Rising alpine vegetation could hit Calif. water supply

By Pete Spotts, Christian Science Monitor

A warming-climate-induced march of alpine vegetation up a large river basin on the western slope of the Sierra Nevada could slash by one-fourth the annual flow of water the basin delivers to California's thirsty Central Valley by the last two decades of this century, a study says.

The results of the Kings River Basin study imply that the same type of risk holds for another 10 major river basins along the western Sierra, although to varying degrees, say the researchers involved in the study. It also could hold similar implications for other regions around the world that rely on alpine snows for much of their fresh water.

The results also imply that in a warming world, some forests may have to be managed as much to ensure adequate water supplies downstream as they will be to reduce the hazards of large wildfires.

Managing vegetation for stream flows already has been undertaken to some extent along rivers and streams in the Southwest, where invasive plants such as tamarisk took root along the banks, siphoning far more water than native species such as cottonwoods. Groups have been removing the tamarisk and other water-binging invasives in hopes of maintaining or restoring normal seasonal stream flows.

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