

**Draft Responses to GSWI TWG and Stakeholder Comments
Draft Task 2B-2 Report – Assessment of Alternatives for Compliance Options Using
the Groundwater Surface Water Interaction Model**

Reviewer: C.P Lai, GSWI TWG and Stakeholders, LARWQCB, August 11, 2008

Comment 1

Section: Executive Summary

Comment:

Attainment frequencies indicated in Table E-1 and Table E-2 should be described clearly if there are the averaged values over all locations of specified reaches and if averaging periods have been used in the groundwater. The attainment frequencies for AWRM should be added in Table E-1 for comparison.

Response:

Groundwater attainment frequencies were developed based on the average concentration in wells that were used for model observations in a specific reach (wells V-0012, V-0013, V-0031, V-0036, and V-0053 for Reach 4B, for example). This convention was developed by the modeling team as part of Task 2B-1 development, as noted in Section 5.3.4 of the Task 2B-1 Report (CH2M HILL/HGL, 2008). Daily predicted chloride concentrations for each well were averaged to produce a single daily average value, and then that value was compared to the appropriate objective. The wells used are noted on the graphs themselves. Text has been added to the appropriate report sections and tables for clarification.

Comment 2

Section: Executive Summary

Comment:

The attainment frequencies at Reach 4B should include groundwater portion in Table E-2.

Response:

The Site Specific Objective (SSO) proposed for Reach 4B has not been finalized pending ongoing discussions between the Districts and the Regional Board. The Final Report will include the appropriate proposed SSO and the appropriate attainment frequencies.

Comment 3

Section: Executive Summary

Comment:

The reasons to propose AWRM compliance option should include more description of other factors, for example, how much of good quality of flow volume provided for downstream, as compared with other compliance options, other than the factor of attainment frequencies, especially for drought condition. It will be very useful to have a pro and con comparison table of all compliance options.

Response:

Additional benefits of the AWRM Program are outlined in "Alternative Water Resource Management Program – Effects in Ventura County" by Dr. Steve Bachman. Additional text will be added in the Executive Summary to reference Dr. Bachman's report. The non-AWRM compliance options were not intended to be comparable with the SSOs developed during the AWRM Program, as the simulation and assessment of these options preceded development of the AWRM program and were designed to assess the ability of any single management approach to meet the existing Water Quality Objectives (WQOs). The AWRM Program and corresponding SSOs were developed based on the fact that the other options could not meet the existing WQOs at all times at all locations.

Comment 4

Section: Chapter 1, Table 1-2

Comment:

The typo in Table 1-2 (100 well water supply system should be corrected to 10 well water supply system)

Response:

Text changed per comment

Reviewer: C.P Lai, GSWI TWG and Stakeholders, LARWQCB, August 11, 2008

Comment 5

Section: Chapter 1, Table 1-2

Comment:

Infrastructure requirements for every compliance option should be listed in bullet.

Response:

Table revised per comment to include bullets.

Comment 6

Section: Chapter 1, Figure 1-1

Comment:

Figure 1-1 should be updated with a newly defined reach area drawing.

Response:

An updated figure has been developed for the Final Task 2B-2 Report

Comment 7

Section: Chapter 2, Figure 2-2

Comment:

The attainment frequencies for groundwater at East of Piru (4B) and West of Piru (4A) in Figure 2-2 should describe more clearly if they are averaged over all location and all vertical layers in the specified reach. Please indicate how these percentage values are obtained.

Response:

Per response to comment number 1, clarifying text has been added to describe the groundwater averaging approach.

Comment 8

Section: Chapter 3, Figure 3-3

Comment:

The attainment frequencies for groundwater at East of Piru (4B) and West of Piru (4A) in Figure 3-3 should describe more clearly if they are averaged over all location and all vertical layers in the specified reach. Please indicate how these percentage values are obtained.

Response:

Per response to comment number 1, clarifying text has been added to describe the groundwater averaging approach.

Comment 9

Section: Chapter 4, Figure 4-3

Comment:

The attainment frequencies for groundwater at East of Piru (4B) and West of Piru (4A) in Figure 4-3 should describe more clearly if they are averaged over all location and all vertical layers in the specified reach. Please indicate how these percentage values are obtained.

Response:

Per response to comment number 1, clarifying text has been added to describe the groundwater averaging approach.

Comment 10

Section: Chapter 5, Table 5-1

Comment:

The "12-month average" in Table 5-1 should be changed to a "3-month average" for reaches 4B, 5, and 6.

Response:

The averaging period proposed for Reach 4B has not been finalized pending ongoing discussions between the District and the Regional Board. The Final Report will include the appropriate proposed averaging period.

Comment 11

Section: Chapter 5, Figure 5-2

Comment:

The upper drawing in Figure 5.2 for East Piru Extraction Wells should be marked as "East Piru Extraction Wells won't be operated during drought condition (when SWP CI > 80 mg/L)".

Response:

Clarifying language added to the figure.

Comment 12

Section: Chapter 5, Figure 5-12

Comment:

The explanation of legend in Figure 5-12 is mistakenly typed. Please check.

Response:

Figure legend has been fixed appropriately.

