

This meeting is not subject to Brown Act noticing requirements. The agenda is subject to change.

Water Supply

Members:

Jeanne Byrne David Pendergrass

Chair

Planning Committee

Robert S. Brower, Sr.

AGENDA Water Supply Planning Committee Of the Monterey Peninsula Water Management District *******

Tuesday, February 10, 2015, 2 pm MPWMD Conference Room, 5 Harris Court, Building G, Monterey, CA

Call to Order

The public may comment on any item within the District's jurisdiction. Please limit

- Consider Adoption of January 21, 2015 Committee Meeting Minutes
- 2. Discussion and Recommendation to the Board on the Acquisition of Los Padres Dam
- Progress Report on Property Lease from City of Seaside for Aquifer Storage and Recovery Project
- Discuss Development of Groundwater Sustainability Plan
- Update on California American Water Co. Desalination Plant
- Update on Local Projects Grant Request by City of Pacific Grove

Suggestions from the Public on Water Supply Project Alternatives (15 min limit)

Upon request, MPWMD will make a reasonable effort to provide written agenda materials in appropriate alternative formats, or disability-related modification or accommodation, including auxiliary aids or services, to enable individuals with disabilities to participate in public meetings. MPWMD will also make a reasonable effort to provide translation services upon request. Please send a description of the requested materials and preferred alternative format or auxiliary aid or service by 5PM on Friday, February 6, 2015. Requests should be sent to the Board Secretary, MPWMD, P.O. Box 85, Monterey, CA, 93942. You may also fax your request to the Administrative Services Division at 831-644-9560, or call 831-658-5600.

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Alternate: Kristi Markey **Comments from Public Staff Contact** your comments to three minutes in length. David J. Stoldt, General Manager Action Items - Public comment will be received 1 Discussion Item - Public comment will be received After staff reports have 3 been distributed, if additional documents are produced by the District 4. and provided to the *Committee regarding any* item on the agenda, they 5. will be made available at 5 Harris Court, Building Update on Pure Water Monterey Project 6. G, Monterey, CA during normal business hours. 7. In addition, such documents may be posted on the District website at mpwmd.net. Documents distributed at Set Next Meeting Date the meeting will be made available in the same Adjournment manner.

WATER SUPPLY PLANNING COMMITTEE

ITEM: ACTION ITEMS

1. CONSIDER ADOPTION OF JANUARY 21, 2015 COMMITTEE MEETING MINUTES

Meeting Date: February 10, 2015

From: David J. Stoldt, General Manager

Prepared By: Arlene Tavani

SUMMARY: Attached as **Exhibit 1-A** are draft minutes of the January 21, 2015, Water Supply Planning Committee meeting.

RECOMMENDATION: The Committee should review the minutes and adopt them by motion.

EXHIBITS

1-A Draft Minutes of the January 21, 2015 Committee Meeting

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EXHIBIT 1-A

DRAFT MINUTES Water Supply Planning Committee of the Monterey Peninsula Water Management District January 21, 2015

Call to Order	The meeting District confe	was called to order at 10:00 am in the Water Management erence room.
Committee memb	oers present:	Robert S. Brower, Sr Committee Chair David Pendergrass Jeanne Byrne
Committee memb	ers absent:	None
Staff members pr	resent:	David Stoldt, General Manager Larry Hampson, Planning & Engineering Division Manager Arlene Tavani, Executive Assistant
Comments from (the Public	No comments were directed the committee.

Action Items

- Consider Adoption of November 10, 2014 Committee Meeting Minutes
 On a motion of Pendergrass and second by Byrne, the November 10, 2014 meeting
 minutes were approved unanimously on a vote of 3 0 by Pendergrass, Byrne and
 Brower. No comments from the public were directed to the committee during the public
 comment period on this item.
- XY. Consideration of Revised Local Projects Grant Request by City of Pacific Grove Pendergrass offered a motion that was seconded by Brower, to take no further action on the grant request until the City of Pacific Grove submits its revised grant application for consideration. The motion was approved on a vote of 3 – 0 by Pendergrass, Brower and Byrne.

Public Comment: **Tom Frutchey**, City Manager, City of Pacific Grove, stated that he is aware that the project as described in the original grant application was a cause for concern, as a reduction in wastewater flows to the MRWPCA treatment plan could be interpreted by some parties to pose a conflict with the Pure Water Monterey groundwater replenishment project. Frutchey offered to submit a revised application that would address four components of the project. (1) Dry weather diversion program could be increased by upgrading the two 100 gallon per minute pumps at Greenwood Park. (2) Expand the dry weather diversion to West of Lover's Point Park to achieve an increase in diversions. (3) Increase surface area of Crespi Pond and complete the fiveyear dredging program, in order to increase storage capacity. This would also allow for metered and delayed flows from the pond. (4) Take all steps to ensure that the local project is on schedule and operational before January 1, 2017. Under this project, additional storm water flows would be treated at a facility to be constructed by Pacific Grove. The storm water would not be sent to the ocean; instead it would be piped to the Monterey Regional Water Pollution Control Agency's (MRWPCA) treatment facility. Frutchey explained that the primary purpose of the project is to replace potable water use at the Pacific Grove Golf Course and Cemetery with tertiary treated water. The most cost effective method in the short term is to utilize sewer flows. In the long term, there will be a greater opportunity to utilize storm water flows, but the first phase does have a storm water component.

