S	U	L	H	0.30	0.75	1.35	2.40
23	Supplemental	Maximize or increase the use of the full allocation.	S	L	L	H	0.30	0.75	1.35	2.40
24	Supplemental	Connect Shandon to State Water Project and set up distribution system.	S	L	L	H	0.30	0.75	1.35	2.40
25	Conservation	Reduce per capita consumption to offset growth in service area.	S	M	L	M	0.60	0.75	0.90	2.25
26	Conservation	Identify and implement Best Management Practices, including frost protection Best Management Practices, for perennial crops.	S	M	L	M	0.60	0.75	0.90	2.25
27	Conservation	Identify and implement specific Best Management Practices for annual crops.	S	M	L	M	0.60	0.75	0.90	2.25
28	Conservation	Reduce water usage on a per household basis.	S	M	L	M	0.60	0.75	0.90	2.25
29	Conservation	Reduce water usage on a per acre basis applicable to each annual crop.	S	M	L	M	0.60	0.75	0.90	2.25
30	Management	Develop an equitable allocation of safe yield for all overlies.	S	M	L	M	0.60	0.75	0.90	2.25
31	Supplemental	Exchange or bank Nacimiento water with Santa Margarita Lake to benefit Basin.	S	M	L	M	0.60	0.75	0.90	2.25
32	Supplemental	Structure operations to use alluvial water first, Nacimiento water second and Basin last.	S	M	L	M	0.60	0.75	0.90	2.25
33	Supplemental	Cloud seeding	S	M	L	M	0.60	0.75	0.90	2.25
34	Conservation	Identify and implement specific Best Management Practices for perennial crops.	S	L	L	M	0.30	0.75	0.90	1.95
35	Conservation	Identify and implement specific Best Management Practices for ag processing and wineries.	S	L	L	M	0.30	0.75	0.90	1.95
36	Conservation	Identify and implement specific Best Management Practices for non-domestic uses.	S	L	L	M	0.30	0.75	0.90	1.95
37	Conservation	Reduce water usage on a per acre basis applicable to each perennial crop.	S	L	L	M	0.30	0.75	0.90	1.95
38	Conservation	Reduce water usage on a per unit basis for each type of ag processing.	S	L	L	M	0.30	0.75	0.90	1.95
39	Conservation	Install water meters on domestic wells.	S	L	L	M	0.30	0.75	0.90	1.95

Paso Robles Groundwater Basin Management Plan Steering Committee
Solutions Ranked by Short Term and Medium/Long Term and by Total Score
August 5, 2013

