

Response to Comments

Draft GSWI Task 1A Literature Review and Data Acquisition

Category: A Category Description: Data/information will be collected/updated, as requested.

Organization	CLWA		
Reviewer	J. Ford		
Section	4.0	Page(s)	4-1
		Comment Date	3/31/2006
Comment	<p>In the Report, one of the data gaps is information from CLWA (page 4-1). I will try to get the information, but I need to know who at this agency has been previously contacted and what exactly has been requested (and provided). Could you forward this question to the appropriate person on the report team and have them respond to me.</p>		
Response			

Organization	GeoSyntec		
Reviewer	B. Steets on behalf of NLF		
Section		Page(s)	3-9
		Comment Date	4/10/2006
Comment	<p>6. Hydrogeology: See comment #3 above on soils data. Slade references should be incorporated here as data source for hydrogeology.</p>		
Response			

Section		Page(s)	
		Comment Date	4/10/2006
Comment	<p>7. Summary of Existing Models, Table 3-1: Include the following additional modeling studies: a. 1998 Kennedy/Jenks monte carlo modeling study of chloride in the upper Santa Clara River, conducted on behalf of LACSD. b. 1998 USGS groundwater-surface water interaction tracer and modeling study of the Santa Clara River using DAFLOW and BLTM models.</p>		
Response			

Section		Page(s)	
		Comment Date	4/10/2006
Comment	<p>9. Summary of Streamflow Measurements, Table 3-4: USGS gauge 11108000 (Santa Clara River near Saugus) should be included here. This data is properly included in the charts of Appendix F (although it appears to be missing recent data), but doesn't seem to be included in Table 3-4.</p>		
Response			

Organization	LACSD		
Reviewer	B. Louie		
Section	3.1 Existing Models	Page(s)	
		Comment Date	4/4/2006
Comment	<p>Two existing models have not been included on this list, which include the following:</p> <ul style="list-style-type: none"> • Kennedy Jenks. Final Draft Report: Phase I Development of a Water Quality Model to Evaluate Chloride Contributions to the Santa Clara River. January, 1998. • USGS. Water-Resources Investigation Using Analog Model Techniques in the Newhall-Saugus Area, Los Angeles County, California. 1972 <p>The Kennedy Jenks model contains some important information on historical flows for various receiving waters and developed a stochastic model on chloride contributions. Both the USGS and Kennedy Jenks model should be listed in Table 3-1.</p>		
Response			

Section	3.4.2 Reservoir Operations and Hydrology	Page(s)	
		Comment Date	4/4/2006
Comment	<p>There is no mention on the UWCD's Piru Spreading Ground Facilities located adjacent to Piru Creek. This information should be discussed in this section or at least somewhere in the Task 1A report, and incorporated when developing the model. One suggestion is to change the Section 3.4.2 title to Reservoir/Recharge Operations and Hydrology.</p>		
Response			

Response to Comments

Draft GSWI Task 1A Literature Review and Data Acquisition

Category: A

Category Description: Data/information will be collected/updated, as requested.

