



Water & Land Resource Manager

TEHAMA, GLENN, COLUSA, AND SHASTA COUNTIES
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A newsletter from the University of California Cooperative Extension seeking to support productive and judicious use of limited water and land resources in the Northern Sacramento Valley.

In This Issue

Proposed Groundwater Project: The Stony Creek Fan Aquifer Performance Test

Dear reader:

Attention to our groundwater resources is vital to all of us, whether our interests involve domestic, industrial, environmental, or agricultural uses. In recent months there has been some press coverage of a proposed groundwater project in the Northern Sacramento Valley known as the **Stony Creek Fan Aquifer Performance Test**. In more recent weeks, I have received requests from various water users for more information on this proposed project. In response to these requests, this newsletter issue provides a forum for discussing this project in greater detail. The Stony Creek Fan Partners (SCFP) who have proposed the project and the Butte Environmental Council (BEC) who has opposed the project have agreed to share their perspectives on the project. The intent is to increase awareness and understanding about the project and related issues.

To facilitate a pertinent discussion, I worked with a core group of farmers, ranchers, and dairymen in Tehama County to frame a set of twelve talking points and invited the Stony Creek Fan Partners (SCFP) and the Butte Environmental Council (BEC) to address them. The SCFP's perspective is printed in blue font and BEC's perspective is provided in green font. Answers and perspectives are alternated so that the responses are presented in an equitable manner. The perspectives expressed do not represent the University of California Cooperative Extension. This is simply an effort to provide "first hand" information on an important but controversial topic in an objective fashion.

This discussion is lengthy but reflects the complexity and importance of the matter. I strongly encourage you to take the time to consider this discussion and I hope you will find the perspectives provided through this forum to be thoughtful and engaging.

A handwritten signature in cursive script that reads 'Allan'.

Allan Fulton

University of California Cooperative Extension Irrigation and Water Resources Farm Advisor

Talking Point 1: Please describe the organization you represent and its constituency, identify whether you are a project proponent or opponent, and provide contact information.

BEC's Response:

Jim Brobeck is the water policy analyst and Barbara Vlamis is the executive director for Butte Environmental Council (BEC). BEC is a community-based, public benefit corporation formed in 1975 to encourage the preservation and conservation of the Earth's natural resources and to foster increased public awareness of local, regional and statewide environmental issues. BEC has 800 members in the Sacramento Valley. Because Glenn Colusa Irrigation District (GCID) has not fully analyzed the possible impacts nor provided the public with the ability to comment, BEC is opposed to the Stony Creek Fan Partner's proposed plan to install and operate seven high volume production wells in the deep aquifer system that underlies Butte, Glenn, and Tehama counties. Readers may contact BEC at (530) 891-6424 or www.becnet.org.

SCFP's response:

The Stony Creek Fan Aquifer Performance Test Project (Project) is an undertaking of three agricultural irrigation purveyors; Orland Unit Water Users' Association (OUWUA), Orland-Artois Water District (OAWD) and Glenn-Colusa Irrigation District. The three entities formed the Stony Creek Fan (SCF) partnership in 2001 under the belief that they could augment existing supplies and provide operational benefits for their constituents. Each brought unique attributes and needs to the table, but all shared common goals.

From Rick Massa, OUWUA General Manager (rmasa@ouwua.net):

OUWUA is a private, non-profit corporation that operates and maintains the U.S. Orland Project under contract with the U.S. Bureau of Reclamation. OUWUA provides irrigation water to its 1,100 landowners that comprise 20,000 acres on the north and south sides of Stony Creek in northern Glenn County. Its water supply is from the Stony Creek watershed that lies within the Coast Range, west of the Sacramento Valley. Orland Project water rights are some of the oldest held in the Sacramento Valley. Orland Project facilities include two major storage reservoirs (East Park and Stony Gorge) with a maximum combined capacity of 100,000 acre-feet (AF).

From Sue King, OAWD General Manager (oawdsue@sbcglobal.net):

OAWD is a public water agency that formed in 1954 for the purpose of contracting with the federal government for Central Valley Project (CVP) water supplies to augment over tapped groundwater supplies being used by District landowners. CVP water is delivered to OAWD via the Tehama-Colusa Canal and distributed by the District through miles of highly efficient underground pipelines. OAWD provides supplemental water to 212 landowners who irrigate nearly 28,918 acres planted to a wide variety of permanent and annual crops. OAWD covers an area just south of Orland and north of Willows and extends from Road U on the East side to the foothills on the Western border.

From Thad Bettner, GCID General Manager (tbettner@gcid.net)

Glenn Colusa Irrigation District (GCID) encompasses nearly 175,000 acres of land from Hamilton City to south of Williams on the west side of the Sacramento River. The District serves more than 1,000 landowners, over 1,500 different parcels of land, including three federal wildlife refuges. GCID's roots began in 1883 when Will S. Green posted one of the earliest water rights on the Sacramento River for diversions of water for use within Glenn and Colusa Counties. Since then, GCID has been actively diverting water from the Sacramento River and irrigating nearly 130,000 acres of farmland with over thirty different crops.

Talking Point 2: Provide background leading up to this proposed project. Depending on perspective, topics might include when and why the Stony Creek Fan Partnership was formed and when and why the Butte Environmental Council became involved.

SCFP's response:

From Sue King, OAWD General Manager:

There seems to be a lot of misconception about the formation and purpose of the proposed Stony Creek Fan Project. In order to understand why the Partnership was formed, I'd like to go back to the beginning, since I initiated the early discussions.

Before formation of the OAWD, our portion of Glenn County was in an overdraft situation. The western half of our District was largely dry land farmed and the rest of the area was farmed using private wells. We estimate that today there are approximately 400 wells within our District. Irrigation demands have ranged from roughly 33,000 AF in 1975 before the introduction of surface water, to a high of 92,000 AF in 1988. Due to the District's efforts to import surface water, the area transitioned from being an area of net groundwater extraction to net groundwater recharge.

Based upon anticipated CVP water allocations, the District continued to develop and District lands are now planted predominantly to permanent crops with a need of up to 90,000 AF annually. However, due to growing competition for surface water, we now have a contract for a maximum of only 53,000 AF during normal water years and are subject to shortages during dry years. Because of our water-short contract and increasing water demands, landowners continue to pump groundwater. When I became District Manager in 1998, I could quickly see that we needed a long-term solution to our water-short problem or Glenn County's and possibly the surrounding area's groundwater as a whole was going to suffer.