The committee members expressed concern about the construction of new wastewater treatment plants in Pacific Grove and Monterey, considering that the regional plant was intended to process all the jurisdictions' wastewater. A question was raised about the ability of MRWPCA to move the heavy waste stream from Pacific Grove's treatment plant, through its distribution lines. Stoldt noted that due to CDO regulations, the reduction in potable use of 125 acre-feet for the City of Pacific Grove may not result in new water for allocation. Ideally, creation of a public water credit would be the best option, but there is no guarantee that could be established. One director expressed opposition to Pacific Grove treating sewer water, but supported treatment of storm water and dry weather flows.

Discussion Items

2. Update on Mid-Year Adjustment to Pure Water Monterey Budget

Byrne offered a motion that was seconded by Pendergrass to increase the budget by \$788,838 to be funded from reserves. The motion was approved unanimously on a vote of 3 - 0 by Byrne, Pendergrass and Brower. No public comment was presented to the committee on this item.

3. Discuss Development of Groundwater Sustainability Plan

Stoldt advised the committee that the Water Management District has until June 30, 2016 to make a decision about becoming a Groundwater Sustainability Agency. He recommended that the Water Management District should take on that responsibility. He stated that the District should meet with the State Water Resources Control Board and the California Department of Water Resources to discuss the status of the Carmel Valley Alluvial Aquifer. The legislation that calls for a Groundwater Sustainability Plan designates the Carmel Valley Alluvial Aquifer as a groundwater basin. However, the State Water Resources Control Board has issued surface water rights to pumpers along the river. This might be resolved by removal of the Carmel Valley Alluvial Aquifer from the list of groundwater basins that require a sustainability plan, or moving the aquifer to lower priority on the list.

4. Progress Report on Property Lease from City of Seaside for Aquifer Storage and Recovery Project

Stoldt reported that Directors Potter and Brower joined staff to meet with Seaside representatives. They reviewed a draft agreement, and offered some changes. A thorough review of the agreement is still in progress by Water Management District



Legal Counsel. A revised version will then be submitted to Seaside representatives for review and comment.

5. Update on California American Water Co. Desalination Plant

Stoldt reported that facility design is underway, and test slant well drilling continues on a 24-hour per day schedule. The driller encountered some problems, which may impede their ability to drill down to the desired depth before the Snowy Plover nesting season begins. Another threat to the project may be that Marina Coast Water District is investigating start-up of its 300,000 gallons-per-day desalination plant. If it could be determined that Cal-Am's project interferes with Marina Coast's source water intake, that could delay or bring an end to Cal-Am desal.

Suggestions from the Public on Water Supply Project Alternatives

No comments.

Set Next Meeting Date

The meeting was scheduled for February 10, 2015 at 2 pm.

Adjournment

The meeting was adjourned at 11:05 pm.



WATER SUPPLY PLANNING COMMITTEE

ITEM: ACTION ITEM

2. DISCUSSION AND RECOMMENDATION TO THE BOARD ON THE ACQUISITION OF LOS PADRES DAM

Meeting Date: February 10, 2015

From: David J. Stoldt, General Manager

Prepared By: Larry Hampson

SUMMARY: Attached for your review as **Exhibit 2-A** is a summary of three studies that are pertinent to the discussion. Staff will review this summary with the committee.

EXHIBITS

2-A Summary of three studies: Carmel River Instream Flow Study; Coupled Groundwater-Surface Flow Model for the Carmel River Basin; and Los Padres Dam Long Term Plan (2015-17 General Rate Case Project IP 15-400100)

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<u>Carmel River Instream Flow Study</u>

SUMMARY

The Monterey Peninsula Water Management District (MPWMD) is developing a scope of work to apply the Instream Flow Incremental Methodology (IFIM) to the Carmel River main stem. The results of the work are intended to update existing instream flow recommendations and to support an application to the California State Water Resources Control Board (SWRCB) for a change petition to an existing water right permit for Carmel River flow diversions in the wet season as part of an expansion of MPWMD's Aquifer Storage and Recovery project. Other goals include developing a better understanding of habitat value and flow needs during the dry season and evaluating operational changes due to proposed water supply projects that replace Carmel River diversions. The reach of primary interest is located between the ocean and San Clemente Dam at River Mile 18.6 (RM, measured from the ocean). In addition, due to the pending removal of San Clemente Dam and need for studies associated with the long-term management of Los Padres Dam at RM 24.8, the interdam reach is also included.

