NOAA FORM 17-4 (4-81) — U.S. DEPARTMENT OF COMMERCE — NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

Form Approved OMB Control No. 0648-0025
Expires 05/31/2027

INITIAL REPORT ON WEATHER MODIFICATION ACTIVITIES

This report is required by Public Law 92-205; 85 Stat. 735; 15 U.S.C. 330b. Knowing and willful violation of any rule adopted under the authority of Section 2 of Public Law 92-205 shall subject the person violating such rule to a fine of not more than $10,000, upon conviction thereof.

Complete in accordance with instructions on reverse and forward one copy to:
National Oceanic and Atmospheric Administration
Office of Oceanic and Atmospheric Research
1315 East-West Highway, WWMC-3, Rm 11216
Silver Spring, MD 20910

1. PROJECT OR ACTIVITY DESIGNATION, IF ANY
Kaweah River Basin Cloud Seeding Program

2. DATES OF PROJECT
a. DATE FIRST ACTUAL WEATHER MODIFICATION ACTIVITY IS TO BE UNDERTAKEN: 11/1/24
b. EXPECTED TERMINATION DATE OF WEATHER MODIFICATION ACTIVITIES: 4/30/25

3. PURPOSE OF PROJECT OR ACTIVITY
Snowpack Augmentation

4. (a) SPONSOR

NAME	AFFILIATION	PHONE NUMBER	STREET ADDRESS	CITY	STATE	ZIP CODE
Shane Smith	Kaweah Delta Water Conse	559 747-5601	2975 Farmersville Rd	Farmersville	CA	93223

4. (b) OPERATOR

NAME	AFFILIATION	PHONE NUMBER	STREET ADDRESS	CITY	STATE	ZIP CODE
Richard Stone	RHS Consulting, Ltd	775 357-4659	PO Box 17096	Reno	NV	89511

5. TARGET AND CONTROL AREAS (See Instructions)

TARGET AREA LOCATION	TARGET AREA SIZE OF AREA	CONTROL AREA LOCATION	CONTROL AREA SIZE OF AREA
Kaweah River Basin	828 SQ. MI	Merced, Tule, Cottowood C	750 SQ. MI

6. DESCRIPTION OF WEATHER MODIFICATION APPARATUS, MODIFICATION AGENTS AND THEIR DISPERSAL RATES, THE TECHNIQUES EMPLOYED, ETC. (See Instructions)

This is a continuation of the Kaweah Basin Program, a long-term project that began operations in 1976. During the 2025 winter season winter storm systems will be seeded using aircraft and ground-based seeding equipment. The operational program office is located at the Fresno Airport (KFAT). A combination of aircraft and ground-based seeding methods are used depending on temperature and wind profiles. The preferred seeding method is aircraft using glaciogenic and/or hygroscopic aerosols released 20-30 miles upwind of the target. Seeding materials are typically released between 8,000' - 17,000' depending on temperatures and wind velocity profiles. Seeding is conducted near the top of the water saturated layer in supercooled liquid or mixed phase cloud conditions as predicted by a regional version of the WRF model. Ground-based generators are used during post frontal periods when area-wide shallow orographic clouds are the dominant cloud type over the target area. Evaluations are updated

7. LOG BOOKS *Enter name, affiliation, address, and telephone number of responsible individual from whom log books or other records may be obtained.*

NAME	AFFILIATION	PHONE NUMBER	STREET ADDRESS	CITY	STATE	ZIP CODE
Richard Stone	RHS Consulting, Ltd	775 357-4659	PO Box 17096	Reno	NV	89511

8. SAFETY AND ENVIRONMENT

- [x] YES [ ] NO — Has an Environmental Impact Statement, Federal or State, been filed? If yes, please furnish a copy as applicable.
- [x] YES [ ] NO — Have provisions been made to acquire the latest forecasts, advisories, warnings, etc., of the National Weather Service, Forest Service, or others when issued prior to and during operations? If yes, please specify on a separate sheet.
- [x] YES [ ] NO — Have any safety procedures (*operational constraints, provisions for suspension of operations, monitoring methods, etc.*) and any environmental guidelines (*related to the possible effects of the operations*) been included in the operational plans? If yes, please furnish copies or a description of the specific procedures and guidelines.

9. OPTIONAL REMARKS (See instructions. Use Separate Sheet).

CERTIFICATION: I certify that all statements in this report on this weather modification project are complete and correct to the best of my knowledge and are made in good faith.

NAME OF REPORTING PERSON	AFFILIATION	SIGNATURE	STREET ADDRESS	OFFICIAL TITLE	CITY	STATE	ZIP CODE	DATE	PHONE NUMBER
Richard Stone	RHS Consulting, Ltd		PO Box 17096		Reno	NV	89511	10-31-24	7753574659

Kaweah River Basin Supplement to Form 17-4

The following information is provided as requested by items 8 on Form 17-4, Safety and Environment

Environmental Impact Report

An Environmental Assessment was conducted by the sponsor and a Negative Declaration was filed with no dissenting opinions.

Suspension Criteria

The project may be temporarily suspended when one of the following conditions exists

EXCESSIVE SNOWPACK

These snowpack amounts serve as a guide regarding the potential suspension of the seeding program; they are not hard and fast criteria, but rather are designed to prompt close coordination with the water managers. These criteria are based on average target area precipitation amounts as follows:

1. 200% on January 1
2. 180% on February 1
3. 160% on March 1
4. 150% on April 1

Snow sensor observation are available on a daily basis at several locations. Interpolation of these percentages can be made for any given day in order to aid suspension decisions.