Groundwater storage was the original concept. Storing surface water during wet years in the aquifer systems for extraction during dry years seemed to be a plausible answer to our water problem, if we could acquire additional, affordable sources of surface water in wet years. To investigate and implement such an approach would require the cooperation of others outside of our District boundaries. We are in close proximity to both the Orland Unit Water Users' Association and Glenn-Colusa Irrigation District and it seemed logical to me that they should be included. My initial contact was with Van Tenney, previous General Manager with GCID and he was very intrigued by the concept of storing water underground. I then called Rick Massa with the Orland Unit since the Association lies to the north and seemed to be an ideal location for recharge. Thus began the Partnership and a long process of determining if water could be recharged in the Stony Creek Fan area.

First, we received grant funding to build three recharge basins and early indications looked promising since the water filtered very quickly into the gravels. Unfortunately it also migrated very quickly to the Sacramento River instead of percolating deeper into the Tehama Formation, which is the primary aquifer where most of the existing groundwater pumping occurs.

We then turned to exploring in-lieu recharge, which is simply a concept of bringing in more surface water in wet years and decreasing the amount of groundwater pumping. The basin would then naturally recharge over a period of time from applied surface water supplies. We learned that the feasibility of in-lieu recharge is at times questionable and is currently on the back burner. In water-short years, additional water supplies may not be available to replace groundwater pumping and

available surface supplies are much more costly for growers than pumping groundwater with existing wells. However, for wet years when surface water supplies are more abundant and that follow dry years, in-lieu recharge remains a viable concept.

This has led to one of the most critical components of our program, exploring the Lower Tuscan Aquifer, which underlies portions of our district as a potential supplemental source of water. Orland-Artois has one existing Lower Tuscan well that is 1320 feet deep and is sealed down to 600 feet so that we won't draw water from shallower aquifer systems that surrounding landowners rely upon. The well yields average about 2,000 gallons per minute (gpm) and adds approximately 1,500 AF per year to our water supply. We do constant monitoring and after three years of pumping we have the data to show that the well has not had any negative impacts to local agricultural and domestic wells.

This year (2008) the United States Bureau of Reclamation has reduced our water allocation to just 21,000 AF, or 40% of our contract quantity. This will result in a large increase of private pumping and we are very concerned about the future of Glenn County's and the surrounding areas groundwater. Individually, growers within OAWD are already lowering their pumps and drilling new wells. There is approximately 300 to 400 AF per day of increased groundwater pumping by our growers. GCID has stepped in and transferred what water they had available and the Orland Unit is trying to transfer water to us as well. This is not going to be sustainable for a long period of time and if we should incur another drought situation next winter, it's going to be very serious. This is going to have far reaching impacts to our agricultural economies and communities as a whole. We need to find reasonable and dependable solutions. To secure and protect Glenn County's and the surrounding Northern Sacramento Valley's valuable water supply is going to require everyone to work together in supporting our efforts to perform the necessary research and testing that is needed in defining the Lower Tuscan Aquifer. To let a potential supply remain virtually untapped in these critical water short times would not be to anyone's benefit. This is information we all need.

From Rick Massa, OUWUA General Manager:

OUWUA realizes the importance of its aquifer system from the local, regional and statewide perspective. Orland Project irrigation operations provide significant amounts of groundwater recharge that is important to Glenn County and surrounding areas. Although OUWUA typically has an adequate water supply to deliver to its farmers, its 100-year old distribution system can only accommodate rotational irrigation deliveries that do not provide the necessary flexibility to support modern on-farm irrigation techniques required for irrigation of most perennial crops. Consequently, as more and more Orland Project lands are being planted to orchards and irrigated by drip and sprinkler systems, more farmers are opting to drill groundwater wells rather than use surface water. Additionally, the Orland Unit can be short of meeting its water users' demands in certain years.

From a regional and statewide water shortage perspective, OUWUA has taken the approach, that though it is not a part of the problem, it wishes to contribute to the solution to avoid having surface water taken from our region. This approach is evident in OUWUA's support of construction of Sites Reservoir, which could add more than 600,000 (AF) to the state's supply, and of the Phase 8 Settlement Agreement where the State Water Resources Control Board, in its role to "save the Sacramento-San Joaquin Delta, considered actions that would likely result in reduced water supplies to federal and state water contractors north of the Delta. Rather than risking the permanent loss of surface water rights and supplies from our region, various northern California water interests, including OUWUA, joined together in committing to provide for future, increased water supplies. However, this commitment was based on more efficient methods of utilizing water resources including conjunctive water management—the efficient and coordinated use of surface and groundwater resources, while not negatively affecting existing users.

From Thad Bettner, GCID General Manager

GCID's mission is "To deliver to landowners a secure and reliable water supply as efficiently and economically as possible, while preserving and protecting all resources." Essentially, GCID's firm belief is that we need to be good stewards of our resources, including water, which requires a hands-on approach to management.

As Sue King stated for OAWD, we need to focus on long-term solutions to water needs that may exist in our region and for those immediately outside our region as well. GCID has actively managed its surface water for over 100 years which has resulted in a strong local farm economy and in stable groundwater supplies within and adjacent to the District. However, more can and needs to be done to manage our groundwater supplies. Some argue that our region will become like other areas of the State where groundwater levels have declined or water rights have been taken such as in the San Joaquin Valley or Owens Valley. However, in those cases it was often "outside" interests that came in and imposed decisions on local interests. For our region, we have the ability to make decisions locally about our uses and needs; however, absent actively pursuing these difficult decisions and being proactive, other interests will come into our region and begin to make decisions on our behalf. That is simply not acceptable.

Most recently and related to GCID's concerns, the Governor's Delta Vision Task Force is looking at reducing surface water diversions, upstream of the Delta, here in the Sacramento Valley, which would have the indirect effect of decreasing groundwater recharge, and requiring additional groundwater pumping to make up for shortages. This directly affects groundwater users who should be just as concerned as GCID, and unless we can demonstrate that we are using and managing groundwater in a beneficial manner, it is possible that the Delta Vision will see groundwater supplies in the Sacramento Valley as a water supply solution to the Delta.

BEC's response:

BEC became heavily involved in groundwater issues after the 1994 Drought Water Bank harmed farmers and residents in Butte County. Thousands of hours have been spent attempting to educate both local and regional residents, participating in policy meetings, and advocating for protective policies for the groundwater basin. When the Sacramento Valley Integrated Regional Water Management Plan (SVIRWMP) surfaced in 2006-2007, BEC and local farmers attempted to influence the process and policy in the Plan. Regrettably, the Plan was formed by and for the benefit of the water districts that entered into agreements with the state and federal governments to "integrate the groundwater into the state water supply."

