

Baker Manock  
& Jensen PC  
ATTORNEYS AT LAW

July 31, 2009

Mr. Jensen Uchida  
San Joaquin Cross Valley Loop  
Transmission Project  
c/o Environmental Science Associates  
225 Bush Street, Suite 1700  
San Francisco, California 94104-4207

Re: *San Joaquin Cross Valley Loop Transmission Project*  
*(A. 08-05-039) Draft Environmental Impact Report*

Christopher L. Campbell  
*Attorney at Law*  
ccampbell@bakermanock.com

Fig Garden Financial Center  
5260 North Palm Avenue  
Fourth Floor  
Fresno, California 93704  
Tel: 559.432.5400  
Fax: 559.432.5620  
www.bakermanock.com

Dear Mr. Uchida:

This comment letter is submitted on behalf of Paramount Citrus Association (“Paramount Citrus”) in response to the San Joaquin Cross Valley Loop 220 kV Transmission Line Project Draft Environmental Impact Report (“DEIR”) and request for public comment by the California Public Utilities Commission (“CPUC”). Paramount Citrus and its affiliates own significant agricultural acreage within the proposed Alternatives 1, 2, and 6 Right of Way (“ROW”) described in the DEIR and will suffer significant adverse impacts if any of these alternatives are chosen.

The DEIR published by the California Public Utilities Commission concerns the Southern California Edison (“SCE”) proposal to build a new two circuit 220kV line with associated poles and lattice towers and additional appurtenant equipment connecting the existing Big Creek 4-Springville transmission line to the existing Rector substation near Visalia (the “Project”). The DEIR indicates that the Project is needed to increase transmission capacity to meet the peak power needs of the Visalia area.

The CPUC received a wide variety of comments concerning the DEIR at the July 23, 2009 public meeting held in Visalia (the “Public Meeting”). Paramount Citrus Vice President Doug Carman spoke at the Public Meeting and provided a written copy of his expanded comments. These comments supplement the comments made by Mr. Carman at the Public Meeting.

The comments of the approximately 50 speakers at the Public Meeting were extremely consistent in advocating for a specific alternative. This is in distinct contrast to the majority of public meetings concerning Environmental Impact Reports (“EIRs”). Generally competing groups argue from very different perspectives about the proposed project and its alternatives. This presents the rare instance where a draft EIR causes an entire community – consisting of

Mr. Jensen Uchida  
San Joaquin Cross Valley Loop  
Transmission Project  
July 31, 2009  
Page 2

farmers, businesses and environmentalists – to coalesce around a single alternative that they all find acceptable. The local community is primarily concerned that construction of the proposed transmission lines on either the proposed route (Alternative 1) or Alternatives 2 or 6, which will travel through highly productive existing agriculture, will have devastating economic impacts upon an area that is already struggling with a variety of economic difficulties. In addition, Alternatives 2 and 6 traverse an extremely valuable local historical and recreational area. Finally, and perhaps most importantly, approximately the eastern half of Alternatives 2 and 6 is an important citrus growing area that is dependent upon groundwater from a limited and unpredictable fractured rock system. The disruption caused by transmission line construction could significantly alter the course of groundwater, thereby damaging wells and depriving existing orchards, homes and communities of vital irrigation water.

The route labeled Alternative 3 in the DEIR is the basis for the community agreement; however, certain members of the community also believe that an additional mitigation measure should be introduced to ensure that Alternative 3 does not damage the Stone Corral Ecological Reserve. For the purpose of these comments, we will refer to Alternative 3 with the proposed additional mitigation as Alternative 3a.

Paramount Citrus encourages the CPUC to determine that Alternatives 1, 2 and 6 are not feasible due to their significant impacts that cannot be addressed by any available mitigation. Paramount Citrus encourages the CPUC to select Alternative 3 or 3a as the environmentally superior alternative for the reasons set forth below.

## **REQUIREMENTS FOR A DRAFT ENVIRONMENTAL IMPACT REPORT**

The California Environmental Quality Act (“CEQA”) requires the preparation of an Environmental Impact Report (“EIR”) whenever there is substantial evidence that a proposed project may produce significant environmental effects. (Pub. Resources Code, Section 21080). The contents of the EIR and the process for review of the EIR are set forth in the CEQA Guidelines that have been adopted by the legislature and have the force of law. They are found in the California Code of Regulations, Title 14, Division 6, Chapter 3 Sections 15000-15387 and Appendices A-K. They will be cited in these comments as “CEQA Guidelines.”

The Draft EIR is an informational document to assist the public and the decision makers to understand the impacts of a proposed project. The statute states generally that “the purpose of an EIR is to provide public agencies and the public in general with detailed information about the effect which a proposed project is likely to have on the environment; to list ways in which the significant effects of such a project might be minimized; and to indicate alternatives to such a

Mr. Jensen Uchida  
San Joaquin Cross Valley Loop  
Transmission Project  
July 31, 2009  
Page 3

project.”<sup>1</sup> Substantively, an EIR must include, among other things, a brief summary of the proposed project and its consequences; a discussion of the inconsistencies between the proposed project and applicable general and/or regional plans; a description of the significant environmental effects of the proposed project, explaining which, if any, can be mitigated and a statement of the measures, if any, proposed to mitigate such environmental impacts; an analysis of a range of reasonable alternatives to the proposed project; a statement explaining why certain impacts were identified as insignificant; an analysis of the proposed project’s cumulative impacts; and **where appropriate** a discussion of the economic and social impacts of the proposed project.<sup>2</sup> As will be demonstrated in these comments, the DEIR in this case fails to provide adequate information about environmental impacts and, although it is appropriate in this case, fails to discuss the adverse economic and social impacts of the proposed project and the alternatives.

The requirement to set forth project alternatives within the EIR is crucial to CEQA’s substantive mandate that avoidable significant environmental damage be substantially lessened or avoided where feasible. In general, an EIR “must produce information sufficient to permit a reasonable choice of alternatives so far as environmental aspects are concerned.”<sup>3</sup> To achieve this mandate, “an EIR must consider a reasonable range of alternatives to the project, or to the location of the project, which (1) offer substantial environmental advantages over the project proposal...; and (2) may be ‘feasibly accomplished in a successful manner’ considering the economic, environmental, social and technological factors involved.”<sup>4</sup> CEQA Guidelines provide that an EIR shall describe a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives.<sup>5</sup> While the DEIR does present a range of alternatives, it fails to completely and accurately compare their environmental impacts so that the decision maker has adequate information to choose the environmentally superior alternative. These comments describe the important information that the DEIR fails to consider in its comparison of the alternatives.

“A legally adequate EIR ‘must contain sufficient detail to help ensure the integrity of the process of decisionmaking by precluding stubborn problems or serious criticism from being swept under the rug.’” (*Kings County Farm Bureau v. City of Hanford* (5<sup>th</sup> Dist. 1990) 221

---

<sup>1</sup> Pub Resources Code, Section 21061.

<sup>2</sup> CEQA Guidelines §§ 15122-15131.

<sup>3</sup> *San Bernardino Valley Audubon Society v. County of San Bernardino* (4<sup>th</sup> Dist. 1984) 155 Cal. App. 3d 738, 750-751.

<sup>4</sup> *Citizens of Goleta Valley v. Board of Supervisors* (1990) 52 Cal. 3d 553, 566 (italics deleted from original).

<sup>5</sup> See CEQA Guideline § 15126.6

Mr. Jensen Uchida  
 San Joaquin Cross Valley Loop  
 Transmission Project  
 July 31, 2009  
 Page 4

Cal.App.3d 692, 733 [270 Cal.Rptr.650] (“*Kings County Farm Bureau*”).) The EIR “must reflect the analytic route the agency traveled from evidence to action.” (*Ibid.*) “The EIR must contain facts and analysis, not just the bare conclusions of a public agency. An agency’s opinion concerning matters within its expertise is of obvious value, but the public and decision-makers, for whom the EIR is prepared, should also have before them the basis for that opinion so as to enable them to make an independent, reasoned judgment.” (*Santiago Water District v. County of Orange* (4<sup>th</sup> Dist. 1981) 118 Cal.App.3d 818, 831 [173 Cal.Rptr.602].)<sup>6</sup>

The DEIR is legally insufficient in that it fails to include the relevant facts in a number of areas and therefore, its analysis of the relative environmental impacts of the alternatives is flawed.

**I. THE AGRICULTURAL IMPACTS FROM ALTERNATIVES 1, 2 AND 6 ARE SEVERELY UNDERESTIMATED WHILE THE IMPACTS FROM ALTERNATIVE 3 ARE SEVERELY OVERESTIMATED. ALTERNATIVE 3 IS THE SIGNIFICANTLY ENVIRONMENTALLY SUPERIOR ALTERNATIVE.**

**a. The Agricultural Impacts from Alternatives 1, 2 And 6 Are Severely Underestimated.**

**i. The DEIR Underestimates The Impacts On Agriculture From Alternatives 1, 2 And 6 Because It Fails To Take Into Account The Danger and Infeasibility of Utilizing Necessary Farming Equipment Under Or Near The High Voltage Transmission Lines.**

According to the DEIR, construction activities for the Proposed Project (Alternative 1) will permanently disturb 24.2 acres of farmland and only 0.1 of those acres will be reclaimed<sup>7</sup>. Of those 24.2 acres, 13.8 acres are acres devoted to orange trees.<sup>8</sup> No portion of those 13.8 acres will be reclaimed.<sup>9</sup> In addition to the land that will be permanently disturbed by construction, the DEIR states that an additional 29 acres of orchards must be permanently removed due to the erection of the transmission lines.<sup>10</sup> These 29 acres are currently devoted exclusively to walnut trees, which cannot be replanted due to the 15 foot height restriction under the ROW.<sup>11</sup>

<sup>6</sup> Guide to The California Environmental Quality Act 1999 Ed. Page 353.

<sup>7</sup> Table 4.2-5

<sup>8</sup> Table 4.2-5

<sup>9</sup> Table 4.2-5

<sup>10</sup> Page 4.2-15

<sup>11</sup> Page 4.2-15

Mr. Jensen Uchida  
San Joaquin Cross Valley Loop  
Transmission Project  
July 31, 2009  
Page 5

According to the DEIR, construction activities for Alternative 2 will permanently disturb 19.8 acres of farmland and only 1.2 of those acres will be reclaimed.<sup>12</sup> Of those 19.8 acres, 9.1 acres are acres devoted to orange trees and only 0.7 acres are expected to be reclaimed.<sup>13</sup> In addition to the land that will be permanently disturbed by construction, the DEIR states that an additional 12 acres of orchards must be permanently removed due to the erection of the transmission lines.<sup>14</sup> Again, these 12 acres are acres devoted exclusively to walnut trees, which cannot be replanted due to the 15 foot height restriction under the ROW.

According to the DEIR, construction activities for Alternative 6 will permanently disturb 27.4 acres of farmland and only 0.7 of those acres will be reclaimed.<sup>15</sup> Of those 27.4 acres, 21.2 acres are acres devoted to orange trees and only 0.5 acres are expected to be reclaimed.<sup>16</sup> In addition to the land that will be permanently disturbed by construction, the DEIR states that an additional 12 acres of orchards must be permanently removed due to the erection of the transmission lines.<sup>17</sup> Again, these 12 acres are acres devoted exclusively to walnut trees. The DEIR concludes that most impacts to agriculture are temporary so they are less than significant. The DEIR does acknowledge that conversion of agricultural land to non agricultural use is a Class I significant and unmitigable impact (eg. Impact 4.2.4) but the DEIR underestimates the extent of that impact.

The average numbers in the DEIR severely underestimate the number of acres of agricultural land that will actually be lost due to the Alternative 1, 2, or 6 ROW because they refer only to land that will be directly affected by construction activities. The DEIR incorrectly asserts that, in addition to the land affected by construction and the permanent facilities, walnut orchards are the only crops that cannot be replanted. As discussed below, however, the erection of transmission lines in the new ROW within Alternatives 1, 2, and 6 will require the removal of the majority of orchard types and many other crops located within that new ROW. The DEIR states, "unlike walnut trees, orange and other citrus trees are able to remain productive even when topped at 15 feet under transmission lines." The DEIR continues: "Consequently, orange orchards and other crops growing in the ROW would not require permanent removal in the ROW for maintenance purposes."<sup>18</sup> Both DEIR statements are technically correct. Citrus trees can be productive when limited to a height of 15 feet and citrus trees below 15 feet will not interfere with maintenance of the transmission lines. The problem is that the DEIR draws the incorrect conclusion that citrus can, therefore, be productively farmed under the transmission lines. The

---

<sup>12</sup> Table 4.2-7.

<sup>13</sup> Table 4.2-7

<sup>14</sup> Page 4.2-19

<sup>15</sup> Table 4.2-11

<sup>16</sup> Table 4.2-11

<sup>17</sup> Page 4.2-24

<sup>18</sup> Page 4.2-15 (emphasis added)

Mr. Jensen Uchida  
San Joaquin Cross Valley Loop  
Transmission Project  
July 31, 2009  
Page 6

equipment necessary to efficiently produce a crop exceeds the 15 foot height restriction and cannot be operated safely under the transmission lines. The inability to operate this equipment will preclude not only re-planting directly under the transmission line after construction, but will prevent commercial citrus farming and will have significant impacts on commercial farming of many other crops within the entire width of the new ROW.

1. The DEIR Does Not Address That The Equipment Necessary to Efficiently Farm and Maintain Citrus Orchards and other Crops Will Prevent Commercial Farming Within the New ROW Proposed for Alternative 1, 2, or 6.