Index	Solution Category	Solution	Time Frame	AFY	Est. Cost	Feasi - bility	AFY	Cost	Feas.	Total Score
							30%	25%	45%	
40	Conservation	Reduce water usage on a per unit basis applicable to each operation.	S	L	L	M	0.30	0.75	0.90	1.95
41	Conservation	Install water meters on non-domestic wells.	S	L	L	M	0.30	0.75	0.90	1.95
42	Management	Require hold harmless notice when land sold that Basin in decline and not rely on for intensive use.	S	U	L	M	0.30	0.75	0.90	1.95
43	Management	Enact urgency moratorium banning construction of all reservoirs for storage of irrigation water.	S	U	L	M	0.30	0.75	0.90	1.95
44	Management	Enforce erosion and sediment control plan per current grading ordinance.	S	U	L	M	0.30	0.75	0.90	1.95
45	Management	Encourage the segments of the ag industry that are comparatively water neutral.	S	U	L	M	0.30	0.75	0.90	1.95
46	Management	Encourage existing low water use crops to remain.	S	U	L	M	0.30	0.75	0.90	1.95
47	Management	Enforce erosion and sediment control plan per current grading ordinance.	S	U	L	M	0.30	0.75	0.90	1.95
48	Management	Enact urgency ordinance for new/expanded ag to limit per parcel water use to sustainable level.	S	U	L	M	0.30	0.75	0.90	1.95
49	Recycling	Install grey water reuse systems onsite. (Rural residential)	S	L	L	M	0.30	0.75	0.90	1.95
50	Recycling	Install grey water reuse systems onsite	S	L	L	M	0.30	0.75	0.90	1.95
51	Supplemental	Construct Basins in Salinas River alluvium within Estrella subarea to recharge unused Nacimiento allocation.	S	L	M	M	0.30	0.50	0.90	1.70
52	Conservation	Limit pumping to winter time water use.	S	H	H	L	0.90	0.25	0.45	1.60
53	Management	Enact urgency moratorium restricting new wells to no greater than 6 inch casing.	S	U	L	L	0.30	0.75	0.45	1.50
54	Management	Enact urgency moratorium on all ag overhead irrigation, including for frost protection.	S	U	L	L	0.30	0.75	0.45	1.50
55	Management	Establish policies and funding to take irrigated agricultural acreage out of production.	S	U	L	L	0.30	0.75	0.45	1.50
56	Management	Enact urgency ordinance for new/expanded users that they provide guarantees to maintain residential water supply.	S	U	L	L	0.30	0.75	0.45	1.50
57	Management	Adopt urgency plan for fair and equitable allocation of groundwater that protects residential users.	S	U	L	L	0.30	0.75	0.45	1.50
58	Supplemental	Increase alluvial well pumping to maximize use of Salinas River appropriation.	S	L	L	L	0.30	0.75	0.45	1.50
59	Supplemental	Connect the Paso Robles/Templeton system to Atascadero by installing 1,400 feet of pipe.	S	L	M	L	0.30	0.50	0.45	1.25

Index	Solution Category	Solution	Time Frame	AFY	Est. Cost	Feasi - bility	AFY	Cost	Feas.	Total Score
							30%	25%	45%	
60	Management	Do nothing.	S	L	H	L	0.30	0.25	0.45	1.00

Medium and Long Term Solutions (Implementation in 6-10 years (Medium) and greater than 10 years (Long Term))

61	Management	Manage pumping from all wells in the Basin.	M	M	L	M	0.60	0.75	0.90	2.25
62	Supplemental	Turnout the State Water Project Coastal Branch at the City of San Luis/Nacimiento junction.	M	H	L	L	0.90	0.75	0.45	2.10
63	Management	Create irrigation districts or other management authorities to convey water to agricultural users.	L	H	H	M	0.90	0.25	0.90	2.05
64	Supplemental	Negotiate with Monterey Co for additional Nacimiento water to utilize full hydraulic capacity of pipeline.	L	H	H	M	0.90	0.25	0.90	2.05
65	Supplemental	Agriculture to use Nacimiento water.	L	H	H	M	0.90	0.25	0.90	2.05
66	Supplemental	Direct delivery of Nacimiento or State Water Project water.	L	H	H	M	0.90	0.25	0.90	2.05
67	Supplemental	Deliver unsubscribed Nacimiento/State Water Project allocation directly to area of concern for Ag/Golf/Rural Res.	L	H	H	M	0.90	0.25	0.90	2.05
68	Management	Prohibit groundwater exports from the Basin.	M	U	L	M	0.30	0.75	0.90	1.95
69	Management	Establish ordinances to protect recharge areas and watersheds.	M	U	L	M	0.30	0.75	0.90	1.95
70	Management	Create small community systems for rural communities.	M	L	L	M	0.30	0.75	0.90	1.95
71	Recycling	Install grey water reuse systems onsite.	M	L	L	M	0.30	0.75	0.90	1.95
72	Supplemental	Wheel water through existing community systems or build infrastructure to deliver water.	L	H	M	L	0.90	0.50	0.45	1.85
73	Management	Groundwater banking.	L	M	H	M	0.60	0.25	0.90	1.75
74	Recycling	Upgrade wastewater treatment plants for distribution to end users.	M	M	H	M	0.60	0.25	0.90	1.75
75	Supplemental	All areas –Develop recharge Basins.	L	M	H	M	0.60	0.25	0.90	1.75
76	Supplemental	Build water treatment plant to full capacity of 4,000 AFY.	M	M	H	M	0.60	0.25	0.90	1.75
77	Supplemental	Connect San Miguel/Paso Robles /Templeton /Atascadero to State Water Project.	L	H	H	L	0.90	0.25	0.45	1.60
78	Supplemental	Jack Creek Dam	L	H	H	L	0.90	0.25	0.45	1.60