With the Plan's approval by the California Department of Water Resources (DWR), an agency that is invested in manipulating Sacramento Valley groundwater for the benefit of the state, BEC realized that the threats to local groundwater had mushroomed and believed that all the districts needed to have their proposed extraction well projects monitored. BEC contacted GCID in 2006 and asked to be placed on their interested party list for all plan discussions and implementation projects. The first notification of any kind about the Stony Creek Fan Project was a Notice of Exemption (NOE) for the seven production wells project in September 2007. BEC was left with no recourse for involvement than to file a lawsuit to challenge GCID's conclusion that their project was "research" and therefore exempt from the California Environmental Quality Act (CEQA). GCID then withdrew their September 2007 NOE, but immediately approved a second one in November 2007. Again left without an opportunity to provide substantive comments on the proposed seven production wells project, BEC filed a second lawsuit, which is pending.

Talking Point 3: Why oppose or support this project?

BEC's response:

The quotes in the paragraphs below are extracted from the June, 2005 Proposition 50 planning grant proposal submitted by Glenn Colusa Irrigation District (GCID)/Natural Heritage Institute (NHI) to create the Lower Tuscan IRWMP entitled: *Regional Integration of the Lower Tuscan Groundwater Formation into the Sacramento Valley Surface Water System Through Conjunctive Water Management*. This sub-regional IRWMP was developed by Glenn-Colusa Irrigation District (GCID), Orland-Artois Water District, and the Orland Unit Water Users Association (the same entities that comprise the Stony Creek Fan Partners or SCFP).

Glenn Colusa Irrigation District (GCID) assumes that more water is available from the Sacramento Valley watershed for out-of-basin transfer. GCID and its partners are interested in developing new sources of water for “participation in the emerging water transfer markets” by “using groundwater from the Lower Tuscan Formation in lieu of surface water entitlements that would otherwise be used, thereby freeing surface water for transfer.”

The SCFP recognized in the planning grant that there are numerous risks to the environment and to the existing users of the aquifer system which states that, “it will take decades before we know enough about the aquifer dynamics to devise such a risk-free regime, and yet it would be foolish to require that the aquifer remain an under-performing asset in the interim.” The SCFP imagines that these threats can be mitigated, “by providing current Lower Tuscan groundwater users a risk-free water supply alternative in the form of a supplemental surface water supply, and/or by imposing restrictions on the location, pumping rates and timing of new wells.”

The SCFP's project to conduct aquifer performance testing is clearly associated with an effort to participate in the emerging water market as described in the 2005 Lower Tuscan grant proposal: “...this [conjunctive water use] program would provide opportunities to benefit from water transfers through the state and federal water projects. Overall program recovery would occur through groundwater substitution from wells tapping the lower Tuscan Formation aquifer system. These wells could be operated in the Butte Basin in conjunction with the SWP [State Water Project – Oroville] or in eastern Glenn and Colusa County in conjunction with the CVP [Central Valley Project – Shasta].”

“The Lower Tuscan Formation aquifer system extends nearly across the northern Sacramento Valley and underlies the service areas of several CVP and SWP water contracting districts. There is a unique opportunity for local CVP and SWP water users to utilize this common resource in concert with State and Federal projects to achieve the three goals of the proposed IRWMP, while also providing additional flexibility for SWP and CVP operations.”

The project partners expect that, “water transfers will play an important role in bridging a significant gap between revenues and costs.” Furthermore, “The Partners plan to utilize the Lower Tuscan Formation in two ways to produce surface water for transfer. The first is by substituting Lower Tuscan Formation pumping for surface supplies that the Partners would otherwise be entitled to use (ground water-substitution-based transfers); the second is by using Lower Tuscan Formation pumping to mitigate water supply shortages...” In other words, exploitation of the aquifer system will occur when drought related demand for transferred water would be the highest. This extra drafting of the aquifer will occur when the groundwater is particularly vulnerable to overdraft, that is, during poor recharge years.

While the Partners fail to devise a plan to mitigate stream flow losses that are likely to occur as the overdraft proceeds, they do anticipate a technical fix for affected existing groundwater users: “[An] example of a possible configuration would provide a physical solution to the geohydrologic risks for the existing groundwater users by providing them a substitute water supply out of Lake Oroville amounting to approximately 70,000 acre feet per year, which is the amount of water needed to replace existing groundwater usage in the recharge area. This would, in effect, make existing groundwater users independent from the Lower Tuscan Formation aquifer system.”

The SCFP’s willingness to participate in lucrative long distance water sales is couched in public service jargon: “A well reasoned and implemented regional water management strategy could include components that would increase the state-wide dry year water supply reliability...,” but proponents refer to short term droughts as worst case scenarios. To date they have failed to identify or analyze the short term impacts let alone the catastrophic impacts that would occur to the environment and the economy if conjunctive use water transfers were implemented during long-term dry spells that include century long droughts that occur periodically in the region. http://ceres.ca.gov/snep/pubs/web/v1/ch01/v1_ch01_02.html).

Despite the detailed plans to integrate the regional groundwater into the state water supply through water sales and conjunctive use, GCID fails to mention this goal in its NOE prepared for the Groundwater Test Wells proposed to be developed by the Stony Creek Fan Partners. GCID insists that, “The primary purpose of the project is to test the feasibility and effectiveness of surface water for groundwater exchange opportunities within the SCFP district boundaries.”

The NOE description of the depth and location of the test wells obliquely indicates the targeted aquifer is the lower Tuscan formation, but assiduously avoids the politically volatile geological identifier “Tuscan” from the document.

SCFP’s response:

The earliest irrigation and municipal uses in California relied upon the direct diversion of surface waters from rivers and streams with most of those uses occurring in close proximity to natural waterways. To increase the water availability and reliability from these streams and rivers, surface water storage projects were built to capture, store, regulate, and manage these supplies to meet growing needs. As needs grew, so did facilities, to the extent that water stored in northern California is transported hundreds of miles for use in southern California. With no sure sign of constructing additional surface storage reservoirs, existing facilities are being managed for complete maximization while also operating to meet environmental needs such as the reoperation of Shasta Dam for fishery enhancement, screened diversions on the Sacramento River, fish ladder projects, and even diversion dam removals. Most recently, the Governor formed the Delta Vision Committee with the goal of restoring the Sacramento-San Joaquin Delta and it is very clear that more water will be required from all users in the State to accomplish this task. Essentially, with no new storage being constructed and surface water supplies diminishing (as evidenced by OAWD’s 40% supply allocation), groundwater will continue to make up the shortages. We must do a better job understanding and managing our groundwater resources. Simply turning on a well and waiting for water to come out is a plan to fail.

