SAWPA

FYE 2022 and 2023 General Fund Draft Budget

1. General Fund Budget
2. Indirect Cost & Benefit Allocations
3. Member Contributions

General Fund Budget

Budget Policy Practices

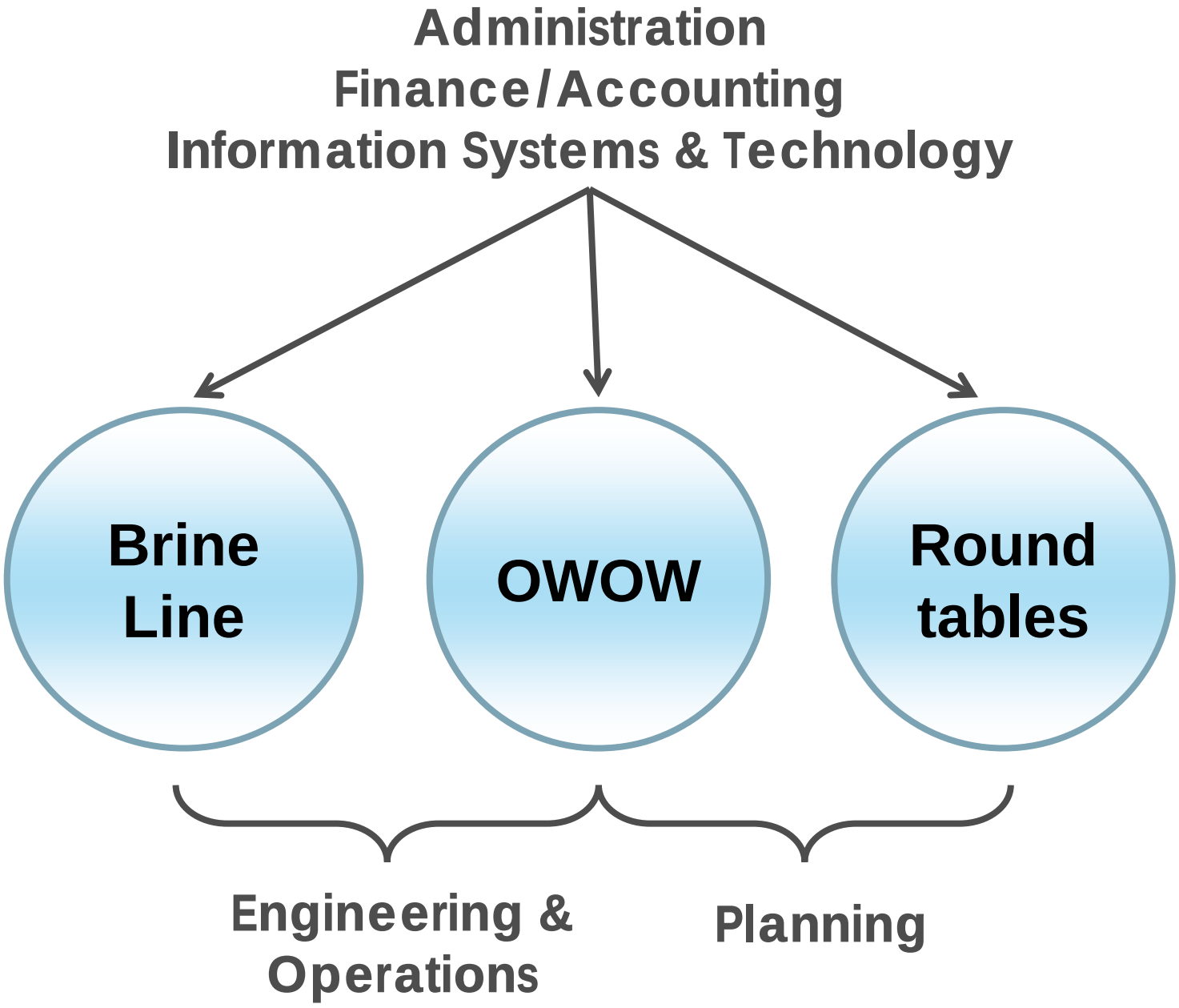
The General Fund is used for all JPA administrative functions in support of the Commission, legislative needs, headquarter building facility and maintenance, and all other functions not specifically related directly to projects.

Budget Policy Practices

SAWPA will endeavor to keep the indirect cost rate constant from year to year to provide stability in costs charged to projects using SAWPA labor, and for reimbursable contracts and charges to outside agencies.

Budget Policy Practices

SAWPA will work to keep member agency contributions reasonable and relatively constant to provide stability for the member agencies.


Administration
Finance/Accounting
Information Systems & Technology
Brine Line
OWOW
Round tables
Engineering & Operations
Planning

