

# MEETING NOTICE AND AGENDA

## **TECHNICAL ADVISORY COMMITTEE OF THE SEASIDE BASIN WATER MASTER**

**DATE: Wednesday, April 8, 2009**

**TIME: 1:30 p.m.**

**LOCATION: City of Seaside City Hall – Portable Buildings Conference Room  
440 Harcourt Avenue  
Seaside, CA 93955**

*If you wish to participate in the meeting from a remote location, please call in on the Watermaster Conference Line by dialing (877)810-9415. Use the Access Code of 4560043.*

### **OFFICERS**

**Chairperson: Diana Ingersoll, City of Seaside**

**Vice-Chairperson: Tom. Bunosky, California American Water Company**

### **MEMBERS**

**California American Water Company**

**City of Del Rey Oaks**

**City of Monterey**

**City of Sand City**

**City of Seaside**

**Coastal Subarea Landowners**

**Laguna Seca Property Owners**

**Monterey County Water Resources Agency**

**Monterey Peninsula Water Management District**

**Public Member (John Fischer)**

### **Agenda Item**

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| <b>6. Other business</b>  |           |
| <b>7. Set next meeting date for Wednesday May 13, 2009 at 1:30 p.m.<br/>    To be held at the Seaside City Hall Portable Office Buildings Conference Room</b> |           |

In compliance with the Americans with Disabilities Act, the City of Seaside does not discriminate against persons with disabilities. Both Seaside City Hall and the Portable Office Buildings Conference Room are accessible facilities. If you wish to attend this meeting and you will require assistance in order to participate, please contact the Office of the City Clerk (831) 899-6707 at least three days in advance of the event to make necessary arrangements. If you need assistance in speaking on a specific item noted on the agenda, please inform staff as to which item you would like to comment on and arrangements will be made for you to participate. Portable microphones and assisted listening devices are available upon request.

**SEASIDE BASIN WATER MASTER  
TECHNICAL ADVISORY COMMITTEE**

**\* \* \* AGENDA TRANSMITTAL FORM \* \* \***

|  |  |
|--|--|
| <b>MEETING DATE:</b>   | April 8, 2009                            |
| <b>AGENDA ITEM:</b>  | 1.A                                      |
| <b>AGENDA TITLE:</b>   | Approve Minutes from March 11, 2009      |
| <b>PREPARED BY:</b>  | Robert Jaques, Technical Program Manager |
| <b>SUMMARY:</b><br><br>Draft Minutes from this meeting were emailed to all TAC members. Proposed changes have been included in the attached version. |  |
| <b>ATTACHMENTS:</b>  | Minutes from this meeting                |
| <b>RECOMMENDED ACTION:</b>   | Approve the minutes                      |

**D-R-A-F-T**  
**MINUTES**

**Seaside Groundwater Basin Watermaster  
Technical Advisory Committee Meeting  
March 11, 2009**

**Attendees: TAC Members**

City of Seaside – Diana Ingersoll, Rick Riedl  
California American Water – Tom Bunosky  
City of Monterey – No Representative  
Laguna Seca Property Owners – No Representative  
MPWMD – Joe Oliver  
Public Member – John Fischer  
MCWRA – Rob Johnson  
City of Del Rey Oaks – No Representative  
City of Sand City – Steve Matarazzo  
Coastal Subarea Landowners – No Representative

**Watermaster**

Technical Program Manager - Robert Jaques

**Consultants**

HydroMetrics LLC - Derrick Williams and Georgina King (by telephone)

**Others:**

RBF Consultants – Paul Findley  
MCWD – Brian True  
MRWPCA – Jim Crook

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The meeting was called to order at 1:35 p.m.

**1. Administrative Matters:**

**A. Approve Minutes from February 11, 2009**

Mr. Bunosky noted that he had attended the February 11, 2009 Watermaster TAC meeting in person rather than by telephone.

Mr. Oliver commented that he did not recall making the comment in the fourth paragraph of page 7 of the agenda packet, and requested that it be deleted from the minutes.

Mr. Williams requested that in the final paragraph on page 7 of the agenda packet, the term "sub-areas" be replaced with the term "sub-basins".

With these amendments made, on a motion by Mr. Bunosky, second by Mr. Fischer, the minutes were unanimously adopted.

**2. Progress Reports**

**A. MPWMD**

**B. HydroMetrics**  
**C. Database Issues**  
**D. Selection of Site for New Monitoring Well**

Ms. Ingersoll introduced these agenda items.

Mr. Jaques asked Mr. Oliver what progress was being made with regard to converting the existing well on the former Fort Ord for use as a monitoring well. He said he is setting up a meeting with the State Parks Department for this purpose in the near future.

Mr. Fischer commented that with regard to the HydroMetrics groundwater modeling workshop, he attended only as an observer.

Mr. Bunosky asked Mr. Jaques to add the time period that the "Work Performed" covers in each of the progress reports in the TAC meeting agendas.

Mr. Oliver provided the following Database update: the Watermaster "Welcome Page" is now set up to allow for general public access to the Database, although some debugging is still being done. When the debugging is complete, Mr. Oliver will e-mail the TAC listserve.

**3. Develop Information for the Board's Consideration Regarding Reducing the Operating Yield**

Ms. Ingersoll introduced this agenda item and invited comments and questions.

Mr. Bunosky asked that a wording change be made to page 17 of the agenda packet in the first full paragraph on this page to replace the words "that further complicates" with the words "pertaining to".

Ms. Ingersoll said that with regard to the discussion topic on page 17 of the agenda packet, the issue of having MCWD provide water for Seaside's golf courses will be presented to the Seaside City Council on Thursday March 19, 2009 in a workshop that will start at 5:30 PM. She also noted that Mr. Lyndel Melton of RMC will give an update on all of the water supply projects, and that other staff reports will also be given.

Mr. Jaques asked Mr. Bunosky if the CAW cutback amounts listed in the table on page 23 of the agenda packet were correct, and Mr. Bunosky confirmed that these numbers were correct.

Mr. Riedl and Ms. Ingersoll asked that language be added to page 19 of the agenda packet in the Conclusions section to state that it was the TAC's consensus that the Decision applies to the Basin as a whole.

With these corrections and revisions made, on a motion by Mr. Bunosky, second by Mr. Riedl, the Discussion Paper contained in the agenda packet was unanimously approved.

**4. Proposed Comments on the Draft EIR for the CAW Coastal Water Project**

Ms. Ingersoll introduced this item and invited comments, questions, and edits.

Mr. Bunosky asked, with regard to the comments on page 25, what authority the Watermaster has. He said the Decision seems clear on this. Mr. Jaques said he did not find clear direction on this in the Decision or the Rules and Regulations adopted by the Board.

Mr. Oliver and Mr. Bunosky said that storage agreements are required for ASR projects.

Ms. Ingersoll said that for CAW to put in new wells did not require Watermaster approval, but taking out stored water did.

Following discussion there was consensus to leave the term "approval" as-is.

There were numerous other edits and additions throughout the document. Mr. Jaques will incorporate these into a final version that will go to the Board, and will send this out via e-mail in Track-Changes form to the TAC for their final review.

There was consensus that the comments should only pertain to the Watermaster's role, and should exclude other types of comments.

Mr. Oliver commented that the Watermaster's interest is to assist with the expeditious implementation of all projects that will bring replenishment water to the Basin, or otherwise improve its condition. This should be noted in the comments.

[Note: Ms. Ingersoll and Mr. True departed the meeting at 2:58 PM at approximately this point in the agenda, and Mr. Bunosky took over as the Chair of the meeting.]

## **5. Schedule**

Mr. Oliver explained that Database problems have delayed data input thus far. He recommended consolidation of ID Nos. 7 for February, 2009 and May 2009 to a single Quarterly Report. There was consensus to accept this approach.

There were no other comments with regard to the schedule.

## **6. HydroMetrics LLC Technical Memorandum Regarding the Groundwater Model**

Mr. Williams summarized the agenda packet materials on this item.

Some edits were requested to pages 45, 46, 55, and 57.

Ms. King said that data collection is going well and extended her thanks to all who provided data.

Ms. King asked Mr. Johnson the status of a legal opinion from MCWRA with regard to overlapping jurisdictions as discussed in the Basin Management Action Plan. Mr. Johnson said he was still pursuing a response and would provide it to Ms. King as soon as he received it.

## **7. Decision of MCWRA Not to Perform Contract Services for the Watermaster in FY 08/09**

Mr. Jaques summarized the agenda packet material for this item.

Mr. Johnson said he concurred with the discussion contained in the agenda packet for this item.

Mr. Oliver asked Mr. Johnson if Ms. Thomasberg would be able to assist with a review of the Seawater Intrusion Analysis Report, and Mr. Johnson replied in the affirmative.