What strides has groundwater management in California taken in the past 50 years? The answer is little, if any. While new surface water rights are subject to a permitting process and insuring beneficial use of water is occurring, California has no permit process for regulating groundwater use. Basically, any landowner can construct a groundwater well and has the right to use groundwater

provided the water is being put to beneficial use. With a growing population, together with expanding land uses and pressures on existing surface supplies, groundwater extraction is the only current alternative to meet future needs in this region, the Sacramento Valley, and the State.

The SCF Partners believe that water users in the local area are faced with making important decisions on how to approach managing our groundwater resources in light of this growing dependence on it. There appears to be two choices: 1) the status quo or “do nothing” approach where all types of water users independently turn to groundwater to meet their needs without consideration of the cumulative effect, leaving the long-term sustainability of the groundwater resource to “chance”; or 2) alternatively, the SCF Partners believe that there are opportunities to actively manage the groundwater resources together with surface water supplies and yield more, and timely, water supplies for our region. Similar to the experience with surface storage, our ability to manage the groundwater system will be determined by our knowledge and understanding of the groundwater system and will require adaptation as experience and knowledge are gained. In the long run, the SCF Partners believe it is better to work toward more coordinated management of our groundwater resources and surface water supplies rather than to leave it to chance.

Therefore, our Project, which is limited to aquifer performance testing only, is a rational and necessary first step in beginning to understand how our groundwater system can be managed to meet the long-term needs for our region. In fact, testing such as we have proposed has been recommended by other entities and experts as cited below:

- “Testing is needed to measure the aquifer parameters by conducting aquifer performance testing.” From the University of California Cooperative Extension circular entitled, *Seeking an Understanding of the Groundwater Aquifer Systems in the Northern Sacramento Valley: An Update*.
- “A regional program of testing in the Lower Tuscan Formation aquifer system would benefit both Butte County and Stony Creek Fan groundwater models. The data determined from this testing would provide additional information....” From Butte County’s project entitled, *Tuscan Aquifer Monitoring, Recharge, and Data Management Project*.

Talking Point 4: Please describe the proposed project. This might include describing: 1) the area that could be influenced by the project; 2) how many new wells are being proposed for construction and where they may be constructed; 3) expected design and construction features of the proposed wells in comparison to existing wells; 4) anticipated pumping capacity of the wells; 5) what seasons and total time will the wells be in operation; 6) expected total volume of water extracted; 7) where will the water be used and how will the water be conveyed within each district; and 8) what is the plan for these wells if the proposed project were conducted and after it has been completed.

SCFP’s response:

Collectively, the SCF Partners provide surface water supplies to more than 210,000 acres of irrigated lands and wildlife refuges, including nearly 130,000 acres in Glenn County. Surface water supplies provided by the SCF Partners meet a large portion of the irrigation water demand in Glenn County. Additionally, there are 75,000 irrigated acres in Glenn County that are outside the SCF

Partners' service area that are solely reliant on groundwater. Based on water balance analysis developed for this area, a net of about 180,000 AF is contributed to groundwater recharge each year by surface water delivered by the SCF Partners. Based on these uses, more information is needed to understand how the groundwater system functions.

The proposed Project is a two-year research program in Glenn County to install up to seven test-production wells, and to conduct well efficiency and aquifer performance testing. The wells will be located west of the Sacramento River and south of Highway 32 with up to three wells in GCID, up to two wells in OAWD, and up to two wells in OUWUA. Test hole drilling will help characterize the extent and distribution of the multiple aquifer systems within the SCF Project study area, and based on the expert advice from hydrogeologists, the wells will be sized and constructed to the appropriate capacity and depth. The SCF Partners expect the test-production wells to be screened from approximately 700 to 1,500 feet deep, based on the geologic information obtained from the test wells, and have a capacity of up to 4,000 gpm. The test-production wells will be constructed to focus pumping from the lower portion of the Tehama and Tuscan aquifer systems and to study their aquifer characteristics while causing minimal impact to existing agricultural wells, typically constructed between 200 to 600 feet deep.

Depending on the timing of construction, it is likely that the wells will be operated for two irrigation seasons, with some additional testing during the non-irrigation season. Winter testing is needed to evaluate aquifer performance characteristics when most of the agricultural pumping has stopped, thus eliminating interference from neighboring wells. The water pumped during the winter will be used locally for rice straw decomposition and wildlife refuge supplies. The maximum volume pumped in one test year would be between 20,000 and 30,000 AF, enough to supply approximately 6000 to 9,000 acres of farmland. While this level of pumping seems high, compared to the 1,000,000 AF of annual pumping in our four-county region, it is relatively small. In fact, this level of pumping is needed in order to obtain reliable data that will answer the technical and scientific questions being asked. If only one or two wells were installed the pumping volume probably would not be sufficient to cause an observable aquifer response, and the test would be inconclusive. Irrespective of the timing or rate of the amount pumped, all extracted groundwater will be delivered into the SCF Partner's respective service areas and used locally.

After the Project is completed, there will be no operation of the wells unless and until the SCF Partners make a determination to do so and conduct the appropriate environmental review as required by law. For any number of reasons, the SCF Partners could decide not to operate the wells beyond the testing done in this Project. However, if it is determined the wells cannot be operated at full capacity without causing significant impacts, their use would be curtailed as needed to avoid adverse impacts. If adverse impacts cannot be avoided or mitigated, the wells would be abandoned.

BEC's response:

Existing wells in the aquifer system are used to irrigate valuable orchard crops and to provide domestic water supply for residents. The proposed project will draw water from the lower Tuscan aquifer. According to the California Department of Water Resources (DWR): "The Lower Tuscan aquifer system is exposed on the east side of the valley. In the central portion of the valley, it is found at a depth of about 1,000 feet below ground surface. It lies beneath the Upper Tuscan aquifer system beginning at the eastern foothills and extends westward past the Sacramento River approaching Interstate 5... Artesian wells have been observed on the west side of this aquifer

system due to the hydrostatic pressure from up gradient recharge areas to the east.”
<http://ucce.ucdavis.edu/files/filelibrary/2280/7950.pdf>

The connectivity of the proposed project wells west of the Sacramento River to the recharge area located on the eastern edge of the valley is clearly indicated by the hydrostatic pressure. Wells and streams located in Glenn, Butte and Tehama Counties could be impacted by this project. A single GCID well test that occurred in 2007 found that some of the recharge water came from as far away as the foothills east of Chico (draft report Glenn-Colusa Irrigation District Aquifer Performance Testing, DWR, 2007).