Legal Functions

Accounting Functions

Training
Meetings
Conferences

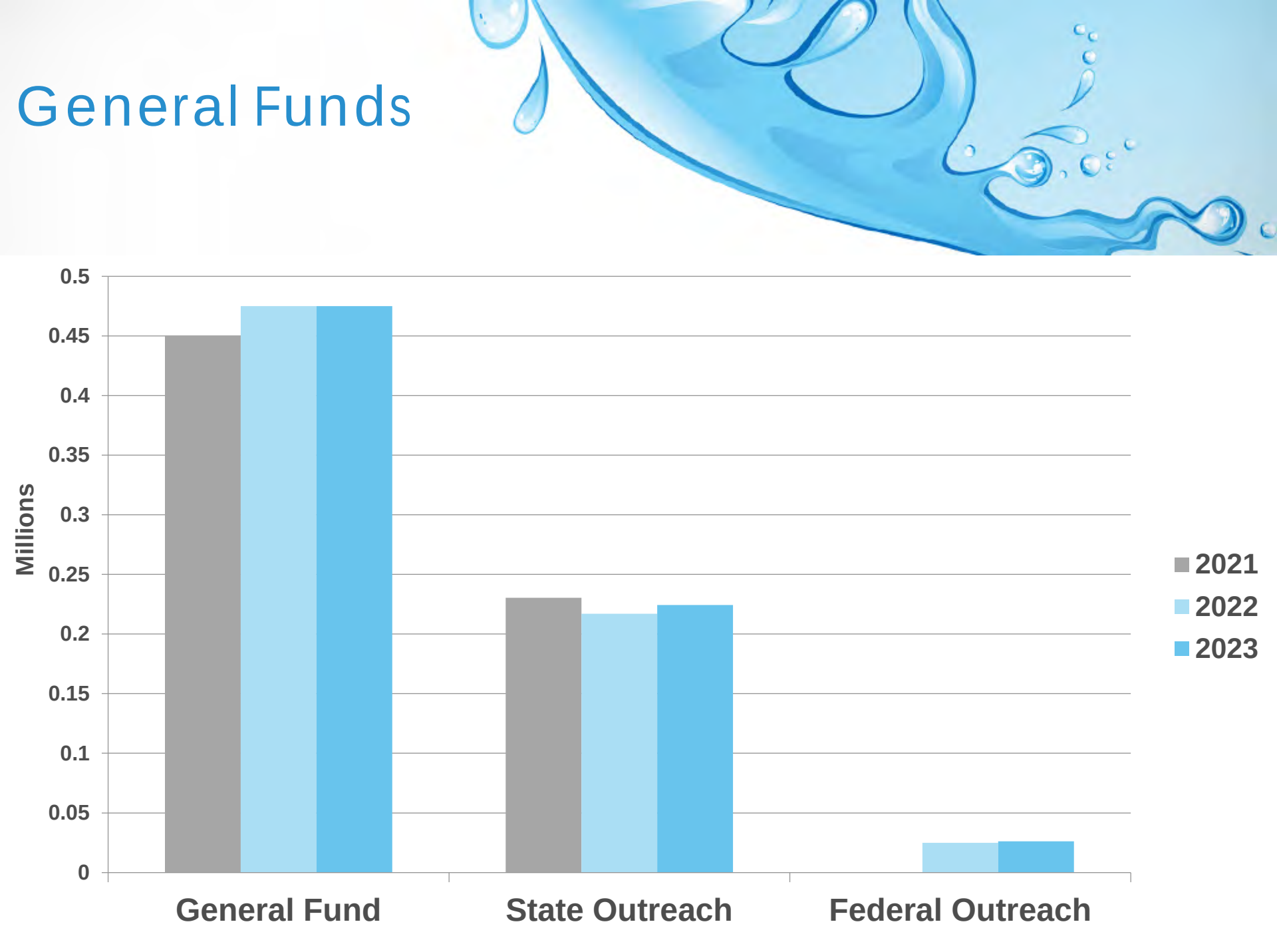
Misc Tasks

HR Activities

Information & Technology Functions

Payroll Activities

General Funds



General Funds Expenses

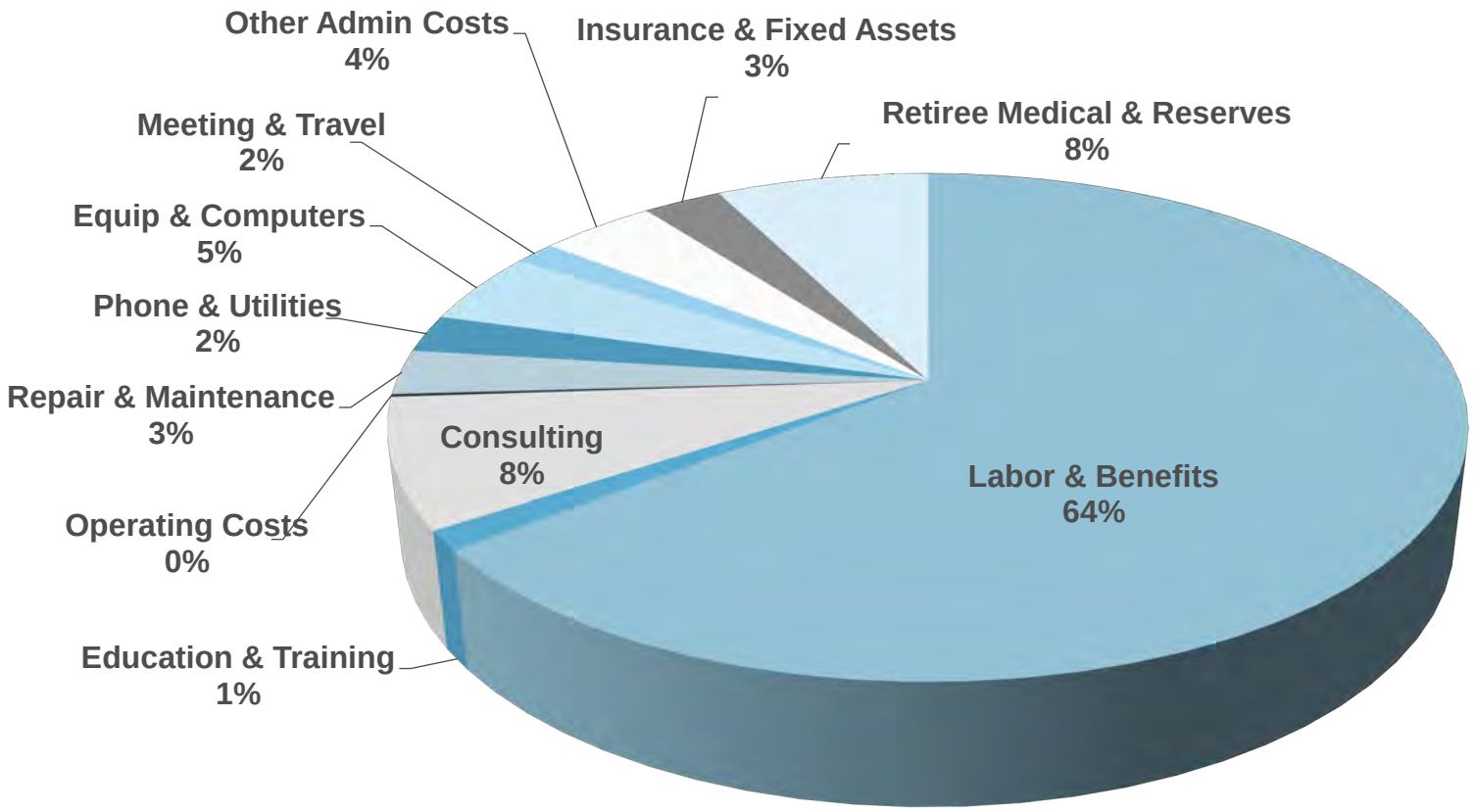
Expense	FYE 2021	FYE 2022	FYE 2023
General Fund	$450,000	$475,000	$475,000
State Outreach	239,339	216,974	224,232
Federal Outreach	0	24,873	26,205
Total	$680,339	$716,847	$725,437

General Fund Costs

Fund	FYE 2021	FYE 2022	FYE 2023
Labor and Benefits	$2,547,084	$2,390,790	$2,566,349
Education & Training	50,200	46,500	46,600
Consulting & Professional Services	304,000	303,750	309,000
Operating Costs	6,550	6,400	6,400
Repair & Maintenance	122,550	106,000	106,400
Phone & Utilities	75,900	89,150	94,350
Equipment & Computers	212,650	170,000	185,400
Meeting & Travel	62,000	55,500	55,500
Other Administrative Expenses	209,103	153,319	153,154
Insurance & Fixed Assets	139,250	104,178	106,577
Retiree Medical & Building Reserves	277,823	281,642	297,414
Total Before Indirect Cost Allocations	$4,007,110	$3,707,229	$3,927,144
Less Indirect Cost Allocations	(3,557,110)	(3,232,229)	(3,452,144)
Total General Fund Costs	**$450,000**	**$475,000**	**$475,000**

