**SEASIDE GROUNDWATER BASIN WATERMASTER**
**MEETING AGENDA**
**WEDNESDAY, MARCH 7, 2007, 1:30 P.M.**
**SOPER COMMUNITY CENTER, 220 COE AVENUE**
**SEASIDE, CALIFORNIA**

**WATERMASTER BOARD:**
City of Seaside – Mayor Ralph Rubio, Chairman
Laguna Seca Subarea Landowner – Director Bob Costa, Vice Chairman
Monterey Peninsula Water Management District – Director Michelle Knight, Secretary
City of Monterey – Vice Mayor Jeff Haferman, Treasurer
City of Sand City – Mayor David Pendergrass
California American Water – Director Steve Leonard
City of Del Rey Oaks – Mayor Joseph Russell
Monterey County/Monterey County Water Resources Agency - Supervisor Jerry Smith, District 4
Coastal Subarea Landowner – Director Paul Bruno

## I. CALL TO ORDER

## II. ROLL CALL

## III. APPROVAL OF MINUTES;

The minutes of the Special Board of Meeting of January 31, 2007 and the Regular Board of February 7, 2007 are attached to this agenda. Watermaster Board is requested to approve the minutes.

## IV. REVIEW OF AGENDA

If there are any items that arose after the 72-hour posting deadline, a vote may be taken to add the item to the agenda, pursuant to the requirements of Government Code Section 54954.2(b). (A 2/3-majority vote is required.)

## V. PUBLIC PARTICIPATION/ ORAL COMMUNICATIONS

Oral communications is on each meeting agenda in order to provide members of the public an opportunity to address the Watermaster on matters within its jurisdiction. Matters not appearing on the agenda will not receive action at this meeting but may be referred to the Watermaster Administrator or may be set for a future meeting. Presentations will be limited to three minutes or as otherwise established by the Watermaster. In order that the speaker may be identified in the minutes of the meeting, it is helpful if speakers would use the microphone and state their names. Oral communications are now open

## VI. CONSENT CALENDAR

A. Request approval for payment of February, 2007 bills
B. Approve Current Fiscal Year Financial Reports

## VII. OLD BUSINESS

### A. COMMITTEE REPORTS

#### 1. TECHNICAL COMMITTEE

a) Accept **Report on Implementation Plan and Schedule** for the Seaside Groundwater Basin Watermaster Monitoring and Management Program

b) **Award contract for Phase I Implementation and Analysis** to RBF Consulting and Monterey Peninsula Water Management District, (MPWMD)/Monterey County Water Resources Agency, (MCWRA)

#### 2. BUDGET/FINANCE COMMITTEE

No Current Report

## VIII. NEW BUSINESS

**A.** Adopt for Water Year 2007 a **Declaration regarding the Unavailability of Artificial Replenishment Water (**Water Year 2007 Allocations attached)

**B.** Refer to Budget/Finance Committee for development of criteria implementing Section III. M. 1. d. of Judgment- Credit Toward Replenishment Assessment

**C.** Adopt an Amended **Rules and Regulations** of the Seaside Groundwater Basin Watermaster (copy attached)

**D.** Review and accept the format for a **timeline of meaningful future events** for Watermaster consideration. (Milestone Report)

**E.** Approve **credit to California American Water of $465,252** against Water Year 2006 Replenishment Assessment for replenishment water jointly made available through MPWMD and California American Water's pilot ASR project

**F.** Authorize Executive Officer to finalize report to Court for submission by March 13, 2007 (draft report enclosed)

## IX. INFORMATIONAL REPORTS (No Action Required)

**A.** Copy of **Agreement Between The Seaside Basin Watermaster and Martin B. Feeney for Professional Services to Implement the Seaside Groundwater Basin Watermaster Seawater Sentinel Monitoring Wells Work Plan**

## X. DIRECTOR'S REPORTS

## XI NEXT MEETING DATE –APRIL 4, 2007 1:30 P.M.

## XII. ADJOURNMENT

This agenda was forwarded via e-mail to the City Clerks of Seaside, Monterey, Sand City and Del Rey Oaks; the Clerk of the Monterey Board of Supervisors; the Clerk to the Monterey Peninsula Water Management District; the Clerk at the Monterey County Water Resources Agency and the California American Water Company for posting on March 2, 2007 per the Ralph M. Brown Act. Government Code Section 54954.2(a)..

# III.

# APPROVAL OF MINUTES

**SPECIAL MEETING OF THE**
Seaside Groundwater Basin Watermaster
*January 31, 2007*

**MINUTES**

## I. CALL TO ORDER

Chairman Rubio called the meeting to order at 1:30 p.m. at the City Of Seaside, City Hall Council Chambers, 440 Harcourt Avenue.

## II. ROLL CALL

City of Seaside – Mayor Ralph Rubio, Chairman
Laguna Seca Subarea Landowner –Director Bob Costa, Vice Chairman
Monterey Peninsula Water Management District ("MPWMD") – Director Michelle Knight, Secretary
City of Monterey – Les Turnbeau (Alternate for Vice Mayor Jeff Haferman,)
City of Sand City – Mayor David Pendergrass
California American Water Co. ("Cal-Am") –Director Steve Leonard
City of Del Rey Oaks – Mayor Joseph Russell
Monterey County/Monterey County Water Resources Agency ("MCWRA") – Supervisor Jerry Smith, District 4
Coastal Subarea Landowner –Director Paul Bruno



## III. PUBLIC PARTICIPATION/ORAL COMMUNICATIONS

There were no comments from the public.

## IV. SPECIAL MEETING BUSINESS

### A. Sentinel Wells Work Plan and Scope

### B. Authorization for contract

CEO Evans reviewed orally the historical development of the Watermaster and the Basin Monitoring and Management Plan ("BMMP").

March 13, 2007 is the deadline set by the court for Watermaster to have entered into a contract for services for BMMP oversight and implementation of well drilling. At the January 17, 2007 regular Watermaster meeting, Director Leonard submitted a summary detailing an expedited scope of work for determining site locations and installing monitoring wells. The Watermaster Technical Advisory Committee ("TAC") was directed by Watermaster to recommend an approach to be taken to gain Watermaster approval for selection of well sites by June 11, 2007. The TAC was also directed to review the proposals for program management submitted by MPWMD/MCWRA and RBF in light of the summary submitted by Director Leonard. Additionally, the TAC was to obtain a proposal and scope of work from Mr. Martin Feeney to carry out the tasks outlined in Director Leonard's submitted summary.

The Board reviewed the submitted copy of Mr. Feeney's scope of work and proposal. The TAC, chaired by Ms. Ingersoll, met last Monday. Ms. Ingersoll

relayed a TAC concern regarding significant changes in conductivity requiring placement of additional wells beyond those planned for. The TAC does support Mr. Feeney's proposal and work plan, but cautions that the recommended contract not to exceed $850,000 is very dependent on the data gathered as work progresses.

The TAC recommends that the Board approve the Seaside Groundwater Basin Watermaster Seawater Sentinel Wells Work Plan and associated Scope of Work submitted by Martin Feeney.

Mr. Feeney addressed the Board regarding the TAC concern of change in conductivity representing seawater being detected during monitoring. Such a change would not be immediately detected. He stated that any need for additional placement of wells beyond those planned for would be determined through data collection and analysis of conductivity change over time. The previous plan had the same risk of further exploration being needed due to conductivity change.



Mr. Feeney explained why there are no planned sentinel wells in the southern part of the basin. Water levels in the southern coastal Seaside Basin are above sea level and there is a strong seaward gradient resulting in the area being not particularly susceptible to seawater intrusion. Groundwater in the southern basin is shallow to the point that it rises to the surface and forms Roberts Lake, and then discharges to the ocean via a controlled rock structure. Moreover, there are currently several wells located in the southern coastal Seaside Basin area. The proposed wells are sited in Fort Ord where water levels are fifty feet below sea level, where no wells are currently located, and where there is no data from the deep zones regarding seawater. The base of the groundwater basin in the Fort Ord area is approximately 800 - 1,500 feet; in the southern coastal area the base is approximately 100'. The BMMP does not currently include networking existing southern coastal area wells (the CDM well, many wells at the end of Bay Street, and some along Dunes Drive).

Joe Oliver, MPWMD Senior Hydrologist, expressed his opinion that there is groundwater production potential in the southern coastal basin area, but it is significantly less than production in other areas of the basin. He further commented that any significant change in water quality that the planned monitoring program brings to light is part of the exploration phase of the BMMP and a recommendation for the installation of an additional well or wells could be possible in the near future. Mr. Oliver described the boundary of the North Coastal Subarea as just north of the entrance of Fort Ord near the previous location of Stilwell Hall.

***Moved by Director Turnbeau, seconded by Director Smith, and unanimously carried, to approve the recommendation from the Technical Advisory Committee to enter into a contract with Mr. Martin Feeney for the scope of work outlined in his submitted Seawater Sentinel Monitoring Wells Work Plan dated January 26, 2007 and authorize the Watermaster Chief Executive Officer to prepare and execute a contract, not to exceed $850,000.***

**C. BMMP Project Management**

Ms. Ingersoll, TAC Chair, recommended the Board consider approving an expenditure request from Monterey Peninsula Water Management District for $7,080 to collect winter and spring 2007 quarterly groundwater quality samples from key coastal monitoring wells as outlined in the BMMP and to comply with Judge Randall's 1/12/07 directive. The quarterly collection of samples is in addition to MPWMD's budgeted annual collection of samples. Approval of this expenditure would allow implementation of the BMMP on an interim basis until a longer term contract with MPWMD for additional, prioritized tasks is considered for authorization by the Board.

Ms. Ingersoll stated that the TAC intends to provide the Board at its February 7, 2007 regular meeting a recommendation for award of contract not to exceed $35,000 to RBF to work with an appointed TAC subcommittee to refine and re-scope the BMMP to cost effectively expedite the court directives. Scope refining includes coordinating with Mr. Feeney's work plan to develop a prima vera schedule as a basis for re-scoping the entire BMMP. The TAC subcommittee would consist of TAC member representatives from Seaside, California American Water, MPWMD, and MCWRA. Other interested TAC members not appointed to the subcommittee are invited to attend subcommittee meetings and would be notified of the content of meetings via email.

The BMMP may need to be amended and Mr. Jacobs suggested that the March 13, 2007 court hearing would be a good time to submit an alternate BMMP to the judge.

***Moved by Mayor Pendergrass, seconded by Director Smith, and unanimously carried, to approve a contract with the Monterey Peninsula Water Management District/Monterey County Water Resources Agency for $7,080 for Seaside Groundwater Basin Program interim water quality sampling management services and to amend the budget accordingly, and to direct the Technical Advisory Committee to report back to Watermaster on February 7, 2007, with a recommendation on award of contract not to exceed $35,000 to RBF to refine and re-scope the BMMP.***

**V. Chair Rubio adjourned the meeting to Closed Session at 2:04 p.m. to consider specific matters:**

**A. Public employee Performance Evaluation: Government Code Section 54957.**

**1. Title: Chief Executive Officer**

**VI. REGULAR MEETING SCHEDULED FOR WEDNESDAY, February 7, 2007 1:30 P.M., SOPER FIELD, SEASIDE, CALIFORNIA**

**VII. DIRECTOR'S REPORTS**

There were no reports from directors.

## VIII. ADJOURNMENT

There being no further business, Chairman Rubio adjourned the meeting at 2:41 p.m.

**REGULAR MEETING**
Seaside Groundwater Basin Watermaster
*February 7, 2007*

**MINUTES**

## I. CALL TO ORDER

Chairman Rubio called the meeting to order at 1:32 p.m. in the Seaside Community Center at Soper Field, 220 Coe Avenue, Seaside.

## II. ROLL CALL

City of Seaside – Mayor Ralph Rubio, Chairman
Laguna Seca Subarea Landowner –Director Bob Costa, Vice Chairman
Monterey Peninsula Water Management District – Director Michelle Knight, Secretary
City of Monterey – Vice Mayor Jeff Haferman
City of Sand City – Mayor David Pendergrass
California American Water Co. – Director Steve Leonard
City of Del Rey Oaks – Mayor Joseph Russell
Coastal Subarea Landowner – Director Paul Bruno
Monterey County/Monterey County Water Resources Agency – Curtis Weeks (alternate for Supervisor Jerry Smith, District 4)



## III. APPROVAL OF MINUTES OF January 17, 2007 Regular Meeting

CEO Evans advised the Board of a correction: Director Lehman (alternate for Director Knight) voted no on the motion regarding the alternative presented for providing consulting services for Management and Implementation of the Basin Monitoring and Management Program ("BMMP").

**Moved by Mayor Pendergrass, seconded by Mayor Russell, and unanimously carried, to approve the Watermaster January 17, 2007, Regular Meeting minutes as corrected.**

## IV. REVIEW OF AGENDA

There were no changes to the agenda.

## V. PUBLIC PARTICIPATION/ORAL COMMUNICATIONS

There were no questions or comments from the public.

## VI. CONSENT CALENDAR

**A.** Request approval for payment of January, 2007 bills

| | |
|---|---|
| Contract Compensation—CEO | $5,700.00 |
| Reimbursable—General | 1,143.36 |

**Moved by Director Leonard, seconded by Director Weeks, and unanimously carried, to approve the payment of bills.**

## VII. OLD BUSINESS

### A. COMMITTEE REPORTS

#### 1. TECHNICAL COMMITTEE

**Report on Seaside Basin Groundwater Recommended Approach – Martin Feeney**

Mr. Martin Feeney, Consulting Hydro geologist, reviewed orally the documents submitted to Ms. Diana Ingersoll dated January 12, 2007, regarding the recommended approach to the groundwater modeling component of the BMMP. Ms. Ingersoll stated that the Watermaster Technical Advisory Committee ("TAC") reviewed the documents and concurred with the recommendations made by Mr. Feeney.

The Board discussed with Mr. Feeney the basis of the recommendations including past modeling efforts and numerical engine models used. If any groundwater modeling is done, Vice Mayor Haferman supported using the simplest approach initially given the uncertainties inherent in the development of the model then adding depth to the model as data is forthcoming.

**Moved by Director Leonard, seconded by Director Costa, and unanimously carried, to accept Mr. Feeney's recommended approach to use, with minor refinements, the existing groundwater model (Durbin) to serve Watermaster's immediate needs and meet the requirements of the judgment and, after stated refinements are completed by the Court deadline of March 27, 2007 at a cost estimate of $50,000, to adopt the Durbin model as the "interim groundwater model."**

#### 2. BUDGET/FINANCE COMMITTEE

No current report.

## VIII. NEW BUSINESS

### A. Board Policy on Reimbursements for Consultants

CEO Evans reviewed orally the submitted memo recommending that the Board adopt a policy that allows reimbursement of expenses for consultants, agents or any outside persons only upon prior approval by the Board of Directors or their designated representative. Mayor Rubio inquired if, for example, all public agencies will be paid to furnish data for the BMMP, as was the case with MPWMD. CEO Evans stated that the policy was developed for the particular case of the groundwater modeling meeting representative reimbursement. Director Leonard requested that the policy be developed to encompass any case where money is spent including emergency situations where authority is delegated to the CEO. The policy should also address the timing issue: Give limited authority to the CEO for situations in which the Board is unable to act expeditiously. Director Weeks requested that the words, "designated representative" be stricken from the policy. Further, he suggested that the policy at hand not include Director Leonard's requests, nor a dollar limit, but a separate policy be developed for approval of expenditures based on parameters recommended by the CEO.

**Moved by Director Weeks, seconded by Director Leonard, and unanimously carried, to adopt a policy that allows reimbursement of expenses for consultants, agents or any outside persons for any and all collaborative and contractual outside services only upon prior approval by the Board of Directors.**

**B. Appointment of a Watermaster Treasurer**

**Moved by Vice Mayor Haferman, seconded by Director Leonard, and unanimously carried, to accept Vice Mayor Haferman's offer to assume the position of Watermaster Treasurer.**

**C. Annual Report to Court for Year 2006**

CEO Evans reviewed orally the submitted draft Annual Report for Year 2006, developed by Attorney Sandra Dunne, to be filed with the Court by February 15, 2007. (In subsequent years the report will be filed November 15th.) The Report includes quarterly pumping data from parties and producers; data provided by MPWMD was used in lieu of data not yet received from certain producers and parties. As additional information, Director Costa will provide to Watermanster water use data for the quarter October through December 2005 from producers Laguna Seca, Golf Ranch, Bishop, and McIntosh. Director Leonard stated that the water use term of calendar year should be stated consistently in the Report. Footnotes in the Report should indicate that water usage in subsequent years would be based on a water year (October 1 through September 30). CEO Evans noted the stated carry-over credits: Cal-Am with 140 acre-feet under-production from Laguna Seca Subarea, DBO Development 49 acre-feet, and Granite Rock 27 acre-feet. Alternative producers are not entitled to carry-over credits or transfers of water.



The submitted schedule of administrative costs for 2006 reports an incorrect total of $36,651.07 and should be corrected to reflect $41,148.93.

Ms. Dunne explained for the Board the replenishment assessment schedule for Standard Producers included in the report. Cal-Am exceeded the Natural Safe Yield as a Standard Producer and will be assessed the amount of $2,106,652; the City of Seaside exceeded the Natural Safe Yield and will be assessed the amount of $168,668 with an additional Operating Yield Over Production Assessment of $50,940. These assessments are based on the Court's most recent order regarding assessment calculations. Production information provided by MPWMD was used to obtain the over-production amounts. Per the Judgment, Watermaster is to declare at the beginning of the water year whether there is replenishment water available so the parties are on notice whether they can or cannot pump over the operating yield of the Basin. The Judgment was not filed until March 2006 and no such declaration was made for the initial year of the Judgment so the parties were unaware whether they could or could not pump over the Operating Yield, therefore, it is unclear whether the City of Seaside actually violated the Judgment during 2006. Ms. Dunne felt it important that the Court be aware that the over production occurred and

why so as not to appear that Watermaster was disregarding the Decision. She suggested agendizing the declaration of replenishment availability at the next Regular Board Meeting. Generally speaking, the assessments are to be used to purchase replenishment water and to support replenishment projects. Director Leonard requested that specific goals for assessment expenditures be discussed in the near future. Director Bruno inquired if the under production by Alternative Producers could be documented to show water saved from pumping. Ms. Dunne will develop a more comprehensive worksheet that will include that information. She stated that the under-production by the Alternative Producers is part of the Natural Yield that the Standard Producers are entitled to use.

Ms. Dunne recommended that the annual report include the water quality monitoring report for 2006 prepared by Mr. Joe Oliver, MPWMD, as an attachment. Attorney Don Freeman suggested approving the draft Annual Report with no substantive changes to be made in preparation of the final report. If any substantive changes are mad, the report would come back before the Board for approval.

Regarding item B of the Report, Mr. Oliver noted that MPWMD, in coordination with Cal-Am, did inject and store, under the MPWMD temporary water right, 411 acre-feet into the Basin as part of a test program and that the information should be characterized in the Report. Director Leonard's interpretation of the judgment is that Cal-Am and MPWMD should have requested storage rights of the injected water in order for it to be included in the replenishment calculations. Attorney David Laredo stated there is a distinction between groundwater storage for which there is a right to extract and use at a later time and just merely reporting the fact of groundwater storage. For this phase of the program, it appears that the 411 acre-feet of water injected and stored does not relate to a later right to extract. MPWMD in conjunction with Cal-Am is in the process of obtaining a water right from the State Water Resources Control Board that would allow water brought over from Carmel River to be injected into the Basin to be pumped at a later time. Once approved by the State Board, the parties would need to come before the Watermaster Board for approval of storage rights and later extraction. Mr. Freeman recommended noting in the Report the injection of the 411 acre-feet and including a footnote that a possible credit adjustment may need to be determined by the Board at a later time. Mr. Laredo and Director Leonard requested documentation of the Aquifer Storage and Recovery Program ("ASR") process for a clear understanding of the elements of the process, such as where the water comes from (Carmel River), as a more defined project phase and related storage rights progress. Director Leonard requested that the CEO rely on Mr. Oliver to develop the ASR process description to communicate to the judge that Watermaster is taking action in the ASR field. Mr. Oliver submitted a revised table of 2006 groundwater production to be included in the Report showing Sand City's production of .5 acre-feet.

**Moved by Director Leonard, seconded by Vice Mayor Haferman, and unanimously carried, to approve the Annual Report for Year 2006 under the following conditions: The term "calendar year" is to be used for the operating production basis; a notation is to be made of the MPWMD/Cal-Am 411 acre-foot test injection with a footnote indicating that a future**

**replenishment assessment credit to Cal-Am may be in order; the documented ASR process provided by Mr. Joe Oliver is to be included; a notation is to be made stating that violation of Over Production is to be addressed by Declaration of the 2007 replenishment amount as an agenda item at the next Regular Board Meeting; and Board and legal review of the final Report will be made prior to submission to the Court by a Watermaster legal representative.**

**D. Replenishment Assessment Distribution**
Chair Rubio requested that attachments provided in the Board packets have associated agenda items indicated at the top.

**Moved by Director Bruno, seconded by Director Weeks/Knight, and unanimously carried, to authorize the CEO to levy 2006 Replenishment Assessments with the assessment amounts being subject to adjustments as authorized in the future by the Watermaster Board.**

**E. Contract with RBF Consulting for Work Plan Development**
Sarah Hardgrave, RBF, reviewed the RBF memo dated February 2, 2007, submitted to Ms. Diana Ingersoll, TAC Chair, regarding the scope of work to identify revised BMMP priorities and key tasks, as well as scheduling and phasing recommendations considering work scope services awarded to Mr. Martin Feeney at the last Regular Board Meeting. Director Costa referred to a letter submitted to the Board by Attorney Eric Robinson, Kronick, Moskovitz, Tiedemann & Girard, dated February 7, 2007, regarding the re-scoping of the BMMP, stating a request by the Laguna Seca Alternative Producers ("LSAP") that any re-scoping of the BMMP retain all tasks concerning the collection and analysis of additional groundwater resource data for the Laguna Seca Subarea and southern Coastal Subarea. Mayor Russell supported the LSAP request. TAC Chair, Diana Ingersoll, stated that, upon award of a contract to RBF as recommended by TAC at the last Regular Board Meeting, a TAC subcommittee would be established that would work with RBF to re-scope the entire BMMP, including the scope of the request made by the LSAP. The TAC subcommittee would bring the re-scoped BMMP back to the Watermaster Board prior to the hearing scheduled by the Court in mid-March.

**Moved by Director Costa, seconded by Director Leonard, and unanimously carried, to approve a contract and a budget increase and expenditure of approximately $35,000 to retain the firm of RBF Consulting to develop a Work Plan for the re-scoping of the BMMP and submit the Work Plan to the Watermaster Technical Advisory Committee for presentation to the Watermaster Board for approval at the March 7, 2007 Regular Board Meeting.**

## IX. STAFF INFORMATIONAL REPORTS

**A. Receive Fall 2006 Groundwater Quality Monitoring Report for MPWMD Seaside Basin Coastal Monitor Wells**

Mr. Joe Oliver, MPWMD, stated that groundwater quality test data was gathered during the District's routine annual testing. As of last month, the existing coastal sentinel wells are now monitored quarterly and a report of that data will be available to the Board in the next two months. He stated that there are no signs of seawater intrusion from the existing network of wells.

**The Board received Mr. Oliver's memorandum as informational.**

**B. Current Fiscal Year Financial Statements**

The Board reviewed the submitted Financial Reports, to be provided to the Board on a monthly basis. Director Bruno inquired if assessment revenue would be invested once received. CEO Evans stated that currently revenues are placed in the City of Seaside Treasury; the Board may request that the money be invested and interest prorated to the Watermaster Fund. Director Leonard requested that monthly informational reports include timely Judgment items such as assessments, reports due, or deadlines approaching.

**The Board received the Financial Reports as informational.**

## X. DIRECTOR'S REPORTS

Director Bruno stated that he had been appointed to the Community Advisory Committee for MPWMD.

Mayor Pendergrass inquired whether the Board of Directors is required to file Form 700. Mr. Freeman stated that the Board is not a public agency, but an arm of the Court, and the Judgment only refers to the Public Records Act and the Brown Act. The Board does need to establish its own Conflict of Interest Code at some point in time however there is nothing reportable at this time.

## XI. EXECUTIVE OFFICER COMMENTS

CEO Evans stated that examples of contracts are being used to develop a contract for services with Martin Feeney to present to the Board at its next meeting. Chair Rubio requested that the elements being considered from sample contracts be made available to the Directors so that the Board could determine what type of contract would be appropriate.

CEO Evans will not be attending the March 7, 2007, Watermaster Regular Board Meeting; Laura Paxton-Dadiw will be attending to take the minutes, and Board packets will be prepared in advance.

The Soper Field facility has been booked by another organization on April 4, 2007, the date of the Watermaster Regular Board Meeting. Blackhawk Room at Oldemeyer Center and the Seaside City Hall Council Chambers are being considered as alternate locations. Any suggestions are welcome. Soper Field is reserved for all other Watermaster Regular Meetings for the remainder of 2007.

Due to the Watermaster administrative workload being greater than originally anticipated, CEO Evans requested an increase in administrative support services from Dadiw Associates. A periodic newsletter will be sent out by email to the Board and other interested parties on items of general interest. A milestone event calendar is being developed to provide deadlines, reports, and assessment dates. It will be sent via email. A copy of the contract and the work plan for the CEO position will be forward to the Board of Directors.

**XII. ADJOURNMENT**

There being no further business, Chairman Rubio adjourned the meeting at 3:05 p.m.

# VI.

# CONSENT CALENDAR

**SEASIDE GROUNDWATER BASIN**
**WATERMASTER**

To: Board of Directors

From: Dewey D Evans, CEO

Date: March 7, 2007

Subject: Payment of February, 2007 Bills

Recommendation:

That the Board of Directors approve the payment of bills as listed on the attached schedule.

Comments:

Contract Compensation—For the period from January 28, 2007 through February 24, 2007 a total of 96.5 billable hours were recorded working directly on Watermaster related business. During this period there were two Board meetings to prepare for with all the related staff reports, coordination of reports from others and meetings to attend. The major focus of this billing period was the preparation, coordination and transmitting of the 2006 Annual Report required by the judgment by February 15th and the coordination and execution of the contract for the construction and drilling of the four sentinel wells with Mr. Martin Feeney. Replenishment assessment bills were prepared and mailed out the year 2006.

Reimbursables—Direct expenditures that are being requested to be reimbursed for are: rent of office space at 2600 Garden Road, Suite 228 for the month of March, 2007. Administrative support for the recording and transcribing of Board minutes, data entry into QuickBooks, preparation of reports and research on various Watermaster matters. Monthly telephone and internet services for the month, long distance telephone calls, purchase of paper and printer ink cartridges and postage for certified mailing costs.