The Sacramento Valley is primarily a saline water aquifer system. Fresh groundwater is only found in the upper formations. Marine formations, such as the Great Valley Sequence and the Lower Princeton Submarine Valley Fill deposits are the primary saline water aquifer systems in the northern Sacramento Valley. The groundwater from these aquifer systems is highly saline and unsuitable for either domestic or agricultural use. Overdraft of the overlying freshwater aquifers may create a “cone of ascension” drawing saltwater contamination into the precious Tuscan aquifer.

Seven wells are proposed in the current GCID NOE. A total of 61 are proposed for the northern Sacramento Valley in the SVIRWMP. The screen depths of the proposed wells is not specified in the NOE, but personal communication with Thaddeus Bettner indicate that the wells would be open screened at every productive stratum of fresh water. This will preclude accurate scientific observation of individual aquifer production levels and response to drafting.

Talking Point 5: What are the project goals and objectives and what is expected to be learned by conducting the proposed project?

BEC's response:

Dr. Kyran Daniel John Mish, the Presidential Professor of Structural Engineering, School of Civil Engineering and Environmental Science at the University of Oklahoma has examined and critiqued the technical memorandum authored by Kenneth Loy in support of the Stony Creek Fan Conjunctive Management Project. Dr. Mish considers the project to be, “an ambitious program of large-scale groundwater extraction from the northern Sacramento Valley.”

SCFP's response:

First and foremost the goal is “to protect local groundwater resources, consistent with Glenn County ordinances and California law.” While the first phase focused on the feasibility of recharging the aquifers underlying the Stony Creek Fan area, the second and current phase is a research project to test and monitor the aquifer system.

The Partners realize that a focused, detailed, planned, and controlled test is needed to answer the questions being asked. The aquifer performance testing and monitoring is needed to identify aquifer properties in this region and to better understand the interaction between surface water and the upper and lower aquifer systems, including the deeper portions of the Tehama and Lower Tuscan formations. There is growing awareness and acceptance that surface water flows in streams and rivers as well as water diverted for agricultural use recharges the groundwater in this region. A natural question that must be asked is, “What is the flow path and residence time associated with the recharged groundwater and who is benefiting?” Additionally, this Project will attempt to answer other questions such as:

- Does groundwater tend to move more vertically or horizontally, and at what rates?
- What are the characteristics of the connection between the surface water and groundwater between the various aquifer zones, which comprise the collective aquifer system, and how might these interactions be important to existing groundwater users?
- Is the Lower Tuscan Aquifer System really semi-confined and what could happen if more wells are constructed to extract groundwater from this portion of the aquifer?
- Can the existing Stony Creek Fan Integrated Groundwater and Surface Water Model (SCFIGSM) or another similar model be adequately calibrated to predict the local and regional impacts associated with project-related pumping?

Talking Point 6: Please discuss the protocol for data collection, analysis, and reporting of findings if this proposed project were conducted. This might include describing: 1) who developed the protocol and any peer review for adequacy; 2) who will be responsible for carrying out the protocol; 3) the type and extent of monitoring and data collection that will be undertaken; 4) mechanisms to peer-review and disseminate interim and final results gained from the project to the broader constituency of Northern Sacramento Valley water users; 5) the interface with the existing County programs to monitor and manage groundwater conditions; and 6) any mitigation plans if groundwater monitoring shows third-party impacts.

SCFP's response:

Currently, there are over 80 wells being monitored on a semiannual basis by DWR in western Glenn County, in the vicinity of the project area. Many of these wells have been monitored for nearly 50 years and long-term trends of groundwater levels are documented. Of these wells, 20 are dedicated monitoring wells and screened in multiple zones. Historical data derived from these wells will provide a lengthy baseline record. Frequent and detailed monitoring will be performed during each phase of the testing to meet data collection requirements, and verify that test activities do not result in significant impacts to groundwater users or cause a serious or major disturbance to environmental resources. If monitoring indicates groundwater elevations show significant decline related to the SCF Program test in the relevant vicinity of the test pumping, and the decline exceeds what was previously planned in the preceding (well Program design) phase, and the decline is directly attributable to the SCF Program testing, then the test pumping will be modified or terminated as necessary to avoid any significant adverse impacts. Monitoring data will include soil/aquifer logging during drilling, flow rates and volumes extracted for each of the test-production wells, depth to groundwater measurements in the test-production wells and observation wells in the vicinity, water quality data, depth to groundwater measurements in critical areas of the groundwater basin (including recharge areas and areas in which groundwater resources are considered limited), and extensometer measurements for land subsidence.

The monitoring and data protocol was developed, and will be carried out, by consulting groundwater hydrologists from both the private sector and from DWR's Northern California office in consultation with County and water agency representatives.

The SCF Partners have conducted outreach on this proposed project with detailed presentations made at various locations and with various attendees, including the Lower Tuscan Workgroup/Groundwater Coordinating Committee, Butte Water Commission, Tehama County AB3030 Technical Advisory Committee, Glenn County Board of Supervisors, Tehama County Flood

Control and Water Conservation Board, Glenn County Water Advisory Committee, and Capay Landowners Association. Once testing commences and as more is learned about our aquifer system, the SCF Partners will on an on-going basis continue to share its findings with the broader community.

As data is gathered, the SCF Partners will disseminate this information through local advisory committees and water commissions, as well as through a website that can be accessed by the general public. An interim report summarizing aquifer test results through December 2008 is scheduled to be issued during the first quarter of 2009. A final report documenting test procedures, data collection, and the results of data analysis will be issued in 2010. Since the Project will be coordinated with the counties, existing basin management objectives (BMO's or groundwater elevation trigger levels) in the project area will be compared to the monitoring data, and if nearby or neighboring BMO's are exceeded in the project area or neighboring areas, the SCF Partners will coordinate with Glenn County or other neighboring counties and BMO area representatives to determine the appropriate course of action to take. It is possible that the long term benefits of gaining valuable information on the groundwater system could outweigh any short-term impacts such as temporary lowering of normal groundwater elevations.

BEC's response:

[Continuing with the critique by Dr. Kyran Daniel John Mish, the Presidential Professor of Structural Engineering, School of Civil Engineering and Environmental Science at the University of Oklahoma who has examined the technical memorandum authored by Kenneth Loy in support of the Stony Creek Fan Conjunctive Management Project.] Thaddeus L. Bettner, GCID General Manager, explains in the NOE that the project is exempt from detailed environmental review because the purpose is: "basic data collection, research, experimental management, and resource evaluation activities, which do not result in a serious or major disturbance to an environmental resource." Dr. Mish on the other hand declares, "While this program is termed "research", it does not constitute scientific research in any recognizable form, and its plan includes no comprehensive identification of possible risks, or coherent discussion of the substantial uncertainties involved in characterizing the aquifers of this region."

