CLOUD SEEDING

For those who think that cloud seeding is like something out of an old Disney Tomorrowland exhibit, think again.

Releasing silver iodide crystals in clouds to make it rain or snow has been carried out for many years. Known more formally as weather modification (or WxMod for short), it's been used in 24 countries and 10 states. Now it's being explored as a partial solution for increasing snowpack and augmenting water supply for the entire Colorado River basin.

Past research and results dating back to the 1970s have shown that a properly designed program can increase snowfall by up to 15 percent, at a cost of less than $20 per acre-foot of water, Metropolitan resource specialist Tom Ryan said.

A 2006 scientific analysis by the federal Bureau of Reclamation found that seeding six major runoff-producing areas within the Colorado River Basin could produce between 1.1 and 1.8 million additional acre-feet of water in the Upper Basin per year, and an additional 830,000 acre-feet in the Lower Basin and adjacent basins. (To see where the Upper and Lower Basins lay, see map on page 28.)

While some may dispute these numbers, or the beneficial effect of cloud seeding in general, it nevertheless is being done throughout the Upper Colorado Basin and in many locations throughout the Sierra Nevada.

In 2006, six California water agencies (among them Metropolitan) joined the Southern Nevada Water Authority and the Central Arizona Water Conservation District in contributing a combined $45,000 to extend a cloud seeding program in the San Juan Mountains near Durango, Colo., where local funding was exhausted.

The 2007 plan calls for extending cloud seeding for four areas in Colorado, two in Utah and some research in Wyoming. The Lower Basin states of California, Nevada and Arizona have each pledged $43,800 to support these activities. Metropolitan's share of California's pledge comes to roughly $14,000.

Agencies are also putting the final touches on a plan that would provide a road map through 2012 toward creating an expanded Basin States Cooperative weather modification program. It would expand, extend and optimize the existing 15 to 20 programs, and add several more, while also conducting applied research and related studies, plus create a process where decisions could be made for the next 25 years.

As research continues, scientists will look at a range of factors, such as what kind of clouds are conducive to seeding or whether a ground-based dispenser or a plane is in the right position. They also will examine how much silver iodide (or, in some cases, liquid propane) should be released and when is the right time to do so.

Metropolitan's involvement in cloud-seeding is a legacy of former district CEO Dennis Underwood, who approached resource specialist Ryan in summer 2005 and asked him to bone up on the subject to "see if we can do something with it."

"This really is his brainchild," Ryan said.

Thair Peterson

More information on weather modification is available at the following Web sites:

The state of Colorado—
http://cwcb.state.co.us/Flood/WeatherModificationProgram.htm

The North American Interstate Weather Modification Council—
http://www.naiwmc.org/