

SPECIAL
POINTS OF
INTEREST:

New California
Water Plan avail-
able on the internet
at [http://
www.waterplan.wa-
ter.ca.gov/
brochures/
index.cfm](http://www.waterplan.water.ca.gov/brochures/index.cfm).

Glenn County
Groundwater
Study Continues

Landowner Advi-
sory Committee
Meeting

INSIDE
THIS
ISSUE:

Water Quality 2

Groundwater Study 2

Water Use Management 3

LAC Meeting in Orland 4

Stony Creek Quarterly

VOLUME 2, ISSUE 2

SPRING, 2006

The Water Plan For California

In late 2005 the State of California released an update to the California Water Plan. The Water Plan is a road map for how the state will manage water and implement projects to meet demand in 25 years. For the past century the state and federal governments have concentrated on getting surface water from where it is produced to where it is needed, investing in infrastructure to hold and convey that water. But as the population increases in California there will be a higher demand for this finite and variable resource. The new approaches and programs listed in the water plan will need to be used in order to meet future demand.

This plan deviates from the approach of the original plan by taking into account urban, agricultural, and even environmental needs as well as looking at water use efficiency (conservation) and groundwater use as the Department of Water Resources plans and implements projects around the state. Some of the guidelines for the road map include: foster regional partnerships, develop integrated regional water management plans, improve watershed management, diversify regional water portfolios, improve aging facilities, implement the CALFED program, improve flood management, integrate ecosystem restoration with water planning and land use planning, restore and maintain the structure and function of aquatic ecosystems, protect public trust resources, and integrate flood management with water supply management. A more in depth discussion of the guidelines can be found online at <http://www.waterplan.water.ca.gov/brochures/index.cfm>.

How Can This Plan Affect Landowners in the Stony Creek Watershed?

The State has expressed they would like to create strong relationships between and with local partners in order to balance between beneficial uses of water. There is recognition of the interrelationships between land management and water management and the need for managers to talk with one another. How water is managed will affect land management (and vice versa) in both positive and negative ways. For example, the dams and reservoirs helped landowners in the valley floor by providing irrigation and flood protection, but the impoundment of sediment is one cause of an increase in bank erosion below the dams.

The state is searching for additional water storage around the state. The Stony Creek Watershed is being looked at as a potential source of water for the North of Delta Off-Stream Storage, or Sites Reservoir, which could store storm water coming out of the watershed. This may reduce the amount of water released for flood control during the winter months.

There are also proposals to better understand the relationship of surface runoff and groundwater (see Groundwater Recharge Study) and aquifers throughout the North State. If groundwater is better understood, then surface and ground water can be better managed in a way that does not negatively impact local users.

In the past few decades it has grown more difficult to build new infrastructure in California. Because there are dams already in the prime spots along rivers, it may make more sense to maintain these facilities rather than construct new ones. Users of Stony Creek water may benefit from this plan because as dams, reservoirs, and ditches grow older, and capacity decreases, there will be a need to improve these facilities. With more capacity to hold irrigation water comes more flexibility during flood season.

In the next century water will be on the forefront of natural resource conflicts not only in California but around the world. As climate changes and population increases there will be an increased strain between where the water goes and who uses it. The California Water Plan lays out how the State should approach these issues in a way that could potentially reduce conflicts.

Water Quality

The quality of surface water in California has become of great concern and has prompted the State to implement programs to reduce water pollution. For years both the federal and state have been monitoring point source water discharges such as waste treatment plants and factories. Since 2003, the State of California made a decision not to renew an exemption waiver from water quality standards for non-point source water discharges, such as farmers and urban development.

In the past, the Department of Water Resources has monitored water quality in the watershed. They had various collection points collecting measurements of dissolved oxygen, pH, temperature, total suspended solids, calcium, magnesium, sodium, potassium, aluminum, copper, iron, lead, mercury, and nutrients, such as nitrates. Mercury was the only constituent to be of any concern and considered a hazard. However, mercury is naturally occurring in serpentine soils, which is found throughout the watershed.

The Sacramento Valley Water Quality Coalition has a monitoring site at the highway 45 bridge to monitor the constituents above as well as total organic carbon, organic contaminants, pathogen indicators, ultraviolet absorbance, and aquatic toxicity. This data has only been collected for 2005. There have been no problems of significance found in the first year.



The study will verify findings from a previous study... that Stony Creek has a significant affect on Glenn County groundwater.



Spillway from Black Butte Dam into the lower watershed

Stony Creek Groundwater Recharge Investigation - 2005

By Lester Messina

The Glenn County Department of Agriculture and the California Department of Water Resources have been working in cooperation with the United States Bureau of Reclamation in conducting a groundwater recharge study in an effort to better understand groundwater and stream interaction between Stony Creek and the shallow Stony Creek Fan aquifer system. A recharge study was performed during summer and fall of 2005; throughout which groundwater and surface water parameters were measured on a weekly basis. The data is currently being analyzed to determine the flow rate in Stony Creek that would optimize recharge into the alluvial aquifer system, with a report due out in the late spring of 2006.

The study was performed over an 18-week period, from June 27 through October 30, 2005. Data collection consisted of gathering weekly surface water flow measurements at four sites on Stony Creek and groundwater level measurements in 25 wells at various distances from the creek. Collected data is currently being analyzed and compared to findings obtained from a similar recharge study performed in 2003 (Stony Creek Groundwater Recharge Investigation – 2003, Glenn County, CA) and with a surface water/groundwater model that was developed for the Stony Creek Fan alluvium in 2004.