Paso Robles Groundwater Basin Management Plan Steering Committee
Solutions Ranked by Short Term and Medium/Long Term and by Total Score
August 5, 2013

Index	Solution Category	Solution	Time Frame	AFY	Est. Cost	Feasi - bility	AFY	Cost	Feas.	Total Score
							30%	25%	45%	
79	Supplemental	Santa Rita Creek Dam	L	H	H	L	0.90	0.25	0.45	1.60
80	Supplemental	Other new dam locations	L	H	H	L	0.90	0.25	0.45	1.60
81	Supplemental	Direct delivery	L	H	H	L	0.90	0.25	0.45	1.60
82	Supplemental	Desalinization (sea water or brackish).	L	H	H	L	0.90	0.25	0.45	1.60
83	Supplemental	Exchange or bank Nacimiento water with State Water Project.	M	M	M	L	0.60	0.50	0.45	1.55
84	Management	Create a rural water district.	L	L	L	L	0.30	0.75	0.45	1.50
85	Supplemental	Develop a San Miguel turnout and utilize Nacimiento Water.	M	L	L	L	0.30	0.75	0.45	1.50
86	Supplemental	Exchange or bank Nacimiento water with Lopez Lake to benefit Basin.	M	U	L	L	0.30	0.75	0.45	1.50
87	Supplemental	Establish live stream water flow throughout the watershed areas (Basin creeks)	M	U	L	L	0.30	0.75	0.45	1.50
88	Management	Connect rural residential properties adjacent to urban water providers.	M	L	H	M	0.30	0.25	0.90	1.45
89	Supplemental	Connect Creston to State Water Project.	L	L	H	M	0.30	0.25	0.90	1.45
90	Supplemental	Implement injection where it will replenish groundwater Basin.	L	M	H	L	0.60	0.25	0.45	1.30
91	Supplemental	Salinas Dam – Santa Margarita Lake - Raise and reinforce to increase storage.	L	M	H	L	0.60	0.25	0.45	1.30
92	Supplemental	Develop other carryover storage options.	L	L	H	L	0.30	0.25	0.45	1.00
93	Supplemental	Develop a high flow waterway management system. (Basin creeks)	L	U	H	L	0.30	0.25	0.45	1.00
94	Supplemental	Other streams	L	U	H	L	0.30	0.25	0.45	1.00
95	Supplemental	Alluvial flow capture (Estrella River, HuerHuero Creek, etc.)	L	U	H	L	0.30	0.25	0.45	1.00
96	Supplemental	Develop high flow waterway system management system. (Salinas River)	L	U	H	L	0.30	0.25	0.45	1.00

Paso Robles Groundwater Basin Management Plan Steering Committee
Solutions Ranked by Category
August 5, 2013