Comment 13

Section: Chapter 5, Figure 5-13

Comment:

The attainment frequencies for groundwater at Reach 5 and 6 in Figure 5-13 should describe more clearly if they are averaged over all vertical layers in the specified reach. Please indicate how these percentage values are obtained..

Response:

Per response to comment number 1, clarifying text has been added to describe the groundwater averaging approach.

Comment 14

Section: Chapter 5, Figure 5-14

Comment:

The attainment frequencies for groundwater at East of Piru (4B) and West of Piru (4A) in Figure 5-14 should describe more clearly if they are averaged over all vertical layers in the specified reach. Please indicate how these percentage values are obtained.

Response:

Per response to comment number 1, clarifying text has been added to describe the groundwater averaging approach.

Comment 15

Section: Chapter 5, Page 27

Comment:

The third bullet in Page 27 should be corrected as “when chloride concentration of SWP less than 80 mg/L or during non-drought condition”.

Response:

The text is intended to describe assumptions related to the AWRM simulation using GSWIM, and accurately states that the model simulated blending of the RO permeate with extracted water underlying Reach 4B when concentrations in the USCR exceeded 117 mg/L. Exceedances of 117 mg/L in the USCR are not completely correlated with SWP concentrations of less than 80 mg/L.

Comment 16

Section: Chapter 6, Table 6-1 and 6-2

Comment:

Attainment frequencies indicated in Table 6-1 and Table 6-2 should be described clearly if there are the averaged values over all locations of specified reaches and if averaging periods have been used in the groundwater. The attainment frequencies for AWRM should be added in Table 6-1 for comparison.

Response:

Per response to comment number 1, clarifying text has been added to describe the groundwater averaging approach.

Comment 17

Section: Chapter 6, Table 6-2

Comment:

The attainment frequencies at Reach 4B should include groundwater portion in Table 6-2.

Response:

The groundwater WQO proposed for Reach 4B had not been developed at the submittal of the Draft Task 2B-2 Report. The Final Report will include the appropriate proposed WQO and the appropriate attainment frequencies.

Comment 18

Section: Chapter 6

Comment:

The reasons to propose AWRM compliance option should include more description of other factors, for example, how much of good quality of flow volume provided for downstream, as compared with other compliance options, other than the factor of attainment frequencies, especially for drought condition. It will be very useful to have a pro and con comparison table of all compliance options.

Response:

See response to comment number 3.

Comment 19

Section: General

Comment:

A key purpose of the AWRM Program that is not mentioned in (the report) – and we recommend it be included – is that it is designed to bring future chloride concentrations in the SCR into attainment with the proposed SSOs in the SCR, particularly in Reach 4, and thereby protect beneficial uses (including salt-sensitive agricultural uses) of this receiving water body.

Response:

Additional text added as suggested – the AWRM is designed to improve groundwater quality and attain SSOs in Reach 4B, and to protect beneficial uses.

Comment 20

Section: General

Comment:

The Task 2B-2 Report does not clearly state whether the first three compliance options also would attain the SSOs if any of these three alternatives were to be implemented along with the proposed SSOs. We recommend that this point be clarified to allow direct comparison with the AWRM approach.

Response:

The non-AWRM compliance options were not intended to be comparable with the SSOs developed during the AWRM Program, as the simulation and assessment of these options preceded development of the AWRM program and were designed to assess the ability of any single management approach to meet the existing Water Quality Objectives (WQOs). The AWRM Program and coincidental SSOs were developed based on the fact that the other options could not meet the existing WQOs at all times at all locations.

Comment 21

Section: General

Comment:

It is our understanding, and we recommended the report more clearly state, that the Valencia RO permeate will be used in the following two ways:

1. Delivery to the Piru wellfield for blending with high chloride groundwater from the east Piru Basin and discharge to Reach 4A (i.e. the bottom of the Dry Gap);
or.
2. During critical dry periods, direct discharge to the SCR near the Los Angeles/Ventura County Line as a low chloride supply for Reach 4B surface water diverters (including salt-sensitive agricultural uses).

Response:

Explanations provided in the Draft Task 2B-2 Report are reflective of how the AWRM Program was simulated using GSWIM, with the intent of demonstrating that the AWRM elements will affect chloride concentrations in the surface water and groundwater systems as anticipated. The AWRM Program allows for flexibility in operations based on actually encountered climatic and hydrologic conditions. Operational considerations for the Valencia RO permeate water will be described in detail in a Memorandum of Understanding for Implementation of an Alternative Water Resources Management Program between the project stakeholders.

Reviewer: B. Steets/D. Parkinson on behalf of NLF, August 12, 2008

Comment 22

Section: General

Comment:

Similarly, it is our understanding, and we recommend the report more clearly state, that groundwater from the Saugus Aquifer, or some other local water resource, will be used in the following way:

1. During critical conditions of extreme drought, and as an interim measure prior to completion of the AWRM Program facilities, direct discharge to the SCR in Reach 5 as a low-chloride source of dilution water to the upper SCR.

Response:

Section 5.1 of the report includes a detailed description of this element of the AWRM Program. The description of Element 3 on page 23 of the Report provides the desired description.

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