Dr. Mish calls into question the limited scope of the investigation. "Accurate assessment of the effects associated with plans such as the GCID example (including characterization of associated physical uncertainties) is a feasible goal, and one can only wonder why such assessments are not being performed or disseminated in this case." Dr. Mish's analysis indicates the need for independent, neutral scientific investigation of the aquifer system. Project proponents, who have a special interest in classifying the aquifer system as being impervious to damage associated with aggressive resource extraction, designed the seven well extraction project with the assistance of DWR.

Concerning the interface between the proposed project and existing county groundwater monitoring and management activities, county BMO's are not designed to operate outside of county boundaries. Even within the county there has been no effort to correct water level non-compliance with objectives when alert stages are triggered. Many wells in Butte County have triggered alert stages in 2007 and 2008, but there is no mechanism to remedy the non-compliance. (<http://gis.buttecounty.net/bmoic3/GIS/Default.asp?loadfile=reports.asp>). The assertion below further illustrates the inadequacy of local BMO's.

Each of the four counties that overlie the Lower Tuscan aquifer system has their own and separate regulatory structure relating to groundwater management. Tehama County, Colusa, and Butte Counties each have their own version of an export ordinance to protect the citizens from transfer-related third party impacts. Glenn County does not have an export ordinance because it relies on Basin Management Objectives (BMO's) to manage the groundwater resource, and subsequently to protect third parties from transfer related impacts. Recently, Butte County also adopted a BMO type of groundwater management ordinance. Butte County, Tehama County and several irrigation districts in each of the four counties have adopted AB3030 groundwater management plans. All of these groundwater management activities were initiated prior to recognizing that a regional aquifer system exists that extends over more than one county and that certain activities in one county could adversely impact another. Clearly the current ordinances, AB3030 plans, and local BMO activities, which were intended for localized groundwater management, are not well suited for management of a regional groundwater resource like that theorized of the Lower Tuscan aquifer system. *Toccoy Dudley, Butte County Department of Water Resource, July 2, 2007. Needs Assessment Tuscan Aquifer Monitoring, Recharge, and Data Management Project (Draft for grant proposal).*

There is no known mitigation and monitoring plan for this project that has been made public. BEC is aware that the DWR conducted monitoring during the single well performance test in 2007, which found that some of the recharge water came from as far away as the foothills east of Chico (draft report Glenn-Colusa Irrigation District Aquifer Performance Testing, DWR, 2007).

Talking Point 7: How much would this project cost and what is the funding source?

BEC's response:

The total cost of the proposed project is 3.1 million dollars.

SCFP's response:

As described in all public meetings the Partners have had on this proposed project, the total cost of the project is \$3,100,000, comprising of the following funding sources:

- \$1,400,000 – State (Administered by DWR, Division of Planning & Local Assistance)
- \$1,200,000 – Federal (Administered by U.S. Bureau of Reclamation)
- \$ 500,000 – Local (Stony Creek Fan Partners)

Talking Point 8: How will success or failure be measured for this project?

SCFP's response:

The ultimate purpose of this Project is to determine whether our groundwater system can be better managed to provide a more reliable water supply for this region. The Project itself has no inherent success or failure since it will be used to gather data and information that will ultimately help to optimize groundwater management and to further the public's understanding of the local and regional aquifers. The Project will be a success if the data is gathered and integrated into the existing base of knowledge regarding the aquifers. A potential failure-related scenario would be that

the Project reveals that options for optimizing groundwater management are feasible, yet they are rejected, due to unsubstantiated concerns by local interest groups or groundwater users.

BEC's response:

No response at this time.

Talking Point 9: How is this proposed project tied to the larger Sacramento Valley Integrated Regional Water Management Plan (SVIRWMP) and the Phase 8 Settlement (also known as Sacramento Valley Water Management Agreement)?

BEC's response:

While the Project Notice of Exemption from environmental review fails to mention a connection to the SVIRWMP, the project obviously will develop data and install infrastructure as stated in the June 11, 2007 *Sacramento Valley Water Resource Monitoring, Data Collection, and Evaluation Framework*. That document was created by DWR, "furthering the development of the SVIRWMP", and explains:

In section 2.1 Groundwater Performance Monitoring:

For water management programs which propose groundwater extraction from an aquifer with little previous production history, new test-production wells along with dedicated observation wells may be required to facilitate data collection and allow for adequate evaluation of the proposed benefits and/or impacts.

In section 6.3 of the SVIRWMP, Glenn County, six bullet points lead the chapter:

1. *Increasing shift in agricultural water supply source from surface supply to groundwater*
2. *Development, use, reuse, and recharge of the Lower Tuscan Formation.*
3. *Groundwater recharge*
4. *Increased residential development in the Orland Unit Water User's Association (OUWUA) district area*
5. *Agricultural land conversion to smaller, rural residential parcels (2 to 10 acres)*
6. *Transfers in/out of basin*

The chapter later expands on these items stating, "The current source of water use is approximately 70 percent surface water and 30 percent groundwater. This ratio is anticipated to continue to move toward a greater proportionate use of groundwater, with county officials projecting an increase in groundwater use by agricultural users in the next 25 years. This increase is primarily because of the anticipated increase in orchards in the county and their typical reliance on groundwater, and anticipated in-/out-of-basin transfers by substitution." Elaboration continues on page 6-44.

GCID is continuing to develop a conjunctive water management and monitoring program to supplement current surface supplies and reduce Sacramento River diversions. Water produced as part of this project is proposed to be dedicated to meeting water quality standards in the Bay-Delta and improve local, regional, and statewide water supply reliability depending on year type in accordance with SVWMA [Sacramento Valley Water Management Agreement or Phase 8 Settlement].

The SVIRWMP as a whole proposes the installation of 61 wells in the northern Sacramento Valley to facilitate conjunctive water management to benefit the state water supply. In addition, GCID's section in the SVIRWMP list for Conjunctive Water Management Projects states, "This program includes the use of 1 district-owned production well and installation of up to 10 new district-owned production groundwater wells." OUWUA also plans to participate in significant increases in groundwater use by, "Additional demand met by groundwater pumping from 35,000 to 95,000 ac-ft annually." The SCF partners are clearly part of the SVIRWMP, have plans to increase groundwater use under the SVIRWMP, and are seeking to augment the state water supply through conjunctive management activities. It is at best disingenuous and at worst illegal to cloak the seven production wells project as separate from the SVIRWMP.

