UC Davis Society for Conservation Biology

Conservation Biologists Approve Measure I

The Woodland-Davis Surface Water Project

The Woodland-Davis Surface water project will be voted on in a special election in March, 2013. The UC Davis Chapter of the Society for Conservation Biology would like to **support the project** for the benefits it provides for human health, and the health of wildlife in the Yolo Bypass, the Sacramento River, and the San Francisco Bay. However, the project should not be taken as a replacement for **aggressive water conservation**.

Problems with Current Use of Groundwater:

City of Davis wastewater is discharged into **Willow Slough** and the **Yolo Bypas**s, which support both agriculture and wildlife. Current groundwater supplies contain high levels of **salts and heavy metals**, including boron, selenium, and hexavalent chromium [1]. These levels are increasing and will soon fail water-quality standards. These metals, while naturally occurring, cause serious harm to fish, invertebrates, and the birds and mammals that prey on them [2-45,6]. Deformities in birds and marine mammals of the Bay-Delta area have already been linked to chemicals in wastewater discharge. Given the importance of the Yolo bypass as water-bird habitat[7] it is unconscionable to discharge toxic wastewater into the system, as will inevitably occur without the surface-water project.

Pollutants in Davis Groundwater

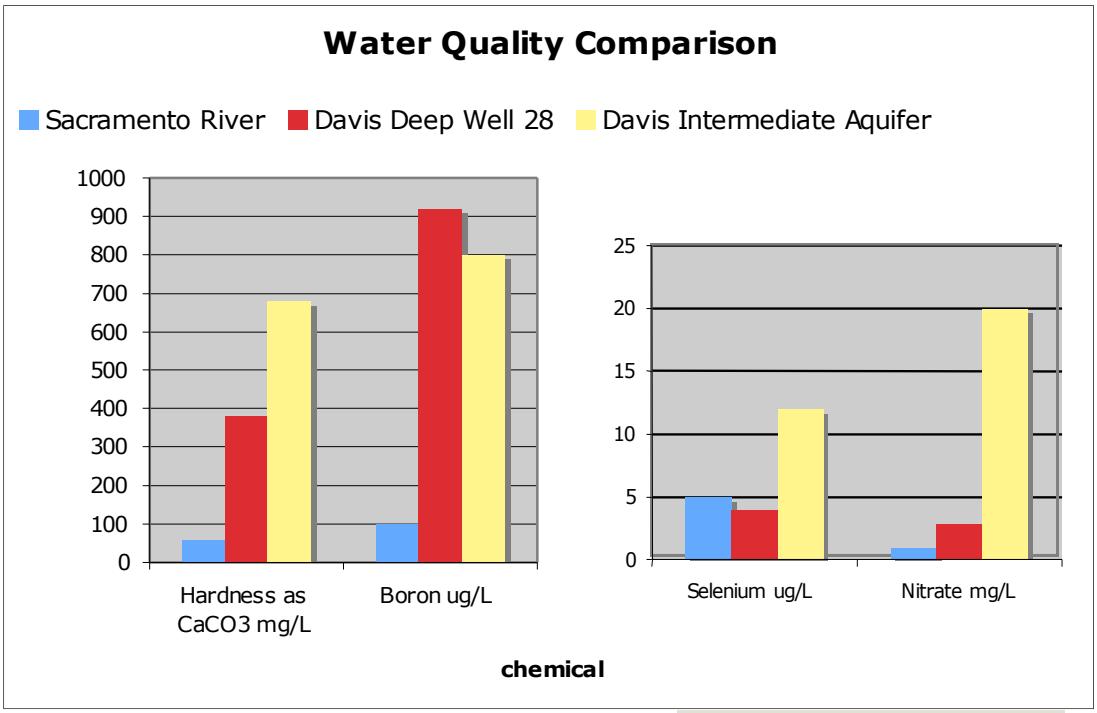
Calcium Carbonate ($CaCO_3$)– causes hard water, shortens life of appliances, plumbing

Selenium – damages fish gills, causes sores in lungs of marine mammals, deformities in birds

Boron - toxic to both plants and animals

Nitrate – causes algal blooms, reduces oxygen in water

This graph shows current levels of these pollutants in water from the wells and aquifers Davis currently uses, compared to the water from the Sacramento River.



Alternatives to Surface-Water

- No Development = continued decrease in water quality, high fines for low water quality

- Aggressive water conservation alone = would not fix current water quality issues

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- Tehama-Colusa Canal Extension =High costs and unreliable water supply

- Treatment of Groundwater Supplies = High costs of treatment plant construction and brine disposal

For more information visit:

www.wdcwa.com

The Sacramento River

The planned surface water project will divert and treat water from the Sacramento River, making it **cleaner and safer for both human consumption and the ecosystem** to which it is returned. The intake is expected to have minimal impacts on the hydrologic conditions of the River and the Delta, as the diversion will only be 46,100 acre-feet per year. This is a very small quantity when compared to the average Sacramento River flows of ~22,000,000 acre feet [8]. In addition, **diversions will be adjusted** when necessary to avoid conflict with other water management objectives, including previous water contracts and mandated flows for listed species habitat [1]. However, we should be aware that while small, the cumulative effects of many small diversions can have a larger impact; during the years from 1968 – 2005 approximately 26% of the annual flows were diverted from the Sacramento River for consumptive use [9]. Therefore, **the project should not be taken on its own**, but as part of a package with water conservation at its core.

The Construction Process

The most significant ecological effects of the project will occur during the construction process – building a raised pipeline, water treatment plants, and intake structure. To reduce these impacts, construction will occur during low flow periods when sensitive fish are less likely to be in the area. During construction, erosion, sediment, and chemicals from the site will be contained or otherwise separated from aquatic habitats and a **fish rescue plan** will be in place/executed for any fish stranded during construction[1].

Water Conservation

All alternatives to the plan, including continuing to use groundwater, could involve significantly higher monetary and environmental costs. Also, the project will provide a **long-term reduction** in both environmental toxins and green-house gas emissions [1]. However, the plan should be **undertaken along with major water conservation measures**, including better irrigation management, more water-efficient appliances, and a campaign to raise awareness of individual life-style changes to improve water efficiency.

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Approved by the Society for Conservation Biology

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