Approval of Task Order with Project Partners, Inc. for Headwaters Access

Ian Achimore | Senior Watershed Manager

December 1, 2020 | Commission Meeting

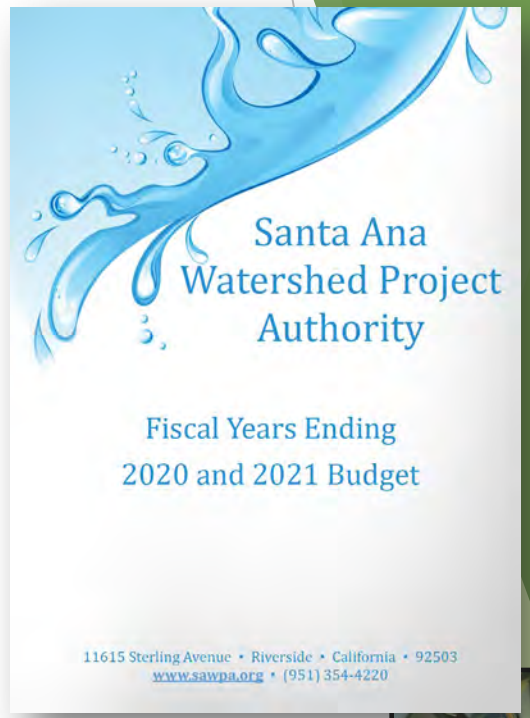
Item 6.A.

Santa Ana River Mitigation Bank

SAWPA

Quick Stats on the Arundo Roundtable

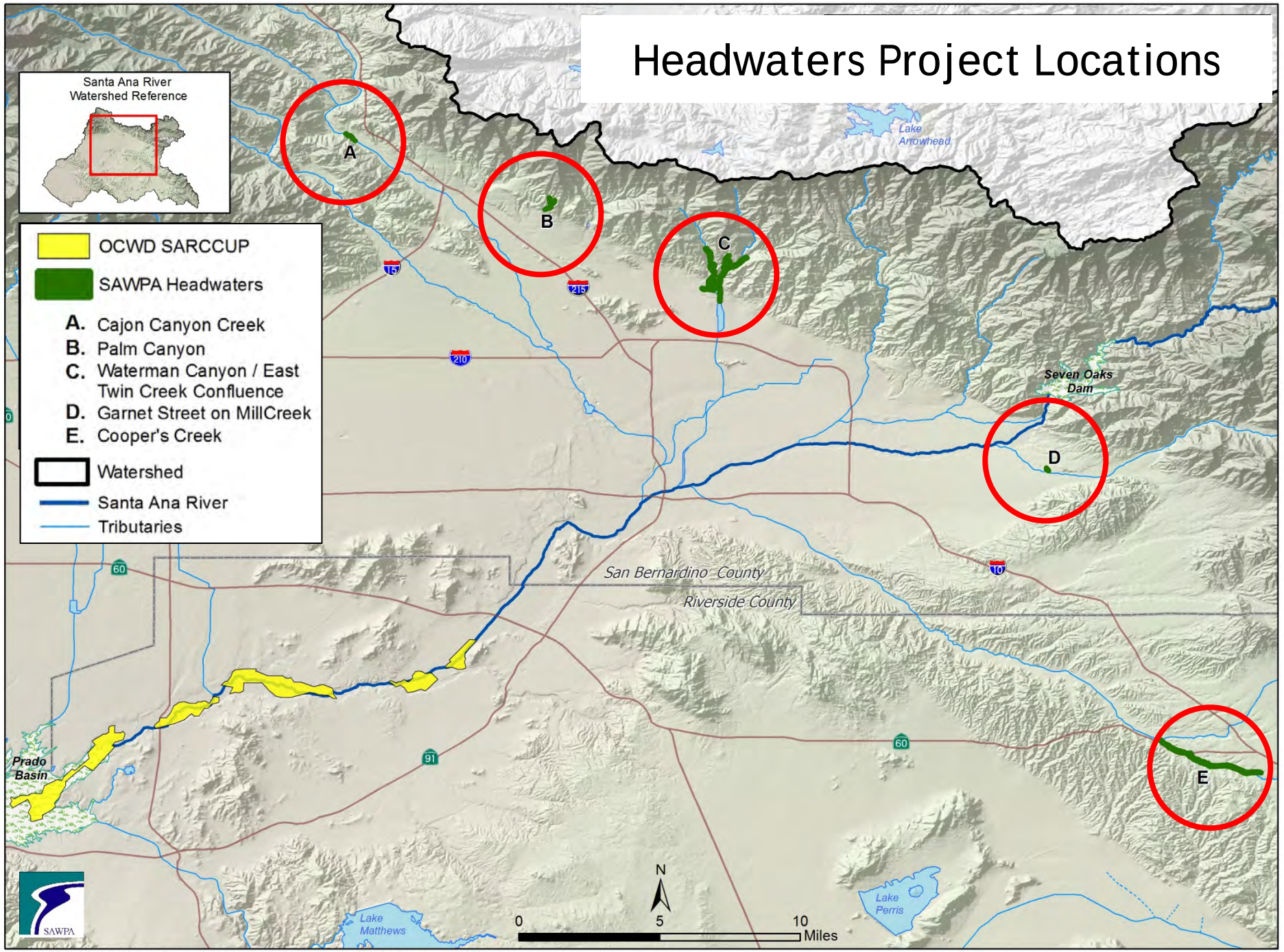
- Arundo Management & Habitat Restoration Fund (Fund) in SAWPA Budget,
- Fund in Budget gains revenue from Santa Ana River Mitigation Bank credit sales,
- Per SAWPA Resolution No. 427, use of the Fund (like a task order) needs to be approved by Commission even if below General Manager signing authority.



What is Arundo donax?

- Invasive Plant (High Rating),
- Noxious Weed,
- Uses approx. 528 gallons of water per meter annually,
- Highly combustible,
- Survives fire and thrives,
- Causes flooding by altering flow regimes, and
- No known habitat benefit.

Headwaters Project Locations



Headwaters Project Area Stats

Project Site Name	Location	Project Site Size (Acres)	Parcels
Cajon Canyon Creek	Downstream of Keenbrook Road in Unincorporated San Bernardino County	3.82	10
Coopers Creek	Downstream of Velie Avenue in the City of Beaumont to the confluence with San Timoteo Creek	115	55
Mill Creek (Along Garnet Street)	East of Garnet Street along Mill Creek in Unincorporated San Bernardino County	2	6
Palm Canyon	0.3 Miles downstream of Forest Road 2N49 in Unincorporated San Bernardino County to 0.3 Miles upstream of North Magnolia Avenue in the City of San Bernardino	12.7	18
Waterman Canyon & East Twin Creek Confluence	Upstream of East 40th Street in the City of San Bernardino and Unincorporated San Bernardino County	167.4	28
Total		**297.1**	**117**

Why Headwaters Are An Important Focus-Area for Arundo Removal

- Arundo seedlings can wash down waterways during rain events,
- Starting at top of watershed and working down is economical, and
- Right-of-entry agreements in upper watershed difficult to acquire but worth investment.

Overall Assignment

Individual Tasks

Final Deliverable

Acquire Access

Survey for Arundo

Parcel data queries

Meet/call with parcel owners

Take note of current and planned activities

Measure Arundo stands

Complete survey reports

Signed entry agreements

Quantification of Arundo

Procurement Process and Project Partners

- SAWPA initially sought SAWA, resource conservation districts and non-profits to handle access agreements,
- SAWPA received three quotes/responses to comply with the February 2020 SAWPA procurement policy,
- SAWPA interviewed the individual Project Partners staff who will be lead in implementing Project,
- Project Partners had the most relevant experience in working with parcel owners and developers, and
- Project Partners has experience in parcel owner queries and explaining complex projects to the public.

Existing SAWA Task Order

- Surveying cost is $15,000,
- Survey sites once access is approved by landowners – verify the amount of Arundo and any obstructions to removal, and
- Next steps: After access and surveys, prepare for removal by another task order.

Important Considerations on Headwaters Project

- SAWPA is not required to remove Arundo donax in these areas,
  - Although to implement the Commission Resolution No. 427, SAWPA should remove Arundo in the watershed,
- Funding is available in SAWPA's Arundo Fund budget for this work,
- Some of the other downstream Arundo "hot spots" in the watershed are being treated by other entities, and
- Task Order with Project Partners has a one-year schedule.

Next Steps

- Reoccurring check-in meetings with Project Partners,
- SAWPA to brief staff representing overlying county supervisors and city councils,
- Project partners to contact parcel owners,
  - Brochure material on Arundo removal and replanting will be provided,
- Reoccurring contact and meetings will likely be necessary, and
- Can quantify total water savings when in-person surveying of Arundo is complete.

