



## **League of Women Voters- Water & Infrastructure Group**

January 11, 2024

Esther Valle Rojas

***SECURING OUR WATER FUTURE TODAY***

# WRD is a special government district that manages groundwater



WRD monitors and replenishes the groundwater in the Central & West Coast Basins



Groundwater meets nearly half of the demand within the WRD service area of southern Los Angeles County



WRD SERVES:  
420 sq. miles, 43 cities, 4 million residents

# There are about 300 active production wells in WRD's service area which are owned and operated by entities with groundwater rights

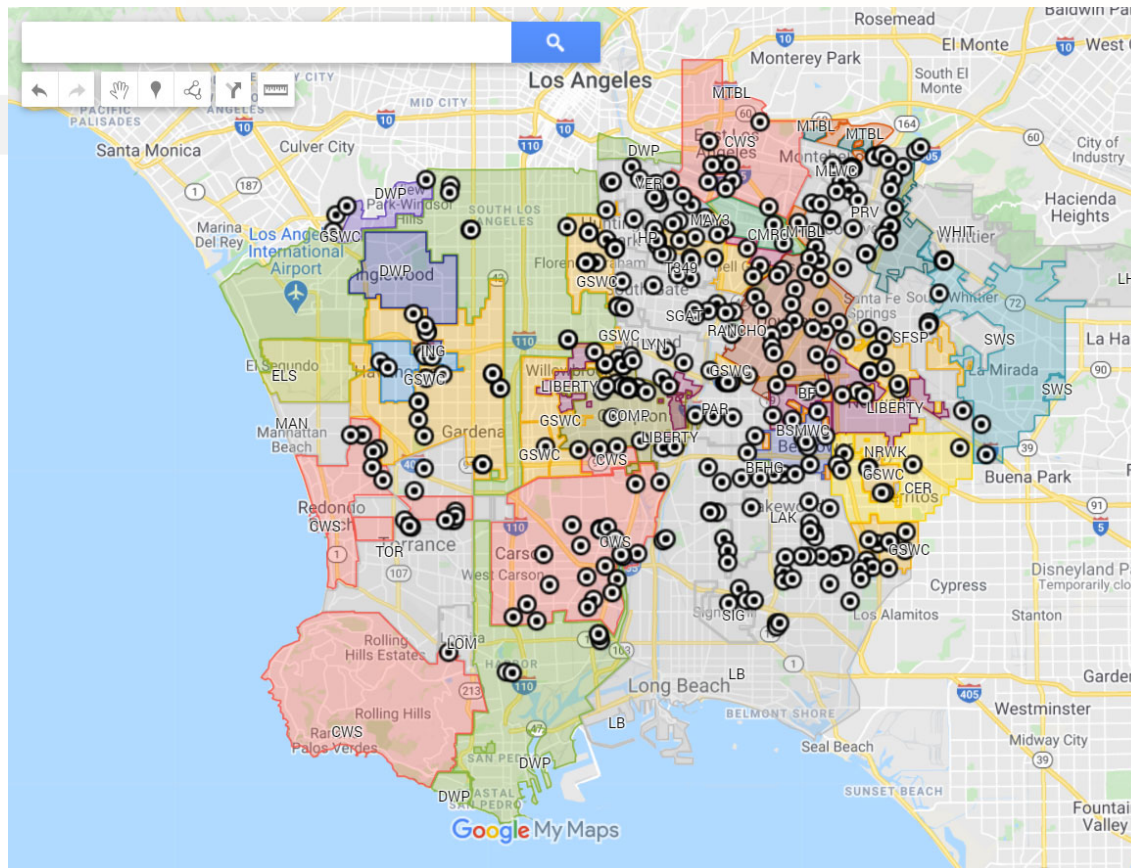
## Purveyor/Well Overlay

18 views

All changes saved in Drive

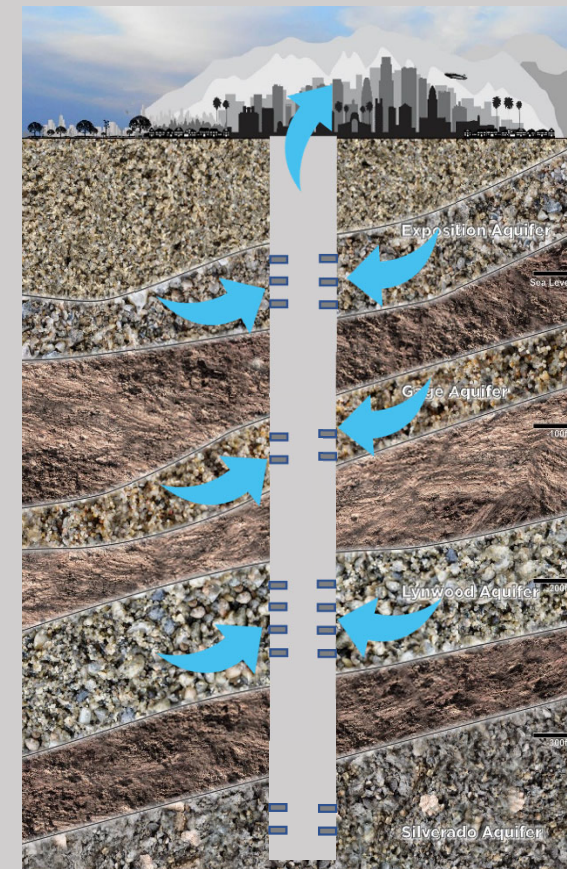
Add layer Share

- GSWC (18)
- LIBERTY (10)
- MTBL (8)
- BF (7)
- CWS (7)
- NRWK (7)
- DWP (5)
- CER (3)
- SGVWC (3)
- BGDN (2)
- ING (2)
- SWS (2)
- BFHG (1)
- BSMWC (1)
- CAW (1)
- CMRC (1)
- COMP (1)
- DOW (1)



Ex: City of Bell Gardens has pumping rights for 1,914-acre-feet (623M gallons) of water per year

## Production Well



# WRD manages groundwater through multiple roles



Replenishment



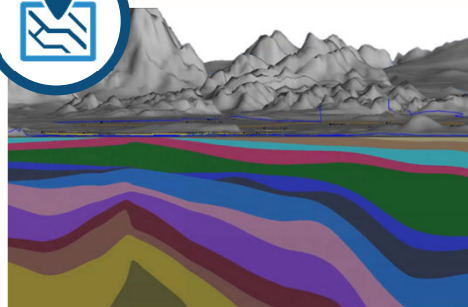
Monitoring



Cleanup



Water Recycling



Basin Modeling



Regional Watermaster

**WRD operates three water treatment facilities which benefit the basins**

*Albert Robles Center  
for Water Recycling &  
Environmental Learning*



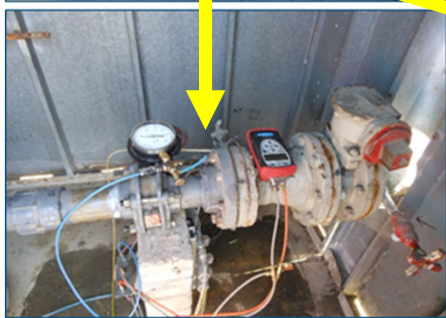
*Leo J. Vander Lans  
Advanced Water  
Treatment Facility*



