



Butte  
Environmental  
Council



**Office**

116 W. Second Street, Suite 3  
Chico, CA 95928  
530/891-6424  
530/891-6426 Fax  
www.becnet.org

**Activities and Events**

Environmental Education  
Recycling Referrals  
Environmental Advocacy  
Endangered Species Faire  
Bidwell Park Cleanups  
Chico Area Creek Cleanups  
Wetlands Preservation

**Board of Directors**

Lynn Barris  
Nora Burnham  
Armeda Ferrini  
Jim Gregg  
Chuck Lundgren  
Heather Schlaff

**Executive Director**

Barbara Vlamis

**Staff**

Maggi Barry  
Mary Muchowski

**Delta Vision Comment Reviewers**

dv\_context@calwater.ca.gov

**Subject: comments on June 18, 2008 preliminary staff draft of the Delta Vision Strategic Plan.**

**June 27, 2008**

Dear DV Staff,

Butte Environmental Council (BEC) is the primary environmental and environmental justice advocate for Butte County and the adjacent counties that overlie the Tuscan formation. We have been involved in groundwater policy since 1994 when the California DWR facilitated significant water transfers out of our basin. These transfers were facilitated by increased aquifer extractions that resulted in costly impacts to groundwater dependent districts in Butte County.

BEC has been active in water policy planning in the Sacramento Valley when meeting venues are open to the public. But there have been major deviations from proper public participation opportunities in the formation of both the Sacramento Valley Water Management Agreement and the Sacramento Valley Integrated Regional Water Management Plan. These plans were created behind closed doors by water purveyors that possess surface water entitlements they hope to integrate into the state water supply through lucrative transfer sales. These plans lay the foundation for transfers using conjunctive water management of the aquifer that has historically been used not by the irrigation districts, but by groundwater dependent towns and farms.

The Tuscan formation also provides immense environmental services through its connections with Sierra-Cascade salmon bearing streams and riparian zones. These streams provide irreplaceable habitat for the last remaining robust populations of natural spawned Chinook salmon. Resource managers must devote extraordinary effort to preserve and enhance the conditions that foster these migrating fish as artificially spawned salmon fail to adapt to rapidly shifting climate, ocean and Delta conditions.

Maintaining the balance between replenishment and extractions from the Tuscan formation provides the dry year buffer needed to maintain stream flow and riparian vegetation. Disrupting this balance to make room for underground reservoir capacity would devastate the environment and the economy that depends on a balanced aquifer system. Plans by Delta Vision and water purveyors to convert our balanced aquifer system into a wildly fluctuating reservoir threaten local farmers, environmentalists and domestic users of the Tuscan formation. The ghastly dead zone that exists between the low reservoir water and the forest behind the Oroville Dam is not something we want to replicate on the valley floor.

The Delta Vision should not include disrupting or altering healthy groundwater basins in any part of California. Continuing California's practice of destroying natural systems to repair a previous mistake and/or allow unsustainable economic activity is folly at best and another calamity at worse.

Thank you for the invitation to improve this draft by submitting comments. Please review my comments for discussion during your July 1 meeting. My analysis of your supply expectations (originating in the Sacramento River Watershed) requires immediate attention from your panel as you move forward on a Delta-centric management strategy. I will quote directly from your June 18 draft to provide context for my remarks.

From the draft:

“California’s existing water systems have provided water for half a century but at large cost to ecosystems. Now water supply systems must evolve in fundamental ways to reverse negative impacts on ecosystems while also moderating failure risks and meeting the challenge of climate change. Just as the state became a world leader in water engineering, it will now have to become a world leader in ecosystem revitalization, water conservation and regional self-sufficiency.”

BEC comment:

Sacramento Valley ecosystems that are dependent on a balanced aquifer must not be sacrificed to revitalize the Delta ecosystem.

“2. A revitalized ecosystem and sustainable water supplies can be achieved, but do not guarantee water export levels of the recent past or survival of any individual species.”