Recommendation

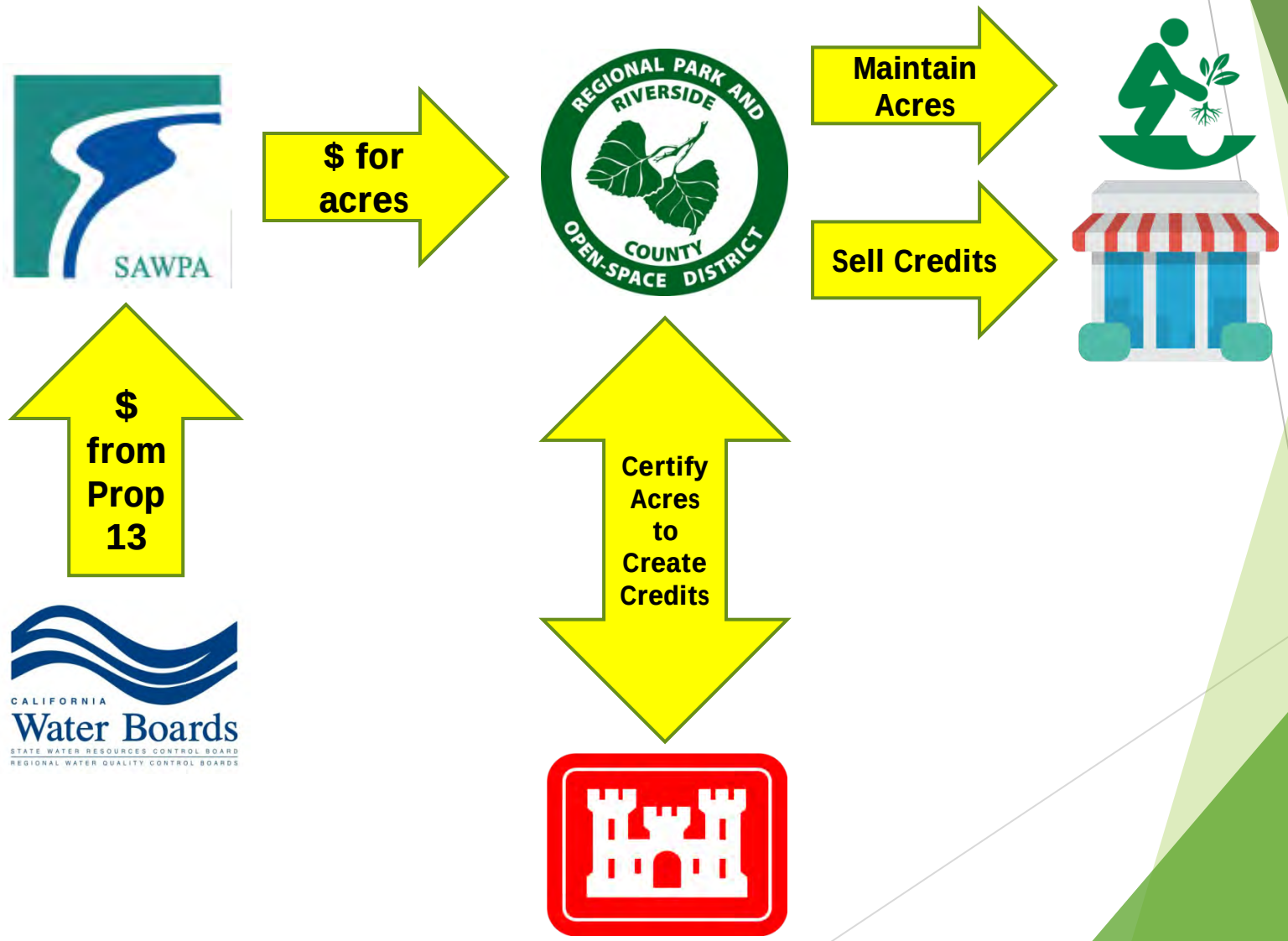
It is recommended that the Commission approve Task Order PRO387-01 in the amount of $23,800 for Project Partners, Inc. to attain right of entry to parcels containing Arundo donax.

Further Background if Needed

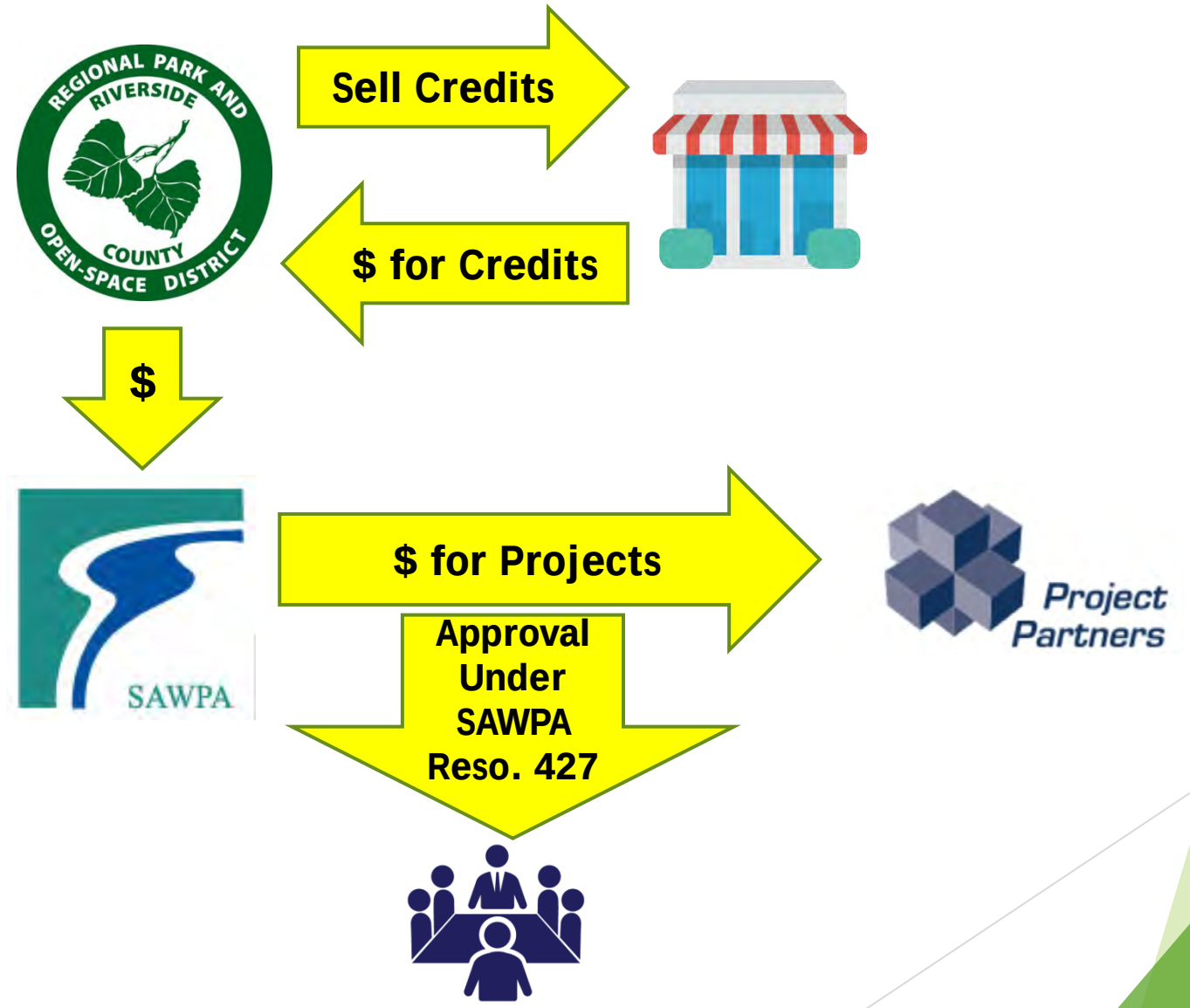
How the Mitigation Bank Works

- Operated by Riverside County Regional Park and Open-Space District,
- Created in 1996 with Army Corps of Engineers, and
- SAWPA purchased 100 units in 2002 as part of Proposition 13 (2000 Water Bond)

SAWPA's Funding Initially Provided to Bank



Bank Revenue Provided to SAWPA



Arundo Management & Habitat Restoration Fund Budget

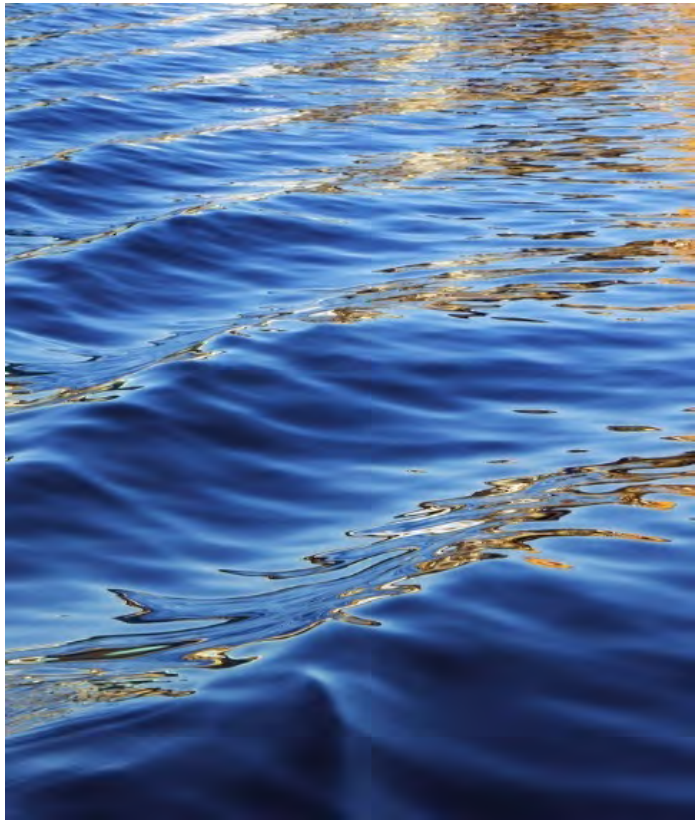
Budget Category	FYE 2020	FYE 2021
Salaries	$11,976	$17,301
Benefits	$5,463	$7,837
Indirect Costs	$18,021	$26,089
Consulting	$6,000	$75,000
Offsite Meetings	$800	$800
Shipping/Postage	$500	$500
Program Expenses	$10,000	$150,000
Total	**$52,760**	**$277,527**

Note: Current total fund balance (due to mitigation bank credit sales) is approximately $950,000.

