



PHOENIX WATER SUPPLY AND DEMAND UPDATE

NSD Synergy Conference
September 12, 2026

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Phoenix Water Services Department

PHX WATER SMART

Quality

Reliability

Value

- 1 Water Supply and Demands
- 2 Changes on the Colorado River
- 3 Drought Management Plan
- 4 Step Taken to Prepare for Drought
- 5 Next Steps

Bartlett Dam Expansion

Pure Water Phoenix

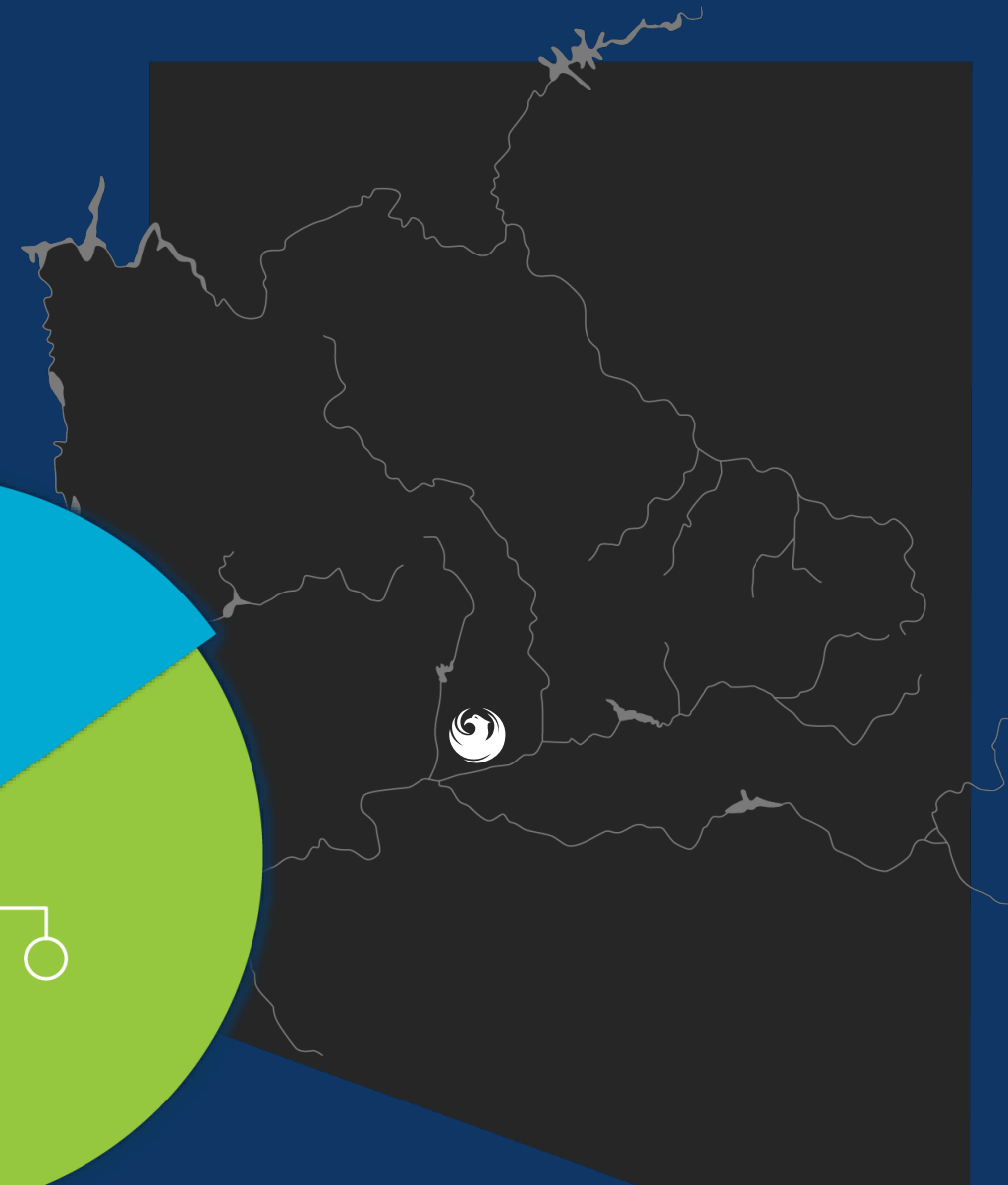
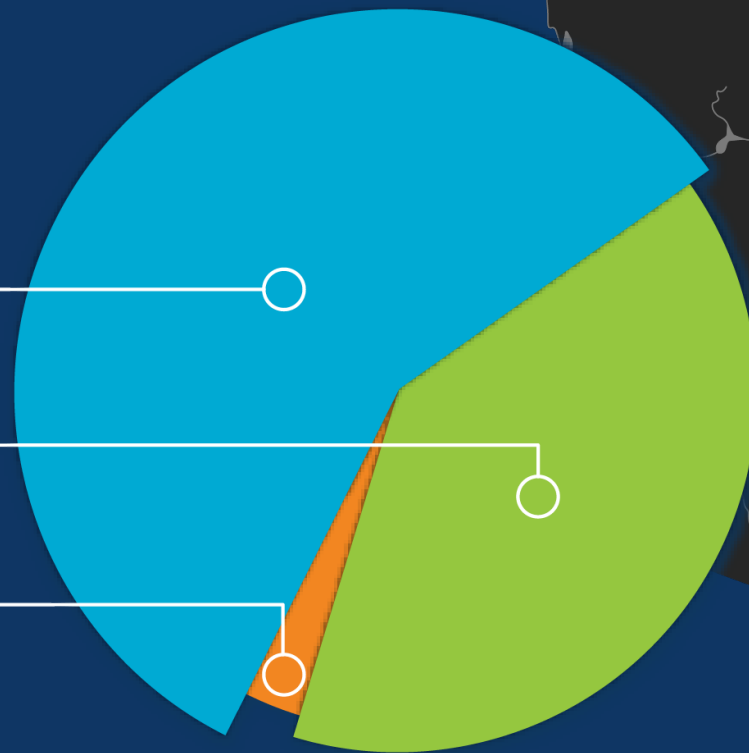