Mr. Fischer commented that MCWRA's decision apparently applies to the current Fiscal Year 2009, but wondered what would be the case in future years. Mr. Johnson said that the MCWRA will make a decision on that later in the current year.

**8. Martin Feeney RFS No. 2009-02 to Prepare a Basis of Design Report for the New Monitoring Well**

Mr. Jaques briefly summarized the agenda packet material for this item. There was brief discussion. On a motion by Mr. Oliver, second by Mr. Bunosky, there was unanimous approval to recommend Board approval of the RFS for Mr. Feeney.

**9. Other business**

There was no other business.

**10. Set next meeting date for Wednesday April 8, 2009 at 1:30 p.m.**

**To be held at the Seaside City Hall Portable Office Buildings Conference Room**

The next Regular TAC meeting was set for this time, date, and location.

The meeting adjourned at 4:33 p.m.

**SEASIDE BASIN WATER MASTER  
TECHNICAL ADVISORY COMMITTEE**

**\*\*\* AGENDA TRANSMITTAL FORM \*\*\***

|   |  |
|---|--|
| <b>MEETING DATE:</b>  | April 8, 2009                            |
| <b>AGENDA ITEM:</b>   | 2  |
| <b>AGENDA TITLE:</b>  | Progress Reports                         |
| <b>PREPARED BY:</b>   | Robert Jaques, Technical Program Manager |
| <b>SUMMARY:</b><br>As a regular part of most monthly TAC meetings, progress reports will be provided by the consultants and entities that are performing work on the Seaside Basin Monitoring and Management Program. From time to time there will also be a progress report from the Technical Program manager on related work. Attached are the progress reports for today's TAC meeting.<br><br>The attached Progress Reports cover the time period since the last TAC meeting held March 11, 2009 to April 3, 2009 when this Agenda packet was prepared.<br><br>Under this agenda topic TAC members are encouraged to raise any questions or issues of concern regarding these items. |  |
| <b>ATTACHMENTS:</b>   | Progress Reports                         |
| <b>RECOMMENDED ACTION:</b>  | None required – information only         |

## **Progress Report from the MPWMD**

### **Work Performed**

- Reviewed and edited draft Watermaster database “deployment guide” from software consultant Zone 24X7.
- Conducted follow up meetings and correspondence regarding procedure and schedule for planned posting of database on Watermaster website.
- Participated in office meeting and field visit with State Parks to existing coastal monitor well site being considered for addition to Watermaster monitor well network.
- Conducted follow up with Bureau of Land Management regarding potential locations for new inland monitor well.
- Continued water level and water quality data entry into Watermaster database at new host location.
- Provided historical water level and quality data from MPWMD database to Watermaster consultant (HydroMetrics) for ground water modeling.
- Continued water level and water quality data collection under enhanced monitoring program.

### **Upcoming Work**

- Process data requests from Hydrometrics for groundwater model development.
- Continue data collection efforts under RFS 2009-01 and 2009-02.
- Continue support for Watermaster database deployment under RFS 2009-03.
- Continue support for Watermaster production accounting.
- Continue negotiations with State Parks for conversion of existing coastal monitor well for Watermaster use.
- Assist with process of securing a site for new inland monitor well.
- Continue Watermaster database data compilation efforts.
- Maintain listing of recommended enhancements for future upgrade of database.
- Support Watermaster technical consultant team on document preparation efforts.

# **Progress Report from HydroMetrics**

## **Work Performed**

Work continues on development of the updated groundwater model. Data is being requested and received from a variety of sources for this purpose.

Proposed workshop dates have been emailed to TAC members and other interested parties, so that the meetings regarding selection of scenarios to be evaluated by the model, and development of protective water levels, can be scheduled.

Selection of times and dates for both of these meetings will be finalized at today's meeting.

Since the last TAC meeting, all work has been focused on the beginning phases of model development, namely data collection, model conceptualization and water budget. Specific tasks have included:

- Sending out data request emails to relevant agencies and following up on data requests,
- Compiling groundwater level data,
- Preparing GIS layers on land use (1991, 1997 and present),
- Preparing GIS layer on system losses,
- Preparing flow chart for recharge calculations,
- Preparing input file for precipitation for recharge calculations,
- Preparing input file for evapotranspiration for recharge calculations,
- Preparing master well table of all wells within model area with updated spatial data,
- Reviewing Tim Durbin model layers and comparing against well logs and published geological cross-sections.

A meeting is scheduled on April 7 with Martin Feeney to discuss conceptualization and model layering.

See the table included at the end of this progress report for a summary of requested data.

## **Upcoming Work**

Actions anticipated in the upcoming month include continued sourcing, collecting and compiling data to be used in the groundwater model, and the other items listed below. Georgina King will be in weekly contact with various parties to ensure the data are obtained as quickly and efficiently as possible.

- Complete data collection,
- Complete recharge calculations,
- Complete constructing model grid and model layers,
- Complete compilation of pumping and injection data,
- Start working on model boundary conditions, and
- Meeting to develop predictive model scenarios.

The meeting to discuss the groundwater model scenario will be held in April.

**DATA REQUEST**  
**Status as of March 31, 2009**

| <b>Agency</b>   | <b>Data Needed</b>  | <b>Date Received</b> |
|-----------------|---|----------------------|
| MCWRA           | GIS data from IGSM  |                      |
|                 | Groundwater level data for all wells within model boundary (see GIS shapefile)                        |                      |
|                 | Precipitation contours in GIS format  | 3/25/09              |
|                 | Land use (preferably GIS format)  | 3/25/09              |
| MPWMD           | Monthly production for wells in Seaside Basin   |                      |
|                 | Groundwater level data for all wells within model boundary (see GIS shapefile)                        | 3/27/09              |
|                 | Injection and artificial recharge data  |                      |
|                 | Map showing historical areas of septic tanks  |                      |
|                 | Laguna Seca golf course monthly irrigation since 1987 (include source of water)                       |                      |
| City of Seaside | Monthly production for each well  | 3/10/09              |
|                 | Map showing historical areas of septic tanks  |                      |
|                 | Current land use (GIS format)   | 3/4/09               |
|                 | Consumption   | 3/4/09               |
|                 | Bayonet and Blackhorse golf course monthly irrigation since 1987 (see MCWD backup supply on occasion) | 3/4/09               |
|                 | GIS shapefile of water mains  | 3/4/09               |
| Cal-Am          | Monthly production for each well  | 3/10/09              |
|                 | Monthly deliveries (by service area)  |                      |
|                 | Groundwater levels  | 3/13/09              |
|                 | GIS shapefile of water mains  | 3/18/09              |
|                 | GIS shapefile of service area   | 3/18/09              |
| MCWD            | Monthly production for each well  |                      |
|                 | Groundwater level data for all wells within model boundary (see GIS shapefile)                        | 3/25/09              |
|                 | GIS shapefile of water mains  | 3/23/09              |
| AMBAG           | Land use (preferably GIS format)  | 3/15/09              |
| FORA            | Land use (preferably GIS format)  | 3/15/09              |
| County Parks    | Map showing historical areas of septic tanks  |                      |

*Date originally sent out: March 3, 2009*

## **Progress Report from Martin Feeney**

### **Work Performed**

Work is proceeding on the two tasks associated with the acquisition of a suitable monitoring well site and the preparation of a basis-of-design report for the new monitoring well.

Well Siting: Work on this task has consisted of working together with Mr. Jaques and Mr. Oliver in a joint effort to negotiate with Monterey Peninsula College and the U.S. Bureau of Land Management for permission to establish a permanent monitoring well location on their properties. We are pursuing permission from both entities, although current plans calls for the construction of only one well in 2009. It is anticipated that permission will be granted by late spring by one or the other, or both, of these agencies so that construction can be scheduled for this summer. Work associated with this task has included meetings, document review and revision, and general support.

Monitoring Well Basis-of-Design: Work to date on this task has been limited as this work was just recently authorized. Work to date has included review of available hydrogeologic data for each proposed site and preliminary discussions with drilling contractors as part of developing construction costs for both nested and clustered well designs.

### **Upcoming Work**

It is anticipated that work associated with acquiring well sites will be limited because completed materials are now in the hands of decision makers.

Work associated with Basis-of-Design Report will move forward parallel with the well site acquisition/permission process. The pros and cons of nested versus clustered well designs will be discussed. Preliminary non-site-specific well designs for both nested and clustered wells will be developed, and conceptual costs for assumed depths and designs will be developed.

## **Progress Report from the Technical Program Manager**

### **A. Database Issues**

MPWMD is continuing to work toward having the Database on the Watermaster's website, and accessible to the general public with no password required, and to members of the TAC and consultants, with password access

Joe Oliver recently reported that MPWMD has completed the transfer of the database to the virtual server at the MPWMD office, and has completed the addition of a Welcome Page that will allow users to either:

1. Enter the database at the most basic level (i.e., User Access Level 5), to view and generate reports, with no username or password required, or
2. Enter the database with a username and password required, which will be pre-assigned to specific users.