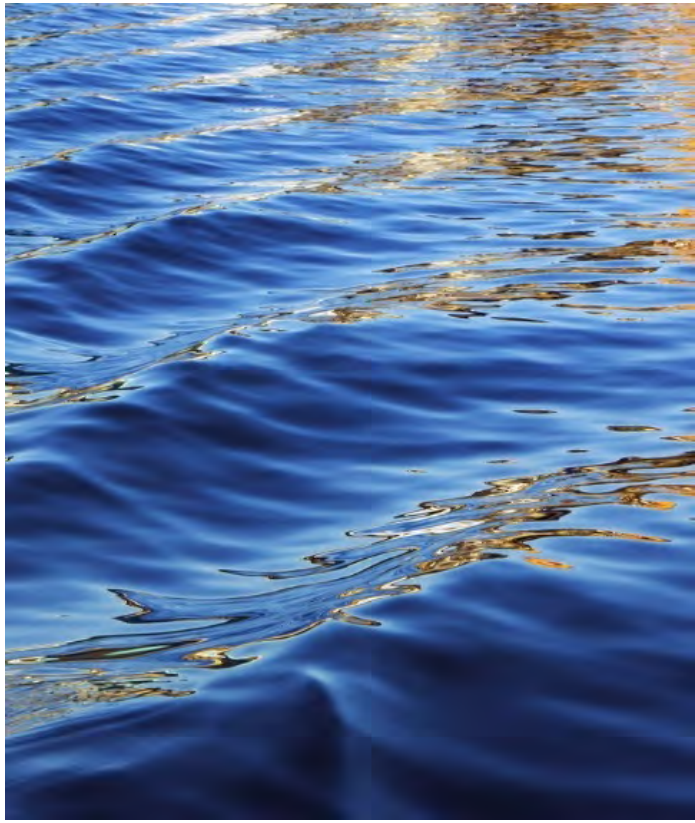
Santa Ana Watershed Weather Modification Feasibility Study

Garrett Cammans, President
North American Weather Consultants

Item No. 6.D.



Quick Review & Background



Cloud Seeding Mechanisms

Ground Based Seeding Methods

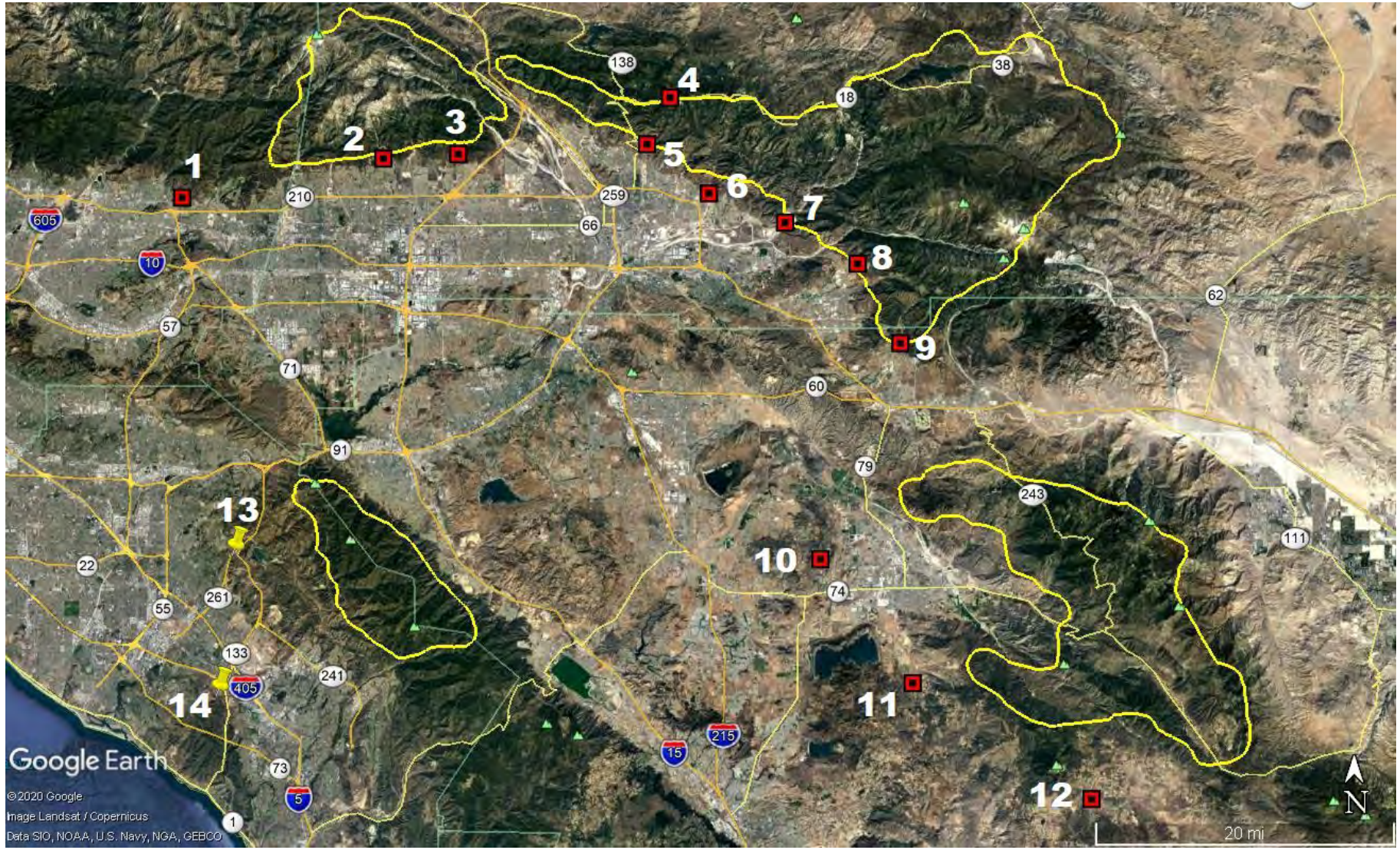
CNG's (Cloud Nuclei Generators)

- Ideal for orographic lift (movement of air over mountain barriers)
- Create a continuous plume
- Inexpensive to install and operate

AHOGS (Automated High Output Ground Seeding) Systems

- Deliver a higher concentration of Silver Iodide – rapid release
- Operated remotely
- Ideal for storms with convective attributes (turbulence)