It is not practical, feasible or safe for workers or contractors to carry out the tasks necessary to successfully farm a citrus orchard under or near the transmission lines. The intensive operations required to maintain, irrigate, and harvest the orchards will be impossible under or near the transmission lines. For example, mechanical toppers are used to prune the top of the citrus trees. This machine has a boom arm and whirling saws that swing up to 30 feet or more. It would not be safe to operate this machine under or near the transmission lines due to the potential for contact with the lines. Additionally, ground spray equipment used for application of fertilizer, pesticides and other products to the orchards would be extremely dangerous to operate under the transmission lines. Of course, aerial spraying is not possible. Paramount Citrus and other growers of the seedless Clementine oranges must drape nets over the trees to prevent bees from pollinating the trees during the bloom. This net machine has a boom that reaches a height of 30 feet. Again, it would not be safe to operate this machine under or near the transmission lines due to the potential for contact with the lines.

The ROW for Alternatives 1, 2, or 6 will interfere with irrigation practices as well. The DEIR requires that all underground water pipelines must have at least 36 inches of cover.<sup>19</sup> It is impossible to irrigate while also maintaining this required 36 inches of cover. In addition, water is frequently used for frost protection, often utilizing metal surface pipelines that cannot be used under the transmission lines. To protect citrus trees from frost damage, wind machines are necessary. Wind machines have a tower height of 35 feet and a propeller that reaches another 8-12 feet above that. In extreme cases some growers also utilize helicopters for frost protection. Like the other normal farming practices discussed, it would not be safe to utilize any of the normal and essential frost protection methods under or near the transmission lines and no other methods are reasonably available. Finally, the normal commercial harvesting methods are unsafe under the transmission lines. Harvesting is done with aluminum picking ladders and/or forklifts, each reaching a height of 20 feet, and presenting an unacceptable risk to workers.

---

<sup>19</sup> Page 2-40.

Mr. Jensen Uchida  
 San Joaquin Cross Valley Loop  
 Transmission Project  
 July 31, 2009  
 Page 7

Because citrus growers cannot perform most normal tasks used in the rest of their orchards, they will not continue to farm under or near the transmission lines. Similar concerns will impair commercial farming of almost any similar orchard crop. Crops other than orchards also utilize significant specialized equipment that may be problematic under or near the transmission lines.

2. The DEIR Improperly Fails to Distinguish Between Existing Impacts to Agriculture in the Existing Right of Way and New Impacts to Agriculture in the Proposed Right of Way.

The DEIR assumes that any crop with a normal growing height below 15 feet can be commercially farmed under the transmission lines. Because this assumption is incorrect, the DEIR substantially underestimates the amount of productive crop acreage, consisting primarily of Prime Farmland and Farmland of Statewide Importance, that will be lost if any of Alternative 1, 2 or 6 are approved. The DEIR, in Table 4.2-3, details the agricultural land that is within the right of way of each alternative but it does not calculate the new ROW and the existing ROW separately. It is crucial to consider the new ROW separately from the existing ROW because, with the exception of temporary construction impacts, all of the agricultural impacts of the existing ROW have already occurred. By treating the existing ROW impacts as the same as the proposed new ROW Table 4.2-3 fails to accurately compare the relative environmental impacts of the alternatives as required by CEQA Guideline 15126.6 (d).

3. The Impacts of the Project and Alternatives 2 and 6 on Agriculture in the Right of Way Are Substantially Greater than the Impacts of Alternative 3. Because Alternatives 1, 2 and 6 Include Significant New Right of Way Through Agricultural Land.

Table 4.2-3 indicates that the Alternative 1 ROW includes a total of 231 acres, the Alternative 2 ROW includes a total of 341 acres, Route 3 includes a total of 382 acres, and Route 6 includes a total of 291 acres. This implies that Alternative 3 impacts the most acreage and Alternative 1 impacts the least acreage. Although the acreage numbers are technically correct, the DEIR does not make the important distinction between the number of **new** acres of ROW in each alternative and the total number of acres in the existing ROW. We have calculated that the number of **new** acres in each ROW is the following: Alternative 1 is 217 acres; Alternative 2 is 180 acres; Alternative 3 is 153 acres; Alternative 6 is 175 acres. More important than the total acres, however, is the distribution of uses and soil types in the new ROW acres. Once again, Table 4.2-3 provided in the DEIR is deficient because it fails to provide this crucial information for comparison of the Alternatives. Based on other information, we have concluded that the soil types in the new ROW are distributed as follows; In Alternative 1 only 11.4 acres are grazing

Mr. Jensen Uchida  
San Joaquin Cross Valley Loop  
Transmission Project  
July 31, 2009  
Page 8

land and the great majority of the new ROW is Prime Farmland or Farmland of Statewide Importance. In Alternative 2, 30 acres are grazing and the balance is in the more important categories. In Alternative 3, all of the new ROW is grazing, not mapped or of local importance—there is no Prime Farmland or Farmland of Statewide Importance in the new Alternative 3 ROW. In Alternative 6 there are 4 acres of grazing land, 48 acres of Farmland of Local Importance and the rest of the new ROW is Prime Farmland or Farmland of Statewide Importance.

When the distribution of Prime Farmland and Farmland of Statewide Importance is compared for only the new ROW, the conclusion is much different than that drawn by the DEIR. Any permanent impacts of the existing transmission line ROW have already occurred. Moreover, the DEIR makes clear on the whole that reconstruction of the existing transmission line for the portion contained in each of the alternative routes will either maintain or reduce the impacts on agriculture within the existing ROW. For example, a net 2.0 acres will be reclaimed in the portion of existing ROW contained in Alternative 3.<sup>20</sup> Therefore, the permanent and significant impacts of this project will occur only in the new ROW. To properly inform the public and decision makers, the DEIR should discuss the new ROW separately rather than obscuring the distinctions between the Alternatives as DEIR Section 4 has consistently done throughout its analysis of agricultural impacts and other categories of impacts.

The DEIR fails to accurately indicate the number of acres of citrus trees and other crop production that will be lost annually in the proposed new ROW as a result and of the farming limitations discussed above. Once again, we must rely upon our own calculations because the DEIR has failed to provide this important information. We will focus on the example of Alternative 2 where Paramount Citrus has the most orchards because we have the most reliable data for that alternative. We estimated that 180 acres of new ROW needs to be created for Alternative 2. Subtracting the 30 acres of grazing land and the 9 acres of presumably rocky land on Colvin Mountain that is not mapped by the Farmland Mapping Program, we estimate that Alternative 2 creates new permanent Class 1 significant and unmitigable impacts to 140 acres of Prime Farmland, Farmland of Statewide Importance, Unique Farmland and Farmland of Local Importance. Although not all of that acreage is currently planted to citrus, our observation is that most of the 140 acres in the new Alternative 2 ROW is either planted to citrus or could be planted to citrus if the transmission lines are not built across it. Therefore, the impacts to the Paramount Citrus orchards described below are indicative of the adverse impacts that would occur along the entire ROW.

#### 4. Paramount Citrus Farming Example in the Path of Alternative 2.

---

<sup>20</sup> 4.2-21.



Mr. Jensen Uchida  
 San Joaquin Cross Valley Loop  
 Transmission Project  
 July 31, 2009  
 Page 9

To provide an example of the impacts of the Alternative 2 ROW we calculated the impacts on the orchards owned and operated by Paramount Citrus. The right of way on their property includes 7 acres. The DEIR estimates that only 4.39 of those acres will be directly affected by transmission facilities. Based on its erroneous assumptions the DEIR therefore concludes that only 4.39 acres on the Paramount Citrus property will be affected by Alternative 2. By contrast, Paramount Citrus has determined that it will lose 17 acres of citrus trees because they cannot continue to safely and effectively farm the acreage within or near the ROW for the reasons discussed above. That is in stark contrast to the EIR assertion in Table 4.2-6 that only 24 acres in the entire new Alternative 2 ROW will be permanently impacted. In addition, Paramount Citrus will lose a well, will need to redesign its irrigation system, including replacing a reservoir and several pumps and must relocate two wind machines. Because the transmission line is not proposed along a farm road or other convenient division of the orchard, Paramount Citrus will also incur additional costs to continue farming some additional property. The inability to farm the very high value citrus crops under the transmission lines will have a significant adverse economic effect on the community as discussed in detail in Section II below.

5. The DEIR Fails to Recognize That the Equipment Necessary to Efficiently Farm and Maintain Crops Will Prevent Planting Almost All Crops Under or Near The Alternative 1, 2, or 6 ROW.

Like citrus, many other commercial crops are farmed with equipment that presents very high risks to the operators if used under or near the transmission lines. While the equipment may be different, the result is the same. Many farmers will be unable to economically farm any crops under or near the transmission lines. However, the DEIR never addresses the loss of these crops. In fact, the DEIR states that such crops can be replanted.<sup>21</sup> The evidence clearly establishes that the DEIR severely underestimates the number of acres that will be converted to non-agricultural land – a significant unmitigable effect<sup>22</sup> - if the Alternative 1, 2, or 6 ROW is approved by the CPUC.

ii. **The DEIR Fails to Consider that Land Outside the Right Of Way Will Be Converted to Non-Agricultural Land Due to Logistical Considerations of Farming Practices.**

The DEIR fails to consider that logistical considerations will interfere with the efficient farming of existing orchards and/or other crops if a new ROW is established. In many instances land that the DEIR does not project will be disturbed by construction and that is outside the ROW itself will be adversely affected by the transmission lines. The established farming

<sup>21</sup> See 4.2-15.

<sup>22</sup> See 4.2-15, 4.2-19, and 4.2-25

Mr. Jensen Uchida  
 San Joaquin Cross Valley Loop  
 Transmission Project  
 July 31, 2009  
 Page 10

operations that the Alternative 1, 2 or 6 new ROW will slice have through established facilities and infrastructure designed and constructed for efficiently farming the property as it is currently laid out. The design did not consider the location of a utility ROW that was not yet proposed. Once the ROW is constructed, the combination of the ROW restrictions (e.g. how close necessary farming equipment can realistically get to the ROW) and the restrictions that naturally come from established facilities and infrastructure could render portions of property and infrastructure stranded and unfarmable. For example, land could become inaccessible for equipment because the equipment cannot get around both the ROW and already established structures. Additionally, established irrigation systems may not be usable in certain areas because the location of the system is incompatible with the location of the ROW. This will force farmers to abandon these portions of their land because they cannot practicably or economically farm. As discussed above, only 7 acres of Paramount Citrus and is actually within the Alternative 2 ROW but Paramount Citrus will not be able to farm an additional 10 acres due to a combination of safety and logistical considerations. The problem of acreage stranded by the new transmission lines is especially acute in any high value orchards – such as citrus - because they are permanent plantings with irrigation systems that cannot be modified easily or quickly.

The DEIR fails to address this issue at all because it specifically assumes that farming operations can and will continue under and near the transmission lines.<sup>23</sup> Since the DEIR has not surveyed these potential impacts it is difficult to evaluate the full extent of the problem. We are aware, however, that loss of acreage will occur and it needs further study.

The failure of the DEIR to consider these crops and orchards that will be converted to non-agricultural land due to the logistical considerations of the farming operations once the Alternative 1, 2, or 6 ROW is constructed establishes that the DEIR severely underestimated the amount of farmland that will be converted to non-agricultural use – a significant unmitigable effect<sup>24</sup>.

**iii. The DEIR Additionally Underestimates the Impacts from Alternatives 1, 2 and 6 Because it Does Not Sufficiently Address the Conflicts Between These Alternatives and the Local Policies Intended to Preserve Agricultural Lands.**

The following local ordinances and polices are affected by Alternatives 1, 2, and 6: (1) Goal 1LU.A of the Tulare County General Plan Land Use and Urban Boundaries Element requires the preservation of the agricultural economic base; (2) Policy 6.I.5 of the Tulare County General Plan Environmental Resources Management Element requires an attempt to maintain

<sup>23</sup> See 42.-15.

<sup>24</sup> See 4.2-15, 4.2-19, and 4.2-25

Mr. Jensen Uchida  
 San Joaquin Cross Valley Loop  
 Transmission Project  
 July 31, 2009  
 Page 11

agriculture as a primary, extensive land use; (3) Issue 9: Agricultural Lands, Goal 1 of the Farmersville General Plan states that the agricultural economic base must be protected; and (4) Issue Four: Urban Boundaries and Farmland Protection, Goal 1, Objective 1 of the Farmersville General Plan requires the preservation and protection of agricultural lands.<sup>25</sup>

The proposed ROW for Alternatives 1, 2, and 6 will require SCE to acquire several miles of new ROW. Specifically, the Proposed Project (Alternative 1) will require acquisition of 17.4 miles of ROW<sup>26</sup>, Alternative 2 will require the acquisition of 12.2 miles of ROW<sup>27</sup>, and Alternative 6 will require acquisition of 12.4 miles of ROW.<sup>28</sup> As discussed above, citrus and similar crops cannot be farmed under any portion of the new ROW due to the machinery that must be used in profitable commercial farming operations today. The loss of this productive agricultural land is contrary to each of the enumerated local ordinances and policies. Reduction in productive agricultural acreage also translates into fewer dollars and jobs generated from agriculture for the local economy.

Since the DEIR dramatically underestimates the number of acres of agricultural lands that will actually be converted to non-agricultural lands, the DEIR makes it difficult to fully quantify the significant impacts of Alternatives 1, 2, and 6 on these local policies. It is clear, however, that creating new ROW across prime agricultural land instead of choosing a viable alternative route violates each of those policies.