When MPWMD staff was in the process of testing the function of the Welcome Page, they noted that errors popped up at two screens: (1) Secondary Information and (2) Production. These errors were

previously undiscovered. Mr. Oliver has summarized the function of the database at each User Access Level in the table below. He is in the process of working with MPWMD's database consultant to determine the most effective way of eliminating the few remaining access errors, so the database can be made accessible to TAC members and the public in general via the Watermaster's website.

In the meantime, if any TAC members would like to have access to the database, they should contact Mr. Oliver to arrange for their access.

### Seaside Basin Watermaster Comprehensive Database

#### Review of User Access Levels

March 25, 2009

| User Access Level | User Access to Database: Function / Data Category / Report Feature |                    |            |           |                     |                       |               |             |             |             |                      |              |                   |
|-------------------|--|--------------------|------------|-----------|---------------------|-----------------------|---------------|-------------|-------------|-------------|----------------------|--------------|-------------------|
|                   | Contacts   | Constituent Values | User Admin | Well List | General Information | Secondary Information | Water Quality | Depth       | Production  | Docs        | Water Quality Report | Depth Report | Production Report |
| 1                 | yes (A/E)  | yes (A/E/D)        | yes (A/E)  | yes (A)   | yes (E/D)           | yes (E)               | yes (A/E/D)   | yes (A/E/D) | yes (A/E/D) | yes (A/E/D) | yes                  | yes          | yes               |
| 2                 | yes (A/E)  | no                 | no         | yes (A)   | yes (E/D)           | yes (E)               | yes (A/E/D)   | yes (A/E/D) | yes (A/E/D) | yes (A/E/D) | yes                  | yes          | yes               |
| 3                 | yes  | no                 | no         | yes       | yes                 | no (error)            | yes           | yes         | yes         | yes (A/E/D) | yes                  | yes          | yes               |
| 4                 | yes  | no                 | no         | yes       | yes                 | no (error)            | yes           | yes         | yes         | yes (A/E/D) | yes                  | yes          | yes               |
| 5                 | yes  | no                 | no         | yes       | yes                 | no (error)            | yes           | yes         | no (error)  | yes (A/E/D) | yes                  | yes          | yes               |

**NOTES:**

- Information above represents current status of the database operation that is accessible via the MPWMD virtual server at this link: <http://205.155.68.103/wmdbs/>
- Abbreviations used above: **A = Add; E = Edit; D = Delete.**
- The following examples illustrate how to interpret the information in the above cells: At **User Access Level 1**, the user can access the **Contacts** screen, and can **Add** or **Edit** these data. At **User Access Level 3**, the user can access the **Contacts** screen to review these data only, and can not add or edit these data.
- It should be noted that currently, operation of the database results in errors when attempting to access the: (a) **Secondary Information** screen at User Access Levels 3, 4 and 5, and (b) **Production** screen at User Access Level 5 (see shaded cells above). Review of the database version that was provided from RBF Consulting in January 2009 indicates that these errors also exist in that version, but were not discovered at that time.
- It should also be noted that currently (aside from the errors noted above), the function of User Access Levels 3, 4 and 5 are all the same.
- It should also be noted that currently, users at Access Levels 3, 4 and 5 are authorized to Add, Edit or Delete well documents. This was likely not intended by the RBF programmers that did the original coding, and should be corrected in the future to limit the potential loss of damage to these stored documents.

### B. Selection of Site for New Monitoring Well

Applications have now been prepared and submitted to the U.S. Bureau of Land Management (BLM) and to Monterey Peninsula College (MPC) to install the new monitoring well on property that has already been, or will soon be, transferred to them. These sites are in the vicinity of the intersections of Eucalyptus Road and Parker Flats Road, near the impact area of the former Fort Ord inland firing range. Thus far there the feedback from both parties has been encouraging.

The MPC application is expected to go before the MPC Board of Directors at their April 28, 2009 meeting, which I will attend to respond to any questions that may arise. If the application is approved by the MPC Board, the process will then move to FORA which will be able to prepare the necessary right-of-entry documents to allow us to install the well on the MPC site prior to the property being transferred to MPC.

The BLM application is being reviewed by their inhouse permit specialist, who apparently has the authority to prepare and issue the necessary right-of-way documentation, if BLM approves the application.

Once the best site has been selected, we plan to focus all of our efforts on that one site.

The Watermaster Board approved the issuance of RFS No. 2009-02 to Martin Feeny to prepare a Basis of Design Report to begin the design process for the new monitoring well. I have given Mr.

Feeney notice-to-proceed on those portions of this work that can be completed before the specific well site has been selected. Mr. Feeney's progress report is included above under this agenda item.

**SEASIDE BASIN WATER MASTER  
TECHNICAL ADVISORY COMMITTEE**

**\*\*\* AGENDA TRANSMITTAL FORM \*\*\***

|   |   |
|---|---|
| <b>MEETING DATE:</b>  | April 8, 2009   |
| <b>AGENDA ITEM:</b>   | 3   |
| <b>AGENDA TITLE:</b>  | Preliminary Planning Discussion Regarding Scenarios to be Evaluated Using the Updated Groundwater Model   |
| <b>PREPARED BY:</b>   | Robert Jaques, Technical Program Manager  |
| <b>SUMMARY:</b>   |   |
| <p>HydroMetrics in the process of scheduling and preparing for the Workshop at which a list of Scenarios to be evaluated by the Updated Groundwater Model will be developed. It will be helpful to HydroMetrics to have some initial input from the TAC on this topic.</p> <p>Attached is a very preliminary list of some considerations that the TAC may wish to have HydroMetrics take into account as they prepare their list of proposed Scenarios to be discussed at that Workshop.</p> <p>The TAC is requested to discuss these topics and to raise other topics it would like HydroMetrics to take into account in preparing for the Workshop.</p> |   |
| <b>ATTACHMENTS:</b>   | None  |
| <b>RECOMMENDED ACTION:</b>  | Provide preliminary TAC input to HydroMetrics for their use in preparing materials for the Workshop on Scenarios the Groundwater Model should be used to evaluate |

**VERY PRELIMINARY LIST OF CONSIDERATIONS**  
**FOR HYDROMETRICS TAKE INTO ACCOUNT**  
**AS THEY PREPARE THEIR LIST OF PROPOSED SCENARIOS**  
**TO BE DISCUSSED**  
**AT THE GROUNDWATER MODELING SCENARIO WORKSHOP**

The Coastal Water Project and all of the alternatives to it include multiple ASR injection/extraction wells in the Seaside Basin, located principally along General Jim Moore Boulevard:

- What are the best location(s) for these wells in terms of raising groundwater levels to protect the existing production wells against seawater intrusion?
- With the planned injection rates described in the CWP DEIR for each of the projects, will the groundwater levels be raised to protective levels for the existing production wells, and if so, how long will this take?

One of the Watermaster's objectives is to raise groundwater levels sufficiently so as to protect the Basin against seawater intrusion. Initially it is most important to raise groundwater levels at the locations of existing production wells:

- How much replenishment water will be needed to reach protective levels at the existing production wells?
- How long will it take for these protective levels to be reached at these production wells?
- How much replenishment water will be needed to reach protective levels throughout the entire Basin?
- How long will it take for these Basin-wide protective levels to be reached?
- What approach would most effectively and most rapidly produce protective groundwater levels:
  - Continued pumping of CAW production wells at current pumping rates, and replenish the Basin through ASR wells or GWRP?
  - Continued pumping of CAW production wells but at reduced pumping rates, make up this pumping reduction by using imported water, and replenish the Basin through ASR wells or GWRP?
  - Stop pumping of CAW production wells altogether, make up this elimination of pumping by using imported water, and replenish the Basin through ASR wells or GWRP?

Is there a difference between the response of the Basin to replenishment through ASR wells compared to replenishment via surface spreading and/or vadose zone injection wells, as being considered by the GWRP? If so, which approach provides the most improvement to the Basin?

One of the components of the Regional Water Project alternative that may be able to be implemented the most rapidly is the RUWAP. The RUWAP would supply over 1,000 AFY for golf courses and landscaping in the areas overlying the Seaside Basin. This would eliminate the need for the existing Seaside Golf Course wells to be used. How much effect would this have on raising groundwater levels and the condition of the Basin in general?

The contention has been made that there is no effect on groundwater levels in other Basin subareas as a result of pumping at current pumping rates in the Laguna Seca Subarea:

- Is there a direct hydraulic connection between the Laguna Seca Subarea and the Coastal and Northern Inland Subareas?
- If so, how “connected” are these subareas, i.e. to what extent, and how rapidly, do lowering or rising groundwater levels in one subarea effect groundwater levels in other subareas?

