

Phase II Conceptual Model Project: Task 3

No.	Date Received	Comment Source	Deliverable	Comment	Response
1	06/03/14	Jeanne Chilcott	Draft Tech Memo	Clarify total number of wells evaluated and the percent reduction by removing 4,000+ from the database and whether the removals were random throughout the region or left a specific gap of data in a certain area (e.g. IAZ). I've forwarded the information to Clay and Rob since they were part of the initial project team	<p>The total number of well IDs from each source totals 64,355. Approximately 25% of these are duplicate wells (wells that appeared in more than one publicly available dataset). In phase 1, we attempted to match IDs between databases, however this is problematic in that IDs and tests are sometimes updated in the original databases, making identification of duplicates difficult. In Phase 2 we decided that if the wells' origin came from one particular dataset, that <b>original</b> dataset was maintained and the duplicate appearing in the non-original dataset was removed. For example, GeotrackerGAMA identifies which tests originate from the DWR database. If DWR updated their database with more current information, that information would not be also updated in the GeotrackerGAMA database. We therefore eliminated the tests from GeotrackerGAMA that indicated that they were from DWR, and brought in the entire DWR database. The reasoning for this is that we wanted to include data from its original source, rather than relying on GeotrackerGAMA (for example) to have the most up to date information from DWR.</p> <p>The Phase II Task 3 TM broadly identified where net groundwater data reductions occurred as a result of the Phase II QA/QC work. Specifically, the TM noted that "Within the Central Valley Floor, there was only a net reduction of 912 wells." (this is compared to 32,393 wells in the IAZs, and 45,940 wells in all of Region 5). So there was a 2.8% reduction of the wells on the Central Valley Floor. As part of Phase I, we described the number of wells in each of the IAZs with various statistics relating to the nature of the wells (e.g., shallow, deep, unknown completion, number of wells with tests by decade, number of wells from various data sources, etc.). Essentially data gaps of different types were highlighted in the Task 7/8 report and during many of the team presentations. The Phase II Task 3 TM shows some of these statistics more broadly. Additional analysis of the data relative to each IAZ was not part of the Phase II scope (this type of analysis was suggested as part of the proposed Work Plan Task 6, which was decided by CV-SALTS not to be conducted at this time).</p>
2	06/06/14	Roger Reynolds	Draft Tech Memo	<p>The second sentence of the second paragraph on page 2 states, "Types of groundwater wells include domestic, public supply, industrial, monitoring, irrigation, and stock wells." The end of the second paragraph on page 2 concludes with the statement "...EC or SC was converted to TDS by multiplying the results by 0.64, a commonly used multiplier."</p> <p>Comment: At last week's TAC meeting there was a discussion on EC/TDS Ratios which for some subsurface drainage waters on the west side varied from 0.64 to 0.80. The resulting sensitivity analysis prepared by LWA determined salt loading to the SJ River could be greater than estimated with a larger ratio. If the water quality data for groundwater wells includes in the ICM analysis "monitoring wells" which measure shallow groundwater, then the conversion to TDS using the common 0.64 multiplier may not be correct. It would appear an added footnote or description on this issue related should be provided.</p>	Footnote: EC and SC data were collected and transformed to TDS using the ratio TDS = EC*0.64 for wells without TDS data (Tchobanoglous and Burton.1991.). It should be noted that this ratio is a common approximation, and can change depending on local conditions. Converted SC/EC tests are indicated in the database in the comment field.
3	06/06/14	Roger Reynolds	Draft Tech Memo	<p>Regarding Page 3, <u>Other Data Qualifiers</u> –</p> <p>Comment: It is understandable that there are different qualifiers in the different data files. The second paragraph indicates some of the qualifiers used by CDPH were not defined in their database. Was there any follow up with CDPH to encourage them to clarify uncertain or unclear qualifiers in the future?</p>	We followed-up with one CDPH employee who had not been made aware of one particular data qualifier (the "-" sign on the recent data qualifier field). No further attempt was made to clarify that qualifier. There was also a period "." data qualifier under XMOD, and this undefined qualifier was ignored.
4	06/06/14	Roger Reynolds	Draft Tech Memo	<p>Figure 1 page 7, <u>Number of Wells with Nitrate or TDS Test by Decade and by Source</u> –</p> <p>Comment: This Figure graphically shows that the number of wells monitored by CDPH are increasing while the wells monitored by DWR and USGS have been decreasing over the last 20 years or so. It may just be a budget issue, but why have the number of groundwater quality analyses from DWR and USGS been decreasing? It seems to mean that other than the groundwater quality data obtained under Dairy program that we are not maintaining an ongoing groundwater quality database in the other areas of Region 5.</p>	Interesting comment. It is outside the scope of this task to determine the ongoing nature of groundwater quality data collection by the various entities.