Thanks, Dewey

**SEASIDE GROUNDWATER BASIN**
**WATERMASTER**
**February, 2007**

**Request for Payment of Bills**

Request for Payment:

Contract Compensation:

Chief Executive Officer—Dewey D Evans
96.5 hours—January 28 through February 24, 2007
At $75.00 per hour-- $7,237.50

Reimbursables:

Pay to Dewey D Evans for personal expenses paid on behalf of Watermaster program:

| | |
|---|---|
| Office rental-2600 Garden Road, Suite 228 (March, 2007) | $280.00 |
| Administrative Support—Preparation of Board meeting minutes, and general administrative support | 1,425.00 |
| Telephone and Internet Services (Feb. 13 through March 12) | 113.36 |
| Computer paper and ink cartridges | 221.32 |
| Postage (certified mail ) | 9.28 |
| Total Reimbursables | $2,048.96 |

**SEASIDE GROUNDWATER BASIN**
**WATERMASTER**

To: Board of Directors

From: Dewey D Evans, CEO

Date: March 7, 2007

Subject: Current Year Financial Reports

Recommendation:

Review and approve for filing the current year financial reports

Comments:

The attached financial reports show the current financial status of all four separate funds that have been established for the SGBW accounts. A new fund was established this month with the "Replenishment Fund". Replenishment assessments were mailed and accounts receivable were set up for both California American Water and the City of Seaside. An entry was made to offset the California American Water assessment by the $465, 252 credit that is being recommended by a separate item on this agenda.

Thanks, Dewey

# Seaside Groundwater Basin Watermaster
## Budget vs. Actual
## Administrative Fund
### Fiscal Year (January 1 - December 31, 2007)
### Balance Through February 28, 2007

| | Adopted Budget | Expenses | Balance |
|---|---|---|---|
| Assessment | | | |
| FY 2006 Rollover | 58,866.47 | | |
| Assessment 2007 | 64,000.00 | | 64,000.00 |
| Total | 122,866.47 | | 122,866.47 |
| Total | | | |
| Expense | | | |
| Administrative | | | |
| Computer Maint. & Supplies | 3,000.00 | 0.00 | 3,000.00 |
| Contract Staff | 60,000.00 | 12,937.50 | 47,062.50 |
| Meetings, Travel & Membership | 2,000.00 | 0.00 | 2,000.00 |
| Mileage Reimbursement | 1,500.00 | 0.00 | 1,500.00 |
| Office Consumables & Other | 6,000.00 | 275.62 | 5,724.38 |
| Office Equip. Maint. & Rental | 1,000.00 | 0.00 | 1,000.00 |
| Office Rental | 3,500.00 | 560.00 | 2,940.00 |
| Administrative Support | 8,000.00 | 2,150.00 | 5,850.00 |
| Legal | 10,000.00 | 0.00 | 10,000.00 |
| Utilities | 1,000.00 | 206.70 | 793.30 |
| Total Administrative | 96,000.00 | 16,129.82 | 79,870.18 |
| Total | 96,000.00 | | |
| Total Available | 26,866.47 | | |
| Less Dedicated Reserve | 25,000.00 | | |
| Net Available | 1,866.47 | | |

# Seaside Groundwater Basin Watermaster
## Budget vs. Actual
## Monitoring & Management - Operations Fund
### Fiscal Year January 1 - December 31, 2007
### Balance Through February 28, 2007

| | Adopted Budget | Encumbrance | Expense | Balance |
|---|---|---|---|---|
| **Assessment** | | | | |
| **Monitoring & Mgmt Fund - Ops** | 400,000.00 | | | 400,000.00 |
| **Total Assessment** | 400,000.00 | | | 400,000.00 |
| **Expense** | | | | |
| **Monitoring & Management - Ops** | | | | |
| **Groundwater Modeling** | | | | |
| **Feeney, Martin B.** | 14,600.00 | 0.00 | 14,755.59 | -155.59 |
| **GW Modeling Consultants Travel** | 16,370.00 | 0.00 | 14,972.52 | 1,397.48 |
| **Total Groundwater Modeling** | 30,970.00 | 0.00 | 29,728.11 | 1,241.89 |
| **BMMP Implementation Work Plan (contract awarded to RBF consulting)** | 35,000.00 | 35,000.00 | | 0.00 |
| **GW Resource Database** | | | | |
| **Annual Maintenance 40 hours/qtr** | 11,200.00 | 0.00 | 0.00 | 11,200.00 |
| **Develop/Populate 200 hrs** | 14,000.00 | 0.00 | 0.00 | 14,000.00 |
| **Total GW Resource Database** | 25,200.00 | 0.00 | 0.00 | 25,200.00 |
| **Monitoring of wells** | | | | |
| **Coastal well monitoring** | 48,240.00 | 7,080.00 (1) | 0.00 | 41,160.00 |
| **Inland well monitoring** | 2,240.00 | | 0.00 | 2,240.00 |
| **Total Monitoring of wells** | 50,480.00 | 7,080.00 | 0.00 | 50,480.00 |
| **Total Monitoring & Management - Ops** | 106,650.00 | 42,080.00 | 29,728.11 | 34,841.89 |
| **Total Expense** | 141,650.00 | 42,080.00 | 29,728.11 | 69,841.89 |
| **Total Assessment Available** | 258,350.00 | | | |

Notes:

(1) Contract awarded to MPWMD to record, monitor, and analyze well water extractions for first two quarters (six months) of calendar year 2007.

# Seaside Groundwater Basin Watermaster
## Budget vs. Actual
## Monitoring & Management - Capital Fund
### Fiscal Year (January 1 - December 31, 2007)
### Balances Through February 28, 2007

| | Budget | Encumbrance | Income/ Expense | Balance |
|---|---|---|---|---|
| **Assessment** | | | | |
| **Monitoring & Mgmt Fund - Capit** | 1,000,000.00 | | 250,000.00 | 750,000.00 |
| **Total Assessment** | 1,000,000.00 | | 250,000.00 | 750,000.00 |
| **Expense** | | | | |
| **Monitoring & Management - Cap** | | | | |
| **Coastal Wells Dataloggers (22)** | 44,000.00 | 0.00 | 0.00 | 44,000.00 |
| **Inland Wells Dataloggers (2)** | 4,000.00 | 0.00 | 0.00 | 4,000.00 |
| **Monitor Well Construction (5)** | 900,000.00 | 850,000.00 | 0.00 | 50,000.00 |
| **Total Monitoring & Management - Cap** | 948,000.00 | 850,000.00 | 0.00 | 98,000.00 |
| **Reserve Available** | 52,000.00 | | | |
| **Balance of Assessment after Expenses** | 98,000.00 | | | |
| **Total Assessment Available** | 150,000.00 | | | |

# Seaside Groundwater Basin Watermaster
## Budget vs. Actual
# Replenishment Fund
### Fiscal Year (January 1 - December 31, 2007)
### Balances Through February 28, 2007

| | Budget | Encumbrance | Income/ Expense | Balance |
|---|---|---|---|---|
| **Assessment** | | | | |
| **Replenishment Fund** | | | | |
| **California American Water** | 2,106,000.00 | | | 2,106,000.00 |
| **(Credit Toward Replenishment Assessment)[1]** | -465,252.00 | | | -465,252.00 |
| **Total California American Water Assessment** | 1,640,748.00 | | | 1,640,748.00 |
| **City of Seaside** | | | | |
| **Exceeding Natural Safe Yield considering Alternative Producers** | 169,010.00 | | | 169,010.00 |
| **Operating Yield Overproduction Replenishment** | 50,940.00 | | | 50,940.00 |
| **Total City of Seaside** | 219,950.00 | | | 219,950.00 |
| **Total Assessment** | 1,860,698.00 | 0.00 | 0.00 | 1,860,698.00 |
| **Expense** | | | | |
| **Total Expense** | 0.00 | 0.00 | 0.00 | 0.00 |
| **Total Assessment Available** | 1,860,698.00 | | | |

[1] ***Subject to Board approval at March 7, 2007 Watermaster Board meeting.***

# VII.

# OLD BUSINESS

# VII. A. 1.

# TECHNICAL COMMITTEE

# DRAFT IMPLEMENTATION PLAN

# SEASIDE BASIN MONITORING AND MANAGEMENT PROGRAM

**March 1, 2007**

**Presented to:**

**Seaside Basin Watermaster**

**Technical Advisory Committee**

Prepared by:

RBF Consulting
3180 Imjin Rd. Ste 110
Marina, CA 93933

The purpose of the Seaside Basin Monitoring and Management Program Implementation Plan is to lie out a logical, efficient and cost-effective work plan to meet the requirements of the Seaside Basin Adjudication. This Implementation Plan contains a description of the phases identified for the MMP work effort, a detailed scope, budget and schedule of tasks planned for 2007, as well as a summary of other projects underway that, in addition to implementation of the MMP, will develop solutions to the threat of seawater intrusion and establish a maximum perennial yield for the producers who rely on the Seaside Basin for their water supply.

# 1. Background

The Seaside Basin Monitoring and Management Program (MMP) was developed by the Seaside Basin Technical Advisory Committee and adopted on May 17, 2006, and revised on September 5, 2006, to comply with the Judgment entered in the Seaside Groundwater Basin Adjudication (California American Water v. City of Seaside, Monterey County Superior Court, Case Number M66343). The MMP contains several primary tasks: 1) Basin Monitoring Well Construction Program; 2) Comprehensive Basin Production, Water Level and Water Quality Program; 3) Basin Management Program; and 4) Seawater Intrusion Program.

The Watermaster Board authorized a Request for Proposals (RFP) on September 29, 2006. Three teams submitted proposals for the two parts of the RFP, Management of the MMP and Implementation of the MMP. The TAC interviewed each team and recommended to the Board that two teams be selected. The Monterey Peninsula Water Management District (MPWMD), in conjunction with the Monterey County Water Resources Agency (MCWRA), would perform the management of the MMP. The second team, lead by RBF Consulting, was selected to implement the MMP. The Watermaster Board provided direction to the TAC to negotiate with these two teams to develop a joint scope and budget at their November and December meetings.

On January 31, 2007, the Watermaster Board selected Martin Feeney to develop an expedited work plan for implementation of the coastal sentinel wells. This effort is key to the detection of seawater intrusion and is the first phase of the monitoring well program identified in the MMP. Based on budgetary constraints, the Watermaster Board directed the TAC to continue to work with the MPWMD and RBF teams to determine which additional MMP tasks can be accomplished within the established budget.

This Implementation Plan for the MMP is the outcome of this effort, and has resulted in establishing a phased approach to the MMP based on a logical order of tasks as well as funding availability as established in the Order. The first phase tasks will provide the prerequisite data for subsequent activities, as well as determining the necessity for them.

# 2. Phase 1 - Management and Monitoring Program Implementation

The first phase of the MMP Implementation includes both the Coastal Sentinel Work Plan authorized by the Watermaster Board on January 31, 2007, as well as additional tasks in the MMP that have been identified as priorities and prerequisite activities to subsequent phases. A summary of these tasks is described below, and a detailed scope of work, budget and schedule is included as Appendix A.

## 2.1 Monitoring Well Program Recommended Modifications

The Coastal Sentinel Work Plan has been reviewed in combination with the additional MMP Phase 1 tasks as well as with the Coastal Water Project (CWP) Aquifer Storage and Recovery (ASR)

program. MPWMD, California American Water, and RBF Consulting (with ASR Systems and GEOSCIENCE) met with Martin Feeney on February 28, 2007. As a result of this discussion, it is recommended that the Work Plan be modified slightly. The Work Plan identified four sites with one well on each site. It is recommended that this be modified to three sites, and that the southernmost site have two wells, one deep to the Santa Margarita formation and the top of the Monterey formation, and one to the Paso Robles formation. The fourth coastal site identified in the work plan will be held in abeyance and will be constructed under the CWP ASR Program in early 2008. However permitting of this site will proceed as authorized.

The CWP ASR Program plans to construct a monitoring well at an inland site, on Bayonet Drive and General Jim Moore Boulevard, and an ASR test well is also planned (see Attachment 3). A second CWP monitoring site will be planned for early 2008, with the most appropriate site yet to be determined but planned to be in the vicinity of the Coastal Sentinel Well Work Plan's fourth site. The key objective in determining the fourth coastal site will be better understanding of the impacts of the ASR Phase 1 well and the CWP Phase 2 ASR test well. It may be determined that a site inland from the coast would provide more valuable data. This can be better determined once the existing databases are consolidated and initial data from the new coastal sentinel wells are analyzed.

### 2.2 Comprehensive Basin Production, Water Level and Water Quality Monitoring Program

All tasks described under this portion of the MMP are recommended to be performed at this time, as the development of a consolidated database of both existing and new data related to water production, water levels and water quality will be critical to the determination of the maximum perennial yield of the Basin. This effort will also provide the data and analysis necessary to identify the need for additional monitoring wells as identified in the MMP.

### 2.3 Basin Management

As recommended in Martin Feeney's December 31, 2006 MMP Groundwater Modeling Component - Report on Groundwater Modeling Meeting and Recommended Approach, under Phase 1 it is recommended to proceed with documentation of the "Durbin" model, in conjunction with Martin Feeney and Derrik Williams of Hydrometrics, the groundwater modeler on the RBF team. Additional modeling is recommended to be deferred to Phase 2 of the MMP Implementation Plan.

### 2.4 Seawater Intrusion Contingency Program

Based on the outcome of the Monitoring Well Program and the Comprehensive Basin Production, Water Level and Water Quality Monitoring Program, the Seawater Intrusion Contingency Plan would be logically informed by the Phase 1 data collection and analysis efforts. Therefore, this Plan is not anticipated to be required in 2007. However, in order to work toward that end, it is recommended that the

## 3. Phase 2 - Management and Monitoring Program Implementation

Based on the results of the Phase 1 Monitoring Well and the Comprehensive Basin Production, Water Level and Water Quality Monitoring Program, specific tasks for Phase 2 will be determined in the fourth quart of 2007. Appendix B identifies the MMP tasks and anticipated budget for tasks that are recommended be deferred to Phase 2 or subsequent phases.

It is anticipated that the new monitoring well data as well as the consolidated database will provide an improved basis for development of a new groundwater model, and that this will be a priority focus for Phase 2 MMP Implementation.

# 4. Supplemental Supply and Other Related Projects

Several project are underway which focus on development of supplemental supplies into the Seaside Basin. These projects are briefly identified here to recognize these efforts as important and significant steps towards achieving the goals of the Seaside Basin adjudication, in particular to be able to reduce pumping in the basin to achieve the maximum perennial yield (safe yield) in the basin.

## 4.1 California American Water - Coastal Water Project

California American Water submitted an application for the Coastal Water Project (CWP) to the California Public Utilities Commission (CPUC) in July 2005. At this time, the CPUC is preparing the Environmental Impact Report. The CWP includes an ASR program for storage of excess Carmel River winter flows into the Seaside Basin, and is a critical supplemental supply project for meeting the requirements of the Seaside Basin Adjudication.

Appendix C is the Scope of Work for the CWP ASR Program currently underway. Appendix D is a Technical Memorandum that reviews all existing data and studies pertinent to the ASR Program. Appendix E is a Technical Memorandum, which describes the site development plan for an ASR test well, and a monitoring well at the Bayonet Drive site. The ASR monitoring well, as identified above under the Phase 1 Monitoring Well Program, is recommended to be incorporated into the Seaside Basin Monitoring Well Network to provide additional data to the Watermaster.

## 4.2 Monterey Peninsula Water Management District Phase 1 ASR Project

The MPWMD is implementing the Phase 1 ASR project at this time. During 2006, the MPWMD prepared its draft and final Environmental Impact Report (EIR) and obtained permits for the project. Construction of the ASR well was started in early 2007, and the temporary pipeline has already been constructed.

Appendix F is the Executive Summary and Project Description from the EIR and provides additional detail on this project.

## 4.3 California American Water - Seaside Basin Adjudication Compliance Project

As a result of the Seaside Basin Adjudication, California American Water has analyzed capital improvement requirements to the Monterey system that are required to support the ASR on an expedited schedule. In addition to MPWMD's project, California American Water is proceeding with construction of a permanent pipeline extension to the ASR south of the temporary pipeline that has already been constructed. The Segunda Pump Station is also planned to be upgraded to support the ASR.

The MPWMD Phase 1 ASR Project includes a number of related actions, including installing a new injection/extraction well, ancillary facilities, and a pipeline connecting the well to the existing California American Water supply system; and replacing an underground pipeline connecting the existing Santa Margarita Test Injection Well to the water supply system with a larger, temporary aboveground pipeline. The ASR Extension Pipeline would link the supply system between the Del

Rey Oaks Regulating Station to the existing temporary pipeline, which begins near the intersection of Hilby Avenue and Mescal Street and conveys water north to the new injection/extraction wells

The proposed ASR Extension Pipeline Project consists of the installation and operation of approximately 4,670 linear feet (LF) of underground pipeline (4,430 LF of 24-inch pipe, and 240 LF of 36-inch pipe). The pipeline alignment would follow General Jim Moore Boulevard (GJM Blvd.), on the former grounds of Fort Ord, in Monterey County, California. In locations where the roadway is being realigned, the pipeline will be constructed within the new alignment. The pipeline would begin at Canyon Del Rey Boulevard (State Route 218), connecting to the California American Water Company's water system upstream of the Del Rey Oaks pressure regulating valve station. A 24-inch pipeline would then extend northward, within the roadway of existing GJM Blvd., for approximately 1,400 LF. At this location, the alignment would then follow the proposed realigned GJM Blvd. northward approximately 3,030 LF to a point east of the intersection of Hilby Avenue and Mescal Street. From this location, a 36-inch pipeline would be constructed west for approximately 240 LF and connect to the existing 36-inch tee near the intersection of Hilby Avenue and Mescal Street.

## Appendices

A. MMP Phase 1 Scope of Work, Budget and Schedule
B. MMP Phase 2 Scope of Work and Budget
C. Scope of Work for the CWP ASR Program
D. CWP ASR Task 1 Technical Memorandum – Existing Data Review
E. CWP ASR Task 2 Technical Memorandum – Test Well Site Development Plan
F. MPWMD Phase 1 ASR Environmental Impact Report – Executive Summary and Project Description

## Appendix A

# Phase 1 Management and Monitoring Plan
# Scope of Work, Schedule and Budget

## MANAGEMENT

### M.1
### Program Administration

| | |
|---|---|
| **M. 1. a.**<br>**Program Management Plan** | Preparation of a Project Management Plan to reduce project goals and objectives, project description, scope of work, work breakdown structures, project organization, roles and responsibilities, contract and construction budgets, communications plan, quality plan, document control and data transfer plan, project controls, and billing procedures. |
| **M. 1. b.**<br>**Project Budget and Controls** | Monthly invoicing, maintenance of internal budgets and schedules, management of subconsultants |
| **M. 1. c.**<br>**Assist with Board and TAC Agendas** | The MPWMD team will closely coordinate with the RBF team, Watermaster staff and Technical Advisory Committee (TAC) representatives to ensure that needed Board and TAC agendas and report items are provided in a timely matter for meeting presentations. |
| **M. 1. d.**<br>**Preparation and Attendance of Meetings** | The Project will require numerous meetings both internally and with outside governmental agencies and with the public. Appropriate members of the Team will attend the necessary meetings and prepare agendas and meeting minutes to facilitate the meetings. Planning and review meetings are assumed with the Watermaster's technical staff and consultants for a budgeted period of 12 months. High-level meetings to present updates to the Watermaster Board are budgeted for 12 months. At key milestones, additional meetings will be held that are focused on technical issues and key findings. |
| **M. 1. e.**<br>**Prepare Board/ TAC Status Updates and Reports** | Provide Watermaster with monthly status reports indicating project progress, costs incurred, contract and construction cost trends, and problem identification and resolution. We will also provide assistance to the TAC in preparing technical summary reports and technical memoranda for the Watermaster Board. |
| **M. 1. f.**<br>**Peer Review of Documents and Reports** | Assist TAC and Watermaster with peer reviews of documents and reports prepared by various Watermaster entities, as requested. |
| **M. 1. g.**<br>**QA/QC** | The MPWMD team will provide quality control and assurance for all program administration materials generated under the program. |

| | |
|---|---|
| Deliverables | ❑ Project Management Plan<br>❑ Monthly Status Reports<br>❑ Technical Data as required for Meetings |

## IMPLEMENTATION

### I. 1. Monitor Well Construction

#### I. 1. a. Coordination with Monitor Well Implementation Program

Maintain coordination and consultation with Martin Feeney on development of Monitoring Well Construction Program.

#### I. 2 Comprehensive Basin Production, Water Level and Water Quality Monitoring Program

Consolidated Basic Groundwater Resources Database

Groundwater resource monitoring within the Seaside Basin is currently being conducted by numerous entities. The programs consist of:

- ❑ Groundwater Production Monitoring;
- ❑ Groundwater Level Monitoring;
- ❑ Groundwater Quality Monitoring;
- ❑ Surface Water Monitoring; and
- ❑ Precipitation Monitoring;

For successful implementation of the Seaside Basin Monitoring Program, pertinent historical basic groundwater resource data obtained from the abovementioned programs needs to be consolidated into a database to allow more efficient organization and data retrieval. The consolidated database will allow for simple identification of differences and discrepancies of datasets compiled by the numerous entities. Data gaps will become evident as well. In addition, the consolidated database needs to allow pertinent groundwater data to be efficiently organized, managed and housed in a single location to facilitate:

- ❑ Ongoing data collection;
- ❑ Data storage and retrieval;
- ❑ Distribution of basic data to Watermaster members and interested parties; and,
- ❑ Preparation of annual and periodic reports to the Watermaster.

Characteristics of both existing wells and wells proposed as part of the Seaside Basin Monitoring Program will be notated in the database, including type, location, construction details and other pertinent information. We understand that the MPWMD already maintains a groundwater database that contains some of the features described

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|---|---|
| | above. It is our understanding that the Watermaster will determine if the MPWMD database should be expanded or if a new database should be created. We offer to assist the Watermaster in the review of the existing MPWMD groundwater database to help determine whether it is feasible and economical to incorporate both the historical data and the ongoing data to be collected as part of the Seaside Basin Monitoring Program.<br><br>Coordination with the Watermaster is required in order to verify the adequacy of the existing database and ensure our data requirements are met. . Completion of the enhancement or development of a consolidated database will allow the review the available groundwater resource data to determine discrepancies, differences, or data gaps. |
| | Monitoring of Production Wells<br><br>As defined in Section D-5, Monitoring of Production Wells, of the RFP, the data to be collected by each owner and/or operator of inactive and active wells in the Basin shall be forwarded to the Watermaster for inclusion into the consolidated database. |
| **I. 2. a. Basin Management Database Development** | |
| **I. 2. a. 1. Coordination with Watermaster to Review Database** | |
| **I. 2. a. 1. 1 Review of MPWMD Database to Catalog Historical Data** | Coordination with Watermaster to review adequacy of existing MPWMD database to consolidate, organize and manage historical groundwater resource data and existing well characteristics. Identify whether the existing database is sufficient to catalog the data to be reviewed as part of this Scope of Work. After review, additional Scope will be identified. |
| **I. 2. a. 1. 2 Review of MPWMD Database to Catalog Ongoing Data Collection** | Coordinate with Watermaster to review adequacy of MPWMD database to organize and manage ongoing groundwater data collection efforts and proposed well characteristics, as identified for Tasks 1 and 2. Identify whether the existing database if sufficient to catalog the ongoing data collection efforts and to archive proposed well characteristics. After review, additional Scope will be identified. |
| **I. 2. a. 2. Develop Scope of Work to Enhance or Develop New Groundwater Resource Database** | Upon the Watermaster's review of the existing groundwater resource database, we will draft and submit a Scope to either enhance the existing database, or develop a new consolidated database. |
| **I. 2. a. 3. Create Basin Management** | Under general direction and guidance from the MPWMD team, the Watermaster database will be formatted and generated to complement the features of the |

| | |
|---|---|
| **Database** | MPWMD's existing water resources database. |
| **I. 2. a. 4. Populate Database with Data from all sources** | Under general direction and guidance from the MPWMD team, the Watermaster database will be populated with the existing data from all available sources, including the MPWWD's existing database, and all applicable data from Watermaster pumper entities, as well as other data available from miscellaneous sources. |
| **I. 2. a. 5. Conduct ongoing data entry/ database maintenance** | Under general direction and guidance from the MPWMD team, all newly-acquired data will be added to the Watermaster database as it becomes available, and any appropriate database structure modifications will be made as needed. |
| **I. 2. b. Data Exchange and Collection** | Incorporate ongoing groundwater monitoring data into the consolidated groundwater resource database. This will include the following subtasks: |
| **I. 2. b. 1. Establish Agreements and Schedule** | The MPWMD and RBF teams will closely coordinate to establish agreements and schedules for ensuring that all materials for Watermaster database development and ongoing maintenance are provided in an organized and timely manner for use by the Watermaster. |
| **I. 2. b. 2. Establish Data Types, Formats** | The MPWMD and RBF teams will closely coordinate to establish mutually acceptable data types and formats, which will provide the optimal benefit to the Watermaster for its recordkeeping and reporting purposes. |
| **I. 2. c. Develop Data Archiving Procedures** | Identify procedures for archiving collected field and electronic data. |
| **I. 2. d. Develop Data QA/QC Procedures** | Identify procedures for routine Quality Assurance/Quality Control of data collection program. |
| **I. 2. g. Enhanced Monitoring Well Network Evaluation** | Evaluate existing inactive production wells for possible inclusion with the existing and new monitoring well network. This will include the following subtasks: |
| **I. 2. g. 2 Key Laguna Seca Subbasin Locations** | Existing and potential new monitor well locations at identified key locations within and near the Laguna Seca Subarea of the basin will be evaluated through consultation with the MPWMD team, report and file research, contacts with existing Watermaster member entities, and field inspections. |
| **I. 2. g. 3 Key Southern Coastal Subbasin Locations** | Existing and potential new monitor well locations at identified key locations within and near the Southern Coastal Subarea of the basin will be evaluated through consultation with the MPWMD team, report and file research, contacts with existing Watermaster member entities, and field inspections. |
| **I. 2. g. 4** | Upon completion of the research and evaluation efforts, a summary technical |

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|---|---|
| **Summary Technical Memorandum with Recommendations** | memorandum with recommendations will be prepared and distributed for review and input by all Watermaster member entities. |
| **I. 2. h. Laguna Seca Water Quality Investigation** | As an additional component to the enhanced monitor well network evaluation, all available historical groundwater quality data sources in and near the Laguna Seca Subarea will be located in coordination with the MPWMD team, in order to evaluate and provide recommendations on enhancement of water quality monitoring that will facilitate future updated groundwater resources assessment of the Laguna Seca Subarea. |
| **I. 3 Basin Management** | |
| **I. 3. a. Supplemental Water Supplies** | Brief review of supplemental water supplies will be conducted as warranted throughout the initial phase of the program. The effort devoted to this task is anticipated to increase once the consolidated database is developed and existing data is analyzed. |
| **I. 4 Seawater Intrusion Contingency Plan** | Thorough, systematic, and appropriate analyses of groundwater data will allow us to identify, track, and mitigate seawater intrusion in the Basin. Seawater intrusion is a slow process, which can be impacted by ground water pumping that impacts ground water levels, and, in turn, affects ground water quality general mineral concentrations. Analyses that help identify seawater intrusion include: graphs of ground water levels, pumping and water quality trends; and maps representing these data using differentiated symbology. The final step is to evaluate the relationship that the pumping and water levels have on water quality.<br>❑ Time series of chloride concentrations. Chloride concentrations are the most dependable and recognizable indicator of seawater intrusion. Time series graphs from a single well can show steady increases in chloride concentration that indicate seawater intrusion. Unfortunately, by the time a definitive chloride trend is established, wells may be too impacted by seawater to produce potable water.<br>❑ Time series of ionic ratios. Typically, the molar ratio of sodium to chloride will often drop to near or below 0.85 in front of an advancing seawater wedge. Similarly, the molar ratio of calcium to sodium will rise in front of an advancing seawater wedge. These trends are due to the ionic exchange of sodium and calcium.<br>❑ Trilinear plots. Plotting major anions and cations on trilinear plots can show if water quality data from a single well is migrating towards seawater quality. Water quality plotted on does not migrate along a simple mixing line on trilinear plots if intrusion is due to an advancing seawater front. Data from Salinas Valley, however, suggests that water quality often does plot along a simple mixing line if intrusion is due to flow through abandoned or non-operating wells. This can help identify the intrusion mechanism in various places.<br>❑ Time series of Stiff diagrams. Plotting major anions and cations on |

stiff diagrams allows qualitative indication of seawater intrusion. Stiff diagrams are identified by their general shapes, each water type having a unique shape. A change in the shape of stiff diagrams may indicate seawater intrusion.