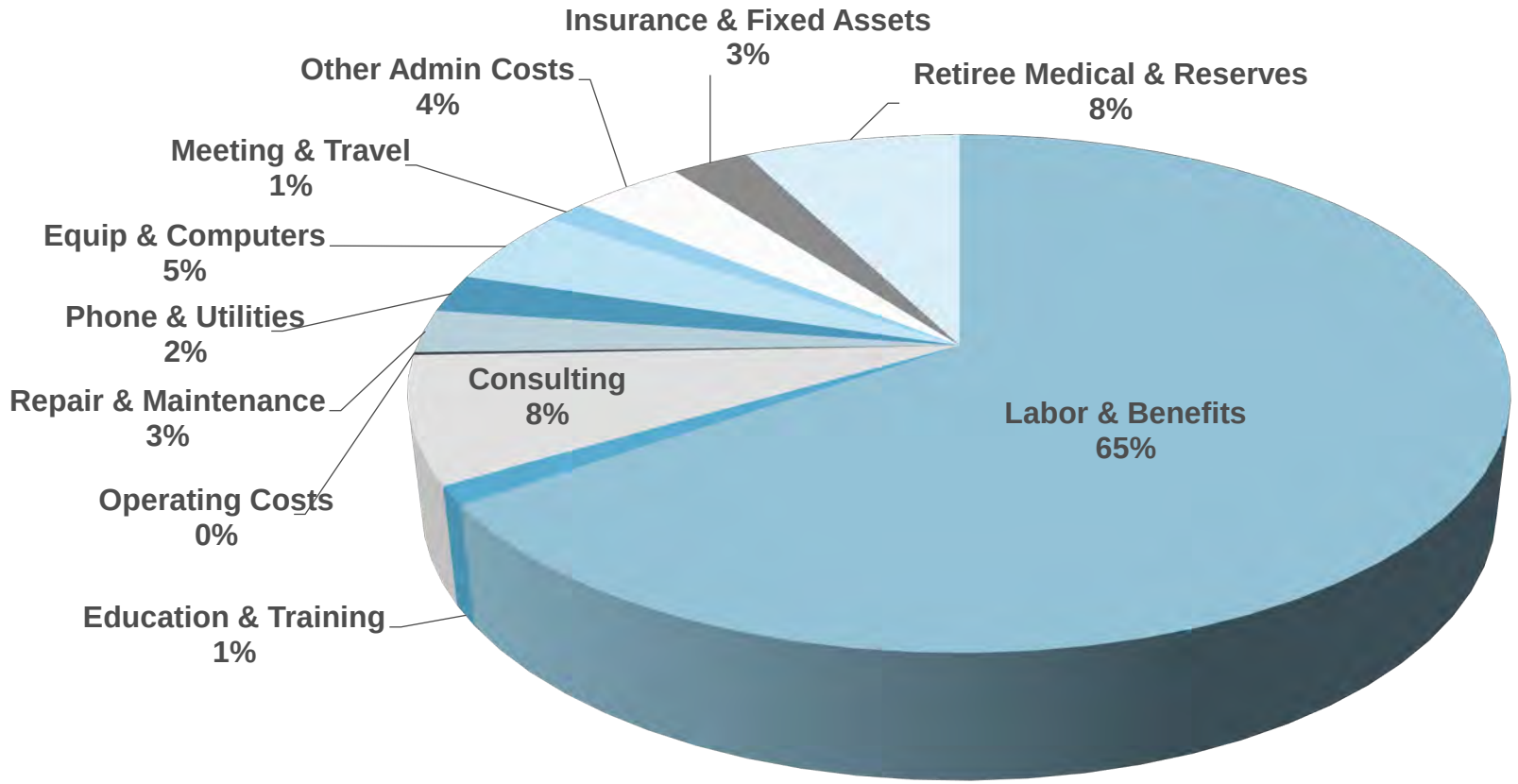
FYE 2022

General Fund Costs $3.7 Million



FYE 2023

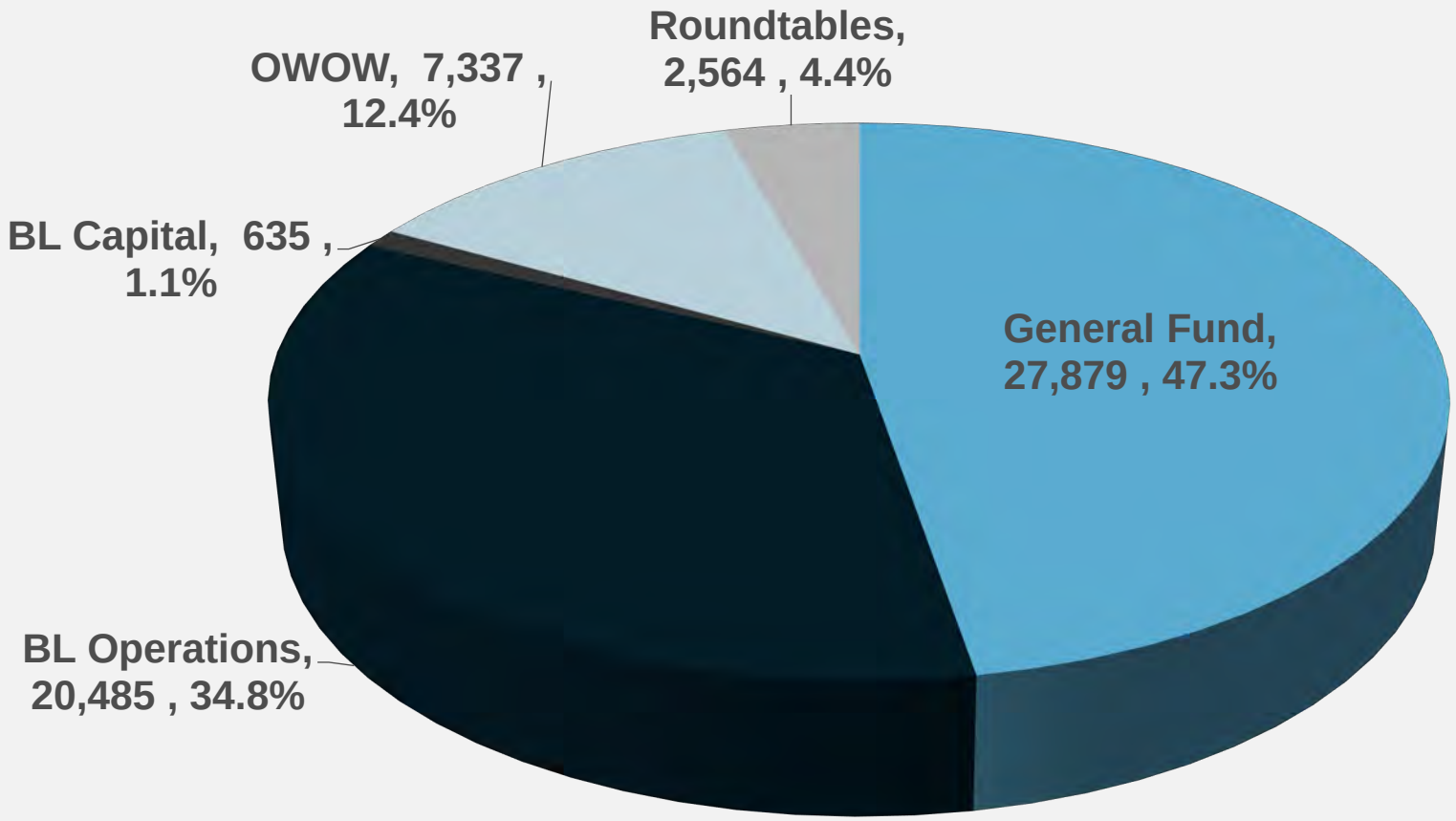
General Fund Costs $3.9 Million



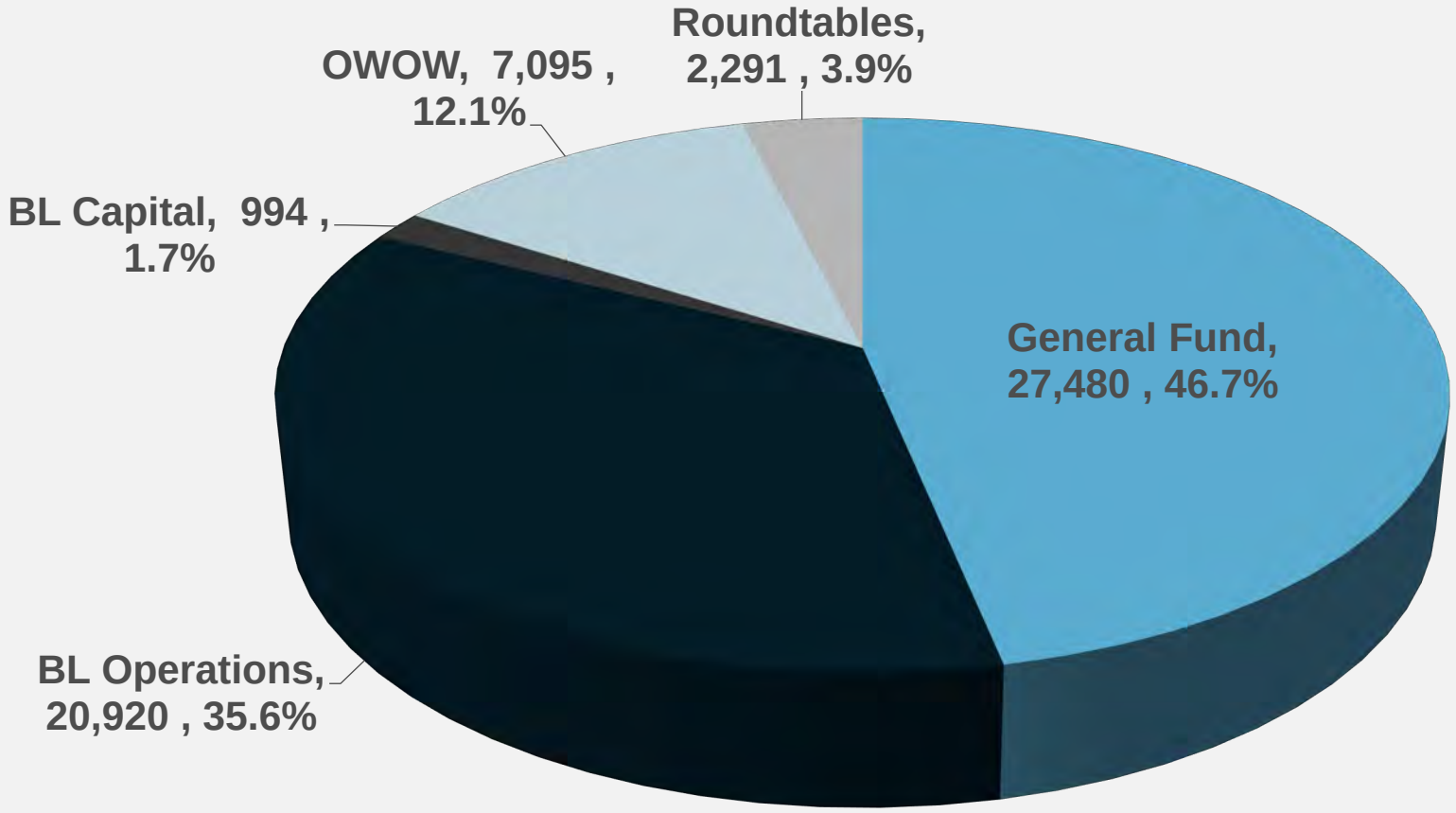
Indirect Cost Allocations by Fund Type

Fund	FYE 2022	FYE 2023
Brine Line Operations Fund	$1,979,458	$2,133,400
Brine Line Capital Fund	94,824	147,614
OWOW Fund	874,486	898,635
Roundtables Fund	283,460	272,496
Total	$3,232,229	$3,452,144

Labor Hours Distribution FYE 2022



Labor Hours Distribution FYE 2023



Total Labor Hours Distribution

Fund	FYE 2022	% of Total	FYE 2023	% of Total
General Fund	27,879	47.3%	27,480	46.7%
Brine Line Operating Fund	20,485	34.8%	20,920	35.6%
Brine Line Capital Fund	635	1.1%	994	1.7%
OWOW Funds	7,337	12.4%	7,095	12.1%
Roundtables Funds	2,564	4.4%	2,291	3.9%
Total	58,900	100.0%	58,780	100.0%

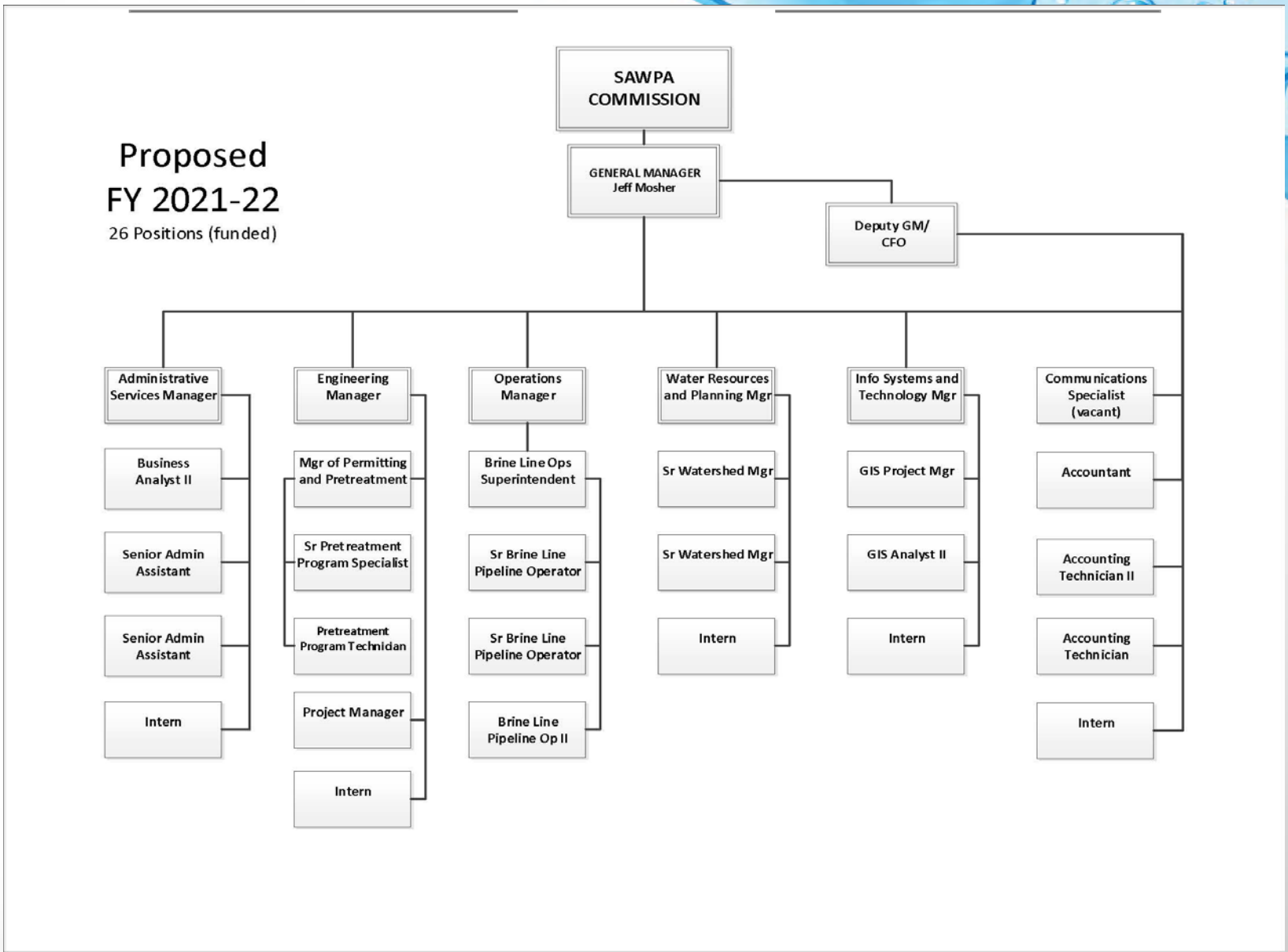
Labor Assumptions Used

- **26 FTE**
  - **25 filled and approved FTE**
  - **1 unfilled budgeted positions**
- **5 Interns**
- **7% Salary increase each year**
  - **Merit Pool**
  - **COLA**
  - **Promotions**
  - **Adjustments**

Staff Changes

- **Removed**
  - **Executive Counsel**
  - **Watershed Manager**
- **Changed**
  - **Executive Assistant to Communications Specialist**

Organization Chart



Positions by Department

Department	FYE 2016	FYE 2017	FYE 2018	FYE 2019	FYE 2020	FYE 2021	FYE 2022	FYE 2023
Executive Management	2	2	2	2	3	3	2	2
Administrative Services	5	5	5	6	6	6	4	4
Finance/Accounting	3	3	3	3	2	2	4	4
Information Systems and Technology	3	3	3	3	3	3	3	3
Engineering*	9	9	5	5	5	5	5	5
Operations*	0	0	5	5	5	5	5	5
Water Resources & Planning	4	4	5	5	4	4	3	3
Total Positions	**26**	**26**	**28**	**29**	**28**	**28**	**26**	**26**

