



...A United Voice for the Santa Ana River Watershed

OWOW Steering Committee Members

Brenda Dennstedt, Convener | SAWPA Commissioner
T. Milford Harrison, SAWPA Commissioner
Vicente Sarmiento, Orange County Supervisor
Karen Spiegel, Riverside County Supervisor
Jesse Armendarez, San Bernardino County Supervisor
James Hessler, Altman Plants

Garry W. Brown, Orange County Coastkeeper
William Ruh, Regional Water Quality Control Board
Deborah Robertson, Mayor, City of Rialto
Wes Speake, Councilmember, City of Corona
Nicholas Dunlap, Mayor, City of Fullerton

THIS MEETING WILL BE CONDUCTED IN A HYBRID FORMAT, OFFERING BOTH VIRTUAL PARTICIPATION AND IN-PERSON ATTENDANCE, PROVIDING AN OPPORTUNITY FOR PUBLIC COMMENT. ALL VOTES TAKEN WILL BE CONDUCTED BY ORAL ROLL CALL.

Meeting Access Via Computer (Zoom):	Meeting Access Via Telephone:
<ul style="list-style-type: none"> • https://sawpa.zoom.us/j/88281364273 	<ul style="list-style-type: none"> • 1 (669) 900-6833
<ul style="list-style-type: none"> • Meeting ID: 882 8136 4273 	<ul style="list-style-type: none"> • Meeting ID: 882 8136 4273

**REGULAR MEETING OF THE
OWOW STEERING COMMITTEE
SAWPA, 11615 STERLING AVENUE, RIVERSIDE, CA 92503
THURSDAY, NOVEMBER 21, 2024 – 11:00 A.M.**

AGENDA

- 1. CALL TO ORDER | PLEDGE OF ALLEGIANCE (Brenda Dennstedt, Convener)**
- 2. ROLL CALL**
- 3. PUBLIC COMMENTS**

Members of the public may address the Committee on items within the jurisdiction of the Committee; however, no action may be taken on an item not appearing on the agenda unless the action is otherwise authorized by Government Code §54954.2(b).

Members of the public may make comments in-person or electronically for the Committees' consideration by sending them to publiccomment@sawpa.gov with the subject line "Public Comment". Submit your electronic comments by 5:00 p.m. on Wednesday, November 20, 2024. All public comments will be provided to the Chair and may be read into the record or compiled as part of the record. Individuals have a limit of three (3) minutes to make comments and will have the opportunity when called upon by the Committee.



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4. **ITEMS TO BE ADDED OR DELETED**

Pursuant to Government Code §54954.2(b), items may be added on which there is a need to take immediate action and the need for action came to the attention of the Santa Ana Watershed Project Authority subsequent to the posting of the agenda.

5. **CONSENT CALENDAR**

All matters listed on the Consent Calendar are considered routine and non-controversial and will be acted upon by the Committee by one motion as listed below.

- A. **APPROVAL OF MEETING MINUTES: MARCH 28, 2024, MAY 23, 2024, AND SEPTEMBER 26, 2024**..... 5
Recommendation: Approve as posted.

- B. **PROPOSITION 1 ROUND 2 REPLACEMENT PROJECT (SC#2024.14)** 21
Recommendation: Receive and file.

6. **NEW BUSINESS ITEMS**

- A. **AMENDMENT TO THE OWOW STEERING COMMITTEE GOVERNANCE DOCUMENT – APPOINTMENT OF ALTERNATE REPRESENTATIVES (SC#2024.15)**..... 23
Presenter: Jeff Mosher
Recommendation: It is recommended that the OWOW Steering Committee recommend to the SAWPA Commission the amendment to the Santa Ana IRWMP “One Water One Watershed” Governance document dated January 15, 2013, allowing for the appointment of alternate representatives.

7. **INFORMATIONAL REPORTS**

Recommendation: Receive for information.

- A. **PROPOSITION 1 ROUND 1 PROJECT HIGHLIGHT: SANTA ANA MOUNTAINS WATERSHED PROTECTION PROJECT (SC#2024.16)**..... 29
Presenter: Rachel Gray and Cyrus Galvan, US Forest Service

- B. **QUARTERLY MEETING SCHEDULE FOR THE OWOW STEERING COMMITTEE (SC#2024.17)**..... 73
Presenter: Jeff Mosher

- C. **SANTA ANA RIVER WATERSHED CLOUD SEEDING PILOT PROGRAM: YEAR 2 OPERATIONS (SC#2024.18)**..... 75
Presenter: Rachel Gray

- D. **ARUNDO DONAX REMOVAL IN THE SANTA ANA RIVER BASIN HEADWATERS PROJECT OVERVIEW (SC#2024.19)** 93
Presenter: Ian Achimore

8. **GENERAL MANAGER REPORT**

9. **CHAIR’S COMMENTS/REPORT**

10. **COMMITTEE MEMBERS’ COMMENTS**

11. **REQUEST FOR FUTURE AGENDA ITEMS**



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12. ADJOURNMENT

PLEASE NOTE:

Americans with Disabilities Act: Meeting rooms are wheelchair accessible. If you require any special disability related accommodations to participate in this meeting, please contact (951) 354-4220 or zramirez@sawpa.gov. Notification at least 48 hours prior to the meeting will enable staff to make reasonable arrangements to ensure accessibility for this meeting. Requests should specify the nature of the disability and the type of accommodation requested.

Materials related to an item on this agenda submitted to the Committee after distribution of the agenda packet are available for public inspection during normal business hours at the SAWPA office, 11615 Sterling Avenue, Riverside, and available at www.sawpa.org, subject to staff's ability to post documents prior to the meeting.

Declaration of Posting

I, Zyanya Ramirez, Executive Assistant II for the Santa Ana Watershed Project Authority declare that on November 15, 2024, a copy of this agenda has been uploaded to the SAWPA website at www.sawpa.gov and posted at the SAWPA office, 11615 Sterling Avenue, Riverside, California.

2025 OWOW Steering Committee Regular Meetings

Fourth Thursday of February, May, September, and November

(Note: All meetings begin at 11:00 a.m., unless otherwise noticed, and are held at SAWPA.)

February 2/27/2025 Regular Committee Meeting	May 5/22/2025 Regular Committee Meeting
September 9/25/2025 Regular Committee Meeting	November 11/20/2025 Regular Committee Meeting *

*Meeting date adjusted due to conflicting holiday.

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...A United Voice for the Santa Ana River Watershed

OWOW STEERING COMMITTEE
REGULAR MEETING MINUTES
March 28, 2024

Committee Members	
<u>Santa Ana Watershed Project Authority Representatives</u>	
Brenda Dennstedt, Convener, Western Municipal Water District	Present
T. Milford Harrison, San Bernardino Valley Municipal Water District	Present
<u>County Supervisor Representatives</u>	
Vicente Sarmiento, Orange County Board of Supervisors	Absent
Karen Spiegel, Riverside County Board of Supervisors	Absent
Jesse Armendarez, San Bernardino County Board of Supervisors	Present
<u>County Municipal Representatives</u>	
Deborah Robertson, Mayor, City of Rialto	Present
Wes Speake, Councilmember, City of Corona	Absent
Nicholas Dunlap, Mayor Pro Tem, City of Fullerton	Absent
<u>Business Community Representative</u>	
James Hessler, Director of West Coast Operations, Altman Plants	Present
<u>Environmental Community Representative</u>	
Garry W. Brown, President, Orange County Coastkeeper	Absent
<u>Regional Water Quality Control Board Representative</u>	
William Ruh, Regional Water Quality Control Board [11:05 a.m.]	Present
Others Present	
<u>SAWPA COMMISSIONERS:</u>	Bruce Whitaker, Denis Bilodeau, Jasmin Hall, Gil Botello
<u>SAWPA STAFF:</u>	Ian Achimore, Jeff Mosher, John Leete, Marie Jauregui, Melissa Bustamonte, Pete Vitt, Rachel Gray, Sara Villa, Zyanya Ramirez
<u>OTHERS PRESENT:</u>	Andrew D. Turner, Lagerlof LLP; Chris Jones, San Bernardino Valley Municipal Water District; Christy Suppes, Orange County Public Works; David Lawrence, Big Bear Area Regional Wastewater Agency; Lisa Fernandez; Manuel Escamilla, County of Orange; Melissa Matlock, Western Municipal Water District; Toyasha Sebbag, City of Rialto.

The OWOW Steering Committee meeting was called to order at 11:00 a.m. by Brenda Dennstedt, Convener, at the Santa Ana Watershed Project Authority, 11615 Sterling Avenue, Riverside, CA 92503.



1. **CALL TO ORDER | PLEDGE OF ALLEGIANCE**

2. **ROLL CALL**

3. **PUBLIC COMMENTS**

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

4. **ITEMS TO BE ADDED OR DELETED**

5. **CONSENT CALENDAR**

A. APPROVAL OF MEETING MINUTES: NOVEMBER 16, 2023

B. GRANT ADMINISTRATION UPDATE

MOVED, approve the Consent Calendar.

Result:	Adopted by Roll Call Vote
Motion/Second:	Milford/Ruh
Ayes:	Armendarez, Dennstedt, Harrison, Hessler, Robertson, Ruh
Nays:	None
Abstentions:	None
Absent:	Brown, Dunlap, Sarmiento, Speake, Spiegel

6. **BUSINESS ITEMS**

A. **GRANT FUNDED PROJECT HIGHLIGHTS: REPLENISH BIG BEAR PROJECT (SC#2024.1)**

David Lawrence, General Manager of the Big Bear Area Regional Wastewater Agency (BBARWA), provided a PowerPoint presentation titled Replenish Big Bear contained in the agenda packet on pages 33-50.

The Replenish Big Bear project involves upgrading the BBARWA wastewater treatment plant, laying around 7 miles of pipeline, and building a new pump station in Bear Valley. The upgraded plant will benefit Big Bear Valley, recognized as a “disadvantaged community,” by providing a new water source. Additionally, it will supply water to the Stanfield Marsh Wildlife and Waterfowl Preserve, supporting habitat sustainability and educational activities for the community and visitors. BBARWA hosted an Open house; about 240 residents attended.

Mr. Lawrence noted that a lesson learned from implementing the project was the slowdown caused by the reeducation process for new board members. He thanked the Committee for their support.

Committee member Hessler inquired about the disposal of brine pellets resulting from the Reverse Osmosis process. Mr. Lawrence responded, explaining their exploration of various markets for resale or donation, with a priority on identifying reuse possibilities. Following this, Convener Dennstedt commended BBARWA for their efforts and applauded the successful turnout at their recent Open House event. She sought clarification regarding community feedback, to which Mr. Lawrence indicated minor concerns from a few community members regarding project costs, microplastics, and PFAS, but noted that these concerns were addressed through during their presentation.

This item was for discussion purposes; no action was taken on Agenda Item No. 6.A.



B. INTEGRATED CLIMATE ADAPTATION AND RESILIENCY PROGRAM REGIONAL RESILIENCE PLANNING AND IMPLEMENTATION GRANT PROGRAM AWARD AND DEVELOPMENT OF THE SANTA ANA RIVER WATERSHED CLIMATE ADAPTATION AND RESILIENCE PLAN (SC#2024.2)

Rachel Gray provided a presentation titled Round 1 Regional Resilience Grant Program Award – Santa Ana River Watershed Climate Adaptation Plan (SARWCRP) contained in the agenda packet on pages 53-66.

SAWPA, along with co-applicants Soboba Band of Luiseño Indians (Soboba) and the Inland Southern California Climate Collaborative (ISC3), successfully secured a \$644,190 grant from the Governor’s Office of Planning and Research (OPR) for the development of SARWCARP. Soboba will contribute expertise in Tribal Perspective and Tribal Engagement, while ISC3 will primarily focus on Stakeholder and Community Engagement. The planning process will be overseen by two groups: the Watershed Resilience Community Advisory Panel (WRCAP) and the Watershed Resilience Technical Advisory Committee (WRTAC). These groups will facilitate implementation planning by ensuring that the appropriate stakeholders and partners are included in resilience portfolios. The phases of SARWCARP development were presented, highlighting Community and Stakeholder Engagement, Vulnerability Assessment, Adaptation Analysis, and Implementation Planning.

A grant term timeline was presented. SAWPA is working toward the executing grant application and sub-agreements. An RFP is scheduled for release within the next month to aid in plan development.

This item was for discussion purposes; no action was taken on Agenda Item No. 6.B.

C. OVERVIEW OF HEADWATERS RESILIENCY PARTNERSHIP AND FOREST FIRST JOINT PRESENTATION BETWEEN SAWPA AND SAN BERNARDINO VALLEY MUNICIPAL WATER DISTRICT (SC#2023.9)

Ian Achimore provided a presentation titled Forest First and Headwaters Resiliency Partnership Overview, contained in the agenda packet on pages 73-79. An overview of the Forest First partnership between SAWPA, the Cleaveland National Forest, and the San Bernardino National Forest was given. The Forest First next steps include ongoing coordination with national forests to identify mutually beneficial projects, regular engagement with the forest service for operations and monitoring activities like stream water quality and aerial imagery, involving additional partners such as downstream water agencies and municipalities, and collaborating with national forests on the Santa Ana River Watershed Climate Adaptation and Resilience Plan.

Chris Jones, from San Bernardino Valley Municipal Water District, provided a presentation titled Headwaters Resiliency Partnership, contained in the agenda packet on pages 81-95. An overview of the headwaters management efforts was provided.

This item was for discussion purposes; no action was taken on Agenda Item No. 6.C.

D. WEATHER MODIFICATION PILOT PROGRAM UPDATE (SC#2024.4)

Rachel Gray provided a presentation titled Santa Ana River Weather Modification Pilot Program Status Update, contained in the agenda packet on pages 99-121. A brief background on the beginning of the Weather Modification Pilot Program (Pilot Program)



was provided. The pilot project began on November 15, 2023.

SAWPA is working with the Desert Research Institute (DRI) on the validation aspect of the Pilot Program. DRI will independently review the cloud seeding pilot operations and verify the resulting increases in precipitation and stream flows.

This item was for discussion purposes; no action was taken on Agenda Item No.6.D.

7. GENERAL MANAGER REPORT

No additional comments.

8. CHAIR'S COMMENTS/REPORT

No additional comments.

9. COMMITTEE MEMBERS' COMMENTS

Committee member Robertson would like to provide a future presentation to this Committee regarding the Inland Empire Utilities Agency and the City of Rialto's recycled water collaboration efforts.

10. REQUEST FOR FUTURE AGENDA ITEMS

There were no comments.

11. ADJOURNMENT

The meeting ended at 12:29 p.m.

APPROVED: November 21, 2024

Brenda Dennstedt, Convener

Attest:

Zyanya Ramirez, Executive Assistant II



...A United Voice for the Santa Ana River Watershed

**OWOW STEERING COMMITTEE
REGULAR MEETING MINUTES
MAY 23, 2024**

Committee Members	
<u>Santa Ana Watershed Project Authority Representatives</u>	
Brenda Dennstedt, Convener, Western Municipal Water District	Present
T. Milford Harrison, San Bernardino Valley Municipal Water District	Present
<u>County Supervisor Representatives</u>	
Vicente Sarmiento, Orange County Board of Supervisors	Absent
Karen Spiegel, Riverside County Board of Supervisors	Absent
Jesse Armendarez, San Bernardino County Board of Supervisors	Absent
<u>County Municipal Representatives</u>	
Deborah Robertson, Mayor, City of Rialto	Absent
Wes Speake, Councilmember, City of Corona	Present
Nicholas Dunlap, Mayor Pro Tem, City of Fullerton	Absent
<u>Business Community Representative</u>	
James Hessler, Director of West Coast Operations, Altman Plants	Present
<u>Environmental Community Representative</u>	
Garry W. Brown, President, Orange County Coastkeeper	Absent
<u>Regional Water Quality Control Board Representative</u>	
William Ruh, Regional Water Quality Control Board	Present
Others Present	
<u>SAWPA COMMISSIONERS:</u>	Bruce Whitaker, Jasmin Hall, Gil Botello
<u>SAWPA STAFF:</u>	Ian Achimore, Jeff Mosher, Marie Jauregui, Pete Vitt, Rachel Gray, Rick Whetsel; Sara Villa, Zyanya Ramirez
<u>OTHERS PRESENT:</u>	Adekunle Ojo, San Bernardino Valley Municipal Water District; Amber Smalley, Riverside County; Andrew D. Turner, Lagerlof LLP; Christy Suppes, Orange County Public Works; Eddie Lin, Inland Empire Utilities Agency; Melissa Matlock, Western Municipal Water District; Toyasha Sebbag, City of Rialto.

The OWOW Steering Committee meeting was called to order at 11:00 a.m. by Convener Brenda Dennstedt, Convener, at the Santa Ana Watershed Project Authority, 11615 Sterling Avenue, Riverside, CA 92503.