Proceeding with the seven production wells project prior to detailed environmental review of the umbrella Plan (SVIRWMP) is a violation of CEQA and the National Environmental Policy Act (NEPA). CEQA's regulations explicitly state that cumulative impacts must be evaluated along with the direct effects and indirect effects of each alternative. NEPA prohibits a piecemeal approach to a project in order to avoid review of the cumulative impacts of that development. This project should disclose all future plans to advance conjunctive use facilitating water sales south of the Delta.

SCFP's response:

As discussed above, the SCF Partners have been pursuing conjunctive use and management opportunities since 2001, long before the thought, or the preparation, of the Sacramento Valley Integrated Regional Water Management Plan (SVIRWMP). This Project focuses on understanding our groundwater system so that we can insure our local needs can be met first and foremost. We owe it to our region to be self-sufficient. The SVIRWMP is a comprehensive plan that identifies, but does not implement activities in the sub-regions in the Sacramento Valley. However, critical to the SVIRWMP is the recognition that local projects must be feasible and acceptable. From Section 1.8.3 of the SVIRWMP, "The implementation of the IRWMP will build on the local water management plans by coordinating the local public agencies' efforts to protect and manage the groundwater resources across the region."

Is this Project related to the Sacramento Valley Water Management Agreement or the Phase 8 Settlement? Simply stated – No. The Phase 8 Settlement was implemented in place of the State Water Resources Control Board (SWRCB) proceeding with Phase 8 of the Bay-Delta Water Quality Control Plan that could have taken over 500,000 AF annually from Sacramento Valley water users. Instead of risking losing that much water, Sacramento Valley water users and south-of-delta water users offered a settlement to the SWRCB in which the parties would share in the responsibility of meeting Bay-Delta water standards. For the Sacramento Valley, that meant that users throughout the valley from Redding to Sacramento would make up to 185,000 AF available in specific year types with 92,500 AF of that total remaining in the Sacramento Valley to meet local shortages and future growth, and 92,500 AF available to the delta for water quality or export uses.

However, prior to the implementation of Phase 8, the parties to the settlement need to complete an environmental document for the project as required under the California Environmental Quality Act (CEQA) and the National Environmental Policy Act (NEPA) which is not expected to be completed in draft form for public review until Fall 2009, at the earliest. This CEQA/NEPA document will evaluate all the projects being considered in Phase 8, address impacts if they exist, and allow the broader public to comment on the proposed projects.

To the extent information from the proposed SCF Project can assist in the preparation of the CEQA/NEPA document, the Partners believe this could improve the assessment of proposed projects.

Talking Point 10: If public funds are used to fund this proposed project, discuss the perceived benefits to the broader public.

SCFP's response:

The main benefit to the broader public will be an improved understanding of how the regional groundwater resource spans local jurisdictional boundaries and to what extent a regional management approach is needed. Similar to surface water, groundwater is a public resource with overlying landowners having the right to use groundwater for beneficial use. However, absent an improved understanding and coordination on the use of these groundwater supplies, there will continue to be unnecessary conflicts that will divide this region instead of bringing the region together to solve problems. The public will significantly benefit from the data collected during this Project, which will increase our understanding of the local and regional aquifers. Understanding the characteristics of these aquifers will allow for more efficient utilization of the groundwater resources, and support more accurate and reliable environmental review of any future groundwater use projects. If groundwater can be better managed, the public will benefit by having a more reliable supply. Further, if this region can help in meeting broader statewide needs, the public will benefit by not having to constantly be concerned that more of this region's water supply may be involuntarily taken and used elsewhere.

BEC's response:

There are four *perceived* public beneficiaries: 1) Current urban users and developers south of the Delta 2) San Joaquin Valley irrigators 3) Delta users; wildlife habitat and Delta irrigated farms 4) North of Delta users, especially SCFP members. Unfortunately, as noted previously, the probable impacts from the SCFP project have not been analyzed. It is faulty science to evaluate only benefits without scrutinizing the serious impacts from increased evacuation of an aquifer. For example, lowering the groundwater table actually decreases surface water flows, creating a negative feedback loop in an attempt to re-establish equilibrium. The reader needs to look no further than the San Joaquin Valley for the results of serious groundwater extractions where dewatering of streams, land subsidence associated with aquifer structure collapse, and lowered groundwater tables have destabilized the hydrologic regime.

If conjunctive management of the Tuscan formation occurs, North of Delta users will need to struggle with aquifer destabilization. Shallow alluvial aquifer wells drawing water that is perched on top of confining layers will be drained as the relatively impervious base layer is perforated, subterranean flows are reversed as lower layers are drained.

The USGS has written a history of the devolution of the aquifer system in the San Joaquin Valley resulting from overuse of groundwater. Here are a few pertinent excerpts:

Surface water satisfied most irrigation needs until the late 19th century, when a rapid increase in irrigated acreage produced a demand for water that exceeded the surface-water supply, and groundwater supplementation became necessary; the drought of 1880 was a major stimulus for groundwater development.

The invention of the deep-well turbine pump around 1930 allowed withdrawals from greater depths, which encouraged further development of groundwater resources for irrigation. Withdrawals increased sharply during the 1940's and 1950's.

During the 1960's and 1970's, withdrawals greatly exceeded recharge, and water levels declined precipitously, as much as 400 feet in places. The declines caused a major reduction in the amount of groundwater in storage and resulted in widespread land subsidence, mainly in the western and southern parts of the San Joaquin Valley.

By the early 1960's, intensive groundwater development had significantly lowered water levels and altered groundwater flow patterns in the Central Valley aquifer system. By far the most dramatic impact of development was in the San Joaquin Valley, where water level declines in the confined part of the aquifer system were locally more than 400 feet. Although predevelopment flow was toward the San Joaquin River throughout most of the basin, large withdrawals from deep wells in the western and southern parts of the aquifer system changed the direction of horizontal flow in the confined part of the system until the water moved toward the withdrawal centers.

...much of the water in the upper unconfined zone of the aquifer system that flowed laterally toward the river under predevelopment conditions leaked downward through the confining beds into the lower confined aquifer after development.

Groundwater development in the San Joaquin Valley has reduced the effectiveness of the confining beds within the aquifer. Thousands of wells with casings perforated for much of their length have been drilled through the clay confining units. Where these wells are open to the unconfined and confined aquifers, they allow virtually unrestricted vertical flow through the well bore. The amount of water that flows downward through one large-diameter well has been estimated to be equivalent to the natural leakage through the "E-clay" over an area of approximately 7 square miles. Before development began, the aquifer system was under steady-state conditions in which natural recharge balanced natural discharge. GROUND WATER ATLAS of the UNITED STATES, California, Nevada HA 730-B [http://capp.water.usgs.gov/gwa/ch_b/B-text3.html].