Index	Solution Category	Solution	Time Frame	AFY	Est. Cost	Feasi - bility	AFY	Cost	Feas.	Total Score
							30%	25%	45%	
Conservation										
2	Conservation	Identify and implement specific Best Management Practices.	S	M	L	H	0.60	0.75	1.35	2.70
4	Conservation	Reduce water usage on a per acre basis for perennial crops.	S	H	L	M	0.90	0.75	0.90	2.55
5	Conservation	Install water meters on irrigation and ag processing wells.	S	H	L	M	0.90	0.75	0.90	2.55
6	Conservation	Participate in California Urban Water Conservation Council policies and practices.	S	L	L	H	0.30	0.75	1.35	2.40
7	Conservation	Conduct outreach for County's groundwater level monitoring program.	S	U	L	H	0.30	0.75	1.35	2.40
8	Conservation	Identify Best Management Practices and set targets to measure success.	S	U	L	H	0.30	0.75	1.35	2.40
9	Conservation	Conduct regular outreach activities.	S	U	L	H	0.30	0.75	1.35	2.40
10	Conservation	Conduct regular outreach activities.	S	U	L	H	0.30	0.75	1.35	2.40
11	Conservation	Conduct regular outreach activities.	S	U	L	H	0.30	0.75	1.35	2.40
25	Conservation	Reduce per capita consumption to offset growth in service area.	S	M	L	M	0.60	0.75	0.90	2.25
26	Conservation	Identify and implement Best Management Practices, including frost protection Best Management Practices, for perennial crops.	S	M	L	M	0.60	0.75	0.90	2.25
27	Conservation	Identify and implement specific Best Management Practices for annual crops.	S	M	L	M	0.60	0.75	0.90	2.25
28	Conservation	Reduce water usage on a per household basis.	S	M	L	M	0.60	0.75	0.90	2.25
29	Conservation	Reduce water usage on a per acre basis applicable to each annual crop.	S	M	L	M	0.60	0.75	0.90	2.25
34	Conservation	Identify and implement specific Best Management Practices for perennial crops.	S	L	L	M	0.30	0.75	0.90	1.95
35	Conservation	Identify and implement specific Best Management Practices for ag processing and wineries.	S	L	L	M	0.30	0.75	0.90	1.95
36	Conservation	Identify and implement specific Best Management Practices for non-domestic uses.	S	L	L	M	0.30	0.75	0.90	1.95
37	Conservation	Reduce water usage on a per acre basis applicable to each crop.	S	L	L	M	0.30	0.75	0.90	1.95
38	Conservation	Reduce water usage on a per unit basis for each type of ag processing.	S	L	L	M	0.30	0.75	0.90	1.95

Paso Robles Groundwater Basin Management Plan Steering Committee
Solutions Ranked by Category
August 5, 2013

Index	Solution Category	Solution	Time Frame	AFY	Est. Cost	Feasi - bility	AFY	Cost	Feas.	Total Score
							30%	25%	45%	
39	Conservation	Install water meters on domestic wells.	S	L	L	M	0.30	0.75	0.90	1.95
40	Conservation	Reduce water usage on a per unit basis applicable to each operation.	S	L	L	M	0.30	0.75	0.90	1.95
41	Conservation	Install water meters on non-domestic wells.	S	L	L	M	0.30	0.75	0.90	1.95
52	Conservation	Limit pumping to winter time water use.	S	H	H	L	0.90	0.25	0.45	1.60
Management										
1	Management	Create a Basin-wide groundwater management district management system.	S	H	L	H	0.90	0.75	1.35	3.00
12	Management	Provide a potable water source for use in trucking water to homes for emergency purposes.	S	L	L	H	0.30	0.75	1.35	2.40
13	Management	Implement ordinances to prohibit subdivisions of land or General Plan Amendments in the Basin.	S	L	L	H	0.30	0.75	1.35	2.40
14	Management	Implement landscaping ordinance.	S	L	L	H	0.30	0.75	1.35	2.40
15	Management	Require new development to be water neutral.	S	L	L	H	0.30	0.75	1.35	2.40
16	Management	Establish baseline conditions.	S	L	L	H	0.30	0.75	1.35	2.40
17	Management	Continuously monitor status of Basin to determine whether solutions are effective.	S	L	L	H	0.30	0.75	1.35	2.40
18	Management	Implement landscaping ordinance (ag processing).	S	U	L	H	0.30	0.75	1.35	2.40
19	Management	Encourage projects that detain or slow runoff.	S	U	L	H	0.30	0.75	1.35	2.40
20	Management	Implement Low Impact Development standards.	S	U	L	H	0.30	0.75	1.35	2.40
21	Management	Require hold harmless notice when land sold that Basin in decline and not rely on for intensive use.	S	U	L	H	0.30	0.75	1.35	2.40
22	Management	Encourage projects that detain or slow runoff.	S	U	L	H	0.30	0.75	1.35	2.40
30	Management	Develop an equitable allocation of safe yield for all overlies.	S	M	L	M	0.60	0.75	0.90	2.25
61	Management	Manage pumping from all wells in the Basin.	M	M	L	M	0.60	0.75	0.90	2.25
63	Management	Create irrigation districts or other management authorities to convey water to agricultural users.	L	H	H	M	0.90	0.25	0.90	2.05