**iv. Because The Agricultural Impacts are Underestimated, the Project Cost for Alternatives 1, 2, and 6 will be Substantially Higher than Projected.**

The variety of impacts from the three Alternative routes traversing high value agriculture will result in significant battles over condemnation awards and costs that are significantly higher than the minimal impacts projected by the DEIR. In Paramount Citrus' case, we are projecting that 17 acres or more will be permanently removed from orchard production. Based on the cost of the orchard improvements that must be removed and the significant lost annual revenue from Clementines and other citrus, the value per acre will exceed almost any other crop land in the San Joaquin Valley. In addition, there will be significant severance damages because the entire operation will be somewhat less efficient and cost effective without that acreage. Finally, replacement of Paramount Citrus' well and reconfiguration of its irrigation system will require a minimum of \$120,000.00, though it certainly may be more.

---

<sup>25</sup> 4.2-7 to 4.2-9

<sup>26</sup> Page 2-6

<sup>27</sup> Page 3-10

<sup>28</sup> Page 3-16

Mr. Jensen Uchida  
 San Joaquin Cross Valley Loop  
 Transmission Project  
 July 31, 2009  
 Page 12

When the costs for all of the affected farms are compiled, the acquisition costs for either Alternative 1, 2 or 6 will greatly exceed the cost of right of way for Alternative 3. While there may be more construction costs for Alternative 3, working within the existing ROW can have significant cost advantages.

**b. The Agricultural Impacts From Alternative 3 Are Severely Overestimated.**

**i. The Impacts on Agricultural Land Within the Alternative 3 ROW Has Been Overestimated Because The Agricultural Land Traversed by Alternative 3 is Already Within a Utility Right of Way.**

Only Alternative 3 does not require acquisition and construction of miles of new right of way across Prime Farmland and Farmland of Statewide Importance. Alternative 3 only requires the acquisition of 9.7 miles of ROW.<sup>29</sup> The remaining 14.6 miles of Alternative 3 ROW will be within the current SCE Big Creek-1 & 3 Rector ROW that will merely be replaced with updated equipment as part of the current project.<sup>30</sup> The effects on farmland within an already existing utility ROW are different from the effects on farmland where a new utility ROW must be created. The DEIR fails to address this difference at all. It is impossible to objectively consider the overall impacts on agriculture between the four action alternatives when the DEIR does not accurately address the disparate nature of the agricultural impacts.

**1. The Land Use in the Existing ROW Has Been Designed and Developed to Accommodate the Transmission Lines that Have Been in Place for Decades.**

Although Alternative 3 will cross farmland, the discussion in the DEIR does not acknowledge that all of the Prime Farmland and Farmland of Statewide Importance traversed by the Alternative 3 ROW is already burdened by a utility ROW. Utility lines and poles are already in place and have been in place for between 80 and 98 years depending on the specific location.<sup>31</sup> As a result, the entire fabric of the land use along the existing ROW has been developed over decades to account for the location of the ROW, as well as other logistical limitations caused by the ROW, and the obtrusive existing transmission lines and towers within it. In fact, in some locations, the ROW is devoted to farm roads or other non-cultivated uses. In other areas there are older orchards that cannot be farmed with current methods; these orchards are not as productive as the same types of orchards that would be affected by the other alternatives. Even

<sup>29</sup> Page 3-13

<sup>30</sup> Page 3-13.

<sup>31</sup> 4.2-20 to 4.2-22

Mr. Jensen Uchida  
San Joaquin Cross Valley Loop  
Transmission Project  
July 31, 2009  
Page 13

where crops have been planted under or near the existing ROW, the planting has been designed to account for the existence and location of the transmission lines. Specifically, it is clear in Figure 4.1-3a (View from Road 148 at Cameron Creek looking South toward Rector Substation) that farming operations in the existing ROW have designed their orchards and fields around the transmission towers. It can be clearly seen in this figure that a buffer zone has been created around the transmission pole. Since this buffer zone already exists, replacing transmission poles in the existing ROW will result in minimal construction impacts and will not require the permanent removal of a significant amount of currently utilized crop land. These differences are significant and important in objectively comparing the alternatives, yet they were not addressed in the DEIR.

The DEIR has overestimated the impacts that the Alternative 3 ROW will have on agriculture. The DEIR appears to consider that the temporary construction impacts for a mile of agricultural land within the existing ROW is equivalent to the construction impacts for a mile of agricultural land within the proposed new ROW. However, the quality of the agriculture is very different between the existing ROW affected by Alternative 3 and the new ROW included in Alternatives 1, 2, and 6. Since the quality of the agriculture is different, the effects of Alternative 3 on agriculture are not as severe as the DEIR portrays. Furthermore, due to the historical use of the agricultural land under the existing ROW, the effects of Alternative 3 on agriculture are not as severe as the effects of Alternative 1, 2, or 6, or as severe as the DEIR portrays.

2. The Agricultural Value of the Land in the Existing ROW is Substantially Less Than the Value of the Lands Impacted by the New ROW in Alternatives 1, 2 and 6.

All of the existing ROW is in heavier soils and has colder local temperatures so the land is not suitable for citrus orchards--the highest value crops grown in the area. The land traversed by the new Alternative 1, 2, or 6, ROW is known as the "citrus belt" where quality navel oranges, lemons and mandarins are successfully grown for export all over the world.<sup>32</sup> These differences in climate and soil between the Alternative 3 and Alternatives 1, 2, and 6 ROW, impact the productivity of agricultural land. The difference in agricultural productivity clearly establishes that the effects each ROW will have on agriculture are, in fact, different. However, the DEIR neither articulates, nor discusses this distinction.

3. The New Portion of the Alternative 3 ROW Has Insignificant Impacts.

---

<sup>32</sup> 4.2.-1

Mr. Jensen Uchida  
San Joaquin Cross Valley Loop  
Transmission Project  
July 31, 2009  
Page 14

The new ROW within Alternative 3 consists of 9.7 miles crossing Stokes Mountain and Stone Corral Canyon. The soils are primarily suitable for grazing land. There are heavy alkaline soils at the bottom of Stokes Mountain where the new ROW reaches the existing ROW. Those soils have little agricultural value and the new Alternative 3 ROW will not affect existing crops. These areas are not suitable for citrus or any other high value crops. The dry land grazing operations crossed by Alternative 3 will not experience adverse economic impacts from the new ROW because they do not utilize either farming equipment or irrigation that would be impaired by the transmission lines. The CPUC has received a letter from a property owner named Ron Paregian, who has orchards affected by Alternative 1 and grazing land affected by Alternative 3. He states that his grazing land will experience only a minor loss of utility so the new Alternative 3 ROW and will not be objectionable to him as a property owner. He agrees that the impacts on the orchard land will be much more serious

**ii. The DEIR Overestimates The Impacts From Alternative 3 Because The EIR Fails To Acknowledge That Alternative 3 Best Serves The Local Policies Aimed At Preserving Agricultural Lands.**

The local policies and objectives discussed in Section I.a.iii above also support Alternative 3 as the superior alternative. As discussed, more than 14 miles of the Alternative 3 route is within existing SCE utility ROW and therefore does not create new impacts to valuable farmland.

**iii. The DEIR Failed To State That Alternative 3 Is The Environmentally Superior Alternative Based On Its Lack Of Significant Effects On Agriculture.**

As discussed in this Section, the new ROW required for Alternative 1, 2 or 6 would result in the permanent retirement of significant acreage devoted to high value crops. This is contrary to adopted local and State policies. The routes through existing orchards will also have significant negative effects on irrigation equipment and the ability to effectively farm some of the remaining plantings. These new routes will have a resulting significant adverse economic impact on the local communities. Alternative 3 will have virtually no new impacts on agricultural land because its new ROW crosses grazing land and heavy alkali soils. None of the new ROW for Alternative 3 is classified as Prime Farmland or Farmland of Statewide Importance. The rest of Alternative 3 is within the existing ROW. Therefore, Alternative 3 best serves the local polices and ordinances aimed at preserving agricultural lands and will have by far the least impacts upon agricultural resources.

Mr. Jensen Uchida  
 San Joaquin Cross Valley Loop  
 Transmission Project  
 July 31, 2009  
 Page 15

**II. THE DEIR SHOULD HAVE CONSIDERED THE SIGNIFICANT ECONOMIC IMPACTS THAT WILL BE FELT BY THE LOCAL COMMUNITIES DUE TO THE DECREASE IN FARMING OPERATIONS CAUSED BY ALTERNATIVES 1, 2 AND 6.**

**a. The DEIR Should Have Considered the Economic and Social Impacts of the Alternatives Because the Economic and Social Impacts are Directly Caused By the Physical Impacts of the Alternatives.**

Although, generally, an EIR is required only to evaluate the environmental impacts of a project<sup>33</sup>, when physical impacts on the environment cause economic and social effects caused by the EIR should evaluate and consider those economic and social effects.<sup>34</sup> The DEIR is deficient because it failed to address the economic and social effects of the physical changes to the environment produced by Alternatives 1, 2, and 6.

As discussed in Section I above, Alternatives 1, 2, and 6 will permanently convert Prime Farmland, Farmland of Statewide Importance and Unique Farmland to non-agricultural use due to the inability to use farming machinery and equipment under or near the transmission lines. When farmland is taken out of production, those individuals who were once employed to work the land, those employed to harvest, process and package the products grown on the land, and those employed to provide specific services to the land will no longer be employed. When jobs are lost due to loss of productive agricultural lands, less money goes into the local community and the State. Furthermore, when jobs are lost, there is a ripple effect felt in the local community as well as the State because “[e]ach dollar earned within agriculture fuels a more vigorous economy by stimulating additional activity in the form of jobs, labor income and value added.”<sup>35</sup>

**i. Income Into The Community**

Here in the Central Valley<sup>36</sup> the agricultural production and processing industry creates a value added multiplier of 2.21.<sup>37</sup> This means that in the Central Valley agricultural production and processing industry, for every dollar spent in farming and agricultural related industries – labor and property income and indirect business taxes – an additional \$1.21 is generated in the

<sup>33</sup> California Public Resources Code § 21100.

<sup>34</sup> 14 C.C.R. § 15313.

<sup>35</sup> *The Measure of California Agriculture, 2006: Chapter 5, Agriculture's Role in the Economy* (Preprint Draft, November 29, 2006) by Agricultural Issues Center, University of California, p. 6.

<sup>36</sup> The Central Valley consists of Butte, Colusa, Fresno, Glenn, Kern, Kings, Madera, Merced, Sacramento, San Joaquin, Solano, Stanislaus, Sutter, Tehama, Tulare, Yolo and Yuba counties.

<sup>37</sup> *The Measure of California Agriculture, 2006: Chapter 5, Agriculture's Role in the Economy* (Preprint Draft, November 29, 2006) by Agricultural Issues Center, University of California, p. 13.

Mr. Jensen Uchida  
 San Joaquin Cross Valley Loop  
 Transmission Project  
 July 31, 2009  
 Page 16

State economy.<sup>38</sup> When a farming operations hires fewer service providers, or hire service providers less frequently, not only is that farming operation putting less money directly into the economy, but the lost money fails to generate additional economic activity within the economy through the ripple effect.

### 1. Farming Operations – Labor, materials and supplies

As we have discussed, many farmers will be forced to cease all farming operations on much of the land within or near and adjacent to the ROW because of cultural operations needed to farm certain types of crops (citrus, olives, pomegranates, most nut crops, etc.). In addition, other land will also be affected by the Project. Since the DEIR has not calculated the correctly number of acres that will be put out of production, it is impossible to describe exactly how much income will be lost to the community directly and through the ripple effect. However, it is clear that a significant amount of money will be lost because of the Alternative 1, 2 or 6 ROW. For example, if Alternative 2 is built through citrus orchards owned and operated by Paramount Citrus, then it will force Paramount Citrus to take 17 acres of citrus orchard out of production. From just those 17 acres Paramount Citrus will spend a total of \$38,808.00 less in the local community based on this year's farming costs. The calculation is based upon actual 2009 farming costs after subtracting insurance, water and utilities as those payments do not go to local employees or vendors. That equates to more than \$2,200.00 per acre in direct farming expenses that is not returned to the community for every acre of Paramount Citrus' orchard that is lost under any of the Alternatives. Using the value added multiplier of 2.21, that \$38,808.00 would have generated \$85,765.00 for the local economy.

The more than \$85,000.00 lost to the economy as described above represents an impact generated by only a single farming operation. Similar impacts will be generated by other farming operations impacted by the new ROW created for Alternative 1, 2, or 6. We previously calculated that the new ROW portion of Alternative 2 will include approximately 140 acres of Prime Farmland and Farmland of Statewide Importance. If that is correct and we apply the Paramount Citrus estimated loss per acre (i.e., \$2,200.00 per acre) then the total lost farming expenses paid locally will be approximately \$300,000.00. With a multiplier of 2.21, that equates to lost local economic activity of \$680,000.00. This money represents a significant adverse impact to the local and state economy that is not adequately addressed in the DEIR. Because we cannot evaluate the amount of land outside the ROW that may be adversely affected, the impacts may be greater.

### 2. Packing Operations – Labor, materials and supplies

---

<sup>38</sup> *The Measure of California Agriculture, 2006: Chapter 5, Agriculture's Role in the Economy* (Preprint Draft, November 29, 2006) by Agricultural Issues Center, University of California, p. 1.



Mr. Jensen Uchida  
 San Joaquin Cross Valley Loop  
 Transmission Project  
 July 31, 2009  
 Page 17

In Paramount Citrus' experience, harvesting, hauling and packing costs average approximately \$3,300.00 per acre. From just those 17 acres Paramount Citrus will spend approximately \$56,100.00 less in the local community based on this year's packing costs. Using the value multiplier of 2.2.1, that \$56,100.00 would have generated \$123,981.00 for the local economy.

