



Chronology of Viking Ranch/Coyote Creek Recharge Project

A 1988 USGS study reports that Coyote Creek accounts for 65% of the naturally occurring annual aquifer recharge.

The first mention of Viking ranch as a site for a retention and recharge facility seems to have been in Oct of 2004, when the Borrego Water District (BWD) board disclosed it was investigating a 160 parcel at the mouth of Coyote Canyon (Viking Ranch) as a site for retention basins to capture runoff and recharge the aquifer.

In April 2005, the minutes of the Borrego Springs Community Sponsor Group contain an announcement that the 320 acre Viking Ranch at the mouth of Coyote Creek had been sold to buyers who intended to use it for retention basins and residential development.

In May 2005, Jim Engelke, a Borrego Springs architect representing the owners of Viking Ranch, reported to the Sponsor Group on preliminary plans for developing the Viking Ranch property and explained how it might be used to mitigate groundwater demand for another project on Yaqui Pass Rd.

In July 2005, the BWD board “approved in concept” capturing runoff from Coyote Creek to recharge the aquifer as partial mitigation for the proposed Coyote Creek Conservation Sub-division, a project of the Prospect Capital Group. BWD counsel noted that the existing groundwater mitigation policy did not specify recharge as a mitigation alternative. Engelke stated that his client wanted to “get the project underway for the [2005 – 06] rainy season.” He also claimed that an engineering report indicated a “conservative” average recharge of from 1,000 acre feet per year (afy) to as much as 1,800 afy was possible. The BWD District Engineer commented that “A lot of years no water comes down there,” and Engelke acknowledged the “cyclical nature of precipitation.”

In November 2005, Engelke suggested to the BWD *ad hoc* Committee on New Development that BWD create a “replenishment district,” and claimed that agencies with groundwater management plans in force can levy assessments without a vote of those who would be assessed. BWD’s operations manager noted that replenishment districts are usually set-up to purchase and import water.

Later in November Engelke told the BWD *ad hoc* Committee on New Development “The state said [Project Capital Group] should capture the 100 year [flood] event;” and to do so would require increasing the size of the project

dramatically and BWD to help cover the increased costs involved. He suggested that BWD could recoup these costs by creating a replenishment district and levying assessments.

In December 2005, Engelke made essentially the same presentation to the BWD Groundwater Management Committee. On this occasion, however, he had with him a consulting hydrologist to provide some of the details that had previously been lacking from the proposal despite repeated requests and demands from members of the BWD board and various committees.

The next day, a series of articles written by “several water experts” appeared in the *Borrego Sun*.

- Tim Ross, engineering geologist with the California Department of Water Resources (DWR), wrote that while such a replenishment system might be part of the solution to Borrego’s overdraft, it will not come close to reversing it because most of the time flow in Coyote Creek is so small that all of the water easily infiltrates through the creek bottom into the aquifer; so impoundment would do nothing to augment already occurring natural percolation. Ross estimates that it would take a flow of more than 10 cfs to produce a flow all the way to the Borrego Sink; so only when flows exceed 10 cfs would there be “additional water” available to augment natural percolation into the basin. USGS data for Coyote Creek indicate flows in excess of 10 cfs only about 1 percent of the time. Moreover, according to Ross, depending on environmental conditions imposed on the project, it is possible that in most years there will be no water at all available for capture. Based on preliminary analysis, Ross concludes that the best case scenario is that in most years less than 100 af will be available for capture, and only once in 20 to 30 years will 1,000 af or more be available for capture – assuming historical rainfall patterns continue.
- Jim Dice, Senior Environmental Scientist for the Colorado District of the California State Parks, also pointed out that runoff from Coyote Creek varies greatly year to year; so it would be difficult to meet a specific groundwater mitigation requirement. He also pointed to issues of habitat destruction and impacts on rare and sensitive species, especially if the flow of water to the Borrego Sink, a unique habitat area, is disrupted.
- Jim Bennett, San Diego county groundwater geologist, noted that the recharge system would have to handle flash floods, which raises the question of maintenance of the system. In addition, the developer would have to prove that recharge would be confined to the permitted area as well as the benefits of the project as a whole. According to Bennett, San Diego county and the county Department of Land Use and Planning would find it difficult to support the project.

- John Peterson, retired San Diego county hydrogeologist with many years of monitoring groundwater in the valley, felt strongly that recharge basins are a waste of time and money, won't provide any significant new water whatsoever, and won't help the aquifer because "The problem is extraction."
- Lin Burzell, BWD District Engineer, minced no words in his assessment of the project: "All they [the developers] are doing is taking water that would percolate any way so they can get mitigation credit for it."