1. **CALL TO ORDER | PLEDGE OF ALLEGIANCE**

2. **ROLL CALL**

3. **PUBLIC COMMENTS**

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

4. **ITEMS TO BE ADDED OR DELETED**

5. **CONSENT CALENDAR**

A. APPROVAL OF MEETING MINUTES: MARCH 28, 2024

B. PROPOSITION 1 STATUS UPDATE (SC#2024.5)

Due to lack of quorum, Agenda Item No. 5 will be brought before the Committee for consideration at a future meeting.

6. **BUSINESS ITEMS**

A. **INTEGRATED CLIMATE ADAPTATION AND RESILIENCY PROGRAM REGIONAL RESILIENCE PLANNING AND IMPLEMENTATION GRANT PROGRAM: DEVELOPMENT OF THE SANTA ANA WATERSHED CLIMATE ADAPTATION AND RESILIENCE PLAN (SC#2024.6)**

Rachel Gray provided a PowerPoint presentation titled Round 1 Regional Resilience Grant Program – ClimateShed Resilience contained in the agenda packet on pages 37-46.

In the OWOW Steering Committee meetings held on July 27, 2023, and November 16, 2023, staff outlined a strategy to enhance the One Water One Watershed (OWOW) Plan with a new Regional Climate Adaptation and Resilience Plan (Plan). This Plan aims to address climate risks such as drought and wildfire by defining watershed-scale vulnerabilities, developing adaptation strategies, and creating a portfolio of resilience projects. Stakeholder input will be crucial throughout the adaptation analysis phase, with the Watershed Resilience Technical Advisory Committee (WRTAC) focusing on programmatic approaches and prioritization criteria, while the Watershed Resilience Community Advisory Panel (WRCAP) will ensure community engagement. The goal is to integrate equity outcomes for underrepresented communities and forge broad-based partnerships to advance shared interests across the watershed.

Staff applied for and received grant funding from the Integrated Climate Adaptation and Resiliency Program Regional Resilience Planning and Implementation Grant Program. This funding will support multi-beneficial projects aimed at increasing watershed resilience. The regional Plan will highlight the interconnectivity of projects, considering affordability and climate vulnerabilities faced by underrepresented communities, and establish connections between resilience initiatives and equitable outcomes. The RRGP will invest in capacity building, planning, and project implementation to address climate risks. Both the WRTAC and WRCAP will guide the planning process, incorporating a range of perspectives to ensure effective and collaborative resilience strategies.

Jeff Mosher pointed out that the plan is not a SAWPA plan, it is designed for member agencies and aims to position everyone in the watershed for future state grants.

This item was for discussion purposes; no action was taken on Agenda Item No. 6.A.



B. OVERVIEW OF GRANT APPLICATION FOR INTEGRATED CLIMATE ADAPTATION AND RESILIENCY PROGRAM ADAPTATION PLANNING FUNDING (SC#2024.7)

Ian Achimore provided a presentation titled Overview of Grant Application for Integrated Climate Adaptation and Resiliency Program Adaptation Planning Funding contained in the agenda packet on pages 49-60.

SAWPA staff is applying for a grant from the Governor's Office of Planning and Research (OPR) Integrated Climate Adaptation and Resiliency Program's (ICARP) Adaptation Planning Grant Program (APGP), with a submission deadline of June 3, 2024. This grant supports tribal, local, and regional climate-related planning, aids in identifying climate resilience priorities, and funds resilient infrastructure projects statewide. The grant amounts range from \$100,000 to \$650,000, with a total of \$9,500,000 available, and no local match is required.

The grant application aligns with state priorities and aims to secure future funding opportunities. The proposed project is the Santa Ana River Watershed Regional Invasive Species Management Plan (the plan), focusing on addressing the invasive species *Arundo donax* (Giant reed). The project will include public outreach on invasive species, analysis of their ecological impacts, creation of a strategic plan and workgroup, and aerial mapping for monitoring. The plan aims to request \$650,000 in funding and is scheduled to start in December 2024 and finish in December 2026. Removing *Arundo donax* is expected to save approximately 20 acre-feet of water per year.

Jeff Mosher noted that the grant application, approved by the SAWPA Commissioners, is part of ongoing watershed-wide *Arundo* management efforts, aimed at accessing regional climate adaptation funding. He stressed the need for a regional approach, as previous efforts have been fragmented. Mr. Achimore added that they are recruiting partners for the plan, with mapping showing more work is needed than initially thought. The plan will form a regional coalition and create a workgroup and strategic plan to coordinate efforts across multiple entities. The application is due June 3, 2024, with awards expected by summer 2024.

Committee member Milford Harrison raised concerns about focusing on studies instead of immediate *Arundo* removal, questioning why efforts aren't solely on removal. Mr. Mosher explained that while individual projects have been done, a regional approach has been missing. He noted that some organizations, like OCWD, have been active, but others, like the Army Corps of Engineers, are just becoming interested. He also mentioned that CAL FIRE has its own program, and a regional collaboration would be more effective. Committee member Harrison then asked if *Arundo* travels past Seven Oaks Dam, and Jeff replied that it's being investigated, but the dam likely acts as a barrier, making it logical to start removal efforts there. Committee member Speake agreed, stressing the importance of proper *Arundo* removal and treatment, especially after storms.

Convener Brenda Dennstedt added that *Arundo* is fast-growing, abrasive, highly flammable, and consumes large amounts of water. Committee member Harrison suggested that using drones would be a good method for monitoring and treating the plant, with Mr. Mosher agreeing that the master plan would incorporate advanced methods.

This item was for discussion purposes; no action was taken on Agenda Item No. 6.B.



C. SANTA ANA RIVER WATERSHED WEATHER MODIFICATION PILOT PROGRAM UPDATE (SC#2024.8)

Rachel Gray provided a presentation titled Santa Ana River Watershed Weather Modification Pilot Program Status Update contained in the agenda packet on pages 125-154.

On July 19, 2022, the SAWPA Commission awarded contracts to North American Weather Consultants Inc. for the Santa Ana River Watershed Weather Modification Pilot Project and to the Desert Research Institute (DRI) for independent validation of the project. The four-year pilot, running from November 15 to April 15 each winter starting in 2023, focuses on cloud seeding in four target areas to increase snow precipitation. Since the project's initiation in August 2022, site access agreements were secured, biological surveys were completed, and cloud seeding units were installed. The first operational year began in November 2023, with 12 storms seeded, and lessons learned included improved communication with fire departments, public transparency, and equipment troubleshooting.

DRI is conducting independent validation of the cloud seeding project, focusing on evaluating operations, analyzing snow chemistry, calculating the snow-water equivalent, conducting statistical analyses, and assessing stream flow impacts to measure the effectiveness of increasing precipitation and stream flows. Results are expected in June, with snow reports from ski resorts contributing to the analysis. A draft schedule will be ready in June, and mobilization for year two will begin once the results are available.

Committee member Bill Ruh asked if there was a plan to inform local cities about cloud seeding. Jeff Mosher responded that they are notifying the county supervisors, but specific outreach to individual cities isn't planned beyond making the information available. Convener Brenda Dennstedt emphasized the importance of being prepared to answer questions from the public.

This item was for discussion purposes; no action was taken on Agenda Item No. 6.C.

D. DISADVANTAGED COMMUNITIES INVOLVEMENT PROGRAM: RESOLUTION REGARDING 2021 URBAN AND MULTI-BENEFIT DROUGHT RELIEF GRANT PROGRAM SET-ASIDE FUNDING (SC#2024.9)

Rick Whetsel provided a presentation titled DWR DACI Program Set-Aside Funding, 2021 Urban and Multi-benefit Drought Relief Grant Program, contained in the agenda packet on pages 159-172.

The SAWPA Commission authorized the submission of a portfolio of water infrastructure projects for up to \$5 million in Proposition 1 IRWM Disadvantaged Community Involvement (DACI) Grant Set-Aside funding, as part of the 2021 Urban and Multi-benefit Drought Relief Grant Program. These projects aim to improve water supplies in disadvantaged communities, addressing drought impacts and protecting public health and wildlife. Approved projects include installation of a new water tank by Box Springs Mutual Water Company, rehabilitation of wells for the City of Colton, Devore Water Company, Marygold Mutual Water Company, and the City of Fullerton, with completion dates ranging from 2023 to 2024. While most projects are on schedule, delays have occurred in Colton and Fullerton due to unexpected issues. To mitigate delays, SAWPA is working with project partners and the Department of Water Resources (DWR) to extend the grant timeline to June 2026 and to replace the City of Colton's project with one



of similar scope and benefit.

Committee member Milford Harrison thanked everyone on staff and noted that progress on the projects is excellent. He inquired about the likelihood of getting an extension from DWR. Mr. Whetsel responded that preliminary discussions with DWR indicate they are generally supportive of the extension. The extension agreement has been submitted, but approval is taking some time.

This item was for discussion purposes; no action was taken on Agenda Item No.6.D.

7. GENERAL MANAGER REPORT

No additional comments.

8. CHAIR'S COMMENTS/REPORT

No additional comments.

9. COMMITTEE MEMBERS' COMMENTS

Convener Brenda Dennstedt proposed discussing the organization of a walkthrough of one of the projects at a future OWOW Steering Committee meeting. Jeff Mosher agreed and said they would send out a few options for consideration.

10. REQUEST FOR FUTURE AGENDA ITEMS

There were no comments.

11. ADJOURNMENT

The meeting ended at 12:16 p.m.

APPROVED: November 21, 2024

Brenda Dennstedt, Convener

Attest:

Zyanya Ramirez, Executive Assistant II

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...A United Voice for the Santa Ana River Watershed

OWOW STEERING COMMITTEE
REGULAR MEETING MINUTES
September 26, 2024

Committee Members	
<u>Santa Ana Watershed Project Authority Representatives</u>	
Brenda Dennstedt, Convener, Western Municipal Water District	Present
T. Milford Harrison, San Bernardino Valley Municipal Water District	Present
<u>County Supervisor Representatives</u>	
Vicente Sarmiento, Orange County Board of Supervisors	Absent
Karen Spiegel, Riverside County Board of Supervisors	Absent
Jesse Armendarez, San Bernardino County Board of Supervisors	Absent
<u>County Municipal Representatives</u>	
Deborah Robertson, Mayor, City of Rialto	Absent
Wes Speake, Councilmember, City of Corona	Present
Nicholas Dunlap, Mayor Pro Tem, City of Fullerton	Absent
<u>Business Community Representative</u>	
James Hessler, Director of West Coast Operations, Altman Plants	Present
<u>Environmental Community Representative</u>	
Garry W. Brown, President, Orange County Coastkeeper	Absent
<u>Regional Water Quality Control Board Representative</u>	
William Ruh, Regional Water Quality Control Board	Present
Others Present	
<u>SAWPA COMMISSIONERS:</u>	Bruce Whitaker, Jasmin Hall, Gil Botello
<u>SAWPA STAFF:</u>	Ian Achimore, Jeff Mosher, Marie Jauregui, Pete Vitt, Rachel Gray, Rick Whetsel; Sara Villa, Zyanya Ramirez
<u>OTHERS PRESENT:</u>	Adekunle Ojo, San Bernardino Valley Municipal Water District; Amber Smalley, Riverside County; Andrew D. Turner, Lagerlof LLP; Christy Suppes, Orange County Public Works; Eddie Lin, Inland Empire Utilities Agency; Melissa Matlock, Western Municipal Water District; Toyasha Sebbag, City of Rialto.

The OWOW Steering Committee meeting was called to order at 11:00 a.m. by Brenda Dennstedt, Convener, at the Santa Ana Watershed Project Authority, 11615 Sterling Avenue, Riverside, CA 92503.



1. **CALL TO ORDER | PLEDGE OF ALLEGIANCE**

2. **ROLL CALL**

3. **PUBLIC COMMENTS**

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

4. **ITEMS TO BE ADDED OR DELETED**

5. **CONSENT CALENDAR**

A. APPROVAL OF MEETING MINUTES: MARCH 28, 2024 and MAY 23, 2024

Due to lack of quorum, Agenda Item No. 5 will be brought before the Committee for consideration at a future meeting.

6. **BUSINESS ITEMS**

A. **SANTA ANA RIVER WATERSHED SUSTAINABILITY ASSESSMENT (SC#2024.10)**

Haley Gohari provided a PowerPoint presentation titled Sustainability Assessment Review and Proposed Update contained in the agenda packet on pages 17-30.

The Santa Ana River Watershed Sustainability Assessment was developed to help decision-makers and stakeholders of the One Water One Watershed (OWOW) Plan evaluate progress toward achieving six goals, including water resource resilience, high-quality water access, environmental protection, community engagement, education, and improved data tracking. Initially published in 2020 as part of the California Water Plan Update 2018, the Assessment uses indicators to measure sustainable water management and track changes over time.

Currently, SAWPA is working with member agencies to refine these indicators, aiming to create quantifiable measures that reflect watershed health, resource management effectiveness, and collaboration efforts. The indicators are designed to be qualitative, straightforward, informative, and accessible, providing annual updates to support watershed and state agencies in resource management and fostering public trust.

Convener Dennstedt inquired on the data being collected for PFAS. Mr. Mosher stated that data collection and sharing are complicated due to potential litigation risks, leading to a more cautious approach in public reporting. PFAS assessments are being handled through a limited public project to manage these concerns. The science surrounding PFAS is still developing, and it's important to clarify that not all aspects are being tested yet. The team has access to data on salinity, desalination, and water quality, which will help monitor watershed health. This data will be used to assess progress and adjust strategies as necessary to maintain sustainability.

This item was for discussion purposes; no action was taken on Agenda Item No. 6.A.

B. **INTEGRATED CLIMATE ADAPTATION AND RESILIENCY PROGRAM REGIONAL RESILIENCY PLANNING AND IMPLEMENTATION GRANT PROGRAM: DEVELOPMENT OF THE SANTA ANA RIVER WATERSHED CLIMATE ADAPTATION AND RESILIENCY PLAN - WORKFLOW (SC#2024.11)**

Rachel Gray provided a presentation titled Development of the Santa Ana River Watershed Climate Adaptation and Resilience Plan Workflow contained in the agenda packet on pages 33-44.



Staff is developing a Regional Climate Adaptation and Resilience Plan to complement the One Water One Watershed (OWOW) Plan, aiming to address watershed-scale climate risks, adaptation strategies, and resilience projects. The Plan will focus on equity for underrepresented communities, strengthen partnerships, and provide a framework for multi-beneficial projects that enhance watershed resilience. It also targets securing future funding for these projects.

Staff applied for and received grant funding from the Integrated Climate Adaptation and Resiliency Program to support this effort. The plan will involve a diverse set of stakeholders, with key roles from SAWPA (project oversight), ISC3 (community engagement), and Soboba (tribal involvement), alongside a consultant to assist with agency coordination and data collection. The near-term schedule includes executing agreements in 2024, with consultant selection planned for December 2024.

Convener Dennstedt noted that the Metropolitan Water District of Southern California (MWD) is currently undertaking a similar water-related process and inquired if staff was monitoring it. Mr. Mosher responded that they have received feedback from the Western Municipal Water District (WMWD), but clarified that their process differs. Rather than developing this initiative for SAWPA, the focus is on the specific needs of their region, with the goal of securing future climate resiliency grant funding. This approach centers on engaging member agencies, local agencies, community-based organizations, as well as the flood control district, councils of government, and other stakeholders. Consultants will assist with outreach to ensure broad and effective engagement across these groups.

She suggested presenting tribal engagement efforts to the Committee to allow an invitation to be extended to those interested in more in-depth involvement. She also noted that member agencies want to know if community-based organizations within their service areas are being engaged, as this would help clarify jurisdictional boundaries. She emphasized the importance of direct outreach to discuss participation opportunities. Mr. Mosher agreed, stating they plan to work closely with community groups, building on existing efforts and expanding involvement. Ms. Dennstedt proposed offering refreshments and food to enhance turnout.

This item was for discussion purposes; no action was taken on Agenda Item No. 6.B.

C. SANTA ANA RIVER TRAIL AND PARKWAY UPDATE (SC#2024.12)

Ian Achimore provided a presentation titled Santa Ana River Trail and Parkway Update contained in the agenda packet on pages 47-64.

From 2006 to 2018, an MOU between Orange, Riverside, and San Bernardino counties, along with local cities, the Wildlands Conservancy, and SAWPA, coordinated efforts for the Santa Ana River Trail and Parkway (SARTP), a 100-mile trail from the San Bernardino National Forest to Huntington Beach. SAWPA joined the SARTP Policy Advisory Group (PAG) and led the staff-level workgroup in 2013, until PAG's replacement by the Advisory Group to the California Coastal Conservancy, prompted by Senate Bill 1390, which established the Santa Ana River Conservancy (SARCON) in 2014.

SAWPA's current SARTP roles include representation on the Advisory Group, managing a 25-year trail maintenance agreement with Riverside County Regional Park and Open-Space District, and coordinating on trail segment construction. SAWPA may also expand its contributions by advocating for SARTP funding, assisting in landowner coordination for construction, and creating a dedicated SARTP website for updates.