The more than \$123,000.00 described above lost to the economy represents an impact generated by only a single farming operation. Similar impacts to the economy will be generated by other farming operations impacted by Alternative 1, 2 or 6. We previously calculated that the new ROW portion of Alternative 2 will adversely affect approximately 140 acres of Prime Farmland and Farmland of Statewide Importance. If that is correct and we apply the Paramount Citrus estimated loss per acre then the total lost farming expense paid locally will be approximately \$462,000.00 at \$3,300.00 per acre. With a multiplier of 2.21, that equates to lost local economic activity of \$1,020,000.00. In total, the new ROW proposed for Alternative 2 could cost the local economy in excess of \$1.7 million **every year**. That loss represents a significant adverse impact to the local and state economy that is not adequately addressed in the DEIR.

## ii. Jobs

Here in the Central Valley, the agricultural production and processing industry creates an employment multiplier of 1.91, which means that for every job in the agricultural production and processing industry another 0.91 jobs are created. Again, the DEIR has not calculated the exact number of acres that will be put out production by Alternatives 1, 2, and 6, so it is impossible to describe how many jobs will be lost by those who work the land and provide services to farming operations. Based on the potential economic losses, however, the job losses will be significant. The DEIR is clearly insufficient due to its failure to examine this important adverse impact on local communities.

## III. **THE DEIR IS INSUFFICIENT BECAUSE IT DOES NOT ADEQUATELY ADDRESS THE SERIOUS ADVERSE IMPACTS THAT ALTERNATIVES 1, 2, AND 6 WILL HAVE ON GROUNDWATER SUPPLY.**

David Bean, PG, CHG of AMEC Geomatrix in Fresno, California conducted and prepared a report entitled *Potential Groundwater Impacts from Proposed Southern California Edison San Joaquin Cross Valley Loop Alternative Routes 2 and 6* ("Hydrology Report") attached hereto as "**Exhibit 1**", and incorporated herein by this reference. Mr. Bean, a Principal Hydrogeologist with AMEC Geomatrix, is a Professional Geologist and Certified

Mr. Jensen Uchida  
 San Joaquin Cross Valley Loop  
 Transmission Project  
 July 31, 2009  
 Page 18

Hydrogeologist in California. He has been practicing hydrology in the San Joaquin Valley for over 20 years. After conducting an extensive survey of groundwater resources in the vicinity traversed by Alternatives 2 and 6, reviewing groundwater elevation data collected by the California Department of Water Resources (DWR), and reviewing the DEIR, Mr. Bean made the following conclusions in the Hydrology Report: (1) the DEIR comparison of potential groundwater impacts from the various alternatives is deficient; (2) the DEIR fails to acknowledge the risks of construction on groundwater recharge and resources in the foothill areas of Alternatives 2 and 6; and (3) the DEIR fails to acknowledge the risks of construction of roads and foundations to existing water supply wells in the shallow alluvium and fractured bedrock beneath Alternative Routes 2 and 6.<sup>39</sup> Overall, the Hydrology Report concludes that “the DEIR is deficient because it fails to adequately address potential significant adverse impacts to groundwater.”<sup>40</sup>

Although the Hydrology Report finds that there is significant evidence that construction of the Alternative 2, or 6 ROW could impact, and in some cases severely deplete or eliminate, available groundwater<sup>41</sup>, the DEIR never addresses or analyzes this potential impact.<sup>42</sup> In fact, the DEIR states “the Proposed Project or alternatives... would... have **negligible impact upon existing groundwater supplies and processes.**”<sup>43</sup> The only potential impacts discussed in the Section 4.8 of the DEIR (Hydrology and Water Quality) are (1) whether each particular alternative will “[v]iolate any water quality standards or waste discharge requirements”<sup>44</sup>; (2) whether the particular alternative will “[s]ubstantially alter the existing drainage pattern of a site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or sedimentation on- or off-site”<sup>45</sup>; and (3) whether the particular alternative will “[p]lace within a 100-year flood hazard area structures which would impede or redirect flood flows”<sup>46</sup>.

The DEIR fails to provide accurate and useful information to compare the water supply and groundwater impacts of the different alternatives because it relies upon macro data for the Kaweah and Tulare Basins as a whole.<sup>47</sup> The DEIR makes the broadly applicable conclusion that much of the San Joaquin Valley overlies large unconfined aquifers and, therefore, concludes that the alternative transmission routes under study must overlie similar large aquifers. Crucial

---

<sup>39</sup> Hydrology Report page 6.

<sup>40</sup> Hydrology Report page 3.

<sup>41</sup> Hydrology Report page 6.

<sup>42</sup> See Section 4.8 (Hydrology and Water Quality)

<sup>43</sup> 4.8-14 (emphasis added)

<sup>44</sup> 4.8-15

<sup>45</sup> 4.8-18

<sup>46</sup> 4.8-18

<sup>47</sup> 4.8-4 and 4.8-5

Mr. Jensen Uchida  
 San Joaquin Cross Valley Loop  
 Transmission Project  
 July 31, 2009  
 Page 19

areas of the citrus belt, however, are located in the foothill areas due to the warmer micro climate. As the Hydrology Report describes, these areas, including the eastern half of Alternatives 2 and 6, are entirely reliant upon small fully or partially confined aquifers and extremely unpredictable fractured bedrock sources of water.<sup>48</sup> The failure of the DEIR to include the potentially significant impacts on groundwater supply and processes, as described in the Hydrology Report renders the DEIR insufficient.

**a. Although A Number Of Existing Irrigation Wells Are Located In The Path Of The New Alternative 1, 2, And 6 ROW, The DEIR Does Not Address The Potential Impossibility Of Successfully Relocating Impacted Wells.**

The DEIR never addresses the potential impacts on the availability of groundwater, the only available source of irrigation water for many farming operations. Instead, the DEIR states in Section 4.2 (Agricultural Resources) that although the construction of Alternatives 1, 2, or 6 could impact existing irrigation systems, the impact will be “less than significant with mitigation.”<sup>49</sup> This mitigation measure requires SCE to (1) “Coordinate with landowners to ensure that construction does not impact irrigation and/or ancillary farming systems to a degree that farming practices cannot be maintained”<sup>50</sup>; and (2) “Maintain existing levels of water available to farmers via the current irrigation system. This may include, but not be limited to, implementing re-routing and/or temporary irrigation systems.”<sup>51</sup>

The mitigation measure designed to mitigate injuries to irrigation systems is not adequate because it can be both impossible<sup>52</sup> and/or prohibitively expensive<sup>53</sup> to successfully relocate impacted wells. As discussed in the Hydrology Report, aquifers at the base of the foothills such as the Elderwood Area and Antelope Valley, both traversed by Alternatives 2 and 6, are unpredictable, and it may not be possible to construct new wells that will effectively replace the impacted wells.<sup>54</sup> Furthermore, the eastern portion of the Alternative 1 ROW near Lemon Cove would present similar issues. When attempting to relocate a well, it is possible to move mere feet and not be able to find a similar or even an adequate source of water. There is no guarantee that a comparable well can successfully be constructed within a farmer’s property, let alone within a reasonable distance of existing wells.

---

<sup>48</sup> Hydrology Report page 2.

<sup>49</sup> 4.2-16

<sup>50</sup> 4.2-16

<sup>51</sup> 4.2-16.

<sup>52</sup> Hydrology Report page 5 (“it may not be possible to construct new wells that will effectively replace any impacted wells”); *See also* page 6.

<sup>53</sup> Hydrology Report page 5 (“typical radial collector wells cost between \$3,000,000.00 and \$5,000,000.00”).

<sup>54</sup> Hydrology Report page 5; *See also* page 6.

Mr. Jensen Uchida  
 San Joaquin Cross Valley Loop  
 Transmission Project  
 July 31, 2009  
 Page 20

If irrigation wells cannot be relocated as assumed by mitigation measure 4.2-5, land cannot be farmed and crops cannot be produced. A lack of water will force the farming operation to shut down production and will preclude any other farming operation on that property except dry land grazing. The elimination of farming operations will transform the property from high value agricultural land to non-agricultural land – a significant unmitigable effect<sup>55</sup> that is never addressed in the DEIR. Additionally, this potential for an inability to relocate impacted wells clearly contradicts the statement in the DEIR that there will be negligible impacts upon existing groundwater supplies and processes. Therefore, the DEIR is insufficient.

**b. The DEIR Does Not Adequately Address The Potential Effect To The Local Groundwater Supply From Construction Of Power Poles And Service Roads.**

Since the DEIR states “the Proposed Project or alternatives...would...have **negligible impact upon existing groundwater supplies and processes**,”<sup>56</sup> the DEIR does not address the potential for the construction of power poles and access roads to impede or preclude the flow of groundwater.

Although never addressed in the DEIR, there are significant potentially adverse impacts to groundwater from the construction of access roads.<sup>57</sup> The construction of access roads within groundwater recharge areas in the Elderwood area and Antelope Valley, and the additional land within that groundwater recharge area that will be permanently disturbed by construction, could significantly reduce permeability and, therefore, reduce annual recharge capacity.<sup>58</sup> Furthermore, recharge areas within the eastern portion of the Alternative 1 ROW near Lemon Cove would present similar issues. This potential loss of recharge capacity could reduce the amount of groundwater available in the aquifer, and, as a result, the amount of groundwater available to those in the immediate area as well as down gradient areas to the west and the south that rely upon local recharge to that aquifer for their water needs.<sup>59</sup> This evidence that construction of access roads, especially within the recharge areas, could impact groundwater clearly contradicts the statement in the DEIR that there will be negligible impacts upon existing groundwater supplies and processes. Therefore, the DEIR is insufficient.

Although never addressed in the DEIR, there are significant potential impacts to groundwater from the construction of the transmission poles.<sup>60</sup> Since the transmission pole

<sup>55</sup> See 4.2-15, 4.2-19, and 4.2-25

<sup>56</sup> 4.8-14 (emphasis added)

<sup>57</sup> See Hydrology Report pages 3-5.

<sup>58</sup> Hydrology Report pages 3-5.

<sup>59</sup> Hydrology Report pages 4-5.

<sup>60</sup> Hydrology Report pages 3-5.

Mr. Jensen Uchida  
San Joaquin Cross Valley Loop  
Transmission Project  
July 31, 2009  
Page 21

foundations will be buried up to 60 feet in the ground, and groundwater in the Elderwood area and Antelope Valley only has a depth of between 10 and 40 feet, the construction of transmission poles in the Elderwood area and the Antelope Valley has the potential to create permanent barriers to groundwater flow.<sup>61</sup> Furthermore, the eastern portion of the Alternative 1 ROW near Lemon Cove would present similar issues. This potential blockage of groundwater would prevent groundwater from traveling through the aquifer to irrigation wells to the west and the south.<sup>62</sup> This evidence that construction of power poles could impact groundwater clearly contradicts the statement in the DEIR that there will be negligible impacts upon existing groundwater supplies and processes. Therefore, the DEIR is insufficient.

**c. No Feasible Mitigation Is Available For Adverse Impacts To Groundwater.**

The DEIR does not propose any mitigation for the substantial risks of serious adverse impacts to groundwater presented by Alternatives 2 and 6 because the DEIR did not recognize that those impacts exist. There are, however, no feasible mitigation measures. There is only one alternative source of water (Sentinel Butte Water Co.) in the eastern portion of Alternatives 2 and 6. That source is only available to a very limited number of growers. If Alternative 2 or 6 is adopted, that water source will be destroyed. No additional surface water supplies are available and no other distribution facilities have been constructed to serve the area. All of the surface water that occurs in the region is subject to existing water rights. According to the State Water Resources Control Board both the Kings River and the Tule River System (including the Kaweah River) are fully appropriated (Appendix A of Water Rights Order 98-08); therefore, no unappropriated surface water is available for mitigation of adverse groundwater impacts. Although groundwater is available to the west and could theoretically be pumped uphill to the Sentinel Butte Valley (Antelope Valley), the cost of the infrastructure and the per acre foot cost of pumping the water would be prohibitive for farming operations. Most importantly, pumping groundwater from the overlying land to a distant farm is legally considered an export of groundwater. Exports can only occur legally when there is surplus water in the aquifer. The DEIR states that the Sub-basin is subject to a significant annual overdraft.<sup>63</sup> Therefore, any groundwater exports to mitigate adverse transmission line impacts would not be allowed. As a result, the potentially significant groundwater impacts and irrigation well impacts of Alternatives 2 and 6 are significant and unmitigable.

**d. Alternative 3 Is The Significantly Environmentally Superior Alternative. Because It Does Not Have Significant Adverse Impacts On Groundwater.**

---

<sup>61</sup> Hydrology Report page 3.

<sup>62</sup> Hydrology Report page 5.

<sup>63</sup> Groundwater hydrology page 4.8-5.

Mr. Jensen Uchida  
 San Joaquin Cross Valley Loop  
 Transmission Project  
 July 31, 2009  
 Page 22

In contrast to the significant impacts on groundwater availability from Alternatives 1, 2, and 6 addressed above that are not analyzed in the DEIR, Alternative 3 has very few groundwater impacts and is the environmentally superior alternative.

No portion of the Alternative 3 ROW passes through the Elderwood area, Antelope Valley or any significant foothill recharge area. The DEIR statement that the area overlies a large unconfined aquifer is accurate for the valley portion of Alternative 3. As discussed in the Hydrology Report, the alluvial aquifer is approximately 300 feet thick when it reaches the existing ROW. Therefore, the DEIR is correct only with respect to Alternative 3 when it states that “[the proposed project and alternatives] would ... have a negligible impact upon existing groundwater supplies and processes.”<sup>64</sup> Since Alternative 3 will have a negligible impact upon existing groundwater supplies, and Alternatives 1, 2, and 6 will have potentially significant adverse impacts on groundwater, Alternative 3 is the environmentally superior alternative.