BEC comment:

A federal district court judge in California has held that water managers in California must protect the Delta Smelt, a fish listed as a threatened species under the federal Endangered Species Act (“ESA”), even if it means reducing water promised to irrigators and municipalities. The decision in *Natural Resources Defense Council v. Kempthorne* (“NRDC decision”) is an important example of how the ESA may trump state-based water rights. Delta Task Force recommendations must be based on Endangered Species Act compliance through the CVP/SWP OCAP. A revised BO should be prepared with adequate analyses to determine jeopardy to listed species, including winter and spring run Chinook, steelhead, and Delta smelt.

“Action 5.1: Provide increased freshwater flows (and shift the timing, quantity, quality, and input locations of flows) through the Delta at critical times and locations in spring and fall that coincide with key life history stages of resident and migratory fishes.”

BEC comment:

Increased freshwater flows through the Delta must not require depleted freshwater flows in other parts of the state. For instance; small streams in Butte County that provide rearing habitat for out-migrating anadromous fish are dependent on connectivity with groundwater. Converting this balanced aquifer into a fluctuating reservoir will dewater these streams and eliminate habitat. Water use conservation, efficiency, and self-sufficiency are the primary strategies that must be employed to preserve and restore ecosystems throughout the state.

“Action 5.4: Improve conjunctive use programs that shift highest exports to wettest periods and lowest exports to driest periods.”

BEC comment:

Transfer scenarios will demand more exports during dry periods when area-of-origin aquifer systems are at the greatest risk of imbalance.

“Action 6.2: Minimize methyl mercury production.”

BEC comment:

The proposed Sites Reservoir is likely to create methyl mercury as water is placed on naturally occurring mercury deposits.

“Water Supply Reliability; Performance Measures.

Amount of water in accessible surface and ground water storage.”

BEC comment:

Peer reviewed scientific inquiry into Tuscan hydro-geology and local public vetting must precede accounting Tuscan aquifer water into the Delta supply inventory. It is pre-mature to build a policy of conjunctive use of the Tuscan into the Delta Management Strategy. Such a policy will be legally, politically and scientifically challenged.

“7. Maximize regional water self-sufficiency throughout California by a wide range of supply augmentation and demand management techniques.”

BEC comment:

Regional water self-sufficiency should not be used as a legal lever to develop appropriative rights to groundwater. Water purveyors that have created enterprises based on surface water entitlements must not assume that they can replace short or transferred surface water diversions with groundwater that has historically been used by aquifer-dependent farms, businesses and towns.

“8. Integrate and strengthen management of all aspects of the water cycle, including surface flows, groundwater, flood control, infiltration, and water quality.”

BEC comment:

Plans to aggressively increase management of groundwater in the Sacramento Valley must not supersede ecosystem benefits from maintaining a balanced aquifer that maintains connectivity between surface flows, riparian vegetation and groundwater.

“Action 7.7: Streamline the water transfer regulatory approval process.”

BEC comment:

Hasty approval of water transfers will result in cumulative environmental impacts in both the area of origin (dewatering of aquifers and streams, impacts to local economy) and area of receipt (growth inducing impacts). BEC challenges shortcuts to environmental review of projects that can cause significant impacts.

“Action 8.4: Ensure a clear decision process and public vetting of major modeling assumptions for the Bay Delta Conservation Plan Environmental Impact Statement/Report for a Delta Conveyance Alternative, and ensure consistency between these assumptions and those used in other major modeling efforts.”

BEC comment:

Modeling must include the entire watershed that flows through the Delta. Of particular interest to BEC is modeling of the hydrology that comprises the Tuscan formation.

“Action 8.6: Improve the legal and regulatory framework associated with groundwater banking agreements and operations.”

BEC comment:

We would appreciate clarification of the concept of improving the framework associated with groundwater banking. BEC is focused on maintaining the ecological and economic benefits associated with a balanced aquifer and is contesting efforts by the state and its willing water selling partners to convert our aquifer system into a wildly fluctuating groundwater bank.

“Action 8.7: Institute comprehensive basin management planning to address the availability, quality, and managed use of regional groundwater resources.”