Convener Dennstedt suggested adding a future agenda item focused on the impact of fires on the watershed, specifically how fire-affected areas that might influence water quality as runoff flows into the Santa Ana River. She proposed analyzing the full scope of the watershed's fire challenges, how these may be addressed in the climate adaptation plan, and their potential impact on related projects.

This item was for discussion purposes; no action was taken on Agenda Item No. 6.C.

D. SANTA ANA RIVER WATERSHED CLOUD SEEDING PILOT PROGRAM: YEAR 1 SUMMARY (SC#2024.13)

Rachel Gray provided a presentation titled Santa Ana River Watershed Cloud Seeding Pilot Program: Year 1 Summary, contained in the agenda packet on pages 69-88.

The SAWPA Commission launched the Santa Ana River Watershed Cloud Seeding Pilot Program with contracts awarded to North American Weather Consultants, Inc. (NAWC) for operations and the Desert Research Institute (DRI) for independent validation. This four-year project, running from November 15 to April 15 each winter season, aims to increase precipitation in higher elevation areas through cloud seeding. Year 1 operations (2023-2024) included extensive preparation, such as site agreements, biological surveys, and equipment setup. The program utilized 15 seeding units, conducting operations during 13 storm events over 22 days, using 17,732 grams of silver iodide (AgI). There was one suspension period due to heavy flooding and another inactive period due to wind patterns.

DRI is currently conducting an independent evaluation of the program's effectiveness, including snow chemistry analysis, precipitation assessment, and stream flow analysis. Results from DRI's validation efforts will be presented by August 2024. Based on Year 1 findings, recommendations for Year 2 include improving communication with local fire departments, training local technicians, and considering adjustments to site locations. A detailed schedule outlines the continuation of operations and validation tasks through 2025, with annual reports and updates on the project's progress.

Mr. Mosher stated that due to fire burn scars it is most likely that there will be a suspension of the program for Year 2.

This item was for discussion purposes; no action was taken on Agenda Item No.6.D.

7. GENERAL MANAGER REPORT

No additional comments.

8. CHAIR'S COMMENTS/REPORT

No additional comments.

9. COMMITTEE MEMBERS' COMMENTS

No additional comments.

10. REQUEST FOR FUTURE AGENDA ITEMS

Convener Dennstedt requested the following:

- The impact of recent fires on the watershed, specifically how fire-affected areas that might influence water quality as runoff flows into the Santa Ana River.
- A site visit to an OWOW project to allow the Committee to observe the progress and work that has been done in person.



11. **ADJOURNMENT**

The meeting ended at 12:02 p.m.

APPROVED: November 21, 2024

Brenda Dennstedt, Convener

Attest:

Zyanya Ramirez, Executive Assistant II

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OWOW STEERING COMMITTEE MEMORANDUM NO. 2024.14

DATE: November 21, 2024
TO: OWOW Steering Committee
SUBJECT: Proposition 1 Round 2 Replacement Project
PREPARED BY: Marie Jauregui, Project Manager

RECOMMENDATION

Receive and file.

DISCUSSION

On February 7, West Valley Water District (WVWD) reached out to SAWPA to let us know that they have not found any lead service lines for their Proposition 1 Round 2 project – *Water Quality: Lead Service Line Replacement in the Bloomington DAC*. At that time, WVWD stated that they would be able to provide a definitive answer in April as to whether they could move forward with the project.

WVWD's project, located in the community of Bloomington which is their most economically disadvantaged community (DAC) area per the State's DAC mapping tool, would address water quality issues. The project would eliminate potential sources of lead by removing lead service lines and fittings, even on the portion that is owned by the property owner and replacing them at no cost to the owner. There are approximately 4,100 water service lines in the Bloomington DAC. Identifying the number of service lines owned by the property owners that are lead and in need of replacement was part of the initial inventory work performed under the project.

On April 1, WVWD notified SAWPA that they completed the service line inventory on customer-owned portions and found that there were no service lines that needed replacement. Thus, they would not be moving forward with the project. An official withdrawal letter was submitted to SAWPA on April 22.

On April 30, SAWPA staff reached out to the other three projects (City of Rialto, City of Santa Ana, and Eastern Municipal Water District) on the OWOW rating and ranking list that were eligible for the DAC funding that could replace the WVWD project. To be considered as a replacement project, the potential project will have to be able to be completed within the grant timeline (construction completed by December 2027) and still meet DWR's requirements for being a DAC project.

After several discussions with the three potential replacement projects, the City of Rialto was the project that was able to meet the requirements previously mentioned. We will be presenting an amendment to the Department of Water Resources to request replacing the WVWD project with the City of Rialto's project, *Septic to Sewer Residential Conversion Program*.

This project is located above the Rialto groundwater volatile organic compounds (VOCs) contaminant plume, the project will connect 12 residential properties to the City's sewer collection and treatment system. This will include the construction of 650 linear feet of sewer

lines, two manholes, the abandonment of the existing septic tank, and the installation of new sewer laterals per city standards. The project will help reduce potential surface and groundwater pollution from failing septic tanks and leach fields by collecting residential sewer flows and treating them at the City's Wastewater Treatment Plant.

CRITICAL SUCCESS FACTORS

- Administration of the OWOW process and plan in a highly efficient and cost-effective manner.

RESOURCE IMPACTS

The changes proposed will result in a DWR amendment. The SAWPA labor time associated with these changes will be charged to SAWPA's grant administration budget for Proposition 1 Round 2 grant program and sufficient funding has been budgeted for such changes.

Attachments:

1. None

OWOW STEERING COMMITTEE MEMORANDUM NO. 2024.15

DATE: November 21, 2024

TO: OWOW Steering Committee

SUBJECT: Amendment to the OWOW Steering Committee Governance Document – Appointment of Alternate Representatives

PREPARED BY: Jeff Mosher, General Manager

RECOMMENDATION

It is recommended that the OWOW Steering Committee recommend to the SAWPA Commission the amendment to the Santa Ana IRWMP “One Water One Watershed” Governance document dated January 15, 2013, allowing for the appointment of alternate representatives.

DISCUSSION

Currently, the Santa Ana IRWMP “One Water One Watershed” Governance document dated January 15, 2013 (Governance Document), does not allow for alternate representatives to the OWOW Steering Committee. To ensure consistent representation, facilitate continuity, and enhance decision-making capabilities during times when primary members may be unavailable, it is recommended that the Governance Document be amended to allow for the appointment of alternate Committee members.

- **Designation of Alternates:** Each Steering Committee member may have one alternate who is familiar with committee topics and decision-making responsibilities.
- **Scope of Responsibilities:** Alternates will have the authority to participate fully in committee discussions and decisions when serving in the absence of the primary member.
- **Documentation Requirements:** Each appointment, including the designated alternate, should be documented in writing and submitted to the Steering Committee Secretary.

According to the Governance Document, the Steering Committee can recommend amendments to the SAWPA Commission. However, these proposed amendments will not take effect unless they are approved by the SAWPA Commission.

The revised Governance Document will be presented for formal approval and execution at the next regular SAWPA Commission Board meeting scheduled for December 3, 2024.

Attachments:

1. Amended Governance Document

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Santa Ana IRWMP “One Water One Watershed” Governance

Revised: ~~December 3, 2024~~ January 15, 2013

In developing the One Water One Watershed (OWOW) Integrated Regional Water Management IRWM Plan (the Plan) for the Santa Ana River, unlike other integrated regional water management planning approaches, every effort has been made to allow the key discussions of major water resource issues, concerns, problems, goals and objectives and potential solutions to originate and be first fully vetted at the stakeholder level – the stakeholders being the local agencies, organizations, and other interested parties within the Santa Ana River Watershed Region. By expanding the involvement and collaboration to the on-the-ground level, greater buy-in and support were expected and realized for this planning development process. Consequently, if one were to ask where the governance originates for the Santa Ana River Watershed Region OWOW process, we believe the identification of issues starts from the grass-roots level, the foundation of a decentralized and collaborative “big tent” approach.

SAWPA Commission

The Santa Ana Watershed Project Authority Commission (the Commission) and SAWPA staff shall be responsible for all administrative oversight for the Plan, and for coordinating all on-going administrative responsibilities associated with its implementation including arranging for meetings of the OWOW Steering Committee, preparing agendas, taking and distributing minutes of the meetings and when directed by the SAWPA General Manager, preparing staff reports, and other related duties. The Commission shall review the Plan for compliance with applicable laws and guidelines. In the event that no issues or inconsistencies with the Plan or project selection process are detected, the Commission shall approve the Plan and the Project Prioritization as submitted by the Steering Committee. Should the Commission determine that the Plan or a specific selected portfolio of projects fails to meet applicable laws and guidelines, it will refer the Plan back to the Steering Committee for further revision and subsequent re-submittal to the Commission for reconsideration and ratification.

OWOW Steering Committee

The OWOW Steering Committee shall be constituted of eleven (11) members from the three counties (Orange County, Riverside and San Bernardino) that are within the Santa Ana River Watershed regional planning area. The Steering Committee members shall serve terms of four (4) years with staggered end dates, as described below. The following describes the composition of the Steering Committee:

- One (1) Supervisor from Orange County;
- One (1) Supervisor from Riverside County;
- One (1) Supervisor from San Bernardino County;
- One (1) Mayor or City Council Member from a City within the Region within Orange County;
- One (1) Mayor or City Council Member from a City within the Region within Riverside County;
- One (1) Mayor or City Council Member from a City within the Region within San Bernardino County;
- Two (2) SAWPA Commission representatives shall be selected by the SAWPA Commission,
- One (1) member of the business community,
- One (1) member of the environmental community, and;
- One (1) member of the Regional Water Quality Control Board.

The SAWPA Commission selected and convened the initial Steering Committee members in coordination with the governmental and non-governmental entities being represented on the Steering Committee.

Steering Committee members may be appointed for multiple terms. *A seated member who loses the status upon which membership on the Steering Committee is based (e.g. leaving an elected office) will continue as a member of the Steering Committee through the balance of that Steering Committee term, or until such time that the entity that selected ~~him or her~~them selects a new representative.*

Each party shall appoint one (1) member of its governing body to serve on the OWOW Steering Committee as a Committee member and one (1) member to serve as its alternate Committee member. In the absence of the Committee member, the alternate Committee member shall act in their place.

Steering Committee members are selected as follows:

- SAWPA Commission representatives shall be selected by the SAWPA Commission.
- County Supervisors shall be selected by their respective boards
- City representatives shall be selected by a majority vote of the Council of Governments in the respective county:
 - Western Riverside County Council of Governments [WRCOG] – Riverside County;
 - San Bernardino Association of Governments [SANBAG] – San Bernardino County;
 - and
 - Orange County Council of Governments [OCCOG] – Orange County.
- Business and environmental community representatives shall be selected by a majority vote of the eight (8) governmental representatives on the Steering Committee based on an application process conducted during a public meeting.
- The Regional Water Quality Control Board representative is selected by the Santa Ana Regional Water Quality Control Board.

The Steering Committee shall be responsible for the development of the Plan. This includes receiving input from staff of their respective agencies as well as the SAWPA staff, providing direction for the development and long-term maintenance of the Plan, and development of a project prioritization process. The Steering Committee may make recommendations to the SAWPA Commission on proposed amendments to this governance document. Any such proposed amendments shall not take effect unless approved by the SAWPA Commission.

Meetings of the Steering Committee shall be scheduled at a regular time and place with an agenda posted prior to the meeting consistent with the Ralph M. Brown Act. The Steering Committee shall meet as needed with a minimum of at least an annual meeting. Minutes of the meetings shall be kept by SAWPA staff and posted on the OWOW website. Special meetings may be called and are subject to the provisions of the Ralph M. Brown Act.

In implementing the Steering Committee’s Goals and Objectives, the Steering Committee will:

- 1) Acknowledge that water resources of the Santa Ana River Watershed Region should be put to maximum beneficial use and that water waste must be prevented;

- 2) Acknowledge water as a public resource and respect existing agreements governing the water resources of the Santa Ana River Watershed Region;
- 3) Seek regional solutions for regional problems;
- 4) Encourage collaboration across boundaries and between multiple parties in project development; and
- 5) Consider sub-regional plans and planning efforts.

SAWPA Administration

The other arm to the governance of the OWOW process includes a management function conducted by the SAWPA staff. As the regional water agency for the Santa Ana River Watershed Region, SAWPA has had a long history of supporting regional collaborative efforts of this kind. As with previous IRWMP efforts for the Santa Ana River Watershed Region, SAWPA serves as support in providing administrative and facilitative assistance to the Steering Committee for the overall OWOW Plan development. In addition, SAWPA provides decision tools to assist the Steering Committee in decision-making processes, and performs significant public outreach and education about the integrated planning approach for the Santa Ana River Watershed Region.

As funding opportunities arise to implement OWOW, the Steering Committee will provide to the Commission an updated Plan and programmatic portfolio of projects specific to the funding opportunity. As noted above, the Commission will review the Plan and programmatic project portfolio to ensure that these fulfill the intent and requirements of the specific funding mechanism, any legislation authorizing the funding, all legal requirements as defined by the funding administrative agency, and equitable application of the benefits of the project portfolio across the entire region. Review of these items will be conducted by the Commission in a public meeting open to all interested stakeholders. It is understood that the Steering Committee will be responsible for the development and implementation of the project selection criteria.

Pillars

In order to manage the technical and planning work, the stakeholders are organized into separate workgroups or pillars centered around specific water resource management areas, issues, or concepts. They are identified and named by, and may be dissolved by, the Steering Committee. The Pillars support and assist SAWPA staff by, for example, offering creative ideas, conducting brainstorming, vetting ideas, assisting with regional coordination, assisting with outreach efforts, gathering or reviewing data or information, or developing or reviewing analysis. Each pillar consists of approximately 10 to 60 volunteers, depending on the topic and interest level. The volunteers include participants from local agencies, special districts, non-profit organizations, university officials, Native American Tribes, and private citizens.

Each pillar is led by a volunteer Co-Chairs with expertise in that specific aspect of water resources. The Pillar Co-Chairs are responsible for organizing, leading, and facilitating the workgroup process. The Pillar Co-Chairs are appointed as needed by the Steering Committee. No limits are placed on the duration someone may hold the position. A Pillar Co-Chair may only hold one chair position at a time.

Another role of the Pillar Co-Chairs is to provide support and input for SAWPA staff as they make recommendations to the Steering Committee about the Steering Committee OWOW goals and objectives. As technical experts in various water resource fields, the Pillar Co-Chairs provide

important feedback to the Steering Committee. The Pillar Co-Chairs periodically meet and act, in collaboration with SAWPA staff, as a technical management committee for reviewing and making recommendations to the Steering Committee and to the Commission relative to implementation of the

Plan and development of specific proposals for funding. The Pillar Co-Chairs also will support SAWPA staff as a technical management committee to provide oversight for OWOW projects.

Pillar work product development is a consensus process. Where there is disagreement on specific recommendations, the Steering Committee will provide guidance. Pillar groups will be added or subtracted based on the goals and objectives of the Steering Committee.

Pillar Co-Chairs, with assistance from SAWPA staff, are responsible for maintaining a notification list of interested stakeholders and notifying them of meetings. SAWPA staff will provide lists of interested stakeholders to Pillar Co-Chairs; however, Pillar Co-Chairs will post notifications. Pillar committee meetings shall be open to all interested parties.

Project Prioritization Development and Modification

Project prioritization for specific grant applications shall be established and maintained by the Steering Committee in coordination and with support from SAWPA staff. Stakeholders shall be allowed to comment on the development and maintenance of the project prioritization process. In addition, the Steering Committee’s role in project prioritization development and modification is to integrate regional water management goals and objectives for the region, to act as the oversight body that performs strategic decision making, crafts and adopts programmatic suites of project recommendations, and provides program advocacy necessary to optimize water resource protection for all.

AGREED TO:

SAWPA COMMISSION

OWOW STEERING COMMITTEE

OWOW STEERING COMMITTEE MEMORANDUM NO. 2024.16

DATE: November 21, 2024

TO: OWOW Steering Committee

SUBJECT: Proposition 1 Round 1 Project Highlight: Santa Ana Mountains Watershed Protection Project

PREPARED BY: Rache Gray, Water Resources and Planning Manager and Cyrus Galvan, US Forest Service

RECOMMENDATION

Receive and file.

DISCUSSION

The State provided funding from the Water Quality, Supply, and Infrastructure Improvement Act of 2014 (Proposition 1) to SAWPA to assist in financing the projects, which are included in and implemented in an adopted Integrated Regional Water Management Plan (IRWM Plan), pursuant to Chapter 7. Regional Water Security, Climate, and Drought Preparedness (Wat. Code, § 79740 et seq.).