**IV. THE DEIR DOES NOT ADEQUATELY ADDRESS THE SERIOUS ADVERSE IMPACTS THAT ALTERNATIVES 1, 2, AND 6 WILL HAVE ON RECREATION, CULTURE, AESTHETICS AND ENVIRONMENTAL VALUES IN THE SENTINEL BUTTE (ANTELOPE) VALLEY.**

Although the Alternative 2 and 6 ROW will bisect the Sentinel Butte Valley (also referred to as the Antelope Valley), the DEIR does not address the cultural, recreational and aesthetic impacts those alternatives will have on this area. Land within the Sentinel Butte Valley is privately owned land; however, there is testimony on the record from the Public Meeting that the land is regularly utilized not only by landowners, and members of the local community as well for the land’s scenic value and for active recreation. Furthermore, there is testimony on the record that the land has historic value as well. Specifically, on May 1, 1920, the Sentinel Butte Valley was home to the “Valley of the Sun” gathering. Virtually all of this cultural, aesthetic and recreational value will be destroyed and lost forever by construction of the Alternative 2 or 6 ROW. The DEIR’s failure to address these impacts renders the DEIR insufficient.

CEQA Guideline § 15126.2 mandates that an EIR must consider and discuss significant environmental impacts. Specifically, an EIR must consider the human use of the land, historical resources and scenic quality.<sup>65</sup> Although the DEIR does include these sections – Aesthetics (Section 4.1), Historical Resources (Section 4.5) and Recreation (Section 4.13) – these sections are inadequate. As discussed above, “the purpose of an EIR is to provide...the public in general with detailed information about the effect which a project is likely to have on the

---

<sup>64</sup> 4.8-14

<sup>65</sup> CEQA Guideline § 15126.2(a).

Mr. Jensen Uchida  
San Joaquin Cross Valley Loop  
Transmission Project  
July 31, 2009  
Page 23

environment.”<sup>66</sup> The Aesthetics, Historical Resources, and Recreation sections of the DEIR do not meet these standards. The failure of the DEIR to include an analysis of the impacts to the aesthetics, recreation and cultural resources of the Sentinel Butte Valley means that the public cannot adequately evaluate the environmental impacts of Alternatives 2 and 6 in comparison to the other Alternatives. The very purpose of having an EIR has not been satisfied; therefore, the DEIR is insufficient

**V. THE DEIR SIGNIFICANTLY OVERESTIMATES THE AESTHETIC IMPACTS OF ALTERNATIVE 3 BECAUSE IT FAILS TO RECOGNIZE THAT MUCH OF THE TRANSMISSION LINES WILL BE PLACED IN EXISTING UTILITY ROW**

According to the DEIR, visual impacts from Alternative 3 “would generally be similar to or less than those for the Proposed Project.”<sup>67</sup> The DEIR does not mention, nor address, that when compared to Alternatives 1, 2, and 6, Alternative 3 is creating the least amount of new aesthetic impact. Furthermore, the DEIR does not address that where the Alternative 3 ROW utilized the existing ROW the aesthetic impacts of the transmission lines and towers will be lessened.

Alternative 3 will create the least amount of new aesthetic impacts when compared to all other alternatives. As discussed above, Alternative 3 requires the acquisition of the least amount of new ROW (i.e. 9.7 miles compared to 17.4 miles, 12.2 miles and 12.4 miles). Most of the new ROW for Alternative 3 is located in a mountainous area where visibility is limited and the ROW does not impact the view from any roads, homes or scenic vistas. The shorter new ROW means that Alternative 3 will require the fewest number of miles of new transmission lines and poles, and, in turn, will create the least amount of new aesthetic impacts.

People are accustomed to seeing the transmission lines and poles along the existing ROW the only portion of Alternative 3 that will be in close proximity to any significant number of people. Furthermore, updating the transmission lines and towers along the existing ROW will actually reduce the aesthetic impacts of the existing ROW. The new transmission poles are taller than the old towers so the transmission lines will not only be higher in the air but more difficult to see. Additionally, due to upgrades in transmission towers, the existing ROW will require fewer poles that will be mostly inconspicuous mono-poles replacing large and aging lattice towers. The visual simulations provided in the DEIR demonstrate that rebuilding the existing infrastructure in the ROW will substantially reduce the current aesthetic impacts.<sup>68</sup>

---

<sup>66</sup> Cal. Pub. Resources Code § 21061.

<sup>67</sup> 4.1-54.

<sup>68</sup> 4.1-27 through 4.1-37

Mr. Jensen Uchida  
San Joaquin Cross Valley Loop  
Transmission Project  
July 31, 2009  
Page 24

**VI. THERE ARE ADDITIONAL REASONS WHY ALTERNATIVE 3A IS THE ENVIRONMENTALLY SUPERIOR ALTERNATIVE.**

**a. Alternative 3a Is A Practically Superior Alternative Because There Is No Significant Or Organized Opposition To The Alternative And It Would Allow SCE To Commence Construction Much Earlier Than Any Other Alternative.**

There is no significant or organized opposition to Alternative 3a. If this project is as important as SCE indicates, then SCE should want the project to be completed as soon and as efficiently as possible. Choosing a route with very limited, if any, opposition will minimize the risk of lawsuits or other delays in the approval process. Prompt approval will allow SCE to commence construction potentially years earlier than if any other alternative were chosen. The other alternatives have serious adverse and unmitigable impacts that have not been adequately addressed in the DEIR and well organized and well funded opposition to ensure those impacts are addressed. Most importantly, from the comments given at the Public Meeting, it is obvious that many of the people affected by Alternatives 1, 2, and 6 passionately feel that they will lose their cherished agricultural lifestyles and the legacy that their families have handed down through generations. Those are more powerful motivators for a lawsuit than money because they are irreplaceable and no condemnation award can satisfy them. If Alternative 3a can be constructed much more quickly than any other alternative the total Alternative 3a project cost will ultimately be lower for the ratepayers.

**b. Alternative 3a Is The Environmentally Superior Alternative Because It Will Require Replacement Of The ROW Through Stone Corral Ecological Reserve – Work That Will Have to Be Done Eventually.**

Alternative 3a can solve an existing environmental problem. The current Big Creek 1 and 3 Rector 220kV transmission line includes approximately 1.5 miles within the Stone Corral Ecological Reserve. Eventually that section of line will require repair or replacement due to the age of the equipment and the difficulty of maintaining that section on a regular basis due to environmental constraints. That inevitable work on the existing line will eventually involve the type of ecological damage that is described in the DEIR discussion of Alternative 3. Therefore, choosing another route merely defers, rather than avoids, the environmental damage in the Stone Corral Ecological Reserve. The other Alternatives should properly be considered as having a greater environmental cost than Alternative 3. In determining the total environmental impact of each Alternative the DEIR should properly include the environmental damage that will ultimately be caused by rebuilding the line through the Stone Corral Ecological Reserve to any environmental impacts of building the other Alternative. Implementation of a new Mitigation



Mr. Jensen Uchida  
 San Joaquin Cross Valley Loop  
 Transmission Project  
 July 31, 2009  
 Page 25

Measure requiring SCE to route the existing transmission lines plus the new lines around the Stone Corral Ecological Reserve and remove the existing equipment from the Reserve will reduce the impacts of Alternative 3 described in the DEIR to less than significant. That approach will also eliminate further risk to the Ecological Reserve by permanently relocating the existing line from the Reserve to the less ecologically sensitive Alternative 3a route.

**c. Alternative 3a Is The Environmentally Superior Alternative Because It Will Require Replacement Of Existing Big Creek 1-Rector And Big Creek 3-Rector 220kV Transmission Lines – Work That Will Have To Be Done Eventually And That Will Improve Safety In The Community.**

While there is some historic value to the existing Big Creek 1-Rector and Big Creek 3-Rector 220kV transmission lines in the existing ROW, there are many good reasons to rebuild those lines. The lines and all of the support structures are old and worn and they present the very real danger of unpredictable failures. Those inevitable failures will certainly cause power outages and will potentially cause significant direct damage if lines or towers fall into populated areas. Rebuilding the approximately 14.6 miles of existing transmission lines included within the Alternative 3 ROW will lessen these risks. As described above, the new poles and towers will be taller and less frequent. That will reduce the amount of land occupied by the structures and will substantially reduce the aesthetic impact of the support structures. When the transmission lines are higher off the ground, impacts from the powerline noise, electromagnetic field and interference with other uses of the ROW will be reduced from the current condition. Together, the reduced risk and the reduced impact will ultimately increase the property values of those burdened by the existing ROW.

Importantly, rebuilding the line will adhere to the “Garamendi Principles” and the local policies that prefer upgrading existing utility infrastructure rather than establishing new right of way corridors. In 1988, recognizing both the growing importance of transmission with the interconnection of independent power producers and the escalating conflicts between transmission-owning and transmission-dependent utilities, the California Legislature passed Senate Bill (SB) 2431 (Stats. 1988, Ch. 1457), now referred to as the “Garamendi Principles,” which contained the following relevant finding concerning the role of transmission in California’s future development:

The Legislature further finds and declares that the construction of new high-voltage transmission lines within new rights-of-way may impose financial hardships and adverse environmental impacts on the state and its residents, so that it is in the interests of the state...to accomplish all of the following:

Mr. Jensen Uchida  
San Joaquin Cross Valley Loop  
Transmission Project  
July 31, 2009  
Page 26

1. Encourage the use of existing rights-of-way by upgrading existing transmission facilities where technically and economically feasible.

Adherence to the Garamendi Principles would not only upgrade 14.6 miles of existing ROW, but would also prevent construction of between 12.2 and 17.4 additional miles of new utility ROW through high value orchard plantings and the significant environmental effects that would accompany that construction. While each of the other Alternatives involve rebuilding some portion of the existing line, Alternative 3 should be preferred because it will rebuild the greatest length of existing line. Therefore, Alternative 3 or Alternative 3a best serves the goals of the Garamendi Principles.

## CONCLUSION

In conclusion, the DEIR concludes that Alternative 2 is the environmentally superior alternative only because the DEIR fails to understand and properly document the significant and unmitigable impacts of Alternative 2 on Land Use, Planning and Policies; Agricultural Resources; Hydrology and Water Quality; Aesthetics; Cultural Resources; Recreation; and, Economic and Social Effects. In each of these mandatory categories of the DEIR the actual adverse impacts of Alternative 2 are equal to or worse than any of the other Alternatives.

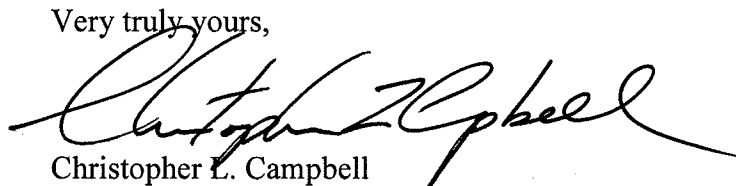
The DEIR also fails to understand and properly document that Alternative 3 has insignificant impacts on Land Use, Planning and Policies; Agricultural Resources; Hydrology and Water Quality; Aesthetics; Cultural Resources; Recreation; and, Economic and Social Effects. In each of those categories Alternative 3 has significantly less adverse impacts than any of the other Alternatives. The only significant impacts of Alternative 3 as designed by the applicant are the biological impacts of construction within the Stone Corral Ecological Reserve. The CPUC has received detailed additional comments from other parties outlining a small alternative route around the Reserve that will solve that problem but even if Alternative 3 is built as designed, it will be within the existing ROW and following the existing transmission lines through the Ecological Reserve. Therefore, the impacts of transmission lines and maintenance within the Reserve are not entirely new.

Mr. Jensen Uchida  
San Joaquin Cross Valley Loop  
Transmission Project  
July 31, 2009  
Page 27

We encourage the CPUC to recognize the serious negative impacts on the local communities that would be caused by the new ROW included within Alternatives 1, 2 and 6. The best choice for the CPUC with the least environmental impacts is some version of Alternative 3.

Thank you for your consideration.

Very truly yours,



Christopher L. Campbell  
BAKER MANOCK & JENSEN, PC

CLC:tlw

DMS: 755253\_1



## Memorandum

Date: July 31, 2009  
To: Doug Carman, Paramount Citrus      Project: 14180.001  
From: David Bean, PG, CHg                      cc:

**Subject: Potential Groundwater Impacts from Proposed Southern California Edison San Joaquin Cross Valley Loop Alternative Routes 2 and 6**

As requested by James Jordan of Paramount Citrus (Paramount), AMEC Geomatrix, Inc. (AMEC), has reviewed the Southern California Edison Draft Environmental Impact Report (DEIR) for the proposed San Joaquin Cross Valley Loop. In particular, AMEC focused on potential impacts to groundwater resulting from installation of high voltage electrical power towers and associated transmission lines, pads and roads along Alternative Routes 2 and 6 as presented in the DEIR (Figure 1).

Groundwater is the primary source of drinking water for most communities in California and the major source of irrigation water for most agricultural areas. In the Valley, groundwater is typically found in deep alluvial aquifers comprised of sand and gravel, and groundwater recharge is primarily from percolation of water from streams, rivers, and applied water. In the foothills on the east side of the Valley, groundwater is more typically found in fractured bedrock and groundwater recharge occurs through percolation of rain and snow melt through fractures in the bedrock. Although the western half of the new rights-of-way of Alternative Routes 2 and 6 overlie significant alluvial aquifers, the eastern half of Alternative Routes 2 and 6 are located in areas where groundwater is found primarily in fractured bedrock characteristic of the foothills, or in areas consisting of shallow alluvial aquifers over fractured bedrock.

