



AGENDA
CITY OF SEASIDE
CITY COUNCIL

SPECIAL MEETING
Council Chamber
440 Harcourt Avenue
Tuesday, August 20, 2019
5:30 PM

1. CALL TO ORDER

2. ROLL CALL – ESTABLISHMENT OF QUORUM

Ian N. Oglesby	Mayor
David R. Pacheco	Mayor Pro Tem
Jason Campbell	Council Member
Jon Wizard	Council Member
Alissa Kispersky	Council Member

3. PUBLIC COMMENT

Members of the public wishing to address the City Council on matters within the jurisdiction of the City of Seaside, but not on this agenda, may do so during the Public Comment period for up to three minutes. Public Comments on specific agenda items are heard under that item. For the public record, please state your name.

4. STUDY SESSION

A. CONTINUE STUDY SESSION FROM JULY 18, 2019: DISCUSS AND PROVIDE DIRECTION ON SECURING OUR WATER FUTURE

RECOMMENDATION: Continued Study Session discussion, ask questions and provide direction.

5. ADJOURNMENT

Next Regularly Scheduled Meeting:
September 5, 2019
7:00 PM

The City of Seaside is committed to providing accessible facilities and accommodating people with disabilities in all of its services programs and activities. If special considerations are needed by any person to fully participate in this meeting, contact the City Clerk at 899-6707 no fewer than two business days prior to the meeting to allow reasonable arrangements. The City Council chamber is equipped with a portable microphone and assisted listening devices are available at all meetings. City Council Meetings that are held in the City Council Chambers are broadcast live to all Seaside residents on Comcast Channel 25 and U-verse Channel 99. Live streamed meeting videos as well as videos of past meetings are available on the City's website at: <http://www.ci.seaside.ca.us/129/City-Council-Committee-Agendas>

Agenda-related writings or documents provided during public meetings are available for public inspection during the meeting or from the office of the City Clerk. This agenda is posted in compliance with California Government Code Section 54954.2(a) or Section 54956.



CITY OF SEASIDE STAFF REPORT

Item No.: 4.A.

TO: City Council

BY: Craig Malin, City Manager

DATE: August 20, 2019

**SUBJECT: CONTINUE STUDY SESSION FROM JULY 18, 2019: DISCUSS
AND PROVIDE DIRECTION ON SECURING OUR WATER FUTURE**

PURPOSE & RECOMMENDATION

Continued Study Session discussion, ask questions and provide direction.

BACKGROUND

The City Council held a study session on July 18, 2019 and received the attached six presentations from the different water purveyors that provide water in Seaside jurisdiction.

This meeting is a continuation of that study session and the Council can ask questions of the representatives from the different water purveyors, discuss and provide direction to staff.

ATTACHMENTS

1. Water Study Session Introduction Presentation
 2. Monterey Peninsula Water Management District Presentation
 3. Pure Water Monterey Update Presentation
 4. Marina Coast Water District Presentation
 5. California American Water Presentation
 6. Seaside Municipal Water System
-

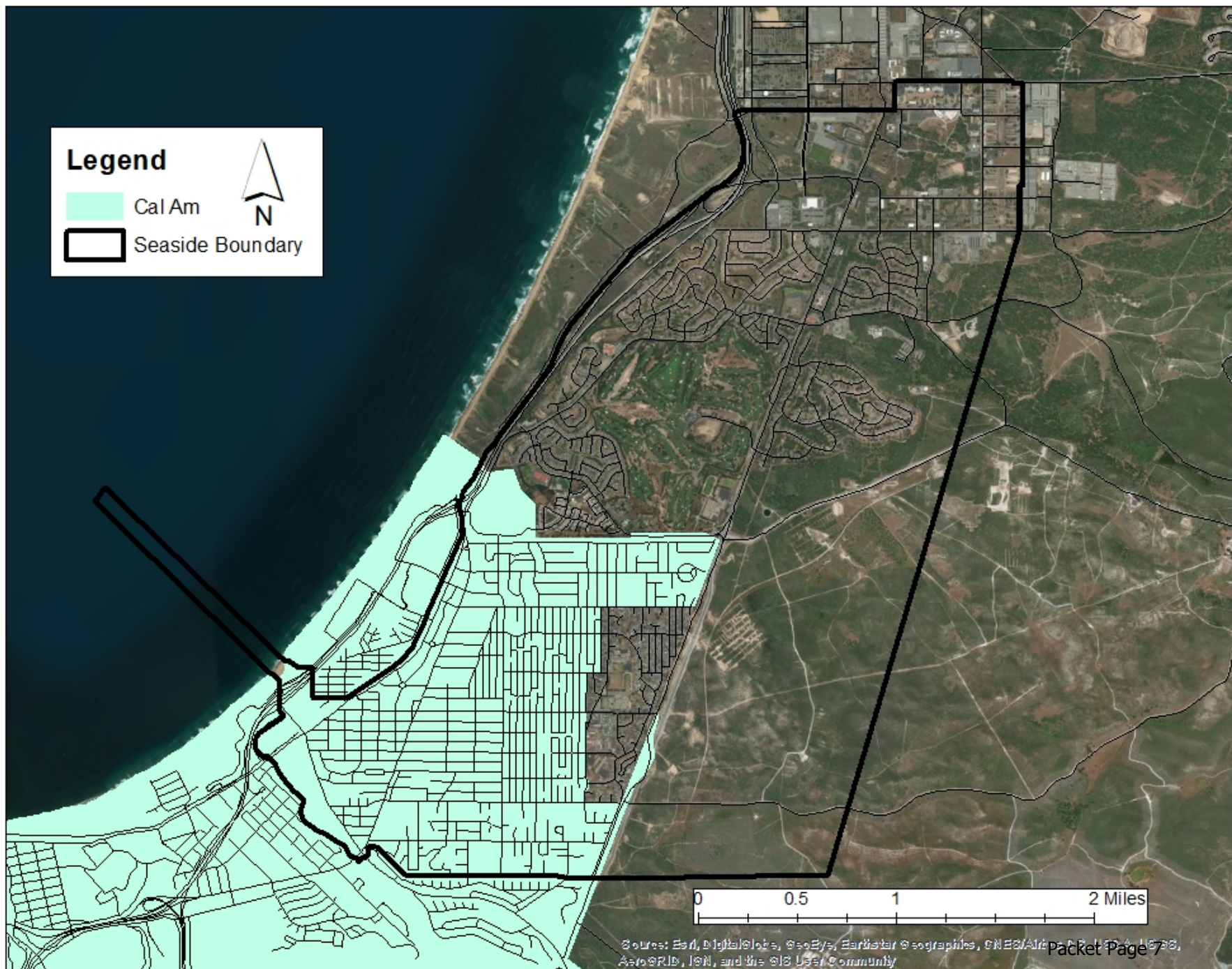
Water Study Session

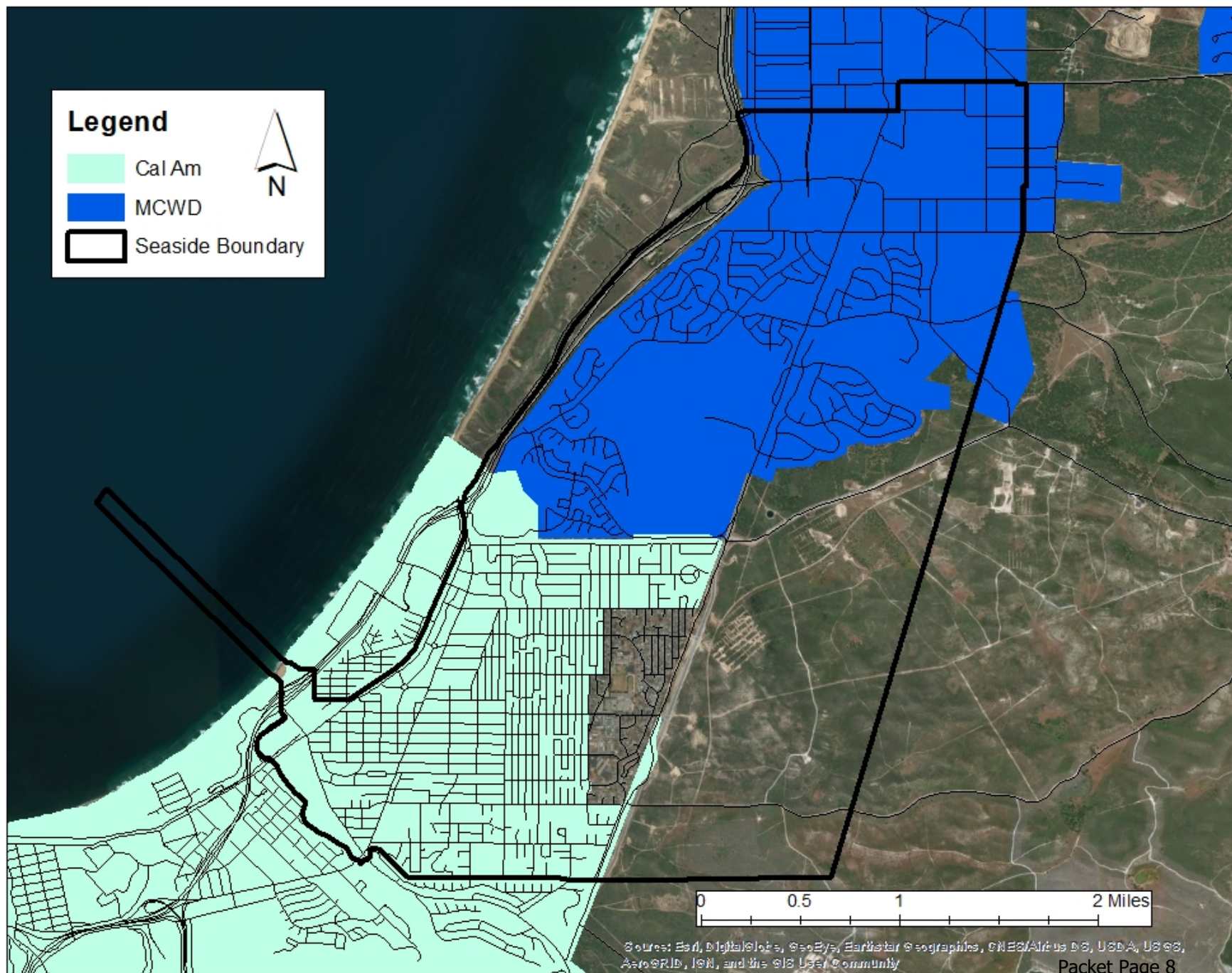
Seaside City Council and Successor Agency to the
Redevelopment Agency of the City of Seaside

July 18, 2019

Overview of Water Suppliers in Seaside

- * Monterey Peninsula Water Management District
- * Monterey One Water
- * Marina Coast Water District
- * California American Water Company
- * Seaside Municipal Water System





