



**SAWPA COMMISSION
REGULAR MEETING MINUTES
OCTOBER 1, 2024**

COMMISSIONERS PRESENT

Bruce Whitaker, Chair, Orange County Water District
Mike Gardner, Vice Chair, Western Municipal Water District
T. Milford Harrison, Secretary-Treasurer, San Bernardino Valley
Municipal Water District [9:37 a.m.]
Jasmin A. Hall, Inland Empire Utilities Agency [9:32 a.m.]
David J. Slawson, Eastern Municipal Water District

COMMISSIONERS ABSENT

None

**ALTERNATE COMMISSIONERS
PRESENT; NON-VOTING**

Gil Botello, San Bernardino Valley Municipal Water District
Denis Bilodeau, Orange County Water District

STAFF PRESENT

Jeff Mosher, Karen Williams, David Ruhl, Shavonne Turner, Rick
Whetsel, Marie Jauregui, John Leete, Lucas Gilbert, Pete Vitt

OTHERS PRESENT

Andrew Turner, Lagerlof; Julio Im, Inland Empire Utilities Agency;
Ken Tam, Inland Empire Utilities Agency; Michael Barber, Inland
Empire Utilities Agency; Joyce Drysdale, Orange County Public
Works; Jeremy Jungreis, Orange County Water District; Kevin
O'Toole, Orange County Water District; Adekunle Ojo, San
Bernardino Valley Municipal Water District; Leo Ferrando, San
Bernardino Valley Municipal Water District; Derek Kawaii, Western
Municipal Water District; Mallory O'Connor, Western Municipal Water
District; Frank McDonough, Desert Research Institute; Elizabeth
Willis, Chino Basin Water Conservation District; Jared Smith, USGS;
Matthew Howard, San Gorgonio Pass Water Agency; Scott Hopkins,
El Toro Water District; Gene Hernandez, Yorba Linda Water District

The Regular Meeting of the Santa Ana Watershed Project Authority Commission was called to order at 9:31 a.m. by Chair Bruce Whitaker on behalf of the Santa Ana Watershed Project Authority, 11615 Sterling Avenue, Riverside, California.

1. CALL TO ORDER

2. ROLL CALL

An oral roll call was duly noted and recorded by the Clerk of the Board.

3. PUBLIC COMMENTS

There were no public comments; there were no public comments received via email.

4. ITEMS TO BE ADDED OR DELETED

There were no items to be added or deleted.

5. CONSENT CALENDAR

A. APPROVAL OF MEETING MINUTES: SEPTEMBER 17, 2024

Recommendation: Approve as posted.

B. TREASURER’S REPORT: AUGUST 2024

Recommendation: Approve as posted.

MOVED, to approve the Consent Calendar as posted.

Result:	Adopted by Roll Call Vote
Motion/Second:	Gardner/Whitaker
Ayes:	Gardner, Hall, Slawson, Whitaker
Nays:	None
Abstentions:	None
Absent:	Harrison

6. NEW BUSINESS

A. SANTA ANA RIVER WATERSHED CLOUD SEEDING PILOT PROGRAM: PRELIMINARY YEAR 1 VALIDATION RESULTS (CM#2024.56)

Jeff Mosher introduced Frank McDonough of Desert Research Institute, and he provided a presentation on the SAWPA Cloud Seeding Program Validation Update: Year 1 Preliminary Results, contained in the agenda packet on pages 21-54. Mr. Mosher noted that SAWPA staff coordinated the Pilot Program planning with the Desert Research Institute (DRI) on the validation component of the project. DRI conducted an independent review of the cloud seeding pilot operations and validated the increases in precipitation and stream flows. The preliminary results and additional evaluation are still ongoing.

Mr. McDonough provided a brief background and noted that North American Weather Consultants, Inc. (NAWC) was awarded a contract to conduct the Santa Ana River Watershed Cloud Seeding Pilot Program Operations. The Pilot Program is a four-year project spanning the four winter seasons starting in 2023 and running between November 15 and April 15 for each season. The focus of the Pilot Program is to seed the four higher elevation target areas identified in the feasibility study surrounding the watershed with an emphasis on increasing precipitation in the form of snow. Mr. McDonough provided a detailed review of the following validation tasks:

- Task 1: Ensure that the cloud seeding operations are matched to the seedable storm periods.
- Task 2: Ensure that the cloud seeding generator placement can deliver seeding material to the target areas.
- Task 3: Determine the estimated amount of additional seeded snowfall/precipitation for each storm, and the winter total in each area.
- Task 4: Compare unseeded seasonal precipitation amounts within the target areas to an adjacent unseeded control area, then compare the seeded year to the long-term relationships.
- Task 5: Compare the seasonal unseeded stream flow within the target areas to adjacent unseeded control areas, then compare the seeded year to the long-term relationships.