**SEASIDE BASIN WATER MASTER  
TECHNICAL ADVISORY COMMITTEE**

**\*\*\* AGENDA TRANSMITTAL FORM \*\*\***

|  |  |
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| <b>MEETING DATE:</b>   | April 8, 2009  |
| <b>AGENDA ITEM:</b>  | 4  |
| <b>AGENDA TITLE:</b>   | Continued Development of Information for the Board's Consideration Regarding Reducing the Operating Yield  |
| <b>PREPARED BY:</b>  | Robert Jaques, Technical Program Manager   |
| <b>SUMMARY:</b>  |  |
| <p>At its March 18, 2009 meeting the Board received an oral presentation by the City of Seaside's water attorney, Mr. Russ McGlothlin, describing a proposal the City is considering as a means of averting the Court-imposed 10% pumping reduction for the remainder of Water Year 2008-2009.</p> <p>Since this proposal was viewed with optimism by the Board, the Board deferred taking action on whether or not to impose the 10% reduction in order for the proposal to be further developed by the City, and for the Budget and Finance and the Technical Advisory Committees to review the proposal and provide their findings and conclusions.</p> <p>Based on the information available to me at the time this agenda packet was prepared, I have summarized the City's proposal in <u>Attachment 1</u>. If there are any errors in my understanding of the City's proposal, Mr. Riedl will point them out at today's meeting. As noted in that attachment, the proposal has not yet been formalized. However, it is recommended that the TAC prepare a revised set of Findings and Conclusions which would be applicable in the event the proposal is formalized. Providing this information to the Board as soon as possible will enable the Board to act rapidly, when and if the City's proposal is formalized.</p> <p>A proposed revised set of Findings and Conclusions is contained in <u>Attachment 2</u>, for the TAC's consideration at today's meeting. It consists of the Findings and Conclusions that was approved by the TAC at its March 11, 2009 meeting, with revisions shown in Track Changes format to reflect the City's Proposal.</p> |  |
| <b>ATTACHMENTS:</b>  | <ol style="list-style-type: none"> <li>1. Description of the Proposal by the City of Seaside to change water sources for the irrigation of its golf courses as a means of averting the pumping reduction for this time period</li> <li>2. Proposed revised Findings and Conclusions based on the City's proposal being formalized and implemented</li> </ol> |
| <b>RECOMMENDED ACTION:</b>   | Provide final input to the Technical Program Manager regarding this topic, so revised Findings and Conclusions from the TAC can be provided to the Board at the Board's May, 2009 meeting  |

**ATTACHMENT 1**  
**DESCRIPTION OF**  
**PROPOSAL BY THE CITY OF SEASIDE**  
**TO REDUCE OR ELIMINATE PUMPING FROM ITS GOLF COURSE**  
**IRRIGATION WELLS**  
**AS A MEANS OF AVERTING THE IMPENDING 10% REDUCTION IN**  
**PUMPING**  
**REQUIRED BY THE ADJUDICATION DECISION**

**THE CONCEPT**

The City of Seaside, property owner for the Bayonet and Blackhorse golf courses, is considering a change in source for the irrigation water for these golf courses. The proposed project involves a change in water supply from the City's own wells that draw from the Seaside Basin to Marina Coast Water District (MCWD) potable water which draws its water from the Salinas Basin.

The proposed project would result in decreased groundwater withdrawals from the Seaside Basin, which would benefit the Seaside Basin by bringing it closer to its Natural Safe Yield.

The City is considering making this change in order to fulfill one of the conditions set forth in the Decision, so that a 10% pumping reduction on the Basin will not have to be imposed for Water Year 2008-2009.

**PROJECT DESCRIPTION**

The proposed project is the change in water supply source at the Bayonet and Blackhorse golf courses from the city's own wells that draw from the Seaside Basin to MCWD potable water which draws its water from the Salinas Basin to allow for alternative uses of the golf course water supply.

MCWD water is currently available at the project site, since it is used for potable purposes at the golf course clubhouse and maintenance buildings. Therefore, no physical improvements are expected to be necessary to switch to the MCWD source.

As condition of approval, the City must receive approval from MCWD to make the change in the water source for the irrigation system. MCWD will also charge for the water it delivers. The amount of this charge is currently being discussed by the City with MCWD.

**WATER USE**

Blackhorse and Bayonet Golf course irrigation used as much as 600 acre-feet per year at the time the City assumed ownership of the courses in 1998. In coordination with the City's Golf Course Operator, a new irrigation system has been installed in conjunction with major renovation of the golf course fairways and greens that has led to a decrease in water use. Now that the renovations are completed and the new irrigation system is in use on all 36 holes, water use is expected to be less than 450 acre-feet per year. The Seaside Basin adjudication authorizes annual withdrawals of 540 acre-feet from the golf course irrigation well; the actual 2007 water year withdrawal was 473 acre-feet. The golf course lease establishes 400 acre-feet as a baseline water use, above which the golf course operator must pay current MCWD rates for all water used.

Based on expected water use savings from the new irrigation system, the City anticipates that its golf courses will use up to 450 acre-feet annually.

Seaside withdraws water from the Seaside Basin through four wells, two of which provide the potable supply to part of the city under the management of Seaside Municipal Water District, and two of which provide irrigation water for the golf courses. The golf course irrigation wells are allotted 540 acre-feet per year; in water year 2007 actual production was 473 acre-feet. The golf course wells are Alternative Production wells, whereas the municipal wells are Standard Production wells, as defined in the Adjudication Decision.

#### **FUTURE USE OF RECYCLED WATER**

The MCWD anticipates the eventual construction of a recycled water pipeline that would serve the golf courses, which is not a part of this currently proposed project. When a recycled water pipeline is completed to the project site, irrigation of the golf courses with recycled water would be possible, and use of potable water could end. The date at which the recycled water pipeline will be built is not known. However, at the Water for Monterey County Coalition meeting held on April 1, 2009 Mr. Heitzman, General Manager of MCWD, said he anticipated that the recycled water project could become operational by the summer of 2011.

#### **CURRENT STATUS**

The City is in the midst of negotiations with MCWD to reach agreement on the terms and conditions under which water for the golf courses would be provided by MCWD's potable water distribution system. The City is optimistic that agreement will be reached in the near future. However, no date-certain can currently be projected for this, and thus no date-certain by which the changeover in water sources would occur can be projected.

## ATTACHMENT 2

### PAPER DESCRIBING THE TECHNICAL ADVISORY COMMITTEE'S FINDINGS AND CONCLUSIONS REGARDING THE SECTIONS OF THE AMENDED DECISION PERTAINING TO REDUCING THE OPERATING YIELD (REVISED ~~MARCH 12~~APRIL 3, 2009)

#### BACKGROUND

The Amended Decision filed February 9, 2007 states, in part, that beginning January 1, 2009 there shall be triennial 10% reductions in the Operating Yield of the Seaside Basin, unless certain conditions contained in Section III.B.2 of the Decision are met. Specifically, the language in Section III.B.2 states:

*“Commencing with the fourth Water Year [starting January 1, 2009] and triennially thereafter the Operating Yield for both subareas [Coastal Subarea and Laguna Seca Subarea] will be decreased by ten percent (10%) until the Operating Yield is the equivalent of the Natural Safe Yield unless:*

- a. The Watermaster has secured and is adding an equivalent amount of Non-Native water to the Basin on an annual basis; or*
- b. The Watermaster has secured reclaimed water in an equivalent amount and has contracted with one or more of the Producers to utilize said water in lieu of their Production Allocation, with the Producer agreeing to forego their right to claim a Stored Water Credit for such forbearance; or*
- c. Any combination of a and b which results in the decrease in Production of Native Water required by this decision; or*
- d. The Watermaster has determined that Groundwater levels within the Santa Margarita and Paso Robles aquifers are at sufficient levels to ensure a positive offshore gradient to prevent seawater intrusion.” (language in brackets added for clarity).*

The Board has asked the TAC to provide its findings and conclusions regarding each of these four conditions, so the Board can determine whether or not to impose a reduction in pumping for Water Year 2008-2009.

This paper focuses on just the technical issues pertaining to this matter, but does include the TAC's thoughts and other information that the Board may wish to consider in making its decisions.

#### FINDINGS

The Decision contains a number of definitions that are pertinent to this discussion, including the following:

“Non-Native Water” is defined as all water that would not otherwise add to the Groundwater supply through natural means or from return flows from surface applications other than intentional Spreading.

“Subarea” is defined to be either the Laguna Seca Subarea or the Coastal Subarea.

“Water” is defined to be all forms of water.

“Spreading” is defined as a method of introducing Non-Native Water into the Seaside Basin whereby Water is placed in permeable impoundments and allowed to percolate into the Seaside Basin.