National Marine Fisheries Service (NMFS), the California Department of Fish and Wildlife (CDFW, previously Fish and Game), MPWMD, and California American Water (Cal-Am, the local water purveyor) have expressed an interest in updating current instream flow requirements for the Carmel River. NMFS and CDFW interests are focused on protecting, enhancing, and recovering the threatened steelhead trout population in the Carmel River watershed. MPWMD and Cal-Am share these interests while also pursuing water supply projects that require Carmel River diversions for municipal supply. At times, these two interests compete with each other for available water. The best approach to resolve Carmel River issues is use of the IFIM assessment method and the use of both one and two-dimensional hydraulic models.

An initial cost estimate to complete the study was up to \$500,000 and would take two to three years to complete; however MPWMD is in discussions with CDFW and NMFS about sharing resources among the agencies in order to reduce the study cost. In 2013, the MPWMD Board authorized up to \$50,000 to retain a consultant for assistance with development of a scope of work for the study. A draft scope was reviewed by several stakeholders in the fall of 2014. MPWMD is awaiting the release of a similar study for the Big Sur River completed by CDFW in 2014 in order to finalize the scope of work for the Carmel River. Portions of the Big Sur study work will likely transfer to the Carmel River study, which could significantly reduce the volume of field work and associated costs.

<u>Coupled Groundwater - Surface Flow Model for the Carmel River Basin</u></u>

SUMMARY

The Carmel Valley Alluvial Aquifer and the Carmel River have been modeled using various techniques in the past, including the main frame FORTRAM program Carmel Valley Simulation Model (CVSIM); however, these models are not current, and have limited ability to answer questions about how to best manage the coupled resource of surface river flow and flow in the subterranean channels underlying the river (i.e., flow in the alluvial aquifer). Newer models, such as GSFLOW(Groundwater and Surface FLOW), which was first released in 2008 by the United States Geologic Service, more accurately model the link between stream flow and the underlying aquifer and can incorporate the effect of individual diversions on aquifer storage and surface flow. GSFLOW is an integrated model that uses the Precipitation Runoff Modeling System (PRMS) for surface water and the Modular Groundwater Flow Model (MODFLOW) for groundwater modeling. GSFLOW was selected because it is built on the United States Geological Survey (USGS) MODFLOW code which is recognized internationally in water resource planning and has a history of use as a scientific tool in legal proceedings. Ultimately, the new model for the Carmel River Basin is expected to be used to:

- 1. Predict the effects of changes in well pumping patterns and locations on the surface flow and aquifer storage along the Carmel River;
- 2. Assess the effects to river flow from management alternatives to be considered for Los Padres Dam and Reservoir, including maintaining and/or increasing storage capacity, dam removal, and the status quo (i.e., no changes in management);
- 3. Assess the effects on aquatic habitat along the river and at the Carmel River Lagoon from different levels of flow;
- 4. Assess the potential effects of climate change on runoff and aquifer storage;
- 5. Assess the impacts of single water distribution systems (private wells) on flows in the Carmel River.

During 2012 and 2013, MPWMD staff and consultants researched the available databases and simulations models with funding from the Prop. 84 Integrated Regional Water Management Program. In August 2014, the MPWMD Board authorized \$128,000 to retain two consultant groups to assist the District in developing the GSFLOW model. Programming for both modules was completed in 2014 and the District plans to complete model calibration and develop input files by the end of 2015. Developing input files has been slowed by the lack of consistency in some data sets. Because a long-term record (many decades) is used as input to the model, MPWMD has found that data collection methods have changed over time. Each data set must be examined and a determination made about how to format the data in order to use them in the model.

Los Padres Dam Long Term Plan (2015-17 General Rate Case Project IP 15-400100)

SUMMARY

If approved for funding by the California Public Utilities Commission, MPWMD and Cal-Am have agreed to cooperate on a three-year program to evaluate options for long-term management of Los Padres Dam and Reservoir. California American Water will contribute \$1 million toward the studies. MPWMD could provide additional funds and/or staff resources as appropriate.

Studies will include evaluating upstream steelhead passage at Los Padres Dam, whether the Carmel River is better or worse with surface storage at Los Padres Dam, and what options exist to maintain or increase physical existing surface storage in Los Padres Reservoir (i.e., manage sediment accumulation at the reservoir). An analysis of the potential geomorphic effects of a resumption or increase of the natural flow of sediment will also be completed.

Improved Steelhead Passage Facilities at Los Padres Dam

This study would evaluate two options:

1) Improvements to the existing trap and truck operation; scope of work to include:

- topographic survey/measurements of the existing ladder/trap and channel configuration
- hydraulic modeling of existing configuration at expected winter and spring flows (or use another method of analysis capable of determining whether the current configuration is optimal)
- hydraulic modeling of ladder and channel modifications (or use another method of analysis capable of determining the effect or proposed modifications)
- cost estimate for environmental review, permit acquisition, and construction; preliminary schedule

The Consultant would coordinate with Cal-Am, MPWMD, CDFW, and NMFS on modeling criteria and selection of an alternative.