Mr. McDonough reported thirteen (13) storms were seeded between November 15, 2023, and April 15, 2024. The total number of generator-hours was 2,165 with 1,703 hours of operation during potential seeding conditions. The snow chemistry showed mostly low values of seeding material in the assessed snowpack. If all seeding time periods were successfully seeded, as much as 29,000 acre-feet of additional precipitation was possible. If all seeding time periods where precipitation was measured were successful seeded, as much as 11,000 acre-feet of additional precipitations was possible. The precipitation target and upstream control analysis of the seasonal snowpack suggested the target area gauges had more

precipitation than climatologically expected for most locations. There was no evidence of a decrease in precipitation downwind of the project area.

Mr. Mosher asked how the estimate is determined for the year using the target and control approach. Mr. McDonough noted that it is based on the footprint of the paths of the ground-based units. The generator's impacted area is about 30 square miles and has 12 generators that release the plume over the impacted area. Mr. Mosher noted that there are some challenges and would like to focus on the targeted control because that is where the actual measurements of precipitation are and it is based on science, though it is still an estimate.

Commissioner Slawson noted that it seems like it is difficult to measure accuracy and one of the analyses that were established was the relationship between the river falls along the coast and precipitation in the mountains. Are there other factors besides cloud seeding that could confound that number or change that relationship? Mr. McDonough noted that each individual storm is factored over decades of data. Commissioner Gardner asked for the cited reference on the Edison work (McGurty 1999). Mr. McDonough stated he would send it to Mr. Mosher to distribute it to the Commission.

Commissioner Hall noted she appreciates the update to have a baseline of results, though she has some concerns on the cost if we decide to do more studies to get the data needed to determine if it is really working. Mr. McDonough noted that with his experience the results thus far look promising and can vouch that it is working. The conditions are present, the real question is, how effectively are the operations being done, and are the generators operating during peak times where they are needed, though can be a factor due to human input. Commissioner Gardner noted that is why this was designed as a four-year program, and one year is going to tell us a lot less than multiple years, so if we complete the four-year study, we will have much more solid information to make decisions on versus after a single year.

Commission Chair Whitaker stated that the important factor for the Commission is how benign this is to the environment and the total cost of effectiveness of the operation but also the measurements as well and appreciate the update.

This item is to receive and file; no action was taken on agenda item no. 6.A.

B. SANTA ANA RIVER WATERSHED CLOUD SEEDING PILOT PROGRAM: YEAR 2 OPERATIONS (CM#2024.57)

Jeff Mosher provided a presentation on the Santa Ana River Watershed Cloud Seeding Pilot Program: Year 2 Operations, contained in the agenda packet on pages 57-73. In light of all the fires we have had around the watershed, SAWPA staff is suggesting postponing Year 2 Operations (November 15, 2024 – April 15, 2025) of the Santa Ana River Watershed Cloud Seeding Pilot Program. This is based on the input received from the flood control districts of the potential debris flow from the burn scars from the recent wildfires.

Mr. Mosher referenced the slides showing a map of the Cloud Seeding areas and Fire perimeters. The Southwest Target Area (Airport Fire) has burned 23,526 acres and is 95% contained, the Northwest Target Area (Bridge Fire) has burned 54,878 acres and is 97% contained, and the Northeast Target Area (Line Fire) has burned 39,232 acres and is 80% contained. Due to the Suspension Criteria, SAWPA staff has coordinated with San Bernardino County Flood Control District, Riverside County Flood Control District, Orange County Public Works, and Los Angeles County Flood Control District. The input received from the Flood Control Districts is that cloud seeding recently burned areas could potentially lead to additional sediment deposition within flood control facilities/dams and may result in increased cleanout costs and/or flood risks. This precaution could help avoid any unintended consequences related to runoff and debris flows from the burn areas.

Commissioner Gardner emphasized that, due to the potential of negative impacts on the watershed, it is important not to proceed with Year 2 Operations. Therefore, the Commission ratifies staff's recommendations from a receive and file and makes a motion to support the staff's decision to postpone the second year of the cloud seeding program. Chair Whitaker second the motion and the Commission unanimously agreed.

MOVED, to postpone Year 2 Operations of the Santa Ana River Watershed Cloud Seeding Pilot Program.

Result:	Adopted by Roll Call Vote
Motion/Second:	Gardner/Whitaker
Ayes:	Gardner, Hall, Harrison, Slawson, Whitaker
Nays:	None
Abstentions:	None
Absent:	None

7. INFORMATIONAL REPORTS

Recommendation: Receive for Information.

A. GENERAL MANAGER REPORT

There was no report received from the General Manager.

B. CHAIR'S COMMENTS/REPORT

There were no Chair Comments received.

C. COMMISSIONERS' COMMENTS

There were no Commissioners' comments received.

D. COMMISSIONERS' REQUEST FOR FUTURE AGENDA ITEMS

There were no requests for future agenda items.

8. CLOSED SESSION

There was no Closed Session.

9. ADJOURNMENT

There being no further business for review, Chair Bruce Whitaker adjourned the meeting at 10:43 a.m.

Approved at a Regular Meeting of the Santa Ana Watershed Project Authority Commission on Tuesday, October 15, 2024.

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Bruce Whitaker

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Bruce Whitaker, Chair

Attest:

DocuSigned by:

Sara Villa

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Sara Villa, Clerk of the Board