- Time series of Chloride concentration maps. Maps of chloride concentrations show the movement of a seawater intrusion front into a basin. Individual maps must be produced for each aquifer. Of importance is that all maps be developed with a consistent approach, ensuring that changes in the maps represent changes in data, not changes in contouring algorithms. The RFP suggested an approach to producing chloride concentration maps with ESRI products.

For purposes of the Seawater Intrusion Contingency Program, until additional empirical data are developed and analyzed, the Seaside groundwater basin aquifers will be defined as seawater intruded when the chloride concentration in a coastal monitor well reaches approximately 100 mg/l and 250 mg/l for the Paso Robles and Santa Margarita aquifers, respectively. For a coastal production well, the standard will be 250 mg/l, given that some wells contain multiple aquifer formations that reflects a blend of these sources. These standards will be utilized until more comprehensive standards based on historical water quality data at individual monitor and production wells can be developed. The Watermaster will institute interim standards for notice of potential seawater intrusion so that appropriate preventive actions may be taken. Interim notice will be defined as 50 percent increase above ambient chloride concentrations for any specific monitoring well location.

In addition to establishing baseline chloride concentrations and monitoring chloride concentrations, other complimentary water quality parameters will be established and monitored to provide supplemental data for water quality trend analysis and characterization. It will be important to coordinate with the Watermaster and the manager of the Seaside Basin Groundwater Resource Database in order to ensure that the appropriate water quality parameters are established to serve the purpose of the Seawater Intrusion Contingency Program. In addition, data formats and data transfer procedures will need to be coordinated with the Watermaster and resource database manager.

**I. 4. a.**
**Oversight of Seawater Intrusion Detection and Tracking**

MCWRA will provide general oversight over the Seawater Intrusion detection program.

**I. 4. b.**
**Develop Seawater Intrusion Analysis Protocol**

The RBF team will coordinate with MCWRA to adapt the existing seawater intrusion analysis protocol utilized in the Salinas Valley Groundwater Basin for use in the Seaside Groundwater Basin.

**I. 4. c.**
**Prepare Baseline Water Level Contour Mapping**

Under general direction and guidance from MCWRA, up-to-date baseline water level contour mapping will be prepared utilizing all available water level data from existing production and monitor wells, and proposed new dedicated coastal sentinel monitor wells.

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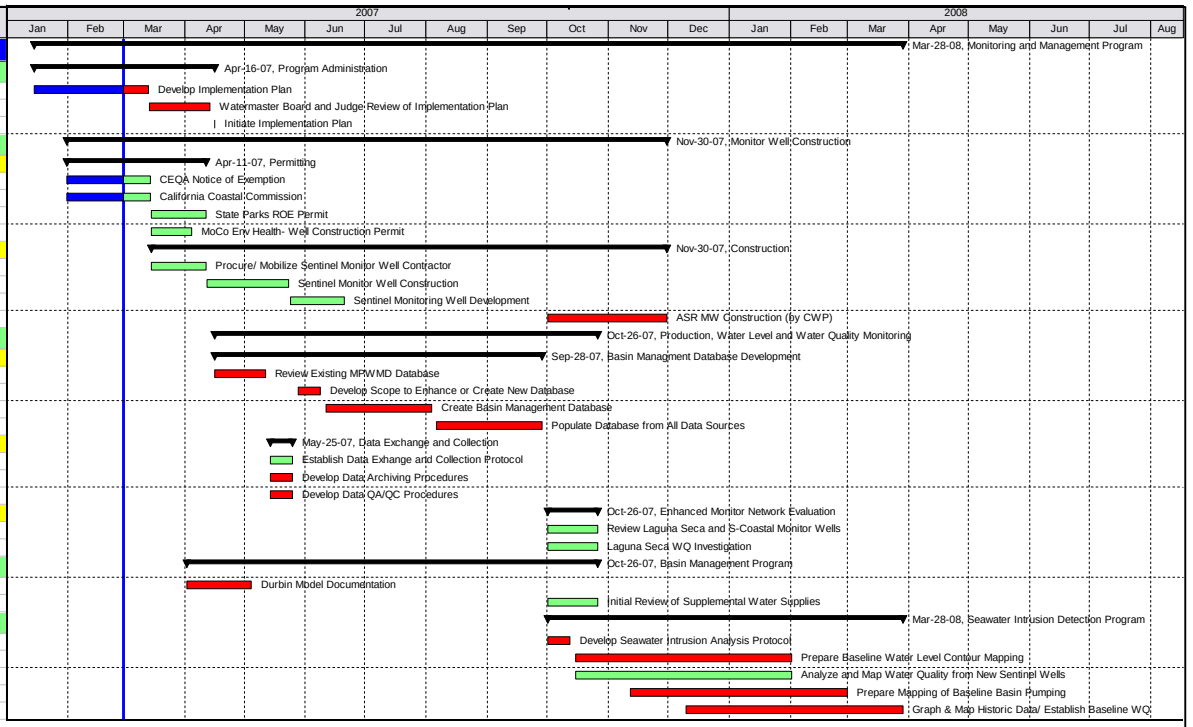
|---|---|
| **I. 4. d.**<br>**Prepare Mapped Representation of Baseline Basin Pumping** | Under general direction and guidance from MCWRA, mapped representation of recent (i.e., baseline) groundwater production will be prepared utilizing symbology adapted from the Salinas Valley Groundwater Basin. |
| **I. 4. e.**<br>**Graph and Map Historical Data/Establish Baseline Water Quality** | Analyzing historical water quality data serves two purposes: 1) It establishes baseline water quality; and 2) It identifies historical water quality trends. We will rely on wells that are completed over short lengths, and in discrete aquifers to determine background water quality for various aquifers; wells completed over many aquifers may show a hybrid water quality signature. As discussed in the approach section, water quality trends are often difficult to discern with only on type of analysis, so we will use many approaches to identify water quality trends. We will produce chloride time series graphs, ionic ratio time series graphs, stiff diagrams, trilinear plots (with standard seawater identified), and chloride contour maps for the time periods identified in Task 5.2. Arcview GIS 3.3 will be utilized to generate chloride contour maps per the procedures outlined in the RFP. A preliminary analysis of the graphs and maps will be conducted to establish baseline water quality and identify trends. In particular, we will compare water quality trends with water levels, pumping data, and recharge data to interpret both the aerial and vertical distribution of seawater intrusion. The graphs, maps, and analyses will be submitted for review by the entire Watermaster Board. Modifications to these graphs and maps will be incorporated based on input from Board members. |
| **I. 4. f.**<br>**Analyze and Map Water Quality from Coastal Monitoring Wells** | Immediately after the coastal monitoring wells are installed and sampled, we will update our data analyses with the data from these wells. New chloride concentration maps will be produced incorporating the data from the coastal wells. Because these new maps are the first maps with all data points included, they will serve as the baseline for future comparison. Insufficient water quality data from the new coastal wells precludes developing time series graphs, however the water quality data will be compared to water quality from similar, nearby wells to identify potential seawater intrusion. |
| **I. 4. g.**<br>**Annual Report- Seawater Intrusion Analysis** | At the end of each water year, all water quality data will be re-analyzed. Semi-annual chloride concentration maps will be produced for each aquifer in the basin. Time series graphs, trilinear graphs, and stiff diagram comparisons will be updated with new data. The annual EM logs will be analyzed to identify changes in seawater wedge locations. All analyses will be incorporated into an annual report that follows the format of the initial, historical data report. Potential seawater intrusion will be highlighted in the report, and if necessary, recommendations will be included. The annual report will be submitted for review to the Technical Advisory Committee (TAC) and then to the entire Watermaster Board. Modifications to the report will be incorporated based on input, first from the TAC, then from Board members.<br><br>After the first annual report, analysis and reporting can be transferred to Watermaster Board or be extended, depending on the needs of the Watermaster Board and subject to additional contract negotiations. |

| Activity ID | Activity Name | OD | RD | Start | Finish |
|---|---|---|---|---|---|
| **Monitoring and Management Program** | | 303 | 282 | Jan-15-07 A | Mar-28-08 |
| **Program Administration** | | 32 | 32 | Jan-15-07 A | Apr-16-07 |
| WM000210 | Develop Implementation Plan | 1 | 9 | Jan-15-07 A | Mar-13-07 |
| WM000230 | Watermaster Board and Judge Review of Implementation Plan | 23 | 23 | Mar-14-07* | Apr-13-07 |
| WM000240 | Initiate Implementation Plan | 0 | 0 | Apr-16-07 | Apr-16-07 |
| **Monitor Well Construction** | | 218 | 197 | Jan-31-07 A | Nov-30-07 |
| **Permitting** | | 51 | 30 | Jan-31-07 A | Apr-11-07 |
| P1000040 | CEQA Notice of Exemption | 35 | 10 | Jan-31-07 A | Mar-14-07 |
| P1000050 | California Coastal Commission | 35 | 10 | Jan-31-07 A | Mar-14-07 |
| P1000030 | State Parks ROE Permit | 20 | 20 | Mar-15-07 | Apr-11-07 |
| P1000140 | MoCo Env Health- Well Construction Permit | 15 | 15 | Mar-15-07 | Apr-04-07 |
| **Construction** | | 187 | 187 | Mar-15-07 | Nov-30-07 |
| WM000250 | Procure/ Mobilize Sentinel Monitor Well Contractor | 20 | 20 | Mar-15-07 | Apr-11-07 |
| WM000220 | Sentinel Monitor Well Construction | 30 | 30 | Apr-12-07 | May-23-07 |
| WM000221 | Sentinel Monitoring Well Development | 20 | 20 | May-24-07 | Jun-20-07 |
| WM000222 | ASR MW Construction (by CWP) | 45 | 45 | Oct-01-07* | Nov-30-07 |
| **Production, Water Level and Water Quality Monitoring** | | 140 | 140 | Apr-16-07 | Oct-26-07 |
| **Basin Managment Database Development** | | 120 | 120 | Apr-16-07 | Sep-28-07 |
| WM000010 | Review Existing MPWMD Database | 20 | 20 | Apr-16-07 | May-11-07 |
| WM000030 | Develop Scope to Enhance or Create New Database | 10 | 10 | May-28-07 | Jun-08-07 |
| WM000040 | Create Basin Management Database | 40 | 40 | Jun-11-07 | Aug-03-07 |
| WM000050 | Populate Database from All Data Sources | 40 | 40 | Aug-06-07 | Sep-28-07 |
| **Data Exchange and Collection** | | 10 | 10 | May-14-07 | May-25-07 |
| WM000070 | Establish Data Exhange and Collection Protocol | 10 | 10 | May-14-07 | May-25-07 |
| WM000090 | Develop Data Archiving Procedures | 10 | 10 | May-14-07 | May-25-07 |
| WM000100 | Develop Data QA/QC Procedures | 10 | 10 | May-14-07 | May-25-07 |
| **Enhanced Monitor Network Evaluation** | | 20 | 20 | Oct-01-07 | Oct-26-07 |
| WM000130 | Review Laguna Seca and S-Coastal Monitor Wells | 20 | 20 | Oct-01-07 | Oct-26-07 |
| WM000140 | Laguna Seca WQ Investigation | 20 | 20 | Oct-01-07 | Oct-26-07 |
| **Basin Management Program** | | 150 | 150 | Apr-02-07 | Oct-26-07 |
| WM000340 | Durbin Model Documentation | 25 | 25 | Apr-02-07* | May-04-07 |
| WM000150 | Initial Review of Supplemental Water Supplies | 20 | 20 | Oct-01-07 | Oct-26-07 |
| **Seawater Intrusion Detection Program** | | 130 | 130 | Oct-01-07 | Mar-28-08 |
| WM000170 | Develop Seawater Intrusion Analysis Protocol | 10 | 10 | Oct-01-07 | Oct-12-07 |
| WM000180 | Prepare Baseline Water Level Contour Mapping | 80 | 80 | Oct-15-07 | Feb-01-08 |
| WM000260 | Analyze and Map Water Quality from New Sentinel Wells | 80 | 80 | Oct-15-07 | Feb-01-08 |
| WM000190 | Prepare Mapping of Baseline Basin Pumping | 80 | 80 | Nov-12-07 | Feb-29-08 |
| WM000200 | Graph & Map Historic Data/ Establish Baseline WQ | 80 | 80 | Dec-10-07 | Mar-28-08 |




Mar-01-07 Page 1 of 1

Data Date: Mar-01-07



# Seaside Basin Monitoring & Management Program

- Actual Work
- Remaining Work
- Critical Remaining Work
- Milestone
- Summary

**DRAFT**

Phase 1
Seaside Basin Monitoring and Management Program

## ESTIMATED BUDGET SUMMARY

**MPWMD/ MCWRA and RBF Team Costs**

| Item | Cost Description | MPWMD | RBF | Total |
|---|---|---|---|---|
| | | | | |
| **Labor Costs*** | | | | |
| M.1 Program Administration | | $ 27,720 | $ 80,900 | $108,620 |
| I.1 Monitor Well Construction | | $ 9,504 | $ 14,471 | $23,975 |
| I.2 Production, Water Level and Quality Monitoring | | $ 21,280 | $ 144,600 | $165,880 |
| I.3 Basin Management | | $ 3,280 | $ 6,300 | $9,580 |
| I.4 Seawater Intrusion Contingency Plan | | $ 23,712 | $ 88,800 | $112,512 |
| | *Subtotal* | *$ 85,496* | *$ 335,071* | $420,567 |
| **Direct Costs** | | | | |
| Durbin Model Documentation | | | | $40,000 |
| Database Server Purchase | | | | $4,200 |
| Data Archiving Software Purchase | | | | $3,600 |
| Reproduction, Mileage and Miscellaneous | | | | $15,000 |
| | *Subtotal* | | | *$62,800* |
| | | | | |
| | | | | |
| **TOTAL** | | | | **$483,367** |

March 1, 2007

## Seaside Basin Monitoring and Management Program
## Proposed Scope and Labor Budget

| Task Description | | Labor Budget | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | MPWMD/ MCWRA | | | RBF | | | | ASR Systems/ Pueblo Water Resources | | | | | | | | | Hydrometrics | | | | | |
| Task No. | | Hours | Rate | Subtotal | Project Manager $220 | Project Engineer $160 | Designer $120 | Subtotal per Task | Eng 7 $187 | Eng 6 $181 | HG 5 $155 | HG 4 $143 | HG 3 $114 | CAD $70 | Tech $58 | Office Support $58 | Subtotal per Task | HG $141 | Staff $110 | Subtotal per Task | RBF Team Subtotal | Task Total |
| **M. 1** | **Program Administration** | | | | | | | | | | | | | | | | | | | | | | |
| M. 1. a. | Program Management Plan | 24 | $ 99 | $ 2,376 | | | | $ - | | | | | | | | | | | | | $ - | $ 2,376 |
| M. 1. b. | Project Budgets and Controls | 48 | $ 99 | $ 4,752 | 24 | 64 | | $ 15,500 | | | | | | | | | | | | | $ 15,500 | $ 20,252 |
| M. 1. c. | Assist with Board and TAC Agendas | 48 | $ 99 | $ 4,752 | | | | $ - | | | | | | | | | | | | | $ - | $ 4,752 |
| M. 1. d. | Preparation and Attendance of Meetings | 60 | $ 99 | $ 5,940 | 40 | 64 | 80 | $ 28,700 | | | | | | | | | | | | | $ 28,700 | $ 34,640 |
| M. 1. e. | Prepare Board/ TAC Status Updates and Reports | 12 | $ 99 | $ 1,188 | 40 | 64 | 80 | $ 28,700 | | | | | | | | | | | | | $ 28,700 | $ 29,888 |
| M. 1. f. | Peer Review of Documents and Reports | 72 | $ 99 | $ 7,128 | 16 | 28 | | $ 8,000 | | | | | | | | | | | | | $ 8,000 | $ 15,128 |
| M. 1. g. | QA/QC | 16 | $ 99 | $ 1,584 | | | | $ - | | | | | | | | | | | | | $ - | $ 1,584 |
| | | | | $ 27,720 | | | | $ 80,900 | | | | | | | | | $ - | | | | $ 80,900 | $ 108,620 |
| **I. 1.** | **Monitor Well Construction** | | | | | | | | | | | | | | | | | | | | | | |
| I. 1. a. | Coordination with Monitor Well Implementation Program | 96 | $ 99 | $ 9,504 | 16 | 24 | | $ 7,360 | 16 | 16 | 8 | | | | | | $7,111 | | | | $ 14,471 | $ 23,975 |
| | | | | $ 9,504 | | | | $ 7,360 | | | | | | | | | $7,111 | | | | $ 14,471 | $ 23,975 |
| **I. 2.** | **Production, Water Level and Quality Monitoring** | | | | | | | | | | | | | | | | | | | | | | |
| I. 2. a. | Basin Management Database Development | | | | | | | $ - | | | | | | | | | | | | | $ - | |
| I. 2. a. 1. | Coordination with Watermaster to Review Database | 16 | $ 99 | $ 1,584 | 30 | 64 | 96 | $ 28,400 | | | | | | | | | | | | | $ 28,400 | $ 29,984 |
| I. 2. a. 1. 1 | Review of MPWMD Database to Catalog Historical Data | | | $ - | | | | $ - | | | | | | | | | | | | | $ - | |
| I. 2. a. 1. 2 | Review of MPWMD Database to Catalog Ongoing Data Collection | | | $ - | | | | $ - | | | | | | | | | | | | | $ - | |
| I. 2. a. 2. | Develop Scope to Enhance or Develop New Database | | | $ - | 8 | 20 | | $ 5,000 | | | | | | | | | | | | | $ 5,000 | $ 5,000 |
| I. 2. a. 3. | Create Basin Management Database | 40 | $ 67 | $ 2,680 | | 40 | 120 | $ 20,800 | | | | | | | | | | | | | $ 20,800 | $ 23,480 |
| I. 2. a. 4. | Populate Database with Data from all sources | | | $ - | | 40 | 120 | $ 20,800 | | | | | | | | | | | | | $ 20,800 | $ 20,800 |
| I. 2. a. 5. | Conduct ongoing data entry/ database maintanance | 32 | $ 69 | $ 2,208 | | 12 | 72 | $ 10,600 | | | | | | | | | | | | | $ 10,600 | $ 12,808 |
| I. 2. b. | Data Exchange and Collection | | | | | | | $ - | | | | | | | | | | | | | $ - | |
| I. 2. b. 1. | Establish Agreements and Schedule | 12 | $ 94 | $ 1,128 | 8 | 36 | | $ 7,500 | | | | | | | | | | | | | $ 7,500 | $ 8,628 |
| I. 2. b. 2. | Establish Data Types, Formats | 60 | $ 94 | $ 5,640 | 8 | 36 | | $ 7,500 | | | | | | | | | | | | | $ 7,500 | $ 13,140 |
| I. 2. c. | Develop Data Archiving Procedures | 60 | $ 94 | $ 5,640 | 8 | 48 | | $ 9,400 | | | | | | | | | | | | | $ 9,400 | $ 15,040 |
| I. 2. d. | Develop Data QA/QC Procedures | 24 | $ 67 | $ 1,608 | 8 | 64 | | $ 12,000 | | | | | | | | | | | | | $ 12,000 | $ 13,608 |
| I. 2. e. | Enhanced Monitor Network Evaluation | 8 | $ 99 | $ 792 | | | | $ - | | | | | | | | | | | | | $ - | $ 792 |
| I. 2. e. 1. | Key Laguna Seca Subbasin Locations | | | $ - | | | | $ - | 4 | 4 | 8 | 16 | | | | | $5,000 | | | | $ 5,000 | $ 5,000 |
| I. 2. e. 2. | Key S-Coastal Subbasin Locations | | | $ - | | | | $ - | 4 | 4 | 8 | 16 | | | | | $5,000 | | | | $ 5,000 | $ 5,000 |
| I. 2. e. 3. | Summary Technical Memorandum with Recommendations | | | $ - | | | | $ - | 4 | 4 | 12 | 16 | | | 4 | 10 | $6,400 | | | | $ 6,400 | $ 6,400 |
| I. 2. f. | Laguna Seca Water Quality Investigation | | | $ - | | | | $ - | 8 | 4 | 8 | 12 | | | 8 | 10 | $6,200 | | | | $ 6,200 | $ 6,200 |
| | | | | $ 21,280 | | | | $ 122,000 | | | | | | | | | $ 22,600 | | | | $ 144,600 | $ 165,880 |
| **I. 3** | **Basin Management** | | | | | | | | | | | | | | | | | | | | | | |
| I. 3. a. | Supplemental Water Supplies | 40 | $ 82 | $ 3,280 | 4 | 16 | 24 | $ 6,300 | | | | | | | | | | | | | $ 6,300 | $ 9,580 |
| | | | | $ 3,280 | | | | $ 6,300 | | | | | | | | | $ - | | | | $ 6,300 | $ 9,580 |
| **I. 4.** | **Seawater Intrusion Contingency Plan** | | | | | | | | | | | | | | | | | | | | | | |
| I. 4. a. | Oversight of Seawater Intrusion Detection and Tracking | 32 | $ 114 | $ 3,648 | | | | $ - | | | | | | | | | | | | | $ - | $ 3,648 |
| I. 4. b. | Develop Seawater Intrusion Analysis Protocol | 32 | $ 114 | $ 3,648 | | | | $ - | | | | | | | | | | 40 | 12 | $7,000 | $ 7,000 | $ 10,648 |
| I. 4. c. | Prepare Baseline Water Level Contour Mapping | 16 | $ 114 | $ 1,824 | 4 | 12 | 20 | $ 5,200 | | | | | | | | | | 24 | 48 | $8,700 | $ 13,900 | $ 15,724 |
| I. 4. d. | Prepare Mapped Representation of Baseline Basin Pumping | 16 | $ 114 | $ 1,824 | 4 | 12 | 20 | $ 5,200 | | | | | | | | | | 24 | 48 | $8,700 | $ 13,900 | $ 15,724 |
| I. 4. e. | Graph and Map Historical Data/Establish Baseline Water Quality | 32 | $ 114 | $ 3,648 | 4 | 12 | 40 | $ 7,600 | | | | | | | | | | 32 | 64 | $11,600 | $ 19,200 | $ 22,848 |
| I. 4. f. | Analyze and Map Water Quality from Coastal Monitoring Wells | 16 | $ 114 | $ 1,824 | 4 | 12 | 40 | $ 7,600 | | | | | | | | | | 16 | 32 | $5,800 | $13,400 | $ 15,224 |
| I. 4. g. | Annual Report- Seawater Intrusion Analysis | 64 | $ 114 | $ 7,296 | 4 | 20 | 24 | $ 7,000 | | | | | | | | | | 40 | 80 | $14,400 | $ 21,400 | $ 28,696 |
| | | | | $ 23,712 | | | | $ 32,600 | | | | | | | | | | | | $56,200 | $ 88,800 | $ 112,512 |
| | | | | $ 85,496 | | | | $ 249,160 | | | | | | | | | $29,711 | | | $56,200 | $ 335,071 | $ 420,567 |

**Notes** x- indicates work performed by
**M** indicates Management
**I** indicates Implementation

# Appendix B

## Phase 2 Management and Monitoring Plan

## Scope of Work, Schedule and Budget

To be inserted on 3/5/07

# Appendix C

# Scope of Work for the CWP ASR Program

The scope is organized into six primary tasks:

- Task 1. Existing Data Review
- Task 2. Installing an ASR Test Well and Monitoring Wells
- Task 3. Installing ASR Wells
- Task 4. Equipping ASR Wells
- Task 5. Project Management and Agency Coordination
- Task 6. Optional Task, CVSIM hydrologic modeling

Each of these tasks and their associated subtasks is discussed in detail below. A summary of deliverables and a project schedule, showing the duration of each task, is presented in Section 3 – Deliverables and Schedule.

## Task 1. Existing Data Review

Considerable data and analyses have been produced since the CWP PEA was submitted to the CPUC. We will review recently developed data for consistency with the current conceptual model presented in the PEA, and review recent models and water budget analyses. Additionally, we will incorporate new data developed during the current study into our conceptual model of the basin. With this new information, we will determine if the existing basin conceptual model properly depicts the behavior of the basin. Any significant deviations should be investigated and added to the goals of the test and monitoring well program. Locations for the test and monitoring wells will be recommended with supporting documentation.

**Task 1.1 Compilation and Review of Existing Data:** The ASR Systems Team was instrumental in producing the PEA, and is already familiar with the data supporting the PEA. Recent groundwater level data, groundwater production and specific capacity data, recharge injection flow and level data, and water quality data will be compiled and reviewed and compared to the data in the PEA. Water level trends in response to recharge operations at the Santa Margarita Injection Test Well will be evaluated. In particular, we will review recent well and aquifer hydraulic data developed from the MPWMD's Santa Margarita Injection Test Well (SMITW).

**Task 1.2 Hydrologic Model Comparison:** The conceptual model used in the PEA will be compared to the historic hydraulic modeling efforts to identify any significant deviations from the expected hydraulic response. We will review both historic modeling efforts as well as analyses produced for the recent adjudication. Reports prepared for the adjudication include the water budget report by Yates (2005), and the groundwater model presented by Durbin (2005). These will be compared to the previous water budget prepared by CH2M Hill, and the groundwater model prepared by CDM, as well as the analytical model results included in the PEA and Monterey Peninsula Water Management District's (MPWMD) Phase 1 ASR Project EIR/EA. If significant discrepancies between the current

conceptual model and the previous studies are discovered, then data gaps will be identified and a data collection program will be recommended to achieve an adequate understanding of the basin's hydraulic response to ASR.

**Task 1.3 Site Investigation and Recommendations:** After substantiating our conceptual model of the Seaside basin, the ASR Systems Team will reevaluate the storage volume potentially available for ASR operations within the Seaside Basin and will confirm the viability of ASR technology to store and recover adequate amounts of water. The team will evaluate the best possible locations for the test and monitoring wells to support the ASR testing program and long-term operation. With recent roadway widening along the west side of General Jim Moore Boulevard, the construction easements for well sites identified in the PEA have been reduced. Creative site management and agency coordination will be necessary to construct the facilities within the narrow easements that will be available within the wellfield alignment.