2) Construction of permanent, volitional passage for all steelhead life stages; scope would include:

- topographic survey of dam, spillway and vicinity (if not already complete)
- evaluation of suitable alternatives for adult steelhead upstream passage facilities from the plunge pool to the reservoir;
- for alternatives that include modification of the existing spillway, coordination with California Division of Safety of Dams (DSOD) would be needed concerning requirements for maintaining dam safety

- for alternatives that bypass the dam spillway (e.g., with use of a tunnel into the reservoir), DSOD would need to be consulted for an appropriate setback from the dam and spillway;
- recommendations, cost estimate for geotechnical review/analysis (if required), environmental review, permit acquisition, construction; preliminary schedule

The Consultant would coordinate with Cal-Am, MPWMD, CDFW, and NMFS on design criteria and selection of an alternative. Design should be made compatible with proposed downstream passage facilities to be completed in 2015.

The first phase (improvements to trap/truck operation) could be initiated immediately after CPUC approval of GRC A.13-07-002 (expected by 2015). The second phase (permanent passage facilities) would be initiated after a determination is made about whether to alter Los Padres Dam.

Modeling whether the Carmel River is better or worse with surface storage at Los Padres Dam

This effort would be undertaken after the GSFLOW model is complete and ready to use. Data from this model would be used in conjunction with the IFIM model to determine changes in steelhead habitat value due to varying levels of surface storage in the basin and flow releases. The GSFLOW model would also quantify the effects to the river and aquifer for downstream property owners with riparian rights and for appropriators downstream of Los Padres Dam.

Options to maintain or enhance physical existing surface storage in Los Padres Reservoir

This effort would build on the existing study prepared for Cal-Am in 2013 entitled "LOS PADRES DAM SEDIMENT REMOVAL FEASIBILITY STUDY" and would consider the feasibility of additional reservoir management options such as a dam raise and bypassing some or the entire annual sediment load. The feasibility of moving sediment to areas downstream of the dam and allowing the river to pick up and move the sediment downstream would be evaluated. A geomorphic analysis of the potential effects in the alluvial portion of river from restoring some or the entire natural sediment load in the river would be completed.

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WATER SUPPLY PLANNING COMMITTEE

ITEM: DISCUSSION ITEM

4. DISCUSS DEVELOPMENT OF GROUNDWATER SUSTAINABILITY PLAN

Meeting Date: February 10, 2015

From: David J. Stoldt, General Manager

Prepared By: David J. Stoldt

SUMMARY: Attached for your review as **Exhibit 4-A** is the County Water Resources Agency presentation from January 21, 2015. Staff will review this presentation with the committee.

EXHIBIT

4-A County Water Resources Agency presentation from January 21, 2015

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Groundwatel	Sustainability Deadlines:
 January 31, 	2020
 high and m conditions plan or coordination 	nedium priority basins that are subject to critical of overdraft must be managed by a sustainability ordinated sustainability plans
– Pajaro	Basin
– January 31,	2022
 high and m conditions plan or coor – Salinas – Carme 	nedium priority basins that are <u>not</u> subject to critical of overdraft must be managed by a sustainability ordinated sustainability plans s Valley
 DWR has un priorities 	til <u>January 31, 2015</u> to finalize basin















Time Fra	me for Successful Implementation	
Time	Action	
6/30/2017	Formation of GSAs	
1/31/2020	Completion of GSPs in critically overdrafted basins	
1/31/2022	Completion of GSPs in all other basins	
20-year implementation period	Implementation of GSPs under local management	















After	Cause of Intervention			
6/30/2017	No GSA formed			
1/31/2020	In critically overdrafted basins, no GSP or the GSP is deemed inadequate			
1/31/2022	In other basins, no GSP or GSP is inadequate and basin is in long-term overdraft			
1/31/2025GSP is inadequate and significant depletions of interconnected surface waters				









WATER SUPPLY PLANNING COMMITTEE

ITEM: DISCUSSION ITEM

5.	UPDATE DESALIN	ON NATION I	CALIFORNIA PLANT	AMERICAN	WATER	COMPANY
Meeti	ng Date:	February	10, 2015			
From:		David J. General I	Stoldt, Manager			
Prepa	red By:	David J.	Stoldt			

SUMMARY: Attached for your review as **Exhibit 5-A** is the schedule for the desalination facilities. Staff will review this exhibit with the committee.