“Artificial Replenishment” is defined as the act of the Watermaster, directly or indirectly, engaging in or contracting for Non-Native Water to be added to the Groundwater supply of the Seaside Basin through Spreading or Direct Injection to offset the cumulative Over-Production from the Seaside Basin in any particular Water Year pursuant to Section III.L.3.j.iii. It shall also include programs in which Producers agree to refrain, in whole or in part, from exercising their right to produce their full Production Allocation where the intent is to cause the replenishment of the Seaside Basin through forbearance in lieu of the injection or spreading of Non-Native Water.

Each of the four sets of conditions described in Section III.B.2 were presented to and discussed by the TAC in the form of questions, with the answers to each question developed from currently available data or knowledge. The TAC’s answers to each of the questions below are shown in **boldface underlined italics**.

- a. **Question:** Has the Watermaster secured and is adding an equivalent amount of Non-Native water to the Basin on an annual basis?

**Answer:** ~~There is only one current project that adds Non-Native water to the Seaside Basin. This is the MPWMD’s Phase I ASR project, all water from which is dedicated to offset production from the Carmel River Basin and is thus not replenishment water for the Seaside Basin. Since the Watermaster is not currently adding any Non-Native water to the Basin, and there are no projects which are expected to become operational in Water Year 2008-2009 which will do so, the TAC finds that the answer to this Question is “no.”~~ If the City of Seaside enters into its proposed agreement with MCWD to secure up to 450 AFY of water from the MCWD distribution system to irrigate the City’s golf courses, and if the City commits to not pumping any water from its golf course wells as a result of this change in water supply sources for its golf courses, then in-lieu recharge of the amount of water that would otherwise have been pumped from the golf course wells will have been achieved. Based on recent historical pumping data for the golf course wells, the amount of in-lieu replenishment water would exceed the 420 AFY required by the Decision for Water Year 2008-2009. **Therefore, the TAC finds that the answer to this Question is “yes.”**

**There are two issues that the Board should consider in making its decision as to whether this proposal will fulfill this condition.**

**(1) The amount of water that can be in-lieu replenished during the remainder of Water Year 2008-2009, once the agreement between the City of Seaside and MCWD has been formalized, will need to be determined. While much of the water to irrigate the golf**

courses is used during the summer months, some of it is used in the spring and fall months, and some is even used between rainfall periods in the winter. Depending on when the agreement is executed and the changeover in irrigation water sources from wells to the MCWD distribution system actually occurs, it may or may not be possible to claim an in-lieu replenishment volume equal to or exceeding the 420 AFY required by the Decision for Water Year 2008-2009.

(2) The City of Seaside stated in its presentation at the Board's March 18, 2009 meeting that it intended to ask the Watermaster to pay for its costs in obtaining the in-lieu replenishment water from MCWD. This cost is likely to be well in excess of \$1 million. In order for the proposal to be implemented the Watermaster would have to have sufficient funds available to pay the City of Seaside for its costs. It is the TAC's understanding that the Watermaster does not currently have this amount of money in its Replenishment Assessment Account. Therefore, a means of acquiring the necessary funds should be put in place in order for the proposal to be implemented.

- b. Question: Has the Watermaster secured reclaimed water in an equivalent amount and has it contracted with one or more of the Producers to utilize said water in lieu of their Production Allocation, with the Producer agreeing to forego their right to claim a Stored Water Credit for such forbearance?

Answer: Reclaimed water is not specifically defined in the Decision. The term reclaimed water is typically used to mean waste water which has been treated to a sufficiently high level such that it can be reused for some beneficial purpose, such as irrigation or groundwater replenishment. TAC members who participated in the adjudication hearings, and were therefore personally familiar with the testimony presented at those hearings, stated that in those hearings the term "reclaimed water" was used only in reference to reclaimed wastewater. **Therefore, since no reclaimed water has been secured by the Watermaster for use in lieu of pumping from the Seaside Basin by any Producers, the TAC finds that the answer to this Question is "no."**

The following information and thoughts are provided by the TAC to the Board for its consideration in conjunction with the Board's making its decision on this Question: The Board may find it appropriate to expand the definition of "reclaimed water" to include desalinated water, since the Sand City desalination plant will take water that is typically unusable for any beneficial purpose due to its high salinity, and treat it (reclaim it) such that it can be used as a potable water supply source.

Using this interpretation, if there were a contract between the Watermaster and CAW (which is one of the Producers in the Basin, as defined in the Decision) in which CAW agreed to utilize desalinated water in lieu of a portion of their Production Allocation, and to forego their right to claim a Stored Water Credit for such forbearance, then the Board might find that the answer to this question is "yes," but only partially so, as discussed in the paragraphs below.

The TAC's Sand City representative said it is likely that the issuance of the permit from the California Department of Public Health (CDPH) will be the controlling factor in determining how soon the desalination plant will be able to begin delivering desalinated water to CAW's distribution system. It is projected by the City of Sand City and CAW (who will operate the plant under contract with Sand City) that the Sand City desalination plant will begin the two months of full-scale testing required by CDPH on or about April 1,

2009. If that testing is satisfactory to the CDPH, then the earliest the plant could begin delivering desalinated water to CAW's distribution system would be on or about June 1, 2009.

The Decision requires an initial reduction of 420 AFY for the period January 1, 2009 to September 30, 2009, increasing to a reduction of 560 AFY for the period October 1, 2009 to September 30, 2010. The full capacity of the Sand City desalination plant is reportedly 300 AFY. If the plant does not go into operation until June 2009 or later, it will not be able to produce 300 AF of water between the time it goes into operation and September 30, 2009. The amount it will be able to produce during that time period is currently unknown, pending completion of the two months of testing, but it will be substantially less than 300 AF.

CAW reported that 94 AF of the projected 300 AF of desalinated water the plant is expected to produce during a full 12 month period of operation will be used to meet existing water demands in Sand City. Ultimately, it is anticipated that the other 206 AF will be needed to serve planned growth in Sand City. However, in the meantime and on a temporary basis, this 206 AF could be available for CAW to use to serve its other existing customers. Under its agreement with Sand City, CAW cannot use any of this 206 AF to serve future customers that are located outside of Sand City.

Confirming the statements in the paragraph above from the CAW TAC representative, the Sand City TAC representative noted that for a significant length of time, the full 300 acre-feet of desalination plant capacity will not be usable by Sand City due to the economy and the length of time it takes to process development. He went on to say that Sand City has agreed, and it is required by the California Coastal Commission and MPWMD approvals of the desalination plant, that it will permanently "give up" the 94 acre feet it is now using as a permanent public benefit to the water sources used by CAW. That means that Sand City will only be able to use an additional 206 acre-feet of water to serve its future development, resulting in a maximum water use by Sand City of 300 acre-feet per year

CAW has indicated its goal is to operate its water production and distribution system in such a manner as to stay beneath the pumping limitations imposed on both the Seaside Basin and the Carmel River Basin via the Amended Decision (for the Seaside Basin) and SWRCB Order No. 95-10 (for the Carmel River Basin). MPWMD representatives have reported that at some past meetings, and recently in discussions before the SWRCB hearing regarding the potential imposition of a Cease and Desist Order against CAW for withdrawing too much water from the Carmel River Basin, CAW said it would use the water produced from the Sand City desalination plant to reduce its pumping from the Carmel River Basin. In other meetings, such as Watermaster TAC meetings, CAW has indicated it would use the water produced from the Sand City desalination plant to reduce its pumping from the Seaside Basin. At the February 11, 2009 TAC meeting the CAW TAC representative stated that CAW cannot commit to reducing its pumping from the Seaside Basin by any specific amount, because it cannot control the water demands on its distribution system. Thus, it would not be possible for CAW to enter into a contract with the Watermaster to utilize reclaimed water in lieu of their Production Allocation or to agree to forego their right to claim a Stored Water Credit for such forbearance. Without such a contract in place it would be not possible to answer "yes" to this question.

There is at least one other issue pertaining to answering “yes” to this Question. Even if 100% of the Sand City desalination plant’s production was used to reduce CAW’s pumping from the Seaside Basin, even the full 300 AFY that the plant is expected to be able to produce would not allow CAW to reduce its pumping from the Seaside Basin by the 420 AF required to fulfill the first cutback required by the Decision for Water Year 2008-2009. In Water Year 2009-2010 the cutback would increase to 560 AFY, which would increase this shortfall.

Therefore, even if it were possible to have the required contract with CAW to fulfill this condition, at best it appears that this condition could only be partially satisfied by the Sand City desalination plant, and that it would still be necessary to find additional supplemental water supplies in order to achieve the 420 AFY and 560 AFY volumes required by the Decision and thereby avert having to impose the 10% pumping reduction required by the Decision.

- c. Question: Are there any combinations of a and b which result in the decrease in Production of Native Water required by this decision?