Task 1 will be conducted jointly by ASR Systems and Padre Associates during the first three months, as shown in Table 3 and also on the Project Schedule presented on p. 14 of the Technical Proposal. Total budget is shown in Table 2 at the end of this revised Scope of Work.

Deliverable: Technical Memorandum for Tasks 1.1 to 1.3

Schedule: Completion by Month 3

## Task 2. Install an ASR Test Well and Monitoring Wells

The test well program has a number of goals including:

- Defining the lateral extent of the Santa Margarita Sandstone to the north of the existing SMITW;
- Defining the thickness of the Santa Margarita formation;
- Substantiating the hydraulic response of the formation to recharge throughout the proposed wellfield area.

Additional analyses of borehole cores and laboratory water testing will be employed to evaluate the chemical compatibility of recharge. This test program should provide the data to re-evaluate the viability of recharge in the Seaside Basin, and if supportive, define the most suitable location and spacing for the planned ASR wellfield within the right-of-way identified in the PEA.

**Task 2.1 Design Wells and Produce Well Construction Contract:** The ASR Systems Team will assemble the technical specifications and drawings for inclusion into two CAW contract documents, one for coring and one for well construction. The well construction technical specifications will cover both the ASR Test Well and the monitoring wells. The technical specifications are intended to provide adequate detail for bidding and well construction by competent, licensed (C-57) well drilling contractors and coring contractors, prequalified by the ASR Systems Team. The contract documents will place special emphasis on timely initiation and completion of the work. The specifications will require the use of two different drilling rig systems. One rig will be used to provide core samples. A second rig will work simultaneously, installing the larger diameter test well and the 6" monitor wells. All three wells must be completed prior to performing aquifer tests. The wells will be constructed in accordance with the PEA conceptual design.

The test well will be designed with sufficient diameter so that at a later date it may be permitted and equipped for ASR permanent operations. The ASR Systems team will assist CAW to obtain authorization from the City of Seaside to construct and test these wells. Well design and construction will be conducted on a fast-track basis.

**Task 2.2 Agency Support:** The ASR Systems Team will support CAW and the contract bidding process by obtaining competitive bids from up to three prequalified well drilling and coring contractors, providing a proposed engineers estimate, attending bid related meetings, and preparing any necessary addenda. We will assist in selection of the qualified well drilling and coring contractor(s), considering cost and ability to meet the CAW schedule. The team will be available to answer questions related to the technical components of the proposed work, assist to identify permits required, and assist the CAW in obtaining the permits for construction of the test and monitoring well facilities. In particular, we will work with CAW to obtain the necessary discharge permits from the Regional Water Quality Control Board. Obtaining well drilling permits from the Monterey County Health Department will be included in the technical specifications discussed above. The selected contractors will work under an agreement directly with CAW.

Upon CAW securing well site property and access, the team land surveyor will mark the permanent and temporary easements for construction.

**Task 2.3 Install Monitoring Wells:** The ASR Systems Team will coordinate the field activities of well construction with local agencies, entities, and residents, and ensure the contractor is meeting their obligation to protect the public. The team will observe the day-to-day activities of the contractor and provide resident geologic observation at appropriate times. The team will ensure the timely and accurate collection of core and water quality samples to complement laboratory testing, health district and NPDES permitting.

Geophysical logs and continuous wire-line cores will be obtained from confining layers and intervals tentatively selected for ASR storage, including the Paso Robles Formation and Santa Margarita Formation, in one of the monitoring wells only. Further discussion with CAW of the advantages and disadvantages of obtaining and analyzing cores is planned since they represent a significant project cost. Current data from the SMITW suggests that the Santa Margarita Formation is geochemically inert to treated drinking water obtained from the Carmel River wells. Selected core samples will be analyzed for mineralogical content and reactivity to the proposed recharge water sources and storage zone ambient groundwater. Full time resident observation will be provided during coring operations.

**Task 2.4 Install Test Well:** Rigorous adherence to the well drilling specifications will be critical to successfully completing a highly efficient well. Drilling of the test well will require specialized drilling programs to provide a high efficiency recharge well for accurate testing. This will include the use of flooded reverse circulation drilling methods, supported by ultra-light custom blended drilling fluids. Personnel for this task will include only experienced well construction inspectors who are familiar with mud rotary drilling techniques and fluid testing procedures. The ASR Systems Team will provide resident observation and construction services with a qualified professional geologist or engineer, analyze the borehole data, and design the well.

Geophysical logs will be obtained from all wells. Alignment surveys will be required for the test well as part of the drilling contractor's services.

**Task 2.5 Hydraulic Testing and Analysis:** The testing program goal is to define the baseline recharge and pumping performance trends, external aquifer boundary conditions, localized wellbore

mounding, and clogging rate. Obtaining this information at the north end of the ASR wellfield area, as proposed in the PEA, will complement data already obtained from the Santa Margarita Test Injection Well at the south end, providing a firm basis for wellfield design. The program will include step and continuous production rate tests to help define the transmissivity, storage coefficient, and leakance of the target formation. The recharge tests will include a step injection and 24-hour continuous recharge test to define the wellbore hydraulic communication area and the mound growth slope. Extended operation, or cycle, testing is not included as part of this task since these tests are normally completed with the actual source water and delivery system.

The ASR Team will direct the testing program and contractor activities; collect and analyze the appropriate data; and report on the aquifer response and proposed design well yields. This Well Construction Report will summarize the well construction, lithology, testing, and laboratory results from the wells. The team will obtain baseline drinking water quality samples during the long term pumping test for health district permits.

**Task 2.6 Preliminary ASR Well and Wellhead Design Report:** Coordination and common understanding will be vital in the success of this fast-tracked program. To ensure the ASR Systems Team and CAW are in alignment, a preliminary ASR well and wellhead design report for up to three ASR well sites will be prepared, including the operations and control strategy. This will provide a process to achieve general concurrence of details such as proposed drilling methods, well construction materials, development methods, wellhead piping, controls, disinfection systems, pump to waste facilities, related improvements, and site layout. The report will include 25% design level drawings for CAW review, permit application support, and requesting power grid diversions.

**Task 2.7 Preliminary Pump to Waste Facilities Design Report:** ASR wells will need to be back-flushed every few days to every few months to maintain performance. Permanent, permittable facilities will be required to accept and properly dispose of the back-flushed water. Common back-flush facilities will reduce the property requirements but will also require interconnection of the well sites with backflush water piping. The impoundment volume requirements to support ASR operations will be evaluated and a matrix of options (ie: pretreatment, dispersed and centralized seepage pits, pipeline and operational requirements, etc.) will be developed displaying the advantages and disadvantages of each approach. The ASR Systems Team will recommend a primary approach and develop the conceptual criteria for the pump to waste facility option, which will be incorporated into the Task 2.6 preliminary design report.

*Deliverables:* *Coring specifications*

*Test and monitor well design specifications*

*Engineer's cost estimate for test and monitor well construction*

*Any addenda to the specifications*

*Well Construction Report*

*Preliminary Pump-To-Waste Facilities Design Report*

*Preliminary Well and Wellhead Design Report for up to three ASR wells*

*Schedule:* *Completion by Month 10, assuming that site acquisition and permits do not hinder progress*

## Task 3. Design and Install ASR Wells

Contingent upon review and approval of the 25% design package, CAW will make the final determination to proceed with the development of an ASR wellfield. Up to three ASR wells may be installed along the proposed wellfield alignment. The wells will be constructed in accordance with the PEA, modified by data obtained from the test well program. Specialized recharge well developments methods will be used employing large volume back-flushes. These methods have been developed by Tom Morris/ASR Systems and have been applied exclusively with great success on ASR Systems projects, achieving high recharge and recovery rates and recovery efficiencies. The progress and completion of well development will be tracked by injection performance changes and stabilization.

**Task 3.1 Design ASR Wells and Produce Well Construction Contract:** The ASR Systems Team will assemble the technical specifications and drawings for the installation of up to three full scale ASR wells for inclusion into a CAW contract document. Performance testing data from each well will be utilized immediately in the well equipping contract to finalize the pump bowl and motor control equipment specifications.

**Task 3.2 Agency Support:** The ASR Systems Team will support CAW and the contract bidding process by proving an engineer's cost estimate, attending bid related public meetings, and preparing any necessary addenda. We will assist in selection of the qualified well drilling contractor(s). The team will be available to answer questions related to the technical components of the proposed work, assist to identify permits required, and assist the CAW in obtaining the permits for construction of the ASR well facilities. Upon CAW securing the well site properties and access, the ASR System's Team land surveyor will mark the permanent and temporary easements for construction.

**Task 3.3 ASR Well Installation:** The ASR Systems Team will coordinate the field activities of well construction with local agencies, entities, and residents, and ensure that the contractor is meeting their obligation to protect the public. The team will observe the day to day activities of the contractor and provide resident geologic observation at appropriate times. The team will ensure the timely and accurate collection of lithologic and water quality samples and geophysical logs to complete borehole design, health district and NPDES permitting.

Rigorous adherence to the well drilling specifications will be critical to successfully completing a highly efficient well. The drilling of the ASR well will include the use of flooded reverse circulation drilling methods, supported by ultra-light custom blended drilling fluids. Personnel for this task will include only experienced well construction inspectors who are familiar with mud rotary drilling techniques and fluid testing procedures. Borehole deviation specifications and alignment surveys will ensure a quality product with an evenly distributed annular seal and a sufficient effective well diameter to support the pumping equipment. Geophysical logs and alignment surveys will be required as part of the drilling contractor's services.

**Task 3.4 Well Testing, Analysis and Reports:** Testing for each ASR well will include initial pump testing to evaluate potential yield and specific capacity; step drawdown testing to evaluate well efficiency; a long term pumping test to evaluate the aquifer performance characteristics, including transmissivity, storativity and leakance; a step-recharge test to provide a baseline injection hydraulic response curve; and a 24 hour continuous injection test to determine the mounding rate and clogging potential. Baseline drinking water quality samples will be obtained during the long term pumping tests for each well, for inclusion in health district permits. The pump test data will be analyzed to estimate aquifer hydraulic characteristics and prepare distance-drawdown curves for proposed wells,

providing a basis for estimation of well interference. A Well Completion Report will be prepared incorporating the results of all construction, testing and analysis activities.

*Deliverables:* *ASR well technical specifications, draft and final*

*Engineer's cost estimate for ASR wells*

*Any addenda*

*Well Completion Report for ASR wells*

*Schedule:* *Completion by Month 19, assuming that site acquisition and permits do not hinder progress*

### Task 4. Equip ASR Wells

Design of the ASR wells sites will be carefully integrated with the hydraulic design of the CAW distribution system in this task, to ensure that adequate capacity exists to meet projected ultimate recharge and recovery flow rate requirements. The ASR Systems Team will develop the engineering specifications and provide oversight for equipping up to three ASR well sites for full ASR operation. The equipment for each well will include designs for all appurtenances and instrumentation at each well site as well as any necessary off site frontage improvements.

**Task 4.1 Design ASR Wellsites and Produce Engineering Contract Specs:** The ASR Systems Team will assemble the technical specifications and drawings for equipping up to three full scale ASR wells. The specifications will be sufficient for inclusion into a CAW contract document. The specifications will include pump, motor, electrical, mechanical, instrumentation, valves, piping, telemetry and SCADA control, disinfection building, metering and other appurtenances required to develop a functioning ASR well facility. Wellhead designs will also be prepared for the monitor wells. Frontage improvements will include gutter, curb, and lighting in alignment with the master development plan for General Jim Moore Boulevard. Drawings and specifications will be provided to CAW for 90% review and final completion (100%).

**Task 4.2 Agency Support:** The ASR Systems Team will support CAW and the contract bidding process by providing an engineer's cost estimate, attending bid related public meetings, and preparing any necessary addenda. The team will be available to answer questions related to the technical components of the proposed work, assist to identify permits required, and assist the CAW in obtaining the permits for equipping the ASR well facilities. The team will assist CAW in securing electric power commitments.

**Task 4.3 Equip ASR Wells:** Construction services will be provided to include shop drawing and pay estimate review, change order support, and construction observation. The team will ensure the many processes of an ASR facility come together and work in accordance with the specifications and manufacturers' intentions. Project team staff will be on site periodically and during specific phases of the work, such as prior to concrete pours, pressure testing, final inspection, and start-up.

**Task 4.4 Performance Testing:** All instrumentation, equipment, and controls will be thoroughly tested to ensure dependable operation. This will include operating the pumping unit for pump acceptance to develop a performance baseline and to start the warranty.

**Task 4.5 Operations and Maintenance:** A completion report will be provided in the form of Record Drawings and an Operations and Maintenance Manual identifying new system valves and the operation of each ASR well facility. A survey will be provided of the final ASR facilities, including both horizontal and vertical control. The team will assist the facility operators for the first few months of operation to ensure proper ASR practices, performance tracking, and back-flush scheduling.

*Deliverables:* *Wellhead plans and specifications, draft and final*

*Engineers cost estimate*

*Any addenda*

*Shop drawing reviews*

*Record drawings*

*Operations and Maintenance Manual*

*Site Survey*

*Schedule:* *Completion by Month 30*

## Task 5. Project Management and Agency Coordination

We will provide ongoing support to CAW during technical meetings, public meetings, and Watermaster meetings as necessary. The Seaside Basin is currently managed by a Watermaster group consisting of nine entities. Coordination and agreement among these nine entities will be important for project success. In particular, coordination and communication with the Monterey Peninsula Water Management District (MPWMD) is crucial, as they are interested in implementing a similar ASR program. Our team members have excellent working relations with the staff and management of the MPWMD, as well as most other members of the Watermaster board. In particular, Padre Associates is a member of the ASR Systems Team, has worked with MPWMD on their ASR testing program, and fully understands the technical and political issues that led to the recent adjudication.

## Task 6. Added Tasks

Additional tasks may be necessary to address certain inherent unknowns associated with the application of ASR technology. The ASR Systems Team is capable and receptive to including additional tasks as necessary to reach a higher level of success in the ASR program and to improve its ultimate potential benefit for CAW.

- Hydrologic modeling, in coordination with the MPWMD, to test alternative ASR operating strategies using a revised version of the CVSIM model, tailored for ASR. This task would better define annual storage volume availability from the Carmel River and its variation with time; cumulative storage volume requirements; recharge and recovery flow rate requirements to achieve ultimate effective application of ASR for the Seaside Basin. Completion of this task would provide a firm basis for sizing of transmission pipelines and other CWP facilities.

Task 6.1 CVSIM Hydrologic Modeling

Review previous CVSIM model reports regarding diversions from the Carmel River. Assist CAW as needed to arrange model support services from MPWMD. Meet with MPWMD to discuss changes to the model code that are needed to adequately address potential ultimate ASR operations in the Monterey area. Provide written directions to MPWMD regarding requested changes to the CVSIM model in order to evaluate proposed ASR operations. Respond to questions from MPWMD during the modeling process. Review a document to be prepared by MPWMD presenting updated model results and prepare a draft Technical Memorandum (TM) to CAW with preliminary recommendations regarding diversion, treatment, storage and pipeline capacities for conveyance of water between the Carmel Valley and the Seaside Basin, and associated ASR storage volume requirements. Upon receipt of review comments from CAW, prepare a final TM.

Deliverable: CVSIM Technical Memorandum

Schedule: Completion by Month 6, assuming MPWMD can complete modeling and issue a report within 3 months of receipt of input data.

# Appendix D

# CWP ASR Task 1 Technical Memorandum – Existing Data Review

# Appendix E

# Phase CWP ASR Task 2 Technical Memorandum – Test Well Site Development Plan

# Appendix F

# MPWMD Phase 1 ASR Environmental Impact Report – Executive Summary and Project Description

# VIII.
# A. – F.

# NEW BUSINESS

**Seaside Basin Groundwater Account**
**Per Amended Decision, Dated February 9, 2007**

| | | | |
|---|---|---|---|
| **Initial Basin-Wide Operating Yield** | **5600** | **Coastal Operating Yield** | **4611** |
| **Natural Safe Yield (NSY)** | **3000** | **Laguna Seca Operating Yield** | **989** |

**Alternative Production Allocations**

| **Coastal Subarea** | **Acre-Feet** | **Laguna Seca Subarea** | **Acre-Feet** |
|---|---|---|---|
| Seaside (Golf) | 540 | Pasadera | 251 |
| SNG | 149 | Bishop | 320 |
| Calabrese | 14 | York School | 32 |
| Mission Memorial | 31 | Laguna Seca County Park | 41 |
| Sand City | 9 | | |
| Total | **743** | Total | **644** |

| | | | |
|---|---|---|---|
| **Available Coastal Operating Yield** | **3868** | **Available Laguna Seca Operating Yi** | **345** |

**Standard Production Allocation**

| **Coastal Subarea** | **%** | **Acre-Feet** | **Laguna Seca Subarea** | **%** | **Acre-Feet** |
|---|---|---|---|---|---|
| California American Wate | 90.6 | 3504 | California American Water | 100 | 345 |
| Seaside (Municipal) | 7.43 | 287 | | | |
| Granite Rock | 0.70 | 27 | | | |
| D.B.O. Development No. | 1.27 | 49 | | | |
| Total | 100 | 3868 | Total | 100 | 345 |

| **Cummulative Standard Production Allocation of Operating Yield** | **%** | **Acre-Feet** |
|---|---|---|
| California American Wate | 91.38 | 3850 |
| Seaside (Municipal) | 6.81 | 287 |
| Granite Rock | 0.64 | 27 |
| D.B.O. Development No. | 1.16 | 49 |
| | | 4213 |

**A.**

# Water Year 2006 Replenishment Assessment

| | | | |
|---|---|---|---|
| **Initial Basin-Wide Operating Yield** | **5600** | **Coastal Operating Yield** | |
| **Natural Safe Yield (NSY)** | **3000** | **Laguna Seca Operating Yield** | |
| **Natural Safe Yield Available to SPA** | **2022** | | |

Water Year 2006 Actual Production

| | **Actual Coastal Alternative Production** | **Acre-Feet** | **Actual Laguna Seca Alternative Production** | **A** |
|---|---|---|---|---|
| | Seaside (Golf) | 465 | Pasadera | |
| | SNG | 8 | Laguna Seca/Bishop | |
| | Calabrese | 0 | York School | |
| | Mission Memorial | 22 | Laguna Seca County Park | |
| | Sand City | 0.05 | | |
| | Total | 495.05 | Total | |
| | **Actual Coastal Standard Production** | **Acre-Feet** | **Laguna Seca Standard Production** | |
| | California American Water | 3263 | California American Water | |
| | Seaside (Municipal) | 332 | | |
| | D.B.O. Development No. 27 | 0 | | |
| | Granite Rock | 0 | | |
| | Total Coastal SP | 3595 | Total Laguna Seca SP | |

**2006 Replenishment Assessment** **$1,132.00**

| **Standard Production** | **Acre-Feet** | **Share of NSY** | **SY Overproductic** | **Assessment** | **Operating Yield Overproductio** | **Assessment** | **Total** |
|---|---|---|---|---|---|---|---|
| California American Water | 3709 | 1848 | 1861 | $2,106,652.00 | | | $2, |
| Seaside (Municipal) | 332 | 138 | 149 | $168,668.00 | 45 | $50,940.00 | $2 |
| Granite Rock | 0 | 13 | 0 | 0 | | | |
| D.B.O. Development No. 27 | 0 | 23 | 0 | 0 | | | |
| **Total Production** | **4041** | **2022** | **2010** | **$2,275,320.00** | | | **$2,** |

## Water Year 2007 Water Account

| | | | |
|---|---|---|---|
| **Initial Basin-Wide Operating Yield** | **5600** | **Coastal Operating Yield** | **461** |
| **Natural Safe Yield (NSY)** | **3000** | **Laguna Seca Operating Yield** | **989** |

**2007 Alternative Production Allocation**

| Coastal Subarea | Acre-Feet | Laguna Seca Subarea | Acre-Feet |
|---|---|---|---|
| Seaside (Golf) | 540 | Pasadera | 251 |
| SNG | 149 | Bishop | 320 |
| Calabrese | 14 | York School | 32 |
| Mission Memorial | 31 | Laguna Seca County Park | 41 |
| Sand City | 9 | | |
| Total | **743** | Total | **644** |

| | | | |
|---|---|---|---|
| **Available Coastal Operating Yield** | **3868** | **Available Laguna Seca Operating** | **345** |

**2007 Standard Production Allocation**

| Coastal Subarea | % | Acre-Feet | Carryover Storag Acre-Feet | Transfers In Acre-Feet | Transfers Out Acre-Feet | Total Ava For Produ |
|---|---|---|---|---|---|---|
| California American Water | 90.6 | 3504 | 141 | | | 364 |
| Seaside (Municipal) | 7.43 | 287 | 0 | | | 287 |
| Granite Rock | 0.70 | 27 | 27 | | | 54 |
| D.B.O. Development No. 27 | 1.27 | 49 | 49 | | | 98 |
| Total | 100 | 3868 | | | | |

| Laguna Seca Subarea | % | Acre-Feet | Carryover Storag Acre-Feet | Transfers In Acre-Feet | Transfers Out Acre-Feet | Total Ava For Produ |
|---|---|---|---|---|---|---|
| California American Water | 100 | 345 | | | | 345 |
| Total | 100 | 345 | | | | |

**Basin Replenishment Account**

| Water Year 2006 | Water Year 2007 | Water Year 2008 | Water Year 2009 | Water Year 2009 | Water Year 2010 | otal Repler |
|---|---|---|---|---|---|---|
| 411 | | | | | | **411** |

**A.**

# RULES AND REGULATIONS

# OF THE

# SEASIDE GROUNDWATER BASIN WATERMASTER

## 1.0 Introduction

The Watermaster for the Seaside Basin was created on March 27, 2006 by entry of Judgment in *California American Water v. City of Seaside, et al*. (Case No. M66343, California Superior Court, Monterey County). A copy of the Judgment is appended to these Rules and Regulations. The purpose of the Watermaster is to assist the Court in the administration and enforcement of the provisions of the Judgment. All actions of the Watermaster shall be governed by the terms of the Judgment and these Rules and Regulations. In the event of any conflict between the terms of the Judgment and these Rules and Regulations, the Judgment, together with any further or supplemental orders or directions from the Court, shall control the actions of the Watermaster.

## 2.0 Definitions

Words and phrases which are defined in the Judgment shall have the same meaning when used in these Rules and Regulations. Other terms used in these Rules and Regulations shall have the meaning ascribed to them herein.

### 2.1 Parties

"**Parties**" shall mean and refer, individually and collectively, to California American Water Company ("**CalAm**"), the Public Agency Parties and the Landowner Group Parties. "**Public Agency Party**" shall mean and refer individually to the cities of Seaside, Sand City, Del Rey Oaks and Monterey, the County of Monterey, the Monterey County Water Resources Agency and the Monterey Peninsula Water Management District. "**Landowner Party**" shall mean and refer to a Producer in the Coastal Subarea and the Laguna Seca Subarea which is not a Public Agency Party or CalAm.

## 3.0 Watermaster Board

### 3.1 Representatives and Voting

The Watermaster may only act by and through the Watermaster Board. The Watermaster Board shall consist of nine (9) members ("**Members**"). Members shall be appointed by each of the following Parties or group of Parties in accordance with the procedures set forth in section 4 of these Rules and Regulations. A vote by a Member shall cast the following number of voting positions on the question presented to the Watermaster Board.

**Deleted:** the question

| Party/Group | Votes |
|---|---|
| California American Water | 3 votes |
| City of Seaside | 2 votes |
| Monterey County Water Resources Agency | 2 votes |
| Monterey Peninsula Water Management District | 2 votes |
| City of Sand City | 1 vote |
| City of Monterey | 1 vote |
| City of Del Rey Oaks | 1 vote |
| Landowner Parties Group (Coastal Subarea) | 1/2 vote |
| Landowner Parties Group (Laguna Seca Subarea) | 1/2 vote |

3.1.1 Quorum

A minimum of six (6) Members shall be required to constitute a quorum of the Watermaster Board. No fewer than seven (7) affirmative votes shall be required for any action by the Watermaster. Any Member may request a roll call vote on any question or motion considered by the Watermaster Board, and the ayes and noes thereon shall be recorded in the minutes of the meeting.

3.2 Organization of the Watermaster Board

At the first meeting of the Watermaster Board each year, the Watermaster Board shall elect a Chairperson, and a Vice Chairperson from its Membership. The Watermaster Board shall also select a Secretary, Treasurer and such assistant secretaries and assistant treasurer as may be appropriate. The Secretary, Treasurer, or any assistant or administrator appointed by the Watermaster Board need not be a Member.

3.3 Advisory Committees

The Watermaster Board may establish such committees and subcommittees as it deems necessary to advise Watermaster Board on specific issues. Persons appointed to such committees or subcommittees need not be a Member. No more than five (5) Members or their Alternates shall sit on any individual committee or subcommittee. Each committee member shall be entitled to one (1) vote only.

3.3.1 Standing Committees

The Watermaster Board has established the following standing committees.

3.3.1.1 Technical Advisory Committee

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The purpose of the Technical Advisory Committee is to advise the Watermaster Board regarding implementation of the physical solution, and to perform such specific tasks as the Watermaster assigns to the Technical Advisory Committee from time to time.

3.3.1.2 Budget and Finance Committee

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The purpose of the Budget and Finance Committee is to advise the Watermaster Board regarding the funding of implementation of the physical solution, including operations of the Watermaster.

### 3.4 Regular Meetings

Regular meetings of the Watermaster Board shall be held on the first Wednesday of each month. The meetings will be held at Soper Field Community Center, in Seaside, California or another location set forth in the monthly meeting agenda and will begin at 1:30 p.m., unless a different time is set forth in the agenda.

### 3.5 Special Meetings

#### 3.5.1 Special Meetings Called by Watermaster Board

A special meeting of the Watermaster Board may be called by the Watermaster Board at any regular or special meeting of the Watermaster Board.

#### 3.5.2 Special Meetings Called by Chair or Members

A special meeting of the Watermaster Board may be called at any time by the Chairperson or Vice Chairperson or by any three (3) Members, by written notice delivered personally or mailed to all Parties and Interested Persons, at least twenty-four (24) hours on a business day before the time of each such meeting in the case of personal delivery, and five (5) days' notice prior to such meeting in the case of mail if the special meeting is being called under urgent circumstances. If a special meeting is called by the Chairperson, Vice Chairperson or by any three (3) Members, and no urgent circumstance exists, then at least ten (10) days' notice must be provided to all Parties. The notice shall specify the time and place of the special meeting and the business to be transacted or discussed. No other business shall be considered at these meetings by the Watermaster Board. The written notice may be dispensed with as to any Member who at or prior to the time the special meeting convenes, files with the Secretary of the Watermaster Board a written waiver of notice. The written notice may also be dispensed with as to any Member who is actually present at the meeting at the time it convenes. The notice shall be posted at least seventy-two (72) hours prior to the special meeting in the posting locations referred to in section 3.6 of these Rules and Regulations.