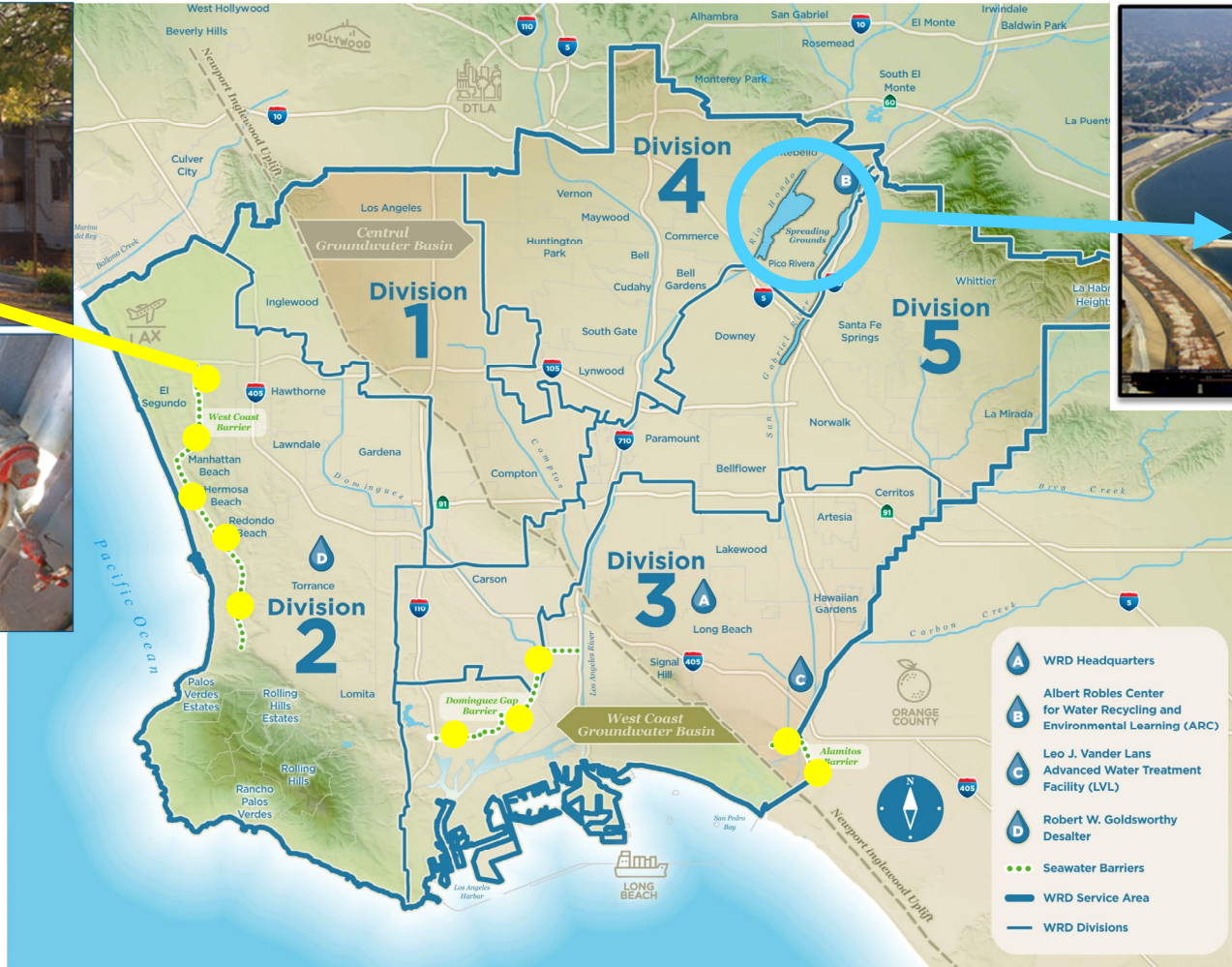
*Robert W. Goldsworthy  
Groundwater  
Desalter*



# WRD replenishes the basins using two important LA County infrastructure systems



Seawater Barrier Injection Wells



San Gabriel & Rio Hondo Spreading Grounds



# Different water sources are used to replenish the basins



Stormwater



Imported Water



Recycled Water



# Climate change has impacted the traditional water supply for replenishment

 Imported Water is largely snowmelt transported from other watersheds

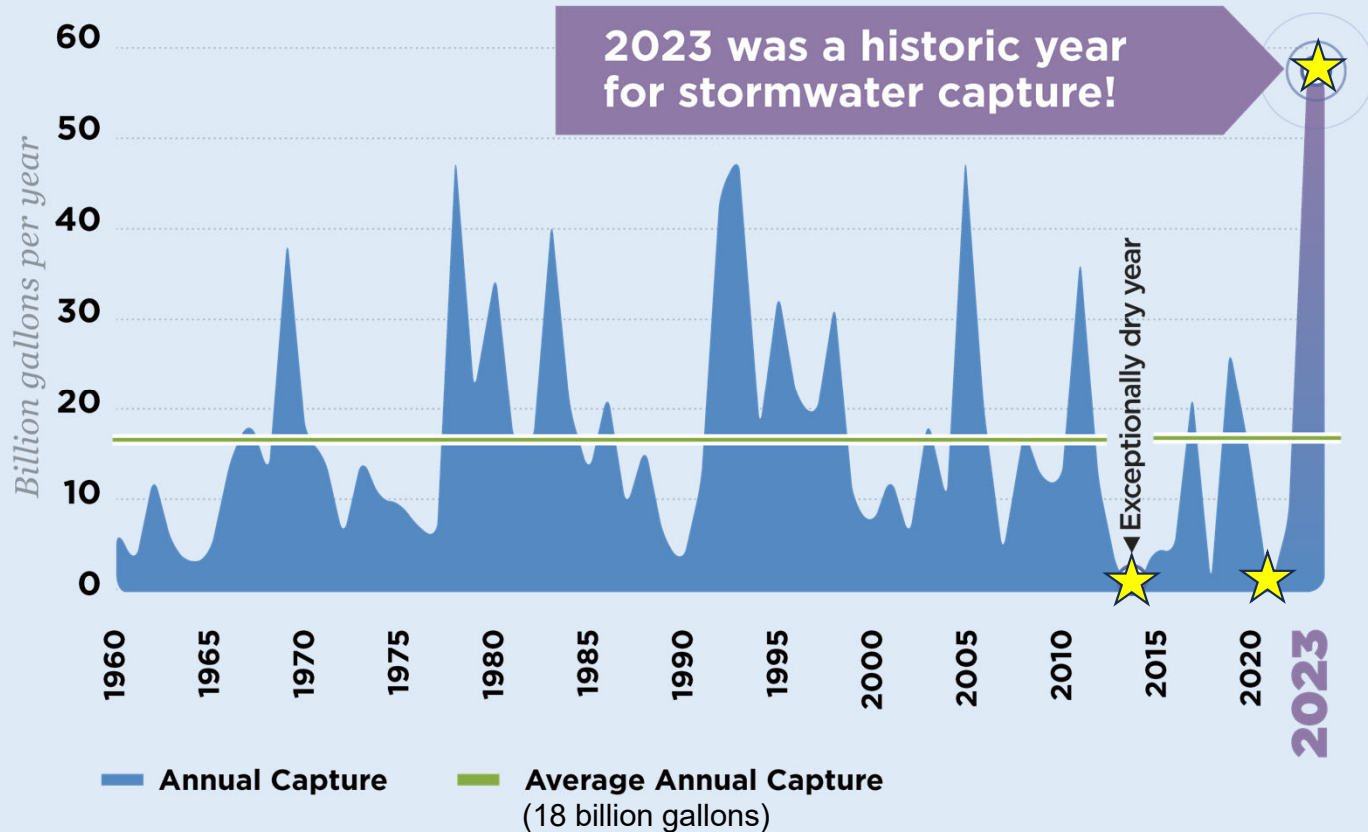


- Climate forecasts predict more rainfall than snowfall in the coming years
- Drought cycles are already frequent and more extreme