In November 2005, Engelke described the project to BWD directors as a "community benefit," asked them to express interest in the concept, and then said the community would have to foot the bill for the project. He claimed the goal was to capture 100 afy, but provided no documentation supporting the possibility of achieving it. BWD's district engineer expressed concerns about dikes washing out and liability for system failure. One BWD director doubted that the developer could even claim ownership of water that was captured.

Two weeks later, the consulting hydrologist for the project appeared before the BWD Groundwater Management committee to retract an earlier statement alleging that developers of the project had been told by state to build a recharge system that would capture the 100 year flood event, a nearly seven-fold increase in project size that would require BWD to create a replenishment district and levy assessments to fund. The viability of the project depends on capturing water in excess of the natural recharge. The project's hydrologist asserts that flows in excess of 3 cfs would exceed natural percolation rate and constitute water legitimately available for capture; but estimates that it would take a flow of more than 10 cfs to produce a flow all the way to the Borrego Sink; so only when flows exceed 10 cfs would there be water legitimately available for capture to augment natural percolation into the basin. In simple terms, the developer argues that there will be more than 3 times as much water available for capture as DWR estimates there will be.

In January 2006, the *Borrego Sun* published a Viewpoint piece by Engelke in which he stated that the intent of the project was to capture flood waters that would, **for the most part** (emphasis added) be lost to evaporation; i.e., exceed the natural percolation rate and be legitimately available for capture to augment natural percolation into the basin.

In the same issue of the *Borrego Sun* John Peterson retired San Diego county hydrogeologist clarified some remarks he made earlier that were critical of the project. He points out that "The issue is not if groundwater recycling basins work, rather if they work in the Borrego valley." According to Peterson, the project would have "significant and unmitigatable environmental impacts" and would not be approvable. It would also be technically very difficult to determine the amount of water recharged by the project that is over and above what would have been

naturally recharged absent the recharge system. Finally, the quantity of such water recharged, if any, “would be insignificant compared to the volume of groundwater extraction.” Peterson believes, therefore, that “the best and most reliable solution to the Borrego valley overdraft is a reduction in groundwater production.”

In March 2006, Lance Lundberg of Prospect Capital Group told BWD directors that plans for the Viking Ranch had mushroomed into one that now “involves a small cast of thousands.” Lundberg wants BWD to be the lead-agency for the project and to reimburse him for water captured and injected into the aquifer. BWD’s initial response was to demur, citing insufficient staff and resources, questions about the legality of capturing free-flowing surface water for recharge, amount of surface flow that reaches the project site, the volume of already occurring natural recharge and the amount of water over and above that that could be legitimately claimed as additional recharge made possible by the project.

In April 2006, a representative of the developer (Mr. Dangelo) appeared at a Groundwater Management Committee meeting to provide a status report on the Viking Ranch project. The developer had hired a firm to produce the required EIRs, and is working with USGS, State Parks, and DWR regarding a “scoping study” on recharge. The project’s consulting hydrologist distributed a document regarding “verification studies” for the project and reviewed its status. He estimated that 12 cfs of water flows through Coyote Creek, but would like to have a gauge installed to obtain more accurate figures. When there is an application ready for the project the agreements, funding, and plans would be set at that time. In answer to a question about why San Diego county would not be designated as the lead-agency for the project, he said he did not think they would be interested. Dangelo indicated the goal of the project was to sell water to BWD.

In November 2006, Engelke reported to the Groundwater Management committee that Lance Lundberg wants to develop 676 acres on Yaqui Pass Road across from Montesorro. In addition to following citrus on Viking Ranch, Lundberg wants to receive mitigation credit for recharging the aquifer using water captured from Coyote Creek, and has asked Lane Sharman to assist in getting approval for the recharge project. Lundberg also wants to sell recharged water to the BWD at a negotiated price per acre foot, and will not go forward with the project if he cannot negotiate such an arrangement with BWD. Engelke indicated that the hope was to have BWD also manage the facility.

In December 2006, Engelke gave a brief presentation to BSCSG on the Viking Ranch project, and promised a more detailed presentation in January 2007.

In November 2007, the developer applied to the California Department of Water Resources for a permit to divert water from Coyote Creek at the Viking Ranch

site for underground storage and later use by the BWD. The application projects an “expected average annual diversion of Coyote Creek flows to groundwater storage of 307 acre feet,” with an annual limit of 2,591 acre feet. See:
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