It is expected that sustained flows in Stony Creek throughout the study period will verify findings from the previous study and model simulations, which suggest that there is significant potential for groundwater recharge in the area surrounding Stony Creek. Groundwater recharge supplies water to domestic and irrigation wells providing an immediate benefit to landowners. An additional benefit of this program would aid in determining the optimum release schedule from Black Butte Reservoir to achieve maximum recharge. Increased recharge would provide increased water supply reliability in the area.

If you would like more information on the recharge studies, contact Lester Messina at the Glenn County Department of Agriculture at (530) 934-6501 or at wateradv@countyofglenn.net.

Water Management

Stony Creek has one of the first, and oldest, systems of dams in California constructed for agricultural use and flood management. East Park Reservoir was constructed in 1910 as part of the Orland Project with a total capacity of 50,900 acre feet with an influx of approximately 64,000 acre feet of average inflow into the reservoir. Stony Gorge Dam, constructed in 1929, has a capacity of 50,300 acre feet and has a drainage area of approximately 240,000 acres of land. Black Butte Dam was completed in 1963, as part of the comprehensive plan for the Sacramento River Watershed. Black Butte Dam was constructed for flood control purposes. The reservoir was constructed with a capacity of 160,000 acre feet; however, flood control capacity has been reduced to an estimated 135,000 acre feet of water due to siltation. The US Army Corps of Engineers (USACE) maintains an average of 100,000 acre feet in the reservoir to meet agreements with the US Bureau of Reclamation (USBR) for irrigation obligations.

The system of dams is jointly managed between the USBR and the USACE with input from the Orland Unit Water Users Association. The two agencies coordinate releases from all three dams to control floods and convey irrigation water. For six months out of the year (March 15 to October 15) the USBR manages the releases from the Black Butte Dam for irrigation for the users of the Orland Project and the Tehama Colusa Canal Authority. For the other six months (October 15 to March 15) the USACE manages releases from the dam for flood control. The USACE manages flood flows according to the Flood Control Diagram of the Water Control Manual. Decisions on flood releases are made by the USACE Division office in Sacramento in order to be coordinated with releases from dams throughout the Sacramento River Watershed so as to not flood towns and cities in the valley.

In cooperation with United States Fish and Wildlife Service (USFWS), the USACE has altered the release rates from the dam (the amount of water per hour which water is released) in 2003 incorporating a “ramping” strategy to decrease the variability of releases. The USACE now increases and decreases flows by a predetermined amount every hour, small changes at low releases, with larger changes at higher releases. The maximum amount that may be released is 15,000 cfs and a minimum of 50 cfs, significantly less than pre-dam conditions. A 50 year flood (a 2% chance of a flood of this magnitude occurring in one year) before the dam was constructed was 80,000 cfs. In January 2006, more than 35,000 cfs entered Black Butte Reservoir with controlled releases from Stony Gorge and East Park reservoirs. Pre-dam summer conditions were as much as 300- 400 cfs (1956-57), but most often there was little surface water in the creek during the late summer months with no water reaching the Sacramento River.

The alteration of when and how much water is flowing in the stream has been altered for the benefit of irrigation, flood control, and fisheries enhancement. However, there have been significant changes to the watershed, that government agencies and landowners now have to face. The challenge will be to minimize those changes while continuing providing the valuable service of flood control and irrigation.

Before Black Butte Dam was constructed... There was a 2% chance every year for one storm that would produce a flood event of 80,000 cubic feet per second of water



East Park Dam circa 1911. Courtesy of CSU, Chico Northeast Collection.

East Park Reservoir and Spilling Orland Project

Please contact the Glenn County Resource Conservation District if you have natural resource concerns or issues you wish the RCD to address or to implement on your property. This newsletter was funded by the CALFED Bay-Delta Authority's Watershed Program

Phone: (530) 934-4601 x3
Fax: (530) 934-8667
E-mail: Ajay.Singh@ca.nacdn.net
132 North Enright Avenue, Suite B
Willows, CA 95988

*Glenn County Resource
Conservation District*



U.S. Postage
PAID
Permit #132
Willows, CA

Landowner Advisory Committee Meeting

A Landowner Advisory Committee Meeting was held on April 11, 2006 at the Carnegie Library in Orland. The purpose of the meeting was to provide an opportunity for landowners to give the RCD and Watershed Coordinator direction in what they would like to see accomplished in the next two years.

The participants of the meeting expressed interest in removing vegetation from the middle of the stream, stabilizing the banks, and re-channalizing the stream.

There was concern about government regulatory permits. Some participants do not want to have to apply for permits to work on private property. Those participants felt that all landowners should just do the

work and not ask "permission" from government agencies. Others do want to see a blanket permit from each of the agencies for projects that use certain practices. However, all landowners want to develop a maintenance agreement to implement the same practices in future years. The RCD will continue to work towards a coordinated permit and maintenance agreement. The RCD will also make itself available for technical assistance in filing regulatory permits.

Continued concern was also expressed about threatened and endangered species. The majority of participants feel the regulations are preventing work from occurring on the ground and are actually destroying

habitat regulations are designed to protect.

Another concern expressed was, if work would adversely affect neighbors, it would hinder anything getting done. There was a suggestion that neighbors sign an agreement of indemnification to hold neighbors harmless.

To close, the RCD will be scheduling a workshop to assist landowners in applying for proper permits, to conduct the "needed" work in the creek. Date to be announced.



**Bridge at Wyo and 99
circa 1911.
Photo Courtesy of
CSU, Chico Northeast
collection**