Answer: *Since the answers to both Questions a and b are “no,” the TAC finds that the answer to this Question is also “no.” Since the Answer to Question a is “yes” the TAC finds that the answer to this Question is also “yes.”*

~~The following information and thoughts are provided by the TAC to the Board for its consideration in conjunction with the Board’s making its decision on this Question: As discussed under Question b above, CAW could reduce its production of Native Water from the Seaside Basin by using desalinated water from the Sand City desalination plant. It could also reduce its production of Native Water from the Seaside Basin by using more water from the Carmel River Basin. However, the Carmel River Basin is subject to pumping limits, and increasing the pumping from the Carmel River Basin would likely cause CAW to exceed those limits, so this is not a viable action.~~

~~The City of Seaside might be able to reduce pumping from its Golf Course wells by connecting to the Marina Coast Water District (MCWD) system and obtaining its golf course irrigation water from MCWD. The City of Seaside TAC representative said that the City had performed a preliminary evaluation of this concept and initially concluded that it was not in the best interest of the city to pursue this approach. This conclusion was due in part to the fact that the City’s Golf Course wells are Alternative Producers, whereas the City’s Municipal Wells are Standard Producers. The City would like to reduce its exposure to being levied Replenishment Assessments on its Municipal Wells (Standard Producer) pumping. In order to be able to accomplish this it would have to first enter into an agreement with MCWD to obtain water to irrigate its golf courses, then convert its Golf Course Wells to Standard Producer status, and then transfer all or a portion of its Golf Course Well pumping allocation to its Municipal Well system, thus increasing the allocation for its Municipal Well system to an amount greater than the pumping level required to supply its customer demands.~~

~~The City may reevaluate the concept of seeking to obtain MCWD water to serve its golf courses in view of the significant adverse impacts its anticipates would occur if a 10% reduction was to be imposed on its Municipal Well system. The Seaside City Council is holding a workshop to further discuss this concept and other water issues on March 19, 2009 at 5:30 p.m. in the Seaside City Council Chambers.~~

- d. Question: Has the Watermaster determined that Groundwater levels within the Santa Margarita and Paso Robles aquifers are at sufficient levels to ensure a positive offshore gradient to prevent seawater intrusion?

Answer: This topic was the subject of a brief discussion at the October 10, 2008 TAC meeting, in response to a request by the Laguna Seca Alternative Producers, through their attorney, that the Laguna Seca Subarea be exempted from the proposed 10% pumping reduction scheduled for January 1, 2009. The following excerpt from the agenda packet from that meeting provides some useful background information:

*“Based on my preliminary consultations with those TAC members who are specialists in groundwater hydrogeology, and whom I was able to reach in the short time given to us to prepare this topic for today’s agenda, here are some issues for TAC members to consider regarding this request:*

- *It may be possible to make a case that the water levels in the Southern Coastal subarea are protective of seawater intrusion. However, it may be difficult to determine whether or not reducing pumping in the Laguna Seca area will help water levels in the Northern Coastal Subarea.*
- *The Laguna Seca Study by Yates and Feeney for MPWMD apparently states that the Laguna Seca Area is in overdraft.*
- *Hydrologic studies apparently have concluded that there is hydrologic connectivity in the aquifers between the Laguna Seca Area and the rest of the Seaside Basin. If this is correct, then it would appear that the Laguna Seca Area pumping has hydrologic influence on the Coastal area(s) of the Seaside Basin.*
- *If the Laguna Seca Area is already in a documented “overdraft” condition, should water levels alone be the determining factor in responding to this request? That is to say, the non-technical findings may be more important than the technical findings - such as "what is the intent of the Amended Decision", or "Does the Amended Decision attempt to prevent overdraft regardless of the threat of seawater intrusion". While these are not decisions for the TAC to make, they should at least be pointed out to the Board in any recommendations the TAC makes to the Board.”*

In Chapter 2 of the recently completed Basin Management Action Plan there are groundwater elevation contour maps for both the Paso Robles (shallow) and the Santa Margarita (deep) aquifers which are referred to in Section III.B.2 of the Decision. Copies of these maps, which are Figures 5, 6, and 13 of the BMAP, are attached. It is clear from Figures 5 and 6 that groundwater levels in much of the Northern Coastal Subarea are significantly below sea level in both of these aquifers. Water levels in the other parts of the Basin are well above sea level, although there are cones of depression (still well above sea level) in both aquifers in the Laguna Seca Subarea. Figure 13 shows the Ghyben-Herzberg protective water levels for the existing production wells near the coast. Comparing Figures 5 and 6 with Figure 13 shows that the existing water levels in both aquifers in the Northern Coastal Subarea are well below the levels needed to protect the production wells in those locations against sea water intrusion. Water levels elsewhere in the Basin are above the levels needed to protect the other existing production wells from sea water intrusion.

The language in this Section of the Decision makes no mention of evaluating the water levels on an individual subarea basis for the purposes of determining whether or not a 10% reduction is to be imposed. The language in the first paragraph of Section III.B.2 simply states that the 10% cutback in production, if it is imposed, is to occur in both the Coastal and Laguna Seca Subareas.

The language in Section III.B.2.a refers to “the Basin” (as a whole) when discussing the importation of Non-Native water to help offset the overpumping. While the language in these Sections is not specific to the question of whether the 10% reduction is to apply to the Basin as a whole, or on an individual subarea basis, if none of the four sets of conditions described in Section III.B.2 are met, it was the conclusion of the TAC that the intent of the Decision is that the 10% reduction is to apply to the entire Basin, if none of the four sets of conditions is met for the entire Basin.

*Based on the reasoning described above, the TAC finds that the answer to this Question is “no.” Since none of the four sets of conditions have been met for the entire Basin, the TAC finds that the answer to this question is “no.”*

The following information and thoughts are provided by the TAC to the Board for its consideration in conjunction with the Board’s making its decision on this Question:

(1) If the intent of the Decision is that this condition must be met for the entire Basin, then it is clear that the answer to this question is “no.”

(2) If the intent of the Decision is that the 10% cutback should occur only within the specific subarea(s) of the Basin where this condition is not met, then the answer to this question is “yes” for all subareas of the Basin except the Northern Coastal Subarea, where the answer is “no.”

## CONCLUSIONS

Determining whether or not the Watermaster is required to impose a pumping reduction is a complex matter. Meeting any one of the four sets of conditions contained in Section III.B.2 of the Decision would avert having to impose a pumping reduction. Based on the TAC’s interpretation of the Decision, it is the TAC’s conclusion that ~~none since the offirst of~~ the four sets of conditions ~~have has~~ been met, it is not necessary to impose. ~~It is therefore the TAC’s conclusion that~~ a 10% Basin-wide pumping reduction ~~must be imposed~~.

Simply for information, ~~t~~The attached table titled “Table Showing Breakdown of Pumping Cutback Amounts for Each Standard Producer” shows how much each Standard Producer would have to cut back its pumping, effective January 1, 2009 and October 1, 2009, if a 10% pumping reduction were to be imposed. Alternative Producers are not subject to the 10% cutback requirement, unless the Standard Producers have reduced their extractions to zero.

~~As discussed above it is the TAC’s consensus that the conditions in the Decision apply to the Basin as a whole. However, if the Board chooses to interpret the Decision as applying the conditions to individual subareas, rather than to the Basin as a whole, then the Board could find that condition~~

~~III.B.2.d has been met for all subareas of the Basin except the Northern Coastal Subarea. This would lead to imposing a 10% pumping reduction only in the Northern Coastal Subarea.~~



Figure 5: Groundwater Elevation Contours in the Shallow Aquifer (Correlated to the 400-Foot Aquifer in Salinas Valley) – Fall 2007