FLOODING

1. TARGET AREA- Utilizing quantitative precipitation forecasts (QPF), antecedent indices, and forecast freezing levels, decisions can be made of individual storm event runoff in the area draining into Lake Kaweah. If the estimated storm runoff volume exceeds the available storage (i.e., spill condition), the project may be suspended.
2. RAIN ON SNOW - During periods above average snowpack exists and rising freezing levels and potential for rain on snow events where insufficient storage capacity is available the project may be temporarily suspended until the river flows recede and freezing levels fall below 4,500'.
3. Severe Weather- Severe weather is monitored on a storm-by-storm basis, and even hourly basis during rapidly changing weather conditions. The project may be suspended when a National Weather Service Flash Flood Warning is in effect over any part of the target area until the warning expires.

SPECIAL CIRCUMSTANCES

1. Official emergency response activity within the target area.
2. Other Special Circumstances or unusual circumstances, which may be deemed hazardous. Examples of special circumstances very strong winds, heavy snow at low elevations, and other unforeseen conditions that could be hazardous or perceived by the public as hazardous. Reservoir storage levels, soil moisture content, and amounts of precipitation in prior seasons are all factors to consider in assessing whether a temporary program suspension is appropriate

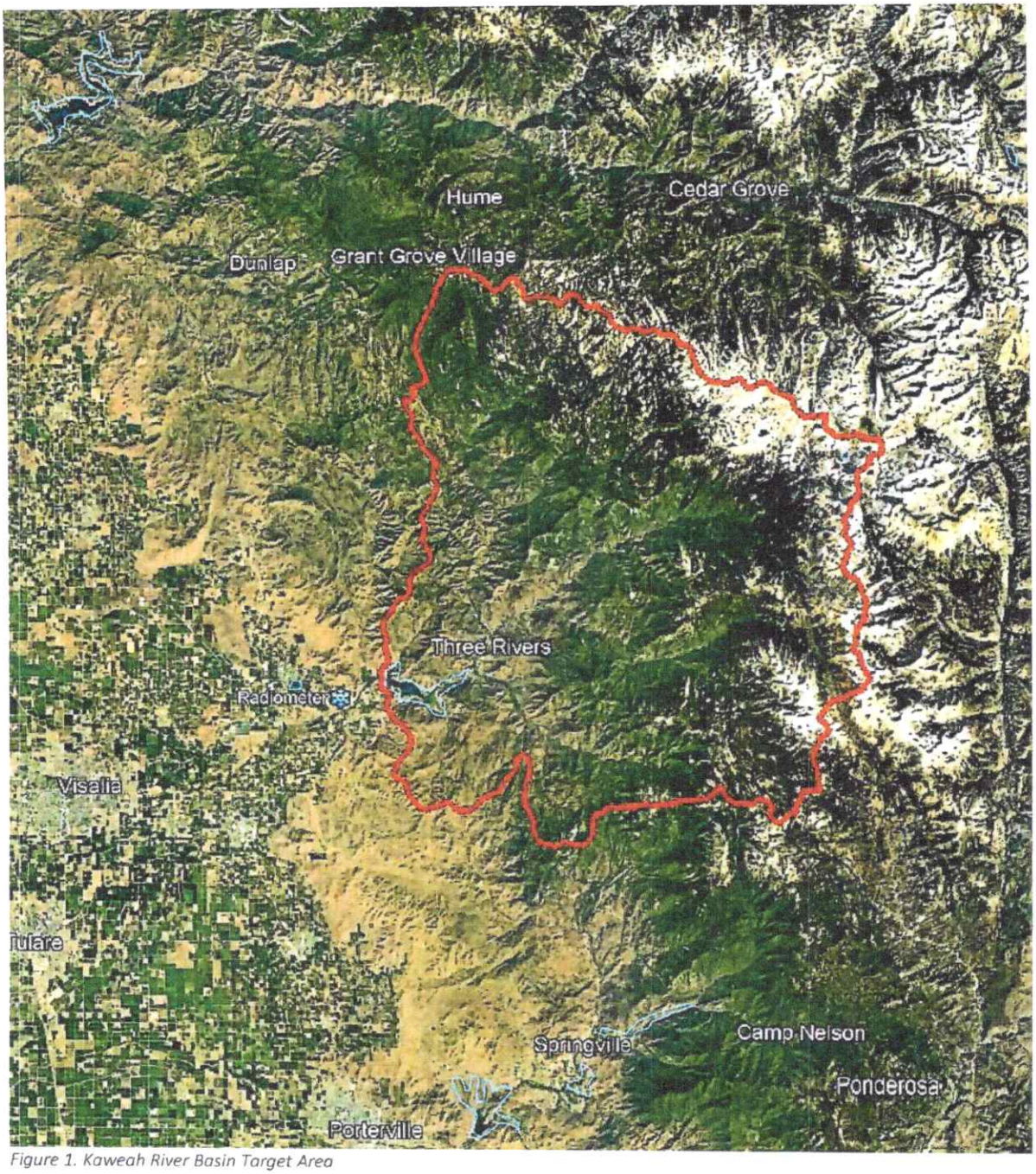


Figure 1. Kaweah River Basin Target Area