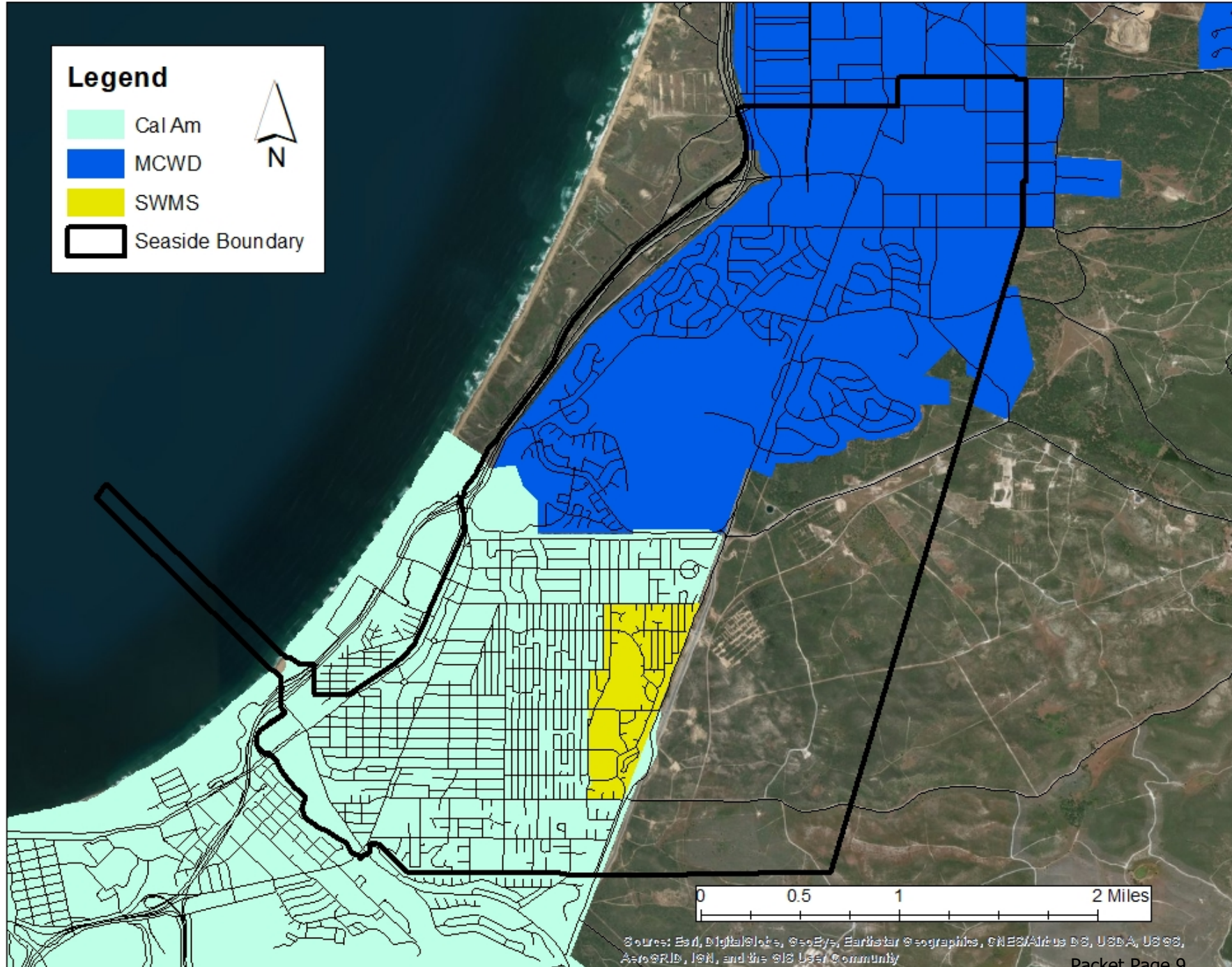
Legend

Cal Am

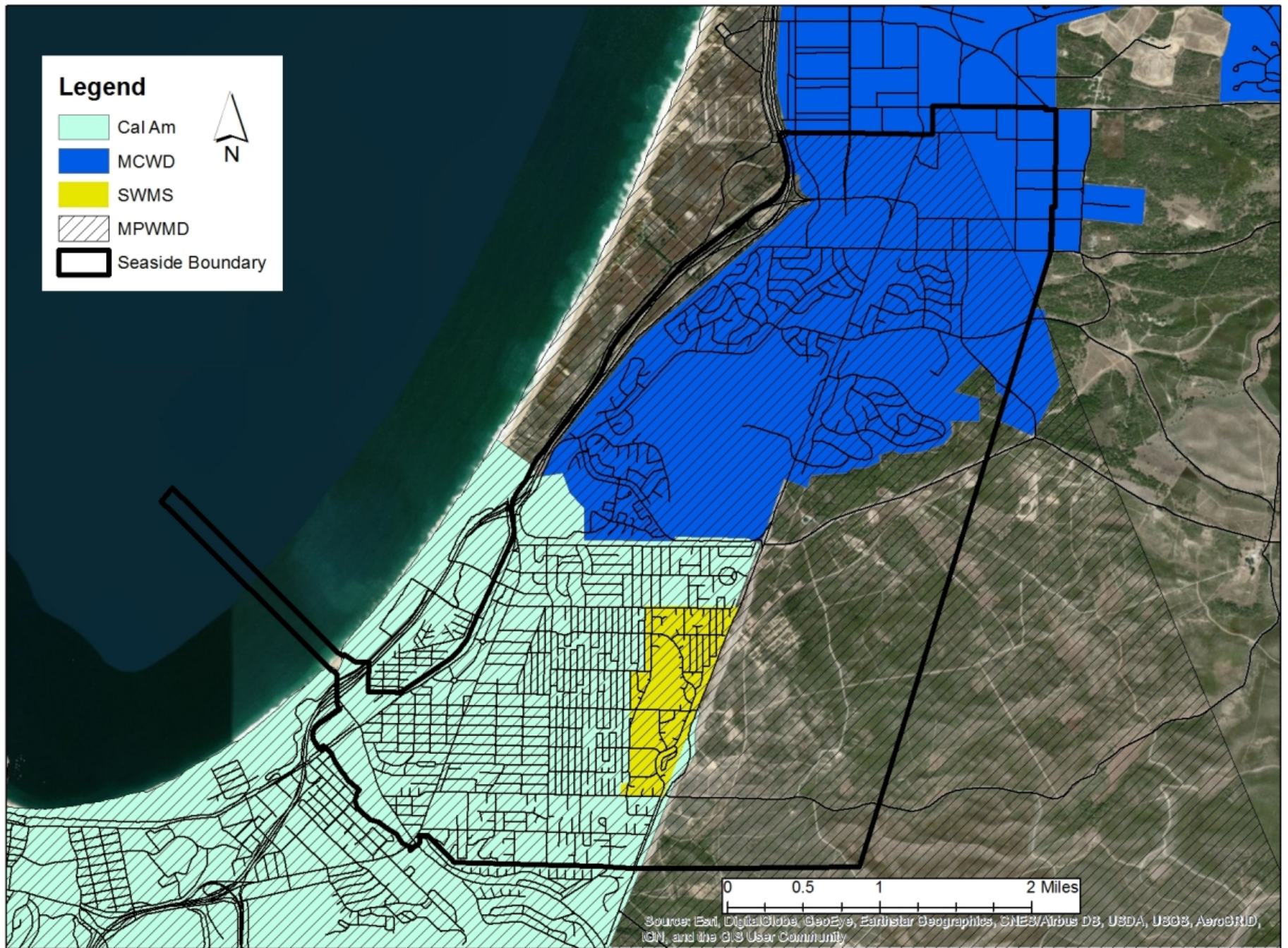
MCWD

SWMS

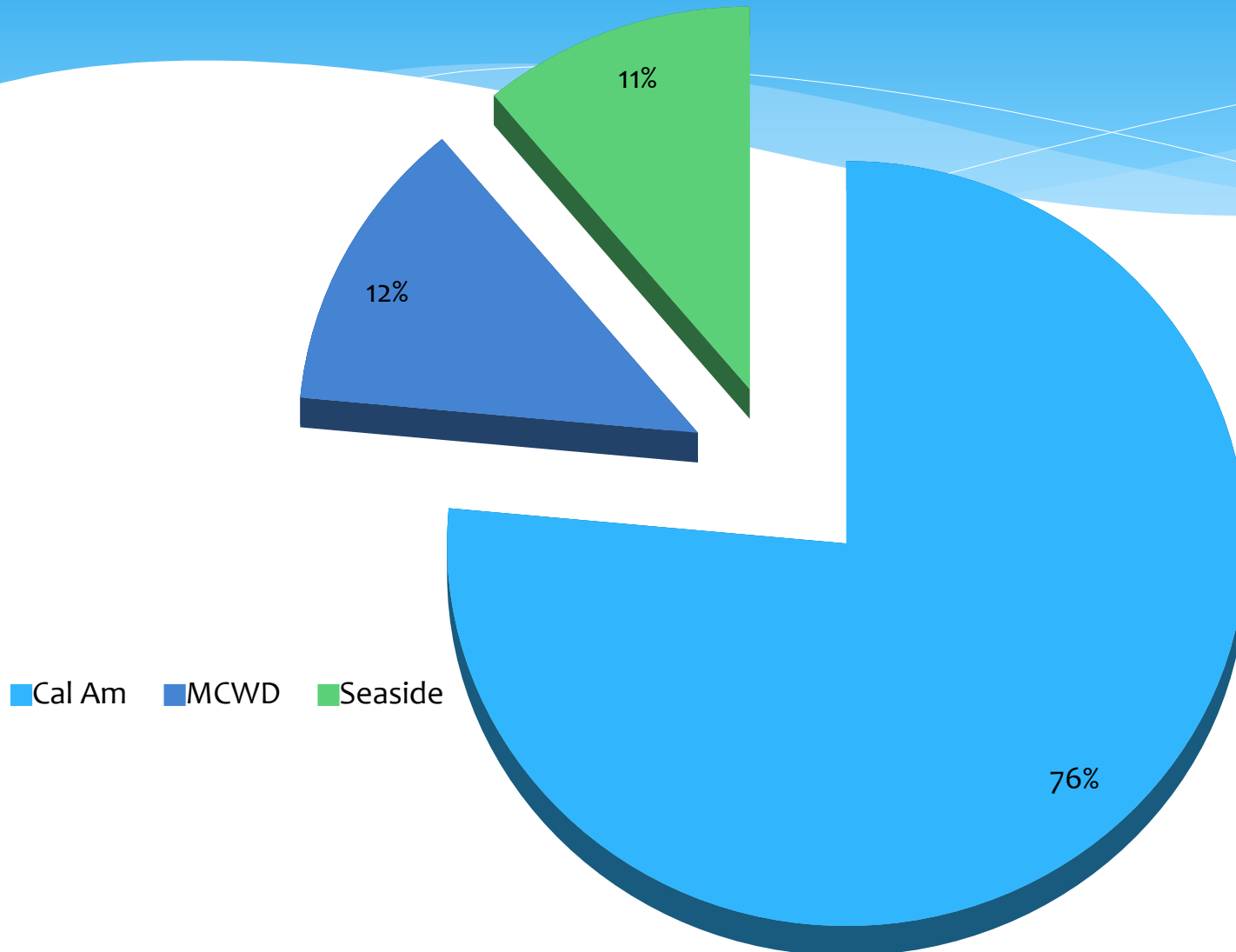
Seaside Boundary



Sources: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community



Current Water Services to City of Seaside





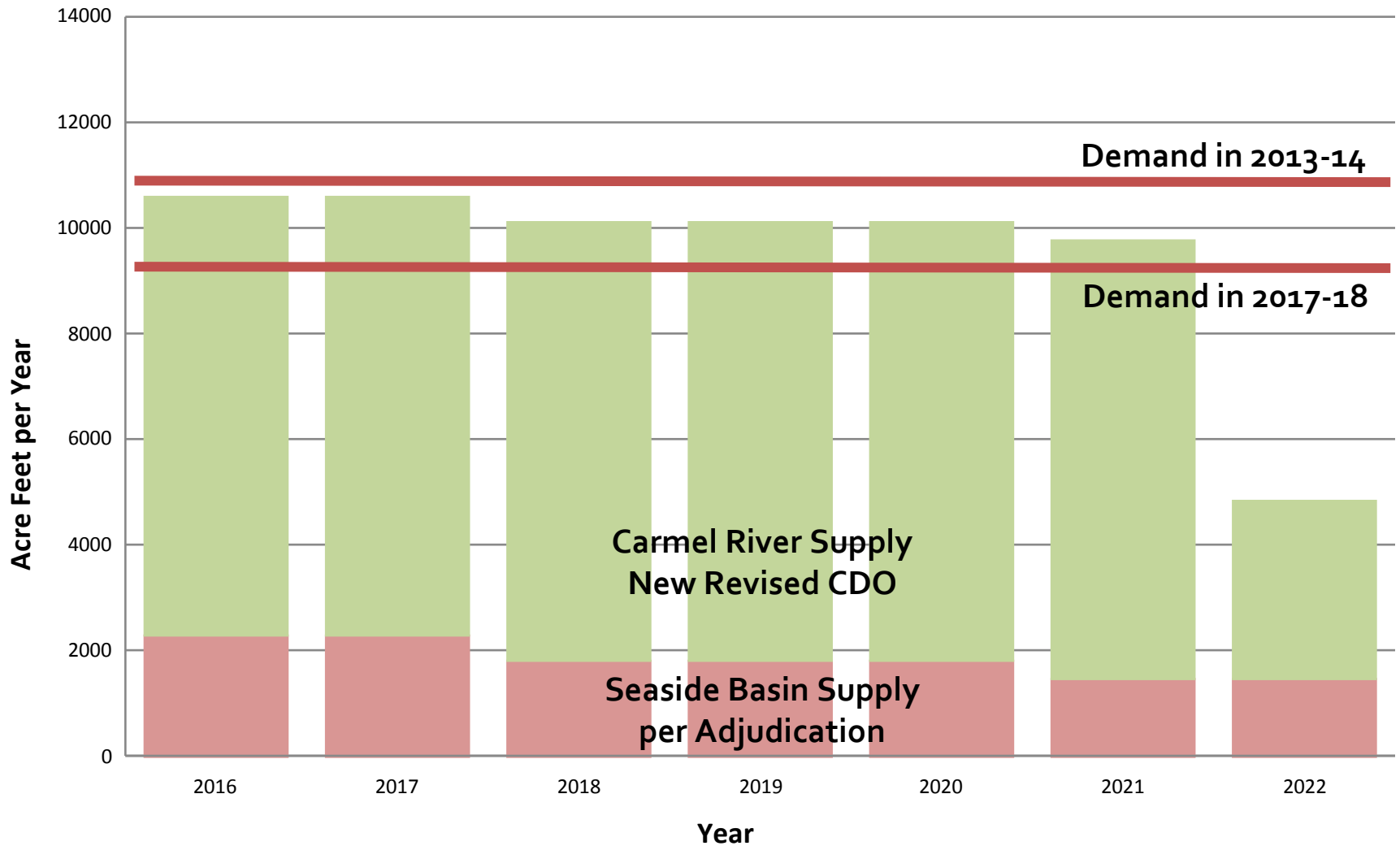
Monterey Peninsula Water Supply Update...

City of Seaside
Water Study Session

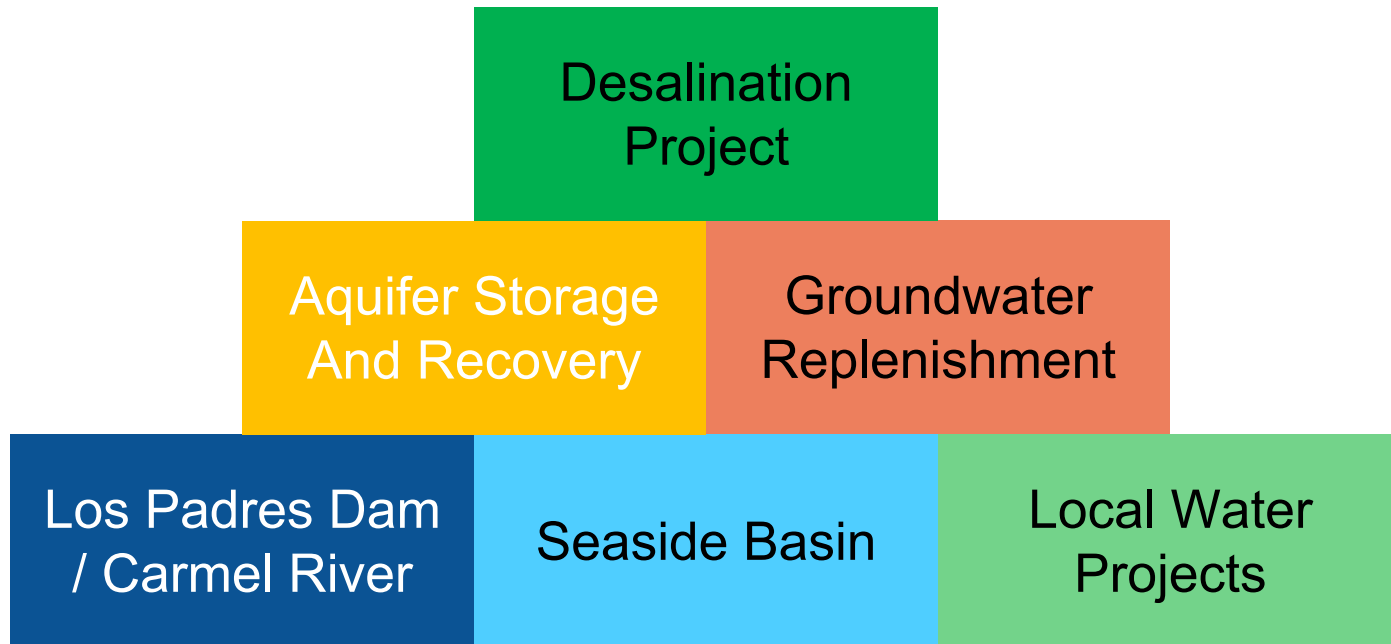
July 18, 2019



Legally Available Water Supply in MPWMD Territory Compared to Consumer Water Demand in MPWMD Territory

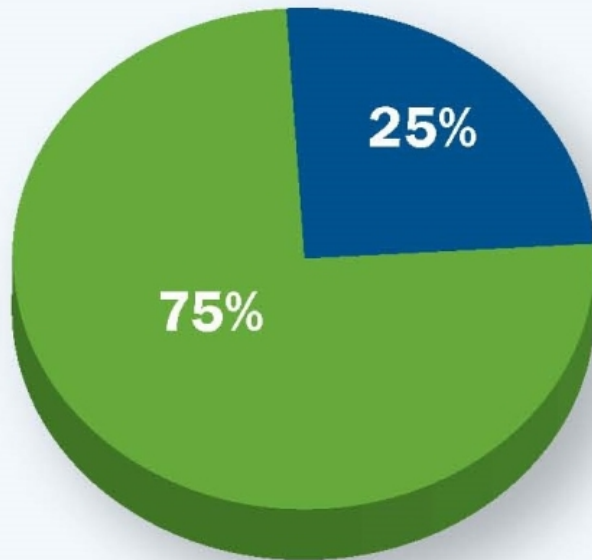


Proposed Solution: Portfolio Approach



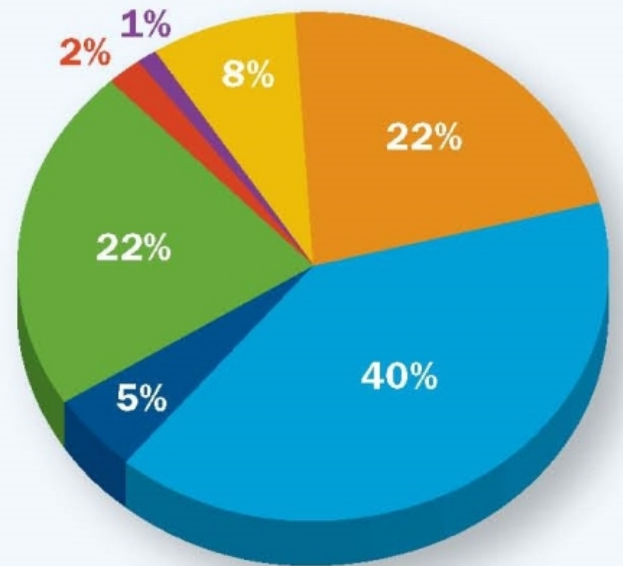
Changing Sources of Supply on the Peninsula