Phoenix Water Supply

58% SALT & VERDE
RIVER WATER

40% COLORADO
RIVER WATER

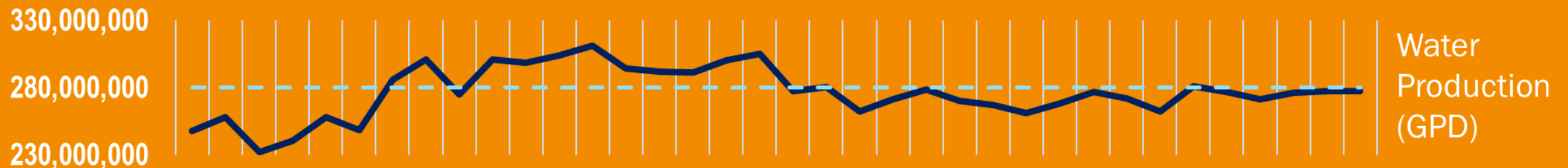
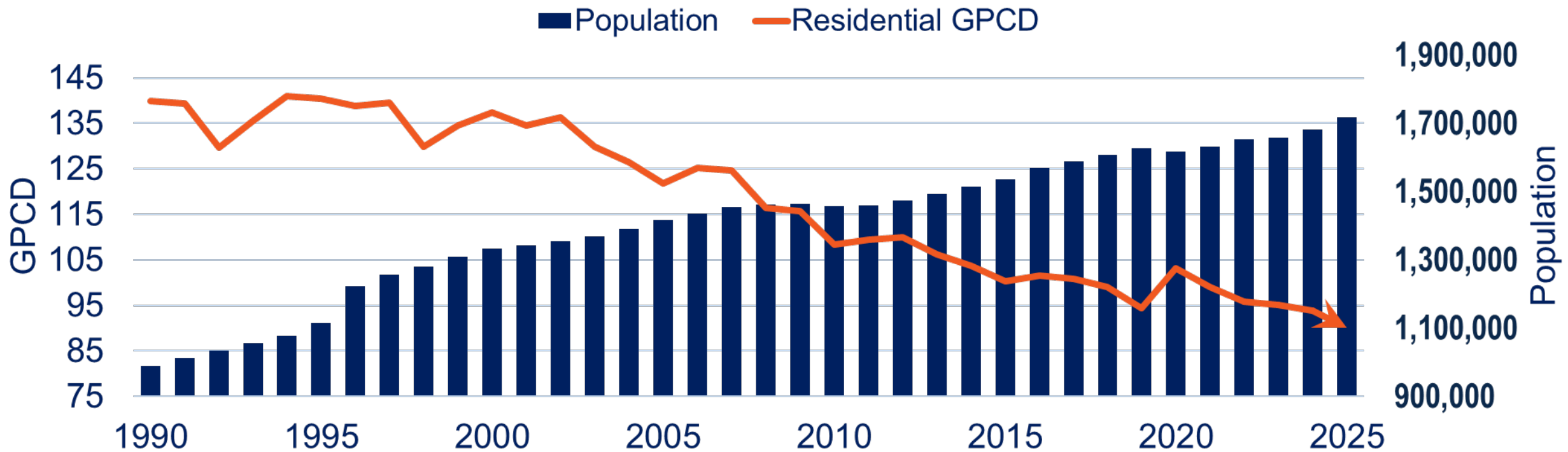
2% GROUNDWATER

