

Maps help utilities, others pinpoint solutions

Protecting water supply, numerous resources key, forest officials say

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A paddler runs the Devils toilet rapid just downstream of the Hwy 49 Bridge of the Electra run on the Mokelumne River. The Mokelumne River between the Electra Dam and the Middle Bar Bridge is a haven for kayakers and fisherman. The proposed middle bar dam would inundate most of the section covering up what is arguably the best of the few Class II sections of whitewater in Northern California. Craig Sanders/Record File 2001

SAN ANDREAS - New maps posted online this month by the U.S. Forest Service pinpoint where the nation's drinking water is most jeopardized by wildfires and other threats to high-country forests.

One of the hot spots, according to the maps, is the headwaters of the Mokelumne River in the high Sierra east of Stockton.

The new mapping effort is called Forests to Faucets. The data behind it is why water utilities in some western cities now help pay to maintain portions of nearby national forests.

Some water utilities have concluded that by spending a few million dollars a year thinning overgrown forests, they can avoid high-intensity fires that could send mudslides into reservoirs and cost tens of millions of dollars.

On one of the new maps, dark blue zones in the Mokelumne headwaters indicate how much drinking water comes from Sierra snow fields. On another map, dark blue shows the high risk that wildfire poses to that water supply.

Talks still in their early stages could make the Mokelumne headwaters the first in California to use this "avoided risk" model to set up arrangements where water users in major cities help pay to protect their water supply.

On the Web

Interactive maps with water supply data for U.S. forests can be seen at www.fs.fed.us/ecosystemservices/FS_Efforts/forests2faucets.shtml.

"The message for the Sierra Nevada is in some of our watersheds we haven't had that high severity fire yet that is going to lead to all of these costs and compromising the water quality and supply," said Kim Carr, sustainable initiatives coordinator for the Sierra Nevada Conservancy.

"Let's not sit back and wait for it," Carr said. "We've already seen other communities suffer from this."

Those communities include Denver and Santa Fe, N.M., where forest fires that contaminated and constrained water supply prompted the utilities to begin paying for prevention and restoration work in forests.

The Sierra Nevada Conservancy is a California government agency charged with promoting the economic and environmental health of the Sierra Nevada. Carr and other Conservancy leaders are facilitating talks on the Mokelumne watershed that include the U.S. Forest Service, the federal Bureau of Land Management, and a variety of other entities including Woodbridge Irrigation District and East Bay Municipal Utility District.

Traditionally, it has fallen to U.S. taxpayers to shoulder the cost of putting out fires and maintaining national forests, even if local interests are the primary beneficiaries. Downstream water users are not necessarily thrilled to be asked to help pay for keeping their drinking water clean.

Bruce Goines, ecosystem services leader for Pacific Southwest Region of the Forest Service, noted that even after fires in 1996 and 2002 contaminated Denver's water supply, it took almost a decade of talks before water officials and forest managers agreed on what was wrong and how to solve it.

"It's extremely complicated," Goines said.

By this coming winter, Goines said he and other members of the Mokelumne Watershed Environmental Markets Initiative expect to complete an "avoided costs" analysis. That is supposed to tell how much disasters are likely to cost and whether there are cost-effective ways to avoid the impacts.

Richard Sykes is director of water and natural resources for East Bay Municipal Utility District, the biggest water user on the Mokelumne. Sykes said there are significant differences between the Mokelumne and the watershed that serves Denver.

For one thing, EBMUD doesn't own the higher-altitude reservoirs most likely to fill with mud, ash and sand after a fire. Those belong to Pacific Gas and Electric Company.

Also, Sykes noted that the 13,604-acre Power Fire in the Eldorado National Forest in 2004 sent very little sediment downstream into EBMUD's Pardee Reservoir.

Still, he said EBMUD will wait to see whether the analysis indicates a watershed services deal "is economically justified for us."

Water insiders say the elephant in the room in California watershed services is the Stockton San Joaquin Delta.

The water provided by the Mokelumne is just a sliver of the water that drains from national forests to rivers such as the American, Plumas, Feather and Sacramento.

It gets mingled in the Delta and then pumped south. That means it is difficult to make the connection between a particular forest and the water coming out of a faucet in San Diego, Long Beach or Los Angeles.

In contrast, a sealed aqueduct carries Mokelumne water east to EBMUD's customers.

Goines said the clear connection between the Mokelumne and end users makes the watershed services effort there more likely to succeed than similar efforts during the 1990s that involved water shipped through the Delta.

"There were counties in California that were working very hard to develop partnerships with southern California water agencies," Goines said. "They just could not draw the thin blue line between management, say, in the Plumas watershed and quality of water delivered to a tap user in Los Angeles."

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