Forecasting tool may be able to predict mountain snowpack

By Matt Weiser, Water Deeply

A skier threads his way through patches of dry ground at California's Squaw Valley Ski Resort on March 21, 2015, when the state experienced one of its driest winters ever. A new forecasting tool could one day be able to predict such poor mountain snowpack conditions as much as eight months in advance.Max Whittaker/Getty Images

If we had known a year ago that this winter would be so dry, would we have conserved water more aggressively last summer? Would ski resorts have installed more snowmaking equipment? Would farmers buy different seeds to plant this spring?

These are among the tantalizing questions raised by a team of government and university scientists, who believe they have developed a tool to predict mountain snowpack in the West up to eight months in advance – long before the first winter snowflake has fallen.

The tool, a powerful computer model, is described in a new study recently published in the Proceedings of the National Academy of Sciences. It is still experimental, but it seems capable at this stage of giving a thumbs-up or -down signal about whether March 1 snowpack will be heavy. And it can do so at the scale of a particular mountain range, offering some indication about potential spring runoff for individual watersheds.

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