## Seasonal extremes have been experienced in the past decade

### ANNUAL STORMWATER CAPTURE IN THE WRD SERVICE AREA



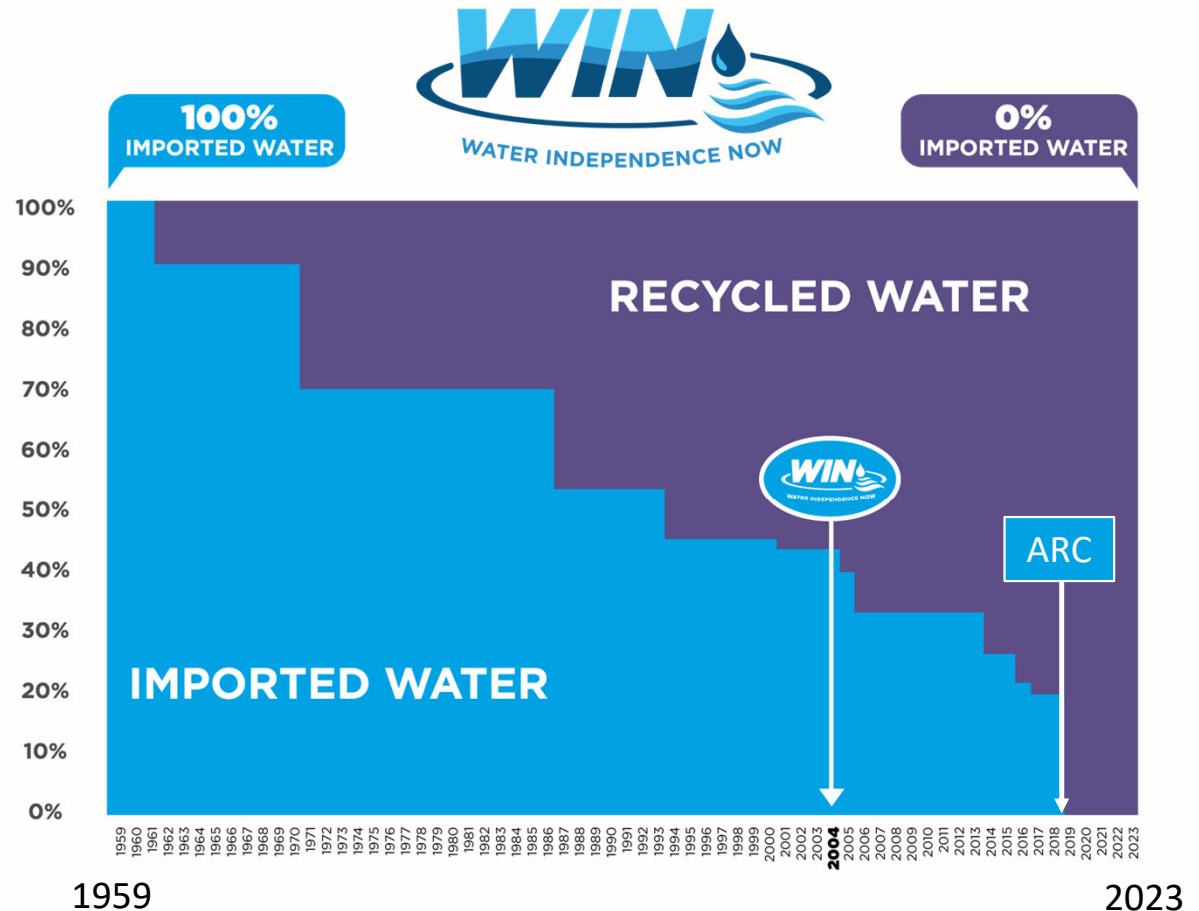
- In the 2022-23 Water Year, the WRD service area captured nearly 60 billion gallons of stormwater
- In the 2013-14 and 2020-21 Water Years, the WRD service area captured ZERO gallons of stormwater
- That's why recycled water is so important to the region

# ARC completed WRD's decade-long recycled water journey

*Albert Robles Center  
for Water Recycling &  
Environmental Learning*



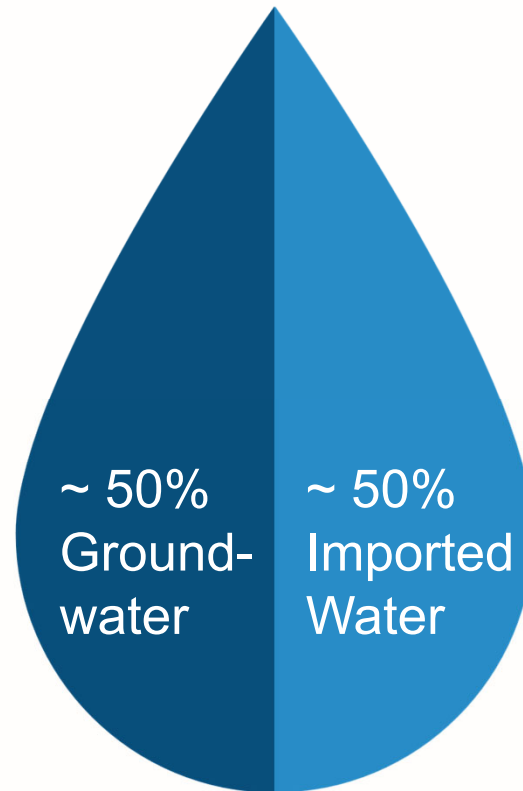
WRD no longer needs  
to import water to  
replenish the Central  
Groundwater Basin



# Even with WIN complete, there's still more work to do in the basins



- The WIN Program was completed in 2019 and created a locally sustainable supply for replenishment using stormwater and recycled water



WATER SUPPLY FOR PROVIDERS IN THE WRD SERVICE AREA



- The WIN 4 ALL Program will address the remaining water supply issues within the WRD service area