Paso Robles Groundwater Basin Management Plan Steering Committee
Solutions Ranked by Category
August 5, 2013

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							30%	25%	45%	
42	Management	Require hold harmless notice when land sold that Basin in decline and not rely on for intensive use.	S	U	L	M	0.30	0.75	0.90	1.95
43	Management	Enact urgency moratorium banning construction of all reservoirs for storage of irrigation water.	S	U	L	M	0.30	0.75	0.90	1.95
44	Management	Enforce erosion and sediment control plan per current grading ordinance.	S	U	L	M	0.30	0.75	0.90	1.95
45	Management	Encourage the segments of the ag industry that are comparatively water neutral.	S	U	L	M	0.30	0.75	0.90	1.95
46	Management	Encourage existing low water use crops to remain.	S	U	L	M	0.30	0.75	0.90	1.95
47	Management	Enforce erosion and sediment control plan per current grading ordinance.	S	U	L	M	0.30	0.75	0.90	1.95
48	Management	Enact urgency ordinance for new/expanded ag to limit per parcel water use to sustainable level.	S	U	L	M	0.30	0.75	0.90	1.95
68	Management	Prohibit groundwater exports from the Basin.	M	U	L	M	0.30	0.75	0.90	1.95
69	Management	Establish ordinances to protect recharge areas and watersheds.	M	U	L	M	0.30	0.75	0.90	1.95
70	Management	Create small community systems for rural communities.	M	L	L	M	0.30	0.75	0.90	1.95
73	Management	Groundwater banking.	L	M	H	M	0.60	0.25	0.90	1.75
53	Management	Enact urgency moratorium restricting new wells to no greater than 6 inch casing.	S	U	L	L	0.30	0.75	0.45	1.50
54	Management	Enact urgency moratorium on all ag overhead irrigation, including for frost protection.	S	U	L	L	0.30	0.75	0.45	1.50
55	Management	Establish policies and funding to take irrigated agricultural acreage out of production.	S	U	L	L	0.30	0.75	0.45	1.50
56	Management	Enact urgency ordinance for new/expanded users that they provide guarantees to maintain residential water supply.	S	U	L	L	0.30	0.75	0.45	1.50
57	Management	Adopt urgency plan for fair and equitable allocation of groundwater that protects residential users.	S	U	L	L	0.30	0.75	0.45	1.50
84	Management	Create a rural water district.	L	L	L	L	0.30	0.75	0.45	1.50

Paso Robles Groundwater Basin Management Plan Steering Committee
Solutions Ranked by Category
August 5, 2013

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							30%	25%	45%	
88	Management	Connect rural residential properties adjacent to urban water providers.	M	L	H	M	0.30	0.25	0.90	1.45
60	Management	Do nothing.	S	L	H	L	0.30	0.25	0.45	1.00

Recycling

49	Recycling	Install grey water reuse systems onsite. (Rural residential)	S	L	L	M	0.30	0.75	0.90	1.95
50	Recycling	Install grey water reuse systems onsite	S	L	L	M	0.30	0.75	0.90	1.95
71	Recycling	Install grey water reuse systems onsite.	M	L	L	M	0.30	0.75	0.90	1.95
74	Recycling	Upgrade wastewater treatment plants for distribution to end users.	M	M	H	M	0.60	0.25	0.90	1.75