The Cleveland National Forest has a year-round fire season and a well-documented history of frequent high-intensity fires around the project area. High-intensity and uncontrolled wildfires severely impair healthy watershed function and therefore, deleteriously affect water resources. Proposition 1 Round 1 funding in an amount of \$497,998 was awarded to Cleveland National Forest to implement the Santa Ana Mountains Watershed Protection Project.

In order to enhance watershed function and water resources, the project will establish approximately 650 acres of strategically located topographic and roadside fuel breaks on National Forest System lands along North Main Divide Road (approximately 635 acres) and the Trabuco Community Defense (approximately 15 acres) within the Santa Ana Mountains and watershed. The acreage covered in this project is an expansion on the currently established and maintained North Main, South Main, and Trabuco Defense fuel break systems that create a larger, more effective network of fuel breaks.

Cyrus Galvan, U.S. Forest Service's Fuels Technician will provide a project status update to the OWOW Steering Committee.

Attachments:

1. PowerPoint Presentation
2. Fire Effects Monitor (FEMO) Report – North Main Divide Rx Burn

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Forest Service
U.S. DEPARTMENT OF AGRICULTURE

Santa Ana Mountains Watershed Protection Project

Trabuco Ranger District
Cleveland National Forest



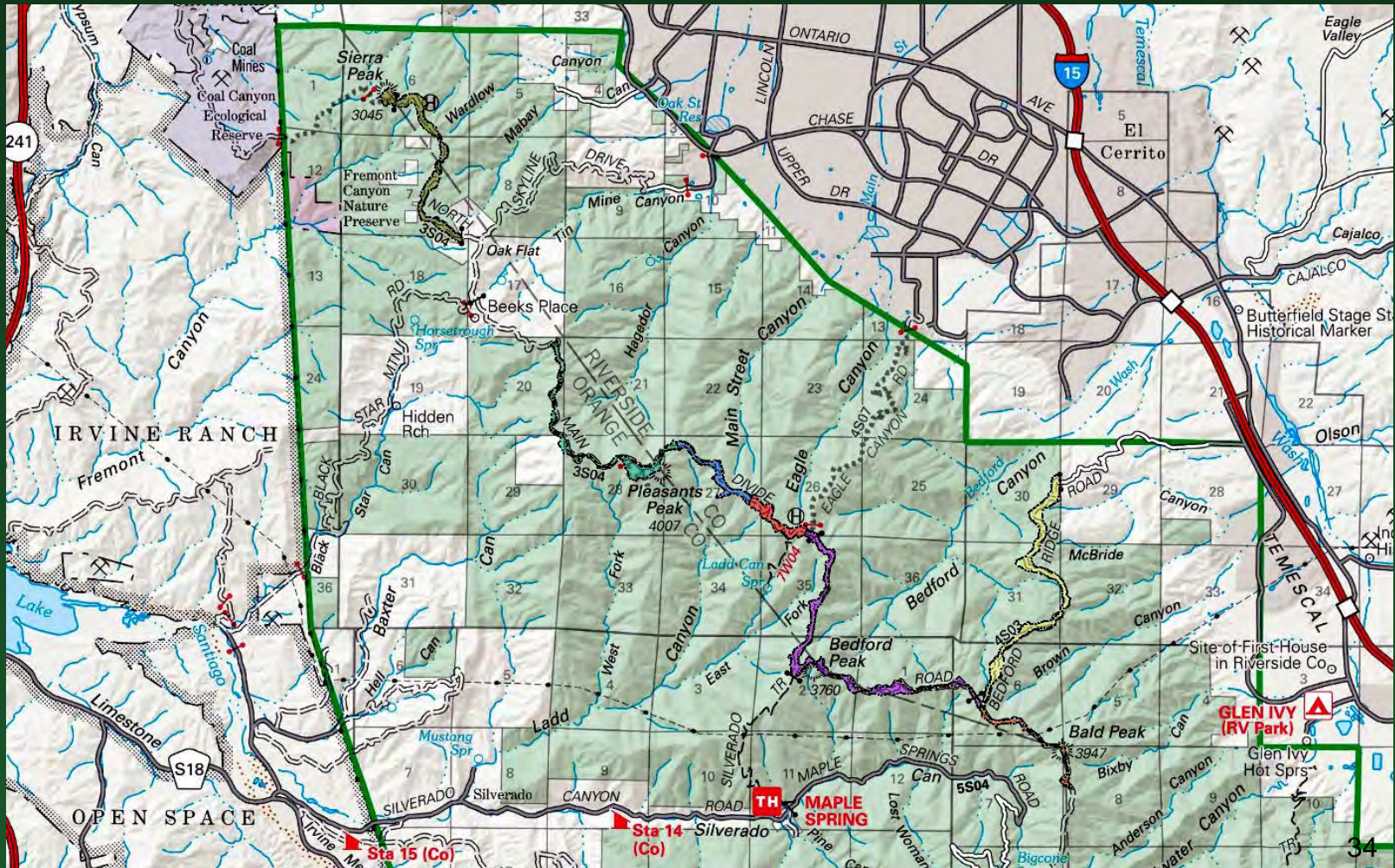
Santa Ana Mountains Watershed Protection Project

- Presentation Outline:
 - Project Description
 - Location
 - Benefits
 - Project Activities
 - Schedule
 - Progress to date
 - Challenges encountered
 - Virtual Site Visit – Pre and Post Treatment Pictures
 - Next Steps

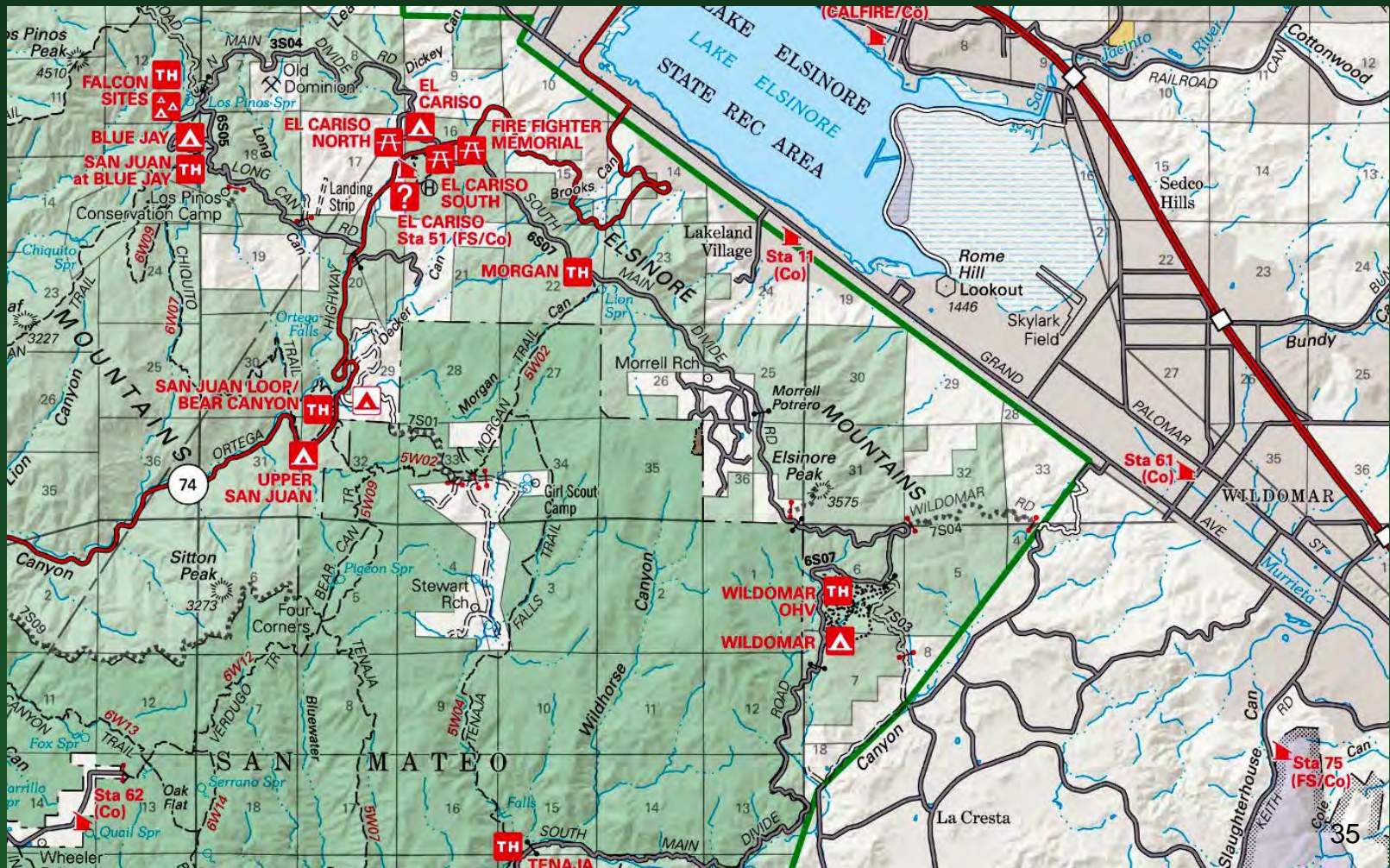
Santa Ana Mountains Watershed Protection Project

- Project Description:
- Purpose
 - Decreases the Risk of large wildfire event in the watershed.
 - Provide for a reduced zone of vegetation where fire suppression tactics will have greater efficacy and allow for firefighters to fight fire aggressively from a safe location.
- How:
 - Reestablishment of the North Main Divide Fuelbreak along the northern crest of the Santa Ana Mountains & a small portion of the South Main Divide Fuelbreak west of the community of Rancho Capistrano.

Santa Ana Mountains Watershed Protection Project



Santa Ana Mountains Watershed Protection Project



Santa Ana Mountains Watershed Protection Project

- Project Benefits:
 - Watershed and Ecosystem Protection
 - Maintains and Improves watershed function across affected HUC 6 watersheds in the project Area

Santa Ana Mountains Watershed Protection Project

- Project Activities:
 - Fuelbreak Construction – Contractor
 - Hand Cutting with Chainsaws Shrubs and Small Trees
 - Hand Piling of Cut Material (Activity Slash)
 - Wax Paper Covering of Piles
 - Timing: Early Summer to Late Fall
 - Prescribed Fire – Forest Service Fire Crews
 - Pile Burning of Activity Slash
 - Broadcast Burning of Residual Surface Fuels
 - Timing: Completed when Environmental Conditions Align, Typically Late Fall into the Early Spring.

Santa Ana Mountains Watershed Protection Project

- Project Schedule:

Activity	Acres	Est. Start	Est. Completion
Submit Smoke Management Plan	n/a	September 2022	October 2022
Cut and Pile Fuelbreak Segments	232	October 2022	November 2022
Prescribed Fire Pile Burning	232	December 2022	March 2023
Submit Smoke Management Plan	n/a	September 2023	October 2023
Cut and Pile Fuelbreak Segments	166	August 2023	September 2023
Prescribed Fire Pile Burning	166	December 2023	March 2024
Submit Smoke Management Plan	n/a	September 2024	October 2024
Cut and Pile Fuelbreak Segments	130	August 2024	September 2024
Prescribed Fire Pile Burning	130	December 2024	March 2025

Santa Ana Mountains Watershed Protection Project

- PROGRESS TO DATE:

- Smoke Management Plan Approved (Annually) – September
- Agreement between SAWPA and CNF Executed – June 21, 2021
- Layout and Mapping of Fuelbreak Segments – February/March 2022
- Contract Preparation - March/April 2022
- Solicitation, Award of Multi-year Contract– July to August 2022
- Notice to Proceed on Base Year Service Work – September 12, 2022
- Project Monitoring Plan Submitted – November 2022
- Base Year Service Work Completed - November 15, 2022

Santa Ana Mountains Watershed Protection Project

- CHALLENGES ENCOUNTERED

- Contracting

- Contractor Capacity

- Substantial Increases in Costs for Fuelbreak Construction

- Grant Funding for Contracting: \$487,164

- Unforeseen Contractual Cost Share: \$ 80,750 (2022)

- \$ 75,000 (2023)

- \$ 66,314 (2024)

- Total = \$222,064 (+ 45%)***

Santa Ana Mountains Watershed Protection Project

Virtual Site Visit

Santa Ana Mountains Watershed Protection Project



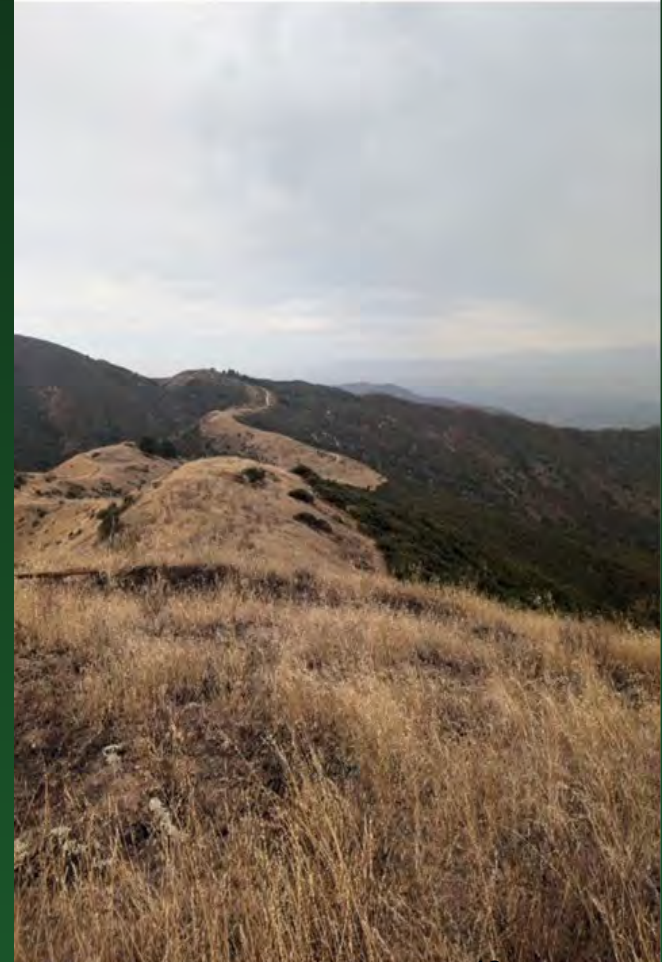
Santa Ana Mountains Watershed Protection Project (Unit 38)



Pre



Post Cut

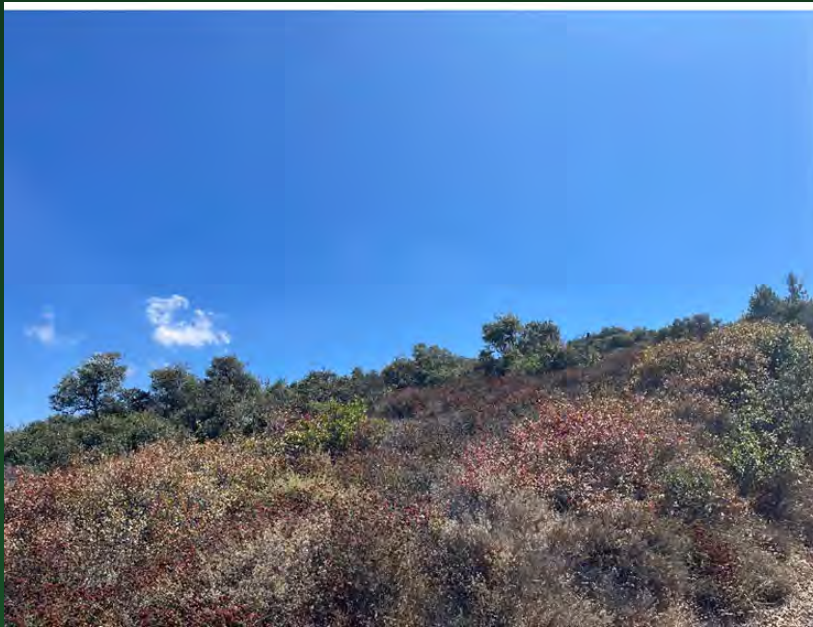


Post Rx

Santa Ana Mountains Watershed Protection Project



Santa Ana Mountains Watershed Protection Project



Pre



Post

Santa Ana Mountains Watershed Protection Project (Unit 40)



Pre



Post Cut



Post Rx ⁴⁶

Unit 40 Video

* Play Video

* FEMO Report

FEMO (t) Zagarella, Jeremy
Report - North Main Divide Rx Burn – Units 38, 40, 115

Date: 1/30/2024
40 acres completed

Rx objectives:

1. Reduce Grass fuel loading to 2 tons/acre or less
2. Burn 80-100% of 1hr fuels
3. Reduce 60-80% of 10hr fuels
4. Reduce 50-80% of 100hr fuels

Weather Observation Summary:

Time	Temp	Winds	Gusts	RH	DFM	PIG	Observations
930	62	E 3-5			9		Fuel Stick 10%
1000	63	E 4		31	9	30	Test Fire complete / Good Spot W
1030	64	E 6		29	9	30	
1100	63	E 8-10	12	27	9	30	
1130	68	SW 6	8	34	9	30	
1200							Fuel Stick 10%
1230	70	SW 2		26	8	40	
1330	69	SW 2		32	8	40	Fuel Stick 10% at 1300
1430	64	SW 6		39	11	20	Wind shift to E after weather
1530	64	Light		36	11	20	

Santa Ana Mountains Watershed Protection Project



Santa Ana Mountains Watershed Protection Project



Pre



Post



Post Rx

Santa Ana Mountains Watershed Protection Project



Pre



Post Cut



Post Rx

Santa Ana Mountains Watershed Protection Project



Santa Ana Mountains Watershed Protection Project



Pre



Post

Santa Ana Mountains Watershed Protection Project



Pre



Post

Santa Ana Mountains Watershed Protection Project



Santa Ana Mountains Watershed Protection Project



Pre



Post Cut



Post Rx

Santa Ana Mountains Watershed Protection Project



Pre



Post Cut



Post Rx ⁵⁶

Santa Ana Mountains Watershed Protection Project

- NEXT STEPS

- Winter 22/23 Prescribed Fire Pile Burning
- Exercise of Option years 1 (2023)
- Repeat for final year of project implementation.