Talking Point 11: When conservation measures are exhausted, assuming no new surface storage will be constructed, and if groundwater investigations such as the Stony Creek Fan Project are prevented, what should water districts do to fulfill the needs of their customers? Also, how will water needs for fisheries and wetlands continue to be met?

BEC's response:

Unfortunately, water districts are not simply seeking to exclusively assist their customers, but are participating in a water market that allows for inefficient water use, Delta and river conditions that jeopardize fish, and destructive agricultural and development practices in and south of the Delta. In 2008, GCID attempted to sell water to buyers south of the Delta by offering to fallow a portion of the district crop acreage. The fallowing would occur in fields that have annually planted crops, not orchards, but could still impact the economy and environment of the north state. The *2008 Option and Forbearance Agreement Between Glenn-Colusa Irrigation District, San Luis & Delta-Mendota*

Water Authority and the United States Bureau of Reclamation, and Related Forbearance Program proposed following up to 25,000 acres of land to export 82,500 AF of surface water and 2,500 AF of groundwater.

When less senior members of the SCFP receive reduced surface water deliveries, GCID may choose to fallow annual crop acreage to share (sell) water to their partners as well as refuges. If and when the Sacramento Valley watershed experiences an extended drought, agriculture will probably fallow annual crop acreage and reserve water applications for perennial orchard crops.

North state water districts should not exploit groundwater that they don't need for their agricultural practices to participate in water marketing, but that is exactly what GCID is pursuing. Knowing full well that there are significant groundwater needs of non-district residential and agricultural users, GCID obtained a federal grant in 2006 that states that, " GCID shall define three hypothetical water delivery systems from the State Water Project (Oroville), the Central Valley Project (Shasta) and the Orland Project reservoirs sufficient to provide a full and reliable surface water delivery to parties now pumping from the Lower Tuscan Formation. The purpose of this activity is to describe and compare the performance of three alternative ways of furnishing a substitute surface water supply to the current Lower Tuscan Formation groundwater users to eliminate the risks to them of more aggressive pumping from the Formation and to optimize conjunctive management of the Sacramento Valley water resources." This scheme is ludicrous due to the current shortage of surface water, prohibitive costs, and the absolute impossibility of bringing water to tens of thousands of private wells scattered throughout three counties. The 2006 federal grant and the seven wells project illuminate the intimate relationship that GCID maintains with the federal and state governments who are focused on exploiting local groundwater so more water can be shipped south.

In summary, it is counter productive for districts to participate in water sales that continue destructive practices in and south of the delta or for that matter, in their own counties. It would be beneficial to fish, wetlands, and agriculture if California's state and local governments would live within the means of its hydrologic region while restoring natural wetland and riparian habitat.

SCFP's response:

To date, the SCF Partners and their landowners have improved water conservation measures, continue to support and advocate for new surface storage, and continue to explore sustainable development of groundwater supplies. However, if groundwater investigations such as this Stony Creek Fan Project are prevented in the future and surface water districts are forced to give up water for the Delta or other environmental uses, water districts will not be able to meet the needs of their landowners. This will result in lands being fallowed or landowners installing new wells to supplement irrigation water that is no longer being supplied by Districts further impacting groundwater supplies. Outside of the SCF Partner areas, groundwater is being developed and used to meet growing demands in the region regardless of this investigation so in affect, this scenario is already a reality in our region.

Talking Point 12: What lies ahead for the proposed Stony Creek Fan Project?

BEC's response:

Butte Environmental Council has challenged the Project that Glenn Colusa Irrigation District (GCID) claims is exempt from environmental review. GCID is using public money to expand its role in water

marketing. The current project is part of a much larger set of plans to “integrate” groundwater into the state water supply. GCID has been pursuing these plans for many years. While speculators are allowed to propose myriad types of projects in California, the law requires that they analyze the potential impacts and mitigate them through the California Environmental Quality Act (CEQA). BEC’s Executive Director, Barbara Vlamis, concludes that, “GCID chose to skirt the hard analysis required by CEQA by trying to assert that it is only seeking information from a research project, completely obfuscating its focus on water exports as noted in numerous documents.”

- Sacramento Valley Water Management Agreement (Phase 8, October 2001).
- Estimating the Potential for In Lieu Conjunctive Water Management in the Central Valley of California (2002).
- Regional Integration of the Lower Tuscan Formation Using Conjunctive Water Management in the Sacramento Valley Regional Integration of the Lower Tuscan Groundwater Formation into the Sacramento Valley Surface Water System Through Conjunctive Water Management (June 2005).
- Sacramento Valley Integrated Regional Water Management Plan (2006).
- U.S. Bureau of Reclamation Grant/Cooperative Agreement 06FG202103 (September 2006).

SCFP’s proposed project will extract a volume of groundwater that approaches or exceeds the current utilization by the city of Chico, creating the likelihood of a significant adverse environmental impact. BEC requests that the court requires the preparation of an environmental impact report by a more appropriate lead agency and that all activities surrounding the project are halted.

The GCID Notice of Exemption dated November 15, 2007 indicated that they intended to start their latest project of installing seven more production wells and that they planned to extract “...15,000 acre-feet during the 2008 irrigation season, and 26,000 acre-feet during the 2009 irrigation season.” Litigation filed by BEC has altered this timeline.

SCFP’s response:

The SCF Partners filed a Notice of Exemption under the California Environmental Quality Act, which states that if a project is for test and information gathering purposes, it is exempt from a rigorous environmental review. Butte Environmental Council (BEC) has sued stating that this CEQA exemption should not apply and that the Partners should complete an Environmental Impact Report that evaluates the impacts of the Project test, as well as every other project in the Sacramento Valley. BEC has also named the Bureau of Reclamation and DWR in this suit. The Project has been challenged in Glenn County Superior Court by the Butte Environmental Council (BEC). BEC alleges that the SCF Partners violated the California Environmental Quality Act (CEQA) when GCID adopted a CEQA Notice of Exemption for the Project. The Notice of Exemption relies on the CEQA exemptions for information collection, minor alterations to land, and new construction of small structures. The SCF Partners allege that they fully complied with CEQA. A hearing on the matter is set for August 6, 2008, and the Court then has up to 90 days to issue a ruling.

The original timeline anticipated well installation to occur between Spring 2008 through Fall 2008, with some testing occurring as the wells are being installed. In 2009, a seven month test would be conducted which would be the prime testing period. Given the delays caused by the BEC case, it is likely the Project will be delayed at least one year. Costs resulting directly from the lawsuit and consequent delays in well drilling and construction will add approximately \$800,000 to the total project cost.

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