* Engineering and Operations was one department prior to 2018

Benefit Assumptions Used

PERS 2% @ 55 - Classic

	FYE 2022	FYE 2023
PERS Employers Rate	11.66%	11.70%
Employer Paid Member Contribution (EPMC)	0%	0%
Unfunded Liability Payment	$115,529	$152,000

PERS 2% @ 62 - PEPRA

	FYE 2022	FYE 2023
PERS Employers Rate	7.70%	7.70%
Unfunded Liability Payment	$11,712	$12,000

Benefit Assumptions Used

- **PERS Unfunded Liability as of 06/30/2020**
  - **$4,081,229**
- **Outstanding OPEB Liability as of 06/30/2020**
  - **$503,309**
- **GASB 45/75 Compliance (6 employees eligible)**
    - **FYE 2022 – $181,642**
      - **Annual Required Contribution = $65,000**
      - **Pay go Retiree Premiums (8) = $116,642**
    - **FYE 2023 - $197,414**
      - **Annual Required Contribution = $65,000**
      - **Pay go Retiree Premiums (8) = $132,414**
- **Health insurance cap based on the lowest cost plan**
  - **(Kaiser family) - $1,994/month**
    - **10% increase FYE 2022**
    - **10% increase FYE 2023**

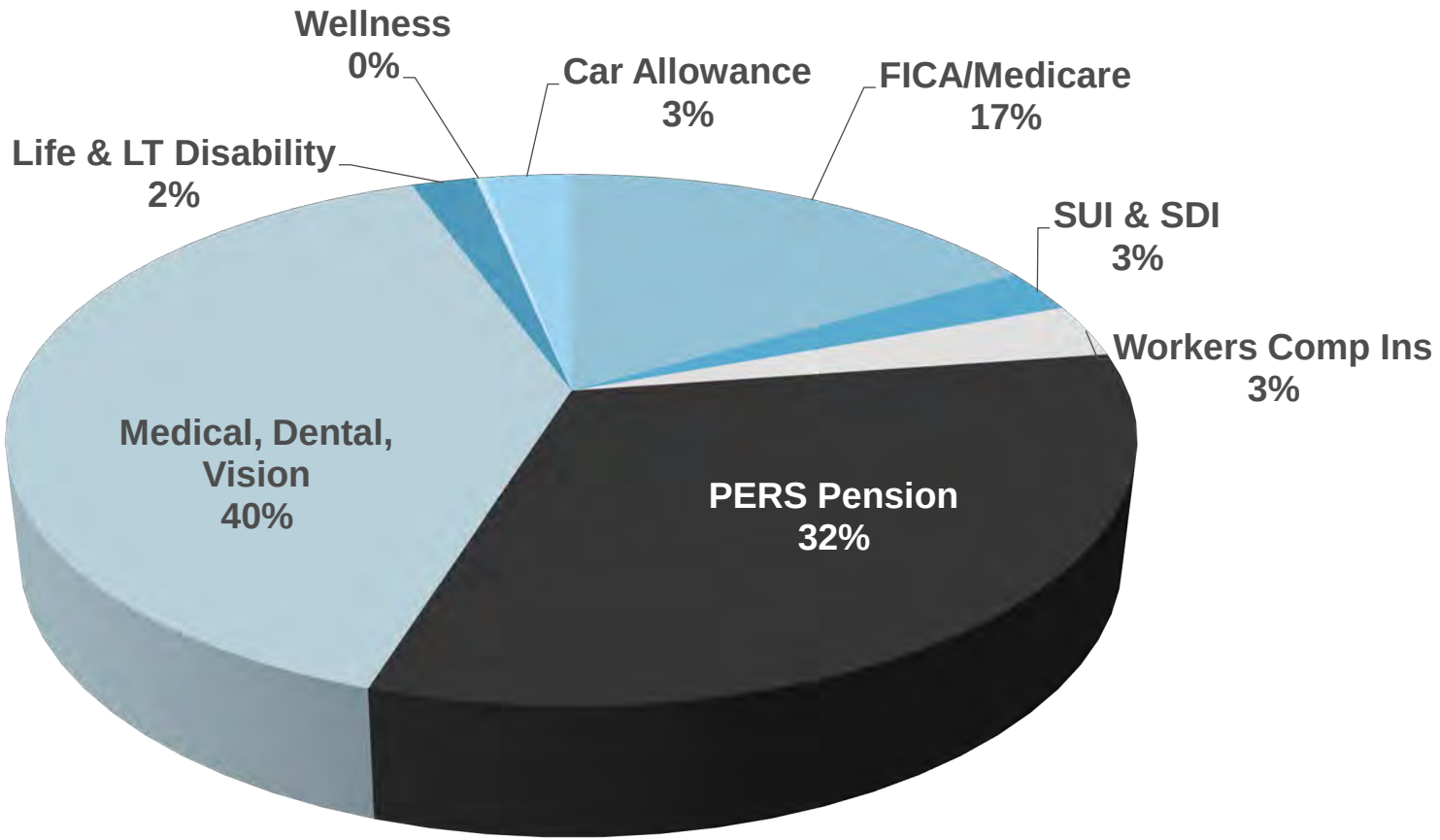
Total Payroll & Benefit Costs

FYE	Benefits	Payroll	Total	FTE
2018	$1,356,121	$3,290,569	$4,646,690	27
2019	$1,496,863	$3,390,201	$4,887,064	28
2020	$1,476,642	$3,493,614	$4,970,256	28
2021	$1,890,627	$4,173,739	$6,064,366	28
2022	$1,497,154	$3,782,588	$5,279,742	26
2023	$1,689,235	$4,025,165	$5,714,400	26

Budget

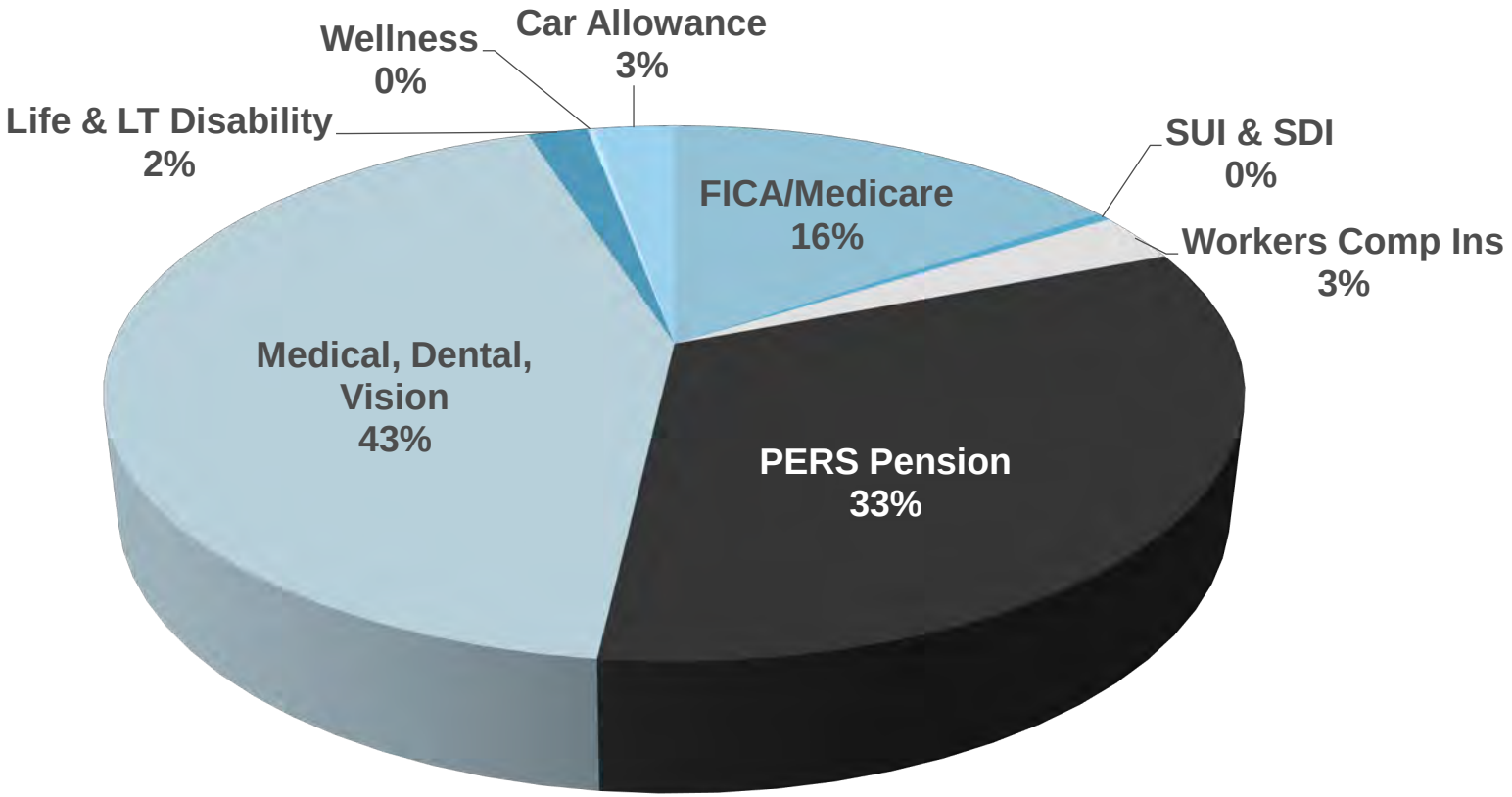
Benefit Costs FYE 2022

Total Benefits $1,497,154



Benefit Costs FYE 2023

Total Benefits $1,689,235



Benefit & Indirect Cost Allocation Rates

FYE	Benefits	Indirect Cost	Total
2018	0.412	1.578	1.990
2019	0.442	1.617	2.059
2020	0.423	1.886	2.309
2021	0.453	1.508	1.961
2022	0.396	1.613	2.009
2023	0.420	1.608	2.028

Budget

Member Contributions

FYE	Per Member Agency	Inc/(Dcr) Over Prior Year	Total
2018	$288,423	($562)	(0.195%)
2019	$294,339	$5,916	2.05%
2020	$305,393	$11,054	3.76%
2021	$306,068	$675	0.22%
2022	$311,369	$5,301	1.73%
2023	$313,087	$1,718	0.55%

Member Contributions per Agency

Activity	Actual FYE 2021	Budget FYE 2022	Budget FYE 2023
General Planning	$72,000	$80,000	$80,000
USBR Partnership Studies	4,000	4,000	4,000
Watershed Management (OWOW)	90,000	80,000	80,000
SA River Fish Conservation	2,000	2,000	2,000
LESJWA Management	2,000	2,000	2,000
State Outreach	46,068	43,394	44,846
Federal Outreach	0	4,975	5,241
General Fund	90,000	95,000	95,000
Total Agency Contribution	$306,068	$311,369	$313,087

1.73%

0.55%


Questions?