BEC comment:

There have been numerous planning efforts by Sacramento Valley water purveyors to create a comprehensive basin management plan that integrates our groundwater into the state water supply. The Sacramento Valley Integrated Regional Water Management Plan (SVIRWMP) was created with *no* input from groundwater dependent farms, communities or environmental advocates. Conjunctive water use of the Tuscan formation is central to this dubious plan. The SVIRWMP has not been appropriately vetted by Sacramento Valley stakeholders and has not undergone environmental impact analysis. It must not be “instituted” or otherwise legitimized because of its “back-room” genesis.

“Action 8.8: Encourage infiltration or direct use of precipitation throughout the Delta watershed and export areas.”

BEC comment:

Natural replenishment of the Tuscan aquifer must be identified and preserved. But increased infiltration based on artificial settling basins and aggressive drawdown of aquifer levels will create environmental and legal impacts that must be fully revealed.

“Action 9.6: Support expedited completion of the CALFED surface storage investigations and implement the storage options that optimize the capture of wet-period flows.”

BEC comment:

The term “expedite” implies rushing through the process. Expedited investigation and implementation of the Oroville Reservoir failed to identify a wide range of impacts: budget impacts to Butte County associated with removal of land from tax roles, destruction of archeological sites, release of CO<sub>2</sub> from flooded decomposing vegetation, failure of the hatchery to mitigate the utter destruction of anadromous reproductive streams. BEC is opposed to raising Shasta Dam because it would impact people who own property around the existing high water level of Shasta Reservoir and exacerbate the loss of sacred sites of the Winnimem Wintu People. Operating Sites Reservoir would require tremendous energy input to move the water from this low elevation location to users. Flooding the ground may lead to the release of methyl-mercury into the biosphere. Furthermore, wet weather pulses need to be restored in rivers and Delta to provide important hydro-ecological processes.

11 **Performance target schedule** (initial unvetted proposals for discussion purposes only)

12

	2020	2040	2060
Water use per capita	Down 20%	Down 30%	Down 50%
Water use per unit economic output	Down 20%	Down 40%	Down 60%
Length of time, at average rates of use over a three-year period, that a given district's alternative and stored supplies will last if there is a catastrophic outage of the Delta	Up 25% (on average)	Up 50% (on average)	Up 100% (on average)
Amount of water in accessible surface and ground water storage	Up 20%	Up 40%	Up 60%
Concentrations of contaminants in Delta water	Down 20%	Down 40%	Down 60%
Percentage of precipitation in the Delta watershed that is infiltrated or directly used	Up 10%	Up 15%	Up 20%
Amount of water exported from the Delta that is recycled or re-infiltrated	50%	75%	100%

BEC comment:

The estimates of the amount of water in accessible surface and ground water storage seem to assume that new dams will be built, old dams raised, and aquifers will be converted into water banks. These assumptions carry the assumption that the public will accept huge environmental impacts as streams and valleys are flooded and aquifers are disconnected from surface ecological attributes. BEC and others will certainly challenge these assumptions.

**“California Delta Ecosystem and Water Plan (CDEW)**

The CDEW Plan should also serve as, or provide a direct foundation for, a programmatic Environmental Impact Statement/Report for any projects undertaken pursuant to the Plan, as the California Environmental Quality Act and the National Environmental Policy Act permit. Other Delta ecosystem or water related plans should be compatible with the CDEW Plan to ensure consistency of action.”

BEC comment:

Agencies must conduct comprehensive NEPA and CEQA review of a basin-wide water management plan. Examining impacts to the Delta core alone is inadequate. Water purveyors in the Sacramento Valley are attempting to piecemeal environmental analysis of impacts on a project-by-project basis even though the individual projects are installing infrastructure (wells piercing the Tuscan formation) to implement broader programs (SVIRWMP, SVWMA).

*“Action 2.2: Ensure that environmental justice is adequately addressed in Delta decision making processes by requiring review of proposed actions against environmental justice criteria defined in the CDEW Plan.*

Many communities living within, and dependent upon, the Delta may be vulnerable to disproportionate negative impacts from resource management decisions in the state’s interest. The Ecosystem and Water Council should consider the CDEW Plan’s impacts on disadvantaged or minority communities and reduce or mitigate these as fully as possible.”

