From:	Trey Driscoll
To:	Bennett, Jim; Steve Dickey
Cc:	David Hochart; Patrick BROWN
Subject:	Project Number 3991 11-022 Tierra Del Sol Solar Project
Date:	Monday, June 25, 2012 3:34:27 PM

Jim,

I have the following comments on the scoping letter provided by County staff and dated June 5, 2012. I am attempting to limit the scope of investigation required to evaluation of potential groundwater dependent habitat. Otherwise my comments are minor.

Potential Groundwater Dependent Habitat

Your memorandum entitled Groundwater Scoping; Project Number 3992 11-022 Tierra Del Sol Solar Project (Project) dated June 5, 2012 states, "For the purposes of the groundwater investigation it will be considered that the fractures at this depth (i.e. >1,000 feet) are hydraulically connected to the shallower fractured zone." You also indicate that Well B (proposed project pumping well) is located, "400 feet from an area mapped as containing vegetation that could be groundwater dependent (open coast live oak woodland)." The County's Guideline 4.2.C from the Biological Guidelines for Determining Significance have the following threshold for determining a significant impact to riparian habitat or a sensitive natural community: "The project would draw down the groundwater table to the detriment of groundwater-dependent habitat, typically a drop of 3 feet or more from historical low groundwater levels." Well 1 located on the Project site is approximately 1,439 feet west of Well B (1,800 feet from the open coast live oak woodland) and is completed to a total depth of 282 feet below top of casing (TOC). The water levels measured in April 2012 in Well B and Well 1 were 44.90 and feet below TOC and 48.00 feet below TOC, respectively. The neighboring property owner to the east in the area of the live oak woodland reportedly has two wells drilled to depths of 190 feet and 100 feet below land surface with well production capacity of 60 gallons per minute (GPM) and 100 GPM, respectively (Personal Communication).

Quercus agrifolia (coast live oak) is a native drought resistant evergreen tree with a root system that consists of a deep taproot with several main roots that may tap groundwater if present within approximately 36 feet of the soil surface (Canadell, 1996).

Based on past experience in San Diego County with fractured rock granitic aquifers conducting long-term pump tests from deep fractures (i.e. >1,000 feet), there is typically limited hydraulic connection with the shallow fracture system that would influence groundwater dependent habitat that extends to a maximum depth of 36 feet below ground surface.

Well 1 and/or the two wells located on the neighboring property to the east, if accessible should be sufficient to monitor water level changes in the shallow portion of the aquifer and potential impacts to groundwater dependent habitat due to groundwater pumping from Well B. Also, given the limited duration of intensive pumping during project construction, drawdown is likely to be short-term and not impact drought resistant habitat. Is the County in general agreement with this observation or are shallow monitoring wells (piezometers) potentially required to directly quantify water level fluctuations in the shallow (potentially alluvial) aquifer associated with the groundwater

dependent habitat?

Groundwater Investigation Requirements
Would you please send me a copy of the County's computer program RECHARG2 in order to determine if this product is suitable to evaluate groundwater recharge for this particular project.

Well Destruction Permit
All wells that exist on the project site except for the Hand Dug Well (currently dry) are planned to be used as monitoring wells for groundwater testing and as part of a monitoring network for the Groundwater Monitoring and Mitigation Program (GMMP). Therefore, Dudek recommends that only the Hand Dug well be destroyed at this time.

Project Update
We are installing a pump in Well B at Tierra del Sol today, June 25, 2012 to conduct an initial pump test to confirm Well B warrants reaming to 8.625 inches and installing casing to 1,000 feet below ground surface (BGS) to unstable formation. Let me know if you are interested in observing any of the drilling activities. We are also conducting a well canvas of Soitec's other project sites this week to determine if there are additional wells that warrant aquifer testing. I will give you an update next week.

Please contact me if you have any questions.

Cheers,
Trey

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