### 3.6 Meeting Agendas

At least 72 hours before a regular meeting of the Watermaster Board, or at least 24 hours before a special meeting of the Watermaster Board, the Secretary of the Watermaster, or its designee, shall post an agenda containing a brief general description of each item of business to be transacted or discussed at the meeting, including items to be discussed in closed session, and deliver a copy of the agenda to the Members and to Persons who have made a written request to be added to the Watermaster's list of interested Persons. A brief general description of an item generally need not exceed 20 words. The agenda shall specify the time and location of the regular or special meeting and shall be posted at the places which have been designated by the Public Agency Parties for the posting of official agendas in their respective jurisdictions. If requested,

the agenda shall be made available in appropriate alternative formats to persons with a disability, as required by Section 202 of the Americans with Disabilities Act of 1990 (42 U.S.C. Sec. 12132), and the federal rules and regulations adopted in implementation thereof. The agenda shall include information regarding how, to whom, and when a request for disability related modification or accommodation, including auxiliary aids or services may be made by a person with a disability who requires a modification or accommodation in order to participate in the public meeting.

3.7 Meeting Procedures

3.7.1 Conduct for Meetings

Meetings of the Watermaster Board shall be called to order by the Chairperson or, in his or her absence, the Vice Chairperson. Watermaster Board meetings shall be conducted in conformity with the procedures established for meetings of public agencies pursuant to the California Open Meeting Law (the "**Brown Act**"), California Government Code section 54950 et seq., as it may be amended from time to time.

3.7.2 Minutes

The Secretary shall keep accurate minutes of all meetings of the Watermaster Board which reflect all actions taken by the Watermaster. Copies thereof shall be furnished to all Members and Interested Persons. Copies of minutes shall constitute notice of any Watermaster Board action therein reported.

3.7.3 Closed Session

The Watermaster Board may convene closed session meetings in accordance with Brown Act procedures.

4.0 Members

4.1 Appointment of Members

The Public Agency Parties, groups of Landowner Parties identified in section 3.1 and CalAm have each appointed an initial Member to sit on the Watermaster Board for a two (2) year term ending at the first regular meeting of the Watermaster in January of 2008. The Public Agency Parties, groups of Landowner Parties and CalAm shall each appoint or reappoint one Member in November of every second year, beginning in November of 2007, to sit on the Watermaster Board for a two (2) year term. Except for the initial Members, each Member shall assume office at the first regular meeting of the Watermaster Board held in January of every second year, beginning in January of 2008. The Secretary shall give notice of this requirement to each of the Parties during the October preceding each such January.

4.2 Alternate Members

In addition to appointing a Member, CalAm and the Public Agency Parties may also appoint an alternate Member in the same manner and for the same terms as provided

for Members in these Rules and Regulations. Each Member representing a group of Landowner Parties may act as an alternate for the Member representing the other group of Landowner Parties. A duly appointed Alternate Member may exercise all of the rights of a Member at a meeting of the Watermaster Board where the Member for whom the Alternate Member sits, is absent.

4.3 Appointments

Appointments of Members and Alternate Members, if any, shall be made in a writing signed on behalf of the Party or group of Parties identified in section 3.1 which is delivered to the Secretary no later than the close of public comment for the agenda item regarding announcement of appointment of new Members at the November meeting. The Watermaster Board shall give notice to the Court of any person appointed as a Member or Alternate Member.

4.4 Vacancies

Should a Member or Alternate Member resign or otherwise be unable to complete his or her term on the Watermaster Board, the Party or group of Parties which appointed such Member shall appoint a new Member to complete the unexpired term, and deliver notice of that appointment to the Secretary.

4.5 Special Rules for Appointment of Members by Landowner Groups

Appointment of Members by the Landowner Parties shall take place at each November meeting of the Watermaster Board (except for the appointment of initial Members) where the appointment of new Members is to be announced. Each Landowner Party will vote for their preferred Member in writing, signed by an agent of the Landowner Party and delivered to the Watermaster Board no later than the close of public comment for the agenda item regarding election of the Landowner Group Members. Voting rights may only be transferred upon permanent sale of 51% or more of the Landowner's respective Production Allocation. Landowner Parties may only vote for the representative for their respective subarea (i.e., Coastal Subarea Landowner Group Parties vote for the Coastal Subarea Member; and Laguna Seca Landowner Group Parties vote for the Laguna Seca Subarea Member). Should a Member appointed by a Landowner Group be unable to complete his or her term on the Watermaster Board, the Landowner Group which appointed such Member shall give notice to the Secretary who shall schedule an election at the next meeting of the Watermaster Board for the replacement of that Member to be held in the same manner as regular appointments of Landowner Group Members. Landowner Group Members are elected by cumulative voting, with each member of the Landowner Group entitled to one vote for each acre-foot of Production Allocation established in the Judgment.

4.6 Compensation

No Member shall be compensated by the Watermaster for their service on the Watermaster Board.

5.0 Administration

5.1 Watermaster Office

The Watermaster office shall be located at 2600 Garden Road, Suite 228, Monterey, CA 93940. The Watermaster Board may change the location of the Watermaster office from time to time to a place located in Monterey County.

5.2 Records

The minutes of Watermaster Board meetings shall be open to inspection and maintained at the Watermaster office. Copies of minutes and other Watermaster records may be obtained for inspection in accordance with the procedures set forth in the California Public Records Act. Copies of records may be obtained upon payment of the actual cost of duplication established by the Watermaster.

5.3 Notice Lists

The Watermaster shall maintain at all times a current list of the Parties to whom notices are to be sent and their addresses for purposes of service. The Watermaster shall also maintain a list of interested Persons ("**Interested Persons**") that shall include all Persons who have made a written request to the Watermaster to be included on the list of Interested Persons. All notices, determinations, requests, demands, objections, reports and other papers and processes required to be delivered to Interested Persons under the Judgment, these Rules and Regulations or by Order of the Watermaster, shall be delivered to all Parties and Interested Persons.

6.0 Budget

The Watermaster Board will annually adopt a budget for each Fiscal Year stating the anticipated annual expenses required for implementation of the Judgment, including reasonable reserve funds. Each annual budget will contain three (3) separate components: (1) an Administrative Budget; (2) a Monitoring and Planning Budget; and, (3) a Replenishment Budget. Seven (7) affirmative votes shall be required for the adoption of any budget or budget assessment by the Watermaster Board. No Member representing a Landowner Party may participate in any vote concerning the approval of the Administrative Budget or Mitigation and Monitoring Plan Budget or the amount of any assessment levied by the Watermaster Board to fund those budgets.

6.1 Adoption of Budget and Budget Assessments

No later than October of 2006, and no later than May of each year thereafter, the Watermaster Board shall adopt a tentative budget, including assessments, for the ensuing Fiscal Year. The tentative budget will be mailed by the Secretary to each Party no earlier than November 1 and no later than November 15 before the beginning of the next Fiscal Year.

6.1.1 Objections

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Objections to the tentative budget by any Producer must be submitted in writing to the Watermaster Board within fifteen (15) days after the date of mailing of the tentative budget. If no timely objections are received, the tentative budget shall become

the final budget. If objections are received, the Watermaster Board shall consider the objections within ten (10) days thereafter and shall prepare a final budget. The final budget will be thereafter mailed to each Producer together with a statement of the amount assessed to each Producer.

6.1.2 Appeal to Court

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Any Producer may apply to the Court within fifteen (15) days after the mailing of the final budget for revision based on specific objections. Payments of assessments otherwise required shall be made despite the filing of a request for revision with the Court. Upon any revision by the Court, the Watermaster shall either remit to the Producers their pro rata portions of any reduction in the budget, or credit their accounts with respect to any assessment for the next ensuing Administrative Year as the Court shall direct.

6.2 Payment of Assessments

All amounts assessed by the Watermaster Board in the final budget shall be paid to the Watermaster by the Party assessed no later than January 15th of the Fiscal Year to which the assessment relates. If such payment by any Producer is not timely made, the Watermaster shall add a penalty of five percent (5%) thereof to the amount assessed against such Producer.

6.2.1 Contributions to Budget

The Watermaster Board may accept contributions of money, goods or services in furtherance of its purposes.

6.3 Administrative Budget

The Watermaster Board shall adopt an Administrative Budget for each Fiscal Year in an amount sufficient to fund the costs associated with the administration of the Watermaster. The Administrative Budget for the first Fiscal Year shall not exceed ONE HUNDRED THOUSAND DOLLARS ($100,000). The first ONE HUNDRED THOUSAND DOLLARS ($100,000) of the Administrative Budget shall be assessed against California American Water Company, City of Seaside and City of Sand City in the following percentage shares:

| | |
|---|---|
| California American Water | 83% |
| City of Seaside | 14.4% |
| City of Sand City | 2.6% |

6.4 Monitoring and Management Program Budget

The Watermaster Board shall develop a budget called the "**Planning and Monitoring Budget**", in an amount sufficient to fund the cost of the Monitoring and Management Plan referred to in section 7. The Planning and Monitoring Budget for the first Fiscal Year shall not exceed TWO HUNDRED THOUSAND DOLLARS ($200,000). The Watermaster Board shall also levy a one time assessment called the

"**Capital Improvement and Groundwater Model Assessment**" in an amount sufficient to fund the cost of the capital improvements and groundwater model described in the Monitoring and Management Program, including but not limited to (1) installation of water quality and water level monitoring wells; (2) implementation of piezometric and water quality monitoring program; (3) installation of sentinel wells to detect seawater intrusion into on-shore portions of the Basin; (4) development of a groundwater model, including if necessary, exploratory borehole drilling, geophysical surveys and improved estimates of natural and secondary recharge in the Basin. The total amount of the Capital Improvement and Groundwater Model Assessment shall not exceed ONE MILLION DOLLARS ($1,000,000). The total amount of both the Planning and Monitoring Budget and the Capital Improvement and Groundwater Model Assessment shall be assessed against the Standard Producers in the Coastal Subarea in the following shares:

| | |
|---|---|
| California American Water | 91% |
| City of Seaside | 7% |
| Granite Rock | 1% |
| D.B.O. Development No. 27 | 1% |

At such time as a Party within the Coastal Subarea chooses to change its Alternative Production to a Standard Production Allocation, that Party will be assessed a proportionate share of the Monitoring and Management Plan Budget.

6.5 Replenishment Budget

As a part of its annual budget process, the Watermaster Board shall declare the per-acre-foot cost of the Replenishment Assessments in October of each Water Year. The per-acre foot cost of Replenishment Assessments for Production in excess of Natural Safe Yield shall be based on the anticipated cost of Artificial Replenishment, including the cost to construct, operate, and maintain facilities necessary for replenishment of the Basin. Replenishment Assessments may only be used for Artificial Replenishment.

6.5.1 Assessment on Production Over Natural Safe-Yield

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At the end of each Water Year the Watermaster shall levy an Over-Production Replenishment Assessment for Production by any Party over the Natural Safe-Yield of the Seaside Basin. The Over-Production Replenishment Assessment does not apply to Production under an Alternative Production Allocation so long as such Production is within the fixed amount established for that Alternate Producer in Table 2 of Section III.B.3 of the Judgment. The Watermaster will determine each Producer's Over-Production Replenishment Assessment, if any, by using the following method:

6.5.1.1 For purposes of determining the Over-Production Replenishment Assessment each Standard Producer is entitled to the following percentage share of Natural Safe Yield and/or the Operating Yield that is in excess of production by those Parties with an Alternative Production Allocation:

| | |
|---|---|
| California American Water | 91.38 % |
| City of Seaside | 6.81% |
| Granite Rock | .64% |
| D.B.O. Development | 1.16% |

6.5.1.2 These percentages were determined by first multiplying the Coastal Subarea Standard Production Allocations by that portion of the Operating Yield for the Coastal Subarea which is in excess of the sum of the Alternative Production Allocations within the Coastal Subarea. (The Standard Production Allocations do not total 100 percent. Thus, after the initial calculation, the Standard Production Allocation must continue to be applied to the remainder until less than one acre-foot remains.) Second, California American's Laguna Seca Subarea Allocation (no other standard producer has a Laguna Seca allocation) must be added to California American's total allocation and each Standard Producer's percentage share of the Operating Yield must be recalculated.

6.5.1.3 If any Standard Producer produces more than the amount of water determined by applying its percentage to the Natural Safe Yield, then Watermaster shall assess a Replenishment Assessment for that Standard Producer. The amount of the Replenishment Assessment will be determined by multiplying the Replenishment Assessment per-acre-foot cost by the number of acre-feet pumped in excess of that Standard Producer's allocation of the Natural Safe Yield.

6.5.1.4 At such time as a Party chooses to change its Alternative Production to a Standard Production Allocation, the percentage shares shall be redetermined.

Deleted: *[Reserved for Clarification re Method of Calculating the Over-Production Replenishment Assessment]*

6.5.2 Assessment on Production Over Operating Yield

The Watermaster Board shall levy an additional Replenishment Assessment on any Alternative Producer for each acre-foot of water produced over their respective Alternative Allocation, and on any Standard Producer for each acre-foot produced over their respective percentage share of the Operating Safe Yield. Should the Watermaster be unable to procure replenishment water to offset Production over the Operating Safe Yield in the previous Water Year, the Watermaster will prohibit any Production over the Operating Safe Yield in the current year or until such time as replenishment water is provided.

6.5.3 Payment of Replenishment Assessment

At the end of each Water Year, the Watermaster will promptly notify each Producer by mail of any Replenishment Assessment owed. Payment must be made by January 15th of the following year. If such payment by any Producer is not timely made, the Watermaster shall add a penalty of five percent (5%) thereof to the amount assessed against such Producer.

6.5.4 California American Credit Toward Replenishment Assessment

California American's expenditures for water supply augmentation may also provide replenishment water for the Seaside Basin. Accordingly, on an annual basis, California American will provide the Watermaster Board with an accounting of all expenditures it has made for water supply augmentation that it contends has or will result

in replenishment of the Basin. The Watermaster Board shall review these expenditures and if it concurs, reduce California American's Replenishment Assessment obligation, for that year, by an amount equal to the amount claimed by California American. To the extent that the Watermaster Board rejects any of the claimed amounts, it shall provide California American with an explanation for the rejection and allow California American an opportunity to meet and confer on the disputed amount. In the event that the Watermaster Board and California American cannot agree, the matter may be referred to the Court through a request filed by California American.

## 7.0 Monitoring and Management Program

Within sixty (60) days of entry of Judgment, the Watermaster Board shall approve the Seaside Groundwater Basin Monitoring and Management Program. The Monitoring and Management Program shall conform to the criteria set forth in Exhibit A to the Judgment, and shall include but not be limited to a seawater intrusion contingency plan, criteria for the annual collection and analysis of groundwater production and quality data, land use data, and the development of criteria for modification of the Operating Safe Yield. The Monitoring and Management Program shall also include criteria to determine the Total Useable Storage Space in the Basin. The Watermaster Board may amend the Monitoring and Management Program from time to time.

## 8.0 Operating Yield and Material Injury

Pursuant to the Judgment, the Watermaster must continually monitor for Material Injury to the Seaside Basin. If the Watermaster Board determines that groundwater extractions at the Operating Yield are resulting in Material Injury, the Watermaster Board will immediately present the Court with a report detailing the circumstances constituting such Material Injury and, if Watermaster deems appropriate, a recommendation for a reduction in the Operating Yield to respond to the perceived material Injury. In the event that the Court concurs in the Watermaster's conclusion of Material Injury, the Watermaster Board shall determine a lower Operating Yield in accordance with the Principles and Procedures attached as Exhibit A to the Judgment, and through the application of criteria that it shall develop for this purpose.

## 9.0 Procedures For Assignment and Transfer of Production Allocations

Parties proposing to assign or transfer any portion of their Production Allocation must submit a written notice to the Watermaster forty-five (45) days prior to the effective date of the proposed assignment or transfer. The notice shall include all details of the assignment/transfer (other than details related to consideration for such assignment or transfer), including thorough descriptions of: (1) the Production Allocation being assigned/transferred; (2) the assignor/assignee or transferor/transferee; (3) the duration of assignment/transfer; and (4) the quantity of Production Allocation being assigned/transferred. The Secretary shall transmit a copy of the notice to each of the Members. Within twenty-one (21) days of the mailing of the notice from the Secretary, any Member may file an objection to the proposed assignment/transfer with the Secretary. If no objection is received within that time, the proposed assignment/transfer shall become effective in accordance with its terms. If an objection is received within that time, the Secretary shall cause the matter to be placed on the agenda for the next available meeting of the Watermaster Board. At the meeting, the Member who filed the

objection will carry the burden of proving to the Watermaster Board, by a preponderance of the evidence, that the production contemplated by the assignment/transfer will significantly increase the risk of Material Injury to the Basin above the risk posed by production absent the assignment/transfer. At the conclusion of the hearing, the Watermaster Board shall make its determination regarding any increased risk of Material Injury. If the Watermaster Board determines that the proposed assignment/transfer will not significantly increase risk of Material Injury, the proposed the assignment/transfer shall thereupon become effective. If the Watermaster Board determines, based on its detailed written findings, that the proposed assignment/transfer will result in significant increase of risk of Material Injury, the Watermaster may impose such conditions on the proposed assignment/transfer as it deems necessary to reduce such risk.

10.0 Storage

Prior to the beginning of the next Administrative Year, the Watermaster Board shall declare the next year's Total Useable Storage Space for the Seaside Basin. The Watermaster Board may periodically amend the quantity of Total Useable Storage Space throughout the year based upon criteria set forth in the Seaside Groundwater Basin Monitoring and Management Plan. Parties seeking to store water in the Seaside Basin shall follow the procedures set forth in the Judgment.

11.0 Reporting by Parties

Pursuant to the terms of the Judgment, all Parties are required to install, at their own cost, devices to measure the quantity of water they extract from the Seaside Basin. All Parties shall report their extraction quantities to Watermaster for the preceding calendar quarter, in writing, on January 15, April 15 and July 15 and October 15 of each Water Year. The water measuring devices must meet the following standards, which are also requirements of the Monterey Peninsula Water Management District:

11.1 A minimum of eight diameters of straight pipe upstream and downstream of the centerline of the meter (i.e., no bends or valves) must be provided to limit turbulence at the meter. Exceptions can be made if it can be demonstrated that the meter is installed according to the manufacturer's recommendations for straight unobstructed flow lengths upstream and downstream of the meter.

11.2 The meter installation must be configured to provide a full flow of water in the pipe at the meter under all flow conditions.

11.3 The meter must be situated such that all water produced from the well is measured.

11.4 Following installation, the meter must be maintained to an accuracy of plus or minus five percent (±5%) of true flow.

11.5 The meter must be equipped with a totalizer that is susceptible to correction only by changing mechanical gear equipment.

11.6 The water meter should be installed in accordance with good design practices and sufficient space should be provided to allow access for inspections and testing as may, from time to time, be deemed necessary.

11.7 The specified flow range of the meter should be consistent with the range of flows provided from the well.

11.8 If solid material (e.g., silt, sand, rust particles, etc.) is present in the discharge from the well, a strainer or filter should be installed in the pipe upstream of the meter to avoid fouling of the meter.

11.9 The well discharge piping, valves, connections, and meter should be water tight. "Wet dial face" meters should be avoided. These meters tend to become unreadable over time, requiring maintenance that could be avoided with the installation of a meter that precludes entry of discharge water into the dial compartment (i.e., a "dry dial face").

11.10 The meter and discharge line should be protected from freezing, where possible, by installing the meter underground, below the frost line, wrapped in insulation, or otherwise enclosing the meter in an insulated box.

11.11 Appropriate fittings should be used to allow easy installation and maintenance of the meter.

11.12 The water meter should be installed by a qualified, experienced professional.

11.13 Manufacturers of water meters that are satisfactory to the Watermaster include, but are not limited to:

- McCrometer Water Meters
- Invensys Meters, Inc.
- Sparling Instruments, Inc.
- Badger Meter
- Water Specialties Corporation

## 12.0 Notice

All notices, determinations, requests, and reports required to be delivered to interested persons shall be delivered to all Parties and all persons on Watermaster's list of Interested Persons. Delivery or service of any notice of document required to be served upon or delivered shall be deemed made by deposit in the mail, first class postage prepaid, addressed as shown on the Watermaster's list of Parties or Interested Persons, or by alternative means of delivery (such as email or facsimile) agreed to in advance by a Party or Interested Party. Any Party or Interested Person desiring to be relieved of receiving deliveries from Watermaster may file, in writing, a waiver.

13.0 Watermaster Annual Report

The Watermaster will prepare and file with the Court, and mail to each of the Parties on or before November 15th of each Water Year, an annual report for the preceding Administrative Year. The Watermaster's annual report shall address the following matters, in addition to other matters deemed appropriate by the Watermaster or requested by the Court: (1) groundwater extractions; (2) groundwater storage; (3) amount of artificial replenishment, if any, performed by the Watermaster; (4) leases or sales of Production Allocations; (5) use of imported, reclaimed, or desalinated water as a source of water for storage or as a water supply for lands overlying the Seaside Basin; (6) violations of the Judgment or the Rules and Regulations of the Watermaster, and any corrective action taken; (7) Watermaster administration costs; (8) the fixed per acre fee for replenishment assessments, and the amount of replenishment assessments levied and paid; (9) all components of the Watermaster budget; and, (10) recommendations.

14.0 Compliance With Judgment and Rules and Regulations

The Watermaster Board will promptly review the written request for compliance with all terms of the Judgment and these Rules and Regulations, and the Watermaster Board will promptly place the matter on a regular meeting agenda for consideration and action by the Watermaster Board.

15.0 Computation of Time

The time in which any act provided by the Judgment or these Rules and Regulations shall be computed by excluding the first day and including the last, unless the last is a holiday. Holidays are every Sunday and any other days that are specified or provided as holidays in Government Code sec. 6700.

16.0 Review of Watermaster Decisions

Any action, decision, rule or procedure of the Watermaster shall be subject to review by the Court on motion filed by any Party in accordance with the following procedure.

16.1 Effective Date of Watermaster Action

Any order, decision or action of the Watermaster on a noticed specific agenda item shall be deemed to have occurred on the date of the order, decision or action.

16.2 Notice of Motion

Any Party, by a regularly noticed motion, may petition the Court for review of the Watermaster's action or decision. The motion shall be deemed filed when a copy, conformed as filed with the Court, has been delivered to the Watermaster with the service fee established by the Watermaster. The fee shall be sufficient to cover the cost of photocopying and mailing the motion to each Party. The Watermaster shall prepare copies and mail a copy to each Party on the Watermaster's list of Parties.

16.3 Time for Motion

A motion to review any Watermaster action or decision shall be filed within thirty (30) days after such Watermaster action or decision, except that motions to review Budget Assessments and Replenishment Assessments shall be filed within fifteen (15) days of mailing a notice of assessment.

| SEASIDE GROUNDWATER BASIN WATERMASTER | |
|---|---|
| ...adjudicate rights of various parties... and ...provide for the long-term management of the Seaside Basin ...by reducing the drawdown to the level of Natural Safe Yield. | |
| **Milestones** | *BLUE TEXT = COMPLETED* |
| **Administrative** | |
| Board Terms | **Two-Year** |
| Budget (Administrative[6] | **January 15 each year** |
| Budget (Operations)[6] | **January 15 each year** |
| Budget (Replenishment)[6] | **January 15 each year** |
| | |
| **Watermaster Board Regular Meeting Schedule** | **Wednesday, March 07, 2007** |
| | **Wednesday, April 04, 2007** |
| | **Wednesday, May 02, 2007** |
| | **Wednesday, June 06, 2007** |
| | **Tuesday, July 03, 2007** |
| | **Wednesday, August 01, 2007** |
| | **Wednesday, September 05, 2007** |
| | **Wednesday, October 03, 2007** |
| | **Wednesday, November 07, 2007** |
| | **Wednesday, December 05, 2007** |
| **Operations** | |
| **Critical Dates** | |
| Adjudicaton ordered by Court and filed | **March 27, 2006** |
| Monitoring and Management Plan submitted to Court for review | **May 17, 2006** |
| Watermaster submission of a revised Monitoring and Management Plan and Replenishment Assessment Calculation to the Court | **January 12, 2007** |
| Service Contract for Well Installation and Implementation of BMMP | |
| 1-Year Anniversary of Adjudication: Provide further estimates, programs and plans[5] | **March 27, 2007** |
| Report to Court designation of sites for drilling groundwater monitoring wells required by BMMP | **June 11, 2007** |
| | |
| **Timelines** | |
| ***Groundwater Modeling for Seaside Basin Through Consultant*** | |
| 1. Review groundwater models, select best model for enhancement | **July - August 2006** |
| 2. Develop scope of services & budget for model enhancement project | **To be determined at March 7, 2007 Board meeting** |
| 3. Advertise, select consultant, execute contract | **To be determined at March 7, 2007 Board meeting** |
| 4. Complete model development & calibration, run scenario evaluation, develop improved estimates of basin recharge and safe-yield | **November 2006 - March 31, 2007** |
| 5. Provide training in use of model to Watermaster TAC | **April 2007** |
| | |
| ***Seaside Basin Management Program*** | |
| 1. Develop scope of services and budget for consultant | **To be determined at March 7, 2007 Board meeting** |
| 2. Advertise, select consultant, execute contract | **To be determined at March 7, 2007 Board meeting** |
| 3. Develop BMMP, Basin Watermaster Database, and data and analysis protocol | **December 2006 - February 28, 2007** |
| 4. Evaluate options for importation of supplemental water supplies into the Basin, develop action plan | **December 2006 - February 28, 2007** |
| 5. Using groundwater model from task above, analyze & develop strategies for improved basin management | **April - June 2007** |
| 6. Develop action plan to avoid adverse impacts on basin | **March - June 2007** |
| 7. Draft Basin Management Plan for Watermaster review | **June - September 2007** |
| 8. Produce final BMMP | **October 2007** |
| | |
| ***Basin Monitor Well Construction*** | |
| 1. Develop scope of services and RFP for consultant program oversight | **To be determined at March 7, 2007 Board meeting** |
| 2. Review proposals, secure oversight consultant contract | **To be determined at March 7, 2007 Board meeting** |
| 3. Oversight consultant completes site acquisition approvals | **June - July 2007** |
| 4. Develop scope of services and request bids for drilling/monitor wells | **January - March 31, 2007** |
| 5. Review bids, secure contract(s) | **April 2007** |
| 6. Drill, equip and collect initial monitoring data | **May - September 2007** |

| | |
|---|---|
| 7. Prepare and submit completion report to Watermaster | **September - October 2007** |
| | |
| ***Creation of Consolidated Basic Groundwater Resource Database*** | |
| 1. Develop database RFP | **To be determined at March 7, 2007 Board meeting** |
| 2. Review proposals, select consultant | **To be determined at March 7, 2007 Board meeting** |
| 3. Develop and approve database format | **February - April 2007** |
| 4. Populate database (historical data from all sources) | **March - April 2007** |
| 5. Populate database (current monitoring data) | **March - May 2007** |
| 6. Prepare database documentation report | **April - June 2007** |
| | |
| **Other Critical Dates** | |
| Each Producer[1] is authorized to Produce its Production Allocation[2] within the designated Subarea[1] in each of the first three Water Years.[3] Alternative Producers may change to Standard Production. | **Each 3 years** |
| Commencing with the fourth Water Year and Triennially thereafter, the Operating Yield for both Subareas will be decreased by 10% until the Operating Yield is equivalent to the Natural Safe Yield unless by recharge or reclaimed water use results in a decrease in production of Native Water as required by the decision. | |
| - 75% of the Operating Yield of 5,600 af could be decreased 10% 1/1/0'9 | |
| - Operating yield could decrease 10% every three years on October 1st until it is the equivalent of Natural Safe Yield | |
| Each Water Year by November 15th, the Watermaster will determine and levy a Replenishment Assessment[4] on each Standard Producer[1], with payment due from Producer 40 days after the levy is mailed | **November 15 each year** |
| After the close of each Water Year, the Watermaster will determine and levy a Replenishment Assessment[4] against all Producers[1] that incurred Operating Yield Over Production during the Water Year, with payment due from Producer by January 15th. | **November 30 each year** |
| California American Water is to submit annually to the Watermaster any augmentation to the water supply for possible credit toward Replenishment Assessment | **Annually** |
| Water level monitoring - monthly data collection *from all members* Reported: | **Annually** |
| Water quality monitoring - yearly data collection *from all members* Reported: | **Annually** |
| Summary report of water resources data *to all members/parties* Reported: | **Quarterly** |
| Annual Report to Court | **November 15 each year** |
| | |
| *[1] See Sheet 2* | |
| *[2] Base water rights x Operating Yield in excess of the sum of the Alternative Production Allocations (See Sheet 2)* | |
| *[3] October 1 through September 30* | |
| *[4] Replenishment Assessment to offset the cumulative Basin Over Production* | |
| *[5] (a) Develop improved estimates of the natural and secondary recharge within the Basin; (b) develop & implement a program for collecting groundwater production, water use, and land use data for the the Basin and appropriate adjacent areas; (c) develop a suitable groundwater model fo the Basin and appropriate adjacent areas; (d) develop a plan of action to be implemented to avoid various adverse effects in the Basin, including seawater intrusion; and (e) develop a plan of action to contain seawater intrusion, should it occur. Include a timeline to secure both non-native water and recycled water.* | |
| *[6] If no objections within 15 days, budget is final. If objections, Watermaster Board shall consider them within 10 days.* | |