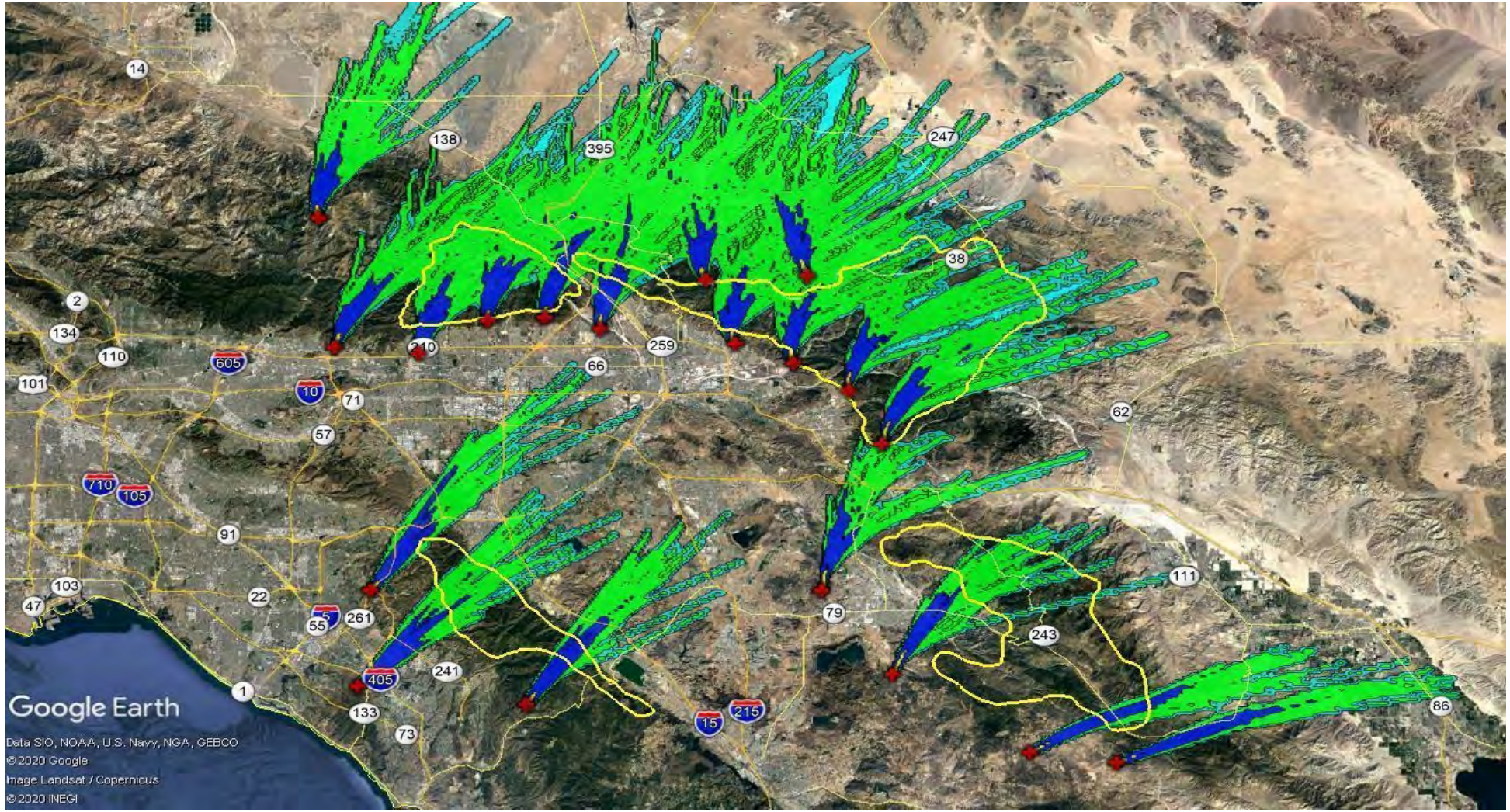
Refined – Ground Seeding Sites



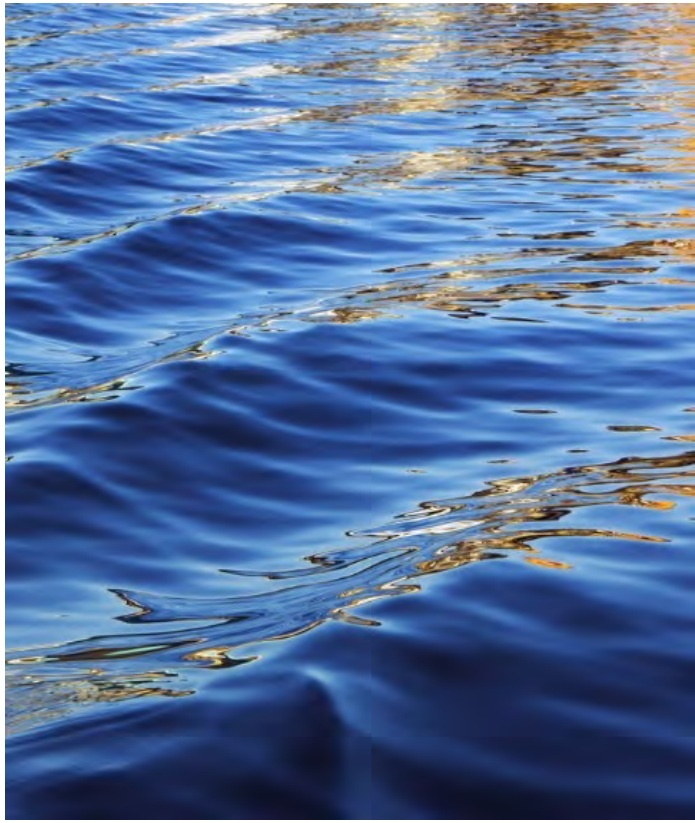
Yellow Pins = AHOGS
Red Bullseyes = CNG's

Aerial Seeding

Ground Based Seeding Dispersion Model



Increase Estimates



Total Projected Increases

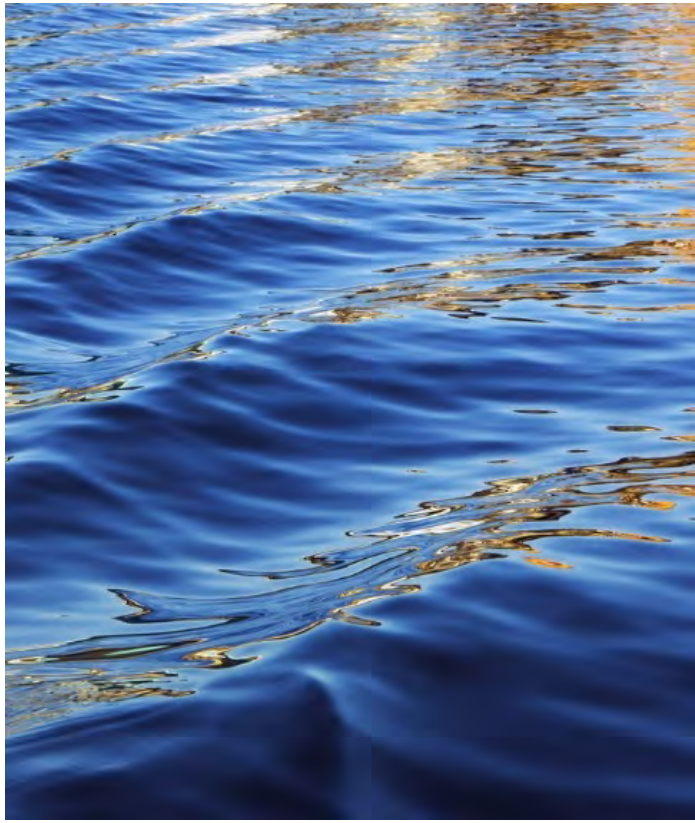
Ground Only Seeding

Target Area	Seasonal Precip. Increase (inches)	Percent Increase	Avg. Natural Streamflow (AF)	Streamflow Increase (AF)	Percent Increase
NW	0.41	3.5%	25,000	2,043	8.2%
NE	0.49	4.1%	65,000	4,330	6.7%
SW	0.59	3.7%	5,000	447	9.0%
SE	0.49	4.5%	10,000	1,373	13.7%
	TOTAL w/ Ground Only		**105,000**	**8,193**	**7.8%**

With Aerial Support in the NE Target

Target Area	Seasonal Precip. Increase (inches)	Percent Increase	Avg. Natural Streamflow (AF)	Streamflow Increase (AF)	Percent Increase
NW	0.41	3.5%	25,000	2,043	8.2%
NE	0.89	7.3%	65,000	7,772	12.0%
SW	0.59	3.7%	5,000	447	9.0%
SE	0.49	4.5%	10,000	1,373	13.7%
		TOTAL	**105,000**	**11,635**	**11.1%**