SAWPA Properties

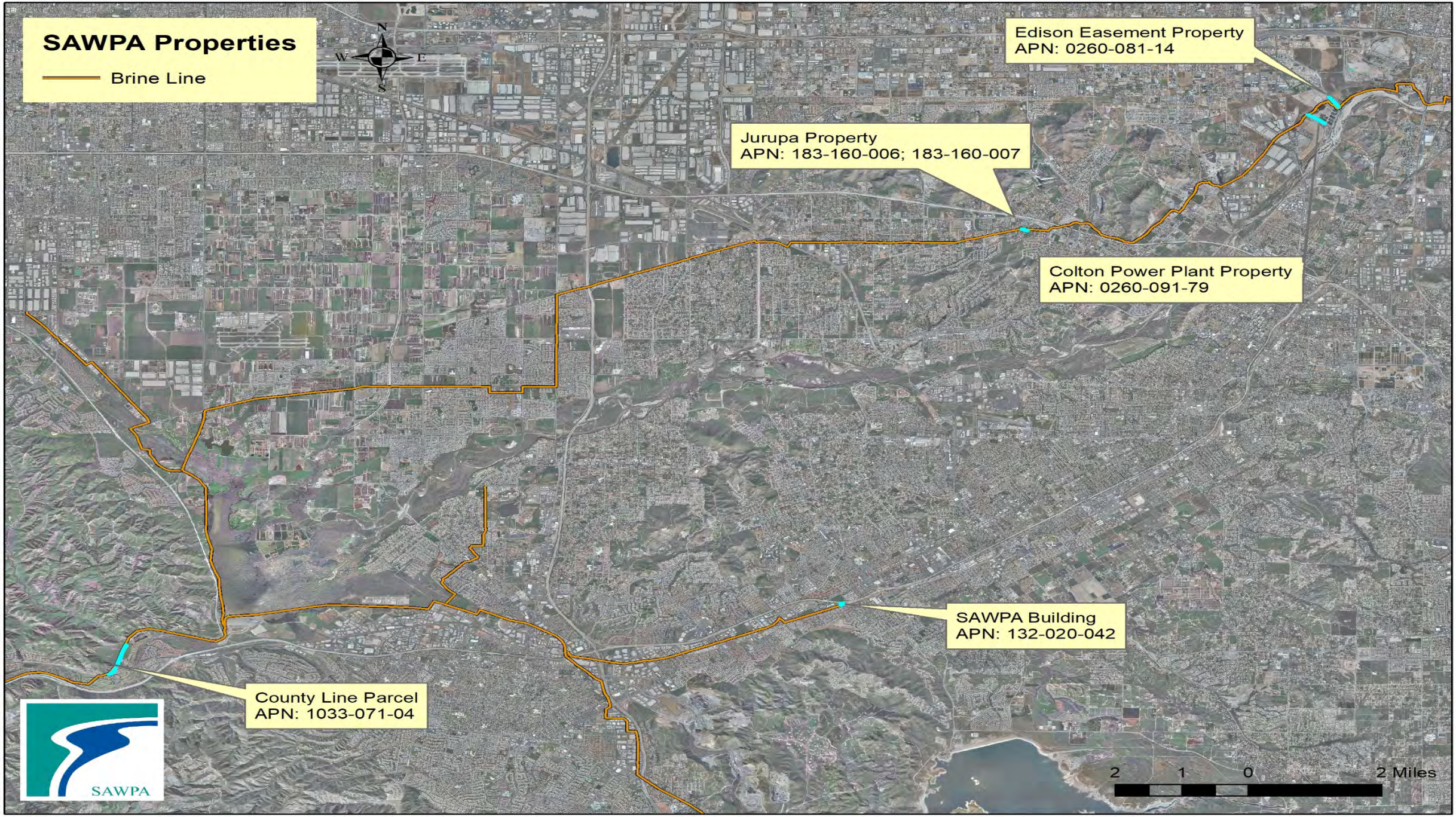
Carlos Quintero, Operations Manager

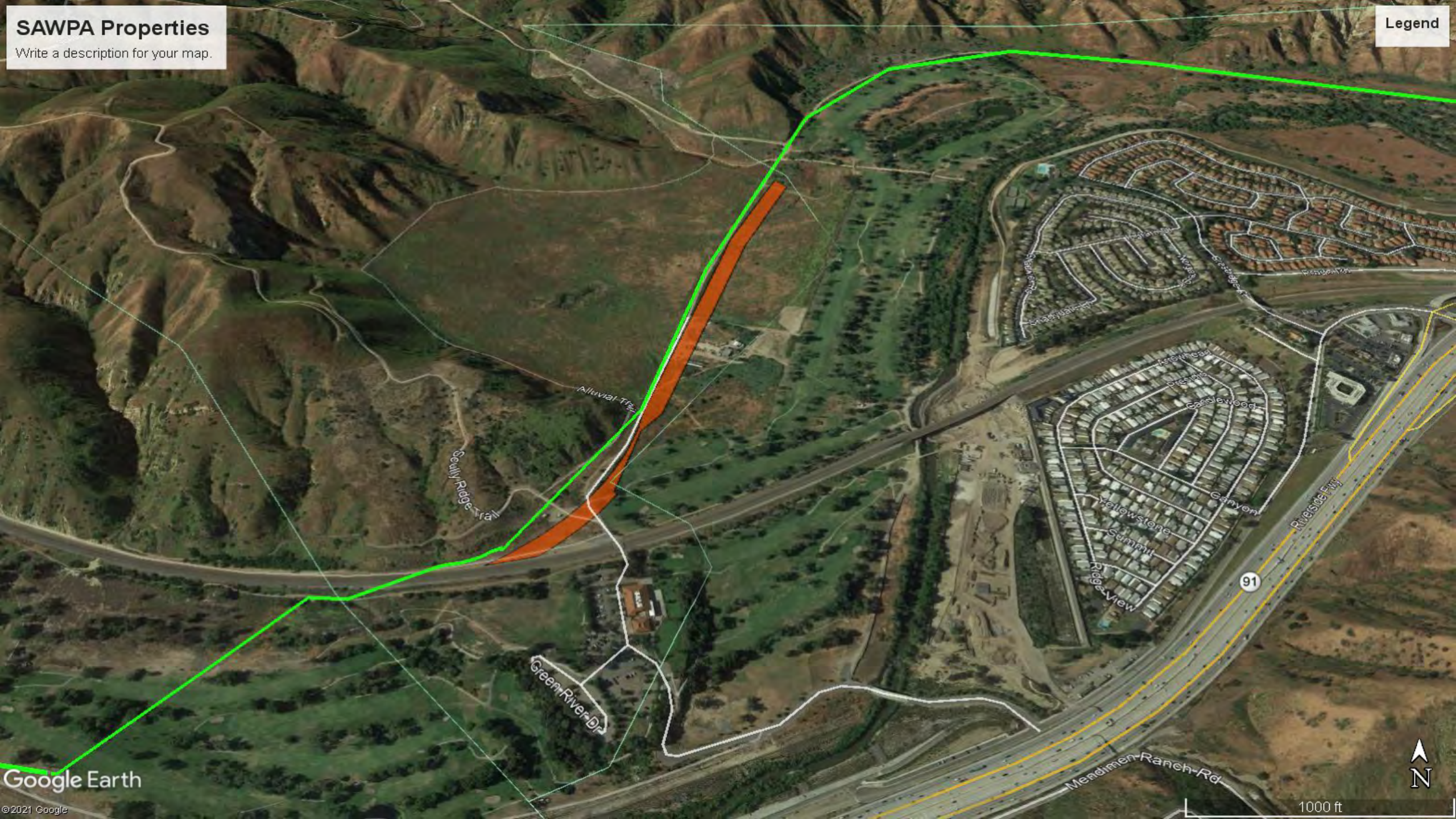
SAWPA Commission| April 6, 2021

Item No. 6.B.