BEC comment:

Environmental Justice considerations must be extended beyond the Delta core to include areas of origin. For instance: The Winnemem Wintu have already had their way of life severely disrupted by the construction of the Shasta Reservoir. Raising the dam would exacerbate the injustice.

For instance: During the 1994 water transfers utilizing Tuscan aquifer water numerous private and municipal wells were dewatered. Dropping water levels allowed floating contaminants to enter the pumps. Water purveyors who participated in the water sales refused to take responsibility for the impacts. Dropping aquifer levels will force existing users to either lower pumps or deepen their wells. Wells located on the up-gradient portion of the tilted Tuscan formation may be entirely dewatered. Impacts to residents and businesses may be severe.

*“Action 6.2: Minimize methylmercury production.*

Develop and implement TMDLs in areas upstream of the Delta, to reduce the loads of organic and inorganic mercury entering the Delta from tributary watersheds.”

BEC comment:

Creating Sites reservoir is likely to create methyl-mercury and release it into the Delta.

*“Action 7.1: Improve collection of baseline water diversion and use data.*

Among specific actions to be analyzed and implemented as judged effective are:

The Department of Water Resources should continue to regularly and systematically collect groundwater elevation data in all groundwater basins and sub-basins in the Delta Watershed, and make the resulting information readily and widely available.”

BEC comment:

Groundwater data is a valuable tool for groundwater management. But DWR is not a disinterested monitoring entity. The Department’s interest in the resource is predicated on developing basin aquifers for use in managing water transfers through the Delta. Local aquifer use must be disconnected from conjunctive use by purveyors involved in water transfer sales.

The goal of transfer purveyors and DWR is to increase water market flexibility. The goal of locals is to sustain regional economic vitality and environmental health. The latter must be the primary goal of groundwater monitoring.

“Require DWR to expand its current network of monitoring wells, including groundwater elevation and groundwater quality monitoring wells, and continue to coordinate data monitoring and interpretation with local entities.”

“Require local and regional agencies/individuals to submit relevant and timely information on surface and groundwater attributes to state agencies, such as DWR, to include in broader data repositories.”

BEC comment:

DWR is not a credible advocate for the majority of Sacramento Valley residents. The FERC relicensing of the Oroville Reservoir has been very contentious with Butte County taking the matter to court. BEC considers DWR to be a scout looking for groundwater to be included in the lucrative transfer inventory. The Regional Water Quality Control Board would be a more appropriate entity to design and implement a network of monitoring facilities.

*“Action 7.7: Streamline the water transfer regulatory approval process.*

Standardize legal and regulatory requirements for short-term water transfers including consistent rules defining the determination of transferrable water, streamlined CEQA and NEPA compliance, and pre-defined mitigation options.”

BEC comment:

Short-term water transfers can create significant environmental and economic impacts in the area-of-origin. “Streamlined” CEQA and NEPA compliance is a strategy not favored by environmental advocates. Truncated CEQA and NEPA process eliminates opportunities for stakeholders to participate as required by law while giving well-funded agencies and purveyors temporal and legal leverage. Please provide the public with a comprehensive list of “pre-defined mitigation options” and definitions of “transferrable water”.

**“Strategy 8. Integrate and strengthen management of all aspects of the water cycle, including surface flows, groundwater, flood control, infiltration, and water quality.”**

The Delta watershed and export service areas contain abundant groundwater storage potential. As regional self-sufficiency efforts expand, it will be critical to incentivize local water districts to bring these storage resources to market, and to engage in conjunctive management of surface and groundwater resources. With auspicious new surface storage sites becoming fewer and farther between, groundwater storage will play an increasingly important role, especially south of the Delta. Simply put, the more water can be stored economically throughout the state, the more flexibility and predictability water managers have, at both regional and statewide scales.”