Supplemental Water

3	Supplemental	Utilize the full allocation (2,000 AFY) by fully utilizing the existing percolation ponds.	S	M	L	H	0.60	0.75	1.35	2.70
23	Supplemental	Maximize or increase the use of the full allocation.	S	L	L	H	0.30	0.75	1.35	2.40
24	Supplemental	Connect Shandon to State Water Project and set up distribution system.	S	L	L	H	0.30	0.75	1.35	2.40
31	Supplemental	Exchange or bank Nacimiento water with Santa Margarita Lake to benefit Basin.	S	M	L	M	0.60	0.75	0.90	2.25
32	Supplemental	Structure operations to use alluvial water first, Nacimiento water second and Basin last.	S	M	L	M	0.60	0.75	0.90	2.25
33	Supplemental	Cloud seeding	S	M	L	M	0.60	0.75	0.90	2.25
62	Supplemental	Turnout the State Water Project Coastal Branch at the City of San Luis/Nacimiento junction.	M	H	L	L	0.90	0.75	0.45	2.10
64	Supplemental	Negotiate with Monterey Co for additional Nacimiento water to utilize full hydraulic capacity of pipeline.	L	H	H	M	0.90	0.25	0.90	2.05
65	Supplemental	Agriculture to use Nacimiento water.	L	H	H	M	0.90	0.25	0.90	2.05

Paso Robles Groundwater Basin Management Plan Steering Committee
Solutions Ranked by Category
August 5, 2013

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66	Supplemental	Direct delivery of Nacimiento or State Water Project water.	L	H	H	M	0.90	0.25	0.90	2.05
67	Supplemental	Deliver unsubscribed Nacimiento/State Water Project allocation directly to area of concern for Ag/Golf/Rural Res.	L	H	H	M	0.90	0.25	0.90	2.05
72	Supplemental	Wheel water through existing community systems or build infrastructure to deliver water.	L	H	M	L	0.90	0.50	0.45	1.85
75	Supplemental	All areas –Develop recharge Basins.	L	M	H	M	0.60	0.25	0.90	1.75
76	Supplemental	Build water treatment plant to full capacity of 4,000 AFY.	M	M	H	M	0.60	0.25	0.90	1.75
51	Supplemental	Construct Basins in Salinas River alluvium within Estrella subarea to recharge unused Nacimiento allocation.	S	L	M	M	0.30	0.50	0.90	1.70
77	Supplemental	Connect San Miguel/Paso Robles /Templeton /Atascadero to State Water Project.	L	H	H	L	0.90	0.25	0.45	1.60
78	Supplemental	Jack Creek Dam	L	H	H	L	0.90	0.25	0.45	1.60
79	Supplemental	Santa Rita Creek Dam	L	H	H	L	0.90	0.25	0.45	1.60
80	Supplemental	Other new dam locations	L	H	H	L	0.90	0.25	0.45	1.60
81	Supplemental	Direct delivery	L	H	H	L	0.90	0.25	0.45	1.60
82	Supplemental	Desalinization (sea water or brackish).	L	H	H	L	0.90	0.25	0.45	1.60
83	Supplemental	Exchange or bank Nacimiento water with State Water Project.	M	M	M	L	0.60	0.50	0.45	1.55
58	Supplemental	Increase alluvial well pumping to maximize use of Salinas River appropriation.	S	L	L	L	0.30	0.75	0.45	1.50
85	Supplemental	Develop a San Miguel turnout and utilize Nacimiento Water.	M	L	L	L	0.30	0.75	0.45	1.50
86	Supplemental	Exchange or bank Nacimiento water with Lopez Lake to benefit Basin.	M	U	L	L	0.30	0.75	0.45	1.50
87	Supplemental	Establish live stream water flow throughout the watershed areas (Basin creeks)	M	U	L	L	0.30	0.75	0.45	1.50

Paso Robles Groundwater Basin Management Plan Steering Committee
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August 5, 2013