Suspension Criteria



Cloud Seeding Suspension Criteria

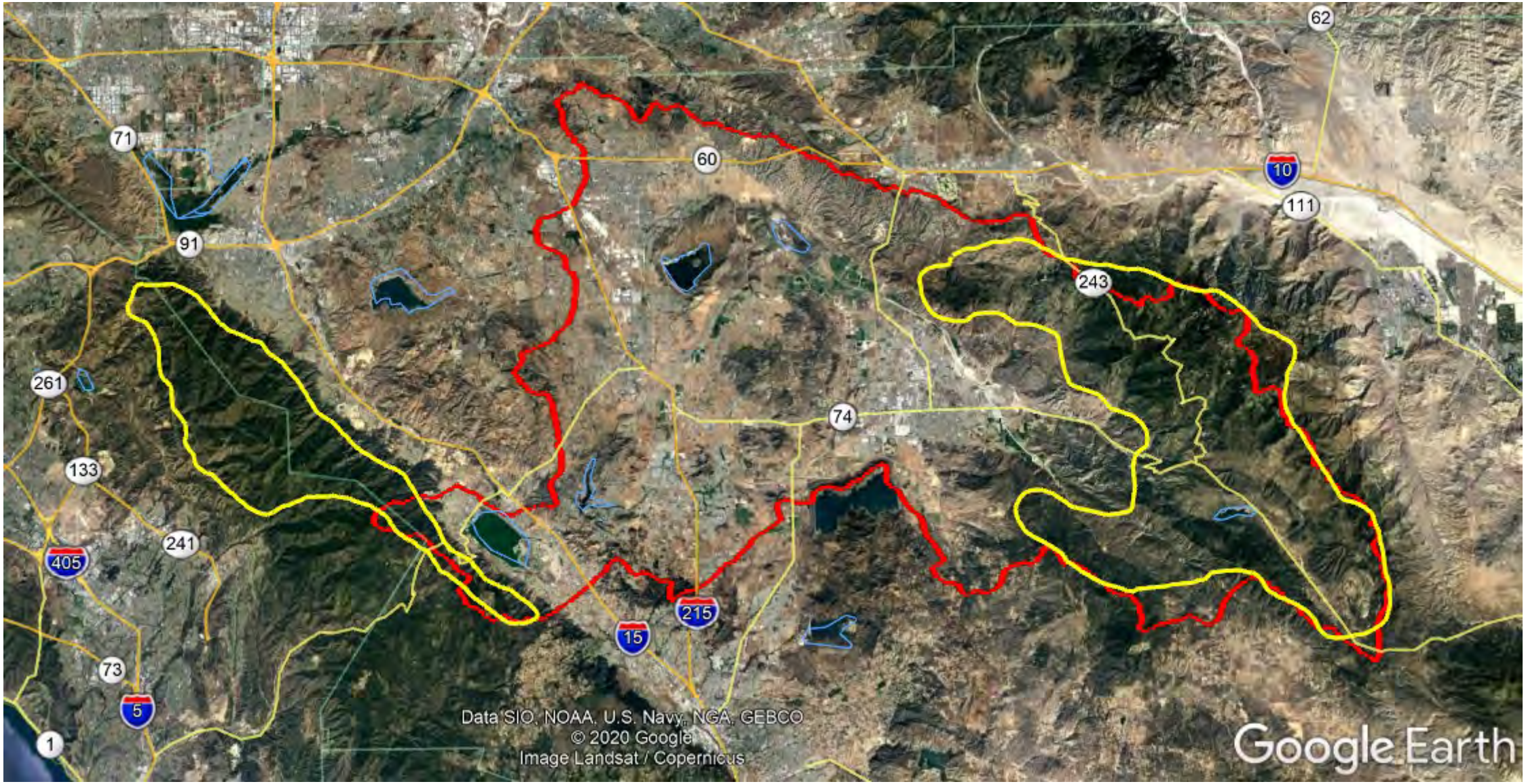
National Weather Services

- Whenever the NWS issues a severe storm, precipitation, flood warning or flash flood warning that affects any of the target areas, the project meteorologist will suspend operations for parts or all of the program. Operations will be suspended for at least the period of time during which the warning is in effect.

Southern Target Areas

- Due to concerns related to infrastructure, NAWC suggests suspending operations if:
  - Hourly precipitation is forecasted to exceed 0.5 or 0.7 inches
  - 24-hr precipitation totals are forecasted to exceed 2-3 inches.
  - These threshold correspond to events that occur on average once every 2-5years.

Lake Elsinore and San Jacinto Watershed

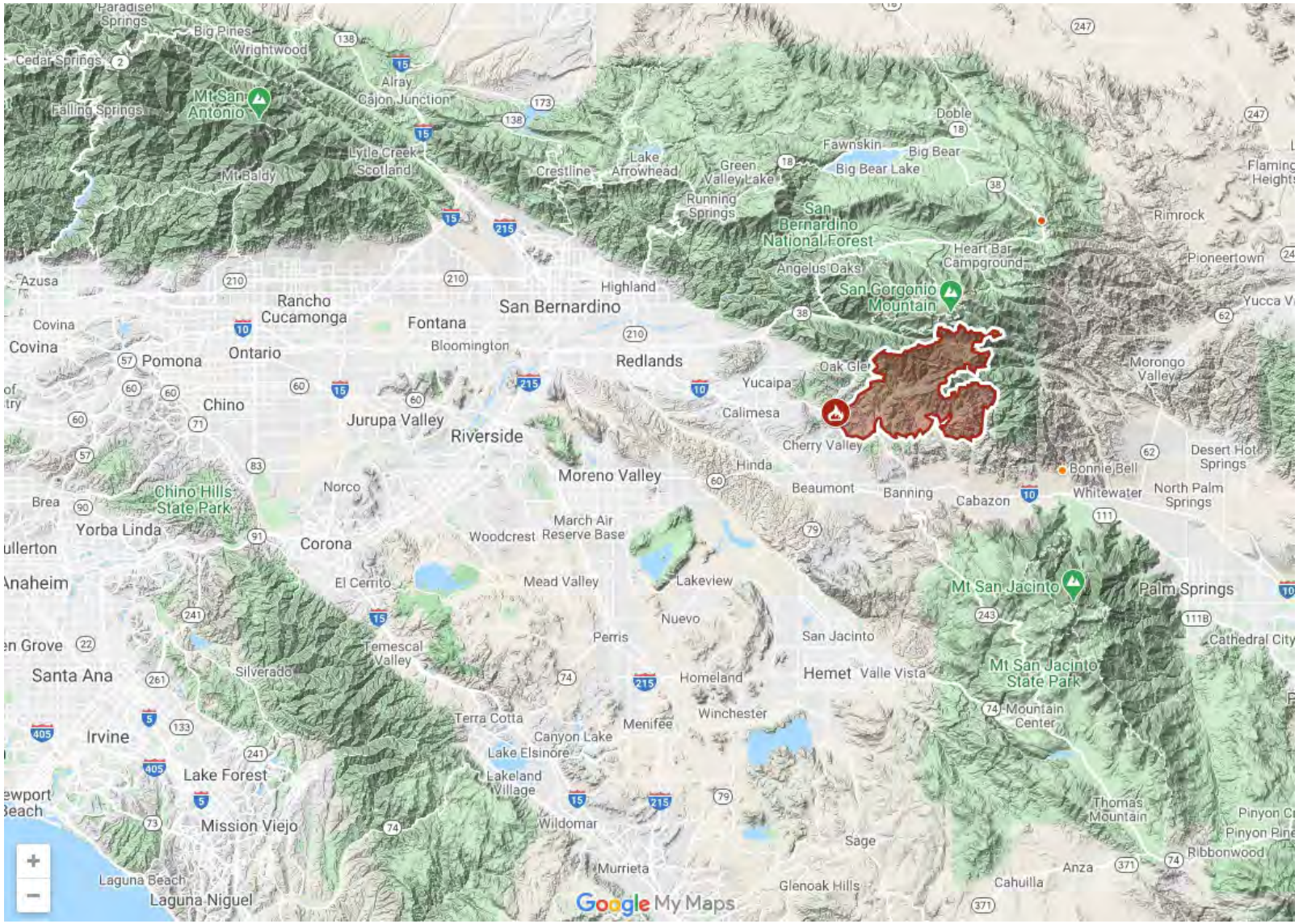


Cloud Seeding Suspension Criteria

Forest Fires

- Open Discussion
  - Size
  - Location
  - Vegetation
  - Soil Attributes (glassing)
  - Flood Risk
  - Debris Flow

Apple Fire


Paradise Springs
Big Pines
Wrightwood
Cedar Springs
Alray
Cajon Junction
Mt San Antonio
Falling Springs
Lytle Creek
Scotland
Mt Baldy
Crestline
Lake Arrowhead
Green Valley Lake
Fawnskin
Big Bear
Big Bear Lake
Doble
Running Springs
San Bernardino National Forest
Heart Bar Campground
Angelus Oaks
Rimrock
Pioneertown
Azusa
Rancho Cucamonga
Highland
San Bernardino
San Gorgonio Mountain
Covina
Fontana
Bloomington
Ontario
Pomona
Redlands
Oak Glen
Yucaipa
Morongo Valley
Chino
Jurupa Valley
Riverside
Calimesa
Cherry Valley
Moreno Valley
Hinda
Bonnie Bell
Desert Hot Springs
Norco
Beaumont
Banning
Cabazon
Whitewater
North Palm Springs
Brea
Chino Hills State Park
Yorba Linda
March Air Reserve Base
Woodcrest
Corona
Mead Valley
Lakeview
Mt San Jacinto
Palm Springs
Anaheim
El Cerrito
Nuevo
Perris
San Jacinto
Cathedral City
Temescal Valley
Silverado
Santa Ana
Homeland
Hemet
Valle Vista
Mt San Jacinto State Park
Terra Cotta
Menifee
Winchester
Mountain Center
Irvine
Canyon Lake
Lake Elsinore
Lake Forest
Lakeland Village
Thomas Mountain
Mission Viejo
Wildomar
Sage
Ribbonwood
Murrieta
Anza
Laguna Beach
Laguna Niguel
Glenoak Hills
Cahuilla
Google My Maps

Contractor's Responsibilities

Balance and Experience are Critical

- A contractor needs to be able to understand both the value of water, and the hazards of flooding, and operate accordingly
- The contractor needs to develop programs that are both effective and efficient

Program Design

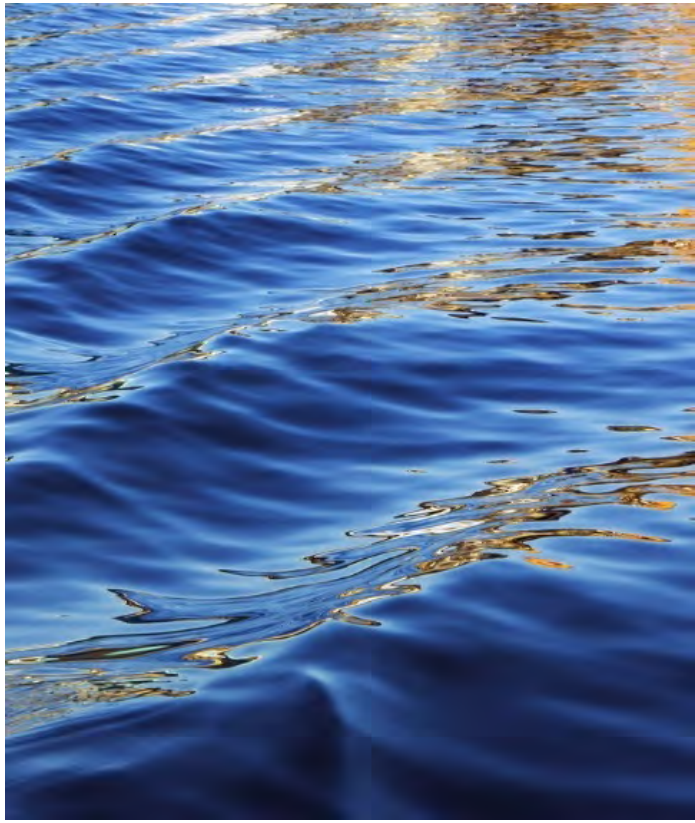
Flexibility and Control

- The program should be designed in a fashion that mitigates risk
- Ideally the program should be adaptable as risks evolve.