Organization		LACSD		
Reviewer		B. Louie		
Section	Figure 3-5	Page(s)		Comment Date 4/4/2006
Comment	The Districts request the location of all farmland areas and any other potential non-point sources be included in this figure. It is clear that additional point sources have been identified in Figure 3-5, which were not included in Table 3-3. This inconsistency should be corrected.			
Response				
Section	3.5 Hydrogeology	Page(s)		Comment Date 4/4/2006
Comment	The other studies not mentioned or referenced in our comments on Section 3.2 (above), also contain important information on hydrogeology. These studies should be referenced accordingly and this section updated as necessary to include such information.			
Response				
Section	Appendix A	Page(s)		Comment Date 4/4/2006
Comment	This appendix contains a partial list of past studies considered to provide significant data or information that will be useful for the current study. As indicated in the report, this list of references and data sources is expected to grow. The District recommend that the studies mentioned in our comments in Section 3.2 (above) be also included in Appendix A.			
Response				
Organization		UWCD		
Reviewer		D. Detmer		
Section	3.0	Page(s)	3-7	Comment Date 4/6/2006
Comment	Reservoir Operations and Hydrology. Discussion of United Water's Lake Piru operations suggests that replenishment of the aquifers in the Upper Santa Clara River system is the purpose of our operations. United Water stores Piru Creek flows during the winter for subsequent release in the summer and/or fall, depending on hydrologic conditions. The released water naturally replenishes groundwater in Piru, Fillmore, and Santa Paula basins along the flow down the river to the Freeman Diversion. The majority of released water in wet years, and lesser amounts during dry years, flows to the Freeman Diversion and is diverted for recharge in the Forebay or delivery via pipelines to the overdrafted Oxnard Plain and Pleasant Valley basins. Piru basin recharge is further enhanced in certain years, when water is purposely diverted into the Piru spreading grounds.			
Response				
Section	Table 3-1	Page(s)		Comment Date 4/6/2006
Comment	The description of the Santa Clara-Calleguas Basin MODFLOW Model, originally developed by the USGS and upgraded by United Water, is dated. The upgraded model has cell dimensions of 880 ft x 880 ft. The model now contains three layers in the upper basins. The most recent model is calibrated for the period 1986 through 2000.			
Response				
Section	Table 3-3	Page(s)		Comment Date 4/6/2006
Comment	Summary of Point Source Discharge Measurement Counts. The value for the maximum discharge for the Piru Treatment Plant is incorrect. There must be an error in units. This treatment plant does not discharge 7.84 X 103 mgd.			
Response				
Section	Figure 3-12d	Page(s)		Comment Date 4/6/2006
Comment	Well Locations at Which Well Construction is Known. There exists a series of Newhall Ranch wells in eastern Piru basin, outside of United Water's boundary. Given that Newhall Ranch provided water quality from certain wells, claiming that water quality results were representative suggests they know how the well is constructed. This information should be requested from Newhall Ranch.			
Response				

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Category: B

Category Description: Additional input from stakeholders is required before proceeding.

Organization	GeoSyntec		
Reviewer	B. Steets on behalf of NLF		
Section	Page(s)	Comment Date	3-2 4/10/2006
Comment	1. Western Boundary: We agree that the study area's western boundary should extend just west of the Fillmore/Piru subbasin boundary, as originally agreed by the technical group, so that impacts of downstream pumping can be included in the analysis, and so that a simulation of water quality and levels in the Piru basin can be included in the analysis (note: it is our understanding that this was originally one of the fundamental motivations for conducting the GSWI modeling analysis).		
Response			

Section	Page(s)	Comment Date	4-1 4/10/2006
Comment	13. GSWI Database: A final, clean, complete version of the database should be posted to the project website for data validation by stakeholders. Stakeholders should then be allowed at least 2 weeks for data review.		
Response			

Organization	LARWQCB		
Reviewer	S. Unger/C.Lai		
Section	Page(s)	Comment Date	4/13/2006
Comment	3. Simulations to 2050 will be required for Board consideration. The background to this comment is that the administrative record for the TMDL contains analyses of chloride loadings to this date. The GSWI will need to address these projections to effectively inform the Regional Board on this issue. Regional Board staff recommend that modeling over this time period should be based on SCAG population projections and the modeling results over this time period at the appropriate locations should be reported as well.		
Response			

Organization	UWCD		
Reviewer	D. Detmer		
Section	Page(s)	Comment Date	1.0 1-2 4/6/2006
Comment	Task 2B Numerical Model Development and Calibration. The historic model being developed for 26 years (1980 through 2005 inclusive). Why is the forward model only being used to project 10 years (to 2015) into the future? Do you think chloride loading in the river levels off some years before 2015? What is the technical justification for limiting the duration of the forward modeling? Shouldn't the modeling period equal or exceed one hydrologic cycle? And more especially why isn't the forward model being used to evaluate a worst-case scenario of dry conditions persisting for up to approximately 20 years, replicating the 1944 through early 1960s hydrology?		
Response			

Organization	VCAWQC		
Reviewer	R.Roy		
Section	Page(s)	Comment Date	3.0 3/31/2006
Comment	The groundwater model should focus on the groundwater-surface water interactions in the Upper Santa Clara River above Blue Cut. It is understood that model calibration may require including data below this point; however, actual model runs should only examine chloride movement in the Upper Santa Clara River above Blue Cut, as specified in the TMDL. We are concerned that undue attention to the lower Santa Clara River at this time will unnecessarily delay protection of beneficial uses in the Upper Santa Clara River.		
Response			
Section	Page(s)	Comment Date	3.0 3/31/2006
Comment	The groundwater model projection should be extended beyond the year 2015, to adequately understand future movement of chloride in the study area. Modeling should extend to at least 2025.		
Response			

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Category: C

Category Description: Additional time is required to acquire data.

