

Managing forests could boost water yields

By Kathleen Masterson, Capitol Public Radio

Here at the 4,000-acre Blodgett Forest Research Station in the Sierra Nevada foothills, researchers have ongoing projects testing different techniques like clear-cutting and selective harvesting and prescriptive burns.

And soon they might also look at what kinds of forest management produce more clean water.

Forest manager Rob York shows me a 12-acre plot where he's selectively removed individual trees. The sunlight is filtering in. It's a much more open space than the shady reserve of 100-year old trees we just came from.

"Water yield we would expect to increase, compared to the reserve, because we have reduced the amount of large trees that are constantly pumping water out of ground and releasing water into the atmosphere. And we've reduced the canopy cover, so that's more through-fall of snow," York said.

If more snow makes it through to the forest floor, it's more likely to percolate into groundwater supply.

About a third of California's water supply comes from mountain snowpack. If forestry managers can learn techniques that boost water yield from forests, even a small percentage increase could make a difference for the state.

The forest research could also offer lessons about how forests respond to climate change, that will likely bring stressors like drought and heat.

York says forests that haven't been thinned may have a tough time in a drought.

“If climate change causes drought stress, then we’re more likely to see the impacts on those high density forests,” York said. “So density management I think is something that we can focus in on as having a high potential to be useful, with respect to making forests more resilient.”

York says another worry with climate change is whether it may allow invasive species or pests to thrive in the Sierra. He says so far the Sierra hasn’t had extreme problems that some other forests have experienced.