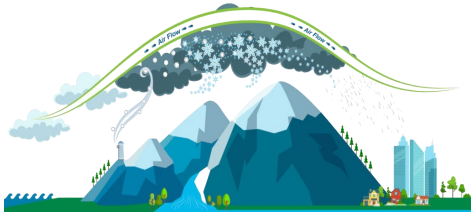
Santa Ana River Watershed Cloud Seeding Pilot Program

What is the Cloud Seeding Pilot Program?

In 2020, the Santa Ana River Watershed Project Authority (SAWPA) conducted a study on the economic and technical feasibility of implementing cloud seeding in the Santa Ana River Watershed to increase water supply in the region. As a result of the study, the Santa Ana River Watershed Cloud Seeding Pilot Program is underway for four years, starting on November 15, 2023, and will continue through April 2027.

What is Cloud Seeding?

Cloud seeding is a type of weather modification used to increase the amount of the precipitation, including snow or rain, during the storm season. This process works through releasing particles of silver iodide into clouds, which increase the chances of droplet condensation.



Benefits of Cloud Seeding

Increases precipitation by 5-15 percent

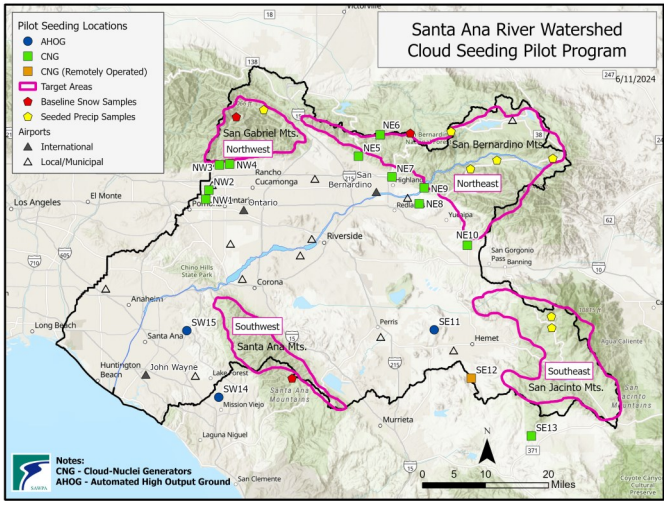
Increases snowpack

Increases water supply for the region

Target Areas

The map shown provides the locations of the 15 ground-based seeding units for the four target areas.

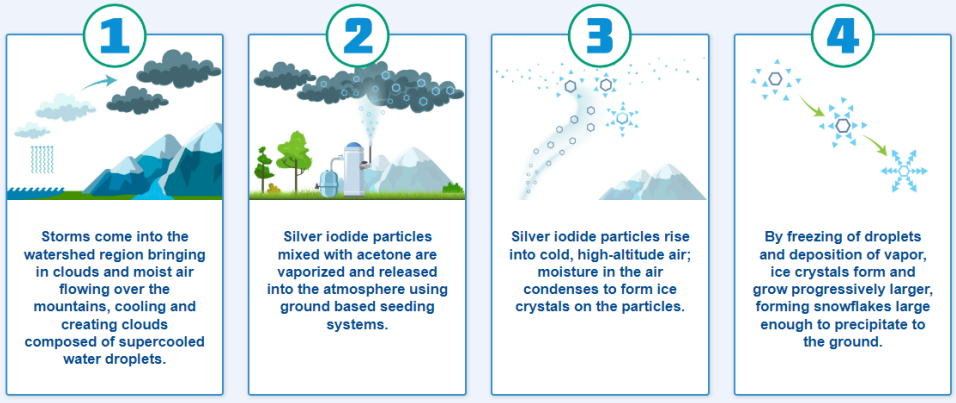
These units include Cloud Nuclei Generators (CNGs) and Automated High Output Ground Seeding (AHOGS) and release silver iodide particles, which rise into storm clouds.



Pilot Program Validation

A key component of the Pilot Program is the validation of the benefits of cloud seeding in the form of additional precipitation, including snowfall and stream flows. SAWPA has contracted with Desert Research Institute (DRI), a nonprofit research arm of the Nevada System of Higher Education to perform the study. The validation will involve a target and control approach where a control area without seeding will be compared to the four target seeding areas.

How Cloud Seeding Works



Program Schedule

2021
Ground Seeding Site Analysis

Feb 2022
CEQA

April 2023
Prop 1 Round 2 Grant

November 2023
Project Begins

2021—2027
Public Outreach

For more information about the Cloud Seeding Pilot Program, visit sawpa.gov/cloudseeding

Cloud Seeding Method

Ground-based seeding consists of two methods, called Cloud Nuclei Generators (CNGs) and Automated High Output Ground Seeding (AHOGS).

CNGs are manually operated and burn a solution of silver iodide and acetone, creating a continuous plume of seeding material that covers a broad area over mountainous terrain. AHOGS are remotely operated units, burning in-place flares that rapidly release a high concentration of silver iodide and are ideal for seeding convective bands with high concentrations of liquid water and vertical updrafts.

Cloud Nuclei Generators (CNGs)

Automated High Output Ground Seeding (AHOGS)

Cloud Seeding Safety

Based on decades of experience, the use of silver iodide for the purpose of cloud seeding has been shown to be safe for people and the environment. The potential environmental impacts of silver iodide have been studied extensively and represents a negligible risk to the environment.

Fast Facts:

- In over 50 years of research, there have been no measurable human or environmental effects caused by silver iodide.
- The concentration of silver in rainwater and snow from a seeded cloud is nearly 1,000 times less than the Environmental Protection Agency (EPA) standard.

About SAWPA

SAWPA is a Watershed Agency Focused on Regional Water Issues

Formed originally in 1972 as a planning agency, the Santa Ana Watershed Project Authority (SAWPA) was created to help resolve interagency conflicts and address regional water issues in the Santa Ana River watershed. SAWPA works to solve issues related to water supply reliability, water quality improvement, recycled water, wastewater treatment, groundwater management, and brine disposal.

SAWPA Supports its Member Agencies with Water Planning

SAWPA is a Joint Powers Authority comprised of five member agencies that supports water resource planning.

- Eastern Municipal Water District
- Inland Empire Utilities Agency
- Orange County Water District
- San Bernardino Valley Municipal Water District
- Western Municipal Water District

SAWPA seeks to create and facilitate strategic partnerships with organizations pursuing common interests with water sustainability. SAWPA's regional leadership provides a model of collaboration by utilizing integrated solutions.

Stay Informed

Scan the QR code to learn more about SAWPA's Cloud Seeding Pilot Program.

For More Information or to Request a Presentation

cloudseeding@sawpa.gov

(951) 289-5440

Connect With Us!

Sawpa.gov

(951) 289-5440

11615 Sterling Avenue

Riverside, CA 92503

@sawpa_water

@SAWPATUBE