

Shasta Tehama Bioregional Council

A Collaborative Council Working on Natural Resources, Biodiversity, Economics and Community

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US Bureau of Land Management

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USFS, Shasta Trinity National Forest

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US Fish & Wildlife Service

US Soil Conservation Service

May 28, 1998

CALFED Bay-Delta Program
1416 Ninth St., Suite 1155
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Attention: Rick Breitenbach

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CALFED and Upper Watershed Reinvestment:
Response to the Draft EIS/EIR

The Shasta-Tehama Bioregional Council (STBC) is a grass-roots community organization comprised of members from state/federal/local agencies, economic development, industry and business, environmentalists, local elected officials, and the academic community. The Council serves as a forum and clearinghouse for information regarding natural resource management issues and projects in our region. STBC also provides formal comments regarding forest and water management plans, legislation, regulation and related issues.

The emerging CALFED solution is of the utmost importance to our organization. The STBC recognizes that this effort will forge a blueprint which will affect our northstate region for decades. As such, our comments are intended to proactively engage CALFED in implementing solutions which will recognize the environmental and economic importance of the upper watersheds where California's water originates. The Sacramento River system provides two thirds of the fresh water that flows into the Bay Delta. What takes place in the forests and wildlands far above the dams and conveyance structures that most of us associate with our water supply -- the upper watersheds -- has long been ignored or taken for granted. The CALFED solution represents a historic opportunity to shift the sole focus of water policy from storage and conveyance projects toward comprehensive solutions which ensure reinvestment in the health and sustainability of the upper watersheds. The STBC supports a holistic solution which incorporates and expands efforts to restore and also to properly manage our upper watersheds, equitable to area of origin stakeholders as well as downstream users.

Recognizing that the present condition of the upper watersheds and the stream courses which drain them is the result of many factors including hydraulic and dredger mining, water diversions and dams, logging, grazing, and roads, the STBC supports efforts to remedy past impacts and regulate current ones. Furthermore, the STBC would like to call attention to the serious threat that catastrophic wildfire poses not only to the health and proper functioning of the watershed discharging to the Delta, but also to the wildlife species dependent upon the forests which would be destroyed, e.g. the California spotted-owl.

Many of our Sierra/Cascade forests are unnaturally overstocked, due in large part to decades of intensive fire exclusion. Dense thickets of stagnant understory trees now pose an unacceptable risk of stand destroying catastrophic fire. The onsite and downstream impacts of catastrophic fire are tragic, and include accelerated erosion and sedimentation, loss of critical wildlife habitat, and increased flooding danger. Efforts to improve watershed health should therefore include consideration of fire hazard factors at the landscape level.

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STBC has long advocated the benefits of forest thinning for improving forest health and lessening the risk of catastrophic fire. Watershed restoration efforts which only concentrate on riparian corridors may be rendered ineffective if unnaturally high fuel loading in upland areas is not reduced to more sustainable levels. In addition to thinning (and often as a secondary treatment) prescribed fire is a proven tool for maintaining more desirable ecological conditions over time.

There is considerable evidence to corroborate a link between thinning and other watershed vegetation management activities and increased water yield. Thinning reduces the absorption, transpiration and evaporation of water by vegetation, while also reducing the hazard for forest destruction by uncontrolled wildfire or insect attack. In addition to the potential of increasing water yields by managing vegetation, water release timing can also be improved. For example, thinning spaces tree crowns, allowing more winter snow to accumulate at the ground level rather than being lost to evaporation from accumulating on tree branches. Snowpack water storage is many times less expensive than reservoir storage and has environmental benefits. Also, riparian restoration activities, particularly in meadow areas, have the promise of delaying the timing of run-off by concentrating more (and colder) water underground for later seasonal percolation and release. This delayed run-off is especially valuable for the well-being of salmon fry.

Efforts to restore ecological balance, lessen the risk of catastrophic fire and improve longterm water yield, quality and release timing can be undertaken with prudent protection measures to avoid short-term negative impacts on water quality. As long as buffers and other protective measures are included, riparian and biodiversity values can be protected as well as enhanced. Thinning and riparian restoration yields other benefits such as forest products, fuel for electrical power plants, and jobs for people in rural areas already heavily impacted by cut-backs in National Forest timber harvest levels.

