



## *SOUTH FEATHER WATER & POWER AGENCY*

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**TO:** Board of Directors

**FROM:** Kathy Zancanella, Power Division Manager

**DATE:** May 19, 2009

**RE:** General Information (regarding matters not scheduled on agenda)  
5/26/09 Board of Directors Meeting

### **Operations**

Attached is the Storage and Generation Report for April 2009. Also attached is a chart showing precipitation as of May 19, 2008.

The rains that came at the beginning of May as the reservoirs were about to reach their maximum storage levels required Power Division crews to increase flow releases from Little Grass Valley Dam to 435 cfs and delay installation of the flashboards at Lost Creek Dam. The Sly Creek Dam spill gate was partially raised for four days to spill the inflows that exceeded the capacity of Sly Creek Powerhouse. The South Fork Diversion tunnel was closed for four days, spilling all of the Little Grass Valley releases down the South Fork Feather River. The rain gauge at Forbestown headquarters measured nearly 8 inches from May 1 - 6, while the LaPorte gauge recorded over 10 inches of rain. Peak spill flows at Slate Creek Diversion reached 2,200 cfs, but dropped quickly once the rains stopped. A small amount of spill continued at Lost Creek and Forbestown Diversion through May 18, primarily because PG&E had to operate the units to manage transmission congestion, which meant they were regulated up and down rather than being left at full load.

The spill conditions allowed the Agency to meet its obligation to provide a "flushing flow" at Lost Creek Dam. The FERC license specifies that a flow of between 390 and 740 cfs be released for 24 hours at least every four years. However, it was too late in the year to conduct sediment pass-through operations at Slate Creek.

### **Maintenance Projects**

#### Ponderosa Dam Spill Gates

Jeffco Painting completed recoating the Ponderosa Dam spill gates on April 30, two weeks ahead of the deadline. Their work was of very good quality and they left the site looking clean. A seven-day cure time

was required after completion of the painting prior to immersing the gates. However, the spills that occurred throughout the first half of May have delayed closing the gates for summer operation.

### Sly Creek Campground – New Restroom

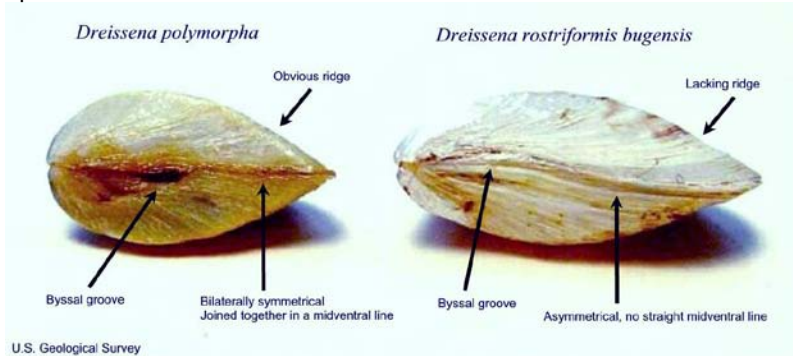
During the week of April 27, Joe Gibson, Equipment Operator, and Gary Daley, Utility Worker, completed paving the approach to the new restroom that was installed last Fall after the campground was closed for the season. They also relocated the dumpster pad and barricade posts. The new facility was ready for public use when the campground opened May 1.



### **General Information**

#### Quagga Mussels

PG&E advised the Agency of the new California Department of Fish and Game regulations regarding Quagga mussels. Quagga mussels are a relative of the zebra mussel and can cause considerable problems related to water delivery by clogging intakes and screens. The regulations state that any "person...local agency, district or authority that owns or manages a reservoir...where recreational, boating, or fishing activities are permitted..." must assess the vulnerability of the reservoir for the introduction of the nonnative mussel species and develop a program designed to prevent introduction of the species. The species have been found in Lakes Mead and Havasu and in seven Southern California reservoirs.



To that end, I conducted a vulnerability assessment of our reservoirs based on calcium levels recorded during the relicensing of the South Feather Power Project. The US Environmental Protection Agency set up ecoregional risk classifications based on calcium concentrations, and determined that waters with calcium concentrations of less than 12 mg/L were very low risk. In 2004, the calcium levels in Little Grass Valley reservoir ranged from 0.73 to 2.9 mg/L; the levels in Sly Creek were 0.83 to 3.4 mg/L; and in Ponderosa they were 3.2 to 4.0 mg/L. No statistics



were available for Lost Creek, but levels should be in the same range as the other reservoirs since it has the same source water. Based on this evaluation, the South Feather reservoirs should be considered at low risk for introduction of the species.

While the risk is low, public education about the risks associated with transporting the mussels by moving boats between different waters seems prudent and is what PG&E is doing (at Lake Tahoe a more stringent boat inspection program has been initiated). The Fish and Game website provided downloadable brochures ready for printing and posting, and these have now been posted at each of the boat ramps at Little Grass Valley and Sly Creek reservoirs. The brochures instruct boaters to “clean, drain and dry” their boats between uses and give hints on where to look for the mussels on the boat, trailer and towing vehicle.

### NHA Conference

I attended the National Hydropower Association annual conference in Washington, DC on May 11-13. Among the topics I found interesting were the discussions of energy planning being done at the national level. Unfortunately, as Congress lays out a renewable energy strategy, it is, for the most part, ignoring conventional hydro as a renewable form of energy and not fully addressing the transmission planning required to move the energy produced to where it will be needed. A big driver of energy policy is climate change and the direction of the future seems to be a “cap and trade” or “carbon tax” program in which low-emitting technologies are used to offset high-emitting energy technologies.

A related session was focused on greenhouse gas (GHG) emissions from reservoirs. All water bodies, including natural lakes and streams, emit some level of carbon dioxide and methane gasses, usually as a result of the decomposition of organic matter. To date, most studies have looked at the gross emissions from reservoirs, but not the net emissions, since some water bodies may serve as sinks that absorb GHG at certain times. What studies have found so far is that, within about ten years of construction, reservoir emissions mimic those of natural lakes and streams. Studies are continuing in this area – SMUD and DWR are looking at the issue in California because of Climate Registry requirements for reporting. DWR has hired Axys Technologies to do a net emissions study at Lake Oroville this summer.

The information I gathered at the conference was valuable as I gained a better understanding of the issues related to our facilities that are considered renewable under the new PG&E contract. Energy produced by Sly Creek and Kelly Ridge powerhouses will be subject to the renewable energy credits accounting system under the Western Renewable Energy Generation Information System (WREGIS). This is required in order to verify that PG&E is meeting its requirements’ under California’s Renewables Portfolio Standards for 20% of retail sales procured from renewable sources by 2010.