Santa Ana Mountains Watershed Protection Project (Sierra Peak)



Pre



Post Cut

Santa Ana Mountains Watershed Protection Project (Pleasants Peak)



Pre



Post Cut

Santa Ana Mountains Watershed Protection Project

QUESTIONS?

FEMO (t) Zagarella, Jeremy

Report - North Main Divide Rx Burn – Units 38, 40, 115

Date: 1/30/2024

40 acres completed

Rx objectives:

1. Reduce Grass fuel loading to 2 tons/acre or less
2. Burn 80-100% of 1hr fuels
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Weather Observation Summary:

Time	Temp	Winds	Gusts	RH	DFM	PIG	Observations
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1130	68	SW 6	8	34	9	30	
1200							Fuel Stick 10%
1230	70	SW 2		26	8	40	
1330	69	SW 2		32	8	40	Fuel Stick 10% at 1300
1430	64	SW 6		39	11	20	Wind shift to E after weather
1530	64	Light		36	11	20	

Timeline

0900: 10hr fuel stick weighed resulting in 110g.

0930: Briefing – spot weather predicts all day in prescription weather

0930: Weather – 62 deg, Winds E 3-5mpg, FDFM 9%

1010: Test Fire completed - Weather – 63 deg, Winds E 4mph, RH 31%, FDFM 9%, PIG 30

1023: Smoke dispersal West / no cloud cover / 3-5ft Flame lengths / 80% of 1hr fuels consumed





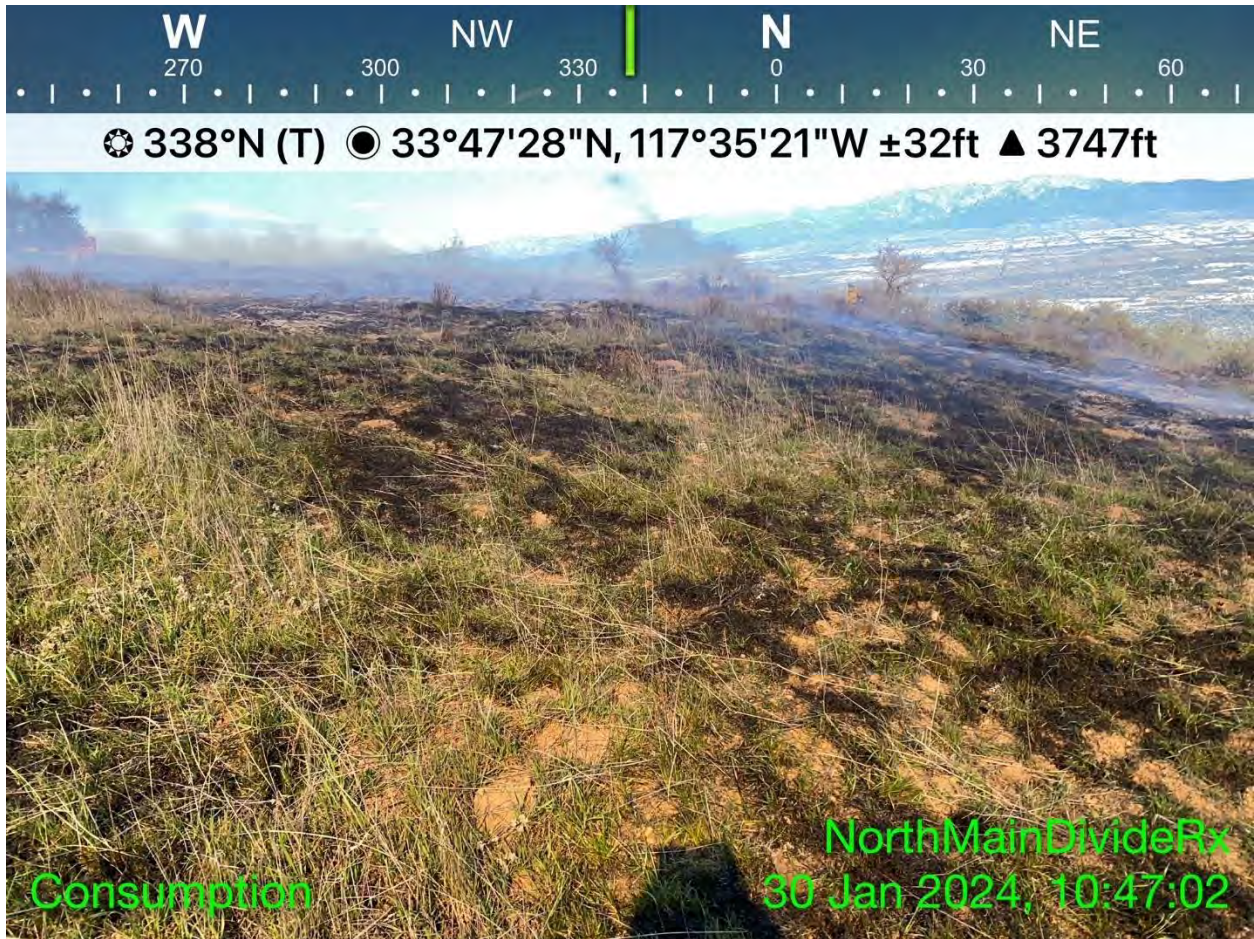
☉ 125°SE (T) ● 33°47'30"N, 117°35'23"W ±72ft ▲ 3767ft



Trabuco

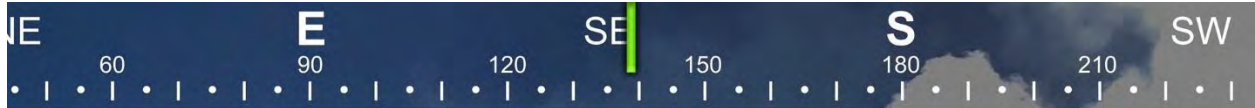
NorthMainDivideRx
30 Jan 2024, 10:26:18

1030: Weather 64 deg, Winds E 6mph, RH 29%, FDFM 9%, PIG 30



1051: 30ft Fire whirl observed and 2-3 torching pine trees observed on south unit (East winds gusts up to 13 mph)

1100: Weather 63 deg, Winds E 8-10 mph w/ gusts up to 12 mph, RH 27%, FDFM 9%, PIG 30



☉ 139°SE (T) ● 33°47'25"N, 117°35'16"W ±269ft ▲ 3671ft



1130: Weather 68 deg, Winds SW 6 mph w/ gusts up to 8mph, RH 34%, FDFM 9%, PIG 30



☀ 118°SE (T) ● 33°47'26"N, 117°35'16"W ±45ft ▲ 3642ft



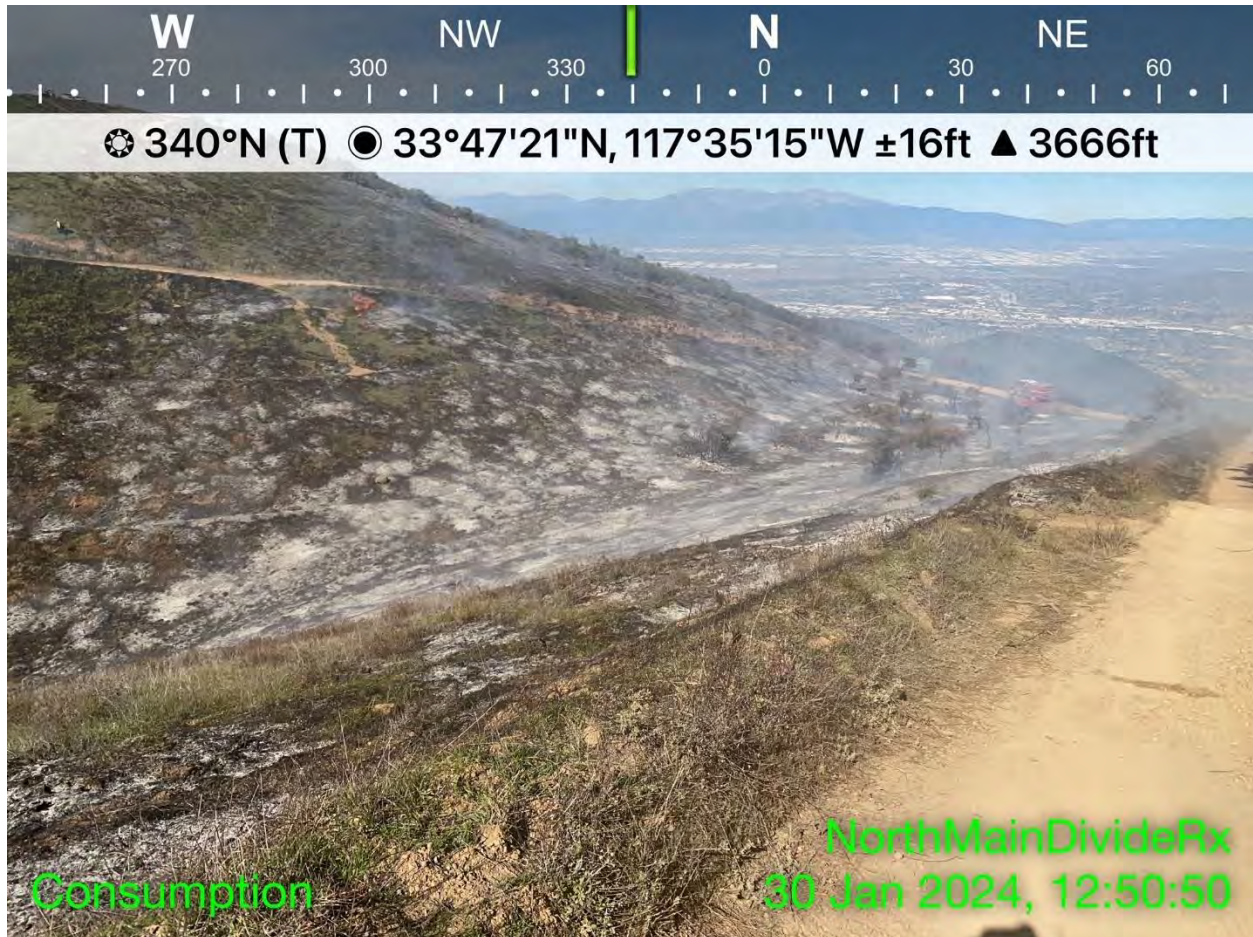
1145: Flame lengths 3-5' in shrub component, smoke dispersal to the NE aloft, smoke whirls observed

1200: Fuel Stick 10hr at 110

1210: Dust devils observed

1230: Weather 70 deg, Winds SW light and variable, RH 26%, FDFM 8%, PIG 40, Fuel Stick 10%

1248: Three pines torched, cloud cover forming (clear skied all day before)



1330: Weather 69 deg, Winds SW light and variable, RH 32%, FDFM 8%, PIG 40

1337: One pine torching, 20' flame lengths off piles and 2-4' flame lengths off standing shrub component



☀ 301°NW (T) ● 33°47'15"N, 117°35'8"W ±36ft ▲ 3676ft



Flame lengths

NorthMainDividePx
30 Jan 2024, 13:51:36

1430: Weather 64 deg, Winds SW 6mph, RH 39%, FDFM 11%, PIG 20

1440: Wind shift to E 5mph

1530: Weather 64 deg, Winds light variable, RH 36%, FDFM 11%, PIG 20

1600: Ignitions ceased

Fire Effects and Behavior Observations



Flame lengths in cut/pile component near pine stand – south unit *(Photo: Zagarella)*



South facing slope burn results (*Photo: Zagarella*)



Understory burn though pines on south unit (Photo: Zagarella)



Precautions taken to reduce or eliminate tree mortality (Photo: Zagarella)

OWOW STEERING COMMITTEE MEMORANDUM NO. 2024.17

DATE: November 21, 2024
TO: OWOW Steering Committee
SUBJECT: Quarterly Meeting Schedule for OWOW Steering Committee Meeting
PREPARED BY: Jeff Mosher, General Manager

RECOMMENDATION

Receive and file.

DISCUSSION

As part of our ongoing efforts to streamline operations, the Committee’s meeting schedule will transition to a quarterly format beginning in 2025. This change replaces the previous schedule of meeting every other month.

Meetings will be held on the fourth Thursday of February, May, September, and November.

OWOW Steering Committee Regular Meetings

Fourth Thursday of February, May, September, and November

(Note: All meetings begin at 11:00 a.m., unless otherwise noticed, and are held at SAWPA.)

February 2/27/2025 Regular Committee Meeting	May 5/22/2025 Regular Committee Meeting
September 9/25/2025 Regular Committee Meeting	November 11/20/2025 Regular Committee Meeting*

*Meeting date adjusted due to conflicting holiday.

In accordance with the Santa Ana IRWMP “One Water One Watershed” Governance document, the Committee is required to meet at least once each quarter. Should a meeting need to be rescheduled, we will be required to arrange an alternative date within the same quarter to remain in compliance.

Agendas and materials will continue to be provided in advance of each meeting. If additional sessions become necessary, we will coordinate as appropriate.

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OWOW STEERING COMMITTEE MEMORANDUM NO. 2024.18

DATE: November 21, 2024

TO: OWOW Steering Committee

SUBJECT: Santa Ana River Watershed Cloud Seeding Pilot Program: Year 2 Operations

PREPARED BY: Rachel Gray, Water Resources and Planning Manager

RECOMMENDATION

Receive and file.

DISCUSSION

Staff will be postponing Year 2 Operations (November 15, 2024-April 15, 2025) of the Santa Ana River Watershed Cloud Seeding Pilot Program based on the potential for debris flows from the burn scars from recent wildfires in the watershed and based on input received from the three Flood Control Districts.

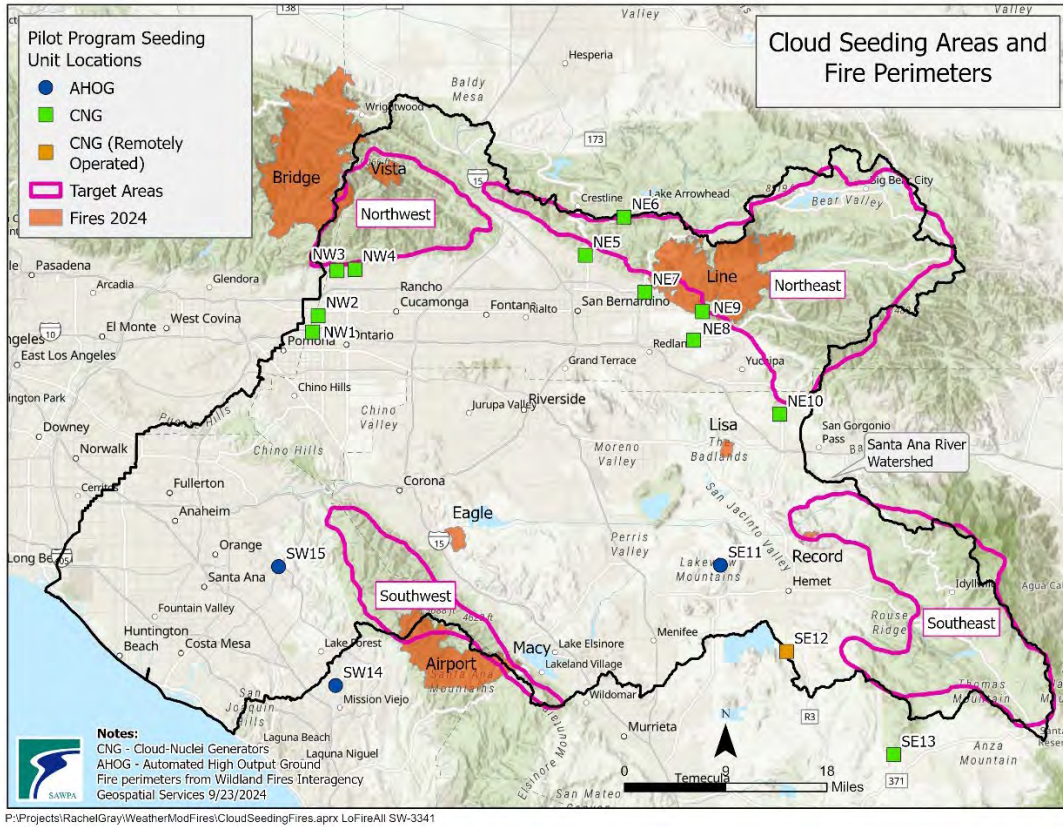
On July 19, 2022, the SAWPA Commission authorized an award of a contract with North American Weather Consultants, Inc. (NAWC) to conduct the Santa Ana River Watershed Cloud Seeding Pilot Program operations.