# Lessons learned from WIN will be expanded into regional WIN 4 ALL

## WEST COAST BASIN

Available Storage Space  
120,000 AF

Unused Groundwater Rights  
35,000 AF

Current Groundwater Pumping

## CENTRAL BASIN

Available Storage Space  
330,000 AF

Unused Groundwater Rights  
33,000 AF

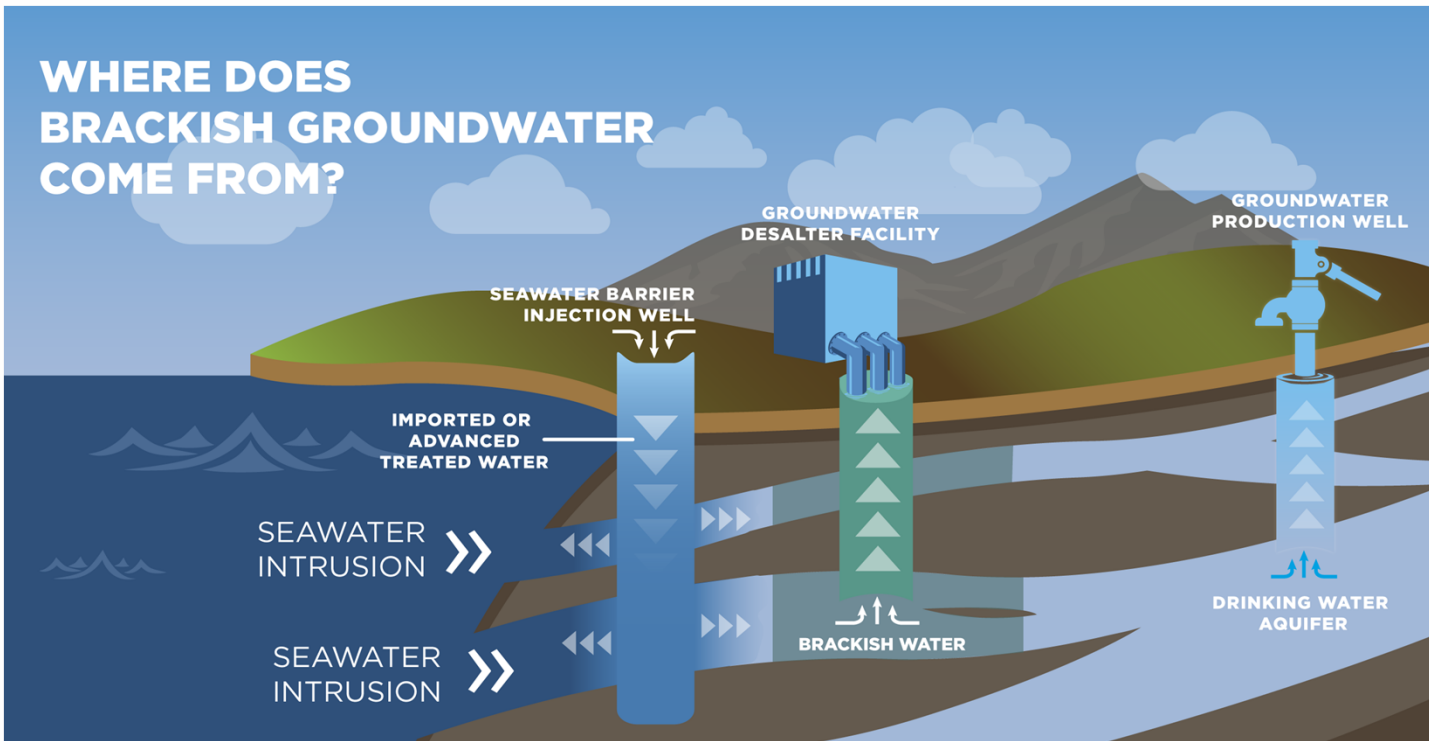
Current Groundwater Pumping

- The WIN Program created a locally sustainable supply for replenishment
- However, many groundwater pumpers don't use all their annual water rights
- There is also a lot of available groundwater storage space in the basins (450,000 AF total)
- The WRD WIN 4 ALL Program will address these issues



# The Brackish Groundwater Reclamation Program will clean up salty groundwater

## WHERE DOES BRACKISH GROUNDWATER COME FROM?

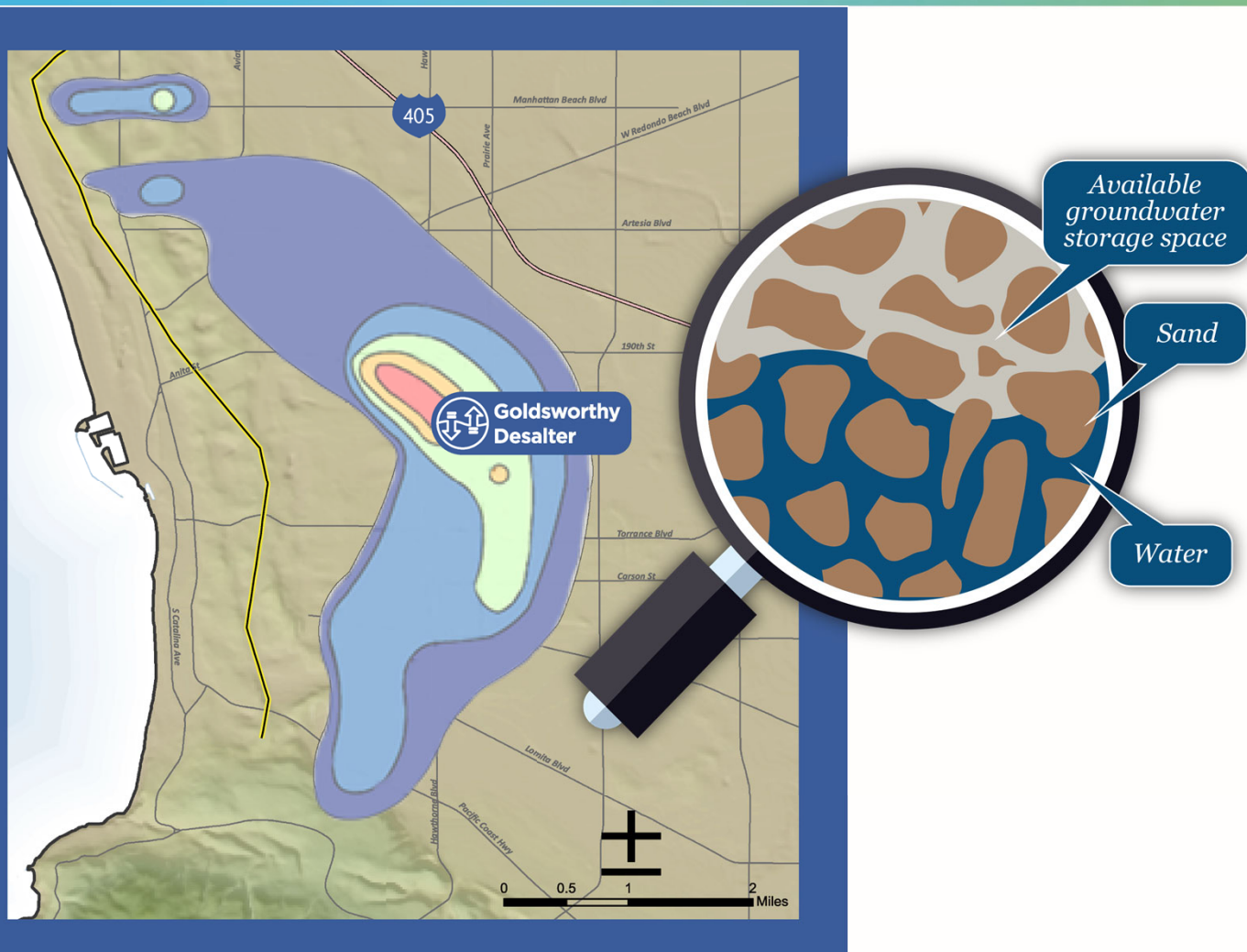


*Robert W. Goldsworthy  
Groundwater  
Desalter*



The Desalter in Torrance will be expanded for continued cleanup of salty groundwater from historical seawater intrusion