BEC comment:

Groundwater dependent farms, businesses and residents as well as environmental advocates in the northern Sacramento Valley consider Strategy 8 to be a direct threat to our quality of life. While planning documents created in 2008 have scrubbed any reference to the Tuscan formation from the verbiage, it is obvious that DWR and willing purveyors are planning to take advantage of incentives to bring the aquifer system to market. There has been no scientific affirmation that the Delta watershed contains “abundant groundwater storage potential”. Peer reviewed science is more likely to find that increasing the exploitation of the Tuscan formation will disrupt important hydrological processes that require connectivity between ground and surface water. Dewatered groundwater basins south of Delta (SOD) may have storage potential, but the water source to fill these depleted aquifers must not be degraded. That is, Oroville and Shasta Reservoirs should not be dewatered to fill SOD reservoirs as has apparently happened during the 2007-2008 period. The era of dewatering a low-population area of the state to increase the availability of water in purveyors’ inventory has ended.

“Even beyond flood control planning and conjunctive use, California must take a much broader perspective on management of precipitation. Encouraging infiltration into the soils at or near points of precipitation reduces flood flows, slows down the release of water into streams, and can improve water quality. Management and infiltration of stormwater must become a high priority throughout the Delta watershed in order to manage flood risks, recharge aquifers, and help prepare for climate change.”

BEC comment:

Protecting aquifer recharge zones and moderating urban runoff are worthy goals to be sure. However, if the Delta Visionaries think that drawing down aquifers in the Sacramento Valley and creating settling basins to channel flood flows is acceptable to local residents they are sorely mistaken. Please clarify if this is the scenario that is being put forth in this draft.

*“Action 8.4: Ensure a clear decision process and public vetting of major modeling assumptions for the Bay Delta Conservation Plan Environmental Impact Statement/Report for a Delta Conveyance Alternative, and ensure consistency between these assumptions and those used in other major modeling efforts.”*

BEC comment:

Please put BEC on the distribution list for public vetting of major modeling assumptions.

“Success of the Bay Delta Conservation Plan (BDCP) process will play an important role in achieving important components of Delta Vision’s plan for a resilient and regenerated California Delta ecosystem and increased reliability of water supply. A critical part of this process is the completion of necessary environmental compliance documentation and analysis to satisfy the California Environmental Quality Act and the National Environmental Policy Act. The BDCP process is at the threshold of a 30-month effort to prepare and certify an Environmental Impact Report/Statement (EIR/EIS) that will analyze the impacts of alternative conservation actions including improved water conveyance infrastructure in the Delta. The EIR/EIS will also analyze the impacts of alternative water operations and management actions to achieve conservation and water supply reliability goals.”

BEC comment:

The SVIRWMP and the SVWMA must also complete necessary environmental compliance documentation and analysis to satisfy the California Environmental Quality Act and the National Environmental Policy Act. BEC looks forward to examining and commenting on these important EIR/EISs.

“Well in advance of a public draft of the BDCP EIR/EIS, produce and request comments from non-Agency decision makers, potential partners and primary stakeholders on an administrative report documenting the representation of projects, regulations, procedures and policies for projected future no-action conditions. This report should, among other items, provide the basis for the major assumptions listed above or deviations from other major water supply and operations investigations recently completed or underway by the State or federal agencies.”

BEC comment:

Please inform BEC of any opportunity to provide comments on an administrative report.

*“Action 8.6: Improve the legal and regulatory framework associated with groundwater banking agreements and operations.*

Groundwater storage is essential to the management of the co-equal values, but the extraction and delivery of banked groundwater can be extremely complicated because of regulatory and contractual limitations. Removing limitations on the extraction and delivery of banked groundwater would enhance water supply reliability and expand statewide storage capacities. The state must therefore clarify and otherwise make consistent (as practical) the legal and regulatory framework that governs the intentional placement, storage and extraction of surface water into groundwater aquifers.”

BEC comment:

The intention to remove restriction on the extraction of “banked” groundwater hardens BEC’s resolve to challenge the conversion of our balanced natural aquifer system into a fluctuating water storage reservoir. The legal implications of such a conversion include the extirpation of pumping rights for users unaffiliated with replenishment districts. The ecological implications include dewatering of streams and riparian areas located on

the up-gradient portion of the Tuscan formation. The economic implications include expenses associated with deepening wells, the increased movement of aquifer contamination and the loss of groundwater dependent agriculture that has no access to surface water. Existing users of the Tuscan aquifer and environmental advocates will challenge any plans to intentionally place and store surface water into the Tuscan formation. Our unique hydrology (a tilted aquifer formation that surfaces and interacts with streams on the eastern edge of the Sacramento Valley) requires customized legal and regulatory strategies. Uniform management regulations will not meet our management requirements.