Recommendation

- Receive and file


SAWPA Properties
Brine Line
N
W
E
S
Edison Easement Property
APN: 0260-081-14
Jurupa Property
APN: 183-160-006; 183-160-007
Colton Power Plant Property
APN: 0260-091-79
SAWPA Building
APN: 132-020-042
County Line Parcel
APN: 1033-071-04
SAWPA
2
1
0
2 Miles


SAWPA Properties
Write a description for your map.
Legend
Alluvial Trl
Scully Ridge Trail
Green River Dr
Yellowstone Summit
Ridge View
Canyon
Riverside Fwy
91
Meridimen Ranch Rd
N
1000 ft
Google Earth
©2021 Google

County Line Property


SAWPA Properties
Write a description for your map.
Legend
Riverside Fwy
91
Sterling Ave
Queensborough St
Fillmore St
Paine Dr
N
200 ft
Google Earth
©2021 Google

SAWPA Building Property


SAWPA Properties
Write a description for your map.
Legend
Valley Way
Jurupa Rd
Fairbanks Ave
Mission Blvd
60
Google Earth
©2021 Google
N
300 ft

Jurupa Property


SAWPA Properties
Write a description for your map.
Legend
Edison Easement Property
Colton Power Plant Property
W Hopkins Rd
Miguel Bustamante Pkwy
Google Earth
© 2021 Google
N
900 ft

Colton Power Plant Property

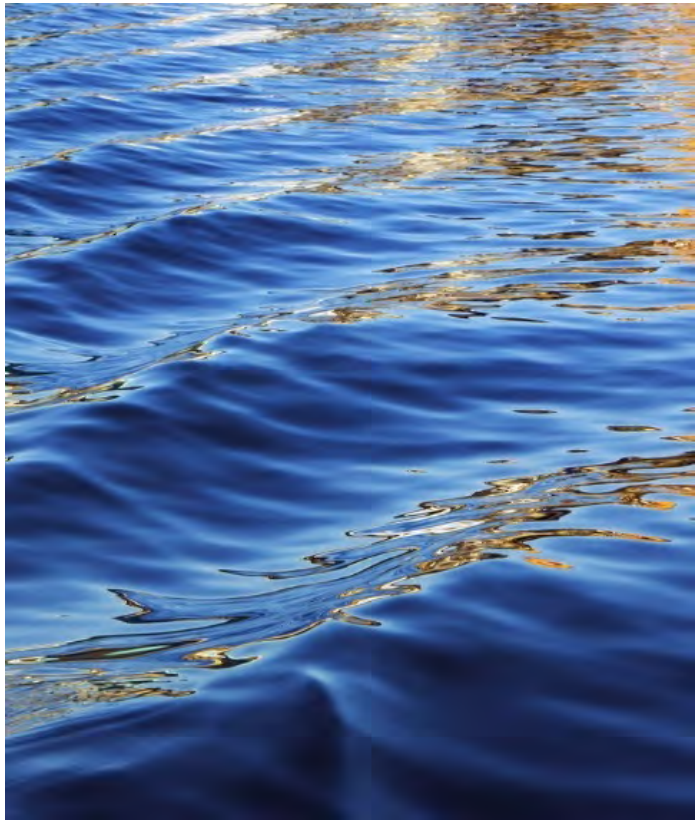
Edison Easement Property

Recommendation

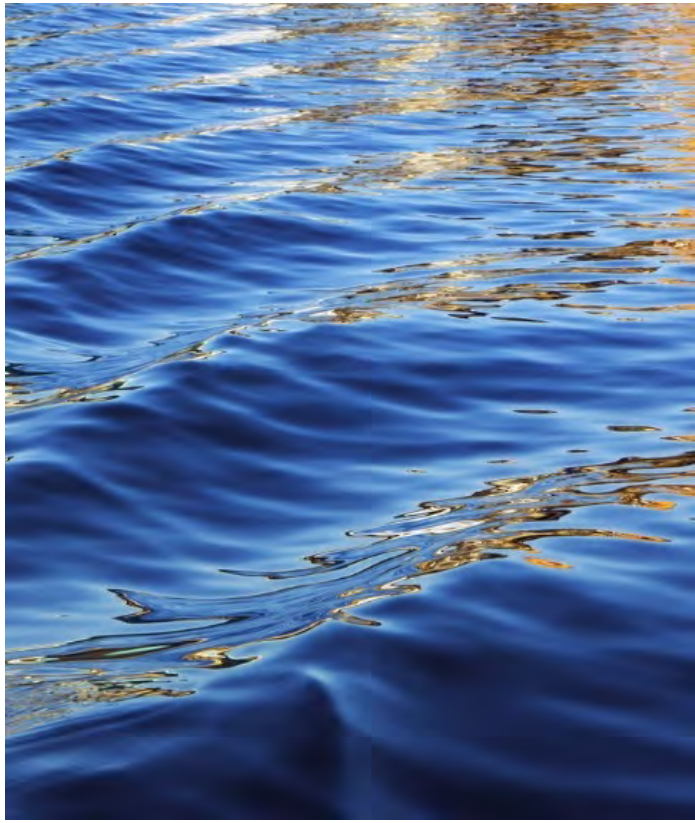
- Receive and File

Santa Ana Watershed Weather Modification Feasibility Study

Mark Norton, Water Resources & Planning Mgr.
Santa Ana Watershed Project Authority
Item No. 6.C.



Review & Background



Cloud Seeding Mechanisms

Ground Based Seeding Methods

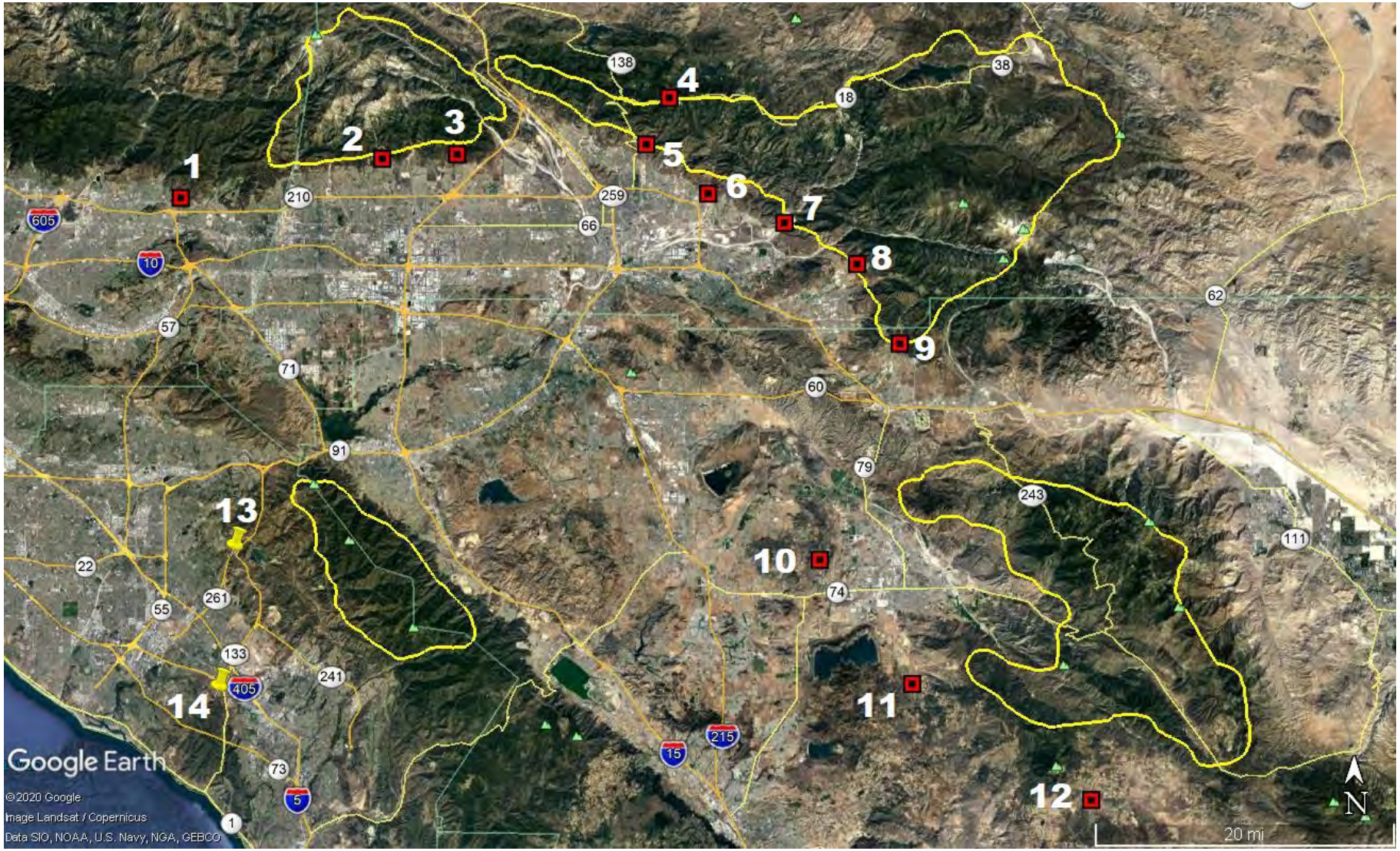
CNG's (Cloud Nuclei Generators)

- 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)