# The Desalter Expansion Project has multiple benefits

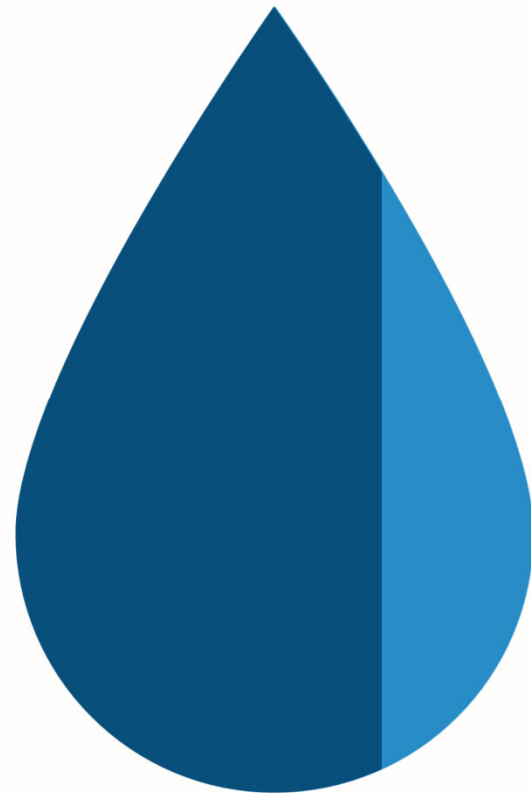
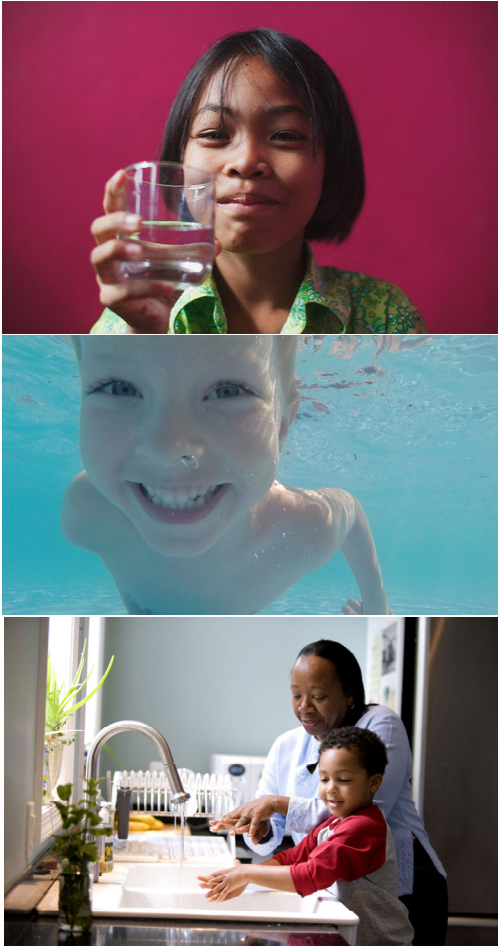


## *Desalter Expansion Project*



By cleaning up the salty groundwater, you create a new water supply, allow groundwater pumpers to use their water rights, and make room for more underground storage of freshwater supplies

# A secure and sustainable water future is within reach



WATER SUPPLY FOR  
PROVIDERS IN THE WRD  
SERVICE AREA



- With the completion of WIN 4 ALL, WRD hopes to see a region fully reliant on a groundwater supply that is replenished with sustainable local supplies of recycled water and stormwater

# WATERMASTER!

- Court- Approved Amended Judgments History
- Watermaster Governance Structure
- Watermaster- Administrative Body Duties
- Navigating the Judgments
- Optimizing Water Rights
- Storage & Augmented Supplies
- Administrative Body's Role with Pumpers





## Amended Judgment's History & Governance Structure

# Watermaster: Judgments' History

- Original Watermaster
- Why Change?
  - Local/Pumper Control
  - Accountability
  - Clean-up Efforts
- Central Basin Judgment amended December 2013.
- West Coast Basin Judgment amended December 2014.



CALIFORNIA DEPARTMENT OF  
WATER RESOURCES



# Watermaster: Judgments' History

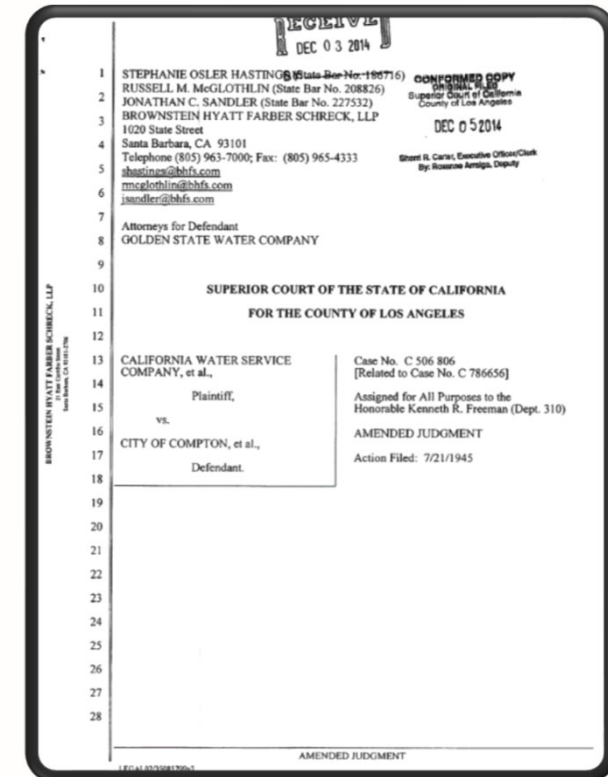
## ➤ Judgments created:

### 1. New governance structures:

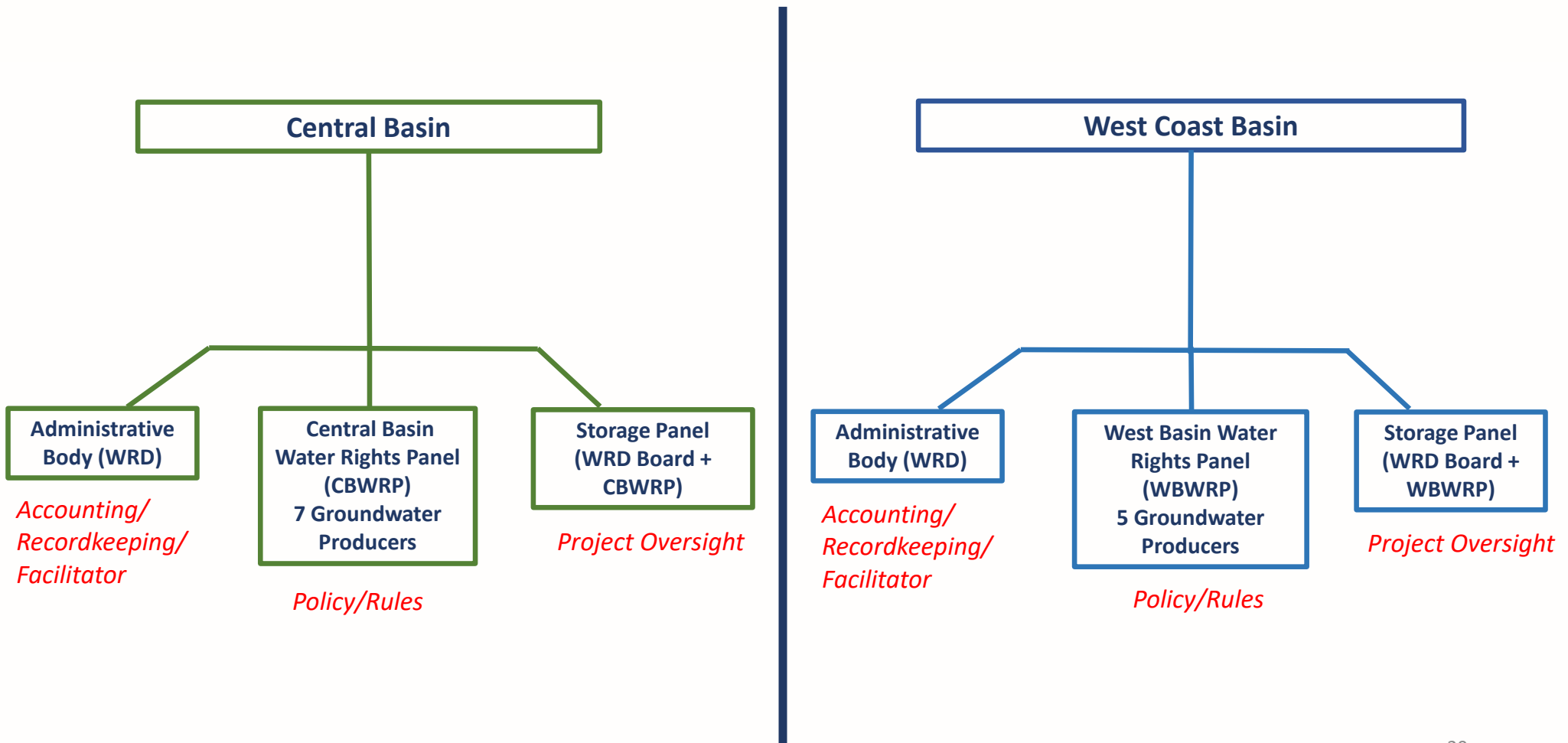
CA Department of Water Resources replaced by...

