

Pitkin County commissioners leery of cloud-seeding project

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In this Wednesday, Sept. 27, 2017, photo, Eric Hjermstad, of Western Weather Consultants, demonstrates a cloud seeding generator in Silverthorne, Colo. Western Weather Consultants claims that its two seeding operations in the High Country generate between 180,00 and 300,000 added acre-feet of water per year, and that has been backed up by independent studies.

Pitkin County commissioners Thursday declined to immediately fund a Colorado River District effort to target the upper Roaring Fork Valley with increased snowfall through cloud-seeding.

Commissioners want more information about the environmental and health impacts of cloud-seeding, as well as a chance for the public to weigh in on any such program in the Aspen area, before contributing money toward the project.

"How much can you mess with Mother Nature before she comes back and bites you in the butt?" Board Chairwoman Patti Clapper asked skeptically. "It doesn't make any sense."

However, Dave Kanzer, deputy chief engineer with the Colorado River District, told board members Thursday afternoon that cloud-seeding — or vaporizing silver iodide in an effort to encourage ice crystal growth in winter storm clouds — is already going on all around them.

In fact, not only are there already more than 100 cloud-seeding generation sites from the San Juans in the southern part of the state to Grand County, but there are four such sites in Pitkin County that have been operating since the mid-2000s, Kanzer said.

All of those sites are on private land and are part of seven state-permitted, cloud-seeding areas in Colorado, including Vail, the Central Mountains,

Grand Mesa, Gunnison, Telluride/Dolores, the Western San Juans and the Eastern San Juans, according to Kanzer's presentation materials.

"There's a lot going on in Colorado," he said.

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The idea is to increase water in watersheds to combat what Kanzer called "the new normal" of prolonged drought in the Colorado River Basin.

"We want to adjust to climate change and try to capitalize on winter recreation issues at the same time," he said.

Each cloud seeding site contains a generator with a propane-fired flame that vaporizes a small amount of silver iodide solution, which creates artificial ice nuclei. Wind carries the invisible nuclei into storm clouds, where moisture attaches to the nuclei and creates snowflakes, according to the presentation materials. Snow then falls onto a target area.

The generators are ignited only when storms approach with prevailing winds likely to blow the snow onto the targeted area, Kanzer said. For example, the four generators located in Pitkin County — two in the Fryingpan River Valley, one in Woody Creek and one off Highway 82 toward Independence Pass — are permitted to seed clouds with northern prevailing winds, meaning any snow they generate falls north of town.

A recent nine-year study in Wyoming — which compared cloud-seeded areas with non-cloud seeded areas in that state — found that cloud-seeding contributes between 5 percent and 15 percent more snow on a per storm basis, Kanzer said. In addition, there is no evidence of harm to people or the environment because silver iodide is a neutral element that does not interact or bond with the environment, he said.

The Vail area has strongly embraced cloud-seeding, with a program that has run continuously since 1976. Breckenridge, Keystone and Winter Park also

fund cloud-seeding programs, Kanzer said.

Southern Pitkin County — including all four area ski mountains — has the potential to join them and also reap benefits from cloud-seeding, according to a 2015 study by the National Center for Atmospheric Research. The study indicated a gap in cloud-seeding coverage in the Aspen area and a high percentage of snowstorms that meet the necessary criteria for cloud seeding, according to presentation.

The process of permitting a new cloud-seeding program falls to the Colorado Department of Natural Resources and the Colorado Water Conservation Board. Kanzer said the river district wants Pitkin County and the city of Aspen to each contribute \$25,000 for the first year of such a program.

Pitkin County's Healthy Rivers and Streams Board voted earlier this month to recommend that commissioners approve the \$25,000. The Aspen City Council has not yet been asked for the funds though there is money in the utilities budget for such an effort, said David Hornbacher, the city's utilities director.

However, the river district would not apply for a cloud seeding permit in Pitkin County without local support, Kanzer said.

Aspen Skiing Co. tried cloud-seeding in the 1970s and the 1990s, but was unable to prove it was effective, said Rich Burkley, vice president for mountain operations.

"We couldn't prove it worked and we couldn't prove it didn't work," he told commissioners Thursday. "We just don't know."

And while a 5 percent boost in snowfall would be negligible — for example 10.5 inches rather than 10 inches — Skico will probably contribute to the cloud-seeding project if it goes forward, Burkley said.

County board members appeared far from approving the money Thursday.

Commmssioner George Newman questioned the data indicating no long-term health or environmental impacts.

"'Long term' is sort of a nebulous term," he said. "We didn't know about lung cancer and cigarette smoking for 40 years."

Newman also asked about the public process and how community members can weigh-in on the project and receive information.

Kanzer said the river district would be amenable to holding public meetings and bringing in experts on cloud-seeding. In addition, the water conservation board in conjunction with the state attorney general's office would hold public meetings on the subject, he said.

Commissioner Greg Poschman was most supportive of cloud-seeding.

"Our neighbors ... have been doing it for 43 years and claiming a significant increase in their snowfall," he said. "If we can get 5 percent more moisture out of a cloud maybe we can get through the next six weeks of no storms."

Also, he reiterated that silver iodide doesn't bond with the environment, that it's only been found in the environment in extremely small trace amounts and that burning it does not generate significant carbon generation.

"It makes me wonder: Do we have a responsibility to try and get as much water in our watershed as we can?" Poschman said. "That's where I am with it."

Clapper — who helped spearhead efforts in the 1990s to cleanup the Smuggler Superfund site at the base of Smuggler Mountain in Aspen — was not convinced. She said she needs far more information and discussion before making any decision on cloud-seeding.

"I have a great deal of experience with toxic metals," Clapper said. "We need to be very careful. We owe it to the community to ask them how they feel

about it."

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