Traditional Sources



■ Seaside Basin
■ Carmel River

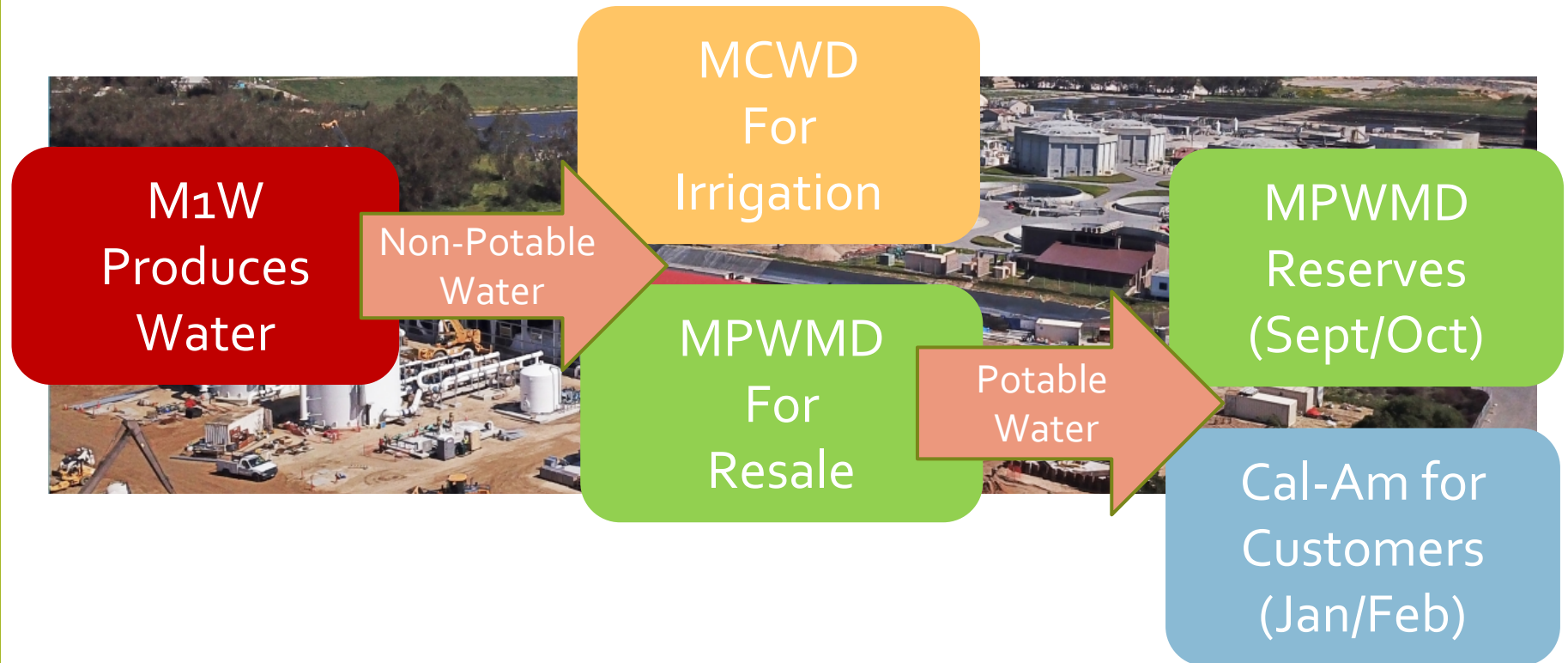
Proposed Water Sources



■ Groundwater Replenishment
■ Desalination
■ Seaside Basin
■ Carmel River
■ Sand City
■ Pacific Grove
■ Aquifer Storage Recovery

The Water Supply Project will diversify the Monterey Peninsula's water supply portfolio. These new sources of water will be sustainable and help protect against drought while also protecting the natural resources of the Carmel River.

Pure Water Monterey



Progress on Desalination Plant



Key Dates



	Item
Feb	Marina and Marina Coast Water District file amended lawsuits at Supreme Court – No Action yet
April 24	Monterey County Planning Commission approved Combined Development Permit (Use Permit, Administrative Permit, Design Approval); Appealed
April 30	Marina City Council was to consider Cal-Am appeal of Planning Commission denial of Coastal Development Permit; Rescinded by Cal-Am
July 11	Coastal Commission Determines Cal-Am may appeal directly. Appeal TBD
July 15	County rejects appeal; Reaffirms Combined Permit

State Water Board Imposed Milestones

2016. CPUC Approves Pure Water Monterey

2017. Start Construction of Cal-Am Pipeline

2018. CPUC Approves Desalination Plant

2019. Start Construction of any of Desalination Plant features

2020. Drill Source Wells; Progress on Desalination Plant features

2021. 50% completion of some features; 100% of others

2022. Substantial Completion (actually December 31, 2021)

...Lose 1,000 AFA for a missed milestone

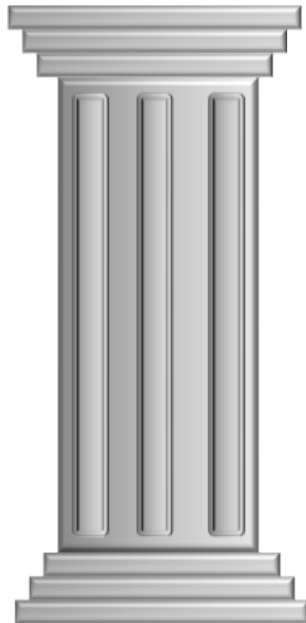
4 Pillars of MPWMD's "Water Neutral" Permitting

Allocations
to Land Use
Jurisdictions
Are Fixed

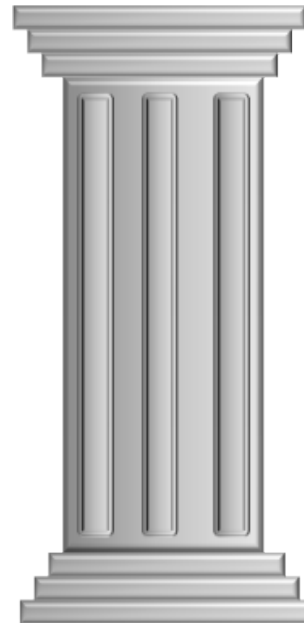


**Seaside
38.8 AF
Available**

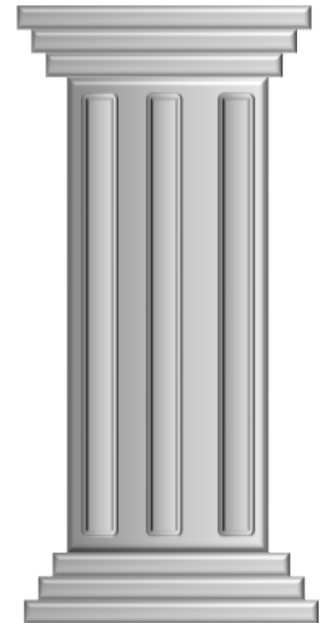
Conservation
Credits can
Offset
Increased Use



On-Site Use
can be
Documented
for Future



Small, New
Supplies can
Create an
Entitlement



No new meters and conflict with State over CDO



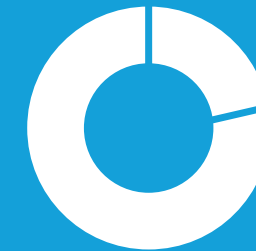
Mike McCullough
Monterey One Water

WATER SUPPLY PROJECT

3,500 ACRE FEET / YEAR
of Advanced Purified
Recycled Water
produced for injection into
the Seaside Groundwater Basin

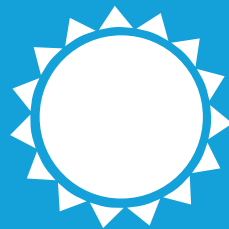


1 Acre Foot = 325,851 Gallons



~22% of the
Monterey Peninsula's
future water supply portfolio

Partners for Pure Water Solutions



1,000 ACRE FEET
potable water drought reserve
created to increase availability of
recycled water for ag use during dry years

New Source Waters
will help increase tertiary treated
recycled water for agricultural irrigation up to
4,400 ACRE FEET / YEAR



PWM PROJECT COMPONENTS

Source Water Diversion Structures



88%

Advanced Water Purification Facility



93%

Overall
93%
Complete



99%

Conveyance Pipeline



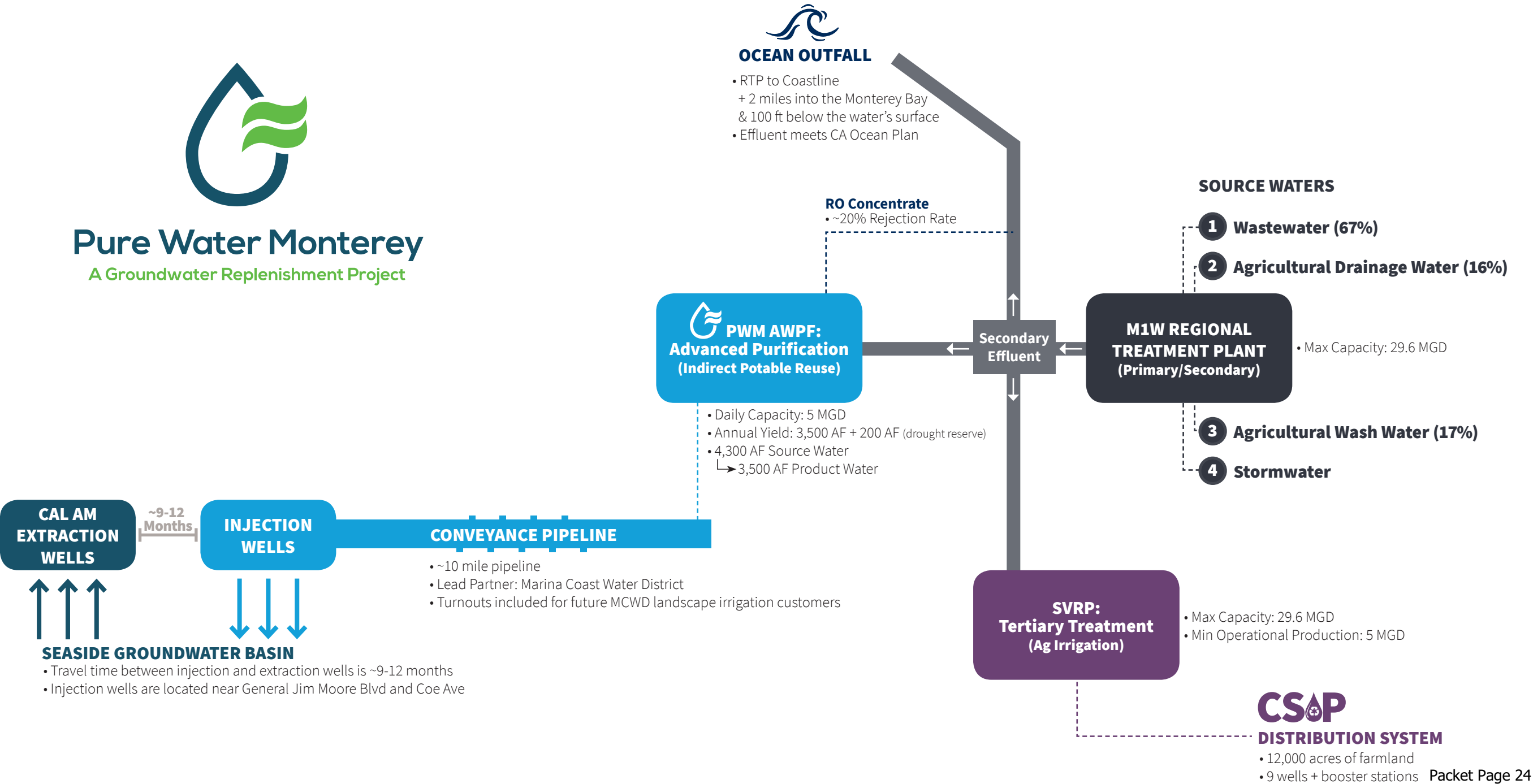
88%

Injection Wells

PURE WATER MONTEREY



Pure Water Monterey
A Groundwater Replenishment Project



POTENTIAL EXPANSION

	Size MGD	Cal Am AFY	MCWD AFY	Reserve AFY	Total AFY
Base Project	5.5	3,500	600	200	4,300
Feasible Expansion	2.1	2,250	0	0	2,250
TOTAL	7.6	5,750	600	200	6,550