- ✓ Administrative Body (WRD)
- ✓ Water Rights Panel (Pumper Representatives)
- ✓ Storage Panel (WRD Board + Water Rights Panel)

### 2. New provisions for groundwater storage



# Watermaster: Governance Structure



## Administrative Body Duties

# Watermaster: Administrative Body Duties

- Administer and enforce the provisions of the Judgment:
  - Central Basin: 151 Parties & 122 Rights Holders (2022-23)
  - West Basin: 71 Parties & 56 Rights Holders (2022-23)
- Fun Facts: *Must be a party to exercise water rights, but you don't need to own them...*
  - Parties: an entity/individual can become a party and not own water rights!
  - Rights Holders: an entity/individual can own water rights and not be a party!
- Manage annual budget and consolidated invoices:
  - Panel and Administrative Body Assessments
    - CB Budget: \$316,500
    - WB Budget: \$135,535



# Watermaster: Administrative Body Duties

## ➤ Water Rights Accounting: leases, sales, and production

Party	Trasaction Type	Amount	Recordation Date		Party
California Water Service Co./Hawthorne Lease	Lease with flex	1,882.00	2013-02-01	FROM	Hawthorne, City of
Hawthorne, City of	Lease with flex	-1,882.00	2013-02-01	TO	California Water Service Co./Hawthorne Lease

Party	Trasaction Type	Amount	Recordation Date		Party
Bellflower, City of	Sale	-700.00	2022-11-08	TO	California American Water Company
California American Water Company	Sale	700.00	2022-11-08	FROM	Bellflower, City of

West Basin	July 2021 - October 2021	July 2022 - October 2022	Difference	%Change
ABC Nursery	4.80	6.00	1.20	20.00
Cal. Water Service Co. Alpha 7050	637.75	298.05	-339.70	-113.97
Cal. Water Service Co. Dominguez - WB	644.19	673.48	29.29	4.35

# Watermaster Administrative Body Duties



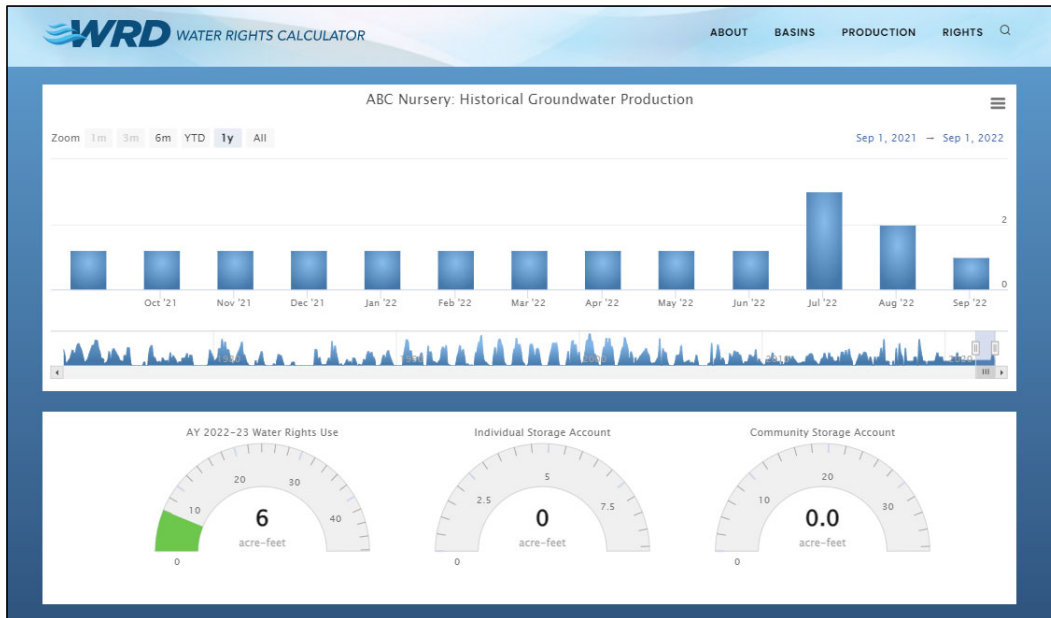
- Annual Watermaster Reports
- Augmentation/Storage Projects
  - Applications
  - Storage Panel
- Stipulation in Intervention- becoming a party
  - Central Basin- Administrative Body files
  - West Coast Basin- Panel files
- Technical Tools (DTS Partnership): Pumper Portal, Water Rights Calculator, WRD Website
- Monthly/bi-monthly association/panel meetings
- Goal: To assist water rights' holders maximize their rights and storage!



# Watermaster: Administrative Body Duties

## Technical Tools:

- Pumper Portal: production reporting
- WRD Website: [www.wrd.org/administrative-body](http://www.wrd.org/administrative-body)
- Water Rights Calculator: [rights.wrd.org/](http://rights.wrd.org/)



### Central and West Coast Basin Water Rights Calculator

ABC Nursery: Administrative Year (AY): 2022-23

Calculator Leases Sales Storage Wells

**Groundwater Rights AY 2022-23**

ABC Nursery | West Coast Basin | Alpha No. 7002

All values in acre-feet

Water Rights	24.10	Total Rights Next Year	48.2
Leased Flex	0.00	Leased No Flex	0.00
Leases Next Year	0.00		
Carryover	24.1	Drought Carryover	0.00
C.O. Next Year	24.1		
Storage (Current)	0	Convert to Storage	0
Net Storage	0	DCO Next Year	0
Total Rights	48.2	Storage (Start AY)	0.00
Withdrawn (AY)	0.00 a.f.		
Production to Date*	6.00	Rights Balance	42.2
Unused Rights	18.10		

Goal: To assist water rights holders maximize their rights and storage!