EXHIBIT

5-A Schedule for the Desalination Facilities

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FULL SCALE PLANT & PIPELINES SCHEDULE - [WORKING PRODUCT & SUBJECT TO CHANGE]

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17		CPUC EIR Approval	02/10/16	02/10/16					¢C	PUC I	EIR Ap	proval					
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23		Coastal Commission Decision	07/10/16	07/10/16							♦ Coa	stal Co	ommis	sion D	ecisio	n	
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25		MARINA LCP - FULL-SCALE WELLS & PIPELINES	10/01/15	05/10/16						N	IARINA	A LCP	- FULI	-SCA	LE WE	ELLS 8	κ F
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27		LCP Application Filed	11/07/15	11/07/15				•LC	СР Ар	plicatio	on File	d					
28		Marina Review	11/08/15	01/06/16					Mar	ina Re	eview						
29		Public Meetings & Comment	01/07/16	03/21/16					+	Publi	c Mee	tings 8	Com	nent			
30		Final CDP Prepared	03/22/16	04/10/16						Fina	al CDF	Prepa	ared				
31		Marina Final LCP Prepared & Decision	04/11/16	05/10/16							larina l	Final L	CP Pr	epareo	1 & De	cision	
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47		MRWMD Power Agreement	01/01/17	12/31/17									MRWMD	Power /	Agreen	nent			
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106		Start-up	03/01/15	03/01/15	Start-up														
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110		PRODUCTION WELLS	10/15/16	02/28/19												P	RODUC	tion we	
111		Slant Wells Phase 1	10/15/16	02/28/17						Sla	ant Wells F	hase 1							
112		Slant Wells Phase 2	10/15/17	02/28/18									Slant	Wells P	hase 2				
113		Slant Well Phase 3 (if needed)	10/15/18	02/28/19												SI	lant Well	Phase 3	
114																			
115		📃 DESAL PLANT	12/18/13	08/31/19														DESA	
116		Pre-Design Activities	12/18/13	03/12/14															
117		BODR	12/18/13	07/15/14															
121		Ŧ 30% Design	04/15/14	07/07/14															
125		Value Engineering	07/07/14	07/11/14															
126		60% Design	06/10/14	12/15/1/															

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130	💿 90% Design	11/01/15	09/30/16						90% D	esign									
134	Final Design	10/01/16	12/15/16	_					Fi	inal Des	sign								
139	Monterey County Permits	01/05/16	07/22/16					Mor	nterey C	ounty F	Permits								
146	Monterey Bay Unified Air Pollution Control District Permit	03/02/16	07/01/18												Montere	y Bay	Unifie	ed Air Po	llution
149	RWQCB Permits	07/15/15	07/01/18												RWQCE	3 Perm	ıits		
153	E CDPH Office of Drinking Water Permits	07/01/18	08/31/19																CDPH
156	Construction	12/15/16	11/25/18													_Cons	structi	on	
157	Start-up & Commissioning	11/26/18	05/24/19															Start-u	Jp & C∈
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159	📄 PIPELINES, RESERVOIR, ASR, BPS	02/21/13	08/31/18												PIP		S, RE	SERVO	IR, ASI
160	Design	02/21/13	01/04/16				Design												
161	Land Acquistion	01/01/14	11/11/14																
162	Permitting	01/01/14	03/07/16				Perm	itting											
163	Procurement Materials	01/01/15	09/10/15			Procur	rement Mat	erials											
164	Procure Contractor	01/01/15	12/31/15				Procure C	Contract	or										
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166	Feedwater	11/01/16	04/29/17								Feedwat	er							
167	Brine & SVR	05/01/17	06/29/18												Brine &	SVR			
168	Transfer North	11/01/16	08/31/18												Trai	nsfer N	lorth		
169	Transfer South	11/01/16	04/02/18										Т	ransf	er South	ו			
170	Monterey Pipeline	11/01/16	08/31/18												Mor	nterey F	Pipelir	ne	
171	Terminal Reservoir & ASR & BPS	02/01/17	08/01/18												Termi	nal Re	servoi	ir & ASR	: & BP:
172																			
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174	FINANCE	08/05/13	12/28/15				FINANCE												
175	💽 Prop 50 Desal Grant	04/04/14	08/29/14																
182	SRF Application	11/22/13	02/13/15	S	SRF Applicati	on													
185	Securization	08/05/13	12/28/15				Securizati	on											
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204	🚍 GWR - EIR TO APPROVAL	01/01/14	11/01/15			GV	VR - EIR TO) APPR	OVAL										
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207	POST SETTLEMENT DATES	04/19/13	09/18/13																
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209		Reply Briefs Due	05/10/13	06/06/13																				
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WATER SUPPLY PLANNING COMMITTEE

ITEM: DISCUSSION ITEMS

7. UPDATE ON LOCAL PROJECTS GRANT REQUEST BY CITY OF PACIFIC GROVE

Meeting Date: February 10, 2015

From: David J. Stoldt, General Manager

Prepared By: David J. Stoldt

SUMMARY: Attached for your review as **Exhibit 7-A** is Pacific Grove's revised Local Water Project grant application. Staff will review this exhibit with the committee.