POTENTIAL EXPANSION

TIMELINE

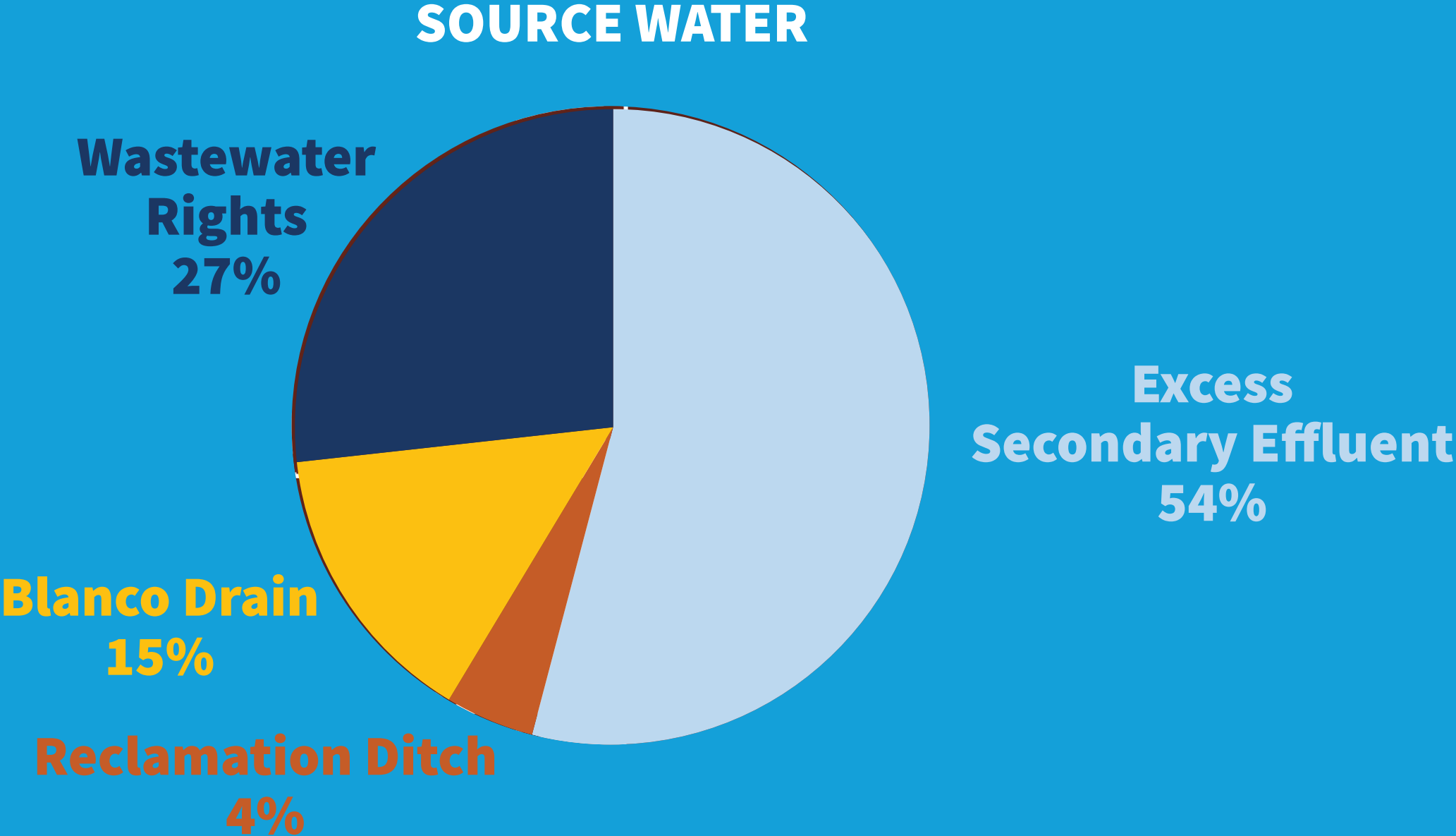


EXPANSION COSTS

Project Cost	Cost of Water	Blended Cost
\$39 Million	\$2,233 AF*	\$2,077

**Cost per acre foot of additional 2,250 AF,
not base 3,500 AF at \$1,976*

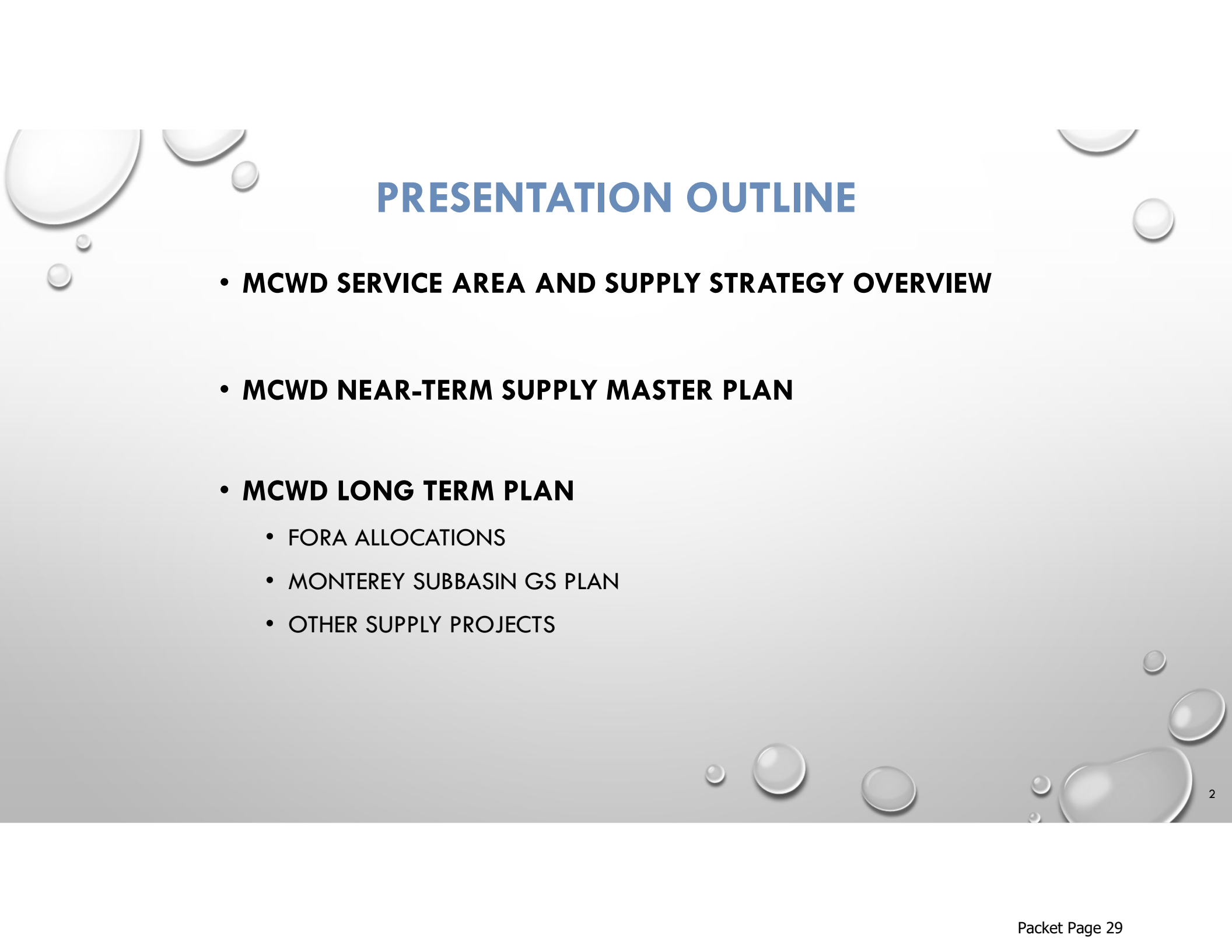
POTENTIAL EXPANSION





SUSTAINABLE WATER SUPPLY PLANNING AND MANAGEMENT

JULY 18, 2019



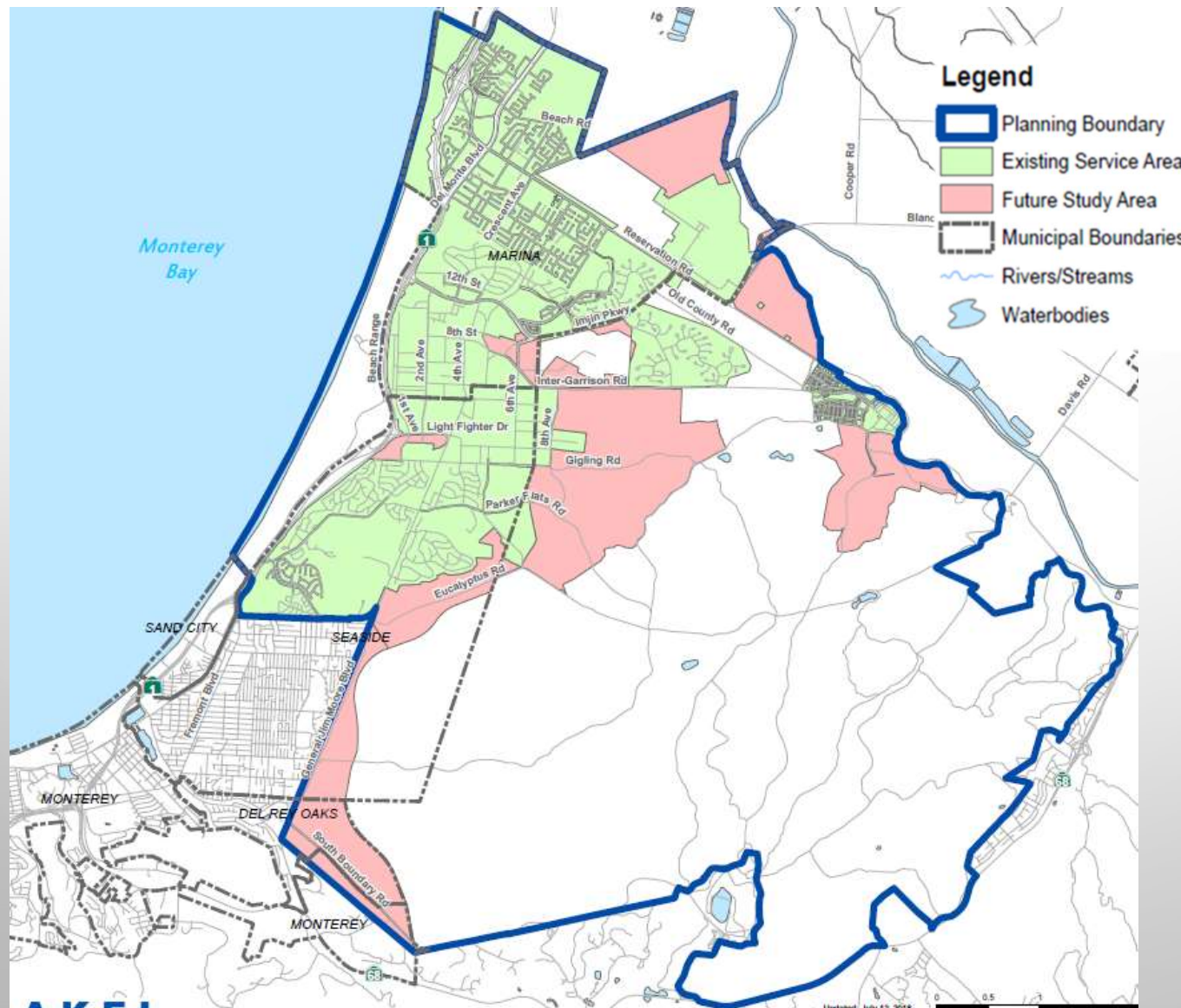
PRESENTATION OUTLINE

- **MCWD SERVICE AREA AND SUPPLY STRATEGY OVERVIEW**
- **MCWD NEAR-TERM SUPPLY MASTER PLAN**
- **MCWD LONG TERM PLAN**
 - FORA ALLOCATIONS
 - MONTEREY SUBBASIN GS PLAN
 - OTHER SUPPLY PROJECTS

The background of the slide is a light gray gradient. It is decorated with numerous realistic water droplets of various sizes. Some droplets are clustered in the top left corner, while others are scattered across the bottom right. The droplets have highlights and shadows, giving them a three-dimensional appearance.

MCWD SERVICE AREA AND SUPPLY STRATEGY OVERVIEW

MCWD'S SERVICE AREA



- Central Marina
- Armstrong Ranch
- U.S. Army (Ord)
- CSUMB (Ord)
- Del Rey Oaks (Ord)
- City of Monterey (Ord)
- County of Monterey (Ord)
- UCMBEST (Ord)
- City of Seaside (Ord)
- State Parks and Rec. (Ord)
- Marina Ord Community (Ord)

KEY ELEMENTS OF CURRENT SUPPLY MANAGEMENT

- **GROUNDWATER SUSTAINABILITY PLANS**
 - GROUNDWATER AND BASIN PROTECTION
 - SUPPLY PROJECTS EVALUATION
 - EVALUATE ALL OPTIONS INCLUDING STORM, SURFACE WATER, DESAL, BARRIERS
- **“RECYCLED” WATER PROJECTS (ADVANCED TREATED WATER)**
- **CONSERVATION (WATER USE EFFICIENCY)**

SUSTAINABLE GROUNDWATER MANAGEMENT ACT (SGMA)

- 2014 LEGISLATION PROVIDES A STATEWIDE FRAMEWORK FOR SUSTAINABLE GROUNDWATER MANAGEMENT IN CALIFORNIA
- REFERRED TO AS SGMA (PRONOUNCED “SIGMA”)
- INTENDED TO SUPPORT LOCAL GROUNDWATER MANAGEMENT THROUGH OVERSIGHT BY LOCAL AGENCIES

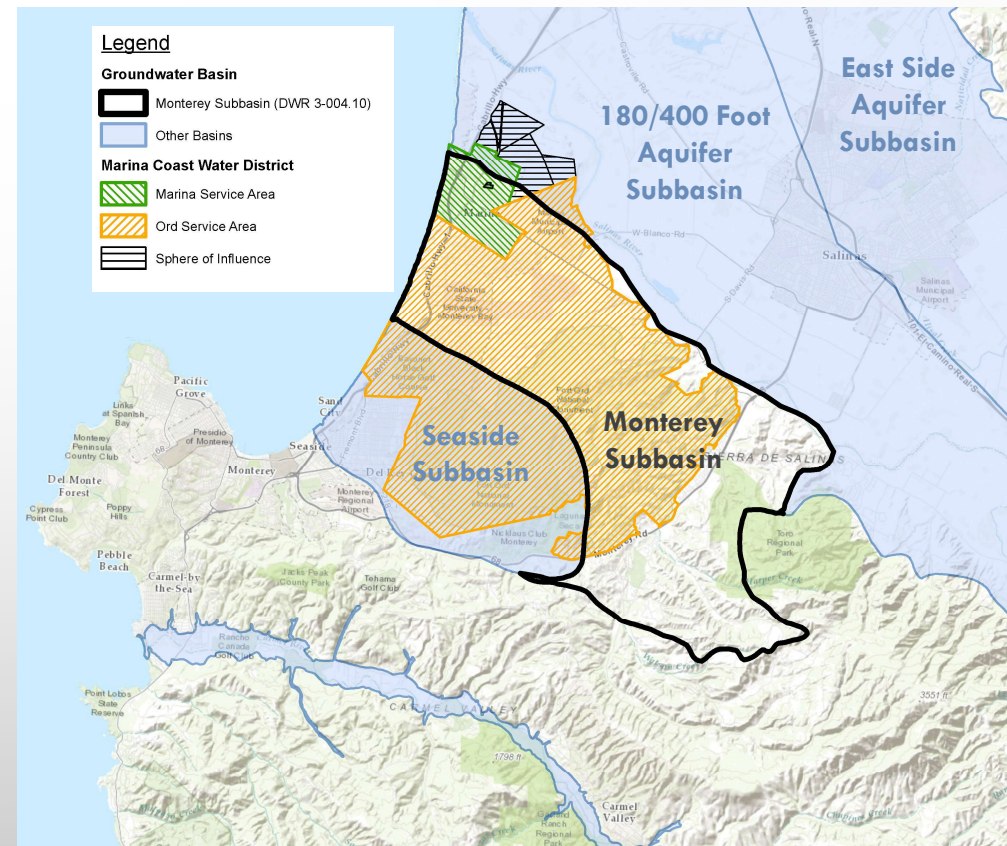


“A central feature of these bills is the recognition that groundwater management in California is best accomplished locally.”