Public Perception

- Continue conducting outreach briefings to interested governing boards and parties

Feasibility



Technical Feasibility

The technical feasibility of the proposed SAWPA program has been examined in great detail.

Considerations Included:

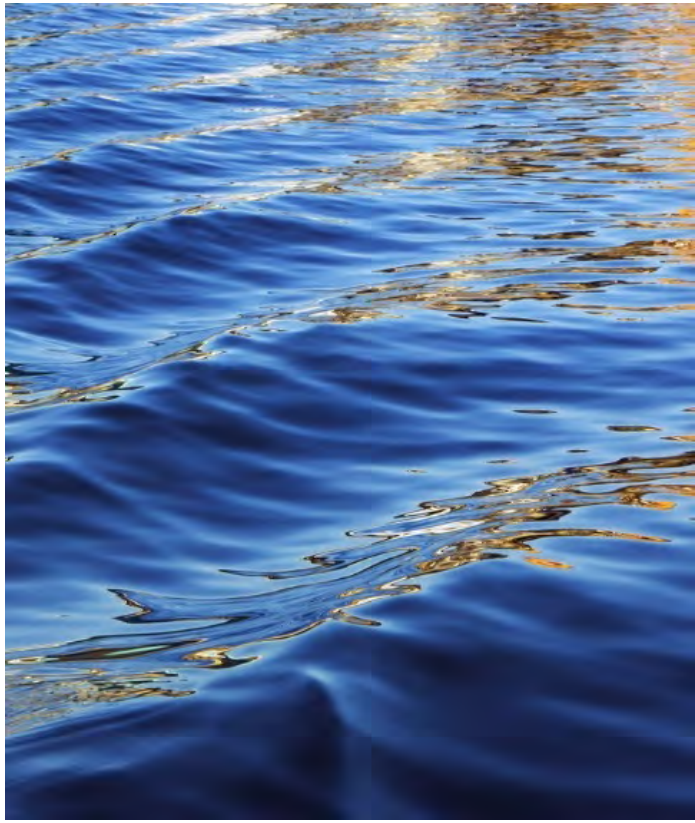
- Results obtained from previous relevant winter research and operational cloud seeding programs (i.e., scientific data).
- Detailed climatology review, including storm attributes and atmospheric behavior
- Watershed geographical and topographical attributes
- Equipment requirements and possible siting locations

From the work performed for all three previous tasks, NAWC concludes that a program, following the proposed design specified in Task 3, is technically feasible.

Economic Feasibility

- According to the ASCE 2016 publication, the best method for determining the economic feasibility of a proposed program is to perform a benefit/cost analysis.
- The ASCE 2016 publication "Guidelines for Cloud Seeding to Augment Precipitation" recommends a minimum benefit to cost ratio of 5:1 to justify economic feasibility
  - This spread ensures a positive return amidst natural seasonal variability.
  - For California clients, where seasonal variability is often more exaggerated than in other climates, NAWC's goal is a to establish a program with a near 10:1 benefit to cost ratio. This accommodates for drier seasons that present fewer seeding opportunities.
- In order to calculate the benefit to cost ratio for this proposed program, SAWPA provided NAWC several estimates for untreated and unpressurized imported water resulting in an average calculated watershed wide value of $255 per acre-foot.
- In preparing the benefit to cost ratio for aerial seeding, NAWC applied a multiplier of 0.9 to the project yield of the aerial component, to account for the probability of missed flight opportunities

Cost Effectiveness



Considerations

- NAWC's cloud seeding program contracts consist of two forms of billings, fixed costs and variable costs.
  - Fixed costs include: equipment, personnel, standard travel, licensing and insurance
  - The variable costs are representative of the weather dependent materials, including ground-based generator (CNG) burn time, flight time and silver iodide flare consumption
- This design is preliminary, the actual program design will be determined will be defined by the scope of work of the Cloud Seeding Operator.

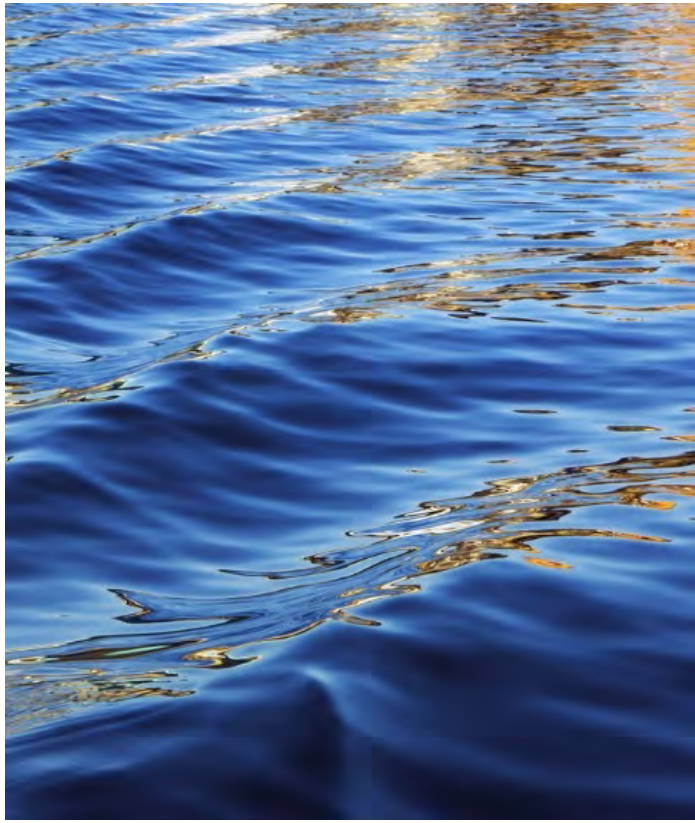
Estimate – Ground and Aerial Seeding

	Rate	Frequency	
Annual Operations			
Set Up	$ 40,000	1	$ 40,000
Take Down	$ 31,000	1	$ 31,000
Reporting	$ 10,000	1	$ 10,000
Monthly Operations			
Fixed Services	$ 55,000	5	$ 275,000
Variable Items (timed expenses are billed on a per hour basis)			
Ground Flares	$ 110	60	$ 6,600
Generator Run Time	$ 19.50	600	$ 11,700
Flight Time	$ 375	30	$ 11,250
Aerial Flares	$ 110	150	$ 16,500
		TOTAL	**$ 402,050**
		COST PER ACRE-FOOT	**$ 35.61**
		Benefit to Cost	**7.16**

Estimate – Ground Based Seeding Only

	Rate	Frequency	
Annual Operations			
Set Up	$ 33,500	1	$ 33,500
Take Down	$ 24,000	1	$ 24,000
Reporting	$ 10,000	1	$ 10,000
Monthly Operations			
Fixed Services	$ 24,500	5	$ 122,500
Variable Items (timed expenses are billed on a per hour basis)			
Ground Flares	$ 110	60	$ 6,600
Generator Run Time	$ 19.50	600	$ 11,700
Flight Time	$ 375	N/A	-
Aerial Flares	$ 110	N/A	-
		TOTAL	**$ 208,300**
		COST PER ACRE-FOOT	**$ 25.42**
		Benefit to Cost	**10.03**

Next Steps



RFP Recommendations

Program Caps

- With water valued at $255/AF, NAWC recommends a total program cap of $450,000.
- If a contractor presents a program proposal that does not encompass all 4 target areas, a reduction in the maximum program expense should be applied to accommodate for the reduction probable yield

Qualifications

- Addressed in the Final Draft Report

Support and Cooperation Amongst Program Participants

- Suspension
- Payments
- Supervision/Representation

Next Steps

1. Selection of Specific Ground Seeding Locations

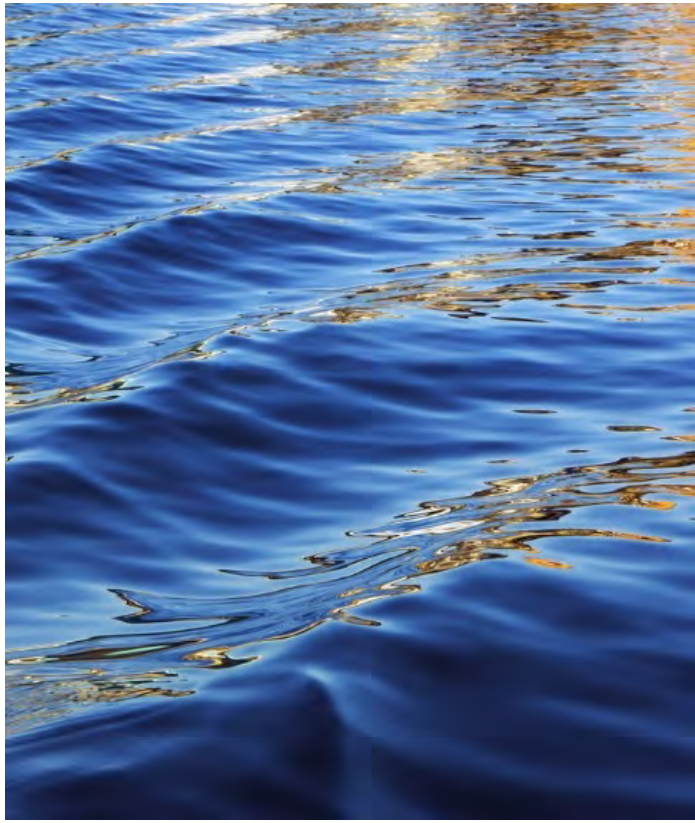
2. CEQA Compliance - Mitigated Negative Declaration

- CEQA compliance work can be a lengthy and involved processed. (6-12 months)
- NAWC can be contracted to assist with or draft the entire MND.

