



Improving Reservoir Management on Federal Land

NCPA's Hydroelectric Project

NCPA operates the North Fork Stanislaus River Hydroelectric Development Project (FERC Project No. 2409) on the North Fork of the Stanislaus River in Alpine, Calaveras, and Tuolumne Counties.

The Project, which has the capacity to generate 256 megawatts of power, includes the New Spicer Meadow Dam and Reservoir, two diversion dams and tunnels, the McKay's Point Reservoir, and two transmission lines.

The McKay's Point Reservoir and Dam, located in Stanislaus National Forest, was completed and filled in 1989. During construction, NCPA worked with the U.S. Forest Service (USFS) to obtain Special Use Permits (SUP) for two sites to relocate the excavated sediment.

Accelerated Sediment Buildup at McKay's Point Reservoir

When the reservoir was first completed in 1989, original sedimentation buildup rate estimates between 1989 and 2018 were projected to be 43,560 cubic yards. However, due to a series of extreme weather events and debris flows *from USFS land*, the actual surveyed quantity in 2018 was 519,040 cubic yards—nearly *12 times* greater than expected. This sediment buildup has degraded the water quality, accelerated the wear and tear of the turbines, and reduced overall power output to nine NCPA member communities served by the project.

To ensure proper project operations, a solution is needed to remove the debris that has flowed into this reservoir from federal lands through landslides and erosion—however, the USFS has declined requests to relocate the sediment back onto the adjacent land it manages.

Preliminary estimates put the cost of removing, hauling, and disposing of the sediment at \$55 million. These costs do not account for the economic impact of the loss in power generation from the facility or the environmental impacts. A large portion of this cost is tied to the need to haul the sediment by truck over longer distances to private lands—and payment for the ability to place the materials at that location, rather than relocate the debris on adjacent USFS lands that were the source of the sediment.

As a joint powers agency, these costs would be borne by NCPA member-utilities and individual consumers in their communities. This comes at a time when electric utility ratepayers are already facing wildfire-related increases as utilities undertake wildfire mitigation and efforts to harden their distribution and transmission systems. Relocating the sediment on federal lands mitigates this impact on consumers, and this is a key reason why this issue must be addressed by the USFS.

Issues with New SUP Requirements

In 2001, the USFS updated its SUP requirements with additional screening criteria, which has prevented them from approving sediment deposition on federal lands adjacent to McKay's Point Reservoir, even though precedent exists for the relocation of similar material.

Specifically, the new policy states that if options exist to dispose of the sediment on private lands—regardless of the excess cost or negative environmental impacts—the USFS is required to reject NCPA's request under the current SUP.

It is important to also note that the debris behind our facility is free of contaminants—a fact confirmed by sediment sampling and lab analysis. While land in other parts of the state may contain heavy metals from hydraulic mining, environmental testing has confirmed that is not the case with the materials behind our facility. The debris is comprised of dirt, rock, sand, and parts of trees that have simply washed off into the reservoir.

Change is Needed

For decades, NCPA has operated its hydro facility to the highest environmental standard through a partnership with the Forest Service. However, given the extreme weather events California has experienced in recent years, and especially in light of the effects of climate change where high water years combined with wildfires are certain to make these types of challenges more prevalent, new SUP regulations are needed to accommodate our changing environment. Moreover, the replacement of soils back onto the USFS lands they came from can potentially provide environmental and public safety-related benefits—particularly when the sediment can be used to create

wildfire breaks and support other wildfire mitigation activities.

Benefits of Policy Change

First and foremost, the relocation of sediment from behind the McKay's Dam onto USFS land would prevent electricity ratepayers from shouldering the unwarranted increased costs associated with transporting the sediment long distances for deposit on private lands. It will also facilitate a more expeditious removal of the sediment, thereby increasing much needed renewable hydroelectric generation that plays a key role in providing reliability and ramping capability for our state's electric system to support more intermittent renewable sources. Redepositing the soil back onto the adjacent USFS lands would prevent adverse environmental impacts associated with the carbon-related emissions and other biological implications of trucking the sediment long distances to private sites. As well, the sediment could be used to provide fire breaks or other forestry efforts, which would enhance public safety.

NCPA urges the U.S. Forest Service to take action to allow for sediment relocation on federal lands as permitted prior to the 2001 change in regulation. Modifying this policy will improve forest watersheds, reduce wildfire risks, increase electric system affordability and reliability, prevent undue costs to electricity consumers, and better accommodate the climate change environment we are experiencing today.