## Navigating the Judgments

# Watermaster: Navigating the Judgments

Terms/Policies	Central Basin	CB Judgment	West Basin	WB Judgment
<b>Adjudicated Right (AR)</b>	n/a	n/a	A parties total water rights available for extraction in an administrative year	Definitions; Page 3, Lines 16-18
<b>Administrative Year</b>	Watermaster year- 12 month period beginning July 1 to June 30	Terms; Page 7, Lines 4-5	Watermaster year- 12 month period beginning July 1 to June 30	Definitions; Page3, line 14-15
<b>Annual Pumping Allocation (APA)</b>	Maximum acre-feet a party is allowed to extract in an administrative year. APA is 80% of a parties Total Water Right.	Terms; Page 7, Lines 6-8	n/a	n/a
<b>Basin Operating Reserve</b>	This allows WRD to meet the replenishment needs of the basin and occupy 110,000 AF of available dewatered space to capture natural inflows of water and to offset overproduction	Page 64 Lines 10-20	This allows WRD to meet replenishment needs with the WRD Act and hold 49,100 AF of available dewatered space to capture natural inflows of water and to offset overproduction	Page 10 Line 22-28; Page 11 4-5

## ❖ Amended Judgments' Guide

- ❖ Adjudicated Right (AR) vs Annual Pumping Allocation (APA)
- ❖ Carryover: One-Year vs Drought (1977 & 1991)
  - ❖ Leases with "Flex"

- ❖ Increased Extractions
- ❖ Non-Consumptive Water Use Permits
- ❖ Order of Extraction
- ❖ Total Extraction Rights



## Optimizing Water Rights

# Watermaster: Maximize Groundwater Rights & Storage

Water Rights Worksheet (version 02/21/23)																						
A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W
Party with Allowed Pumping Allocation (APA)	Allowed Pumping Allocation (APA)	Net Carryover From Previous Year			Leases w/flex	Leases w/o flex	Water In Storage	Increased Extraction	Total Rights (sum of B through I)	Total Extraction Right	Storage Pumped	Other Rights Pumped	Net Rights Balance (J-L-M)	Current Admin-Year Carryover into Storage	Storage Balance (H-L+O)	Allowable Carryover (CO) Into Next Year					Unused (Lost) Rights for the Year (S-U)	
		One-Year Carryover	Drought Carryover													Drought Carryover	Balance of (N-P-Q-R)	Cap on One-Year Carryover	One-Year Carryover Allowed	Total Carryover into Next Year (Q+R+U)		
			1977	1991												1977	1991					
Bellflower, City of	680.00	420.00	0.00	483.00	0.00	0.00	0.00	0.00	1,583.00	952.00	0.00	700.00	883.00	0.00	0.00	0.00	483.00	400.00	408.00	400.00	883.00	0.00

West Coast Basin																						
A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	
Party with Adjudicated Right (AR)	Adjudicated Right (AR)	Net Carryover From Previous Year			Leases w/flex	Leases w/o flex	Water In Storage	Increased Extraction	Total Rights (sum of B through I)	Total Extraction Right	Storage Pumped	Other Rights Pumped	Net Rights Balance (J-L-M)	Storage Balance	Allowable Carryover (CO) Into Next Year					Unused (Lost) Rights for the Year (R-T)		
		Carryover	Drought Carryover												Drought Carryover	Balance of (N-O-P)	Cap on Carryover	Carryover Allowed	Total Carryover into Next Year (P+T)			
Golden State	7,502.24	3,826.76	3.39		0.00	0.00	3,300.00	0.00	14,632.39	9,002.69	0.00	3,642.27	10,990.12	3,300.00	3.39	7,686.73	4,202.24	4,202.24	4,202.24	4,205.63	3,484.49	



# Watermaster: Unused Rights

N	O	P	Q	R	S	T	U	V
Net Rights Balance (J-L-M)	Storage Balance	Allowable Carryover (CO) Into Next Year						Unused (Lost) Rights for the Year R-T
		Drought Carryover		Balance of (N-P-Q-R)	Cap on One- year Carryover	One-year Carryover Allowed	Total Carryover into Next Year (P+Q+T)	
		1977	1991					
6,070.63	0.00	204.88	316.29	5,549.46	4,523.40	4,523.40	5,044.57	1,026.06
(5.41)	0.00	0.00	0.00	(5.41)	164.40	(5.41)	(5.41)	0.00
1,728.25	1,077.91	0.00	204.64	445.70	251.80	251.80	456.44	193.90
3,708.75	0.00	0.00	0.00	3,708.75	4,137.00	3,708.75	3,708.75	0.00
101.86	50.00	0.00	24.12	27.74	10.00	10.00	34.12	17.74
46.85	0.00	0.00	13.82	33.03	20.00	20.00	33.82	13.03
182,721.95	62,064.11	3,510.79	18,366.75	98,780.30	94,769.20	57,951.91	79,829.45	40,828.39

- Unused Rights = (Total Rights Balance – Storage Balance – Drought and One-Year Carryover) *rights that you could have pumped, leased, stored or sold*
- To maximize rights, they must be pumped, leased, stored\* or sold.

# Watermaster: Unused Rights

In Admin Year 2022-23

- CB APA: 217,367 AF
- Inactive: 3,387 AF
- **Unused Rights: 45,103 AF**
- Imported Water: 99,735 AF
- WCB AR: 64,468 AF
- Inactive: 4,365 AF
- **Unused Rights: 20,522 AF**
- Imported Water: 32,482 AF

**65,625 AF of  
Unused Pumping Rights**

## Storage & Augmented Supplies



# Watermaster: Storage Accounts

- **Individual Storage:** all rights holders have an Individual Storage Account (ISA). Stored water can remain in the ISA indefinitely.
  - **Central Basin:** the size of an ISA is 50% of a party's APA
  - **West Coast Basin:** the size of an ISA is 40% of a party's AR
- **Community Storage:** is available on a first come, first served basis after a party's ISA is full. There is a 10-year limit for community storage. After 10 consecutive years:
- **Regional Storage:** (WB only) 9,600 af reserved for regional projects
- ❖ Storage Limits
  - **Central Basin:** rights holders can store up to 200% of their APA
  - **West Coast Basin:** rights holders can store up to 200% of their AR plus up to 50% more (250% total) with approval from the Storage Panel
- ❖ Basin Operating Reserve:
  - Managed by WRD- can make available to other parties
  - Augmented supplies