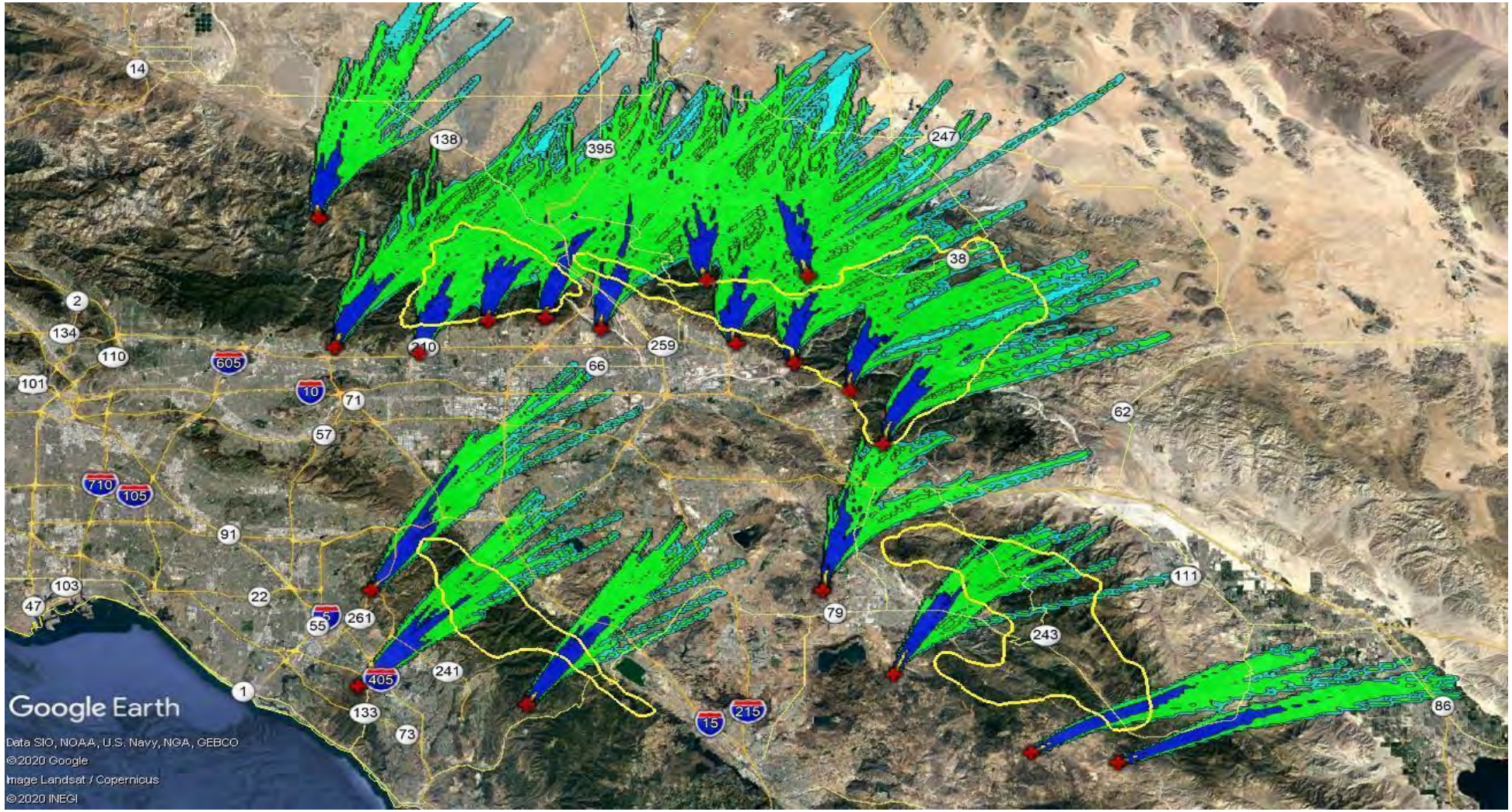
Refined – Ground Seeding Sites



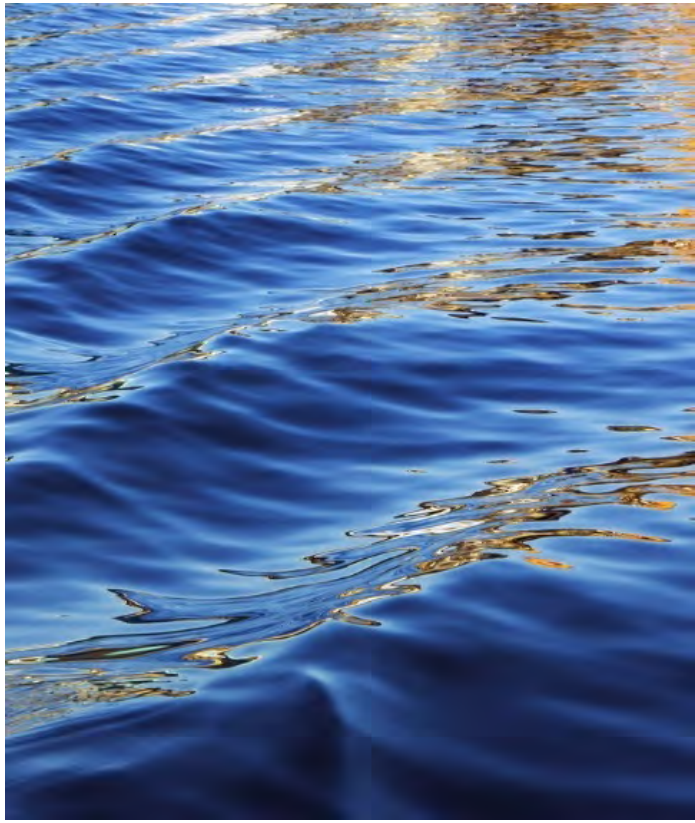
Yellow Pins = AHOGS
Red Bullseyes = CNG's

Aerial Seeding

Ground Based Seeding Dispersion Model



Increase Estimates



Total Projected Increases

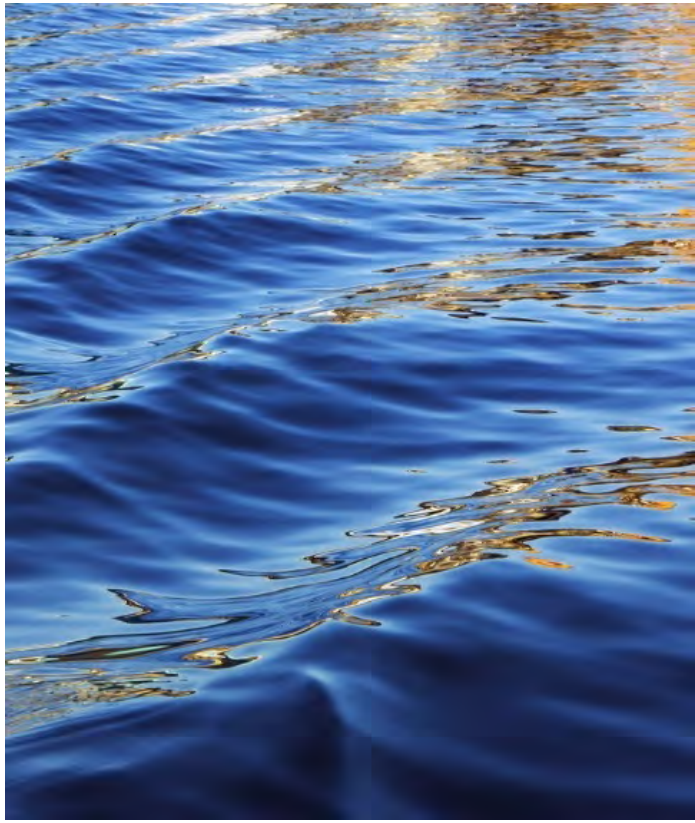
Ground Only Seeding

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 Service (NWS)

- 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

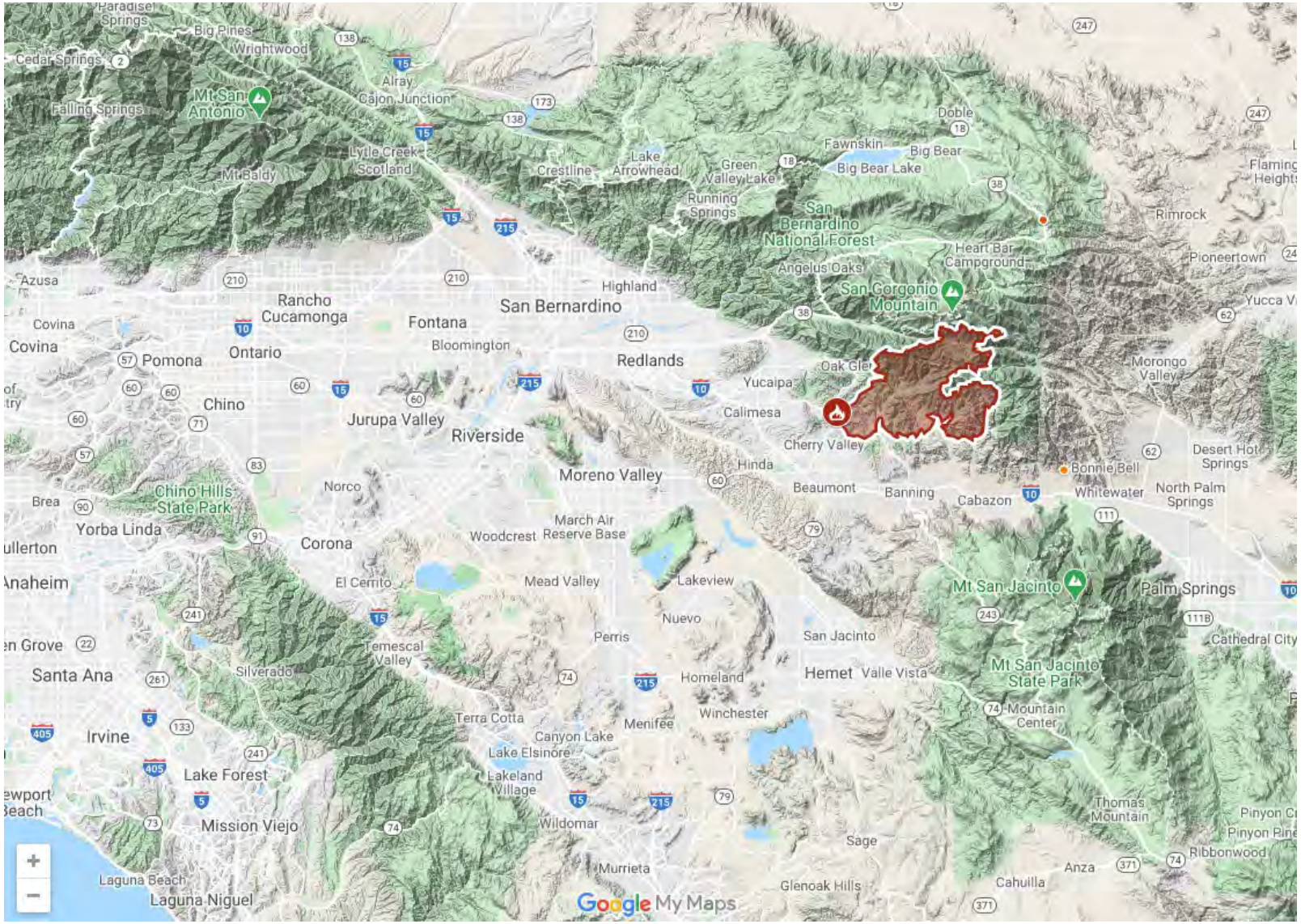
- Due to concerns related to infrastructure, Consultant suggested suspending operations when:
  - Hourly precipitation is forecasted to exceed 0.5 or 0.7 inches
  - 24-hr precipitation totals are forecasted to exceed 2-3 inches.
  - These thresholds correspond to events that occur on average once every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