### Previous Investigations

In 2008, AMEC conducted an extensive survey of groundwater resources in the vicinity of Rayo Ranch on behalf of Paramount (AMEC, 2008). Project Alternative Routes 2 and 6 cut directly through this study area as they extend from the existing Big Creek 1-Rector/Big Creek 3-Rector 220 kilovolt (kV) transmission line right-of-way along Road 148 eastward into the foothills to connect to the existing Big Creek 3-Springville/Big Creek 4-Springville 220 kV transmission line (Figure 1).

Groundwater beneath the Rayo Ranch area (located in the path of both Alternative Routes 2 and 6 west of Colvin Mountain) is found in a shallow alluvial aquifer overlying a fractured bedrock aquifer. The alluvial aquifer ranges from just a few tens of feet thick at the base of Colvin Mountain to approximately 250 to 300 feet thick near Road 148.

East of Colvin Mountain (where Alternative Routes 2 and 6 converge), groundwater beneath the Cottonwood Creek (Elderwood/Dutch Colony) and Antelope Valley (including Sentinel Butte)



Memorandum  
July 31, 2009  
Page 2 of 6

area is also found in a shallow alluvial aquifer overlying a fractured bedrock aquifer. On this eastern portion of Alternative Routes 2 and 6 the alluvial aquifer ranges from just a few tens of feet thick to only a few feet thick at the base of the foothills.

The limited well construction data available for the Cottonwood Creek and Antelope Valley area indicate that the wells are relatively shallow and are completed in alluvial and fractured bedrock. Information provided by farmers in the area east of Colvin Mountain indicates that groundwater supply is extremely inconsistent. Wells in some areas have good yields while many wells that are drilled provide no usable water. This is consistent with the results of our surveys and, in our experience, is characteristic of the Sierra foothill region. Groundwater is not consistently available across the small alluvial-filled valleys. Some areas are underlain by fractured bedrock filled with water while other areas are underlain by dry fractures or fractures isolated from recharge areas so they do not have enough groundwater flow or storage to provide a long-term supply. Relocating a well, even a short distance in a fractured bedrock aquifer, can be very unpredictable.

Groundwater elevation data collected by the California Department of Water Resources (DWR) and the United States Geological Survey (USGS) were used to prepare long-term hydrographs from 1980 to 2007 for over 60 wells in the area (Figure 2). Some of our more important observations are:

- Groundwater elevations tend to vary seasonally 5 to 10 feet, rising in the wet winter months and falling in the dry summer months when wells are pumped for irrigation.
- Groundwater elevations also vary in response to decadal-scale drought cycles, rapidly declining 20 to 30 feet during drought periods and quickly recovering during wet periods.

The same groundwater elevation data were used to evaluate seasonal (Fall and Spring) groundwater flow patterns over 25 years. Some of our more important observations are:

- Groundwater flows generally from east to west from the foothills areas (i.e. Cottonwood Creek drainage and Antelope Valley) to the Valley trough west of Highway 99 (Figure 3).
- The groundwater gradient is consistent in direction and magnitude during both Fall and Spring and during wet and dry periods.

In the Cottonwood Creek drainage area there is a strong correlation between groundwater elevation data from DWR and USGS, stream flow data from the USGS, and precipitation data from the National Oceanographic and Atmospheric Administration (Figure 4). This indicates that the Cottonwood Creek drainage and Antelope Valley are very important groundwater recharge areas on the east side of the Valley.

The data also show a strong correlation between groundwater elevations wells in the Elderwood area, wells south of Colvin Mountain, and wells west of Colvin Mountain (Figure 2). This



Memorandum  
July 31, 2009  
Page 3 of 6

indicates that the foothill area on the east side of the valley is an important recharge source for local wells, including those south and west of Colvin Mountain, and many square miles of productive farm land.

The data show that depth to groundwater has historically ranged from 10 to 80 feet below ground surface in the Elderwood area (Figure 5). However, as recently as 2007, depth to groundwater was between 10 and 40 feet, depending on location.

Our conclusion is that the local aquifer system is not laterally extensive and does not have diverse sources of recharge. The data indicate the local aquifer has a limited recharge area because the local effects are so quickly evident. The seasonal variation in groundwater elevations, the decline during drought periods and subsequent recovery during wet periods indicates that local recharge is extremely important to the local aquifer system. As a result, in this aquifer system even a small impairment of the local recharge capability can have a significantly adverse impact.

### **Potential Groundwater Impacts**

At the request of Paramount, we have reviewed the DEIR with particular focus on the potential impacts Alternative Routes 2 and 6 may have on groundwater resources and the availability of agricultural irrigation supplies in the vicinity of the Rayo Ranch, the Elderwood area, and Antelope Valley.

As a result of this review, we believe the DEIR is deficient because it fails to adequately address potential significant adverse impacts to groundwater. These impacts result from the installation of power poles and service roads in several areas, particularly along the eastern alignments of Alternative Routes 2 and 6 in the Elderwood and Antelope Valley areas.

DEIR Pages 2-20 to 2-33 describe the poles, towers, and roads required for the project. Foundations for tubular power poles will be 6 to 10 feet in diameter and 20 to 60 feet deep. Groundwater is at a depth of 10 to 40 feet along much of the alignment. Dewatering may be necessary to construct foundations for as many as 38 poles. Dewatering in a limited aquifer system during a period of drought may adversely affect local water supply wells and may permanently damage the aquifer system through compaction and sealing of alluvial and fractured bedrock in the vicinity of the borings. In addition, once cemented in place, the foundations are likely to become permanent local barriers to recharge and groundwater flow in both alluvial and fractured bedrock. Because the transmission of groundwater through the fractured bedrock cannot accurately be mapped, the impact of pouring cement into the fractures intersected by an individual foundation cannot be predicted with any certainty. Once the concrete is poured and the impacts are known, however, they are very hard to reverse. It is likely that the concrete will cut off the downstream flow in the sealed fractures, or possibly redirect the water flowing in the sealed fractures to some other fracture or fracture system. Any wells relying on those sealed fractures will experience decreased flow or possibly a complete loss of flow. Because it is virtually impossible to determine the route water takes to a well, all wells in the vicinity of a new foundation must be considered at risk.



Memorandum  
July 31, 2009  
Page 4 of 6

DEIR Pages 3-10 to 3-12 describe Alternative Route 2 and indicate that new permanent roads will cover over about 28 acres of land. Approximately 5 acres of new road surface appear to be in the recharge areas of Elderwood area and Antelope Valley. These 5 acres of graded and compacted road may have an adverse impact on the rate water can recharge. As a result, more water may run off in rain events and may be lost to the aquifer. An additional 9 acres will be "permanently disturbed." The definition of "permanently disturbed" includes areas where other impervious surfaces are located. Therefore, these 9 acres may further reduce recharge capacity.

DEIR Pages 4.8-4 to 5 and 4.8.14 describe the sediments beneath the Alternative Routes as consisting of "three stratigraphic units: continental deposits, older alluvium, and younger alluvium. For the most part, assessable groundwater occurs within an unconfined state throughout the study area." The DEIR also indicates "The groundwater basins underlying the study area are relatively large, predominantly unconfined, and heavily impacted by existing agricultural demands. Groundwater use is not proposed for the Proposed Project or alternative, and they would otherwise have negligible impact upon existing groundwater supplies and processes." These statements may be reasonable for the portion of the project on the Valley floor. However, the DEIR fails to consider the shallow alluvial and fractured bedrock aquifers at the base of the foothills (i.e. the Elderwood area and Antelope Valley). As described above, the local aquifer system beneath this area is not laterally extensive and does not have diverse sources of recharge. This local aquifer system is also being put to extensive beneficial use for domestic and agricultural supply. Dewatering for foundations would exacerbate local overdraft during the current drought conditions, and installation of foundations may have significant impacts on groundwater supplies and processes by reducing recharge and disrupting groundwater flow.

### **Particular Areas of Concern**

DEIR Appendix C Pages 17-20 Alternative Route 2 – Structures 55-73 are located in the Rayo Ranch area east of Colvin Mountain. Along this alignment the shallow alluvium aquifer thins from a few hundred feet thick to only a few tens of feet thick. Approximately 2,700 feet of new roads will be required to construct 20 structures. Installation of roads, pads, and power poles may reduce recharge potential and, as discussed above, create barriers to groundwater flow by sealing fractures, especially on the eastern end of the alignment. Available data suggest a significant amount of groundwater flow occurs through fractures and into the alluvium in this area, so the concrete foundations can potentially block a significant amount of the flow, which would adversely affecting wells required to irrigate local farms.

DEIR Appendix C Pages 20-21 Alternative Route 2 – Structures 74-78 are located on the west side of Colvin Mountain overlying a primarily fractured bedrock aquifer. Approximately 2,100 feet of new roads will be required to construct 4 structures. Installation of roads, pads, and power poles may reduce recharge potential and create barriers to groundwater flow by sealing bedrock fractures. Available data suggest a significant amount of groundwater flow occurs through fractures in this area, so if concrete foundations are installed in the fractured



Memorandum  
July 31, 2009  
Page 5 of 6

bedrock aquifer it is likely that they will inhibit a significant amount of groundwater flowing west into the Rayo Ranch area.

DEIR Appendix C Pages 21-23 Alternative Route 2 – Structures 78-91 are located in Mud Springs Gap along the north of Colvin Mountain. This is an area of shallow alluvium overlying fractured bedrock. Approximately 4,000 feet of new roads will be required to construct 13 structures. Installation of roads, pads, and power poles may reduce recharge potential and create barriers to groundwater flow by sealing fractures. Available data suggest a significant amount of groundwater flow occurs through fractures in this area, so if concrete foundations are installed in the fractured bedrock aquifer it is likely that they will inhibit a significant amount of groundwater flowing through the Mud Springs Gap and adversely affecting wells required to irrigate local farms. In this area it may not be possible to construct new wells that will effectively replace any impacted wells. In addition, impacts to recharge and groundwater flow in this area may impact downgradient areas to the west and south.

DEIR Appendix C Pages 23-25 Alternative Route 2 – Structures 92-100 are located in the Elderwood area. This is a significant recharge area when water is present in Cottonwood Creek. Structure 93 is located adjacent to the main channel of Cottonwood Creek. Installation of roads, pads, and power poles may reduce the recharge potential of the area and create barriers to groundwater flow in both alluvium and fractured bedrock. In addition, several water supply wells are located along this section of alignment. Wells located in the path of alignment will need to be relocated. As indicate above, the availability and location of groundwater in this area is unpredictable and difficult to determine, so relocating wells will likely be very challenging, expensive, and potentially impossible. The impediment to groundwater flow, especially in the bedrock, should be considered significant because there is no way to ensure that it does not cause adverse impacts. In addition, impacts to recharge and groundwater flow in this area may impact downgradient areas to the west and south.

DEIR Appendix C Pages 25-27 Alternative Route 2 and Alternative Route 6 – Structures 101-115 are located in Sentinel Butte and Antelope Valley. This is a relatively undisturbed recharge area with several ephemeral streams. Approximately 6,500 feet of new roads will be required. Installation of roads, pads, and power poles may reduce the recharge potential of the area and create barriers to groundwater flow in the primarily fractured bedrock aquifer. Several water supply wells, including a high yield “wagon-wheel” or radial collector well, reportedly will need to be relocated along this section of alignment. A radial collector well has a large diameter central caisson with horizontal perforated pipes extending radially into a thin shallow aquifer. Typical radial collector wells now cost between \$3,000,000 and \$5,000,000 to construct. While it is possible to install a new radial collector well in this area, there is no guarantee that it will have the desired yield. As indicated above, the availability and location of groundwater in the Sentinel Butte/Antelope Valley area is unpredictable and difficult to determine, so relocating wells will likely be very challenging, expensive, and potentially impossible. The impediment to groundwater flow, especially in the bedrock, should be considered significant because there is no way to ensure that it does not cause adverse impacts. In addition, impacts to recharge and groundwater flow in this area may impact downgradient areas to the west and south.





Memorandum  
July 31, 2009  
Page 6 of 6

## Conclusion

While the individual impact of certain individual structures on groundwater recharge in the Rayo Ranch, the Elderwood area, and Antelope Valley may be less than significant, the cumulative impacts of the roads, multiple pads, deep foundations and multiple structures on groundwater recharge cannot be so easily dismissed. The DEIR does not acknowledge or address the significant risk and negative impact that sealing of one bedrock fracture by a single concrete foundation in the Elderwood area and Antelope Valley can have on groundwater flow. Replacement of wells in this thin alluvial and fractured bedrock aquifer is difficult and costly.