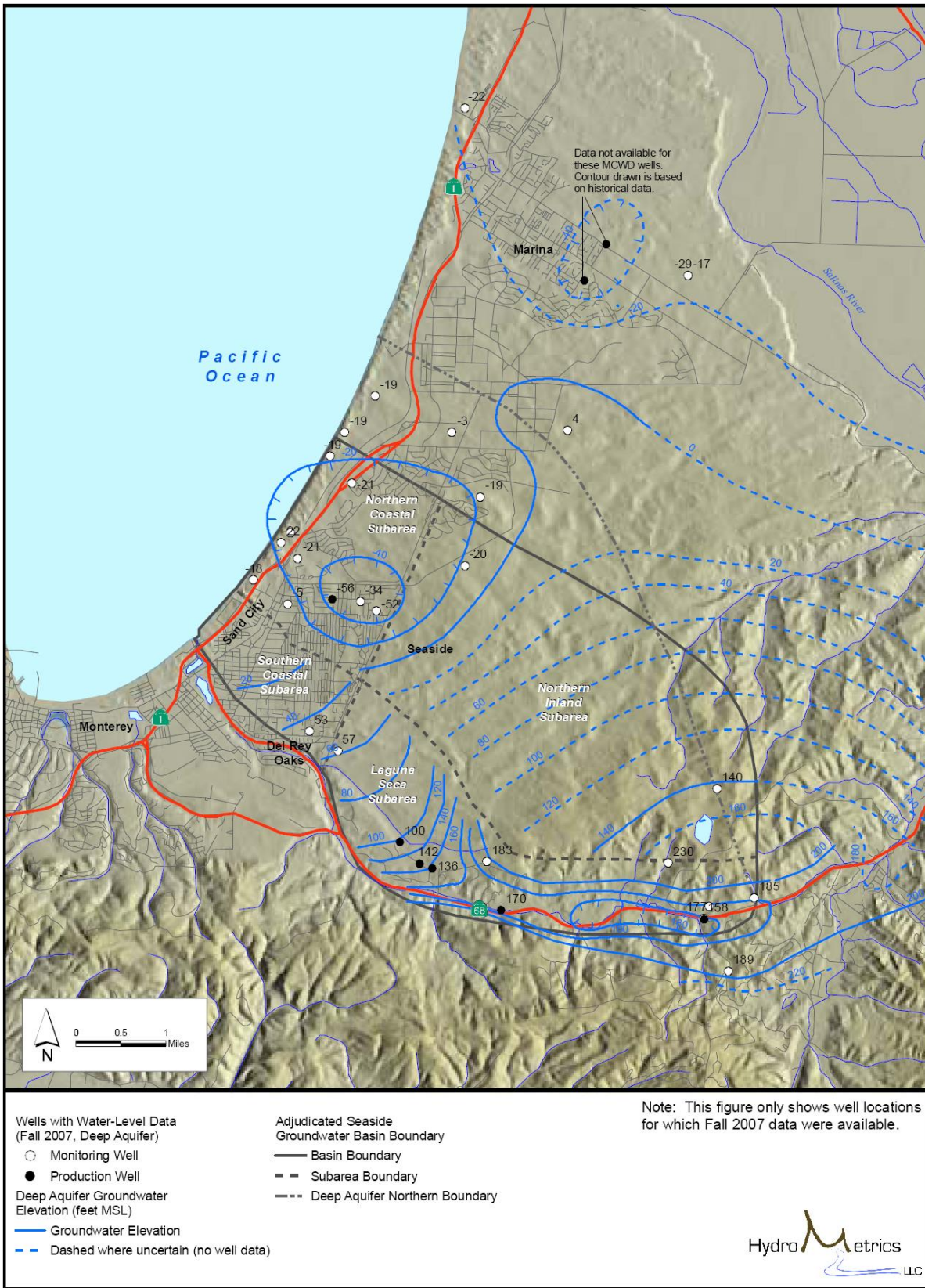


Figure 6: Groundwater Elevation Contours in the Deep Aquifer (Correlated to the Deeper Aquifer in the Salinas Valley) – Fall 2007

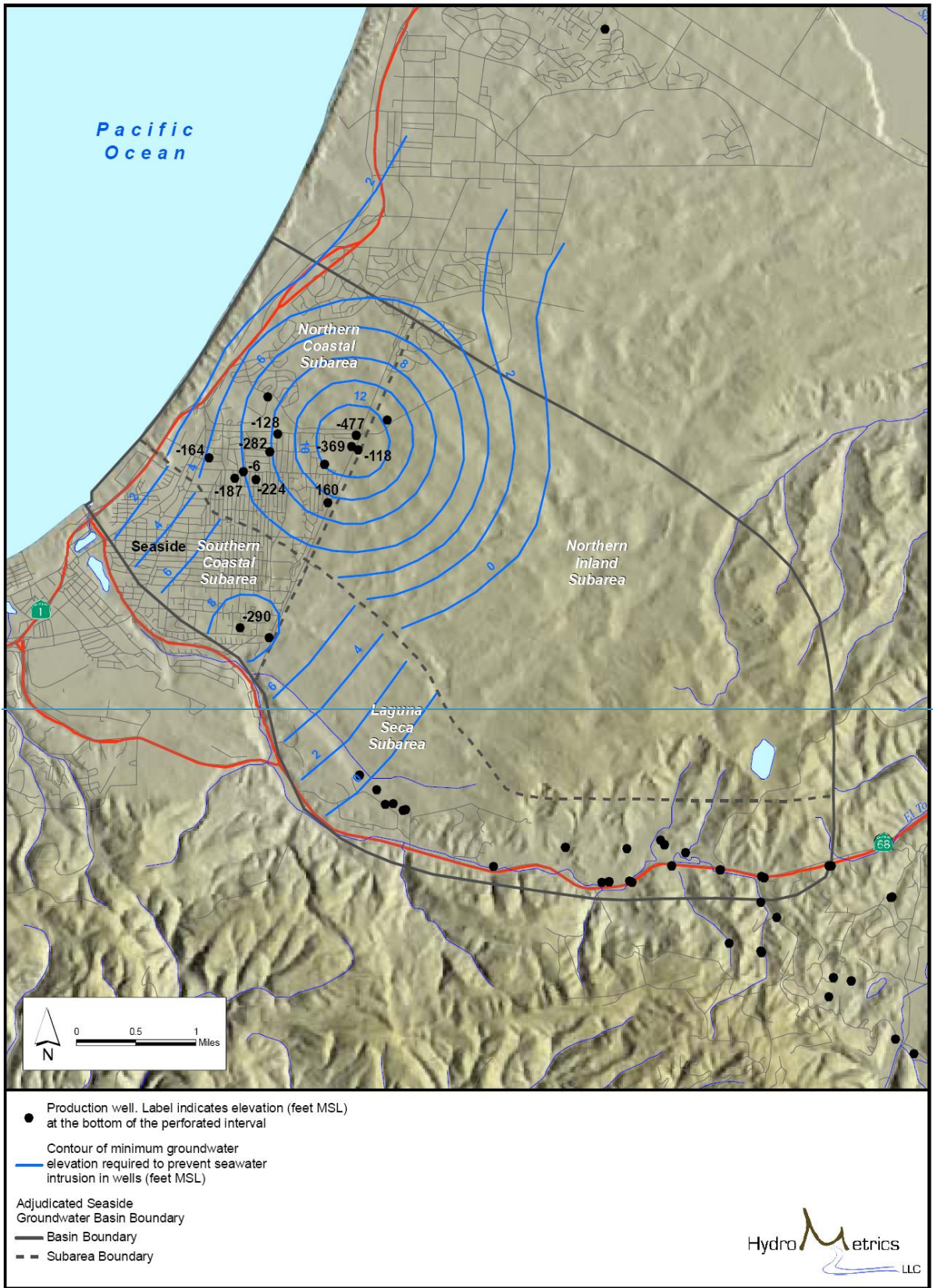


Figure 13: Ghyben-Herzberg Protective Groundwater Levels Based on Well Depths

# Table Showing Breakdown of Pumping Cutback Amounts for Each Standard Producer

| SEASIDE BASIN WATERMASTER PRODUCER ALLOCATIONS                |   |  |   |   |  |                           |   |
|---|---|--|---|---|--|---------------------------|---|
| Initial Basin-Wide Operating Yield <sup>(1)</sup>             |   | 5600                                     |   | Coastal Operating Yield <sup>(1)</sup>                            |  | 4611                      |   |
| Natural Safe Yield (NSY) <sup>(2)</sup>                       |   | 3000                                     |   | Laguna Seca Operating Yield <sup>(1)</sup>                        |  | 989                       |   |
| <b>ALTERNATIVE PRODUCER ALLOCATIONS</b>                       |   |  |   |   |  |                           |   |
| <b>Coastal Subarea<sup>(3)</sup></b>                          | <b>Acre-Feet</b>  | <b>Laguna Seca Subarea<sup>(3)</sup></b> |   | <b>Acre-Feet</b>  |  |                           |   |
| Seaside (Golf)  | 540   | Pasadera                                 |   | 251   |  |                           |   |
| SNG   | 149   | Bishop                                   |   | 320   |  |                           |   |
| Calabrese   | 14  | York School                              |   | 32  |  |                           |   |
| Mission Memorial (Alderwood)                                  | 31  | Laguna Seca County Park                  |   | 41  |  |                           |   |
| Sand City   | 9   |  |   |   |  |                           |   |
| <b>Total<sup>(1)</sup></b>                                    | <b>743</b>  | <b>Total<sup>(1)</sup></b>               |   | <b>644</b>  |  |                           |   |
| <b>STANDARD PRODUCER ALLOCATIONS</b>                          |   |  |   |   |  |                           |   |
| Coastal Operating Yield Available to Standard Producers (AFY) |   |  | 3,868   | Laguna Seca Operating Yield Available to Standard Producers (AFY) |  |                           | 345   |
| Coastal Subarea   | Standard Producer Allocations   |  | AFY Available to This Producer  | Laguna Seca Subarea   | Standard Producer Allocations  |                           | AFY Available to This Producer  |
|   | Base Water Right % <sup>(4)</sup>   | Weighted % <sup>(5)</sup>                |   |   | Base Water Right % <sup>(4)</sup>  | Weighted % <sup>(5)</sup> |   |
| California American Water                                     | 77.55%  | 90.60%                                   | 3,504.2   | California American Water   | 100.00%  | 100.00%                   | 345.0   |
| Seaside (Municipal)   | 6.36%   | 7.43%                                    | 287.4   |   |  |                           |   |
| Granite Rock  | 0.60%   | 0.70%                                    | 27.1  |   |  |                           |   |
| D.B.O. Development No. 27                                     | 1.09%   | 1.27%                                    | 49.3  |   |  |                           |   |
| <b>Total</b>  | <b>85.60%</b>   | <b>100.00%</b>                           | <b>3,868.0</b>  | <b>Total</b>  | <b>100.00%</b>   | <b>100.00%</b>            | <b>345.0</b>  |
| <b>Standard Producers</b>                                     | <b>Total Base Water Rights Allocated to Each Standard Producer (AF)<sup>(6)</sup></b> |  | <b>% of Total Base Water Rights Allocated to Each Standard Producer</b> |   | <b>Cutback Amount Required of Each Standard Producer on January 1, 2009 for Remainder of WY 2008-2009 (Total WY 2008-2009 cutback amount = 420 AF)</b> |                           | <b>Cutback Amount Required of Each Standard Producer on October 1, 2009 for WY 2009-2010 (Total WY 2009-2010 cutback amount = 560 AF)</b> |
| California American Water                                     | 3,849.2   |  | 91.36%  |   | 383.7  |                           | 511.6   |
| Seaside (Municipal)   | 287.4   |  | 6.82%   |   | 28.7   |                           | 38.2  |
| Granite Rock  | 27.1  |  | 0.64%   |   | 2.7  |                           | 3.6   |
| D.B.O. Development No. 27                                     | 49.3  |  | 1.17%   |   | 4.9  |                           | 6.6   |
| <b>Total</b>  | <b>4,213.0</b>  |  | <b>100.00%</b>  |   | <b>420.0</b>   |                           | <b>560.0</b>  |