Cost Estimate

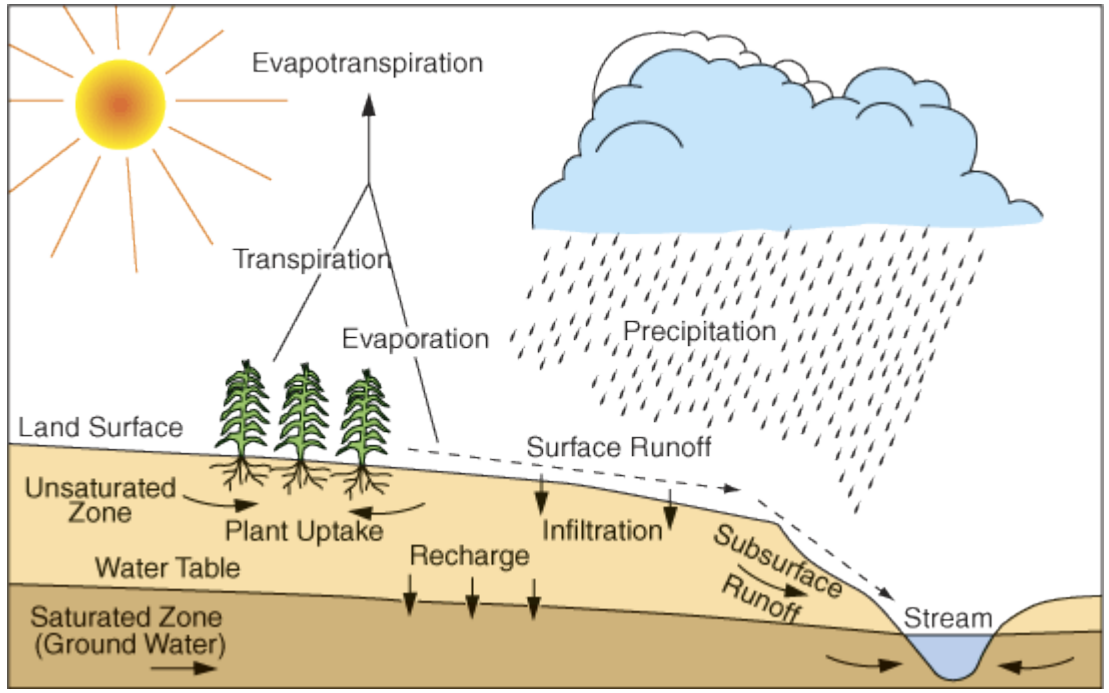
Service Rendered	Cost
Selecting Specific Site Locations	$1,100 per site or $15,400
CEQA (Mitigated Negative Dec)	$60,000
CEQA combined with Site Selection	$75,400

SAWPA Staff Recommendations



SAWPA Staff – Value to SAWPA Member Agencies

- Based on cost benefit ratio and a conservative estimate of water cost, the watershed could obtain 8200 – 11,600 AF/yr of additional recharge water supply at a cost of $280K - $475K/yr vs. $2.1 million - $3 million.
- This will have a direct impact on reducing costs to purchase recharge water by SAWPA member agencies.
- This cost could even be less if a SAWPA Prop 1 IRWM Round 2 grant application is successful for a three year pilot program (50% grant – 50% local share)



Recommendation

- Staff recommends that the SAWPA Commission receive this final report presentation on the Santa Ana River Watershed Weather Modification for Water Supply Feasibility Study by North American Weather Consultants Inc. and support including a budget for the ground seeding site selection analysis and CEQA development in the FY 21-22 SAWPA Budget

Disadvantaged Communities Involvement Program

Status Report

Rick Whetsel, Senior Watershed Manager

SAWPA Commission| December 1, 2020

Item No. 6.E.

Disadvantaged Communities Involvement Program (DCI) Program

DWR established the Disadvantaged Community Involvement Grant Program to support the following objectives:

1) Work collaboratively to involve DACs, community-based organizations, and stakeholders in IRWM Planning efforts
2) Increase the understanding, and identify the water management needs of disadvantaged communities
3) Develop strategies and long-term solutions that appropriately address the identified DAC water management needs
4) Support technical assistance for planning of future construction projects including feasibility, design, CEQA, etc. - Not construction at this stage.

Disadvantaged Communities Involvement (DCI) Grant Program Eligible Grant Activities		In SAWPA Scope
General Activity	Examples of Activity	
Technical assistance	Service provider trainings, local circuit rider programs to train water and wastewater staff	✓
Needs assessments	Surveys or meetings with community members to identify water management needs	✓
Project development activities	Planning activities, environmental compliance, or pre-construction engineering/design activities	✓
Site assessment	Water quality assessments, median household income surveys, data and mapping activities	✓
Engagement in IRWM efforts	DAC regional engagement coordinator role, DAC Advisory Committee to RWMG, DAC representatives in governance	✓
Governance Structure	Evaluation of governance structures and plan financing efforts, assessments of the level of DAC involvement in decision making processes	✓
Community outreach	Public project meetings open to community members, door-to-door outreach	✓
Education	Translation or interpretive services for information sharing, water education campaigns for community members, education for RWMGs on DAC needs	✓
Facilitation	Facilitated RWMG meetings, facilitated project development meetings	✓
Enhancement of DAC in IRWM Plans	Development of Funding Area-wide DAC plan to be utilized as a unified approach for all IRWM plans	✓

Program Partners

Leveraging Resources for Biggest Impact

OWOW Steering Committee

SAWPA

University of California Irvine

The Newkirk Center For Science & Society

CSU The California State University

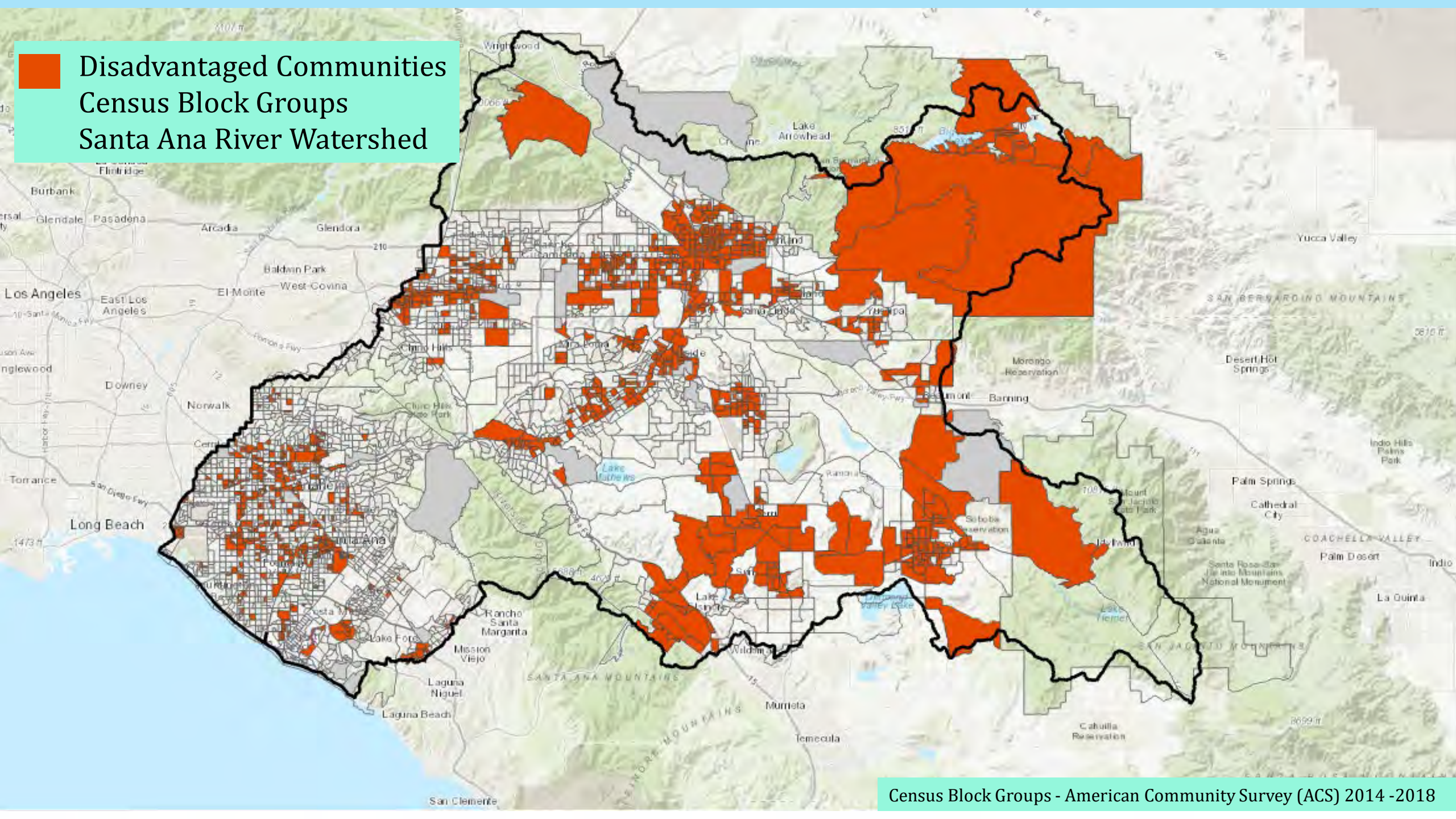
Local Government Commission
Leaders for Livable Communities