EXHIBIT

7-A Pacific Grove's revised Local Water Project grant application

 $\label{eq:u:staff} WSP 2015 2015 0210 07 item 7. docx$



PUBLIC WORKS DEPARTMENT CITY OF PACIFIC GROVE

2100 Sunset Drive Pacific Grove, CA 93950 Telephone: (831)648-5722 / Facsimile: (831)375-0627

February 4, 2015

David Stoldt Monterey Peninsula Water Management District PO Box 85 Monterey CA, 93942

RE: Pacific Grove Stormwater and Dryweather Flow Reuse Grant Application

Dear Mr. Stoldt,

The City of Pacific Grove is pleased to submit the attached application for funding from the Monterey Peninsula Water Management District for the Stormwater and Dryweather Flow Reuse Project. The City is requesting \$100,000 in funding from MPWMD this fiscal year, matched by a City contribution of \$100,000. The project has potential to produce 155 acre feet of water by capturing stormwater and dryweather flows.

We look forward to your consideration of our request and to continue to work together collaboratively to address water issues facing the Monterey Peninsula region.

Regards,

Daniel Stor

Daniel Gho, Public Works Superintendent (831)648-5722 ex.203 Email: <u>dgho@cityofpacificgrove.org</u>



City of Pacific Grove Stormwater and Dryweather Flow Reuse Project Grant Application Form

DATE: February 4, 2015

Eligibility Summary

Project Geographic Eligibility:	The City of Pacific Grove is within the geographic boundaries of the Monterey Peninsula Water Management District ("District"). Benefits of the Stormwater and Dryweather Flow Reuse Project accrue to all water users within the territory of the District, including but not limited to water users within the City of Pacific Grove, the Pebble Beach Community Services District/Carmel Area Wastewater District, the Presidio of Monterey, the City of Monterey, and unincorporated portions of the County of Monterey.
Project Sponsor:	The City of Pacific Grove ("City") is the Project Sponsor and is a public entity located within District boundaries.
Project Purpose Eligibility:	The increase of stormwater and dry weather flows into the sanitary sewer system will produce an additional volume of non-potable water supply that can be treated and distributed by the District to be used for irrigation purposes by the farming community.
	This project will also assist the City in achieving regulatory requirements for the Pacific Grove Area of Special Biological Significance (ASBS).
Matching Requirement:	The City of Pacific Grove has thus far committed \$100,000 towards the ASBS Regional Discharge Monitoring Program in 2014, and has also committed \$235,000 on engineering of stormwater related projects and urban diversion systems since 2012. The City will commit to provide matching funds of at least \$100,000, equivalent to 100% or more of the requested grant funds.

Requirements

1)	Project Sponsor:	City of Pacific Grove
2)	Type of entity:	Public entity
3)	Project Title:	Stormwater and Dryweather Flow Reuse Project
4)	Project Sponsor Contact Information:	Mr. Daniel Gho Public Works Superintendent City of Pacific Grove 2100 Sunset Drive Pacific Grove, CA 93950 (831) 648 5722 ext. 203 dgho@cityofpacificgrove.org
5)	Amount of Funding Requested	\$100,000.00
6)	Project Geographic Location:	City of Pacific Grove

- 7) Project Purpose and Description.
 - a. Description of the project facilities, operations, direct water supply benefits, and ancillary benefits.

Facilities:

The City of Pacific Grove's Stormwater and Dry Weather Flow Reuse Project consists of the design, construction, monitoring, and operation of existing and new facilities to capture and convey stormwater flows and provide additional stormwater storage.

Major Components:

1. The first component of the Project is the upgrade of existing pumps and infrastructure at the Greenwood Park Diversion System.

- Replacement of two 100 gallon per minute pumps with two 300 gallons per minute pumps
- Evaluation and potential upgrades of valves, controls, and pipe capacity
- Potential to produce 100 acre feet of stormwater diversion flow per year (2014 volumes were 15 acre feet, current system potential of 70 acre feet if continuous operation occurred)

The Greenwood Park Diversion System is the primary stormwater diversion system in the City of Pacific Grove. Currently the City has completed Phase Three of the Urban Runoff Diversion Project. All outfalls east of Lovers Point are connected to this system. During the dry weather months the system is online and pumps all flows to MRWPCA Fountain Street Pump Station, Station 13.

2. The second component of the Stormwater and Dry Weather Flow Reuse Project is to initialize the capture of stormwater flows west of Lovers Point Park.

- Engineering and design of stormwater and sanitary sewer system pipe connections with a series of flow control valves and a SCADA system
- System will accommodate increased volume and ensure all ASBS regulatory requirements are met
- Potential to produce 50 acre feet of stormwater diversion flow per year

Two-thirds of dry weather flows in Pacific Grove are not tied into the current stormwater diversion system.