Footnotes:

(1) From page 17 of Exhibit A (Amended Decision) of Court Order filed February 9, 2007.  
(2) From page 14 of Exhibit A (Amended Decision) of Court Order filed February 9, 2007.  
(3) From page 21 of Exhibit A (Amended Decision) of Court Order filed February 9, 2007.  
(4) From Table 1 on page 19 of Exhibit A (Amended Decision) of Court Order filed February 9, 2007.  
(5) Calculated from the Base Water Right percentages in the adjacent column.  
(6) Total of both Coastal and Laguna Seca allocations.

**SEASIDE BASIN WATER MASTER  
TECHNICAL ADVISORY COMMITTEE**

**\* \* \* AGENDA TRANSMITTAL FORM \* \* \***

|                            |  |
|----------------------------|--|
| <b>MEETING DATE:</b>       | April 8, 2009  |
| <b>AGENDA ITEM:</b>        | 5  |
| <b>AGENDA TITLE:</b>       | Schedule   |
| <b>PREPARED BY:</b>        | Robert Jaques, Technical Program Manager   |
| <b>SUMMARY:</b>            | <p>As a regular part of each monthly TAC meeting, I will provide the TAC with an updated Consultants Work Schedule of the activities being performed by the Watermaster's consultants and the public entity, MPWMD, which is performing certain portions of the work, and of the Critical Program Milestones Schedule.</p> <p>Attached is the Updated Consultants Work Schedule.</p> |
| <b>ATTACHMENTS:</b>        | Updated Schedule of Consultants Work Activities  |
| <b>RECOMMENDED ACTION:</b> | Provide Input to Technical Program Manager Regarding Any Corrections or Additions to This Schedule   |

# Seaside Basin WaterMaster Monitoring and Management Program 2009 Work Schedule

| ID | Task Name   | 2009 |     |           |           |     |     |     |     |     |     |     |     |     |     |     |     |     |   |
|----|---|------|-----|-----------|-----------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|---|
|    |   | Sep  | Oct | Nov       | Dec       | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Jan | F |
| 1  | <b>CRITICAL PROJECT MILESTONES ASSOCIATED WITH TAC, BOARD, AND/OR CONSULTANT WORK</b>   |      |     |           |           |     |     |     |     |     |     |     |     |     |     |     |     |     |   |
| 2  | 2009 Administration, Operations and Replenishment Budgets Due                           |      |     |           | Completed |     |     |     |     |     |     |     |     |     |     |     |     |     |   |
| 3  | 2010 Administration, Operations and Replenishment Budgets                               |      |     |           |           |     |     |     |     |     |     |     |     |     |     |     |     |     |   |
| 4  | Prepare M&MP Draft Budgets  |      |     |           |           |     |     |     |     |     |     |     |     |     |     |     |     |     |   |
| 5  | TAC Approves M&MP Budgets   |      |     |           |           |     |     |     |     |     |     |     |     |     |     |     |     |     |   |
| 6  | Board Approves M&MP Budgets   |      |     |           |           |     |     |     |     |     |     |     |     |     |     |     |     |     |   |
| 7  | Watermaster Prepares Quarterly Water Production, Water Level, and Water Quality Reports |      |     | Completed |           |     |     |     |     |     |     |     |     |     |     |     |     |     |   |
| 32 | Replenishment Assessment Unit Costs for Water Year 2010                                 |      |     |           |           |     |     |     |     |     |     |     |     |     |     |     |     |     |   |
| 33 | Develop Replenishment Assessment Unit Cost for 2010 Water Year                          |      |     |           |           |     |     |     |     |     |     |     |     |     |     |     |     |     |   |
| 34 | TAC Approves 2010 Water Year Replenishment Assessment Unit Cost                         |      |     |           |           |     |     |     |     |     |     |     |     |     |     |     |     |     |   |
| 35 | Board Adopts and Declares 2010 Water Year Replenishment Assessment Unit Cost            |      |     |           |           |     |     |     |     |     |     |     |     |     |     |     |     |     |   |
| 36 | Replenishment Assessments for Water Year 2010   |      |     |           |           |     |     |     |     |     |     |     |     |     |     |     |     |     |   |
| 37 | Watermaster Prepares Replenishment Assessments for Water Year 2010                      |      |     |           |           |     |     |     |     |     |     |     |     |     |     |     |     |     |   |
| 38 | Watermaster Board Approves Replenishment Assessments for Water Year 2009                |      |     |           |           |     |     |     |     |     |     |     |     |     |     |     |     |     |   |
| 39 | Watermaster Levies Replenishment Assessment for 2009                                    |      |     |           |           |     |     |     |     |     |     |     |     |     |     |     |     |     |   |









# Seaside Basin WaterMaster Monitoring and Management Program 2009 Work Schedule

| ID  | Task Name  | 2009 |     |     |     |     |     |     |     |     |     |     |     | Jan | F |  |  |  |  |  |
|-----|--|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|---|--|--|--|--|--|
|     |  | Sep  | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug |     |   |  |  |  |  |  |
| 99  | <b>I.4.c Annual Seawater Intrusion Analysis Report (SIAR)</b>                |      |     |     |     |     |     |     |     |     |     |     |     |     |   |  |  |  |  |  |
| 100 | HydroMetrics Provides Draft SIAR to Watermaster                              |      |     |     |     |     |     |     |     |     |     |     |     |     |   |  |  |  |  |  |
| 101 | TAC Approves Annual Seawater Intrusion Analysis Report (SIAR)                |      |     |     |     |     |     |     |     |     |     |     |     |     |   |  |  |  |  |  |
| 102 | Board Approves Annual Seawater Intrusion Analysis Report (SIAR)              |      |     |     |     |     |     |     |     |     |     |     |     |     |   |  |  |  |  |  |
| 103 | <b>I.4.d Complete Preparation of Seawater Intrusion Response Plan (SIRP)</b> |      |     |     |     |     |     |     |     |     |     |     |     |     |   |  |  |  |  |  |
| 104 | HydroMetrics Makes Presentation of Final Draft SIRP to Board                 |      |     |     |     |     |     |     |     |     |     |     |     |     |   |  |  |  |  |  |
| 105 | CEQA Requirements for Adoption of SIRP and BMAP Evaluated                    |      |     |     |     |     |     |     |     |     |     |     |     |     |   |  |  |  |  |  |
| 106 | Board Adopts Final SIRP  |      |     |     |     |     |     |     |     |     |     |     |     |     |   |  |  |  |  |  |
| 107 | <b>I.4.e Refine and/or Update the SIRP</b>                                   |      |     |     |     |     |     |     |     |     |     |     |     |     |   |  |  |  |  |  |

◆ 10/1

◆ 10/14

◆ 11/4

Completed  
◆

Completed  
●

Completed  
◆

Only if Refinement or Updating is Necessary