Water Education Foundation

California Rural Water Association

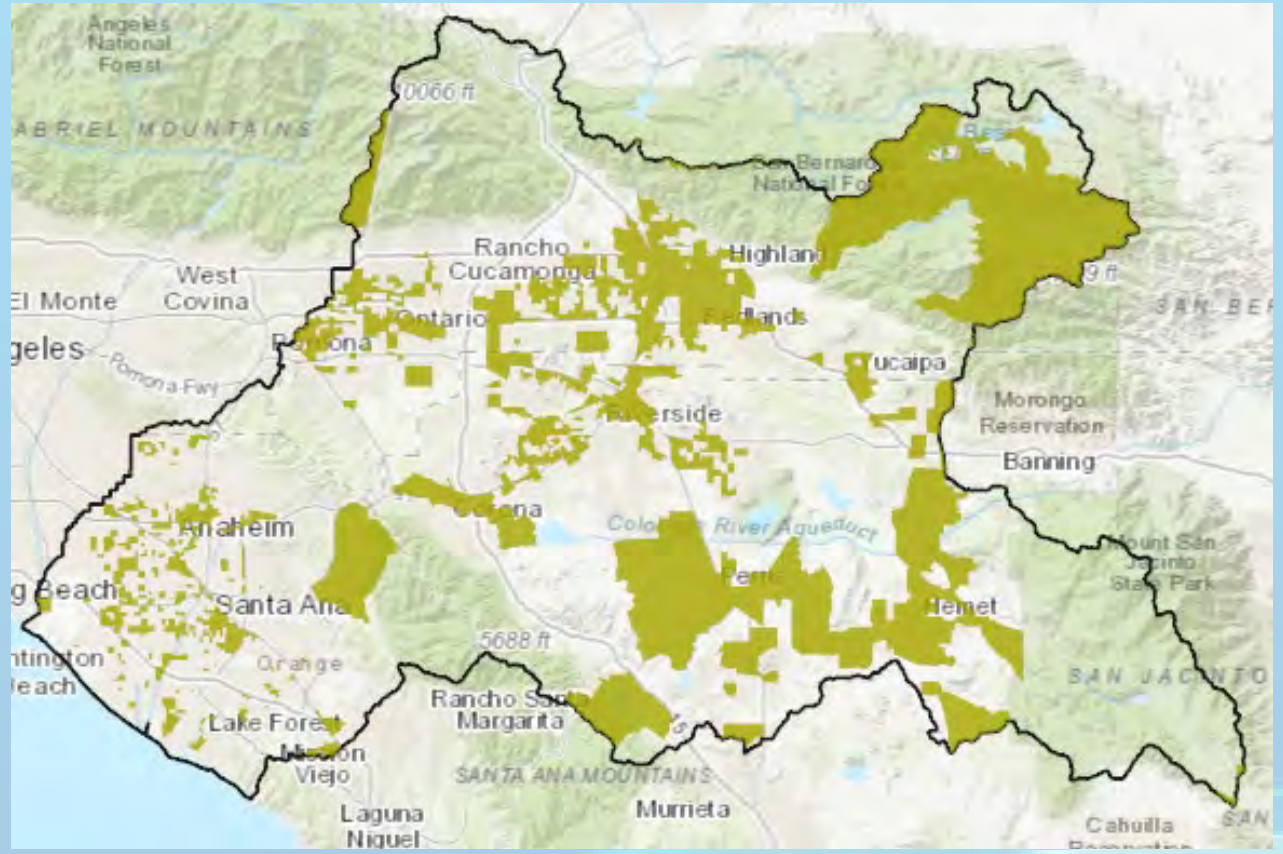
CivicSpark Water

SAWPA


Disadvantaged Communities
Census Block Groups
Santa Ana River Watershed
Census Block Groups - American Community Survey (ACS) 2014 -2018

DCI Program Elements

1. Strengths and Needs Assessment
2. Education and Engagement
3. Project Development
4. Administration



SAWPA

Disadvantaged Communities and Tribal Involvement Lessons Learned Summit

- Focus: Disadvantaged Communities and Tribes Lessons Learned through Prop 1 IRWM Program
- Highlighted SAWPA's DACI Program
- Findings from IRWM regions around the State
- Key Speakers:
  - Wade Crowfoot, California Natural Resources Agency
  - Laurel Firestone, State Water Board
  - Yana Garcia, California Environmental Protection Agency
  - Carmel Brown and Anecita Aguustinez, Department of Water Resources
- Over 450 Attendees
- Next Key Deliverable: Summary Findings Report

Wade Crowfoot
Secretary
California Natural Resources Agency

Laurel Firestone
Board Member
State Water Resources Control Board

Yana Garcia
Deputy Secretary for Environmental Justice, Tribal Affairs and Border Relations
California Environmental Protection Agency

Links to Summit Resources

Direct links to the summit materials can be found at:

https://www.lgc.org/summit/

Recordings

https://www.lgc.org/summit-recorded-sessions/

Slides

https://www.lgc.org/summit-presentations/

Technical Assistance for Community Need

- Objective: Technical Assistance (TA) funding to support the development of projects and programs that address the water needs of disadvantaged and underrepresented communities.
- Requires evaluation of projects, plans, and programs following set of evaluation criteria developed by DCI Technical Advisory Committee (TAC)
- Allocated Funding $2.9 M
- Work is ongoing

DCI Program Technical Assistance Funding

TA Award	Project Sponsor:	Project Title:
$25,630	CRWA / CSU WRPI	Median Household Income Surveys
COMPLETE	SAWPA	Assessing the Water Quality, Riparian, and Aquatic Habitat Impacts of Homelessness in the Upper Santa Ana River Watershed
$350,000	Soboba Band of Luiseno Indians	Residential Asbestos Cement Pipe Abandonment and Replacement Project
$500,000	Big Bear Area Regional Wastewater Agency	Replenish Big Bear
COMPLETE	California Rural Water Association	Tribal Advisory Committee (Tribal AC)
$175,000	Box Springs MWC	Rehabilitation, Removal or Replacement of Water Storage Reservoirs with SCADA
$200,000	City of Colton	Two New Potable Wells with Generators
$100,000	Devore WC	New Reservoir, Distribution System Upgrades and New Well
$150,000	Idyllwild WD	Water Treatment Plant Upgrade with SCADA
$100,000	Marygold MWC	New Well and Generator Project
$25,000	Riverside Highland WC	Ion Exchange System
$250,000	Terrace MWC	New Potable Well
$200,000	Eastern Municipal WD	Quail Valley Sub-Area 4 Septic to Sewer, Phase 1 Planning Analysis
$277,990	City of Rialto	Bohnert/Banyon Septic to Sewer Project
$100,000	Orange County WD	Watershed Education and Field Trip Program for Disadvantaged Community Elementary School Students
$100,000	City of Fullerton	Fullerton's Water Future - Ensuring Delivery of Clean, Safe Drinking Water
$50,000	Huerta del Valle	Reconnecting and Enhancing Water Resources for greater community and environmental benefit.
$100,000	City of Santa Ana	Washington Avenue Well Project
$2,900,000	Total Technical Assistance funding Awarded	

DCI Program Budget (through Q3 2020)

	Program Element	Budget	Expenses	Balance	% Spent
1	**Strengths & Needs**	$ 898,644	$ 898,644	$ -	100%
2	**Engagement / Education**	$ 1,853,068	$ 1,634,486	$ 218,582	88%
3	**Project Development**	$ 3,233,288	$ 1,888,540	$ 1,344,748	58%
4	**Administration**	$ 315,000	$ 246,154	$ 68,846	78%
	Total	**$ 6,300,000**	**$ 4,667,825**	**$ 1,632,175**	**74%**

Program Schedule

Element / Activity		2020 Q4	2021 Q1	2021 Q2	2021 Q3
PE 1	Strengths & Needs Assessment				
PE 2	Engagement / Education				
14	Community Water Education				
15	Water Agency Engagement Training				
16	Local Elected Leader Training				
PE 3	Project Development				
18	Technical Assistance / Project Implementation				
PE 4	Grant Administration				

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Questions