SEASIDE GROUNDWATER BASIN WATERMASTER

CRITICAL MILESTONE DATES

*...adjudicate rights of various parties... and ...provide for the long-term management of the Seaside Basin ...by reducing the drawdown to the level of Natural Safe Yield.*

| **Milestones** | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Administrative** | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | | | | | | | | | | | |
| Board Terms | | | | | | | | | | | | | | | | | | | |
| Budget (Administrative[6] | | 15-Jan | 15-Jan | 15-Jan | 15-Jan | 15-Jan | 15-Jan | 15-Jan | | | | | | | | | | | |
| Budget (Operations)[6] | | 15-Jan | 15-Jan | 15-Jan | 15-Jan | 15-Jan | 15-Jan | 15-Jan | | | | | | | | | | | = Complete |
| Budget (Replenishment)[6] | | 7-Mar | 15-Jan | 15-Jan | 15-Jan | 15-Jan | 15-Jan | 15-Jan | | | | | | | | | | | = Yet to be c |
| | | | | | | | | | | | | | | | | | | | = Scheduled |
| Watermaster Board Regular Meeting Schedule | | 7-Mar-07 | 4-Apr-07 | 2-May-07 | 6-Jun-07 | 3-Jul-07 | 1-Aug-07 | 5-Sep-07 | 3-Oct-07 | 7-Nov-07 | 5-Dec-07 | | | | | | | | |
| **Operations** | | | | | | | | | | | | | | | | | | | |
| **Critical Dates** | ***27-Mar-06*** | ***17-May-06*** | ***31-Jul-06*** | ***31-Aug-06*** | ***30-Sep-06*** | ***31-Oct-06*** | ***30-Nov-06*** | ***31-Dec-06*** | ***12-Jan-07*** | ***31-Jan-07*** | ***28-Feb-07*** | ***13-Mar-07*** | ***27-Mar-07*** | ***31-Mar-07*** | ***30-Apr-07*** | ***31-May-07*** | ***11-Jun-07*** | ***30-Jun-07*** | |
| Adjudicaton ordered by Court and filed | | | | | | | | | | | | | | | | | | | |
| Monitoring and Management Plan submitted to Court for review | | | | | | | | | | | | | | | | | | | |
| Watermaster submission of a revised Monitoring and Management Plan and Replenishment Assessment Calculation to the Court | | | | | | | | | | | | | | | | | | | |
| Service Contract for Well Installation and Implementation of BMMP | | | | | | | | | | | | | | | | | | | |
| 1-Year Anniversary of Adjudication: Provide further estimates, programs and plans[5] | | | | | | | | | | | | | | | | | | | |
| Report to Court designation of sites for drilling groundwater monitoring wells required by BMMP | | | | | | | | | | | | | | | | | | | |
| **Timelines** | | | | | | | | | | | | | | | | | | | |
| ***Groundwater Modeling for Seaside Basin Through Consultant*** | | | | | | | | | | | | | | | | | | | |
| 1. Review groundwater models, select best model for enhancement | | | | | | | | | | | | | | | | | | | |
| 2. Develop scope of services & budget for model enhancement project | | | | | | | | | | | | To be determined at 3/7/07 Board meeting | | | | | | | |
| 3. Advertise, select consultant, execute contract | | | | | | | | | | | | To be determined at 3/7/07 Board meeting | | | | | | | |
| 4. Complete model development & calibration, run scenario evaluation, develop improved estimates of basin rechrage and safe-yield | | | | | | | | | | | | | | | | | | | |
| 5. Provide training in use of model to Watermaster TAC | | | | | | | | | | | | | | | | | | | |
| ***Seaside Basin Management Program*** | | | | | | | | | | | | | | | | | | | |
| 1. Develop scope of services and budget for consultant | | | | | | | | | | | | | | | | | | | |
| 2. Advertise, select consultant, execute contract | | | | | | | | | | | | | | | | | | | |
| 3. Develop BMMP, Basin Watermaster Database, and data and analysis protocol | | | | | | | | | | | | | | | | | | | |
| 4. Evaluate options for importation of supplemental water supplies into the Basin, develop action plan | | | | | | | | | | | | | | | | | | | |
| 5. Using groundwater model from task above, analyze & develop strategies for improved basin management | | | | | | | | | | | | | | | | | | | |
| 6. Develop action plan to avoid adverse impacts on basin | | | | | | | | | | | | | | | | | | | |
| 7. Draft Basin Management Plan for Watermaster review | | | | | | | | | | | | | | | | | | | |
| 8. Produce final BMMP | | | | | | | | | | | | | | | | | | | |
| ***Basin Monitor Well Construction*** | | | | | | | | | | | | | | | | | | | |
| 1. Develop scope of services and RFP for consultant program oversight | | | | | | | | | | | | To be determined at 3/7/07 Board meeting | | | | | | | |
| 2. Review proposals, secure oversight consultant contract | | | | | | | | | | | | To be determined at 3/7/07 Board meeting | | | | | | | |
| 3. Oversight consultant completes site acquisition approvals | | | | | | | | | | | | | | | | | | | |
| 4. Develop scope of services and request bids for drilling/monitor wells | | | | | | | | | | | | | | | | | | | |
| 5. Review bids, secure contract(s) | | | | | | | | | | | | | | | | | | | |
| 6. Drill, equip and collect initial monitoring data | | | | | | | | | | | | | | | | | | | |
| 7. Prepare and submit completion report to Watermaster | | | | | | | | | | | | | | | | | | | |
| ***Creation of Consolidated Basic Groundwater Resource Database*** | | | | | | | | | | | | | | | | | | | |
| 1. Develop database RFP | | | | | | | | | | | | To be determined at 3/7/07 Board meeting | | | | | | | |
| 2. Review proposals, select consultant | | | | | | | | | | | | To be determined at 3/7/07 Board meeting | | | | | | | |
| 3. Develop and approve database format | | | | | | | | | | | | | | | | | | | |
| 4. Populate database (historical data from all sources) | | | | | | | | | | | | | | | | | | | |
| 5. Populate database (current monitoring data) | | | | | | | | | | | | | | | | | | | |
| 6. Prepare database documentation report | | | | | | | | | | | | | | | | | | | |
| **Other Critical Dates** | ***2006*** | ***2007*** | ***2008*** | ***2009*** | ***2010*** | ***2011*** | ***2012*** | ***2013*** | ***2014*** | ***2015*** | ***2016*** | | | | | | | | |
| Each Producer[1] is authorized to Produce its Production Allocation[2] within the designated Subarea[1] in each of the first three Water Years.[3] Alternative Producers may change to Standard Production. | | | | | | | | | | | | | | | | | | | |
| Commencing with the fourth Water Year and Triennially thereafter, the Operating Yield for both Subareas will be decreased by 10% until the Operating Yield is equivalent to the Natural Safe Yield unless by recharge or reclaimed water use results in a decrease in production of Native Water as required by the decision. | | | | 75% of the Operating Yield of 5,600 af could be decreased 10% Jan 1, 2009 | | Operating yield could decrease 10% every three years on October 1st until it is the equivalent of Natural Safe Yield | | | 1-Oct | 1-Oct | 1-Oct | | | | | | | | |
| Each Water Year by November 15th, the Watermaster will determine and levy a Replenishment Assessment[4] on each Standard Producer[1], with payment due from Producer 40 days after the levy is mailed | | 15-Nov | 15-Nov | 15-Nov | 15-Nov | 15-Nov | 15-Nov | 15-Nov | 15-Nov | 15-Nov | 15-Nov | | | | | | | | |
| After the close of each Water Year, the Watermaster will determine and levy a Replenishment Assessment[4] against all Producers[1] that incurred Operating Yield Over Production during the Water Year, with payment due from Producer by January 15th. | | 30-Nov | 30-Nov | 30-Nov | 30-Nov | 30-Nov | 30-Nov | 30-Nov | 30-Nov | 30-Nov | 30-Nov | | | | | | | | |
| California American Water is to submit annually to the Watermaster any augmentation to the water supply for possible credit toward Replenishment Assessment | | Annually | Annually | Annually | Annually | Annually | Annually | Annually | Annually | Annually | Annually | | | | | | | | |
| Water level monitoring - monthly data collection *from all members* Reported: | Annually | Annually | Annually | Annually | Annually | Annually | Annually | Annually | Annually | Annually | Annually | | | | | | | | |
| Water quality monitoring - yearly data collection *from all members* Reported: | Annually | Annually | Annually | Annually | Annually | Annually | Annually | Annually | Annually | Annually | Annually | | | | | | | | |
| Summary report of water resources data *to all members/parties* Reported: | Quarterly | Quarterly | Quarterly | Quarterly | Quarterly | Quarterly | Quarterly | Quarterly | Quarterly | Quarterly | Quarterly | | | | | | | | |

# Seaside Basin Watermaster Sentinel Wells Project

***Workschedule***

*Weeks after Contract Execution (2/20/07)*

| *Task* | *Description* | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Task 1 | Project Management/Meetings | | | | | | | | | | | | | | | | | | | | |
| Task 2 | Permitting | | | | | | | | | | | | | | | | | | | | |
| Task 3 | Well Network Review | | | | | | | | | | | | | | | | | | | | |
| Task 4 | Well Construction | | | | | | | | | | | | | | | | | | | | |
| Task 5 | Initial Data Collection | | | | | | | | | | | | | | | | | | | | |
| Task 6 | Reporting | | | | | | | | | | | | | | | | | | | | |

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Attorneys for Plaintiff and Cross-Defendant
CALIFORNIA AMERICAN WATER

IN THE SUPERIOR COURT OF THE STATE OF CALIFORNIA

IN AND FOR THE COUNTY OF MONTEREY

| | |
|---|---|
| CALIFORNIA AMERICAN WATER,<br><br>Plaintiff,<br><br>vs.<br><br>CITY OF SEASIDE; CITY OF MONTEREY; CITY OF SAND CITY; CITY OF DEL REY OAKS; SECURITY NATIONAL GUARANTY, INC.; GRANITE ROCK COMPANY, INC.; D.B.O. DEVELOPMENT COMPANY NO. 27, INC.; MURIEL E. CALABRESE 1987 TRUST; ALDERWOODS GROUP (CALIFORNIA), INC.; PASADERA COUNTRY CLUB, LLC; LAGUNA SECA RESORT, INC; BISHOP MC INTOSH & MC INTOSH, a general partnership; THE YORK SCHOOL, INC.; and DOES 1 through 1,000, Inclusive,<br><br>Defendants.<br><br>MONTEREY PENINSULA WATER MANAGEMENT DISTRICT,<br><br>Intervenor. | Case No. M66343<br><br>**REPORT ON STATUS OF CONSULTANT TO OVERSEE IMPLEMENTATION OF THE MONITORING AND MANAGEMENT PROGRAM; REQUEST TO MODIFY MONITORING AND MANAGEMENT PROGRAM**<br><br>(Assigned to Hon. Roger D. Randall, Ret.) |

MONTEREY COUNTY WATER RESOURCES AGENCY,

Intervenor.

AND RELATED CROSS-ACTIONS

//

California American Water, on behalf of the Seaside Groundwater Basin Watermaster Committee, respectfully submits this report for the Court's consideration. Since the Court's rulings at the January 12, 2007 hearing, three significant actions have occurred regarding implementation of the Seaside Basin Monitoring and Management Program (MMP). These actions are detailed below.

1. Report from MPMWD, Included in 2006 Watermaster Report, On Water Quality Monitoring Results

Attachment 6 to the 2006 Watermaster Report explains the findings of the MPWMD's Fall 2006 water quality monitoring tests. In summary, those tests of the existing Seaside Basin sentinel well network found no indications of seawater intrusion. Pursuant to order of this Court, water quality monitoring will continue on a quarterly basis with reports to follow within 90 days therefrom.

2. Execution of Contract with Martin Feeney to Perform Planning and Installation of Additional Sentinel Monitoring Wells; Work Has Commenced

On February 20, 2007, the Watermaster executed a contract with hydrogeologist Martin Feeney to plan and install additional sentinel wells (Mr. Feeney's contract is attached hereto as Exhibit A). Mr. Feeney worked closely with Watermaster staff to quickly develop a sentinel well plan. Even before the contract was executed, Mr. Feeney, in cooperation with staff from the Monterey Peninsula Water Management District, met twice with representatives from the California Resources Agency's Division of State Parks to identify possible wells sites and discuss permitting issues. These meetings were productive and resulted in identification of four ideal well sites. Subject to the permitting process, Mr. Feeney received tentative approval to

drill wells at these sites. The permitting and planning process are currently underway and, as shown on the schedule attached to the contract, Mr. Feeney anticipates drilling to begin eleven weeks from execution of the contract –approximately mid-May 2007.

Mr. Feeney's contract is not to perform all aspects of the Monitoring and Management Program. His work focuses on installing the additional sentinel wells – a priority established by the Court. As explained in the work plan attached to Mr. Feeney's contract, the wells he intends to install are different than those described in the MMP. Instead of installing multiple wells with varying screened zones at each site, he proposes to drill a single well at each site with one screening at the bottom. Mr. Feeney believes the single well approach is ideal for monitoring changes in basin salinity, and drilling only one well at each site is significantly less costly. The wells use a probe technology that can detect changes in conductivity throughout all depths of the well (the probe obtains readings through the casing of the well). On a quarterly basis, the probe testing would record data on conductivity, and any changes in conductivity would alert Watermaster to the potential for seawater intrusion. Mr. Feeney's work plan contains a full explanation of the benefits and characteristics of the proposed wells.

3. Revised MMP and Scope of Work

[Discussion to be determined based on decisions of Watermaster at March 7, 2007 meeting].

Respectfully submitted,

SOMACH, SIMMONS & DUNN

Dated: March 13, 2007

By_____
Nicholas A. Jacobs

Attorneys for California American Water

PROOF OF SERVICE

I am employed in the County of Sacramento; my business address is Hall of Justice Building, 813 Sixth Street, Third Floor, Sacramento, California; I am over the age of 18 years and not a party to the foregoing action.

On March 13, 2007, I served a true and correct copy of

**REPORT ON STATUS OF CONSULTANT TO OVERSEE IMPLEMENTATION OF THE MONITORING AND MANAGEMENT PROGRAM; REQUEST TO MODIFY MONITORING AND MANAGEMENT PROGRAM**

X (by mail) on all parties in said action listed below, in accordance with Code of Civil Procedure §1013a(3), by placing a true copy thereof enclosed in a sealed envelope in a designated area for outgoing mail, addressed as set forth below. At Somach, Simmons & Dunn, mail placed in that designated area is given the correct amount of postage and is deposited that same day, in the ordinary course of business, in a United States mailbox in the City of Sacramento, California.

SEE ATTACHED SERVICE LIST

X (by e-mail) to the persons at the email addresses set forth on the attached E-Mail Service List.

___ (by personal delivery) by personally delivering a true copy thereof to the person and at the address set forth below:

___ (by facsimile transmission) to the person at the address and phone number set forth below:

I declare under penalty of perjury that the foregoing is true and correct under the laws of the State of California. Executed on March 13, 2007, at Sacramento, California.

Marlene Martin

SERVICE LIST

| | |
|---|---|
| J. Terry Schwartz<br>Craig A. Parton<br>Price, Postel & Parma<br>200 E. Carrillo Street,<br>Suite 400<br>Santa Barbara, CA 93101-2190<br>Facsimile: (805) 965-3978 | Attorneys for Intervenor Monterey Peninsula Water Management District |
| Thomas D. Roth<br>Law Offices of Thomas D. Roth<br>One Market, Spear Tower,<br>Suite 3600<br>San Francisco, CA 94105<br>Facsimile: (415) 435-2086 | Attorneys for Defendant Security National Guaranty, Inc. |
| Jacqueline M. Zischke<br>Virginia A. Hines<br>Lombardo & Gilles<br>318 Cayuga Street<br>P.O. Box 2119<br>Salinas, CA 93902-2119<br>Facsimile: (831) 754-2011 | Attorneys for Defendant Laguna Seca Resort, Inc. |
| Robert Allan Goodin<br>Anne Hartman<br>James Squeri<br>Goodin, MacBride, Squeri, Ritchie & Day, LLP<br>505 Sansome, Suite 900<br>San Francisco, CA 94111<br>Facsimile: (415) 398-4321 | On behalf of Defendant Pasadera Country Club, LLC |
| James Heisinger<br>Heisinger Buck Morris et al.<br>P. O. Box 5427<br>Carmel, CA 93921-5427<br>Facsimile: (831) 625-0145 | Attorneys for Defendant City of Sand City |
| David C. Sweigert<br>Fenton & Keller<br>2801 Monterey-Salinas Highway<br>P.O. Box 791<br>Monterey, CA 93942-0791<br>Facsimile: (831) 373-7219 | Attorneys for Defendant D.B.O. Development Company |

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| Rob Wellington<br>Wellington Law Offices<br>857 Cass Street, Suite D<br>Monterey, CA 93940<br>Facsimile: (831) 373-7106 | Attorneys for Defendant<br>City of Del Rey Oaks |
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| Michael Albov<br>Hudson, Martin, Ferrante & Street<br>P.O. Box 112<br>Monterey, CA 93942-0112<br>Facsimile: (831) 375-0131 | Attorneys for Defendant<br>Muriel E. Calabrese 1987 Trust |
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| Dewey Evans<br>Watermaster Executive Officer<br>2600 Garden Road, Suite 228<br>Monterey, CA 93940 | Watermaster Executive Officer |
| Steve Leonard<br>Vice President and Manager<br>California American Water<br>50 Ragsdale Dr., Suite 100<br>P.O. Box 951<br>Monterey, CA 93940-5758 | Robert Costa<br>Laguna Seca Golf Ranch<br>10520 York Road<br>Monterey, CA 93940 |
| Kelly Morgan<br>City Administrator<br>City of Sand City<br>1 Sylvan Park<br>Sand City, CA 93955 | Bill Mitchell **[NEED CURRENT ADDY]**<br>P.O. Box 2157<br>Yucca Valley, CA 92286 |

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City of Monterey
City Manager's Office Attn: Elaine Ramos
Monterey, CA 93940

Mayor Ralph Rubio
City of Seaside
440 Harcourt Avenue
Seaside, CA 93955

Mayor Joseph Russell
650 Canyon Del Rey Road
Del Rey Oaks, CA 93940

Jerry Smith
District 4 Supervisor
2616 1st Avenue
Marina, CA 93933

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Tom Squeri <tsqueri@Graniterock.com
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# IX.

# INFORMATIONAL REPORTS

**AGREEMENT BETWEEN THESEASIDE BASIN WATERMASTER AND MARTIN B. FEENEY FOR PROFESSIONAL SERVICES TO IMPLEMENT THE SEASIDE GROUNDWATER BASIN WATERMASTER SEAWATER SENTINEL MONITORING WELLS WORKPLAN**

THIS AGREEMENT is entered into this 20th day of February 2007, by and between Martin B. Feeney, hereinafter called "Consultant," and the Seaside Basin Watermaster, hereinafter called "Watermaster" or "Seaside Basin Watermaster."

SECTION I
SCOPE OF SERVICES

Watermaster hereby engages Consultant for the conduct and preparation of certain analyses, studies, and planning procedures as set forth in **Exhibit A**, Scope of Services.

SECTION II
COMPENSATION

A. FEE SCHEDULE

Fees payable to Consultant for services specified herein shall be in accordance with the fee schedule in **Exhibit B**.

B. METHOD OF PAYMENT

Payment of fees shall be based on work completed, as documented in monthly billings submitted by Consultant. Work reports shall be rendered in accordance with the schedule shown in **Exhibit C**, Work Schedule. Payments are due and payable within thirty (30) days after receipt of each invoice subject to a finding by Watermaster that work performed has been satisfactory and that payment is for the work specified in **Exhibit C**, Work Schedule. Where Watermaster finds the work to be unsatisfactory, Watermaster shall describe deficiencies in writing to Consultant within ten (10) days. Twenty percent (20%) of the maximum payment shall be retained until submission of the final work product. The final invoice for work performed shall be submitted not later than sixty (60) days following completion of such work.

C. MAXIMUM PAYMENT

Payments to Consultant for services rendered and expenses incurred under this Agreement shall not exceed $850,000.

D. LATE PERFORMANCE PENALTY

Time is of the essence to this Agreement. In the event Consultant is unable to perform

satisfactory work within thirty (30) days of the date such work is due pursuant to **Exhibit C**, Work Schedule, Watermaster may, in its discretion, withhold an additional ten percent (10%) of the fees which would otherwise be payable pursuant to the fee schedule set forth in **Exhibit B**.

In the event Consultant is unable to perform satisfactory work within sixty (60) days of the date such work is due pursuant to **Exhibit C**, Work Schedule, Watermaster SHALL withhold twenty percent (20%) of the fees which would otherwise be payable pursuant to the Fee Schedule set forth in **Exhibit B**, and SHALL reduce the maximum payment stated in Section II, Paragraph C of this Agreement by twenty percent (20%). Said reductions shall be deemed liquidated damages for the untimely performance of work required by this Agreement, and the Consultant shall be deemed to have waived any claim for such fees by reason of his/her failure to perform in a timely fashion.

## SECTION III
## INSPECTION OF WORK

Authorized representatives of Watermaster shall have access to Consultant's offices or other work location during normal business hours for the purpose of review and inspection of work activities undertaken pursuant to this Agreement.

## SECTION IV
## OWNERSHIP OF PROJECT REPORT AND EQUIPMENT PURCHASED

All original documents, explanations of methods, maps, tables, computer programs, reports and other documents prepared under this Agreement and equipment purchased specifically for the project shall become the exclusive property of Watermaster. Consultant may retain copies for his/her own use.

## SECTION V
## TIME OF PERFORMANCE

Consultant shall begin work upon the effective date of this Agreement and shall complete all tasks described herein according to the schedule shown in **Exhibit C**, Work Schedule. Time is of the essence to this Agreement, and late performance shall result in a waiver of a part of the fees payable pursuant to the terms of this Agreement.

## SECTION VI
## RESPONSIBILITIES

A. Consultant represents that he/she has or will secure at his/her own expense all personnel,

materials, and related services required to perform the services under this Agreement. Consultant shall act as an independent consultant and not as an agent or employee of Watermaster. Consultant shall have exclusive and complete control over his/her employees and subcontractors, and shall determine the method of performing the services hereunder.

B. Watermaster shall provide Consultant with all relevant data and studies in its possession without charge.

C. Consultant and Watermaster staff shall coordinate and arrange for all meetings required to be held with other agencies or persons hereunder, unless otherwise specified in **Exhibit A**, Scope of Services.

D. Consultant shall be responsible for the reproduction of work produced by Consultant hereunder.

E. The officers, agents, and employees of Watermaster shall cooperate with Consultant in the performance of services under this Agreement without charge to Consultant. Consultant agrees to use such services insofar as feasible in order to effectively discharge his/her obligations hereunder and further agrees to cooperate with Watermaster's officers, agents and employees.

F. The Consultant agrees to indemnify, defend and save harmless Watermaster, its officers, agents and employees from any and all claims and losses accruing or resulting to any and all consultants, subcontractors, materialmen, laborers and any other person, firm or corporation who may be injured or damaged by the willful misconduct or negligent acts, errors, and/or omissions of the Consultant, Consultant's employees, or Consultant's subcontractors or subconsultants in the performance of this Agreement.

## SECTION VII
## INSURANCE

A. The Consultant shall procure, purchase at his/her expense and maintain in full force and effect such insurance as will protect it from claims, damages, losses, liability, costs, and expenses as set forth herein which may arise out of or result from or in any way connected with the Consultant's activities, work, services, and/or operations performed by the Consultant under this Agreement, whether such activities or operations be by itself or by any subcontractor or by any sub-subcontractor or by anyone directly or indirectly employed by any of them, or by anyone else for whose acts the Consultant or any of them is or may be liable. The procurement and maintenance by the Consultant of policies required under this Contract shall not relieve, limit or satisfy Consultant's obligation to indemnify, defend and save harmless Watermaster, its officers, directors, agents and employees.

B. Consultant represents that he/she will, prior to commencement of work pursuant to this Agreement, name and endorse on to his/her Comprehensive General Liability insurance policy Watermaster as "an insured" with respect to liability arising out of the activities, services, operations or work negligently performed by Consultant for Watermaster (ISO form CG 20 09 11 85 or its equivalence). Consultant shall obtain and keep in full force and effect insurance policies and in appropriate limits as specified by the Insurance Requirements (**Exhibit D**) and shall require any subcontractor or sub-subcontractor to provide evidence of similar liability insurance coverages.

C. Consultant shall add to his/her Comprehensive General Liability insurance policy a severability or interest clause or such similar wording if his/her policy does not automatically have this clause already written into it. Such language shall be similar to: "The insurance afforded applies separately to each insured against whom claim is made or suit is brought, including claims made or suits brought by any person included within the persons insured provision of this insurance against any other such person or organization."