Among specific actions to be analyzed and implemented as judged effective are:

Facilitate banking, extraction, and delivery of State and local water supplies through revisions of place-of-use restrictions.

Exempt extractions and deliveries of banked groundwater from county ordinances that require permits for out-of-county exports of groundwater.

BEC comment:

The usurping of local control of groundwater that may occur if the natural aquifer is converted to a state water bank is unacceptable. This effort to eradicate legal protection provided by county ordinances that require permits for out-of-county exports of groundwater will be discussed at upcoming Butte County Supervisor and Water Commission meetings.

Work with the U.S. Bureau of Reclamation (BoR) to facilitate flexible groundwater banking, extraction, and delivery operations.

BEC comment:

The BoR has presented grant money to a willing purveyor to identify surface water sources that can be used by existing aquifer users to replace depleted groundwater. This grant was awarded to the purveyor (Glenn Colusa Irrigation District) without consulting the affected groundwater users as part of the BoR plan to integrate the Tuscan formation into the state water supply. This action has made residents and advocates of the public trust wary of BoR's intentions.

*“Action 8.8: Encourage infiltration or direct use of precipitation throughout the Delta watershed and export areas.*

Forests are rarely managed now for the water holding capacity of their soils, but this should become standard practice in the future, particularly as climate change produces more rain and less snow in California. Increasing infiltration above the reservoirs can slow down rates of runoff, in effect partially replacing snowpack storage with soil storage.”

BEC comment:

The Sierra Nevada Ecosystems Report (SNEP) identified water as being the primary commodity output from the Sierra Nevada-Southern Cascade mountain range. The SNEP indicated that reinvestment into the ecosystems that create the water is extremely low (<2%, primarily from timber extraction). It is long past time for the state to recognize the importance of watershed management and to create generous funding mechanisms to manage vegetation, fuels, meadows and other watershed components.

**Strategy 12. Improve the Delta’s flood protection and levee system by improving upstream flood management...**

*Action 12.1: Reduce flood threats to the Delta, and increase the flexibility and reliability of water management in the Delta watershed, by improving upstream flood management.*

Infiltrating and storing more floodwater upstream of the Delta using both groundwater and floodplain storage in the Sacramento Valley. At the same time, the more water (either runoff or reservoir water) that can be infiltrated into groundwater upstream, the more total water yield there is in the system, again to the benefit of water users.

BEC comment:

The reference to Sacramento Valley groundwater storage of floodwaters seems to indicate a plan to create settling basins and to deplete aquifer levels to create space. Who would control the replenishment district? Would existing groundwater users lose pumping rights to “banked” groundwater? Will existing pumpers be compensated for increased lift expenses associated with declining aquifer levels? Will environmental stream flows in Sierra/Cascade streams be allowed to decline during transfer pumping?

It is difficult to differentiate between aquifer overdraft and aquifer drawdown to create space for water banking. Public trust advocates, like BEC, consider defense of our balanced aquifer to be of the utmost importance. Strategies that consider knocking the aquifer out of balance to create water bank opportunities in an effort to make California water supplies more “flexible and reliable” are of great concern to BEC and the members we represent. Having no seat at the DV table we remind you of the following comments from Dr. Mann.

“Some aquifers are being or will be depleted or damaged by non-sustainable use. Many of the State’s most important aquifers are overdrafted. The economic costs of overdraft can include increased pumping depth and head, costs for improving wells and drilling new wells, water quality impacts, and eventually, loss of economic viability of groundwater supplies. Overdraft of groundwater can be economically efficient depending on current and future water values and discount rates, but overdraft is not sustainable [emphasis added]. In general, increasing real water values over time suggest that overdraft may not be economically efficient now.”

Economic Efficiency of Water Use and Allocation in California

A Scoping-Level Analysis For Delta Vision Process

First Draft Not for Circulation

Roger Mann, Ph.D., RMecon1

June 2008

Thanks again for considering my comments.

Jim Brobeck, Water Policy Analyst

Butte Environmental Council