- Gov. Jerry Brown (Sept. 2014)

MCWD GROUNDWATER SUSTAINABILITY AGENCY

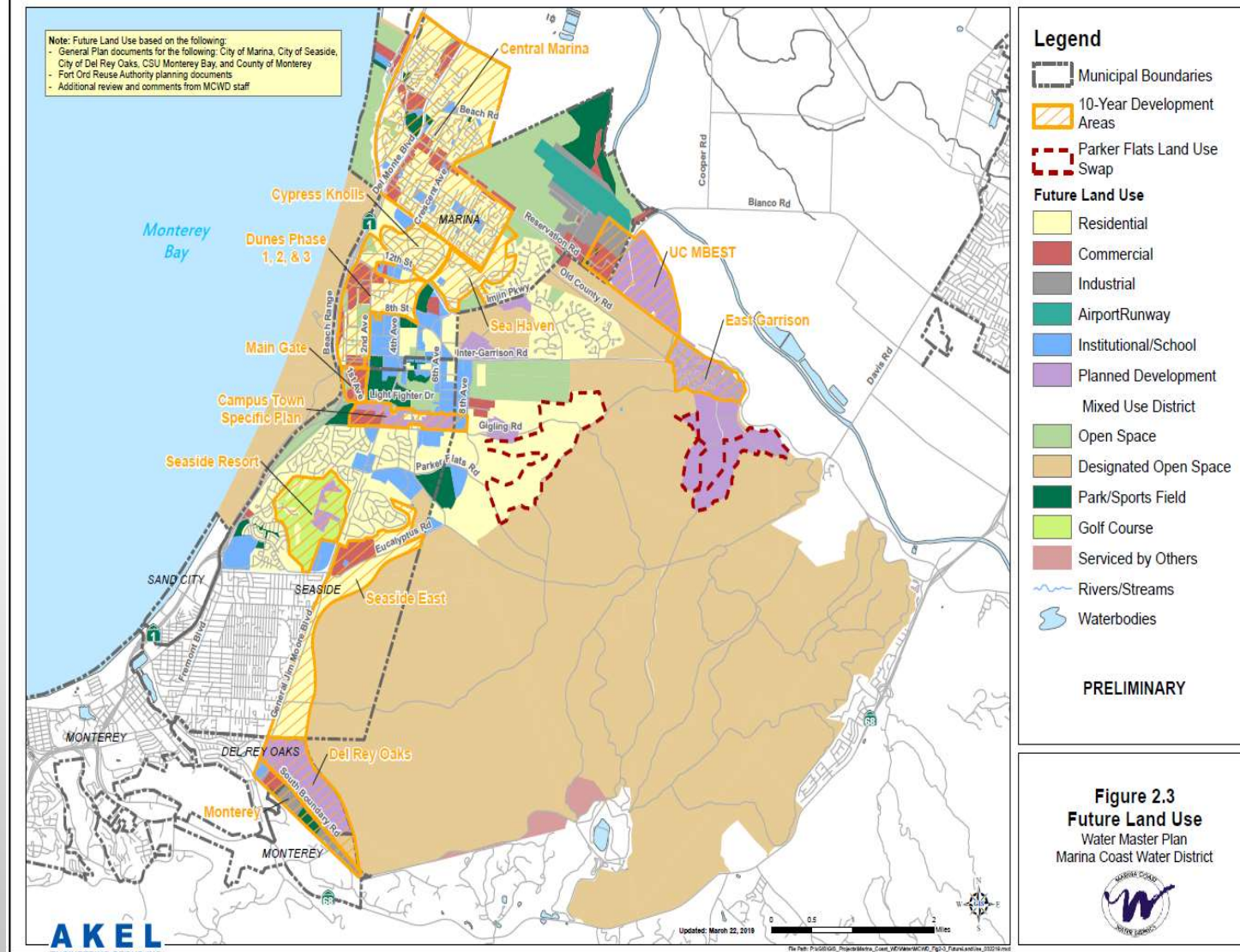
- MCWD IS AN EXCLUSIVE GROUNDWATER SUSTAINABILITY AGENCY (GSA) IN THE MONTEREY AND 180/400 SUBBASINS
- GSA'S HAVE AUTHORITY TO IMPLEMENT “PROJECTS” AND “MANAGEMENT ACTIONS” THROUGH A GROUNDWATER SUSTAINABILITY PLANS (GSP)



The background of the slide is a light gray gradient. It is decorated with numerous realistic water droplets of various sizes. Some droplets are at the top left, some are in the center, and a larger cluster is on the right side. The droplets have highlights and shadows, giving them a three-dimensional appearance.

MCWD NEAR-TERM SUPPLY MASTER PLANS

MASTER PLAN DEVELOPMENT



MASTER PLAN DEVELOPMENT

15-YEAR DEVELOPMENT SUMMARY (NEAR TERM DEVELOPMENT)

PRELIMINARY

Development Areas 1	Development Limits ¹			Estimated Development Area			
	Residential	Office, Industrial, Commercial	Hotel	Residential ²	Office, Industrial, Commercial ³	Hotel ⁴	Total
	(du) 2	(sf) 3	(rooms) 4	(acres) 5	(acres) 6	(acres) 7	(acres) 8
Campus Town Specific Plan	388	180,000	300	48.5	6.9	2.5	57.9
Cypress Knolls	712	0	0	89.0	0.0	0.0	89.0
Del Rey Oaks	691	400,000	550	86.4	15.3	38.6	140.2
Dunes Phase 1, 2, & 3	847	1,049,000	394	105.9	40.1	12.9	158.9
East Garrison	721	102,000	0	90.1	3.9	0.0	94.0
Main Gate	145	150,000	350	18.1	5.7	7.8	31.6
City of Monterey	0	937,800	0	0.0	35.9	0.0	35.9
Sea Haven	929	0	0	116.1	0.0	0.0	116.1
Seaside East	310	90,000	0	38.8	3.4	0.0	42.2
Seaside Resort	122	10,000	398	15.3	0.4	16.8	32.4
UC MBEST	240	1,090,000	0	30.0	41.7	0.0	71.7
Total	5,105	4,008,800	1,992	638.1	153.4	78.5	870.0

AKEL
ENGINEERING GROUP, INC.

3/15/2019

MASTER PLAN SUPPLY ELEMENTS

15-YEAR DEVELOPMENT SUMMARY (NEAR TERM DEVELOPMENT)

RUWAP PHASE 1 (IN PROGRESS)

600 AFY IRRIGATION WATER TO OFFSET GROUNDWATER PUMPING

RUWAP PHASE 2 (PARTIALLY IN PROGRESS)

827 AFY IRRIGATION WATER TO OFFSET GROUNDWATER PUMPING

RUWAP PHASE 3 (BEING STUDIED)

973 AFY INJECTION WATER TO AUGMENT AND ALSO TO PROTECT GROUNDWATER

RUWAP TOTAL: 2400 AFY



MASTER PLAN DEVELOPMENT

15-YEAR DEVELOPMENT SUMMARY (NEAR TERM DEVELOPMENT)

Year	Recycled Water/IPR (AFY)	Ground water (AFY)	Total Supply (AFY)	Total Demand (AFY)	Avg MGD
2008	0	4,102	4,102	4,102	3.66
2009	0	4,038	4,038	4,038	3.60
2010	0	4,133	4,133	4,133	3.69
2011	0	4,047	4,047	4,047	3.61
2012	0	4,174	4,174	4,174	3.73
2013	0	4,431	4,431	4,431	3.96
2014	0	4,026	4,026	4,026	3.59
2015	0	3,228	3,228	3,228	2.88
2016	0	3,025	3,025	3,025	2.70
2017	0	3,239	3,239	3,239	2.89
2018	0	3,135	3,135	3,135	2.80
2019	0	3,629	3,629	3,629	3.24
2020	0	3,747	3,747	3,747	3.35
2021	600	3,264	3,864	3,864	3.45
2022	600	3,382	3,982	3,982	3.56
2023	600	3,500	4,100	4,100	3.66
2024	1427	2,790	4,217	4,217	3.77
2025	1427	2,908	4,335	4,335	3.87
2026	1427	3,026	4,453	4,453	3.98
2027	1427	3,143	4,570	4,570	4.08
2028	1427	3,261	4,688	4,688	4.19
2029	1427	3,378	4,805	4,805	4.29
2030	1427	3,496	4,923	4,923	4.40
2031	2400	2,641	5,041	5,041	4.50
2032	2400	2,758	5,158	5,158	4.61
2033	2400	2,876	5,276	5,276	4.71



HISTORICAL IRRIGATION DEMANDS

IRRIGATION DEMANDS (Does not Include any water provided Bayonet Blackhorse Golf Course)						Projected
AFY	2013 Consumption	2014 Consumption	2015 Consumption	2016 Consumption	2017 Consumption	2018 Consumption
Central Marina	131.39	115.60	98.23	78.76	80.17	386.19
CSUMB	138.27	89.15	50.98	47.04	81.99	46.54
ARMY	104.72	58.46	55.26	45.85	46.38	38.59
COUNTY	0.64	8.83	13.07	12.94	34.09	30.36
FO MARINA	94.56	82.70	64.33	63.37	96.21	62.52
SEASIDE	95.05	68.95	71.37	64.45	65.01	48.59
UCMBEST	1.25	1.10	0.92	0.66	1.21	0.95
TOTAL ALL	565.88	424.80	354.17	313.06	405.04	613.74
TOTAL ORD ONLY	434.49	309.19	255.94	234.30	324.88	227.55

MASTER PLAN SUPPLY ELEMENTS

RUWAP PHASE 1, 2
15-YEAR RECYCLED WATER IRRIGATION DEMANDS

PROJECTED IRRIGATION DEMANDS

Cumulative Recycled Water Demands	
Tier 1 & 2 Subtotal	879.6
Total - Tier 1, 2, & 3	1,695.9

AKEL
ENGINEERING CONSULTING, INC.

TIER 1-2: NEAR TERM DEMANDS, WITHIN NEXT 10 YEARS

TIER 1-3: NEAR TERM AND INTERMEDIATE TERM DEMANDS, WITHIN NEXT 15 YEARS

MASTER PLAN SUPPLY ELEMENTS

RUWAP PHASE 3-INJECTION

CURRENTLY BEING STUDIED

4. STUDY SCOPE

As described above, this feasibility study aims to identify a preferred project for injection of purified recycled water into the Monterey Subbasin for future extraction by MCWD's municipal production wells and for protection of these production wells from seawater intrusion. A groundwater-flow model is needed to evaluate the feasibility of IPR to accomplish these goals. It is also needed to assess retention times within the aquifer of injected advanced treated recycled water prior to extraction at the nearest production well. State Water Resources Control Board ("SWRCB") regulations for groundwater replenishment under Title 22 of the California Code of Regulations ("Recycled Water Regulations"), require minimum aquifer retention times for injected recycled water for pathogen microorganism control.

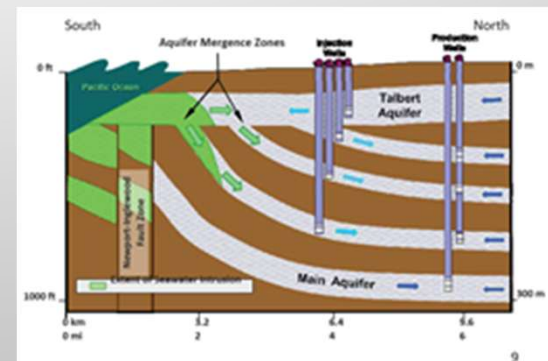
A numerical, three-dimensional, transient model is required that characterizes the multi-aquifer system, simulates seasonal extraction and injection operations, and calculates the potential water retention time between injection and extraction. For example, recycled water availability for injection will likely be greater during winter and early spring when CSIP irrigation water demand is low, whereas recycled water availability will be relatively less during the summer and early fall when CSIP water demand is high. The groundwater-flow model is needed to quantitatively evaluate the complex relationships between the seasonal injection/extraction schedules, injection/extraction well locations, the resulting spatial distribution of groundwater levels and storage, and recycled water aquifer retention time.

As such, a large portion of this feasibility study will be the preparation and use of a groundwater-flow model to assess a variety of well siting, operational, and flow rate scenarios that will then be screened for final evaluation. A draft feasibility study outline is included as Exhibit 2 and the tasks anticipated to be included for this feasibility study are as follows:

	Aug 2019	Sept 2019	Oct 2019	Nov 2019	Dec 2019	Jan 2020	Feb 2020	Mar 2020
Task 1 - Background								
Task 2 - Model Construction								
Task 3 - Alternatives Analysis								
Task 4 - Recommended Project								
Task 5 - Compile Draft and Final Reports			Submit Draft Report			Submit Final Report		
Task 6 - QA/QC and Project Management								

The overall project schedule is anticipated to be as follows:

Task	Anticipated Start	Anticipated End
Permitting		
CEQA Compliance	Mid 2020	Late 2021
SWRCB Permitting Process	Early 2021	Late 2024
RWQCB Permitting Process	Early 2021	Late 2024
Design and Construction		
Detailed Design	Mid 2021	Mid 2022
Bidding and Contracting	Mid 2022	Late 2022
Construction	Late 2022	Late 2024



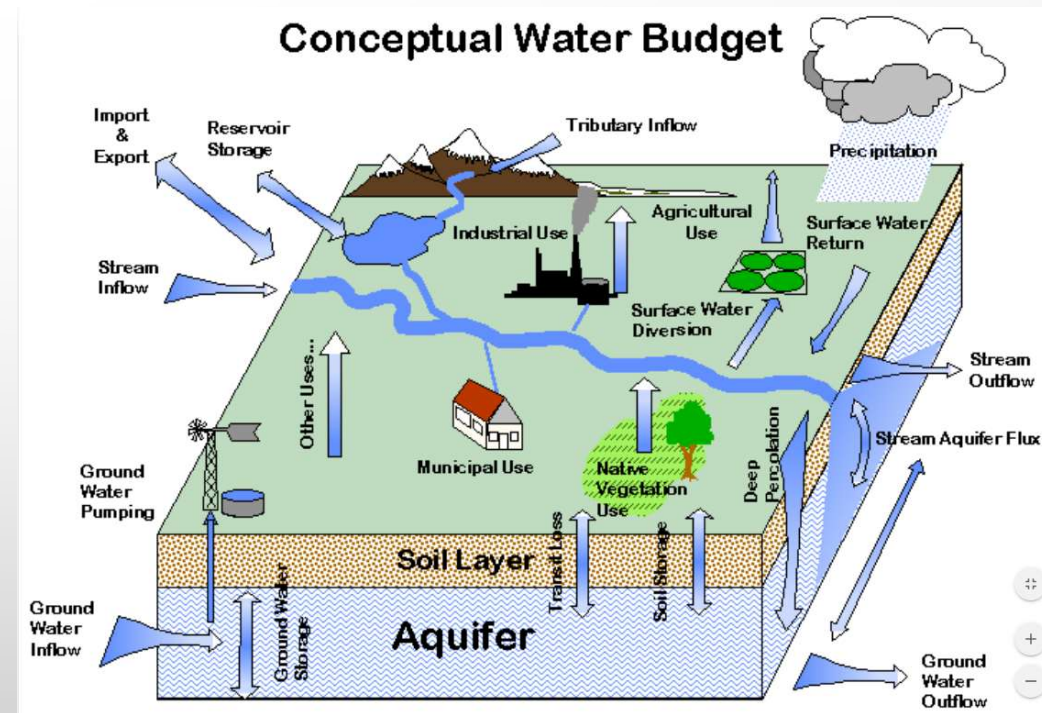
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MCWD LONG TERM PLAN

MCWD GSA PLAN IS THE “LONG TERM PLAN”

IN PROGRESS, DUE IN 2022

- EXPANDED RECYCLED WATER USE
- STORMWATER/SURFACE WATER USE
- INJECTION/EXTRACTION BARRIER USE
- BRACKISH OR OCEAN DESALTER USE
- INCREASED CONSERVATION AND USE EFFICIENCY