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							30%	25%	45%	
89	Supplemental	Connect Creston to State Water Project.	L	L	H	M	0.30	0.25	0.90	1.45
90	Supplemental	Implement injection where it will replenish groundwater Basin.	L	M	H	L	0.60	0.25	0.45	1.30
91	Supplemental	Salinas Dam – Santa Margarita Lake - Raise and reinforce to increase storage.	L	M	H	L	0.60	0.25	0.45	1.30
59	Supplemental	Connect the Paso Robles/Templeton system to Atascadero by installing 1,400 feet of pipe.	S	L	M	L	0.30	0.50	0.45	1.25
92	Supplemental	Develop other carryover storage options.	L	L	H	L	0.30	0.25	0.45	1.00
93	Supplemental	Develop a high flow waterway management system. (Basin creeks)	L	U	H	L	0.30	0.25	0.45	1.00
94	Supplemental	Other streams	L	U	H	L	0.30	0.25	0.45	1.00
95	Supplemental	Alluvial flow capture (Estrella River, HuerHuero Creek, etc.)	L	U	H	L	0.30	0.25	0.45	1.00
96	Supplemental	Develop high flow waterway system management system. (Salinas River)	L	U	H	L	0.30	0.25	0.45	1.00

Revision Control

Revised	Who	What	Why
2/27/2013	Sue Luft	Revised in Solutions Meeting on 2/27/13	Initial ranking of timeframe for solutions.
	Sue Luft	Incorporated comments from Laura Edwards - US-LT RCD	from Laura's email of 3-8-13
	Sue Luft	Incorporated comments from Della Barrett	from Della's email of 3-11-13
	Sue Luft	Incorporated comments from Sue Harvey	from Sue's email of 3-8-13
3/20/2013	Mike/Sue	Entered comments and removed some text	Comments from Solutions Subcommittee meeting 3/13
3/20/2013	Committee	Updated for meeting comments	Comments made by committee at 3/20 meeting
4/2/2013	Mike/Sue	2 wording changes switching per unit to per acre and household	Comments noted by Sue
7/3/2013	Sue Luft	Slight cleanup	to match wording in list provided to BoS on 5-7-13
7/10/2013	Larry/Committee	Feasibility column	To complete column
7/14/2013	Larry	Completed blanks in Feasibility and AFY	To get it done and out for review
7/19/2013	Mike	Put in ranking metric columns	Per instructions by committee
7/19/2013	Mike	Change "disseminate" to "implement" on one solution.	Per comment by Steve
7/22/2013	Mike	Set up formulas for converting alpha to numeric	Continue ranking process
7/22/2013	Mike	Inserted new page "All for Ranking" and sorted highest to lowest	Continue ranking process
7/22/2013	Mike	Updated Key to Ranking	Explain in detail the ranking methodology
7/30/2013	Mike	Change category values, eliminated "Time Frame" and resorted	Per Keith and Christopher's recommendation
7/31/2013	Mike	Updated Key to Ranking	Removed "Timeframe" as a category
7/31/2013	Mike	Updated Key to Ranking	Removed all "U" and changed to "L"
7/31/2013	Mike	Removed Solution #2.1.1.5.1(Maximize use of unsub. Allocation)	Per committee discussion
7/31/2013	Mike	Put in simple index	Per John H recommendation
7/31/2013	Mike	Changed several alpha codes and left notes in cells as to which	Per discussion at meeting
8/1/2013	Mike	Reinstated the U code	Per discussion with Keith
8/1/2013	Mike	Changed several alpha codes and left notes in cells as to which	Per discussion with Keith
8/5/2013	Mike	Added #96	Per email from Keith and Christopher
8/5/2013	Mike	Rescored #28 and resorted - It is now #5	Per email from Don and discussion with Larry
8/5/2013	Mike	Added text to #66, 12,4, 25,26,29,22	Per emails from Sue, Larry, and Courtney
8/5/2013	Mike	Changed several references to "vineyards" to "perennial crops"	Per email from Don.