D. All policies carried by Consultant shall contain a provision or be endorsed to state that coverage as respects to Watermaster shall not be suspended, voided, canceled or non-renewed except after the insurance company has given to Watermaster at least forty-five (45) days prior written notice to the address shown below prior to any such termination of coverage becomes effective.

E. Consultant shall, on all policies or coverages required to be carried by Consultant pursuant to this contract, give to Watermaster forty-five (45) days prior written notice by certified mail, return receipt requested, to the address shown below notification of any limitations, reductions or material change in coverage or in limits available.

F. Prior to the execution of the contract, Consultant shall file with Watermaster certificates of insurance of coverage actually in force that is required to be carried by Consultant pursuant to this Section VII and Insurance Requirements (**Exhibit D**). With respect to each renewal or replacement of any such insurance, the requirements of this paragraph must be complied with not less than forty-five (45) days prior to the expiration or cancellation of the policy being renewed or replaced.

G. All insurance policies carried by or available to Consultant shall be primary and not excess nor contributing with any insurance issued to or available to Watermaster. Any insurance or self-insurance maintained or carried by Watermaster shall be excess of the Consultant's insurance and shall not participate in nor contribute with such insurance carried by or available to Consultant. Watermaster will not be responsible for any payment of premiums due as a result of compliance with the terms and conditions of the insurance requirements. The cost of such insurance shall be borne solely by the Consultant.

H. In the event Consultant elects to utilize existing policies to meet insurance requirements specified herein for comprehensive general liability and or professional errors and omissions coverages, Consultant shall provide an accurate history of claims filed against either of those policies during the past twenty-four (24) months along with amounts paid and reserves outstanding.

I. Watermaster shall be under no duty either to ascertain the existence of or to examine such insurance policies or to advise Consultant in the event such insurance coverage does not comply with the requirements hereof. However, Watermaster may, at any time, and from time to time, inspect and copy any and all insurance policies, endorsements, certificates and correspondence required to be carried by Consultant pursuant to this Agreement.

## SECTION VIII
## CHANGES AND CHANGED CONDITIONS

If, during the course of the work herein contemplated, the need to change the Scope of Services or the time schedule should arise, for whatever reasons, whichever party first identifies such need to change shall notify the other party in writing (e-mail communication is acceptable). The representatives of the parties shall meet within seven (7) working days of the date of such notice, to discuss the need for change so identified and to set the proposed action to be taken by the parties. A change in the Scope of Services may also result in a change in the compensation amount. Compensation changes shall be based upon the Consultant Fee Schedule (**Exhibit B**) attached hereto. Any changes agreed to shall be documented by duly executed amendments to this Agreement.

## SECTION IX
## TERMINATION

Watermaster may terminate Consultant's services at any time by written notice to Consultant at least thirty (30) days prior to such termination. Upon receipt of written notice from Watermaster that this Agreement is terminated, Consultant shall submit an invoice for an amount which represents the value of services actually performed to the date of said notice for which he/she has not previously been compensated. Upon approval of this invoice by Watermaster, Consultant shall be paid from the sum found due after having applied the provisions of Section II, Paragraph D of this Agreement, "Late Performance Penalty," where applicable, and MPWMD shall have no further obligation to Consultant, monetarily or otherwise.

## SECTION X
## SUB-CONTRACTING AND ASSIGNABILITY

Consultant shall not sub-contract any portion of the work required by this Agreement nor otherwise assign or transfer any interest in it without prior written approval of Watermaster.

## SECTION XI
## DISCRIMINATION AND FAIR EMPLOYMENT

Attention is directed to Section 1735 of the California Labor Code, which reads as follows:

> "No discrimination shall be made in the employment of persons upon public works because of race, religious creed, color, national origin, ancestry, physical disability, mental disability, medical condition, martial status, or sex of such persons, except as provided in Section 12940 of the government code and every Consultant for public works violating this section is subject to all penalties imposed by a violation of this chapter."

The Consultant shall not willfully discriminate against any employee or applicant for employment for employment because of race, religious creed, color, national origin, ancestry, physical disability, mental disability, medical condition, martial status, or sex of such persons. The Consultant shall ensure that applicants and employees are treated without regard to their race, religious creed, color, national origin, physical disability, mental disability, medical condition, martial status or sex. Such action shall include, but not be limited to, the following: upgrading, demotion or transfer; recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship.

## SECTION XII
## INTEREST OF CONSULTANT

Consultant covenants that he/she presently has no interest and shall not acquire any interest, direct or indirect, which would conflict in any manner or degree with the performance of services required to be performed under this Agreement. For breach or violation of this warranty, Watermaster shall have the right to annul this Agreement without liability.

## SECTION XIII
## CONTINGENT FEES

Consultant warrants that he/she has not employed or retained any company or person, other than a bona fide employee working solely for the Consultant to solicit or secure this Agreement, and that he/she has not paid or agreed to pay any company, or person, other than a bona fide employee working solely for Consultant, any fee, commission, percentage, brokerage fee, gifts, or other consideration, contingent upon or resulting from the award or making of this Agreement. For breach or violation of this warranty, Watermaster shall have the right to annul this Agreement without liability, or at its discretion to deduct from the contract price or consideration, or otherwise recover, the full amount of such fee, commission, percentage, brokerage, gift or contingent fee.

## SECTION XIV
## DISPUTES

In the event of a dispute arising out of the performance of this Agreement either party shall, as soon as a conflict is identified, submit a written statement of the conflict to the other party. Within fifteen (15) working days of receipt of such a statement of conflict, the second party will respond and a meeting will be arranged not more than fifteen (15) working days thereafter to arrive at a negotiated settlement or procedure for settlement. If, within forty (40) working days from the initial filing of a statement of conflict an agreement cannot be reached, it is agreed that the dispute may be resolved in a court of law competent to hear this matter. This Agreement shall be construed in accord with California law and it is agreed that venue shall be in the County of Monterey. The prevailing party shall be awarded costs of suit, and attorneys' fees.

## SECTION XV
## NOTICES

All communications to either party by the other shall be deemed given when made in writing and delivered or mailed to such party at its respective address, as follows:

Watermaster: Seaside Basin Watermaster
2600 Garden Road, Suite 228
Monterey, CA 93940

Martin B. Feeney:

Martin Feeney
P.O. Box 23240
Ventura, CA 93002

## SECTION XVI
## AMENDMENTS

This Agreement together with **Exhibits A, B, C, and D** sets forth the entire understanding of the parties with respect to the subject matter herein. There are no other agreements expressed or implied, oral or written, except as set forth herein. This Agreement may not be amended except upon written amendment, executed by both parties hereto.

## SECTION XVII
## ATTACHMENTS

The following exhibits attached hereto and referred to in the preceding sections are, by reference, incorporated herein and made an integral part of this Agreement:

**Exhibit A.** Scope of Services
**Exhibit B.** Consultant Fee Schedule
**Exhibit C.** Work Schedule
**Exhibit D.** Insurance Requirements

IN WITNESS WHEREOF, the parties hereto have entered into this Agreement effective as of the day and year first above written.

**SEASIDE BASIN WATERMASTER**

Dated: Feb. 20, 2007 By: _____
Dewey Evans, Watermaster Executive Officer

**MARTIN B. FEENEY**

Dated: 2/20/07 By: _____
Martin B. Feeney

FEDERAL TAX IDENTIFICATION NUMBER 560-90-8421

# EXHIBIT A

**Martin B. Feeney**
*Consulting Hydrogeologist*

*P.G. 4634*
*C.E.G. 1454*
*C.Hg 145*

# SEASIDE GROUNDWATER BASIN WATERMASTER

## SEAWATER SENTINEL MONITORING WELLS WORKPLAN
## January 26, 2007

## INTRODUCTION

As part of the court decree, the Seaside Groundwater Basin Watermaster (Watermaster) is required to install a series of coastal monitoring wells for the purpose of enhancing the existing network of monitoring wells that can detect seawater intrusion into the Seaside Basin. As part of the judge's review of the Watermaster's progress, he imposed a set of deadlines for implementation of this work. The timelines set by the judge are aggressive and will be difficult to achieve without refocusing the scope and goals of this work. This document intends to detail a revised approach to the work, propose preliminary well locations, identify required permits, and suggest an achievable schedule. A preliminary estimate of costs is also provided.

## BACKGROUND

The Watermaster has initiated a multi-faceted Basin Monitoring and Management Program (MMP) that includes data collection, management and analysis, ground water modeling, and hydrogeologic analysis. This program also includes the installation of monitoring wells for purposes of refining basin hydrogeology and water quality monitoring. Because of the wells dual purpose of refining basin hydrogeology and water quality monitoring, the magnitude of the monitoring well program was large and expensive. While the insight and data from these wells may be necessary in the long run, achieving the primary goal of detecting seawater intrusion can be achieved with well designs that focus on the water quality monitoring. Hydrogeologic data and understanding that are developed as part of implementation of the coastal monitoring wells will be useful, but not the primary purpose. The decoupling of the dual purposes for installing monitoring wells allows redesign of the coastal monitoring wells, reducing their cost and speeding implementation.

The MMP approved by the judge also includes the construction of several inland monitoring wells to further the understanding of the groundwater basin. The purpose of these wells is to provide better understanding of the structure, hydrostratigraphy, and water level conditions of the inland portions of the basin. These inland wells are not part of this work plan as the purpose of these wells is significantly different than the coastal monitors.

### Previous Approach

The previous approach consisted of six monitoring well clusters. Each cluster would have four monitoring wells completed to various depths. One borehole would be drilled to the Monterey Formation and completed toward the lower portion of the aquifer system, one would be completed in the upper Santa Margarita Sandstone, and two would be completed in the overlying Paso Robles Formation. It was assumed that the deeper boring would extend as deep as 1,500 to 2,500 feet. Each well was to be constructed of PVC casing with gravel pack and perforations in the appropriate hydrostratigraphic interval. The deeper well was to be 3-inch diameter while the other wells would be 2-inch diameter. The drilling cost estimate included site preparation, well construction and development, fluid/cuttings disposal and site restoration. Total cost of the drilling program was estimated $3.8 million. The actual well sites were undetermined. The

P.O. Box 23240, Ventura, CA 93002 ♦ **Phone: 805/643-7710** ♦ e-mail mfeeney@ix.netcom.com

estimated costs did not include site selection, design, permitting, site acquisition, or construction management. These costs were estimated at approximately $550,000 which bring total project cost to $4.35 million.

The proposed approach would have allowed collection of the following data:

- Water levels in the upper and lower Santa Margarita Sandstone
- Water levels in two discrete hydrostratigraphic intervals in the Paso Robles Formation
- Water Quality sampling of the Santa Margarita Sandstone and Paso Robles Formation intervals
- Conductivity/Resistivity (Induction) surveys of entire sediment column providing indirect measurement of water quality and water quality changes.
- Base of water bearing sediments – Depth to Monterey Formation

**Revised Approach**

With the exception of distilled water, all water contains some level of dissolved minerals or salts. Typical drinking water contains less that 1,000 part per million of dissolved salts whereas seawater contains approximately 35,000 parts per million of salts. Unlike organic contaminants which degrade water with concentrations measured in parts per billion; degradation of water by seawater is the result of contamination on the parts per million or even parts per thousand basis. The addition of more salts to the water, as the result of mixing with seawater, changes the physical properties of the water such as the density of the water and, most relevant to the subject project, the electrical properties of the water.

Distilled water is essentially electrically non-conductive; with increasing amounts of salinity water becomes increasingly more conductive. As such, the electrical conductivity of water can be used to infer the salt concentration. The revised work plan relies on this principal.

The change in electrical properties with increasing salinity makes the detection of seawater contamination into an aquifer relatively easy. As the water within the aquifer becomes more saline due to the intrusion of seawater, the electrical conductivity of the formation containing the water increases relative to the value measured when the aquifer was filled with native ground water.

The revised work plan utilizes single-well monitoring sites (as opposed to the multiple wells at each site described in the existing plan). The wells would extend into and perforate the Santa Margarita Sandstone. The well would be constructed of 3-inch diameter casing to allow the periodic cased-hole conductivity/resistivity (induction) profiling of the aquifer system. This would allow detection of seawater (as measured as an increase in formation conductivity) at any depth from the top of saturation (i.e. the water table) to bottom of the well.

**Well Specifics for Each Site:**

- One 8 ¾-inch boring to 1,500 feet or Monterey Formation (whichever comes first)
- Geophysical logging (Resistivity, SP and Natural Gamma)
- 3" diameter flush threaded Sch. 80 PVC Casing into Santa Margarita Sandstone

- 100 feet of 0.032-inch horizontally-cut PVC perforations. Continuous or placed in the most productive zones – the zones a production well would be perforated
- Gravel packed in the perforated interval(s)
- Well sealed from the top of Santa Margarita Sandstone
- Well air lifted developed until clean
- Flush-grade surface vault with room for data logging equipment

Data collection from the monitoring well network would include periodic induction logging of the cased borehole and collection of physical water samples from the Santa Margarita Sandstone for calibration purposes. Successive induction logs would be overlaid on previous logs for comparison. If a significant change in conductivity was detected, a depth-specific monitoring well should be drilled at the site to provide improved understanding of the nature of the change. In addition to the indirect measurement of water quality within all portions of the Paso Robles Formation and Santa Margarita Sandstone, the wells would allow monitoring of water level conditions in the Santa Margarita Sandstone.

An example of the type of data that is collected as part of the proposed approach is presented on Figure 1. Figure 1 presents data collected recently from a coastal monitoring well. The data are taken from an induction survey conducted within a three-inch diameter monitoring well similar to the proposed design. This aquifer system has seawater at a depth of 450 feet below ground surface. The presence of seawater is indicated by the rapid increase in conductivity (decrease in resistivity) values below a depth of 450 feet. The presented data represent the baseline value. This well will be surveyed periodically. Data (curves) will be compared to detect the movement of seawater within the aquifer system at this location.

*Supplement Network Through Use of Existing Monitoring Wells.* In addition to the new wells, and the existing network of monitoring wells owned by MPWMD and California American (see attached map) there are other existing wells in the area of the proposed new wells that can be integrated into the sentinel well network. The proposed well sites are in the coastal bluffs area on the former Fort Ord. As part of the conversion of Fort Ord to civilian use, extensive subsurface exploration has been performed to assess environmental impacts of historical land use. At many locations along the coast, there remain monitoring wells that could be brought into the Watermaster's monitoring program. Many of these wells are quite shallow, but several extend to into the upper aquifer system. These wells would be useful additions to a coastal monitoring network, as many have water quality data extending back to the early 1990's.

In summary, the revised approach will allow collection of the following data:

- Water levels in the Santa Margarita Sandstone
- Collection of water quality samples from the Santa Margarita Sandstone
- Conductivity/Resistivity (Induction) surveys of entire sediment column providing indirect measurement of water quality and water quality changes

Compared to the previous approach the revised approach does not directly collect these data:

- *Base of water bearing sediments – Depth to Monterey Formation.* These data are desirable for increasing understanding of the basin structure. However, these data are very expensive, as drilling to the proposed depths requires a different class of drilling equipment, significantly raising costs. The proposed approach includes drilling into the Santa Margarita Sandstone/Purissima Formation. Within the coastal areas of the Seaside Basin, there are adequate data to project the depth to the Monterey Formation below the bottom of the borehole. In the areas where the Purissima may be encountered, this could be more problematic as there are few, if any, wells that fully penetrate the Purissima into the Monterey.
- *Water Quality sampling of the Paso Robles Formation.* The proposed approach would not allow collection of water quality samples from the Paso Robles Formation. However, the induction surveys will provide water quality data for water within the various units of the Paso Robles Formation.
- *Water levels in two discrete hydrostragraphic intervals in the Paso Robles Formation.* The proposed approach does not provide water level data from any of the various water bearing units of the Paso Robles Formation. However, some of the sites have existing shallow monitoring wells installed as part of Fort Ord clean-up investigations. Water level data from the shallow system may be available from these wells. Additionally, most of the basin's production and artificial recharge is from the confined Santa Margarita Sandstone, and water levels in this aquifer unit at the coast are the primary management tool.

## MONITORING PROGRAM

It is assumed that the new monitoring wells would be folded into the existing Seaside Basin monitoring network. It is understood that the judge has specified collection of water data on a quarterly basis from the coastal monitoring well network. This could be accomplished cost-effectively by quarterly induction profiling of the wells supported by periodic (annual) collection of water quality samples. The quarterly induction surveys could be performed by a geophysical contractor who could provide the data to the Watermaster's designated technical personnel for analysis. This approach would reduce quarterly monitoring cost significantly.

## WELL SITES

As part of the work associated with the preparation of this work plan, the team (Joe Oliver of the MPWMD and I) met with a representative of the California State Parks (Ken Gray) to identify locations for the coastal monitoring wells. The team visited and received conceptual approval for five sites in the coastal portion of Fort Ord north of Sand City, and I have identified four primary sites and one alternative location. The tentatively approved sites are shown on the attached map and are as follows:

- Range 8 – This site is at the extreme southwestern corner of Range 8. There is an existing shallow monitoring well at this site although actual depth is unknown. The well site would be with the existing paved road.
- Bunker 11 – This site is located immediately in front of the abandoned Ammo Bunker No. 11. The Ammo bunkers are planned to be maintained for public access and historical interest.
- Bunker 1–This site is located immediately in front of the abandoned Ammo Bunker No. 1.

- MCWD Lift Station – This site is located at the site of Marina Coast Water District's existing sewer lift station. There is an existing shallow monitoring well as this site. Again, its actual depth is unknown at the time of the preparation of this plan. Data on the construction of the existing well is likely available from BRAC personnel.

The site below was identified as an alternative site due to its distance from the ocean.

- Along Road – This site will be located along the existing north-south trending road. Several turn-out areas were identified that would support a well site and provide sufficient room for construction.

All of sites are located in existing roads and have sufficient previously-disturbed area for well construction staging. Additionally, each site is in an area where State Parks plans to maintain roads and access. This will allow for continued on-going access to the well sites for the purpose of collecting data.

***Alternative Sites:*** If the well sites on State Park Land become infeasible, a fall back position would be to locate the wells within the TAMC right-of-way. These sites are less favorable for coastal monitoring wells because this right-of-way is significantly farther from the ocean than the above sites.

**PERMITTING**

Permitting of the well sites will likely be the critical path issue in meeting deadlines imposed by the judge. The discussion below assumes the construction on State Parks property. Construction in the TAMC right-of-way has similar permitting requirements.

The coastal bluffs property of former Fort Ord was formally transferred from the U.S. Army to the Dept. of Interior (Nat'l Parks Service) last fall. Ken Gray's best guess is that the Nat'l Park Service could do a formal transfer to State Parks as early as this March, but based on a field meeting with Mr. Gray on 1/22, the fact that this property has not yet been formally transferred to State Parks does not prevent State Parks from authorizing uses such as monitor wells, because State Parks currently has "operational authority" for the property. Assuming Mr. Gray's assumption is correct the permitting process would likely include:

- State Parks – Based on discussions with Mr. Gray, the Watermaster could submit a project description and an application for permission to install the monitoring wells. The application would need to include assessment of potential impacts for their review prior to granting the permit.
    - The key issue will likely be construction impacts on:
        - Biological resources, including habitat for special-status wildlife species (Smith's blue butterfly, snowy plover, and black legless lizard) and presence of special-status plant species (Monterey Spineflower, Wallflower, and Sand Gilia). If the land has been transferred to State Parks, implementation of the Habitat Management Plan would likely mitigate for these impacts, except for state listed plants. If land has not been transferred and remains federal property, there are existing biological opinions that would likely cover impacts to all these species.

- Coastal zone analysis/consistencies (aesthetics, impacts on visitor serving uses and coastal access)
- Other construction impacts (air quality, noise, etc.) - These can be easily mitigated with standard construction practices.

- CEQA - Assuming that the project can be designed and implemented without significant environmental impacts (i.e., possible biological resources impacts discussed below which require more comprehensive mitigation); a Notice of Exemption could be the appropriate document. This assumes that the project will not involve major controversy or objection.
- NEPA - The project would not be subject to NEPA if the US Army has conveyed or will convey ownership of the property to State Parks prior to commencement of construction. Ken Gray has indicated that he believes that State Parks has operational control giving them the permitting authority. If Mr. Gray's assumption is wrong regarding permitting authority, it is believed that there is a categorical exemption for monitor wells under NEPA.
- Coastal Act (California Coastal Commission) - The project would require, at a minimum, an "Amendment to an Existing Coastal Development Permit" which would be considered "Immaterial" (staff level approval). It may be considered "Material" (requiring approval by the Coastal Commission; therefore more coordination and longer time period). If there is no existing permit covering related activities, another process that would be expeditious would be for the project to be considered *de minimus* and receive a waiver from the Coastal Commission staff.

The sites have been selected to avoid impacts to habitat. However, if construction activities are deemed to potentially disturb sensitive habitat, the permits listed below would be necessary. However, the sites likely would be moved to avoid these issues.

- CA Endangered Species Act (ESA) Take permit (California Dept. of Fish and Game) - if the Sand Gilia is located at any sites that may be disturbed and the land has been transferred.
- Federal ESA Take permit (USFWS) - If habitat for snowy plover and/or Smith's blue butterfly is to be disturbed and the land has been transferred.

In addition to the above permits, well construction permits will be required from Monterey County Environmental Health Department. These permits are essentially ministerial and require 2 to 3 weeks to be issued. These permits can only be issued to the drilling contractor.

Timing of permits:

- Timing of State Park Permit: 1 month or less from submission of project definition and supporting documentation
- Well Construction Permits – 2 to 3 weeks.
- CEQA – Assuming a Notice of Exemption: 1 month or less from project definition.
- NEPA – Not Required
- Coastal Commission (if required): minimum 2 months, if Coastal Commission hearing required several months to a year.

- CA / Federal ESA: 6 months to a over a year depending upon resources affected and ownership/designation of land

## SCHEDULE

Permitting and site acquisition will control schedule. After permitting is completed, sentinel wells can be installed within 6 weeks. Initial data from the wells would be available within 10 weeks.

## COST

### Permitting Costs:

Permitting Costs are always difficult to estimate, as the process can be unpredictable. Assuming the permitting process is somewhat similar to that discussed above; permitting costs are estimated at $ 35,000.

### Well Construction/Hydrogeologic Data Collection Costs:

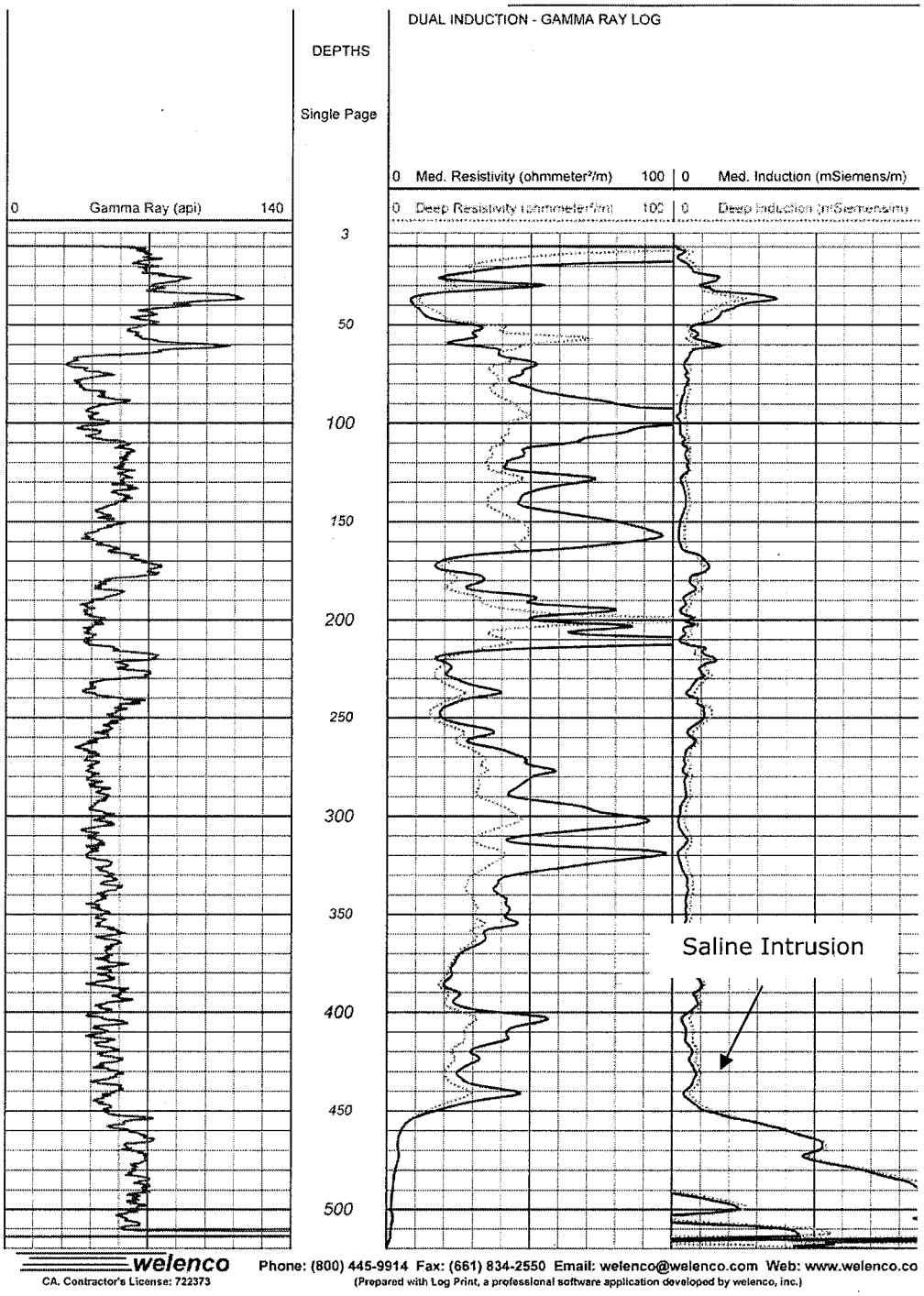
Cost for program management, well construction, hydrogeologic supervision and analysis, monitoring network review and initial data collection are estimated at between $850,000.

### Annual Monitoring Program Costs:

As proposed the 4 coastal sentinel wells would be induction logged quarterly and water quality samples collected annually. This cost of this limited program is estimated $18,000 per year. This would include approximately $12,000 for induction logging ($3,000 per quarter) and annual collection and analysis of water quality samples of approximately $6,000.