MCWD GSA PLAN SUPPLY GOALS

ALL MARINA AND ORD DEMANDS

PRELIMINARY

Year	Population ^{1,2}	Annual Growth (%)	Average Annual Demand ^{3,4} (mgd)
Historical Population			
2005	29,477	-	3.74
2006	29,154	-1.1%	3.83
2007	29,065	-0.3%	4.07
2008	29,533	1.6%	3.66
2009	29,743	0.7%	3.60
2010	30,840	3.7%	3.69
2011	31,141	1.0%	3.62
2012	31,445	1.0%	3.68
2013	31,752	1.0%	3.96
2014	32,062	1.0%	3.60
2015	32,375	1.0%	2.88
2016	33,346	3.0%	2.70
2017	34,347	3.0%	2.89
2018	35,377	3.0%	3.57
Projected Population			
2019	36,438	3.0%	3.68
2020	37,531	3.0%	3.79
2021	38,657	3.0%	3.90
2022	39,817	3.0%	4.02
2023	41,012	3.0%	4.14
2024	42,242	3.0%	4.27
2025	43,509	3.0%	4.39
2026	44,815	3.0%	4.53
2027	46,159	3.0%	4.66
2028	47,544	3.0%	4.80
2029	48,970	3.0%	4.94
2030	50,439	3.0%	5.09
2031	51,952	3.0%	5.25
2032	53,511	3.0%	5.40
2033	55,116	3.0%	5.57
2034	56,770	3.0%	5.73
2035	58,473	3.0%	5.90
2036	60,227	3.0%	6.08
2037	62,034	3.0%	6.26
2038	63,895	3.0%	6.45
2039	65,812	3.0%	6.65
2040	67,786	3.0%	6.84
2041	69,820	3.0%	7.05
2042	71,914	3.0%	7.26
2043	74,072	3.0%	7.48
2044	76,294	3.0%	7.70
2045	78,583	3.0%	7.94
2046	80,940	3.0%	8.17
2047	83,368	3.0%	8.42

AKEL

2/7/2019

FORA ALLOCATIONS (ORD DEMANDS)

Potable Water Allocations

Land Use Jurisdiction	Acre-Feet per Year (AFY)
U.S. Army	1,577.0
Marina (Ord Community)	1,325.0
CSUMB	1,035.0
City of Seaside	1,012.0
County of Monterey	720.0
Assumed Line Loss	348.5
Del Rey Oaks	242.5
UCMBEST	230.0
City of Monterey	65.0
State Parks and Rec.	45.0
TOTAL (excl. Army)	5,023.0
TOTAL ALL	6,600.0

Recycled Water Allocations

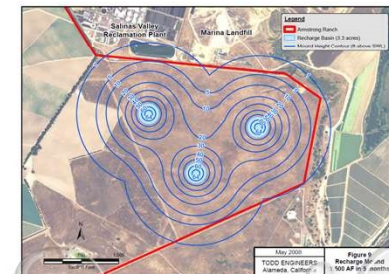
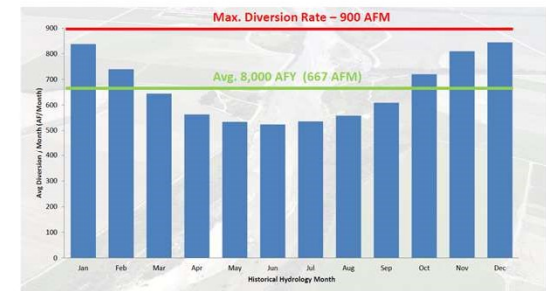
Land Use Jurisdiction	Acre-Feet per Year (AFY)
City of Seaside	453.0
Marina (Ord Community)	345.0
Del Rey Oaks	280.0
County of Monterey	134.0
CSUMB	87.0
Assumed Line Loss	68.0
UCMBEST	60.0
U.S. Army	0.0
City of Monterey	0.0
State Parks and Rec.	0.0
TOTAL ALL	1,427.0

TOTAL RECYCLED WATER DEMANDS

Cumulative Recycled Water Demands		
	Tier 1, 2, & 3 Subtotal	1,695.9
	Total - Tier 1, 2, 3, & 4	2,775.9

AKEL
ENGINEERING GROUP, INC.

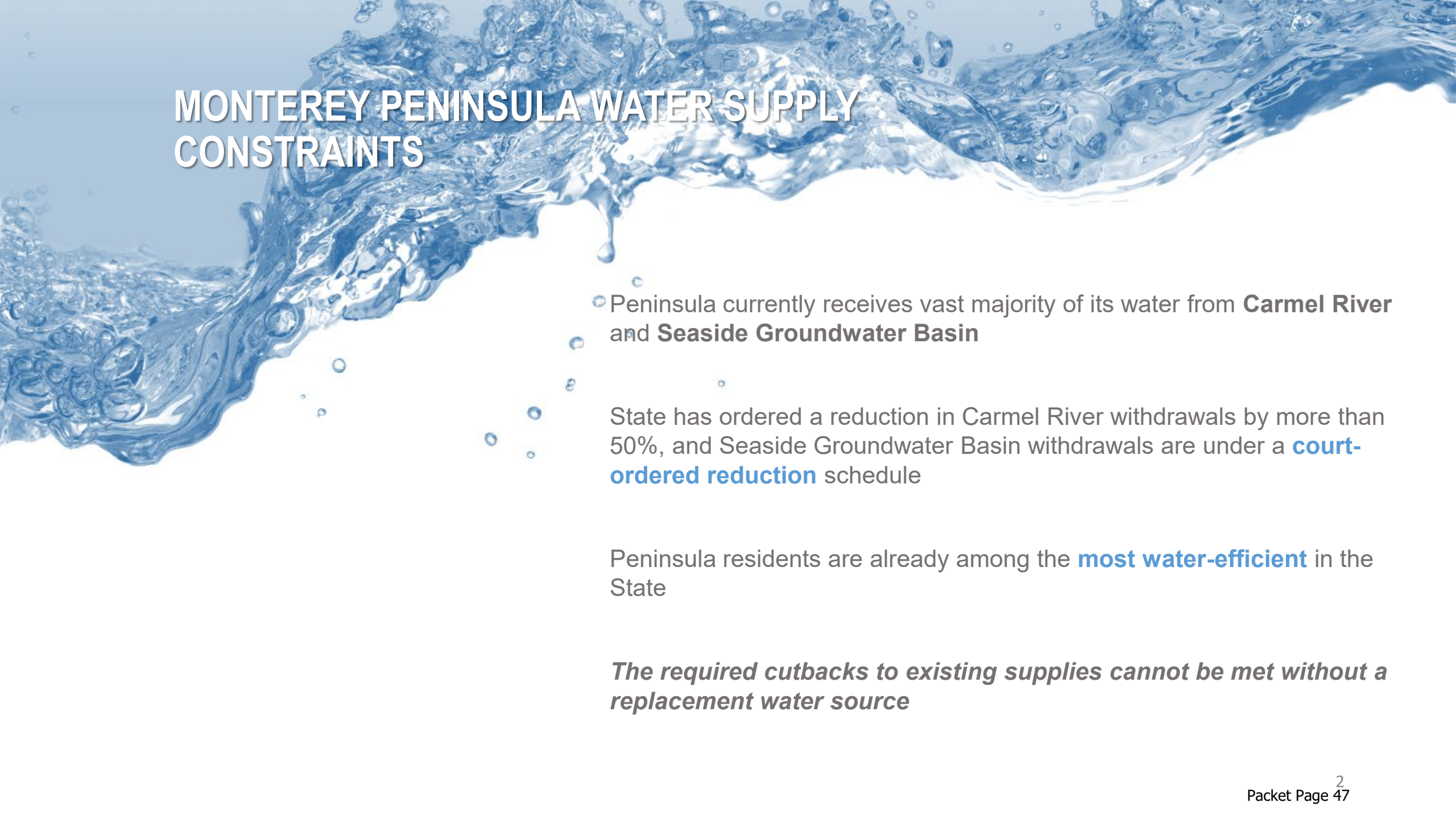
- INITIAL SCOPING STUDIES COMPLETED IN 2013
- FEASIBILITY STUDY COMPLETED IN NOV 2016
- ~1,500 TO 8,000 AFY OF STORMWATER CAPTURED FOR GROUNDWATER RECHARGE



A wide-angle photograph of a coastal scene. In the foreground, a sandy beach with some dark, pebbly patches leads to the water. The ocean is filled with white-capped waves rolling in from the right. In the background, a range of blue, hazy mountains stretches across the horizon under a clear sky.

Monterey Peninsula Water Supply Project

California American Water



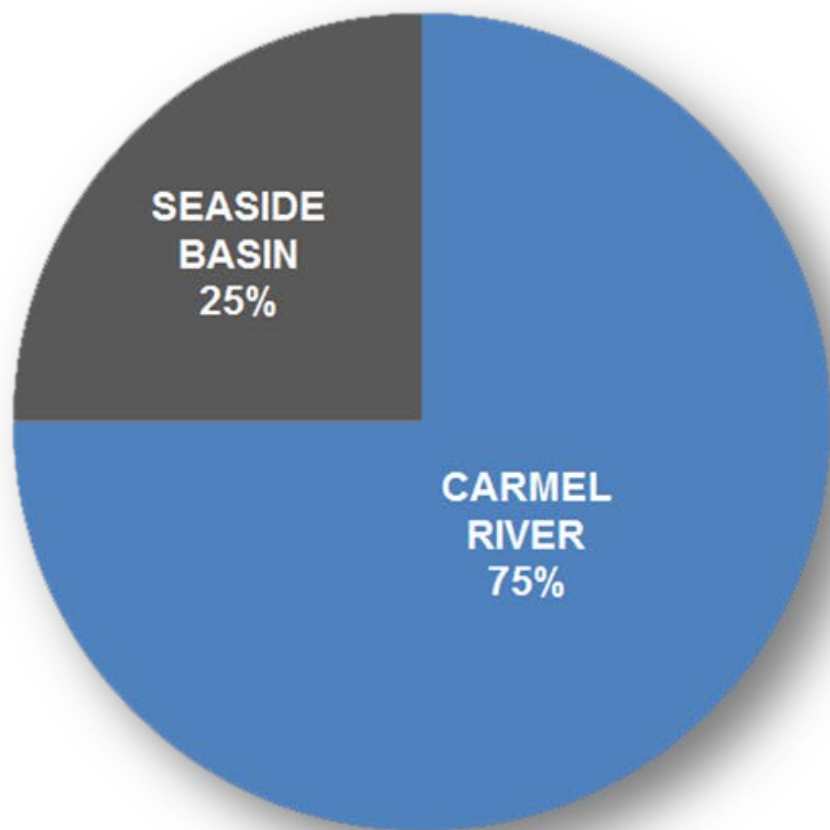
MONTEREY PENINSULA WATER SUPPLY CONSTRAINTS

- Peninsula currently receives vast majority of its water from **Carmel River** and **Seaside Groundwater Basin**

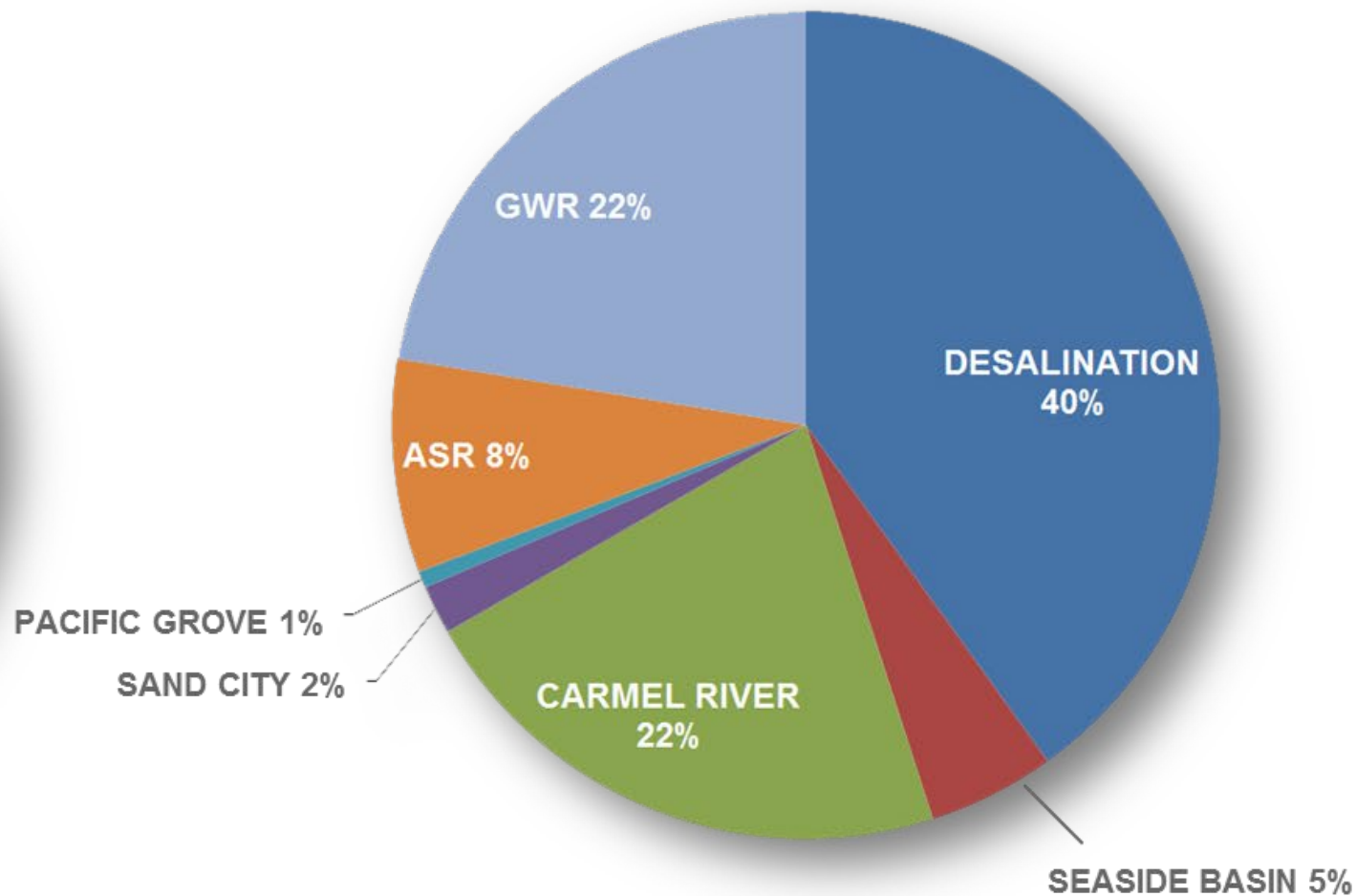
State has ordered a reduction in Carmel River withdrawals by more than 50%, and Seaside Groundwater Basin withdrawals are under a **court-ordered reduction** schedule

Peninsula residents are already among the **most water-efficient** in the State

The required cutbacks to existing supplies cannot be met without a replacement water source