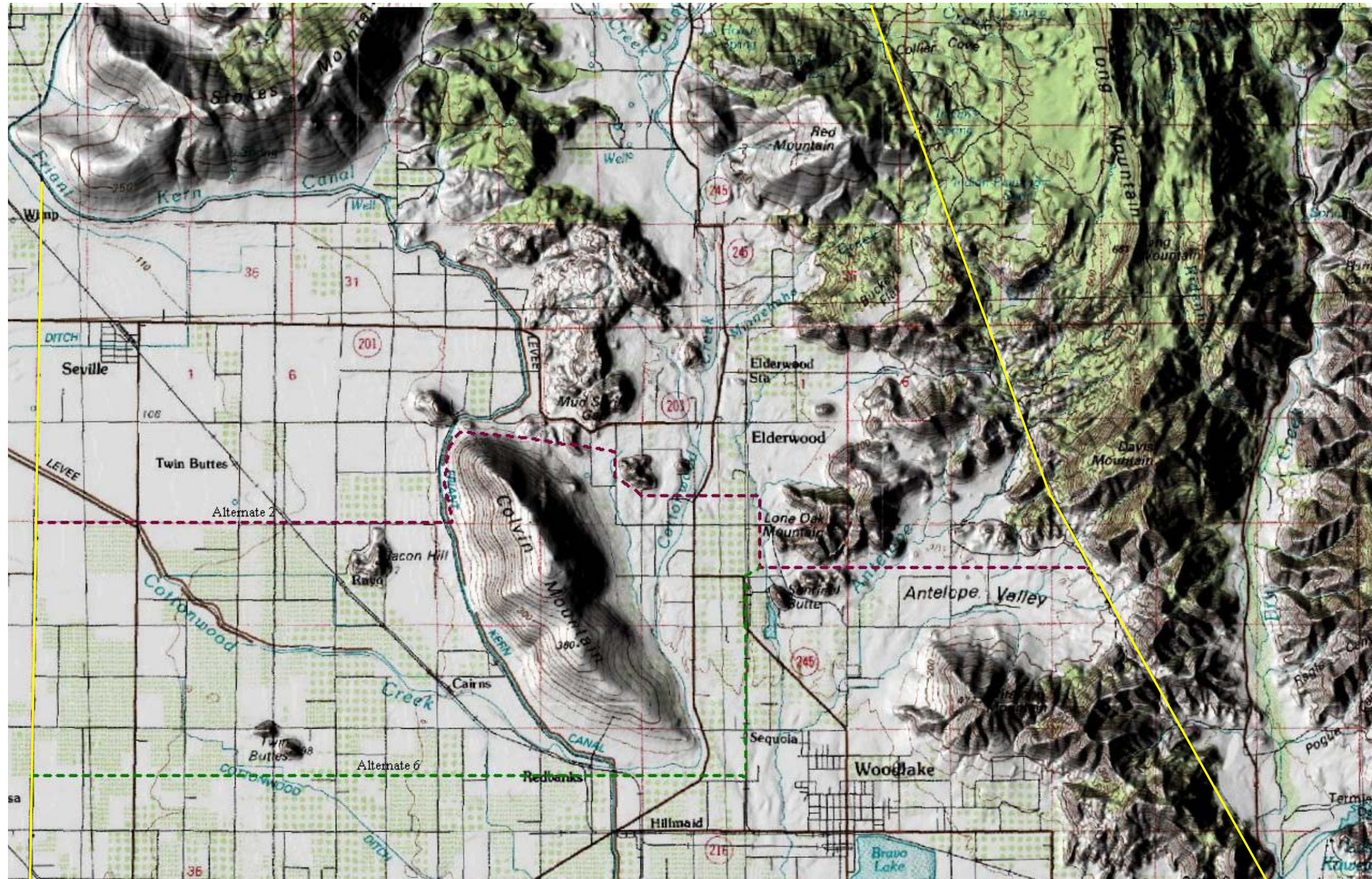
In summary, the DEIR is deficient because of the following:

- The DEIR comparison of potential groundwater impacts from the various alternatives is deficient.
- The DEIR fails to acknowledge the risks of construction on groundwater recharge and resources in the foothill areas of Alternative Routes 2 and 6.
- The DEIR also fails to acknowledge the risks of construction of roads and foundations to existing water supply wells in the shallow alluvium and fractured bedrock aquifers beneath Alternative Routes 2 and 6.

Attachments: Figure 1 – Location Map and Alternative Routes 2 and 6  
Figure 2 – DWR Well Hydrographs  
Figure 3 – Water Surface Elevation – Spring 2007  
Figure 4 – Correlation between Precipitation, Stream Flow, and Groundwater Elevation in Cottonwood Creek Valley  
Figure 5 – Hydrographs of Selected Wells Showing Relationship between Groundwater in Cottonwood Creek Valley, Antelope Valley, and West of Colvin Mountain

## References

- AMEC Geomatrix, Inc., 2008, Evaluation of Groundwater Resources, Paramount Citrus Rayo Ranch, Tulare County, California, November (AMEC, 2008).
- Croft, M.G. and Gordon, G.V, 1968, Geology, Hydrology, and Quality of Water in the Hanford-Visalia Area, San Joaquin Valley, California, USGS Open-File Report 68-67 (Croft and Gordon, 1968).



**Explanation**

- - - Alternate Route 2
- - - Alternate Route 6
- Existing 220 Kilovolt Transmission Lines

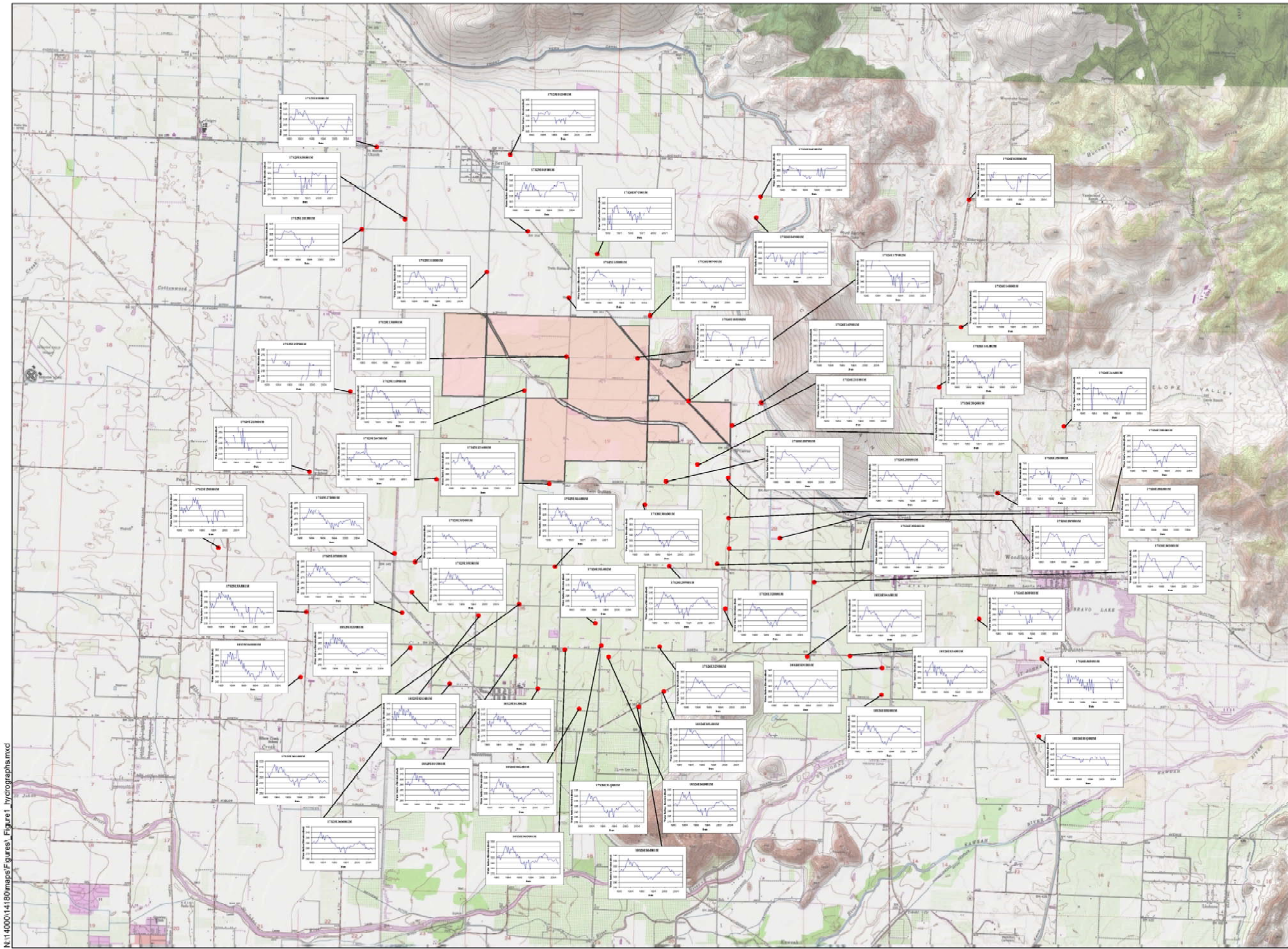
LOCATION MAP AND ALTERNATIVE ROUTES 2 AND 6

SCE San Joaquin Cross Valley Loop DEIR  
Visalia, California

By: dmb	Date: 07/29/09	Project : 14180.001
---------	----------------	---------------------

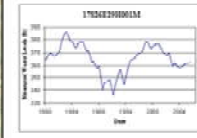
**AMEC Geomatrix**

Figure 1

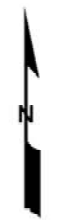


**Explanation**

- DWR well location
- Rayo Ranch boundary



Hydrograph showing water surface elevation from 1980 - 2007.



APPROXIMATE SCALE IN FEET

0 6,000



0 1,800

APPROXIMATE SCALE IN METERS

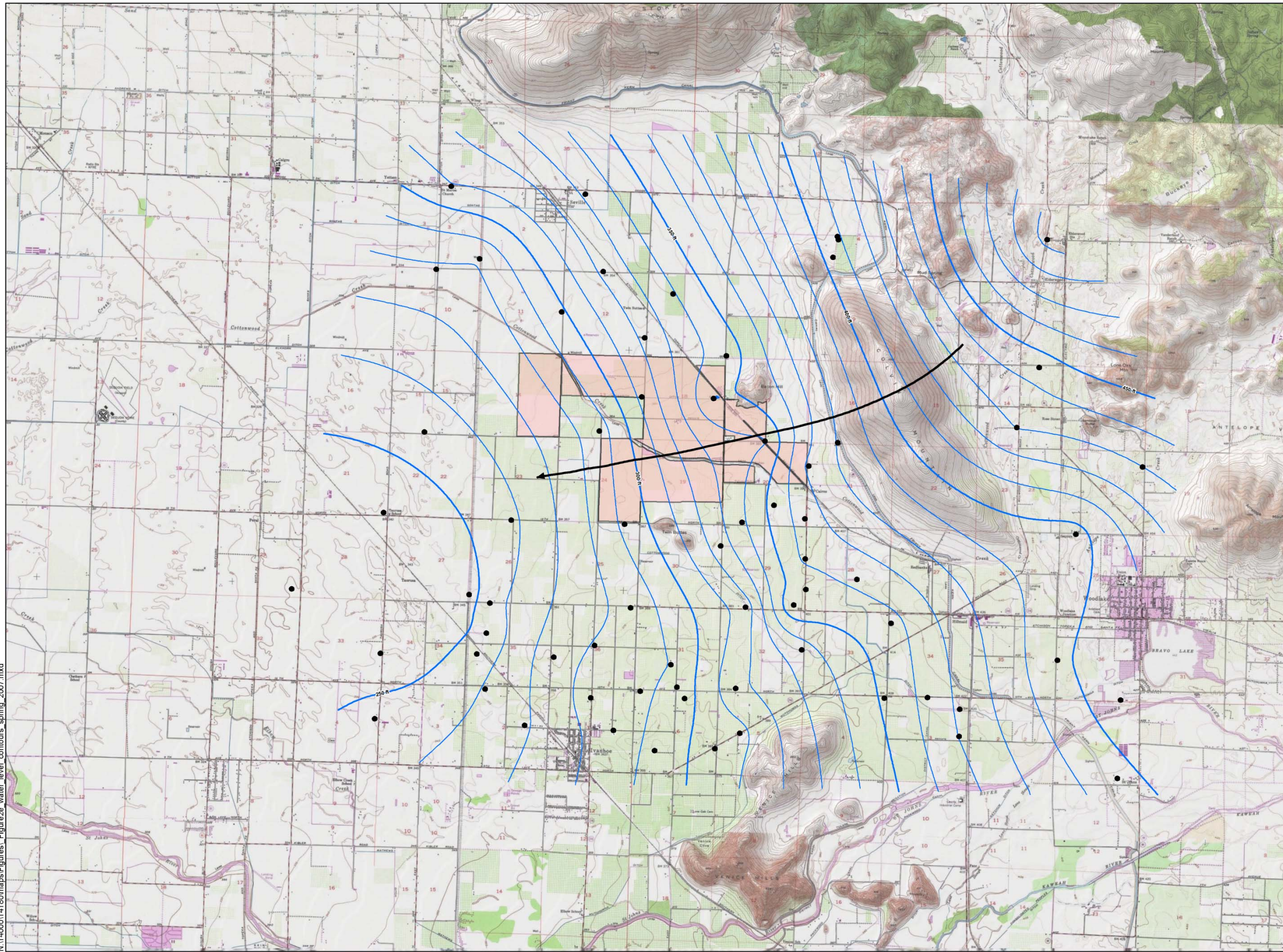
Note: Base map modified from U.S.G.S. 7.5 minute topographic quadrangle maps Monson, Ivanhoe, Woodlake, Exeter, Stokes Mountain, Orange Cove South, Oakland, Rocky Hill, Visalia, CA

**DWR WELL HYDROGRAPHS**  
 SCE San Joaquin Cross Valley Loop DEIR  
 Visalia, California

By: SDE	Date: 09/05/2008	Project No: 14180.000
---------	------------------	-----------------------