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 operations are based on past work described in the SAWPA feasibility study published in 2020, updated seeding site analysis, and reflects requirements from CEQA, and comments from SAWPA member agency staff and other stakeholders. The focus of the Pilot Program will be on seeding 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.

Over the past several months, the Watershed has experienced a number of fires, some of which are inactive (Vista, Lisa, Eagle, Record, and Macy) and some of which are currently active (Bridge, Line, and Airport) [see figure below]. Seeding Suspension Criteria were developed for the Pilot Program and includes the following:

Burn Scars

After a wildfire is contained, a burn scar will form in the impacted area. According to the National Weather Service (NWS), the length of time the burn scar remains a threat for debris flow “depends on the severity of the wildfire that occurred as well as how much erosion occurs. It could take many years for vegetation to become reestablished and this is the main factor in slowing the precipitation run off that creates flash flooding and debris flows. Most burn areas will be prone to this activity for at least two years.” Following a wildfire, SAWPA will share the impacted areas with NAWC and coordinate the fire severity and extents of the burn scar with the applicable flood control district. If the burn scar is a threat for debris flow, NAWC will not conduct seeding operations that will affect the burn scar area.



SAWPA contacted the Flood Control Districts and was provided input on cloud seeding relative to the burn scars from the inactive and active fires. General feedback was to suspend cloud seeding for the upcoming Year 2 of Operations.

CRITICAL SUCCESS FACTORS

- Successful implementation of an integrated regional water resource plan that reflects the watershed management needs of the public and the environment.
- Data and information needed for decision-making is available to all.

RESOURCE IMPACTS

In April 2023, SAWPA was notified by the Department of Water Resources (DWR) that the SAWPA Santa Ana River Weather Modification Pilot Program will receive a grant valued at \$861,400 under the Proposition 1 Round 2 funding program. SAWPA staff anticipates requesting a project extension for the grant period in light of postponing Year 2 Operations from 2024-2025 to potentially 2025-2026. Local funding has been secured totaling \$94,000. Project operations and validation study costs are budgeted and reflected in the FYE 23-24, FYE 24-25, FYE 25-26 and FYE 26-27 SAWPA Budgets.

Attachments:

1. PowerPoint Presentation



SANTA ANA WATERSHED
PROJECT AUTHORITY

Santa Ana River Watershed Cloud Seeding Pilot Program: Year 2 Operations

Item No. 7.C.

Rachel Gray

Water Resources and Planning Manager

November 21, 2024

Recommendation

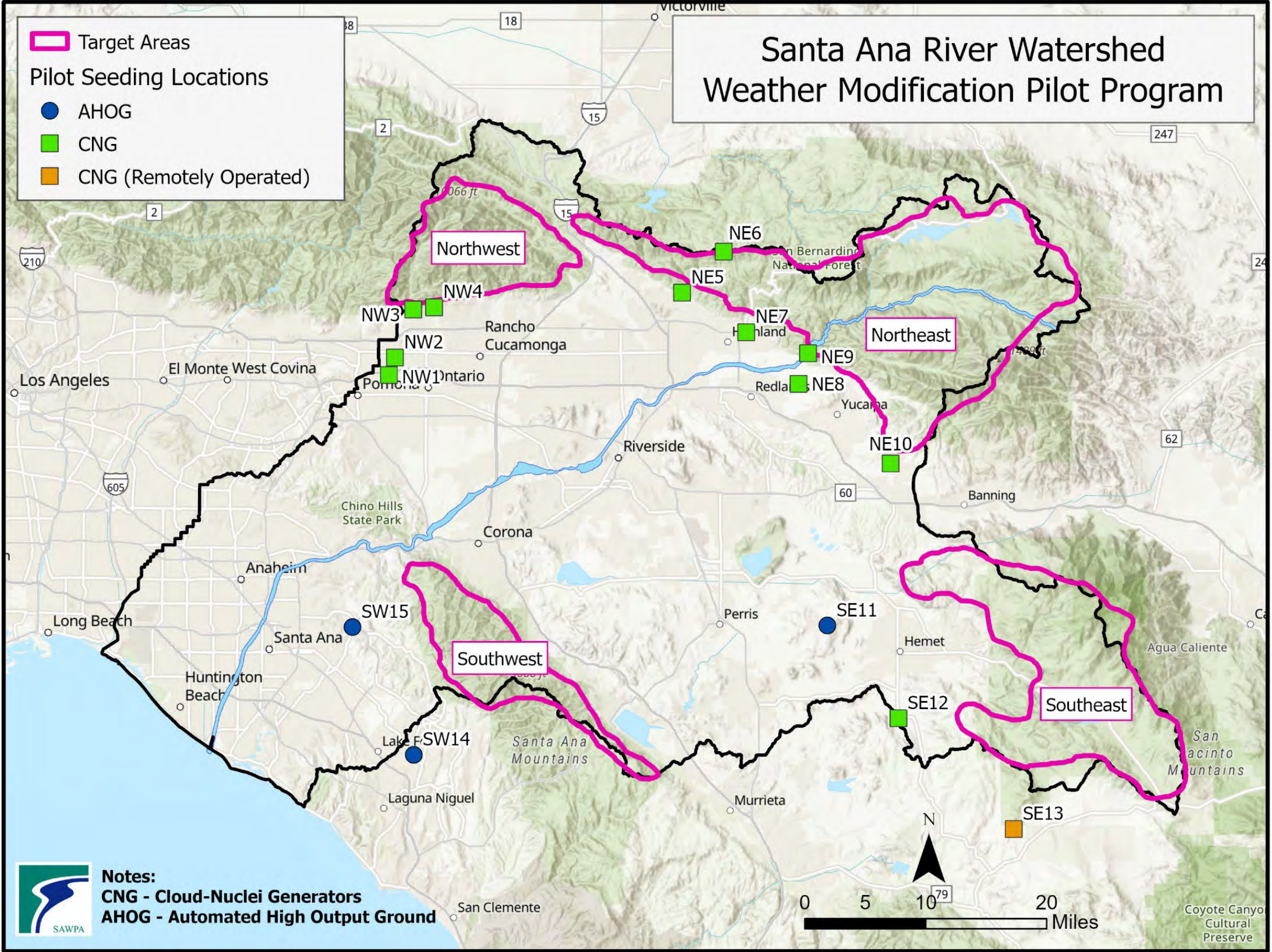
Receive and file.

Postpone Year 2 Cloud Seeding Pilot Program Operations

- SAWPA Staff will be postponing Year 2 Operations (November 15, 2024-April 15, 2025) of the Santa Ana River Watershed Cloud Seeding Pilot Program
- The decision was based on:
 - The potential for debris flows from the burn scars from recent wildfires in the watershed
 - Input received from the three Flood Control Districts
 - Program's Suspension Criteria

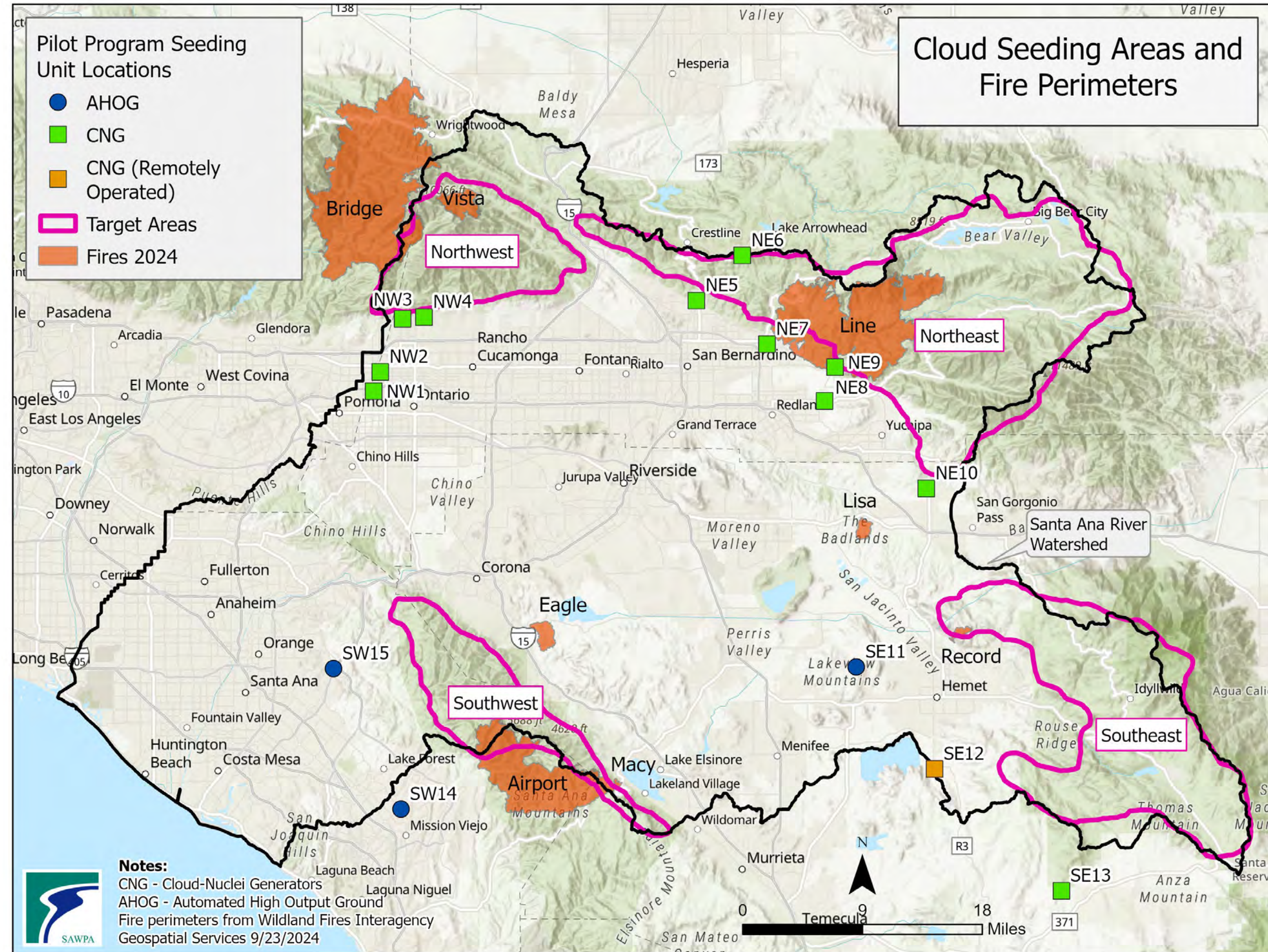
Cloud Seeding Pilot Program

Site (15)	Sponsors (11)
Northwest	
NW1	Chino Basin Water Conservation District
NW2	
NW3	San Antonio Water Company
NW4	
Northeast	
NE5	City of San Bernardino MWD
NE6	Private Landowner
NE7	San Bernardino Valley MWD
NE8	San Bernardino Valley Water Conservation District
NE9	
NE10	San Gorgonio Pass Water Agency
Southeast	
SE11	Eastern Municipal Water District
SE12	
SE13	Private Landowner
Southwest	
SW14	El Toro Water District
SW15	East Orange County Water District



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Santa Ana River Watershed Fires (2024)

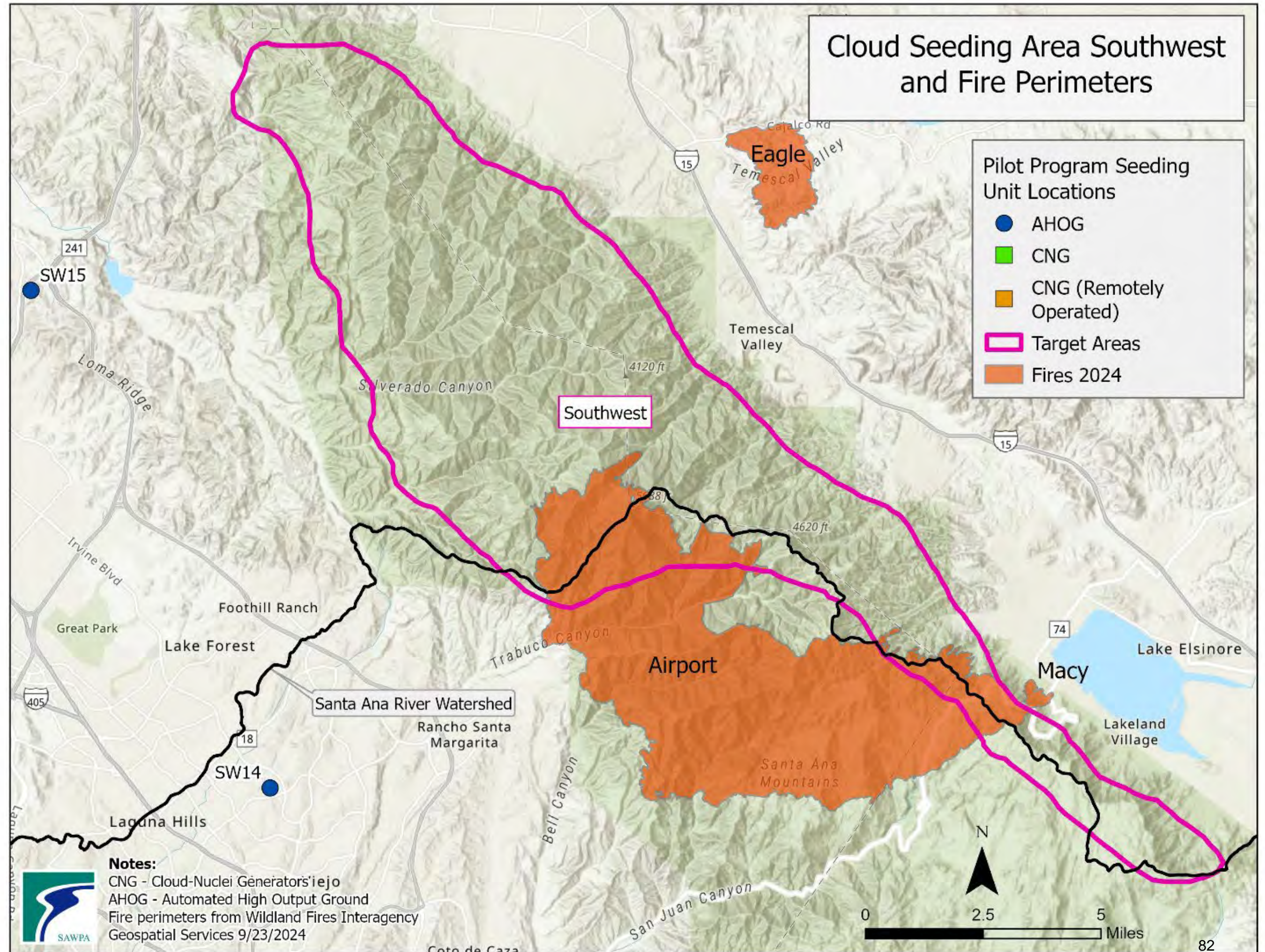


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Santa Ana River Watershed Fires (2024)

Southwest Target Area:

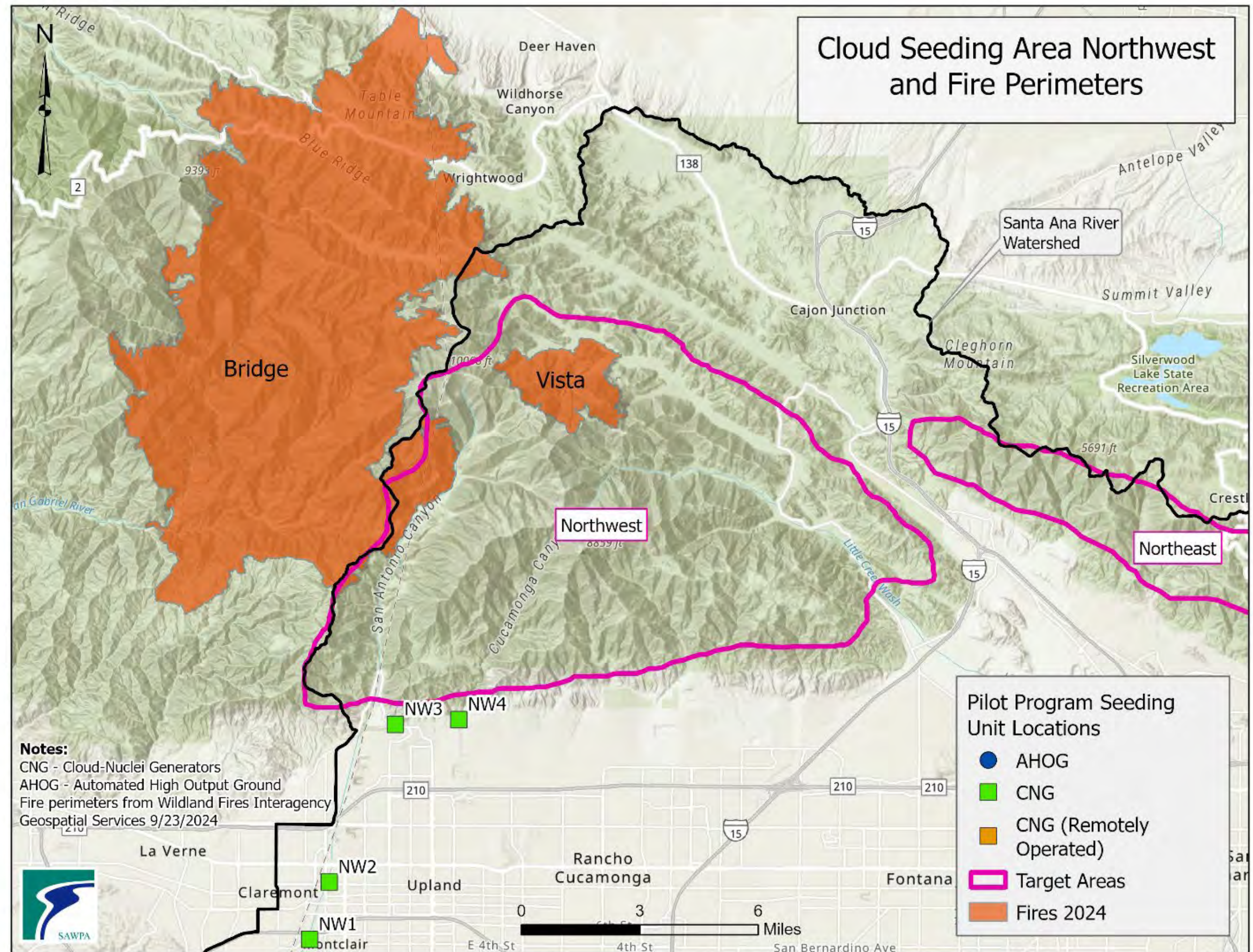
- Airport Fire
- Start Date: 9/9/24
- Date Contained: 10/5/24
- 23,526 acres
- Equipment



Santa Ana River Watershed Fires (2024)

Northwest Target Area:

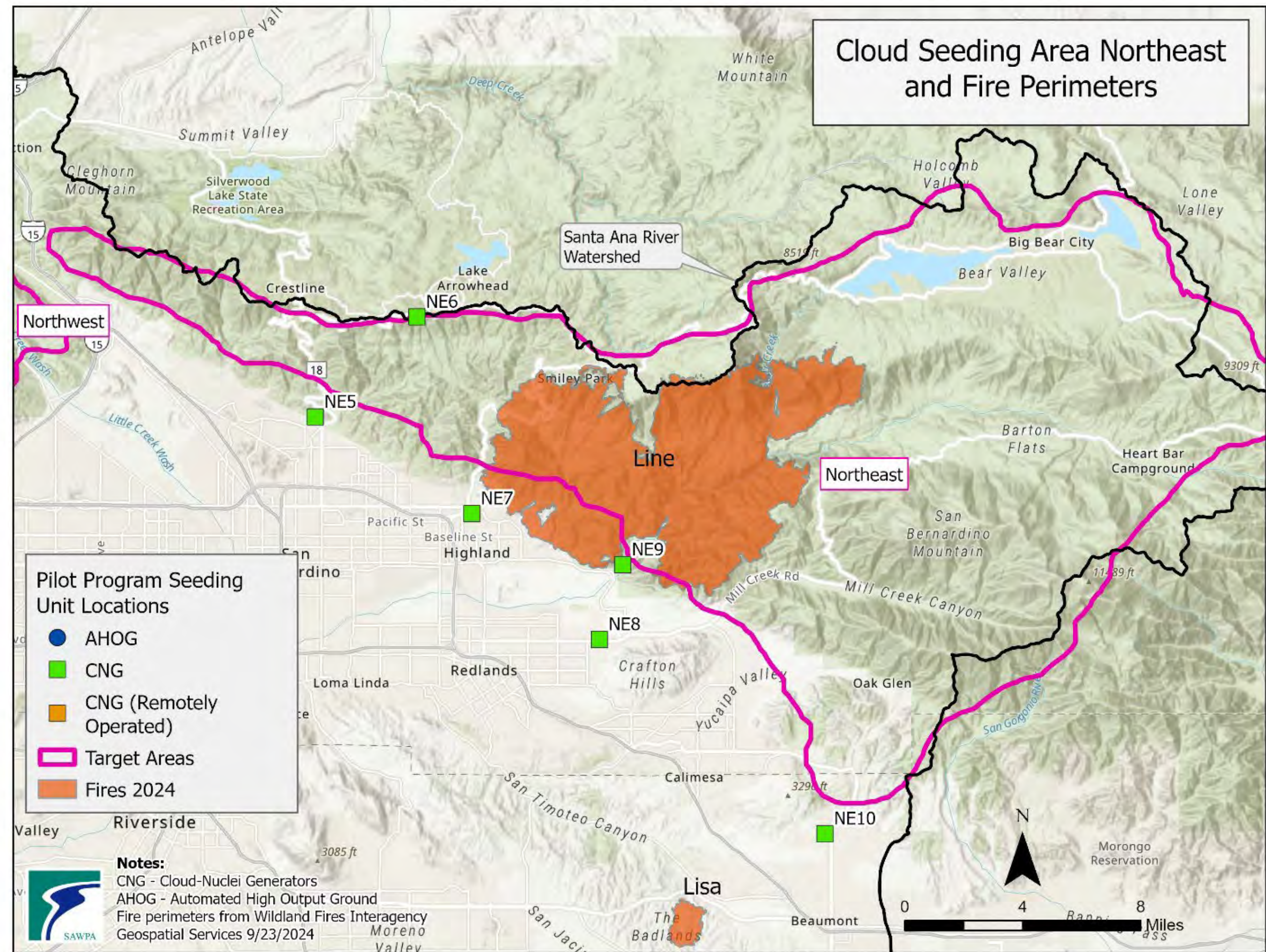
- Bridge Fire
 - 56,030 acres
 - Start Date: 9/8/24
 - 99% contained
 - Under investigation
- Vista Fire
 - 2,936 acres



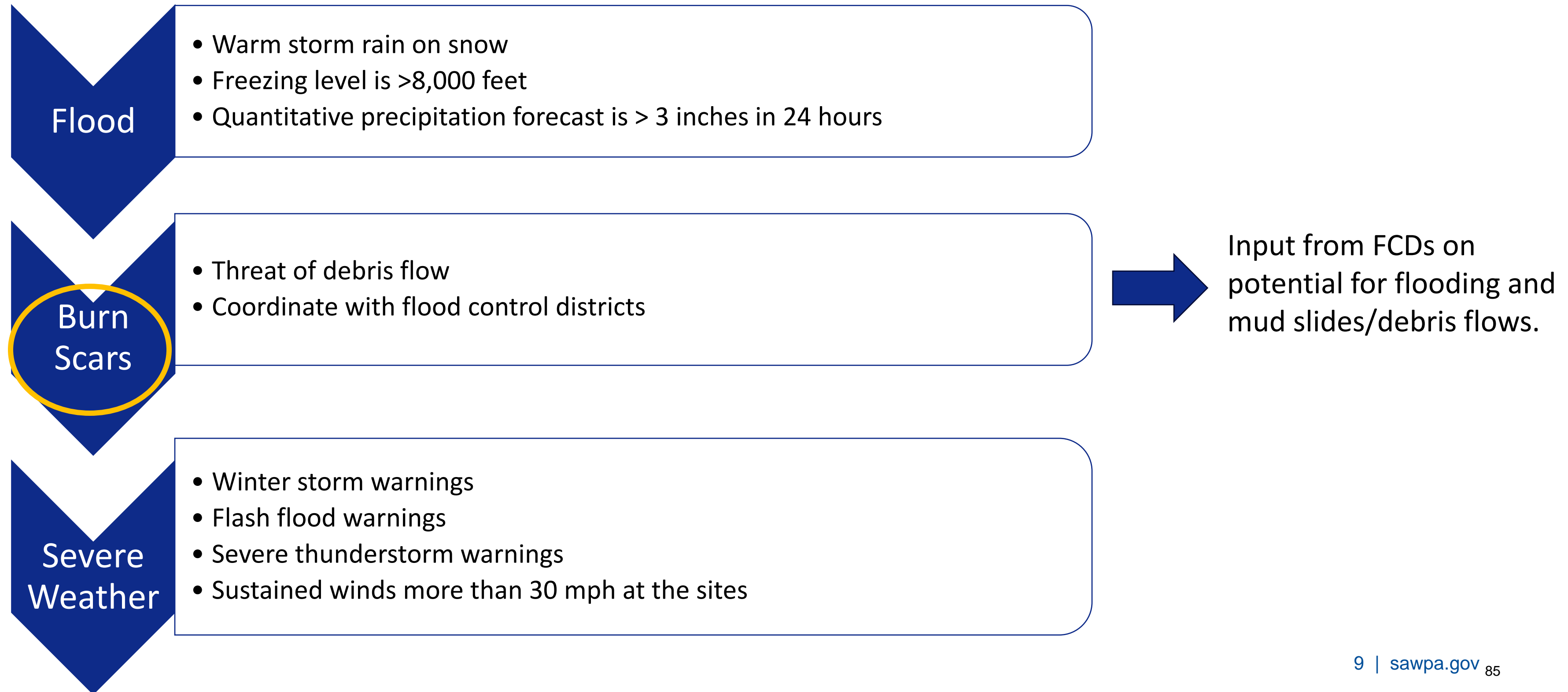
Santa Ana River Watershed Fires (2024)

Northeast Target Area:

- Line Fire
- 43,978 acres
- Start Date: 9/5/24
- 98% contained
- Arson



Suspension Criteria



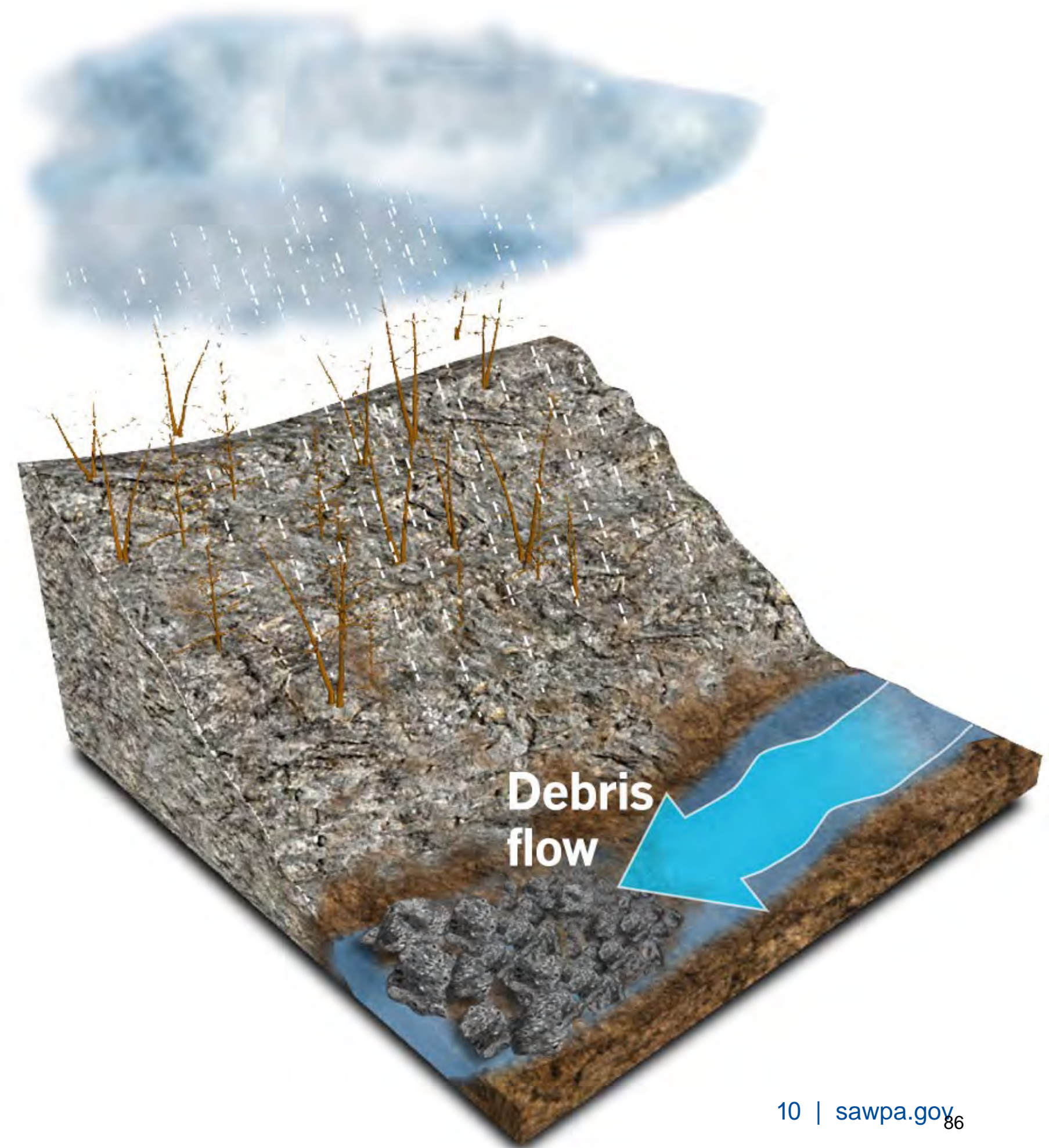
Flood Control District Input

San Bernardino County
Flood Control District

Riverside County Flood
Control District

Orange County Public
Works

Los Angeles County
Flood Control District



Flood Control Districts Input

LA County Flood Control:

- 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.

San Bernardino County Flood Control

- In light of these fresh burn scars, recommend suspending the cloud seeding pilot project for this upcoming winter season. This precaution could help **avoid any unintended consequences related to runoff and debris flows** from the burn areas.



Debris flow from the El Dorado fire burn scars (2022)
Source: KTLA 5 News

Flood Control Districts Input

Riverside County Flood Control

- Reduce the Southwest, Northeast, and Northwest cloudseeding target areas by removing the Macy, Airport, Bridge, and Line fire burn scar areas.

OC Public Works

- Recommend holding off on performing cloud seeding in the Santa Ana Mountains (due to the ongoing fire) and in the San Bernardino Mountains by Seven Oaks Dam (due to the ongoing fire).



Postpone Year 2 Cloud Seeding Pilot Program Operations

- SAWPA Staff will be postponing Year 2 Operations (November 15, 2024-April 15, 2025) of the Santa Ana River Watershed Cloud Seeding Pilot Program
- The decision was based on:
 - The potential for debris flows from the burn scars from recent wildfires in the watershed
 - Input received from the three Flood Control Districts
 - Program's Suspension Criteria

Proposed Schedule

Tasks	2024			2025												2026			
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr
Year 1 Validation Results																			
Year 2 Operations		Postpone																	
Input from FCDs																			
Mobilization (Y2 Operation)																			
Year 2 Operations																			

Recommendation

Receive and file.

Thank You

Rachel Gray
Santa Ana Watershed Project Authority
Office (951) 354-4250
rgray@sawpa.gov
sawpa.gov



OWOW STEERING COMMITTEE MEMORANDUM NO. 2024.19

DATE: November 21, 2024

TO: OWOW Steering Committee

SUBJECT: Arundo Donax Removal in the Santa Ana River Basin Headwaters Project Overview

PREPARED BY: Ian Achimore, Senior Watershed Manager

RECOMMENDATION

Receive and file.

DISCUSSION

Through the implementation of the Inland Empire Resource Conservation District (IERCD) Task Order for the Arundo Donax Removal in the Santa Ana River Basin Headwaters Project, the invasive weed Arundo donax has been surveyed and removed in several key areas in the Upper Santa Ana River Watershed’s headwaters. Through the Task Order (dated July 19, 2022), IERCD has done 10,000+ acres of surveys using aerial imagery and, in the field, to determine the most upstream occurrences of Arundo in the Watershed. As the weed spreads from its rhizomes (underground stems) being uprooted and flowing downstream by high flows, and not through air-based seed disbursement, it is important to start at the top of the Watershed.