Cloud Seeding Suspension Criteria

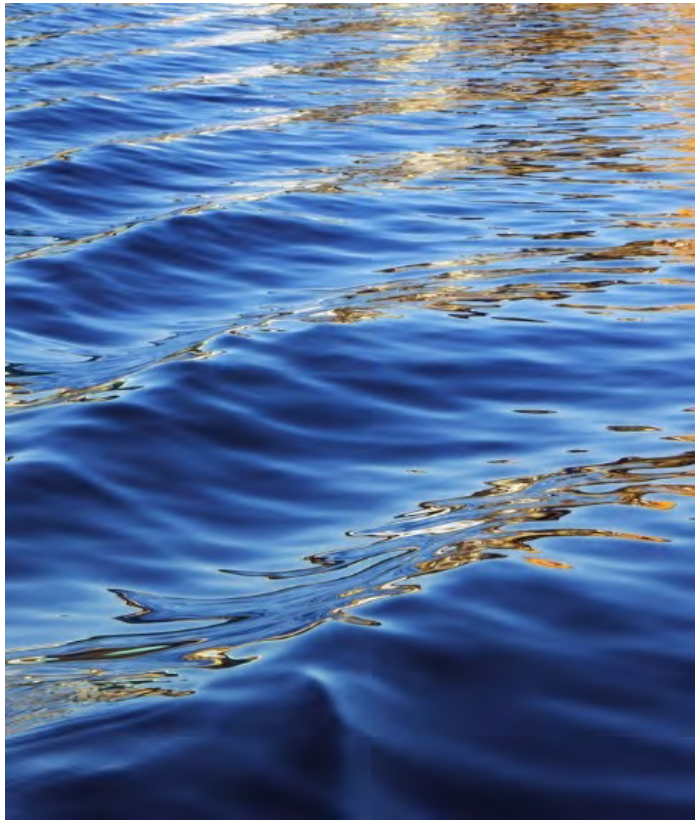
Forest Fires

- Considerations
  - 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
Yucaipa
Oak Glen
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
Anaheim
El Cerrito
Mead Valley
Lakeview
Mt San Jacinto
Palm Springs
Nuevo
Perris
San Jacinto
Cathedral City
Grove
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
Wildomar
Thomas Mountain
Mission Viejo
Sage
Ribbonwood
Murrieta
Anza
Laguna Beach
Glenoak Hills
Cahuilla
Laguna Niguel
Google My Maps

Feasibility



Technical Feasibility

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

Consultant concluded that a program, following the proposed design in the feasibility report, is technically feasible.

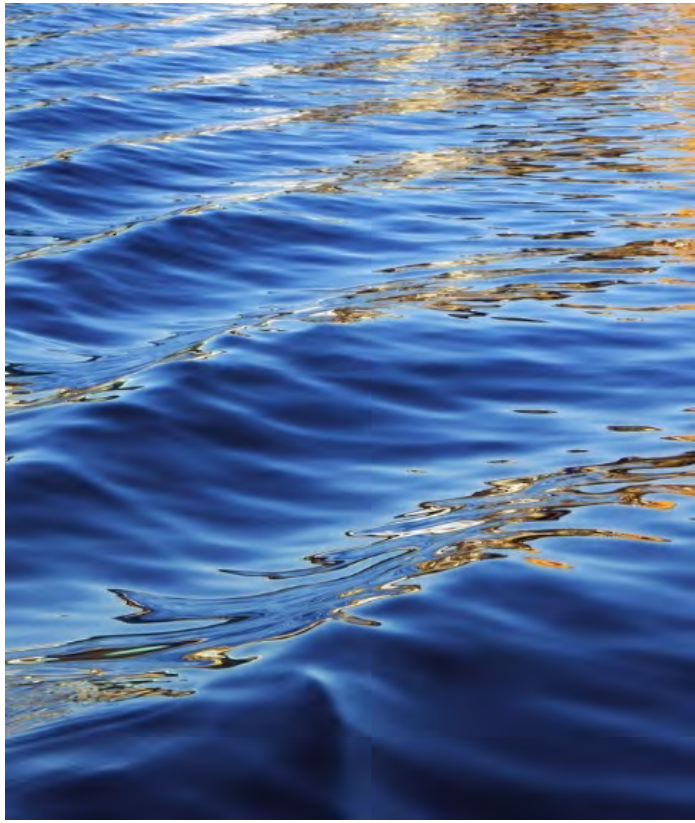
Economic Feasibility

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 minimum ratio ensures a positive return amidst natural seasonal variability.
- In California, seasonal variability is often more exaggerated than in other climates, so ratio goal was to establish a program with a **near 10:1 benefit to cost ratio**. This accommodates for drier seasons that present fewer seeding opportunities.

- Assumptions:
  - Costs were compared to untreated and unpressurized imported water reflecting an average watershed wide value of $255 per acre-foot.
  - Multiplier of 0.9 to the project yield of the aerial component, to account for the probability of missed flight opportunities

Cost Effectiveness



Estimate – Ground and Aerial Seeding

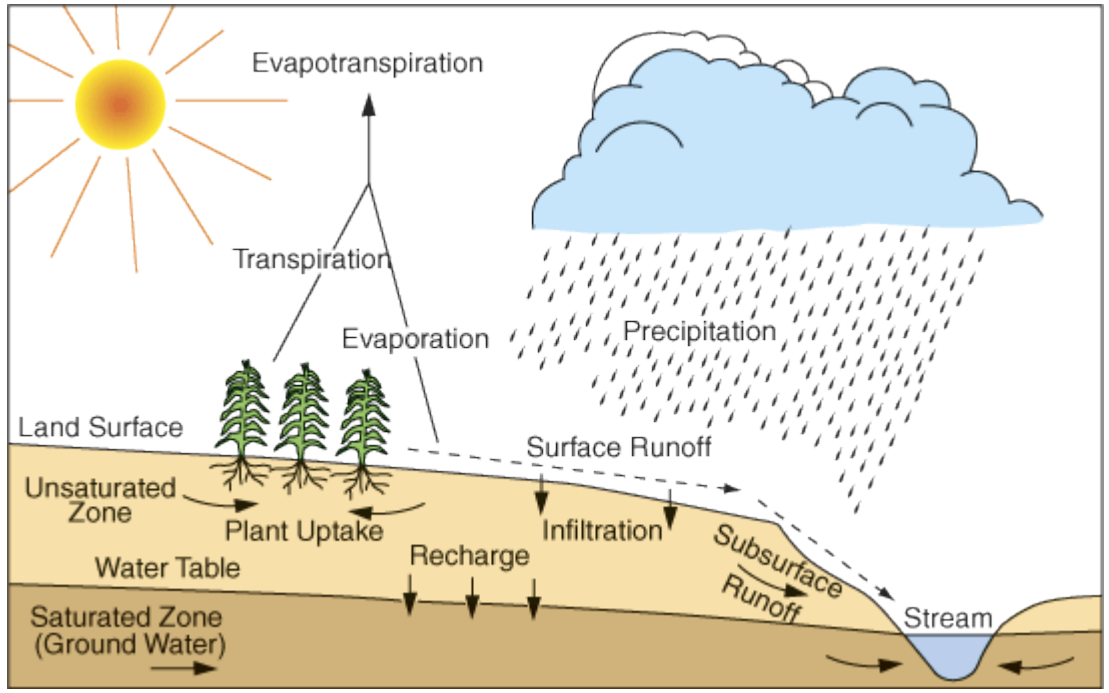
	Rate	Frequency	
Annual Operations			
Set Up	$ 40,000	1	$ 40,000
Take Down	$ 31,000	1	$ 31,000
Reporting	$ 10,000	1	$ 10,000
Monthly Operations			
Fixed Services	$ 55,000	5	$ 275,000
Variable Items (timed expenses are billed on a per hour basis)			
Ground Flares	$ 110	60	$ 6,600
Generator Run Time	$ 19.50	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

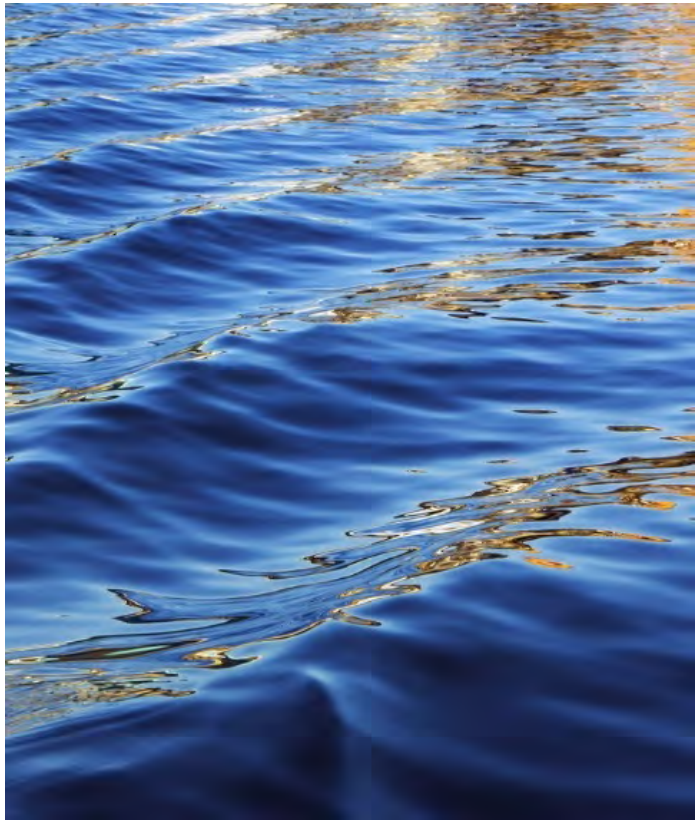
	Rate		Frequency		
Annual Operations					
Set Up	$	33,500	1	$	33,500
Take Down	$	24,000	1	$	24,000
Reporting	$	10,000	1	$	10,000
Monthly Operations					
Fixed Services	$	24,500	5	$	122,500
Variable Items (timed expenses are billed on a per hour basis)					
Ground Flares	$	110	60	$	6,600
Generator Run 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**

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)



Next Steps



Next Steps

1. Selection of Specific Ground Seeding Locations
2. CEQA Compliance - Mitigated Negative Declaration
   - CEQA compliance work is estimated to take 6-12 months

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

Next Steps

- SAWPA GM and Member Agency GM's indicated full support with the continued investigation and CEQA preparation
- Full support that SAWPA prepare a Prop 1 Round 2 grant application for a three-year pilot scale project for the Santa Ana Watershed Weather Modification Program. If successful, grant could cover 50% of program costs.
- Grant application would be for $300K-$600K in grant funds, less than 3% of available competitive Round 2 grant funding from Santa Ana Funding Area allocation.

Recommendation

- Staff recommends that the SAWPA Commission:

(1) Authorize proceeding with the ground seeding site selection analysis and CEQA Development in FY 21-22

(2) Authorize staff to prepare a watershed wide SAWPA project application for Prop 1 Round 2 seeking 50% grant funding for a three-year pilot scale watershed weather modification program