~//~

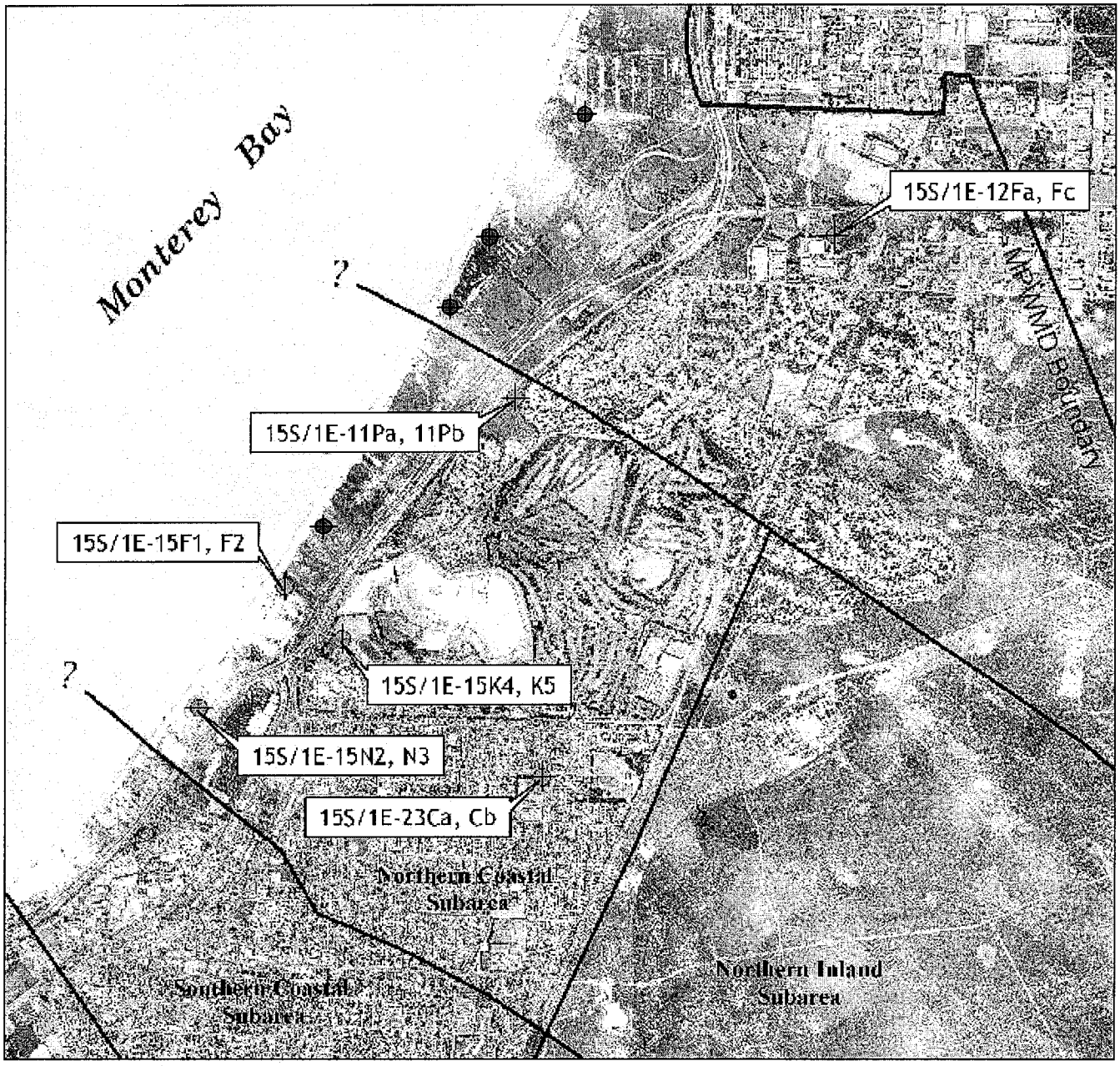
# FIGURE 1 – CASED HOLE INDUCTION LOG



## SITE MAP

[Hard Copy to Follow]

# SEASIDE BASIN
# COASTAL WATER QUALITY
# MONITORING WELLS



**Martin B. Feeney**
*Consulting Hydrogeologist*

*P.G. 4634*
*C.E.G. 1454*
*C.Hg 145*

## SCOPE OF WORK

The following scope of work has been developed to perform the work described in the Seawater Sentinel Monitoring Wells workplan dated January 26, 2007.

**Task 1 – Project Management/Meetings** – This task includes project management and meetings. It is assumed that 3 meetings in Monterey/Seaside Area will be required during the course of the project. It is assumed that Project Manager and Lead Field Geologist may be required to attend either Watermaster Board or TAC meetings.

**Task 2 – Permitting** – This task will be lead by Denise Duffy and Associates. Their work will include preparation of permit application to the State Parks, inducing biologic assessments, and CEQA compliance issues. Their scope of work is attached.

**Task 3 – Identify Existing Wells for Incorporation in Monitoring Network** – This task will include review of available data regarding existing wells on the former Fort Ord that may be useful for seawater intrusion monitoring. Well construction and data histories will be reviewed to evaluate whether these wells are appropriate for inclusion in the Monitoring Well Network.

**Task 4 – Well Construction** – This task will include construction of the 4 wells as specified in the work plan. This task will also include coordination of drilling contractor activities, geologic and geophysical logging of each well, and documentation of the activities and data collected. For budgetary purposes, it is assumed that each well can be drilled and developed in 10 work days.

**Task 5 – Initial Data Collection --** After completion and development of each well, water quality samples will be collected and an initial "baseline" induction log will be run to measure formation conductivity/resistivity. The induction log can then be used as a point of comparison with subsequent induction logs allowing detection of changes in pore fluid conductivity, an indicator of seawater intrusion. Water quality samples collected be taken to State Certified Laboratory and analyzed for general mineral constituents.

**Task 6 – Reporting** – After completion of the field program, collected data will be tabulated and summarized in brief report. The report will include "as-built" construction, geologic and geophysical logs, hydrogeologic interpretations and a brief summary of operations.

## COSTS

Costs for the proposed project are not complete finalized. Due to the tight schedule with preparing this scope of work some project items are estimated. Additionally, costs assume relatively simple permitting of the selected sites. If the sites change or the permitting becomes more complicated, the costs for permitting could change.

Cost for well construction, monitoring well network review, initial data collection and reporting are estimated at approximately $850,000.

## SCHEDULE

Schedule will be controlled by permitting. Permitting will be initiated immediately after authorization. Best case scenario would be to complete permits in 10 weeks from authorization. If permitting becomes more complicated, the schedule will need to be extended. After

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permitting, monitoring wells can be installed within an additional 10 weeks, contingent on drilling contractor availability.

## PROJECT PERSONNEL

As of this writing, the provisions for staffing for this project are not finalized. I will serve as project manager and project geologist. Because of the extended construction schedule, contract personnel from a qualified hydrogeologic consulting firm of my choosing will assist me.

The permitting work will be performed by Denise Duffy and Associate, Inc. (DDA). DDA is a Monterey-based planning and permitting firm. They have done extensive work on permitting and CEQA on the former Fort Ord. They long standing personal relationships with the personnel of the various agencies involved in the permitting process.

## QUALIFICATIONS

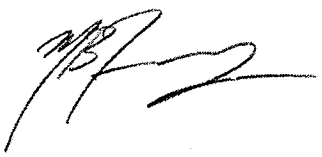
I am a Professional Geologist licensed in the State of California with specialty certifications in engineering geology and hydrogeology. I have 24 years of professional consulting experience in the field of hydrogeology, ground water development, ground water recharge augmentation, and ground water resources management. I have applied this experience to recharge, desalination, water well and basin management projects internationally. During my career I have designed and managed the construction of over 70 municipal wells with depths to 2,500 feet, diameters to 24-inches and discharge rates of up to 6,000 gpm. I have experience with more than 200 monitoring well constructions. I have significant experience in drilling and well construction technology as well as the assessment and rehabilitation of existing wells. I have experience with all types of well rehabilitation techniques including chemical and mechanical treatments, timed-charge methods, liners, and in-situ methods. I have been involved in the successful remediation of well performance problems including sanding and declining production rates due to encrustation or iron bacteria. I have experience in well field operations for purposes of optimizing water quality or water quantity. A summary of well projects and my resume are attached.

## CONTRACTING/INSURANCE

It is assumed that the Watermaster will utilize their standard contract for professional services. Please provide a copy as soon as possible for review by my insurance carrier. Alternatively, I would be happy to provide a copy of my standard agreement. Please let me know your preference. I maintain general, automobile, and insurance coverage with limits of $1,000,000. I maintain professional errors and omissions insurance at $2,000,000.

I appreciate the opportunity to be involved with this project. Please call if you have any questions.

Sincerely,



Attachment: Denise Duffy Associates Proposal

# Detailed Costs

**Seaside Groundwater Basin Watermaster**

## SWI Sentinel Wells - 4 well alternative

*PRELIMINARY*

**BUDGET** **$847,640**

### Professional Service

| TASK | DESCRIPTION | HOURS | FEE | Prin $150 | Prin Field Rate $120 | Prof $115 | Assoc $100 | Word Proc. $50 | Data Entry $40 | Graphics $50 |
|---|---|---|---|---|---|---|---|---|---|---|
| Task 1 | Project Management/Meetings | 105 | **15,250** | 100 | | | | 5 | | |
| Task 2 | Permitting | 60 | **8,300** | 40 | | 20 | | | | |
| Task 3 | Network Review | 30 | **3,000** | 2 | | 20 | | 4 | | 4 |
| Task 4 | Well Construction | 498 | **58,150** | 40 | | 450 | | 4 | | 4 |
| Task 5 | Initial Data Collection | 42 | **4,900** | 2 | | 40 | | | | |
| Task 6 | Reporting | 76 | **8,000** | 16 | | 40 | | 10 | | 10 |
| | **TOTAL (LABOR)** | **811** | **97,600** | **200** | | **570** | | **23** | | **18** |

### Other Direct Charges (ODC)

| | | Number | Rate$ | Fee |
|---|---|---|---|---|
| Task 2 | Permitting - Denise Duffy | 1 | 34040 | 34,040 |
| Task 4 | Drilling - Bradley | 6000 | 115 | 690,000 |
| Task 4 | E-logs | 4 | 1500 | 6,000 |
| Task 4 | Well Permits | 4 | 1500 | 6,000 |
| Task 5 | Induction Logs | 4 | 1000 | 4,000 |
| Task 5 | Laboratory Services | 4 | 400 | 1,600 |
| | Per diem | 60 | 140 | 8,400 |
| | SUBTOTAL (ODC) | | | **750,040** |

**TOTAL COST** **$847,640**

**Seaside Basin Monitoring Wells**
**Denise Duffy & Associates'**
**Proposal for Environmental Review and Permitting Assistance**
**January 26, 2007**

This constitutes DD&A's scope and budget estimate for conducting California Environmental Quality Act (CEQA) processing and providing permitting assistance for the Seaside Basin Monitoring Wells Project. The project involves installation and operation of up to five monitoring wells within the Fort Ord Dunes State Park area of the Ord Community (former Fort Ord). Total land disturbance would be less than one acre, thereby avoiding the requirement for a California Regional Water Quality Control Board (RWQCB) Construction Storm Water Permit. The sites will be selected to avoid biological resources (including special status species and their habitat) to the extent possible. The improvements would include staging and drilling the groundwater monitoring wells and ongoing data collection to establish water quality in the Seaside Basin Aquifer. Any drilling fluids or soils displaced during well construction will be contained in onsite tankage for legal disposal. For this project, DD&A has been requested to prepare a proposal to provide CEQA Compliance and Permitting Services for these improvements.

## SCOPE OF WORK

### Task 1: Project Initiation

The DD&A team will attend one kick-off meeting with the project team to finalize the scope of work for the project, identify data needs, confirm deliverables, and establish schedules. It will also be important to develop early on in the process a clear purpose and need statement, comprehensive project description. DD&A will work with the project team to develop these items.

### Task 2: Research/Initial Study Checklist/CEQA Determination

DD&A will research background materials, including the Fort Ord Dunes State Park Initial Public Use Access Management Plan, and the Fort Ord Dunes State Park Master Plan, Ord Community Water and Wastewater System Master Plans, City of Seaside General Plan and EIR, relevant Seaside Basin environmental and technical documents, and the CEQA Guidelines, in order to fully understand available background materials for the projects and to satisfy the environmental processing for the projects.

This task also includes a field visit and site review by DD&A which should be conducted with key project team members. The field review will include DD&A Natural Resources Division staff to assess existing environmental conditions and identify any potentially significant impacts to biological resources. Because all work is proposed primarily within already disturbed areas, it is anticipated (and assumed for the purposes of the budget) that no significant biological impacts will be identified or that the project can be redesigned to avoid special status species and their

habitat. *Note: In order to conduct an adequate field review and to complete Task 2, the project team must provide DD&A with a topographic map or an aerial photograph outlining the areas at each lift station that would be disturbed, graded or otherwise impacted by the projects.*

After review of relevant background information and conducting the site review, DD&A will prepare an Initial Study Checklist for the project that complies with CEQA and would provide an e-mail memo to the project team confirming whether the project is exempt from CEQA. For those projects that are considered to be exempt from CEQA and that will not have a significant effect on the environment based on the Initial Study Checklist, a Notice of Exemption (NOE) is the recommended CEQA compliance document. Specifically, the project may qualify for exemption under "Class 6" [CEQA Guidelines section 15306 (Information Collection)]. This section provides an exemption for "basic data collection, research, experimental management, and resource evaluation activities which do not result in a serious or major disturbance to an environmental resource. These may be strictly for information gathering purposes, or as part of a study leading to an action which a public agency has not yet approved, adopted, or funded." The exception to the above analysis is projects for which there is vocal opposition. An NOE as the CEQA compliance document is the most risky process to comply with CEQA. Therefore, if public or agency opposition exists, an NOE may not be adequate due to the risk of lawsuit.

The budget assumes that the project will be determined exempt from CEQA and DD&A will prepare the NOE as described in Task 3. In the event that the improvements do not qualify for an exemption, DD&A is available to prepare an Initial Study/Mitigated Negative Declaration (IS/MND). DD&A can provide a scope of work to prepare an IS/MND for the wells if they do not qualify for a NOE or the lead agency otherwise chooses to prepare an IS/MND. Based on the results of Task 2, DD&A would prepare a budget and scope for the IS/MND.

## Task 3: Prepare Draft and Final NOE

Assuming the project qualifies for a CEQA exemption, DD&A will prepare a Draft NOE and attach the IS Checklist per the CEQA Guidelines, which includes a project description and documentation that the project would not create any environmental impacts. California State Parks (State Parks) is assumed to be the lead agency, although if the Water Master or other entity assumes the role of lead agency, the budget and scope are not anticipated to change substantially.

DD&A will submit an electronic copy of the Draft NOE and IS Checklist for review and comment to the project team and State Parks, and will be available to meet to discuss comments and revisions. DD&A assumes that the project team and State Parks will provide one set of written comments each, either in letter form or on a single copy of the document. If additional revisions become necessary, DD&A will perform this out-of-scope work on a time-and-materials basis.

After review of the Draft NOE and IS Checklist by State Parks and the project team, DD&A will revise the documents based on the comments received. After project approval and receipt of the appropriate fee from the project team, DD&A will then submit the appropriate number of copies of the Final NOE and IS Checklist to State Parks and the County Clerk for posting and filing for a 35-day period.

## Task 4: Meeting/Hearing Attendance

DD&A has provided budget to attend one (1) meeting on the environmental documentation and related issues. Additional meeting attendance associated with permitting are provided in Task 6 (below). The attendance at additional meetings by DD&A would be billed on a time-and-materials basis.

## Task 5: Project Management

DD&A will provide project management services which include client and agency communication, scheduling, contract management, and administration.

## Task 6: Permitting

Permitting of the wells will likely be the critical path issue in meeting deadlines imposed by the Seaside Basin adjudication judge. The discussion below assumes the following; if one or more of these conditions do not apply, an amendment to this scope of work and budget would be necessary:

- Construction on State Parks property or other condition eliminating the requirement for National Environmental Policy Act (NEPA) compliance due to federal ownership.[1] If this assumption is wrong regarding permitting authority, it is believed that there is a NEPA Categorical Exclusion (comparable to the Categorical Exemption process under CEQA) for monitoring wells under. Completion of the required paperwork for the Categorical Exclusion is not included in this scope of work because it is assumed to be performed by the lead federal agency (in this case the National Park Service).
- Construction disturbance of less than one acre; precluding CRWQCB Stormwater Permit
- No special status plant or wildlife species will be directly impacted by the project.
- Existing habitat management plans exist to mitigate for minor disturbance to special status wildlife habitat.

The following approvals and/or permits would be anticipated to be required based on the above assumptions:

***State Parks Authorization***
Based on discussions with Ken Gray, State Parks, the project team could submit project description and an application for permission to install the monitoring wells. The application would need to include assessment of potential impacts for their review prior to granting the permit.

[1] The coastal bluffs property of former Fort Ord was transferred from the U.S. Army to the U.S. Dept. of Interior (National Parks Service) in approximately fall of 2006. State Parks personnel estimate that the National Park Service could do a formal transfer to State Parks as early as this March, but based on a field meeting with Ken Gray on January 22, 2007, State Parks has the operational authority to allow uses such as monitor wells.

The key issues will likely be construction impacts on:

- Biological resources, including habitat for special-status wildlife species (Smith's blue butterfly, snowy plover, and black legless lizard) and presence of special-status plant species (Monterey spineflower, wallflower, and sand gilia). If the land has been transferred to State Parks, implementation of the Fort Ord Habitat Management Plan would likely mitigate for these impacts, except for state listed plants. If land has not been transferred and remains federal property, there are existing biological opinions that would likely provide mitigation for impacts to these species.
- Coastal zone analysis/consistencies (aesthetics, impacts on visitor serving uses and coastal access)
- Other construction impacts (air quality, noise, water quality, etc.)

***California Coastal Act Coastal Development Permit (California Coastal Commission)***

The project would require, at a minimum, an "Amendment to an Existing Coastal Development Permit" which would potentially be considered "Immaterial" (staff level approval). It may also be considered "Material" by the Coastal Commission staff; and therefore may require approval by the Coastal Commission and the associated longer and more complex process (not anticipated or assumed in the budget estimate). If there is no existing permit covering related activities, another process that would be expeditious would be for the project to be considered "de minimus" and thereby receive a waiver from the Coastal Commission staff. DD&A is prepare to work with the project team to prepare the permit packages for the Coastal Development Permit and to provide coordination with Coastal Commission staff as needed to secure the relevant permits if an "Immaterial Amendment" or a "De Minimus Waiver" is deemed to be appropriate.

***State and Federal Endangered Species Act Permits (not included in budget estimate)***

The sites have been selected to avoid impacts to sensitive species and their habitat. However, if construction activities are deemed to potentially disturb sensitive habitat and the project is not redesigned to avoid the species and habitat, the permits listed below may be necessary.

- California Endangered Species Act (CESA) Section 2081 Take Permit (California Department of Fish and Game)
- Federal Endangered Species Act Section 7 or 10 (depending upon ownership of property) Take permit (United States Fish and Wildlife Service)

Based on input from the project team, DD&A assumes the above permits will not be required, therefore, is not including this as a task within the budget estimate. If they are found to be necessary, existing HMPs and/or Biological Opinions may be relied upon to mitigate impacts, and DD&A is available to assist with permit applications and processing for an additional fee.

***Well Drilling Permits***

In addition to the above permits, well construction permits will be required from Monterey County Environmental Health Department. These permits are essentially ministerial and require 2 to 3 weeks to be issued. These permits can only be issued to the drilling contractor. DD&A will not be responsible for assisting with receipt of these permits.

## SCHEDULE

DD&A is available to begin work on this project immediately and will commit the necessary staff resources to complete the project. As part of Task 1, a schedule will be developed to meet the needs of the project team. The NOE process typically requires 1.5 to 2 months to complete, including the 35-day posting period, but can be expedited if necessary.

The following are the estimate timeframes for preparing and receiving the relevant permit approvals:

- State Park Authorization: 1 month or less from submission of project definition and supporting documentation (filing of the NOE is expected to be required prior to authorization by State Parks)
- Well Construction Permits: 2 to 3 weeks
- Coastal Commission (if required): minimum 2 months, if Coastal Commission hearing required several months to a year.
- CA / Federal ESA (not anticipated or included in the budget estimate below): 6 months to over a year depending upon resources affected, status of management plans, and ownership/designation of land

## BUDGET

The fees required to complete the above-described scope of work tasks are shown in the attached budget. The total fixed fee budget for Tasks 1, 2, 3, 4 and 5 is $14,600.

Due to the unknown level of effort needed to provide the services outlined in Task 6, this task will be billed in accordance with the time and materials actually expended and the budget for this task is estimated as a not-to-exceed of $15,000. In addition to the time required to compile application materials (including one round of revisions) and conduct telephone and e-mail correspondence, we anticipate that at least one coordination meetings with each of the responsible permitting agencies will be necessary. This task may require an amendment if the level of effort exceeds that shown in the budget. If the actual work effort cost reaches 90% of this estimate, DD&A will alert the client and request an amendment.

**Seaside Basin Monitoring Wells Project**

| TASKS # | Task Description | Denise Duffy Principal | Alison Imamura Project Manager | Erin Harwayne Environmental Scientist | Assistant Planner | Graphics | Administration | Task Total |
|---|---|---|---|---|---|---|---|---|
| | **Rate** | **$ 185** | **$ 115** | **$ 95** | **$ 75** | **$ 65** | **$ 50** | |
| 1 | Project Initiation/Kick-off Meeting | 4 | 12 | 8 | 6 | | 2 | **$ 3,430** |
| 2 | Research/Initial Study Checklist/CEQA Determination | 2 | 16 | 20 | 32 | 6 | | **$ 6,900** |
| 3 | Prepare Draft and Final NOE* | 2 | 6 | | 12 | 4 | 2 | **$ 2,320** |
| 4 | Meeting/Hearing Attendance | | 6 | | | | | **$ 690** |
| 5 | Project Management | 2 | 4 | | | | 2 | **$ 930** |
| **Total Hours** | | 10 | 44 | 28 | 50 | 10 | 6 | **148** |
| **Total DDA cost by person** | | **$ 1,850** | **$ 5,060** | **$ 2,660** | **$ 3,750** | **$ 650** | **$ 300** | **$ 14,270** |

| **Estimated Expenses** | |
|---|---|
| Reproduction (assumes that drafts will be submitted electronically only; hard-copies will be made of the Final NOE/checklist for County Clerk and OPR only) | $ 200 |
| Postage, phone, fax | $ 50 |
| Mileage | $ 80 |
| **TOTAL EXPENSES** | **$ 330** |

| **Total Estimated Cost (without Task 6):** | **$ 14,600** |
|---|---|

* This budget assumes that special status species or their habitat will **NOT** be adversely affected by the project construction, and it does not include permitting assistance (Task 6, which is estimated to be $15,000 for CDP and State Parks) or NEPA compliance documentation.

# EXHIBIT B

**Martin B. Feeney**
*Consulting Hydrogeologist*

*P.G. 4634*
*C.E.G. 1454*
*C.Hg 145*

# Martin B. Feeney, PG, CEG CHg
# Consulting Hydrogeologist

## Fee Schedule 2007

| *Professional Services* | |
|---|---|
| Principal Hydrogeologist | $150/hour |
| Principal Hydrogeologist (field) | $115/hour |
| Project Hydrogeologist | $115/hour |
| Associate Hydrogeologis t | $90/hour |
| Word Processor | $50/hour |
| Illustrator | $50/hour |

| *Equipment* | |
|---|---|
| Data Logger and Transducer | $125/day |
| Conductivity Meter | $75/day |
| Turbidity Meter | $75/day |

| *Indirect Charges* | |
|---|---|
| Reproduction | Cost + 15% |
| Outside Services | Cost + 15% |
| Laboratory Services | Cost + 15% |
| Mileage (outside 100 mile radius) | $0.40/mile |

P.O. Box 23240, Ventura, CA 93002 ♦ **Phone: 805/643-7710** ♦ e-mail mfeeney@ix.netcom.com

# EXHIBIT C

# Seaside Basin Watermaster Sentinel Wells Project

## *Work Schedule*

*Weeks after Contract Execution*

| *Task* | *Description* | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Task 1 | Project Mangement/Meetings | | | | | | | | | | | | | | | | | | | | |
| Task 2 | Permitting | | | | | | | | | | * | | | | | | | | | | |
| Task 3 | Well Network Review | | | | | | | | | | | | | | | | | | | | |
| Task 4 | Well Construction | | | | | | | | | | | | | | | | | | | | |
| Task 5 | Initial Data Collection | | | | | | | | | | | | | | | | | | | | |
| Task 6 | Reporting | | | | | | | | | | | | | | | | | | | | |

*Permitting could be complicated by agency requirements. This could extend permitting timeline, and construction start date.

# EXHIBIT D

## INSURANCE REQUIREMENTS

I. Consultant shall provide evidence of valid and collectible insurance carried for those exposures indicated by an "X".

A. _X_ Professional Liability Errors & Omissions
B. _X_ Workers Compensation and Employers Liability
C. _X_ Automobile Liability - "Any Auto - Symbol 1"
D. _X_ Comprehensive General Liability, including Bodily Injury, Property Damage and Personal Injury
E. _X_ Owners & Contractors Protective
F. ____ Protection & Indemnity (Marine/Aviation)

II. The minimum limit of protection provided by insurance policies for each of the coverages listed above shall be not less than $1,000,000. The procurement and maintenance by the Consultant of the policies required to be obtained and maintained by Consultant under this contract shall not relieve or satisfy Consultant's obligation to indemnify, defend and save harmless the Seaside Basin Watermaster.

III. Evidence of insurance carried shall be certificates of insurance for the current policies. The Seaside Basin Watermaster shall be listed as a certificate holder on the Consultant's Comprehensive General Liability insurance policy, and the policy must be endorsed to provide a forty-five (45) day prior written notice of cancellation.

IV. The Seaside Basin Watermaster requires that all Consultants carry a commercial liability policy written on a broad comprehensive general liability form.

A. Such protection is to include coverage for the following hazards, indicated by an "X":

1. _X_ Premises and Operations
2. _X_ Products and Completed Operations
3. ____ Explosion Collapse and Underground
4. _X_ Broad Form Blanket Contractual
5. _X_ Broad Form Property Damage
6. _X_ Personal Injury, A, B & C
7. _X_ Employees named as Persons Insured
8. _X_ Protective and/or Contingent Liability (O&CP)

B. The "Persons Insured" provision on each comprehensive general liability policy shall include as an insured the "Seaside Basin Watermaster, its officers, directors, agents and employees."

C. This policy shall contain a severability of interest clause or similar language to the following:

"The insurance afforded applies separately to each insured against whom claim is made or suit is brought including claims made or suits brought by any persons included within the persons insured provision of the insurance against any other such person or organization."

D. All policies shall contain a provision that the insurance company shall give the Watermaster at least forty-five (45) days prior written notice mailed to the address shown below prior to any cancellation, lapse or non-renewal. The 45-day written notice must be shown on all certificates of insurance.

E. Certificates of insurance for the current policies shall be delivered by the Consultant to the Watermaster Executive Officer as verification that terms A, B, C and D have been met.

V. All insurance correspondence, certificates, binders, etc., shall be mailed to:

Seaside Basin Watermaster
2600 Garden Road, Suite 228
Monterey, CA 93940

VI. All policies carried by the Consultant shall be primary coverage to any and all other policies that may be in force. The District shall not be responsible for payment of premiums due as a result of compliance with the terms and conditions of the insurance requirements.

VII. All such policies of insurance shall be issued by domestic United States insurance companies with general policy holders' rating of not less than "B" and admitted to do business in the State of California. The policies of insurance so carried shall be carried and maintained throughout the term of this contract.