3. The third component of the Stormwater and Dry Weather Flow Reuse Project is to provide additional stormwater storage at Crespi Pond. Currently Crespi Pond is 1.5 feet deep and has a maximum capacity of approximately 2 acre feet

- If dredged to 3 feet deep and expanded towards the 16th tee of the golf links Crespi Pond could hold roughly 5 acre feet
- Previous exploratory drilling showed granite at a depth of 6 feet towards the north side and 8 feet towards the south end
- Installation of a pumping system into the inflow pipelines or a direct pipeline from Crespi Pond to the reclamation equipment
- Requires engineering, design and Coastal Development permits

Expansion of Crespi Pond would allow the City to supplement stormwater and wastewater influent flows for the production of reclaimed water for irrigation purposes with time-released stored stormwater.

Operations:

The City of Pacific Grove is currently responsible for the operation and maintenance of all existing dry weather flow diversion systems, including the upgrades to accommodate increased stormwater collection. The addition of a diversion system west of Lovers Point would also be the responsibility of the City, in collaboration with MRWPCA, especially during design and construction phases of the Project.

For component three of the Project, Crespi Pond, the City would be responsible for all expansion and dredging activities, and engineering and



design of pumps, valves, and other infrastructure for stormwater distribution. Operation and maintenance of the system would also be the responsibility of the City.

Direct Water Supply Benefits:

The Stormwater and Dry Weather Flow Reuse Project will be a direct benefit to the water supply as it is directly capturing stormwater for reuse that would otherwise be going directly into the Bay. Capturing stormwater and dry weather flows through diversion systems and conveyance to MRWPCA for distribution to growers, especially once the GWR system is online, is a direct benefit as consumers have become more conscience of the drought scenarios in California, thus reducing overall usage and creating lower volumes of untreated water flowing to the PCA. It is anticipated that the upgrade of the Greenwood Park Diversion System and creation of a diversion system west of Lovers Point could capture and convey at least 155 acre feet per year if the systems are operated continuously.

Ancillary Project Benefits:

- <u>Ocean water quality improvements</u>: Diversion, conveyance, treatment, and distribution of stormwater flows will prevent direct discharge into the Ocean. Flows diverted by this project originate both from the City of Pacific Grove and from the New Monterey area of the City of Monterey.
- <u>Stormwater capture and reuse consistent with California ASBS</u> <u>policy goals</u>: The Stormwater and Dry Weather Flow Reuse Project will capture, divert, treat, and recycle dry weather discharges and the 85th percentile wet weather flows (design storm requirement for ASBS). The Project will therefore comply with the state ASBS policy goals by ensuring that these flows do not cause or contribute to a violation of the water quality objectives in Chapter II of the Ocean Plan nor alter natural ocean water quality in the PGASBS.
- <u>Crespi Pond Rehabilitation</u>: Crespi Pond is widely known by residents and visitors as one of the premier bird watching areas on the Monterey Peninsula. By dredging and enlarging the capacity of the pond, the habitat for migratory birds will be greatly enhanced.
- b. Describe capacity (acre-feet and/or MDG) in annual, seasonal or monthly terms.
 - Greenwood Park Diversion System Upgrades = 100 acre feet per year if operated continuously
 - Stormwater Flows West of Lovers Point = 50 acre feet per year if operated continuously
 - Crespi Pond= 5+ acre feet of seasonal storage



- c. Describe all project participants and roles for successful execution.
 - The Greenwood Park Diversion System: City to coordinate with MRWPCA for increased volume and system expansion.
 - Installation of a diversion system west of Lovers Point: City to coordinate with MRWPCA, the California Coastal Commission (for permitting), and California State Parks.
 - Expansion of Crespi Pond: City to coordinate with California Coastal Commission (for permitting) and CourseCo, the operators of Pacific Grove Golf Links.
- d. Project Phase:

The Project will be compromised of three independent components. This grant request is for the initial planning and design of each component.

Component one consists of the pump upgrades at the Greenwood Park Diversion System. This component is achievable as the existing infrastructure, vaults, delivery pipelines to the sanitary sewer system, electronics, and valves, are already in place. Pump replacement would be completed in coordination with MRWPCA to ensure that their systems have the capacity to accommodate the additional inflow. Preliminary engineering will need to be completed to ensure that the electronics, vaults and valves could also accommodate the increased volume of flow.

Component two would consist of preliminary design and communication with MRWPCA in regards to gravity connections of the storm drain system west of Lovers Point into the sanitary sewer system. Stormwater and dry weather flows from this area of the storm drain system would be directed through the Coral Street Pump Station, Station 15. Preliminary communication, design and engineering would need to be completed to determine pipe capacity and pump station mechanics to ensure adequate capacity to accommodate the increased flow.