Organization	GeoSyntec		
Reviewer	B. Steets on behalf of NLF		
Section	Page(s)	Comment Date	4/10/2006
Comment	8. Summary of Point Source Discharges, Table 3-3: See NPDES discharger data compiled for the Nitrogen TMDL's WARMF analysis, summarized in the Identification and Characterization Task 1 Report (Systech, July 2002). This data is properly referenced in the Point Discharges section on p. 3-8 (and shown on Figure 3-5), but doesn't seem to be included in Table 3-3. Note: NPDES monitoring data (flow and concentration) should also be available from the Regional Board for these various minor discharges.		

Response

Section	Page(s)	Comment Date	4/10/2006
Comment	10. Summary of Surface Water Samples, Tables 3-5 & 3-6: Include the following additional chloride data: a. SWAMP data for the following upper watershed stations (site IDs and descriptions from SWAMP database shown): 403STC004 – Random Site 4 - Santa Clara River near Chiquito Cyn Rd - Newhall property 403STC019 – Random Site 19 - Santa Clara River - Newhall Land - d/s of Saugus WRP - u/s of Valencia WRP 403STC068 – Random Site 68 - Santa Clara River 403STCBQT – Bouquet Canyon Creek 403STCCTC – Castaic Creek 403STCNRB – Newhall Ranch Blue Cut b. Six Flags Magic Mountain NPDES monitoring data		

Response

Section	Page(s)	Comment Date	4/10/2006
Comment	4-1	12. Task 1A Data Gaps: Regarding surface water diversions information that is lacking from the database, see the assumptions and estimates that were made in the Identification and Characterization Task 1 Report (Systech, July 2002). Newhall will also provide flow information that is available for its Isola diversion.	

Response

Organization	LACSD		
Reviewer	B. Louie		
Section	Page(s)	Comment Date	4/4/2006
Comment	3.4.3.2 Point Discharges The report indicates data from all point source discharges were not available in time to be included in this report. The Districts believe that such data needs to be included in the final Task 1A report. The 1998 Kennedy Jenks Report, provides a good start that lists the NPDES permitted dischargers to the SCR. The Regional Water Quality Control Board also provides a website at: http://www.swrcb.ca.gov/rwqcb4/html/permits/permits.html The other NPDES discharges to the SCR can and should be assessed. In addition, there are a number of other point source dischargers to the Santa Clara River than what are listed in Table 3-3. These include the Fillmore WWTP, which is within the study area, as well as Six Flags Magic, which discharge significant volumes of treated wastewater to the SCR. In addition, the future Newhall WRP should also be mentioned and discussed as a new major point source to the SCR. Finally, recent information related to the illicit discharge of wastewater and softener brines and their impact to surface water and groundwater of the USCR should also be included. (See http://www.the-signal.com/News/ViewStory.asp?storyID=9194) Finally, there is no mention of non-point source (NPS) dischargers in this report. NPS need to be evaluated and include loadings and discharges associated with agricultural return flows for the final Task 1A report. There also needs to be an evaluation of how current agricultural practices and leaching of concentrated rootzone salinities affect groundwater with respect to Chloride and TDS for all agricultural areas in the study area. Districts recommend that Table 3-3 be revised to include NPS discharges accordingly.		

Response

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Category: C Category Description: Additional time is required to acquire data.

Organization LACSD

Reviewer B. Louie

Section 3.4.4.1 Streamflow Page(s) Comment Date 4/4/2006

Comment The 1996 UWCD/CLWA Report and the 1998 Kennedy Jenks report contain some good information on streamflows and diversions, which should be incorporated, accordingly. In addition, the WARMF model for the SCR Nutrient TMDL made some estimates of diversions associated with Camulos Ranch as well as well as for Newhall Land and Farming. Both farming entities should be contacted to discuss the volumes of diverted water. These entities should also report surface water diversions to the State Water Resources Control Board.
 Historic stream flows at Freeman Diversion and Sespe Creek should also be collected in order to estimate/approximate the amount of flow that is discharging Piru Basin at the western interface between Piru/Fillmore Basin. Because there is no historic streamflow gauging data at this important location, it seems inevitable that some estimate of flow will need to be estimated for the purpose of calibration for based on available data from locations where historic downstream gauging data are available.

Response

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Draft GSWI Task 1A Literature Review and Data Acquisition

Category: D

Category Description: Will be addressed as part of the Task 2A Conceptual Model Development and/or Task 2B Numerical Model Development and Calibration.