HISTORIC SOURCES



FUTURE SOURCES

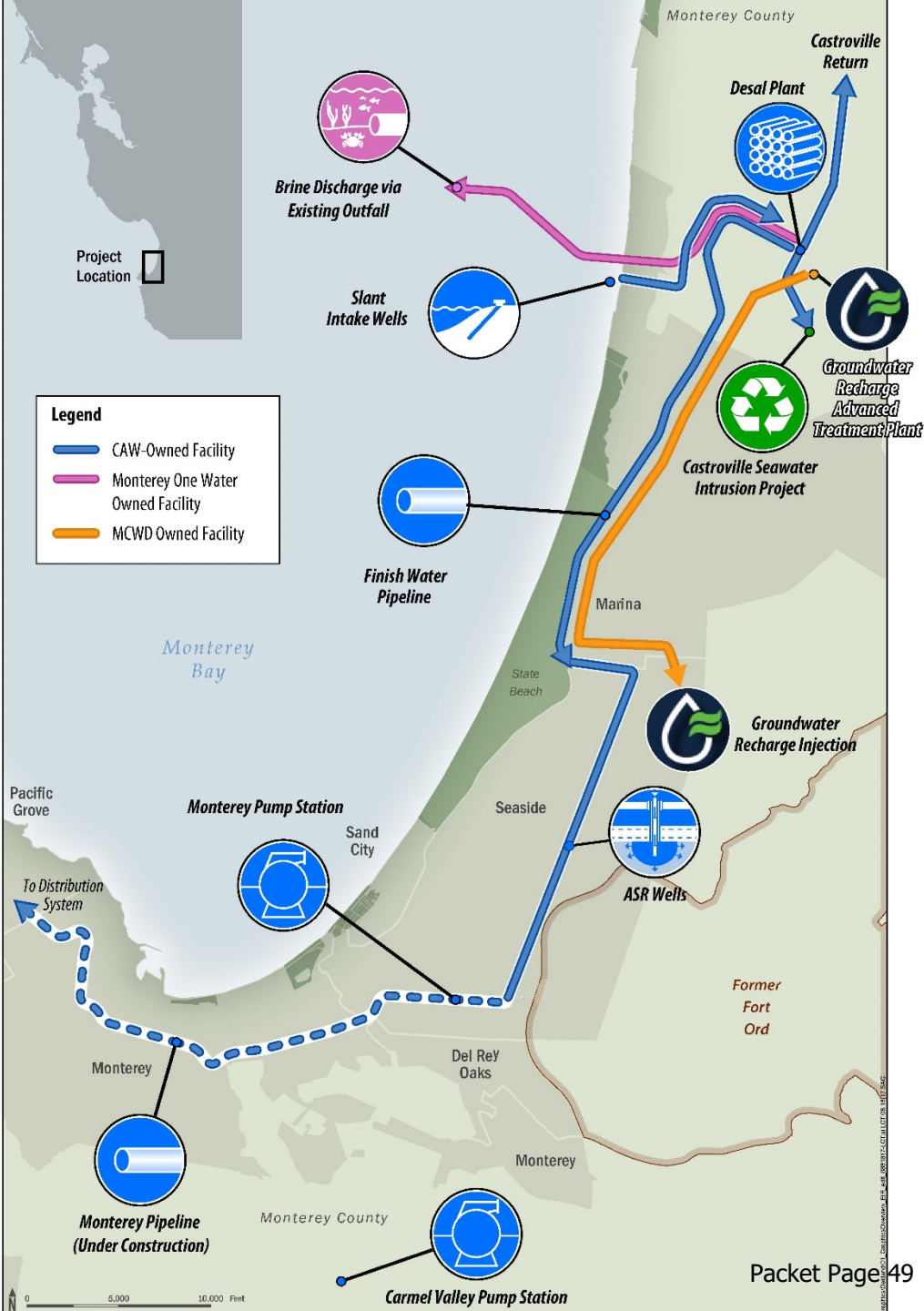
PROJECT COMPONENTS



Water Supply Project
Desalination Plant

Pure Water Monterey
Recycled Water

Aquifer Storage
and Recovery



MONTEREY PIPELINE & PUMP STATION

ENVIRONMENTAL PROJECT OF THE YEAR

by American Public Works Association -- Monterey Bay Chapter



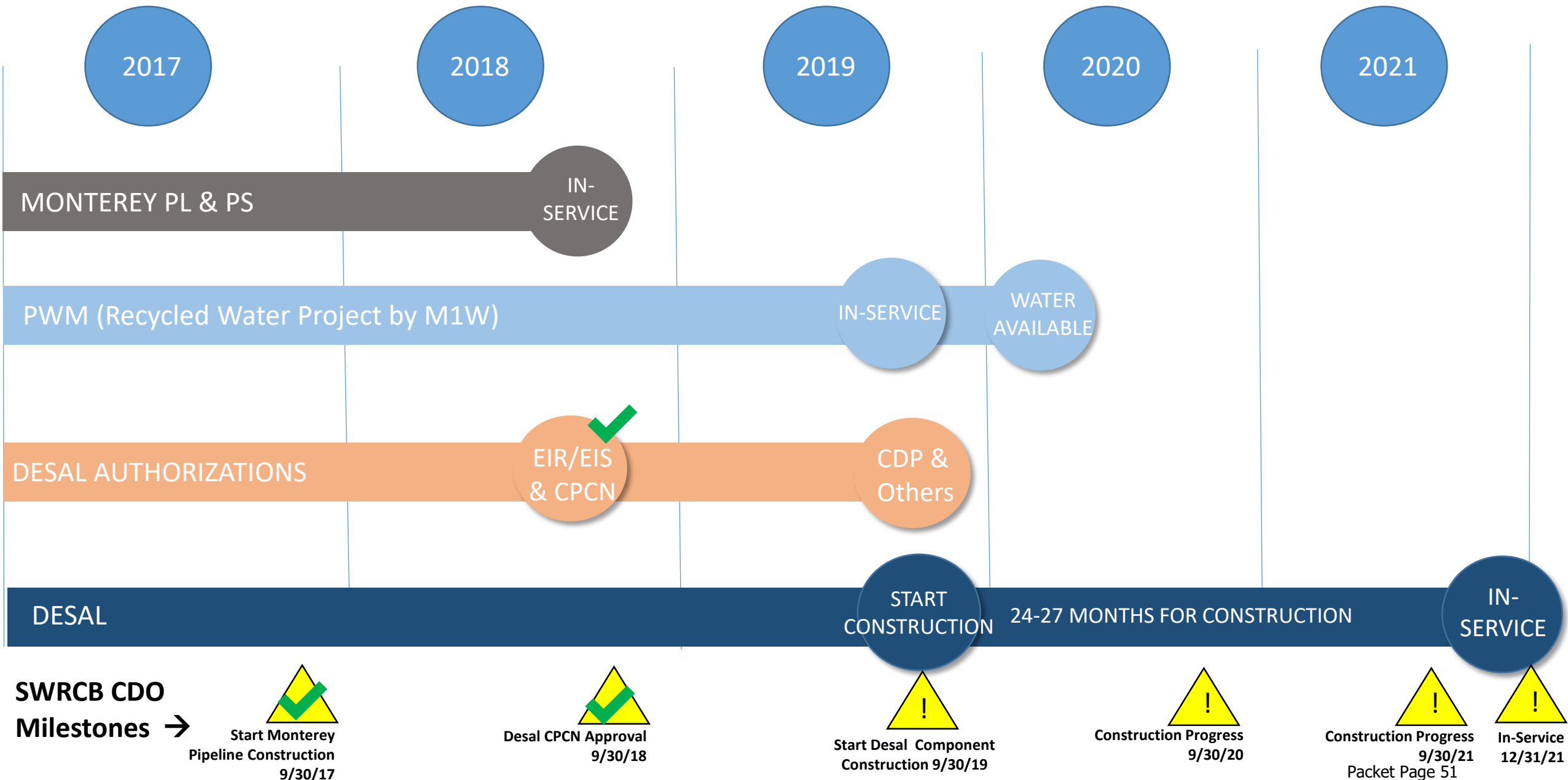
MONTEREY PENINSULA
WATER SUPPLY
PROJECT

NEWSLETTER
2018/4Q

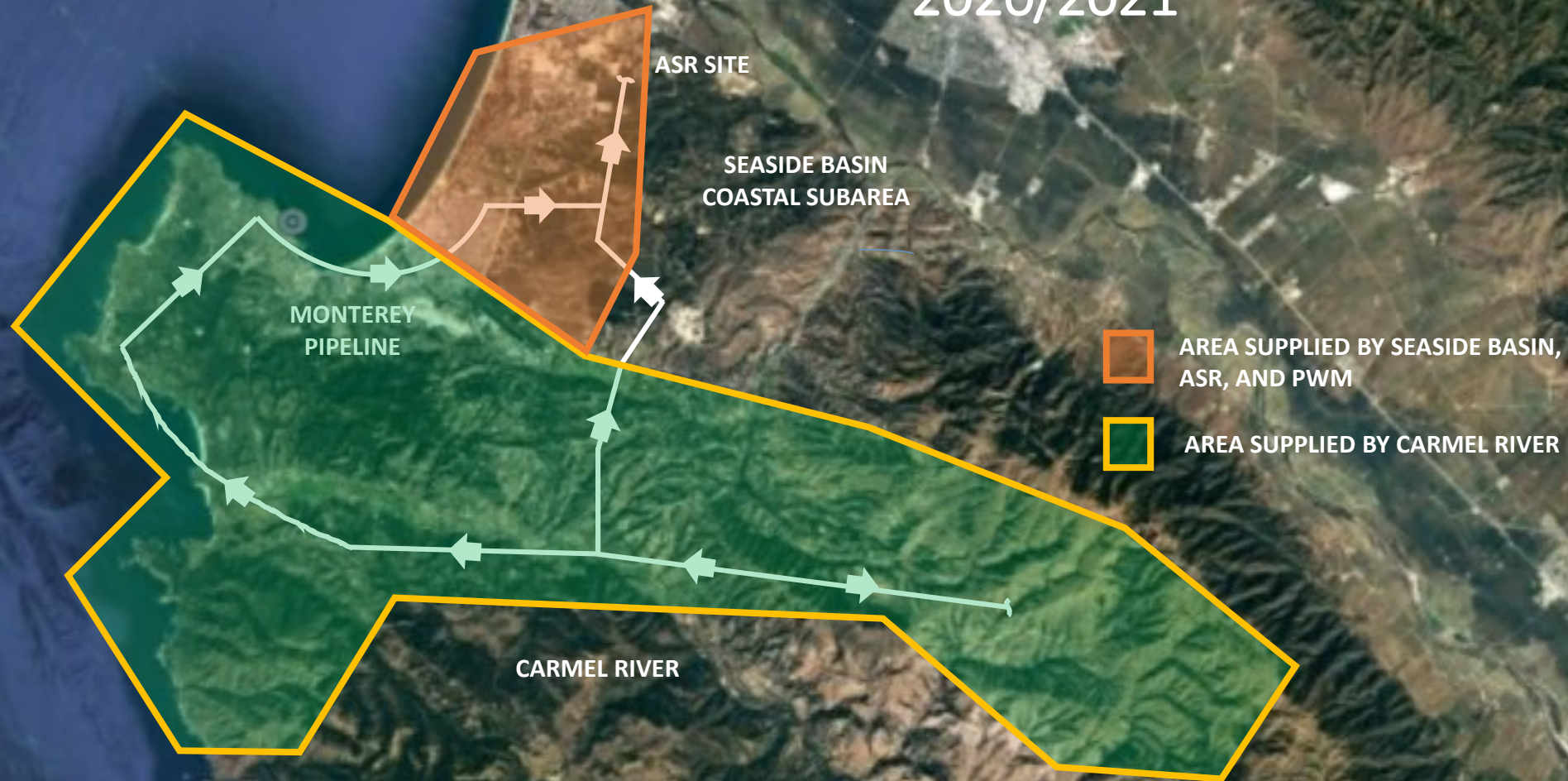
PROJECT EARNS TWO PRESTIGIOUS AWARDS INCLUDING
PROJECT OF THE YEAR

ALSO INSIDE
PROJECT WINS CAL AEP AWARD
SUPREME COURT CHALLENGE
UPDATED PROJECT SCHEDULE

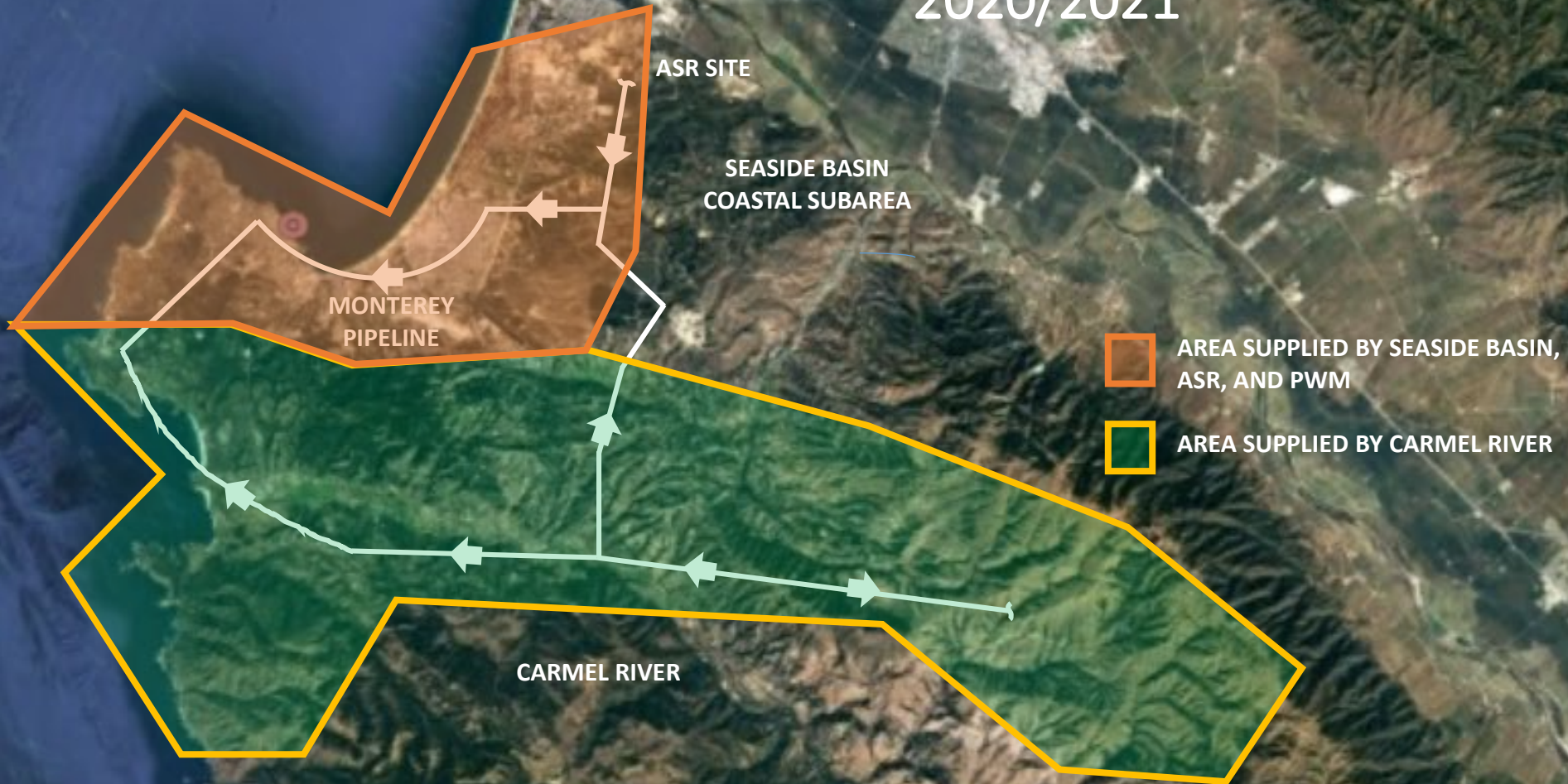
MPWSP SCHEDULE



PRE DESAL WITH PWM ASR Injection/Standby 2020/2021



PRE DESAL WITH PWM ASR Extraction 2020/2021



Monterey System Operations Moving Forward

Available

Seaside Basin		Carmel River	
ASR Recovery	1,300 AF	Effective Diversion Limit	8,310 AF
PWM	3,500 AF	Pure Water Monterey	(3,500 AF)
Coastal Subarea	1,820 AF	Sand City Desal	(120 AF)
Seaside Basin Limit	6,620 AF	Carryover Credit	750 AF
		Carmel River Limit	5,440 AF

Conclusion

Seaside Basin	Carmel River
Meet Seaside Basin water allotment by 1,356 AF	Meet Carmel River EDL by 304

Actual*

Seaside Basin	Carmel River
Max Extraction from Seaside Basin	Minimum to meet customer demand
5,264 AF	5,136 AF

Cannot miss CDO milestone with current operations/infrastructure
1000 AF - 304 AF = -696 AF

During interim period between start-up of PWM and desal, missing a CDO milestone could result in going over EDL by ~700 AF.