Component three would consist of the dredging of Crespi Pond. Dredging activities are currently underway at the site. The City has received a five year permit to complete maintenance dredging of the pond, and conducted initial dredging in 2014, but the permit does not allow significant expansion. Simultaneously with the other two components of the Project, the City would submit a Coastal Development Permit with the California Coastal Commission for expansion of Crespi Pond. Once a permit is acquired then engineering and design for expansion would be completed.

8) District Goals:



• Can the Project provide water supply to the District for drought/rationing reserve (i.e. water that is not supplied to a beneficial use immediately upon project completion) and if so, how much?

Yes, the projects noted above would supply an additional non-potable water source that could be used for irrigation purposes.

• Can the Project provide water supply to the District for potential future reallocation to the jurisdictions (i.e. water that is not supplied to a beneficial use immediately upon project completion) and if so, how much?

Yes, the expansion of Crespi Pond could provide seasonal storage and ultimately be used to offset outdoor irrigation that currently uses potable water.

Can the project be run in a manner that would provide surplus production that could be "banked" into the Seaside Groundwater Basin utilizing the District's Aquifer Storage and Recovery project?

Yes, the diversion of stormwater flows to the sanitary sewer system can be conveyed to MRWPCA for inclusion in the groundwater replenishment project.

• Are there multiple benefits to the region or the State as described in section 6, above?

Yes, the Stormwater and Dry Weather Flow Reuse Project results in multiple benefits to the region and the state from the expansion of the stormwater diversion systems and storage capacities:

- a. Provide a drought/rationing reserve,
- b. Provide a potential future reallocation to the MPWMD's jurisdictions,
- c. Provide surplus water production that could be "banked" into the Seaside Groundwater Basin. Reduce desalination plant operations and costs.
- d. Ensure water supply reliability, conservation, and efficiency of use.
- e. Improve ocean water quality improvements.
- f. Reduce non-point source pollution and point source discharges, consistent with the California Ocean Plan.
- g. Capture and re-use stormwater reuse consistent with California ASBS policy goals.
- 9) Technical Feasibility of Project. Information about the project and include as exhibits or define links to documents or websites for future reference.

The Dry Weather Flows Reuse Project technically feasible. The Project proposes to upgrade and construct facilities that are common in other municipal stormwater collection systems.

The City already has a stormwater diversion system in place to capture dry weather flows. Upsizing pumps, ensuring pipe capacity, and identifying other infrastructure needs at the Greenwood Park Diversion System will allow for additional flow capture. The support of the MPWMD will give the City the opportunity to evaluate all options for specific outfall connections and determine the best design and engineering for stormwater collection west of Lovers Point. Crespi Pond has undergone dredging and the City will continue these efforts over the next four years. Expanded engineering and permitting will create additional stormwater storage facility adapting a pond that already exists.

- 10)Project Schedule. Describe basic project schedule milestones including, but not limited to feasibility study, conceptual design, CEQA/NEPA Process, other permits required, etc. Major milestones included in the schedule are as follow:
 - The City is in the process of completing a Concept study for first two components of the Project.
 - The City has yet to undergo any regulatory permitting for improvements to the existing diversion system, but is confident that with communication between MRWPCA and the City that this component is achievable.
 - The City is dedicated to the expansion of the diversion system west of Lovers Point.
 - The City currently holds a five year waiver from the California Coastal Commission for the dredging of Crespi Pond and is committed to researching expansion for future storage capacity.
- 11) Project Financing. Describe project capital costs and construction schedule, even if the project is currently applying only for "planning phase" projects. For "planning phase" projects, also describe costs for solely that phase and sources of funding. Funding would be applied to the planning phase of all project components.
 - Greenwood Park Diversion System upgrades: Estimated upgrades \$10,000-\$20,000
 - Diversion System West of Lovers Point: Engineering, design and permitting \$80,000-\$100,000
 - Crespi Pond Dredge: 2014 dredging of 200 Cubic Yards \$25,000

Demonstrate applicant's matching share. To date the City has committed \$360,000 since 2012 for monitoring, maintenance, and engineering of the current diversion system and maintenance of Crespi Pond.

If the District does not provide a grant, how will the Applicant fund that amount and proceed with the project? The City's General fund would continue to fund the evaluation of this project.

12) Land. Describe the site and/or right-of-way requirements and status. Identify any approvals to date.



- Greenwood Park Diversion System Upgrades consist of Right-of-Way land near a greenbelt. This is City-owned land.
- The expansion of the diversion system west of Lovers Point is also located within the City Right-of-Way. Collaboration between the City and California State Parks system will be necessary as the City has outfalls that are located within Asilomar State Park.
- Crespi Pond Expansion solely falls within property that the City owns, but does not operate. In April of 2014 the City leased the operations of the golf course to CourseCo, and together the City and CourseCo are committed to wise use of water.
- 13) Permits. Describe permits required, scheduled for approval, and already acquired.
 - California Coastal Commission Coastal Development Permit for all three components
 - MRWPCA Approvals to upgrade the current stormwater diversion system and increase flow to MRWPCA pump stations