Organization	GeoSyntec		
Reviewer	B. Steets on behalf of NLF		
Section	Page(s)	3-3	Comment Date 4/10/2006
Comment	<p>2. Soils Data: WARMF soils data should be replaced with SSURGO data since different spacial resolution (i.e., grid size) and soil properties are required of this current modeling analysis. Fundamental differences between WARMF and the current modeling analysis should be noted. For instance, WARMF lumps parameter values according to subcatchment units (i.e., very large "grid" sizes). And with the WARMF modeling analysis, soil hydrologic parameter values were adjusted during the surface water balance and hydrology calibration steps; a separate but similar water balance and hydrologic calibration should be conducted here, beginning initially with the soil parameter values taken from SSURGO and other relevant data or references. Additional references for soil property information include:</p> <ul style="list-style-type: none"> a. 1986 Slade report on the hydrogeology of alluvial sediments in the Santa Clara River Valley; b. 1988 Slade report on the hydrogeology of the Saugus formation in the Santa Clara River Valley; c. Various USGS studies on tracer tests along Santa Clara River (e.g., Constantz et. al., 2003, Paybins et. al., 1998); and d. Los Angeles and Ventura County Hydrology Manuals' soil maps and associated hydrologic parameters (however this may be unnecessary precision for the scale of analysis that you are conducting). 		
Response			
Section	Page(s)	3-5	Comment Date 4/10/2006
Comment	<p>3. Land Use Data: WARMF's combined land use dataset is not available as a shapefile, therefore a new land use layer will have to be created, with LADPW's layer (based on SCAG 2000) probably the most accurate and current. BASINS data can be used to differentiate the "native vegetation" land use category, if needed. The City of Santa Clarita also may have a more accurate local land use dataset. And if percent impervious information is to be used or generated during the analysis, a general residential land use category is too gross and should be further differentiated (such as single-family vs multi-family/mixed residential subcategories).</p>		
Response			
Section	Page(s)	3-6	Comment Date 4/10/2006
Comment	<p>4. General Hydrology and Hydraulics: See comment #3 above on soils data and key differences of the WARMF modeling analysis. Also, it should be noted that during calibration of hydrology in WARMF, some unusual assumptions (such as 0% imperviousness for all land uses) had to be made in order to force flow predictions to better match observations at the gauges, presumably due to infiltration of runoff that was occurring in the wide channel of the Santa Clara River. This was a small scale, but hydrologically significant process that WARMF was unable to simulate, and should be considered in this GSWI modeling analysis.</p>		
Response			
Section	Page(s)	3-8	Comment Date 4/10/2006
Comment	<p>5. Irrigation. Note that WARMF irrigation estimates were based on a 30"/yr application rate assumption. This assumption should be revisited, with input from the local ag stakeholders. Same comment applies for WARMF's flow estimates of surface water diversions and ag well pumping, which were based on the same assumption.</p>		
Response			
Section	Page(s)		Comment Date 4/10/2006
Comment	<p>11. Schematic for Water and Salts, Figure 3-18: References to Newhall Ranch ASR program should be removed as this is no longer part of the Newhall Ranch specific plan. Also, why is rain not included in the "supply" box? And why aren't minor NPDES dischargers (e.g., Magic Mountain, dewatering, etc.) and diversions included in the "non-storm flow in SCR" box?</p>		
Response			

Response to Comments

Draft GSWI Task 1A Literature Review and Data Acquisition

Category: D

Category Description: Will be addressed as part of the Task 2A Conceptual Model Development and/or Task 2B Numerical Model Development and Calibration.

Organization	LACSD
Reviewer	B. Louie

Section	Page(s)	Comment Date
3.2 Physical Setting		4/4/2006
Comment	<p>Some other studies that appear to have not been included are the following:</p> <ul style="list-style-type: none"> • United Water Conservation District and the Castaic Lake Water Agency. Water Resources Report for the Santa Clara River. 1996. • United Water Conservation District. Water Quality of the Santa Clara River and the Montalvo and Oxnard Plain Groundwater Basins • United Water Conservation District. 2003 Piru and Fillmore Basin AB3030 Report. December 2004. • United Water Conservation District. 2000 Surface and Groundwater Conditions Report. September 2001. • USGS. Water-Resources Investigation Using Analog Model Techniques in the Newhall-Saugus Area, Los Angeles County, California. 1972 • Richard C. Slade & Associates. 2001 Update Report: Hydrogeologic Conditions in the Alluvial and Saugus Formation Aquifer Systems. July 2002. • Richard C. Slade & Associates. Hydrogeologic Investigation 1986. Perennial Yield and Artificial Recharge Potential of the Alluvial Sediments in the Santa Clarita River Valley of Los Angeles County, California. 1986 • Richard C. Slade & Associates. Hydrogeologic Assessment of the Saugus Formation in the Santa Clarita River Valley of Los Angeles County, California. 1986 • United States Department of Agriculture Soil Conservation Service. Soil Survey: Ventura Area, California. April 1970. • Santa Clara River Enhancement and Management Plan (see various documents at http://publicworks.countyofventura.org/fc/SCREMP/index.htm) <p>Section 3.2 should be updated accordingly with relevant information from these important studies that were not included in the Draft Task 1A Report.</p>	