Stressors on watersheds such as unnaturally high fuel loading and degradation of riparian systems negatively impact each of CALFED's four primary objectives: Water Quality, Ecosystem Quality, Water Supply and Delta Functions. There is a link between improving the environmental conditions in source watersheds and improved water yield, quality, timing of delivery and storage capacity. The STBC believes that comprehensive water conservation efforts, coupled with proactive watershed projects such as forest thinning and upland meadow restoration, are the logical first steps in any CALFED solution. CALFED should provide for secure funding and implementation of upper watershed projects in stages, so that their efficacy can begin being fully evaluated well in advance of the construction of a dual conveyance system or off stream storage facility. This more incremental, environmentally friendly sort of "engineering" (managing a total watershed rather than simply engineering its outflow) holds promise for real, immediate benefits to the Bay Delta ecosystem.

In addition, "conjunctive use" -- moving surface flows to meet new water demands and replacing them locally with pumped groundwater -- poses the risk of lowering groundwater tables, damaging riparian ecosystems and subsequent permanent contamination of aquifers by using surface waters to re-charge them. The STBC believes that the real cost of water delivered south includes the environmental and economic consequences of stressors affecting the health and sustainability of our source watersheds. The CALFED solution must embody this fundamental truth.

We would support a CALFED strategy that:

- Has built-in phases with performance standards
- Provides official recognition of Northern California, the source region where our water originates, as a partner in the traditional three-way water brokering process comprised of agriculture, environmental and urban interests.
- Takes care of the basic resource first. End users of water derive numerous benefits, and must reinvest in source watersheds. A program of commensurate financial reinvestment in upper watersheds must be implemented.

- Honors and reaffirms area-of-origin and county-of-origin water rights.
- Closes the research information gap on the link between watershed management practices and improved water yield and release timing.
- Attempts to create sustainable new water supplies from the upper watersheds.
- Implements actions that protect watersheds from catastrophic wildfire. CALFED's draft EIS/EIR watershed strategy addresses catastrophic wildfire as a stressor, but does not adequately promote remedial practices such as vegetation management through thinning and prescribed burning.
- Preserves and enhances environmental values such as water quality, fisheries and wildlife habitat, aesthetics and ecological sustainability within any watershed reinvestment strategy.
- Implements actions first that have immediate and verifiable outcomes for fisheries such as redesign of antiquated fish screens and ladders.
- Implements phased conservation and watershed management/restoration measures well in advance of the construction of massive new storage and conveyance projects.


 Melinda Brown,
 Chair

NOTES:

Catastrophic Wildfire -- Past fire management practices attempted to withhold fire from the landscape resulting in forests that are unlike pre-european conditions. This resulted in unnatural conditions such as heavy understory build-up, changing vegetation types, and lack of regeneration for some species. Most importantly, instead of periodic low intensity fires sweeping through, fuels have been allowed to build up which when ignited pose greater potential for catastrophic wildfire events that destroy habitat, forests, resources, degrade air quality, and cause massive erosion events threatening nearby streams as well as rapid acceleration of sedimentation in reservoirs reducing their lifetime of use. Leaving an overstocked forest untreated is leaving it in an unnatural state (unlike pre-european conditions) and at risk for catastrophic wildfire fire.

Thinning -- Modern thinning practices can be adaptive to local landscape conditions. Thinning can be accomplished with minimal soil disturbance while replicating more natural (pre-european) forest conditions. By removing small suppressed vegetation, thinning mimics the effect of low intensity fire and can set the stage for later prescribed fire treatments that are beneficial to the forest. It is a management tool that is cost effective for many landscapes when cost avoidance (reduction of future fire suppression costs) and cost recovery (value of vegetation removed) are factored in.

Vegetation Management-- Changing vegetation back to pre-european conditions, for example, from heavy chaparral to native grasslands, improves water yield and restores the landscape to its natural ecosystem.