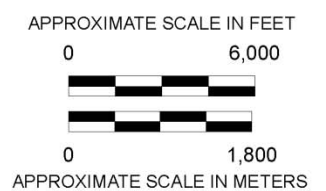
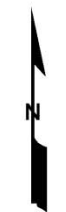
N:\14000\14180\maps\Figures\Figure1\_hydrographs.mxd

N:\14000\14180\maps\Figures\Figure2e\_water\_level\_contours\_spring\_2007.mxd



- Explanation**
- DWR well location
  - 250— Water surface elevation in fmsl
  - ↖ Generalized direction of groundwater flow
  - ▭ Ranch boundary

**Notes:**  
 1. fmsl = feet above mean sea level  
 2. Contour interval 10 feet

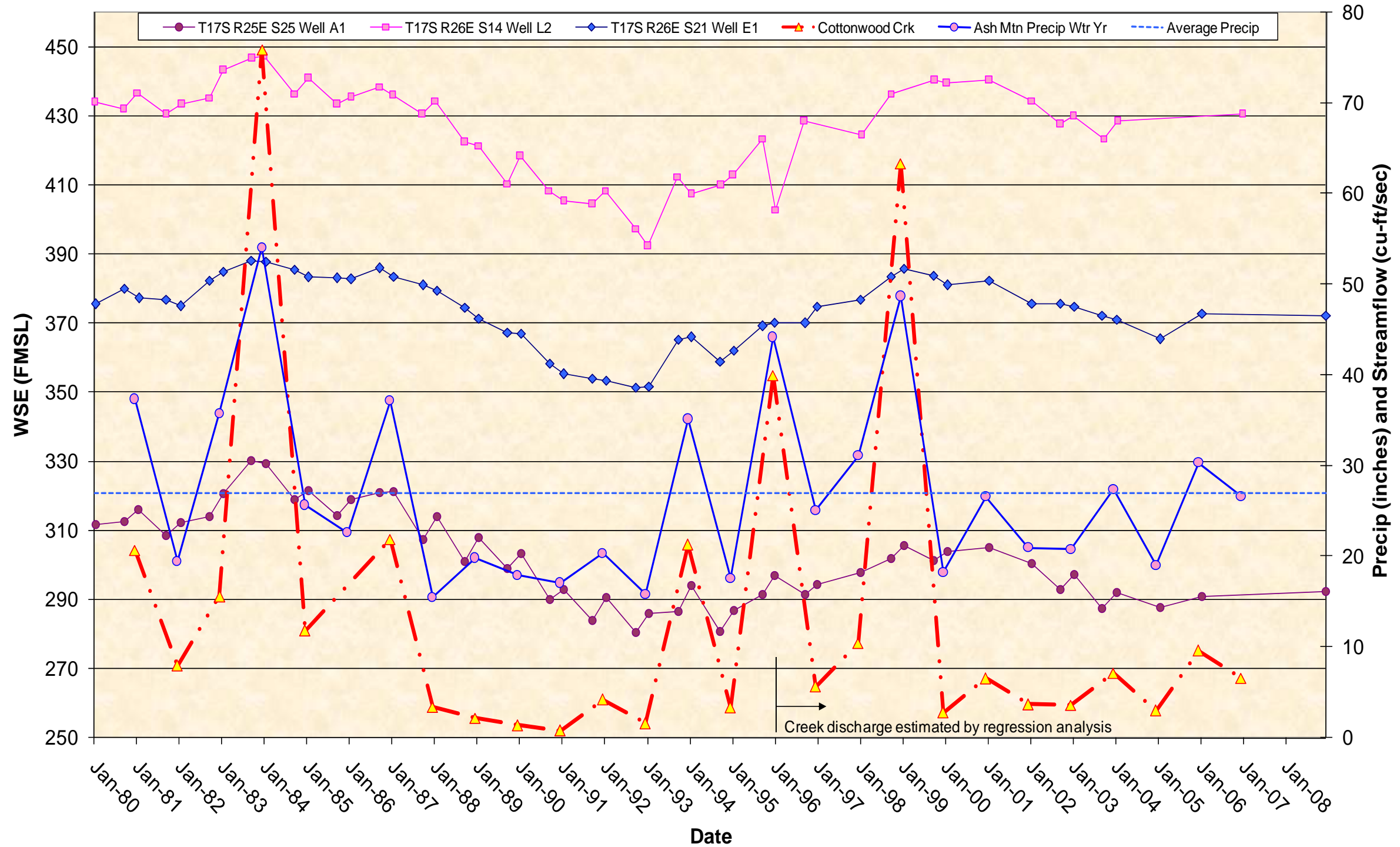


Note: Base map modified from U.S.G.S. 7.5 minute topographic quadrangle maps  
 Monson, Ivanhoe, Woodlake, Exeter, Stokes Mountain, Orange Cove South,  
 Auckland, Rocky Hill, Visalia, CA

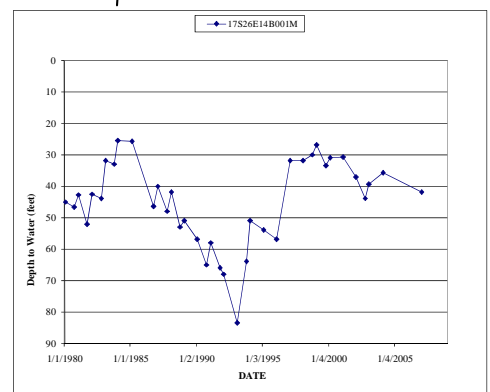
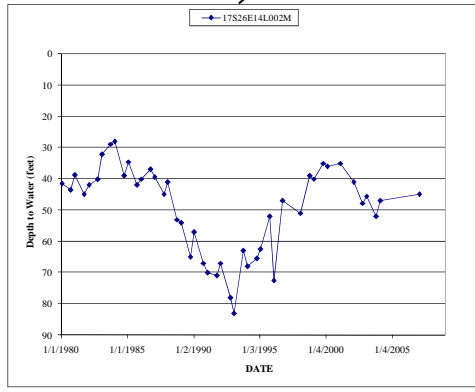
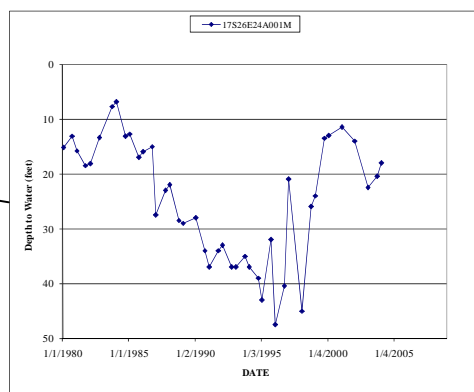
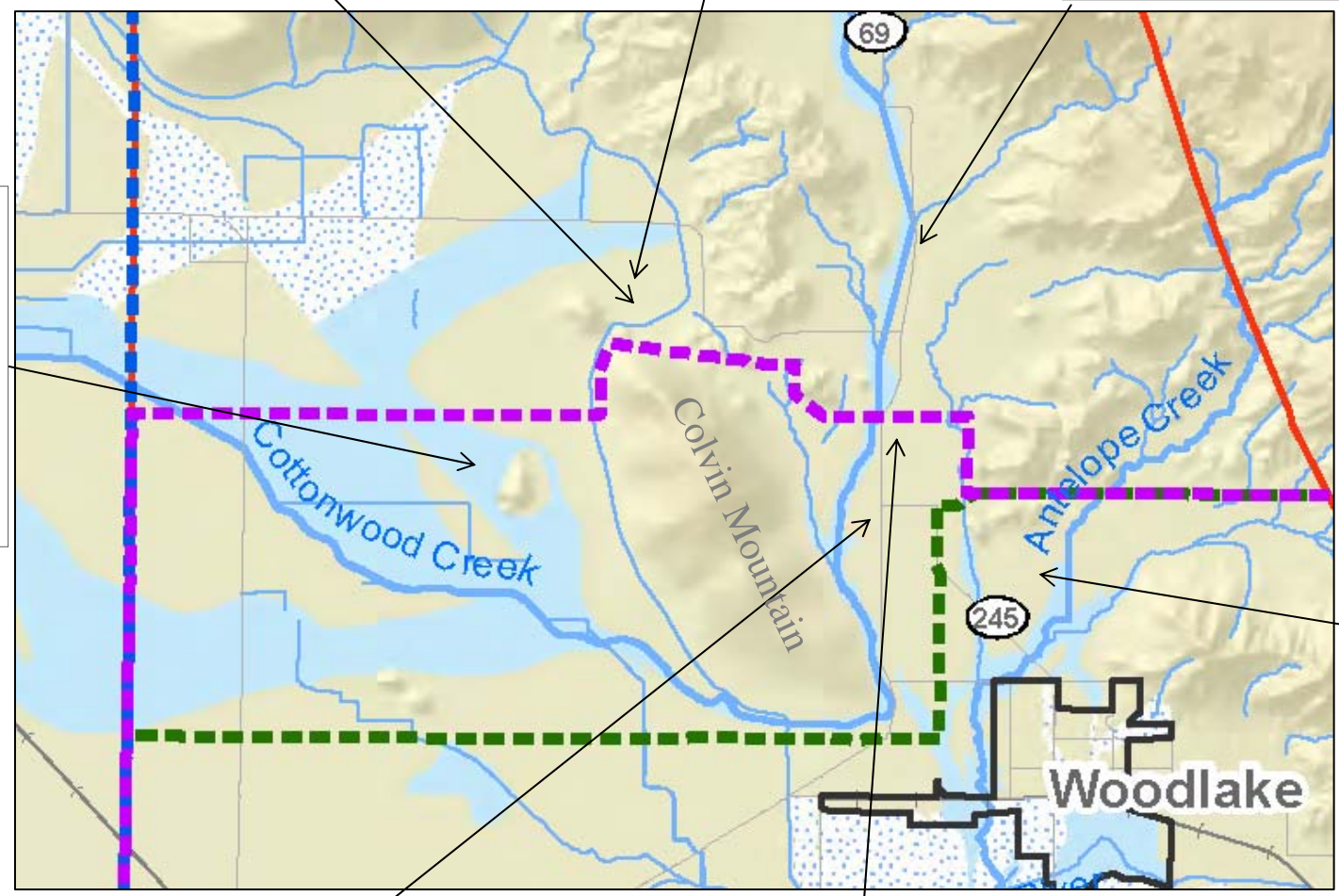
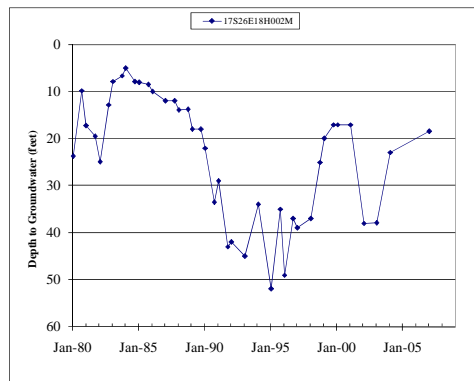
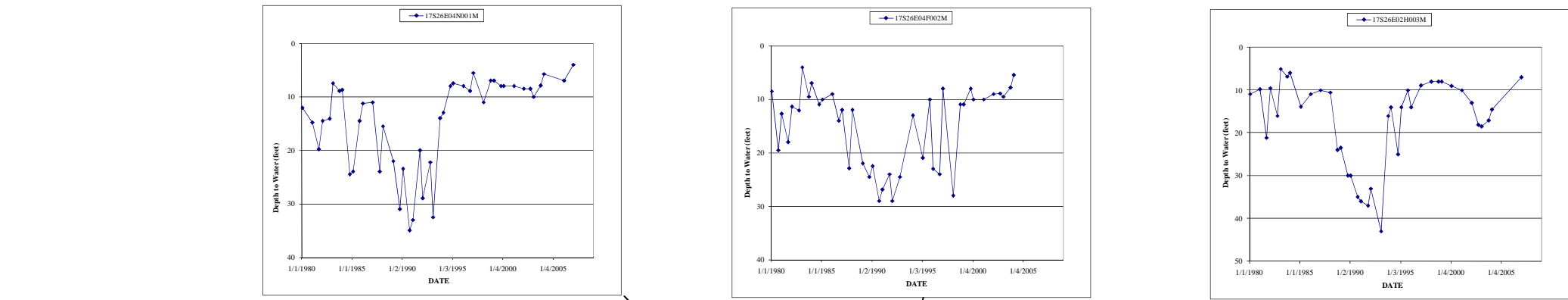
**WATER SURFACE ELEVATION - SPRING 2007**  
**SCE San Joaquin Cross Valley Loop DEIR**  
 Visalia, California

By: SDE | Date: 09/05/2008 | Project No. 14180.000

### Groundwater Level, Precipitation, and Streamflow



CORRELATION BETWEEN PRECIPITATION, STREAM FLOW, AND GROUNDWATER ELEVATION IN COTTONWOOD CREEK VALLEY		
SCE San Joaquin Cross Valley Loop DEIR Visalia, California		
By: dmb	Date: 07/29/09	Project : 14180.001
<b>AMEC Geomatrix</b>		Figure 4



**Explanation**

- - - Alternate Route 2
- - - Alternate Route 6
- Existing 220 Kilovolt Transmission Lines
- - - Transmission Lines

HYDROGRAPHS OF SELECTED WELLS SHOWING  
RELATIONSHIP BETWEEN GROUDNWEATER IN  
COTTONWOOD CREEK VALLEY, ANTELOPE VALLEY,  
AND WEST OF COLVIN MOUNTAIN  
SCE San Joaquin Cross Valley Loop DEIR  
Visalia, California

By: dmb      Date: 07/29/09      Project : 14180.001

**AMEC Geomatrix**      Figure 5