Response

Section	Page(s)	Comment Date
3.2.3 Vegetation and Land Use		4/4/2006
Comment	<p>The Districts recommend the use of SCREMP layouts should be used for further land use data for the area in and around the river. Please see Ventura County Watershed Protection District for more information. Many of these SCREMP documents can be downloaded at:</p> <p>http://www.santaclarariverparkway.org/wkb/projects/scremp</p> <p>In addition, some consideration should be given on whether further subdivision of land use within natural/native vegetation category may be necessary? Some vegetation types would appear to have greater ET rates than others, particularly Tamarask and Arundo, which are prevalent in and around the river.</p>	

Response

Section	Page(s)	Comment Date
3.3.1 Rainfall		4/4/2006
Comment	<p>The average annual rainfall pattern (isohyets) information from the CaSIL only cover the period from 1900-1960, the Districts recommend a literature review to identify if similar information is available for the time period 1960 until 2005. Additionally, precipitation data available from Department of Water Resources (CIMIS weather stations) should be incorporated. Some discussion over how more recent data will be collected and how projections of rainfall will be determined/evaluated would be useful.</p>	

Response

Section	Page(s)	Comment Date
3.3.2 Evapotranspiration		4/4/2006
Comment	<p>The report indicates evapotranspiration data from the Piru #101 CIMIS station will be used to calculate ET for specific crop types during development of the model, however, only data from 1992 through 2004 were included in Appendix C and the Piru #101 CIMIS station is listed as inactive since February 2005. Will other sources of ET information for the region be utilized during development of the model, UCCE Farm Advisor, ITRC (See http://www.itrc.org/reports/californiacrop/californiacrop.htm)?</p> <p>Will any other CIMIS data be used, and is this data useful for MODHMS? Here is typical data report from CIMIS website for the Piru #101:</p> <p>Month Year – Tot ETo (in) – Tot Precip (in) – Avg Sol Rad (Ly/Day) – Avg Vap Pres (mBars) – Avg Max Air Tmp (F) – Avg Min Air Tmp (F) – Avg Air Tmp (F) – Avg Max Rel Hum (%) – Avg Min Rel Hum (%) – Avg Rel Hum (%) – Avg Dew Point (F) – Avg Wind Speed (mph) – Avg Soil Temp (F)</p>	

Response

Response to Comments

Draft GSWI Task 1A Literature Review and Data Acquisition

Category: D

Category Description: Will be addressed as part of the Task 2A Conceptual Model Development and/or Task 2B Numerical Model Development and Calibration.