*Based on maximum ASR Injection season and 2018 Consumption.

REQUIRED LONGTERM WATER SUPPLY CAPACITY

System Demand 12,275 AFY

Pebble Beach Water Entitlements 325 AFY

Hospitality Rebound Economic Recovery 500 AFY

Legal Lots of Record 1,180 AFY

TOTAL 14,280 AFY





thank you

Seaside Municipal Water System

Seaside City Council and Successor Agency to the
Redevelopment Agency of the City of Seaside

January 18, 2018

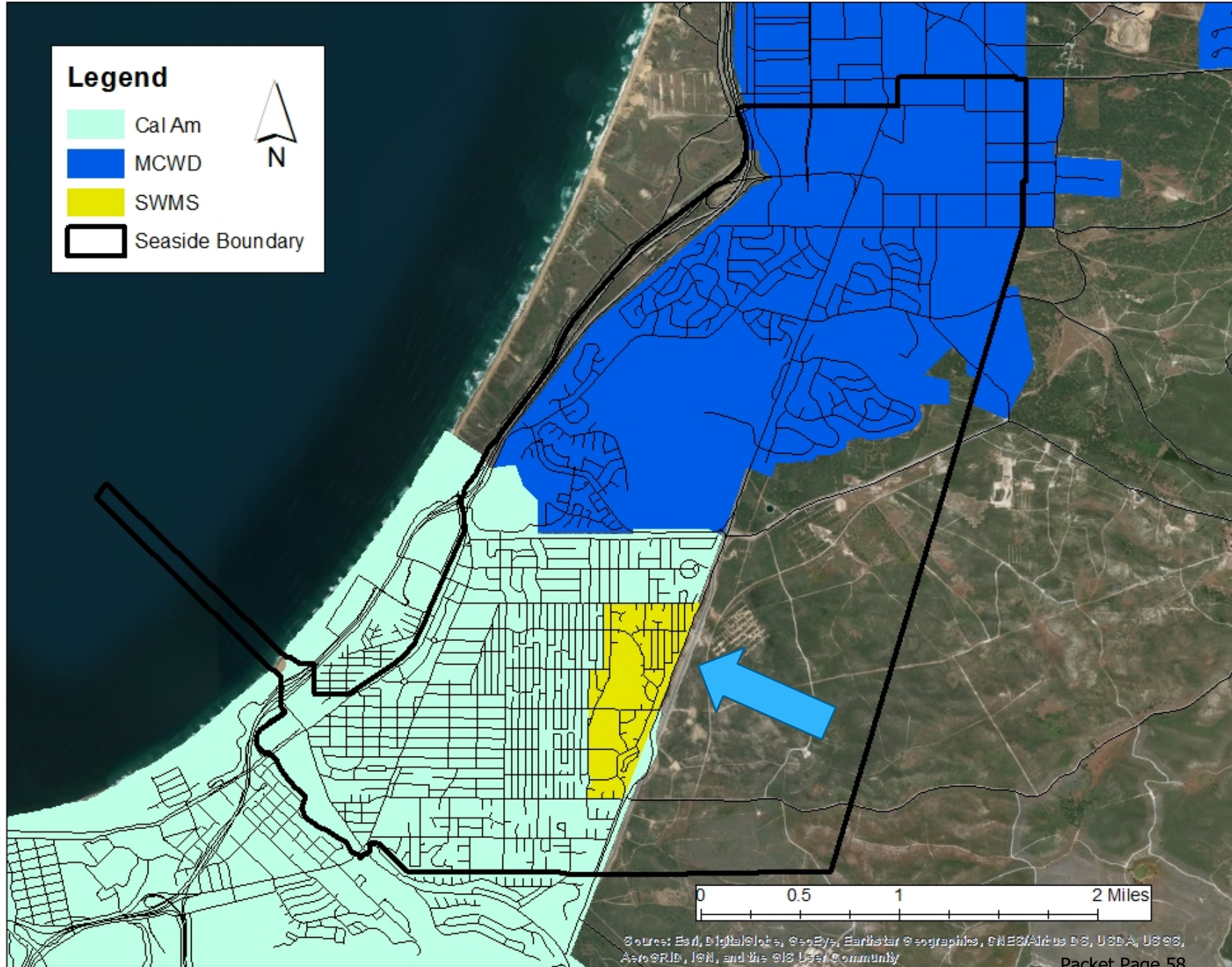
Legend

Cal Am

MCWD

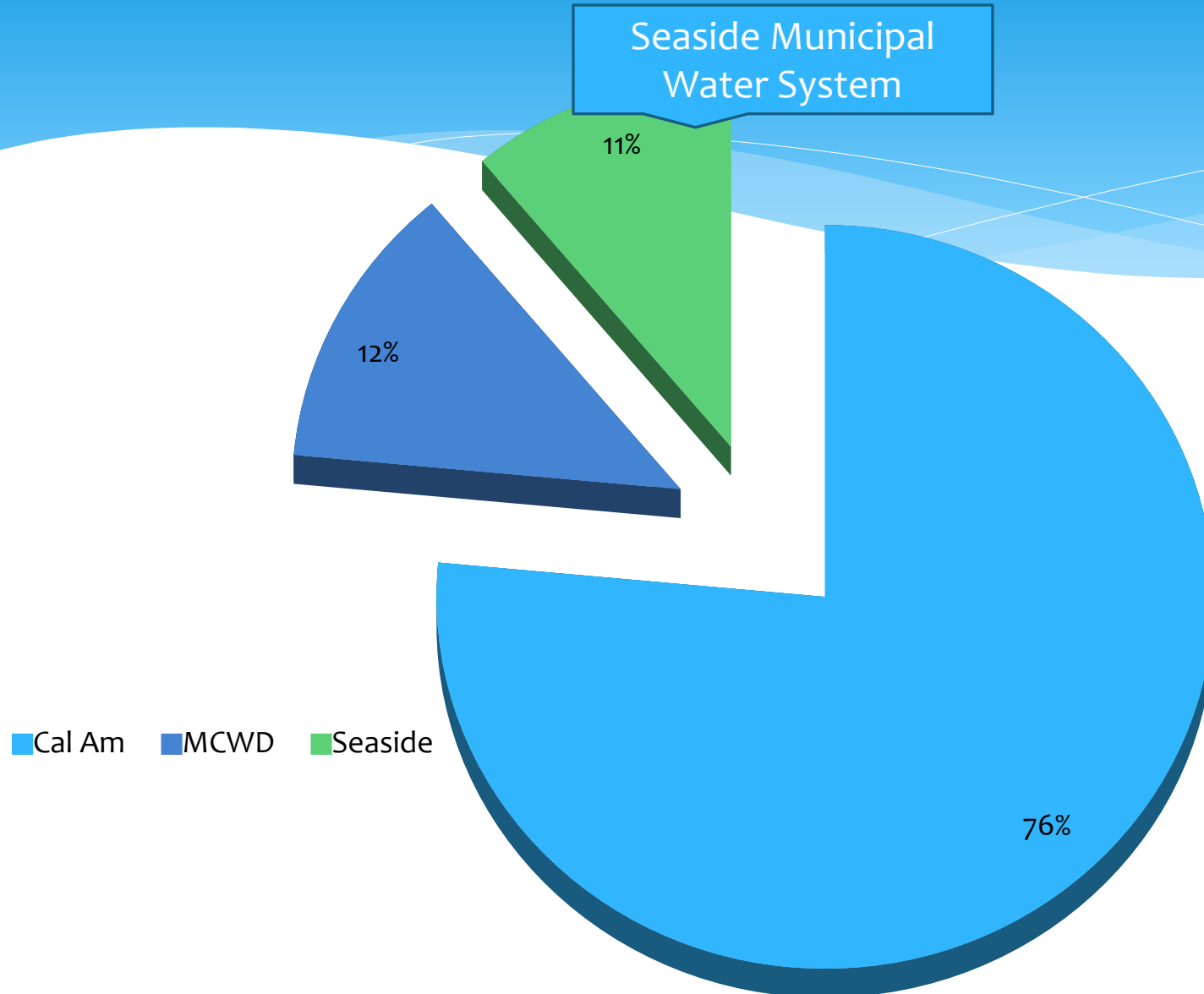
SWMS

Seaside Boundary



Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

Water Service to City of Seaside

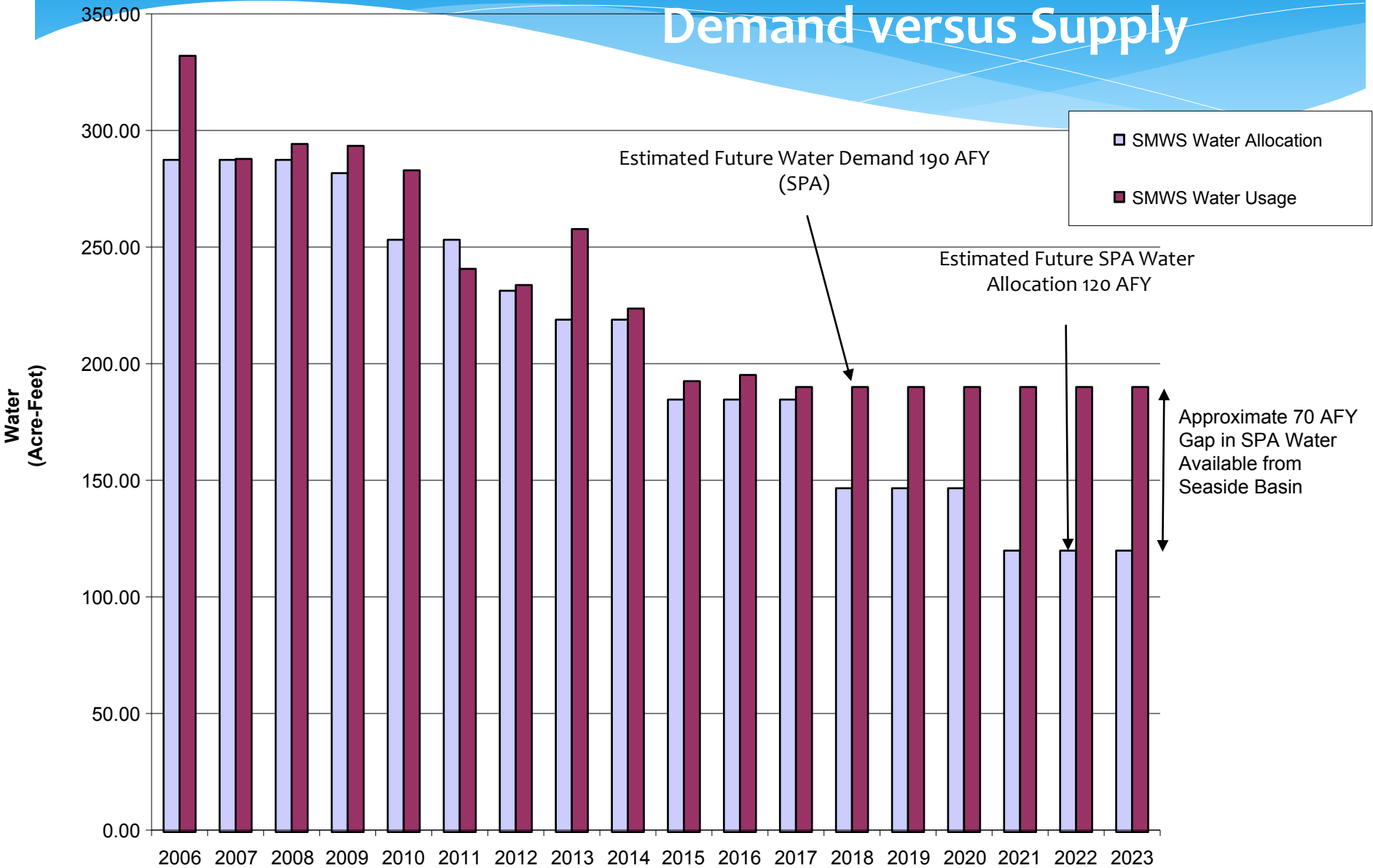


Regulatory & Environmental Conditions

- * Seaside Groundwater Basin
 - * Groundwater rights are constrained by the court order (the Decision)
 - * Since 2009, Seaside residents have had to decrease their water usage to comply with the ramp down schedule.
 - * Full rampdown will go into effect in 2021.
 - * About 60% decrease to Seaside Municipal Water System

Seaside Municipal Water System (SPA)

Demand versus Supply



Water Rights to City of Seaside

- * Seaside Municipal Water System
 - * Reduced to approximately 120 afy in 2021
- * Seaside Golf Courses
 - * Remains constant at 540 afy
- * Convert some of the golf course irrigation to recycled water
- * The water not pumped from the Basin is “in lieu” storage for later use

Seaside's Water Future

- * Seaside Municipal Water System
 - * About 120 AF in 2021
- * Seaside Golf Courses
 - * 540 AF
 - * Decrease pumping by 450 AF?

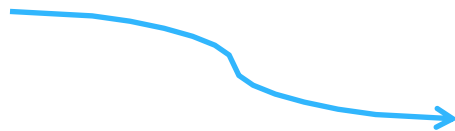
Seaside's Water Future

- * Seaside Municipal Water System

- * About 120 AF in 2021

- * Seaside Golf Courses

- * 90 AF



450 AF supplied by MCWD

Seaside
Municipal Water
System



Future Projects

Seaside's Water Future

- * Seaside Municipal Water System
 - * **About 190 AF**
- * Seaside Golf Courses
 - * 90 AF
- * Future Projects
 - * **About 380 AF**

Seaside's Water Future

- * Seaside Municipal Water System
 - * Need about 190 AF
 - * Allocated about 120 AF from Basin
 - * 70 AF deficit
- * Develop water supply outside of the adjudicated basin
 - * Find approximately 70 AF



Proposed
groundwater well
site

Seaside's Water Future

- * Seaside Golf Course “In Lieu” Storage
 - * On line in about 3 years
- * Develop water supply outside of the adjudicated basin
 - * On line in about 5 years