IERCD has surveyed the following sites shown in the table below and removed critical upstream stands of Arundo that have the potential to repopulate throughout the entire Santa Ana River Watershed from Mill Creek to Prado Basin, and potentially even further downstream if rhizomes can make it through the Prado Dam intake. “N/A” is shown in the Table to represent that Arundo has not been removed in those sites yet for several reasons including in-field surveys have not been fully completed (and thus the corresponding inventoried amount is 0), there is standard resource/staff limitations, or property access has not been granted yet.

Site Name for Surveys	Total Site Size Surveyed (Acres)	Stands* Inventoried	Stands* Removed	% Stands* Removed
Cajon Creek	876	587	40	7%
Coopers Creek	74	0	0	NA
Devore	1,426	19	1	5%
Live Oak Canyon	31	91	91	100%
Lytle Creek	4,361	10	0	0%
Mill Creek	467	14	14	100%

Morey Arroyo	9	11	11	100%
Noble Creek	167	0	0	NA
Palm Canyon	23	0	0	NA
San Timoteo	350	73	73	100%
Santa Ana River Main Stem	2,182	36	36	100%
Waterman, East Twin Creek	141	0	0	NA
Yucaipa Waterways	42	10	10	100%
Zanja	29	6	1	17%
Devil's Canyon	5	17	17	100%
Total	10,183	874	294	34%

*See corresponding Steering Committee PowerPoint for examples of Arundo stands.

BACKGROUND

Using the Arundo Habitat and Restoration Fund, SAWPA has implemented Arundo donax invasive weed removal projects that cover approximately 3,000 acres in the Santa Ana River Watershed saving an estimated total of 14,000-acre feet of water since the first Fund's project began in 2006. This amount of acre feet is likely an underestimate because removal of Arundo prevents reinfestation of new stands downstream (thus saving further water from potential new plants).

IERCD is one of four resource conservation districts in the SARW, and its service area covers the upper SARW. A resource conservation district (RCD) is natural resource conservation entity that can work on public and private lands at the local, regional, state, tribal, and federal levels. In California, RCDs are special districts organized under Division 9 of the State's Public Resources Code. All RCDs operate with a Board of Directors made up of elected or appointed volunteer landowners in that district.

Proposition 13 (2000 Water Bond) funding created the SAWPA managed Southern California Integrated Watershed Program (SCIWP) and provided SAWPA \$4,000,000 to purchase 100 units in the existing Santa Ana River Mitigation Bank. The Santa Ana River Mitigation Bank was created in 1996 by an agreement with local bank manager Riverside County Regional Park and Open-Space District and the lead federal regulatory agency, the U.S. Army Corps of Engineers. As stated in the original SCIWP work plan, proceeds of the sale of these 100 SAWPA units were to fund projects that prevent Arundo re-infestation in areas where the weed has been removed.

As part of that 100-unit purchase, the SAWPA Commission approved Resolution No. 427 in 2004 that stipulates that the proceeds of the sale of these units would be used to remove

Arundo and other non-native invasive plants, as well as related habitat efforts in the SARW. Resolution No. 427 states that any project related expenditures from the account shall be approved by the SAWPA Commission to ensure consistency with the purpose of the intent of the SCIWP.

CRITICAL SUCCESS FACTORS

Roundtables: Goals, scope, costs, resources, timelines, and the contract term are approved by the Commission before executing an agreement to participate in a roundtable group.

RESOURCE IMPACTS.

This \$147,777 Arundo Donax Removal in the Santa Ana River Basin Headwaters Project Task Order is funded solely through the proceeds of the sale of mitigation credits from the Santa Ana River Mitigation Bank. Revenue from the mitigation bank is kept in a separate interest bearing SAWPA fund – the Arundo Management & Habitat Restoration Fund. The fund's current balance is approximately \$754,835 as of July 31, 2024.

Attachments:

1. PowerPoint Presentation

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SANTA ANA WATERSHED
PROJECT AUTHORITY

Arundo Donax Removal in the Santa Ana River Basin Headwaters Project Overview

OWOW Steering Committee
Item No. 7.D.

Ian Achimore, Senior Watershed Manager
Santa Ana Watershed Project Authority

November 21, 2024

Presentation Overview

- Purpose:
 - Provide the Committee with an update on Arundo Donax Removal in the Santa Ana River Basin Headwaters Project
- Agenda:
 - Background information on Arundo
 - Watershed-wide occurrence
 - Inland Empire Resource Conservation District (IERCD) Project



Problematic Plant – Arundo Donax

Arundo donax, or giant reed

Invasive, non-native plant that provides no habitat benefit

Grows 4 inches per day and up to a total height of 33 feet

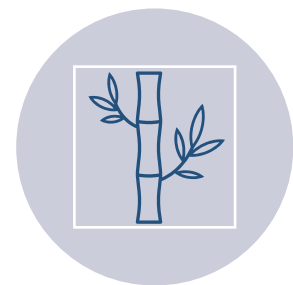
Highly flammable

Causes flooding by altering flow regimes

Consumes large volumes of water from Santa Ana River Watershed that could be used downstream



Arundo as a Watershed-Wide Issue



The invasive weed spreads as its rhizomes (subterranean stems) are uprooted and flow downstream in waterways.



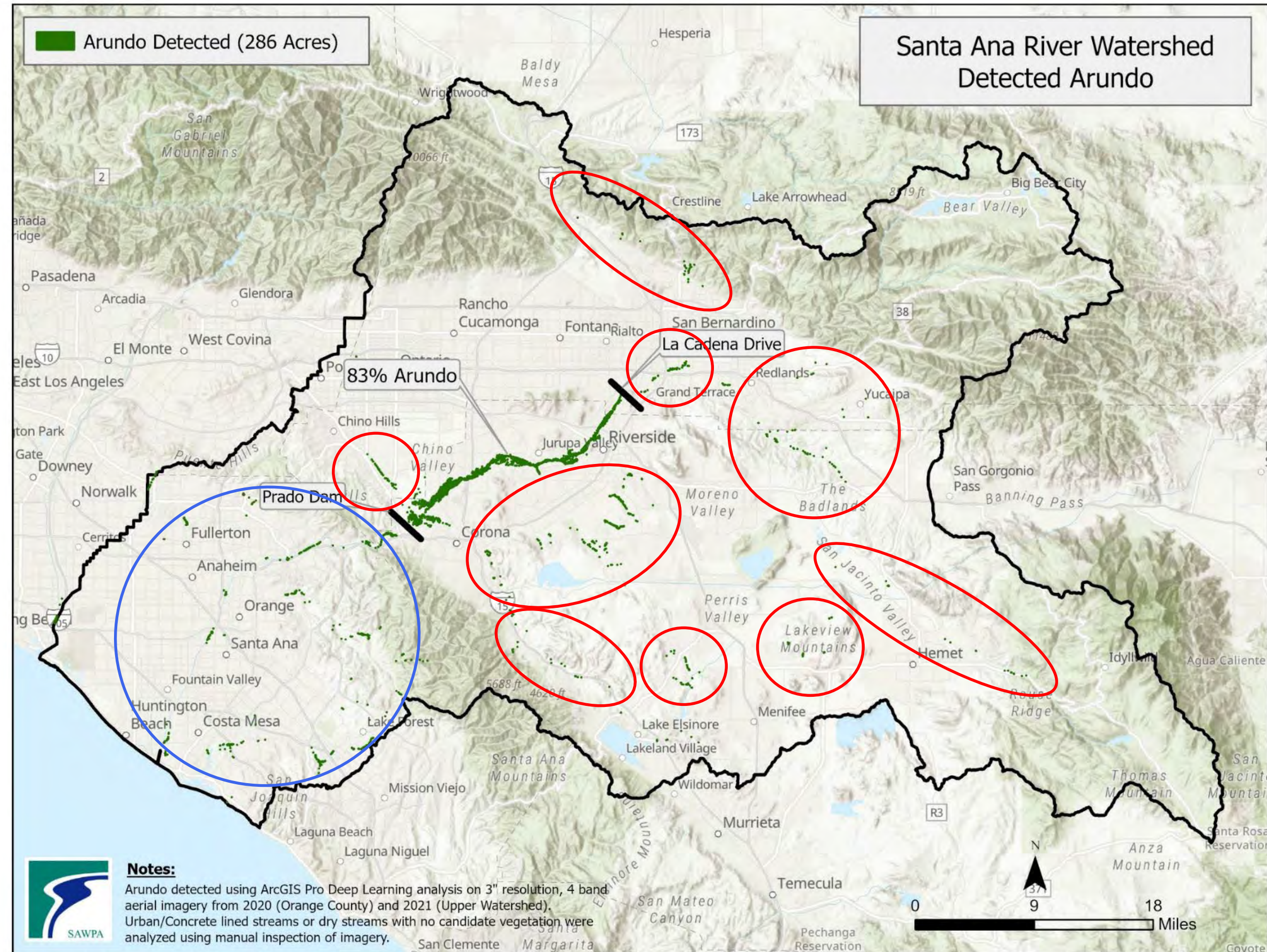
In our watershed's waterways, invasive weeds are largely managed through mitigation-related funding, conservancy organizations, and through property maintenance efforts. But mitigation is dependent on specific projects and conservancies are often focused on specific areas in the Watershed. This leads to "gaps" in waterways where Arundo can gain a foothold.



SAWPA is using deep learning software to determine presence of Arundo (in acres) in the watershed.

Watershed-Wide Arundo Mapping

- Presented to the Commission on June 18
- Uses 2021 high resolution imagery and a ESRI deep learning imagery analysis
- Most Arundo (83%) in the watershed is upstream of Prado Dam
- Upper watershed Arundo can seed lower watershed areas (**red** circles)
- Arundo occurs in lower watershed (**blue** circle)



P:\Projects\JeffMoshier\ArundoWatershed\ArundoFinalMaps\ArundoFinalMaps.aprx LoDetectedArundo1to5 SW-3354

Arundo Donax Removal in the Santa Ana River Basin Headwaters Project Summary

- Scope of Project
 - IERCD shall help acquire access, survey for, and perform removals of the noxious weed Arundo donax in the Santa Ana River Basin's headwaters.
 - IERCD shall remove all documented Arundo donax stands within the designated areas, which will occur in the approximately first two years.
 - Treatment locations will be monitored for the three subsequent years following the initial treatment. Re-treatment applications will be conducted if necessary following monitoring of initial treatments within those three subsequent years.
- SAWPA Commission approved a five-year IERCD Task Order of approximately \$150,000 on July 19, 2022.

Inland Empire Resource Conservation District (IERCD)

- One of four RCDs in the Santa Ana River Watershed (SARW).
- IERCD service area covers the upper SARW
- Previous IERCD Arundo projects:
 - Mill Creek Spanish Broom Control Project
 - Cajon Pass Invasive Species Control Project.
- IERCD has a detailed invasive species removal plan for their field staff
- Staff are certified by Department of Pesticide Regulation for herbicide application



INLAND EMPIRE
RESOURCE CONSERVATION DISTRICT

Prepared by:
The Inland Empire Resource Conservation District
25864 Business Center Dr # K
Redlands, CA 92374
(909) 799-7407

Map of Surveyed Sites

- Surveying completed by IERCD via aerial imagery viewing and/or in-site field visits.



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Example of Arundo Stands (Group of Canes)



Most stands encountered are composed of 5 to 20 canes/stalks. A larger stand has been 200 square meters of canes.

Arundo Sites Surveyed/Removed To Date

Site Name for Surveys	Total Site Size Surveyed (Acres)	Stands Inventoried	Stands Removed	% Stands Removed
Cajon Creek	876	587	40	7%
Coopers Creek	74	0	0	NA
Devore	1,426	19	1	5%
Live Oak Canyon	31	91	91	100%
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Zanja	29	6	1	17%
Devil's Canyon	5	17	17	100%
Total	10,183	874	294	34%

Devore – Before and After



Devils Canyon – Before and After



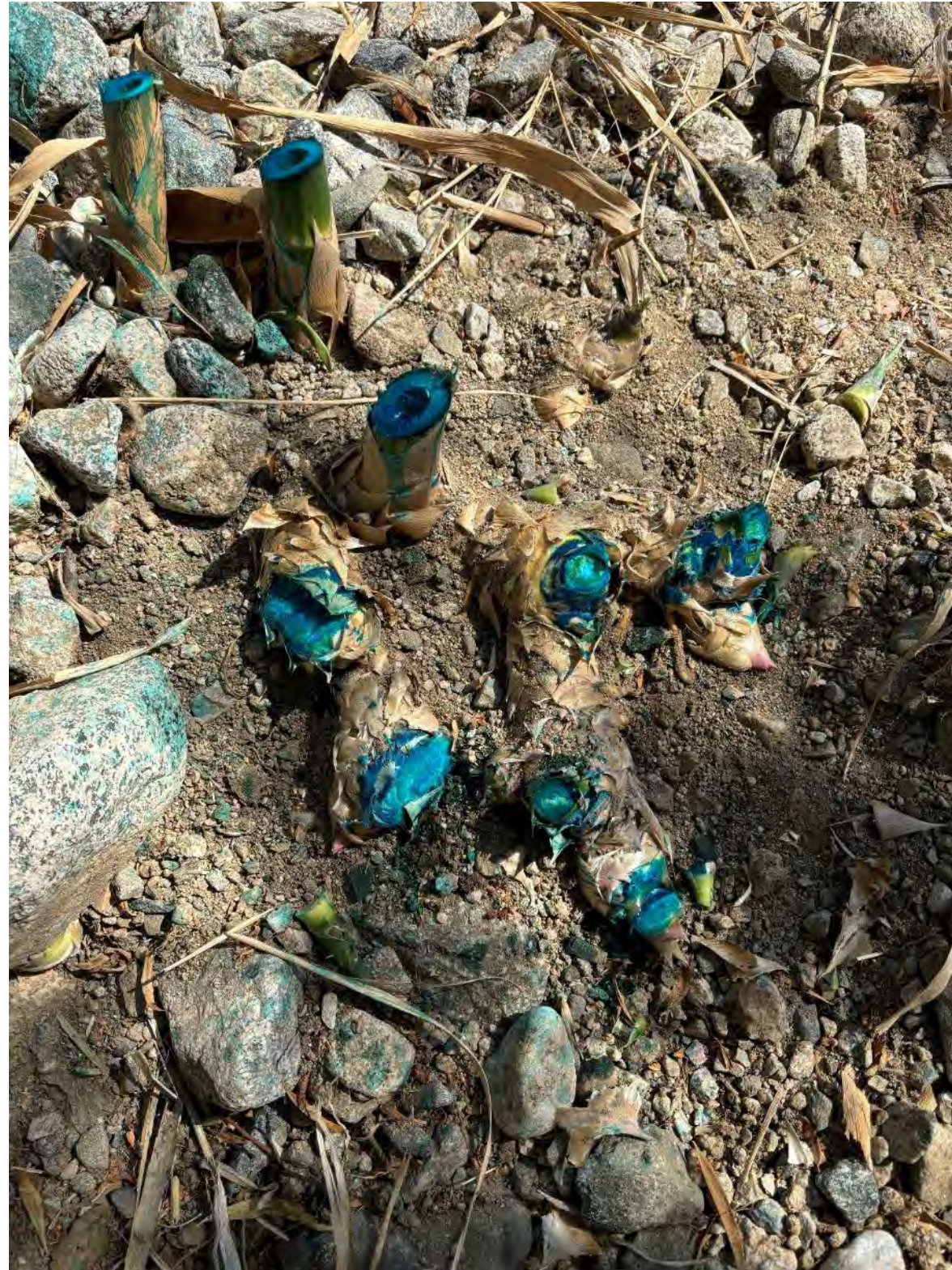
Live Oak Canyon – Large Arundo Stand



IERCD Hauling Arundo Offsite



Treated Rhizome Example



IERCD Outreach

- Copy of IERCD Letter



- Presentation to Cajon Community

Why are Invasive Species Bad?

- Ecology – invasive species displace native plants, decreasing diversity. Large invasions create “dead zones”
- Hard to control
- Reduce crop yields
- Etc.



Lessons Learned (To Date)

- Foliar application* of herbicide is working efficiently. That removal method has been done more than cutting of canes.
- Right of entry letter requests have been updated/refined to increase participation by landowners.
- There is more Arundo stands in the upper watershed's tributaries than previously thought at the start of this project in 2022.

*Foliar application is a technique that involves spraying nutrients, boosters, or pesticides directly onto a plant's leaves and stems



Thank You

Ian Achimore
Santa Ana Watershed Project Authority
Office (951) 354-4220 | Direct (951) 354-4233
ian@sawpa.gov
sawpa.gov