Organization	LACSD		
Reviewer	B. Louie		
Section	3.7 Salt Loading	Page(s)	Comment Date 4/4/2006
Comment	Figure 3-18, provides a salt balance for groundwater that appears to be more specific to Los Angeles County. Artificial and natural recharge in Piru Basin are also important considerations in the salt balance that should be incorporated in the Figure 3-18. Also outflow/inflows from Piru Basin do not seem to be captured in Figure 3-18.		
Response			
Section	4.1 Task 1A Data Gaps	Page(s)	Comment Date 4/4/2006
Comment	The report indicates data for SWP water has not been received. The Districts refer CH2M Hill to the SCVJSS Chloride Source Report as a good source of data and information on SWP water quality and blending associated with usage of imported SWP water and local groundwater supplies.		
	The Districts recommend the following additional data gaps be investigated as well. Some of these data gaps may be information that will eventually be collected and/or assessed as the model is developed, and are not necessarily associated with hydrogeology, but other input parameters that are important for model development and calibration.		
	<ul style="list-style-type: none"> • River paths/routing: (Some mention of available historical aerial photography from the VCWPD was mentioned at the March 18, 2006 TWG Meeting. This data should be collected and assessed, if necessary) • River bed widths/depths • River bed roughness (Manning's N) • Amount of recharge to Alluvial, Saugus and Piru Basins during storm-flow events • Frequency of storm-flow events • Estimation/validation of surface water diversions from agriculture • SWP/groundwater blending, recharge and pumping practices for Los Angeles and Ventura Counties during drought and non-drought conditions • Non-point source chloride and TDS loading 		
	Additionally, information regarding locations of existing routine monitoring and sampling, constituents sampled and the entities conducting this monitoring in the study area should be provided as part of the Final Task 1A report. This should include all Monitoring and Reporting Programs for existing NPDES permit holders (e.g. Six Flags Magic Mountain, Saugus/Valencia WRPs, Piru WWTP, Fillmore WWTP, etc.), as well as other agencies such as the UWCD, LACDPW and VCWPD, and private/non-profit entities that may routinely collect water quality data in the study area.		
Response			
Organization	LARWQCB		
Reviewer	S. Unger/C.Lai		
Section		Page(s)	Comment Date 4/13/2006
Comment	1. Real time measurements of flow and chloride concentration will be required at the selected model boundary to calibrate the model. The model boundary need to be properly imposed to assure the mass of flow and water quality is conserved in the modeling domain.		
Response			
Section		Page(s)	Comment Date 4/13/2006
Comment	2. Elevation of river bottom and cross section will be required in the modeling domain to represent actual flow motion and interaction of surface water and groundwater. The bottom elevation and cross section of the river will significantly affect discharge, velocity and water elevation. In addition, the amount of groundwater entering into the surface water depends on the elevation of river bottom and area of the cross section.		
Response			
Section	3.7	Page(s)	Comment Date 4/13/2006
Comment	4. In Section 3.7 Salt Loading and Transport, diversion flow should be incorporated in Table 3-11 and Figure 3-18 for water budget components and direct runoff should be considered in the routing processes for water and salts indicated in the Figure 3-18.		
Response			

Response to Comments

Draft GSWI Task 1A Literature Review and Data Acquisition

Category: D Category Description: Will be addressed as part of the Task 2A Conceptual Model Development and/or Task 2B Numerical Model Development and Calibration.

Organization LARWQCB
 Reviewer S. Unger/C.Lai

Section	4.0	Page(s)	Comment Date	4/13/2006
Comment	5. In Section 4.0 Task 1A Data Gaps, it is recommended that Data Gaps can be described in the following categories to provide more basis for Task 1B: <ul style="list-style-type: none"> a. Model Setup: watershed topography including land use, river bed widths and elevations, soil data, etc. b. Source Input: precipitation, streamflow, chloride and TDS concentrations of point sources and non-point sources, etc. c. Model Parameters: data needed for model parameters like transmissivity, hydraulic conductivity, dispersion coefficients etc. d. Model Calibration and Validation: in-stream surface water and groundwater flow, constituents sampled at specific locations, etc. 			

Response

Section		Page(s)	3-2	Comment Date	4/13/2006
Comment	6. To avoid delay of schedule due to additional sampling of streamflow at downstream boundary and assure that an appropriate downstream boundary condition is imposed, two grid systems are recommended for modeling: one grid system covers the modeling domain down to the Blue Cut, the other grid system extends further downstream to the proposed western boundary indicated in page 3-2 and Figure 1-1. Technically, the first grid system can provide a checkup of model results of concentrations at Reach 5 and 6 for the boundary imposed in the second grid system.				

Response

Organization UWCD
 Reviewer D. Detmer

Section	3.0	Page(s)	3-12	Comment Date	4/6/2006
Comment	Transmissivity. Be careful trying to derive transmissivity values from specific capacity results in the Piru basin. Unless the well is perforated over a significant portion of the aquifer thickness, the value derived from the specific capacity is not the transmissivity value for the aquifer. Corrections need to be applied that take into account the component of vertical flow contribution and proportion of the aquifer stressed by pumping.				

Response

Section	Figure 3-4	Page(s)		Comment Date	4/6/2006
Comment	Isohyetal Map Showing Average Annual Rainfall Pattern from 1900 to 1960. The isohyetal map represents data from 1900 to 1960. United Water has data for rainfall at Santa Felicia Dam (Lake Piru) over the last 50 years, which shows average precipitation is 11% to 25% greater than what is implied by the isohyetal map. Why use 1900 through 1960 data for an isohyetal map? There is more variability of precipitation during the second half of the 20th Century and the model is being calibrated for the period of 1985 through 2005; wouldn't it be more accurate to generate an isohyetal map for last 50 years or so of data?				

Response