# Storage Accounts

## CENTRAL BASIN

Available  
Dewatered  
Space  
330,000 AF

**Basin Operating Reserve**  
110,000 AF  
WRD

**Community Storage**  
111,250 AF  
*(includes 23,000 DAC)*  
(150% of APA)

**Individual Storage  
Allocation (ISA)**  
108,750 AF  
(50% of APA)

*Augmented Supplies*

Adjudicated  
Storage  
Capacity  
220,000 AF

## WEST COAST BASIN

Available  
Dewatered  
Space  
120,000 AF

**Basin Operating Reserve**  
49,100 AF  
WRD

**Regional Storage** 9,600

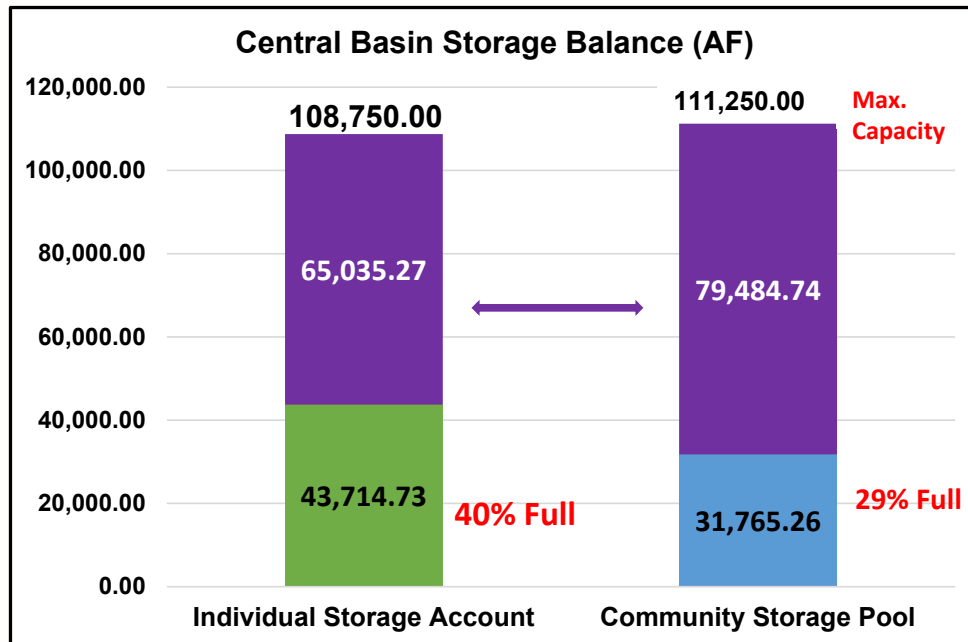
**Community Storage**  
35,500

**ISA** 25,800  
(40% of AR)

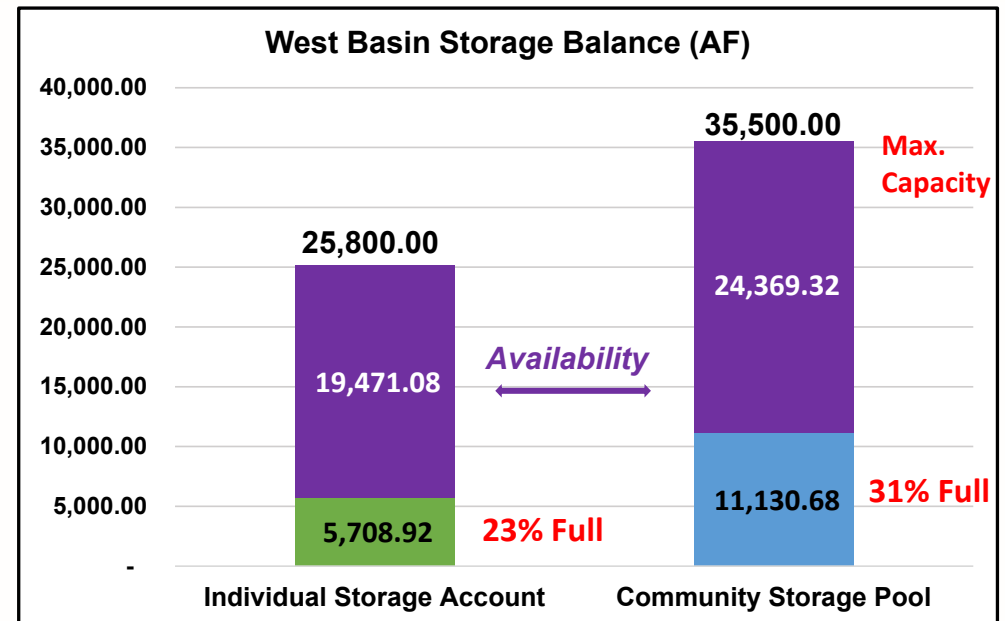
*Augmented Supplies*

Adjudicated  
Storage  
Capacity  
70,900 AF

# Storage Accounts (2022-2023)



Central Basin  
Individual Storage (ISA): 40% full  
Community Storage (CSA): 29% full



West Basin  
Individual Storage (ISA): 23% full  
Community Storage (CSA): 31% full

**AK0**    \\wrd.local\wrd\Water Resources\WIN 4 ALL\Presentations\Storage Balance Chart.xlsx  
Asha Kreiling, 2023-10-25T00:32:11.219

# Accessing Storage

## ➤ Carryover Conversion

- **WB:** Converts one-year carryover (water carried over from prior year) into stored water
- **CB:** Converts one-year carryover (water carried over from prior year) into stored water, once exhausted, pumper can convert any remaining APA balance into storage.
- Pay RA when converting
- Economic/resources management benefits

## ➤ Augmented Supplies

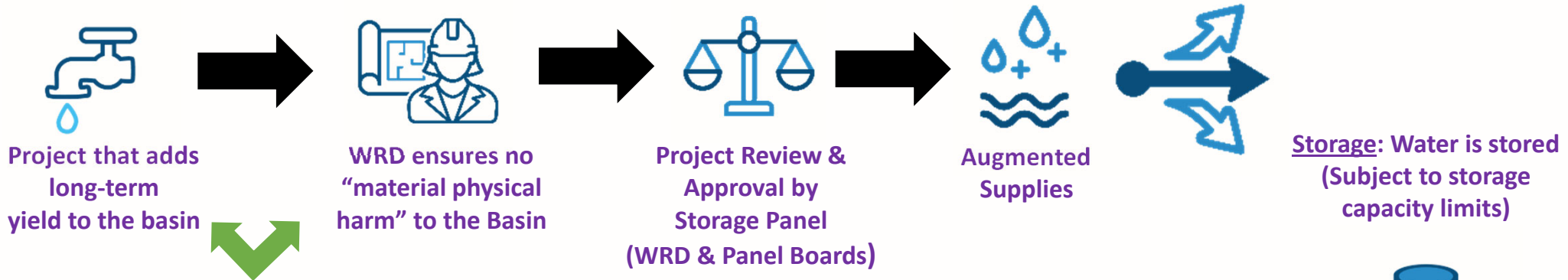
- Project adds “long-term yield” to basin
- No “material physical harm”



# Augmented Supplies

## Developing Augmented Supplies

### WRD's Role: Facilitator



- Staff works with applicant to complete basin modeling, confirm project info, enviro etc.
- Implement process to allow all parties to participate and share costs and benefits

# Augmented Supplies

## Augmentation Project

- Reoccurring recharge and extractions
- Accounted for separately from APA/AR
- Does not require party to utilize storage space
- Projects utilize the “basin operating reserve” space
- No RA is levied on extraction of augmented water
- Largest potential for maximizing the reuse of recycled water!

## Storage Project

- Water is stored in Individual or Community Storage space, subject to rules
- Does not increase a party’s APA/AR
- Parties can have up to 200% of APA/AR in storage
- No RA is levied on extraction of stored water



- Central Basin: WRD can participate and receive allocation to offset replenishment
- West Basin: WRD cannot obtain any allocation



# Administrative Body's Role



# Watermaster: Administrative Body's Role

## FACILITATOR!

- Provide Guidance on Judgments
- Assist parties with water right transactions
- Match-maker (leases/sales)
- Coordinate Augmentation Efforts
- Optimize water rights using WRD' tools and programs:
  - Well Construction & Rehabilitation Loan Program
  - Safe Drinking Water Program (grants/loans)
  - PFAS Remediation Program
  - Pursuing State/Federal Funding Opportunities





**THANK YOU**

Esther Valle Rojas, Watermaster & Manager of Water Resources  
**[erojas@wrd.org](mailto:erojas@wrd.org)**

   [@WRDsocal](https://www.instagram.com/WRDsocal)

 *4040 Paramount Blvd.  
Lakewood, CA 90712*

 [www.WRD.org](http://www.WRD.org)