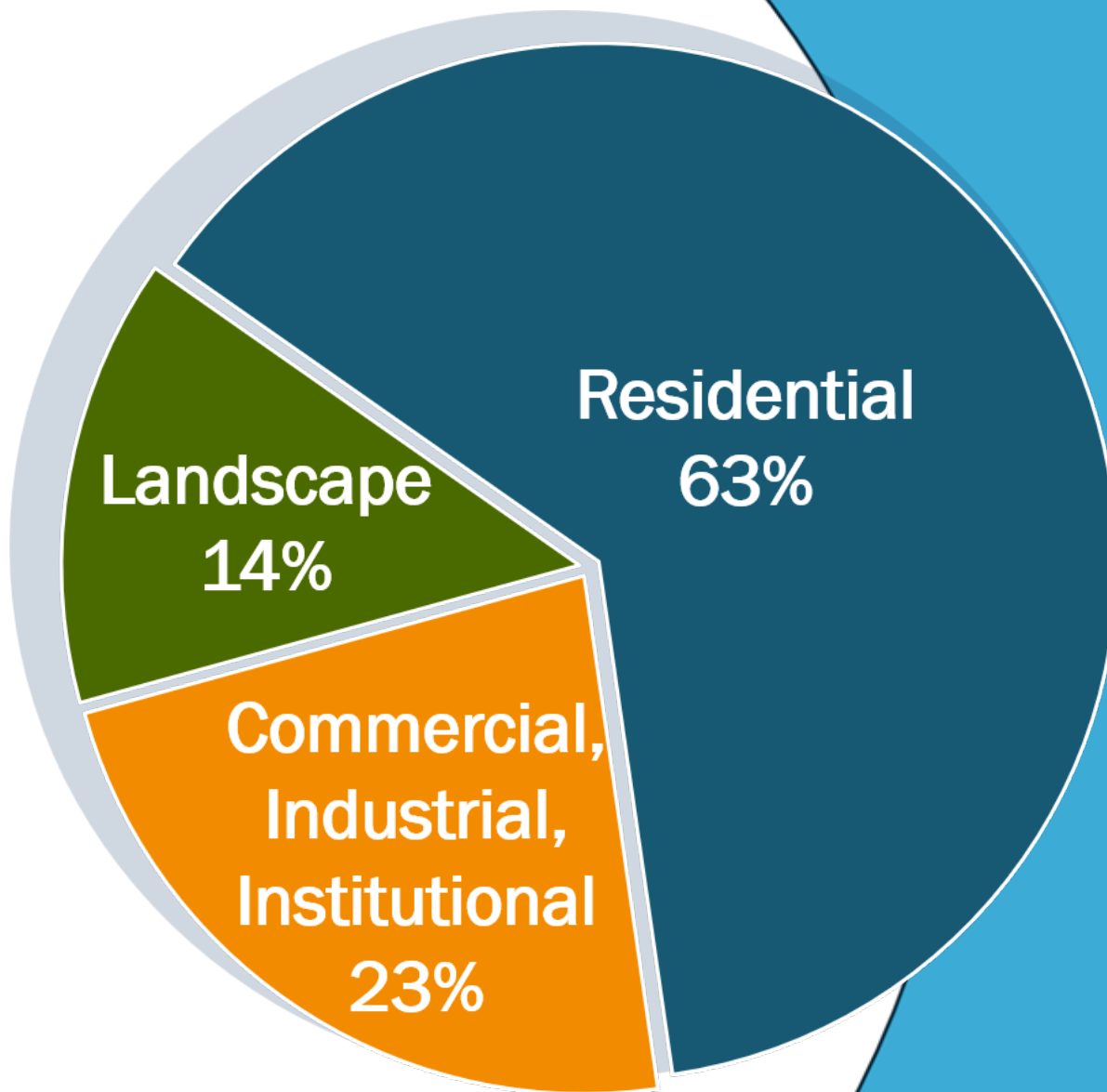


PHOENIX WATER DEMAND



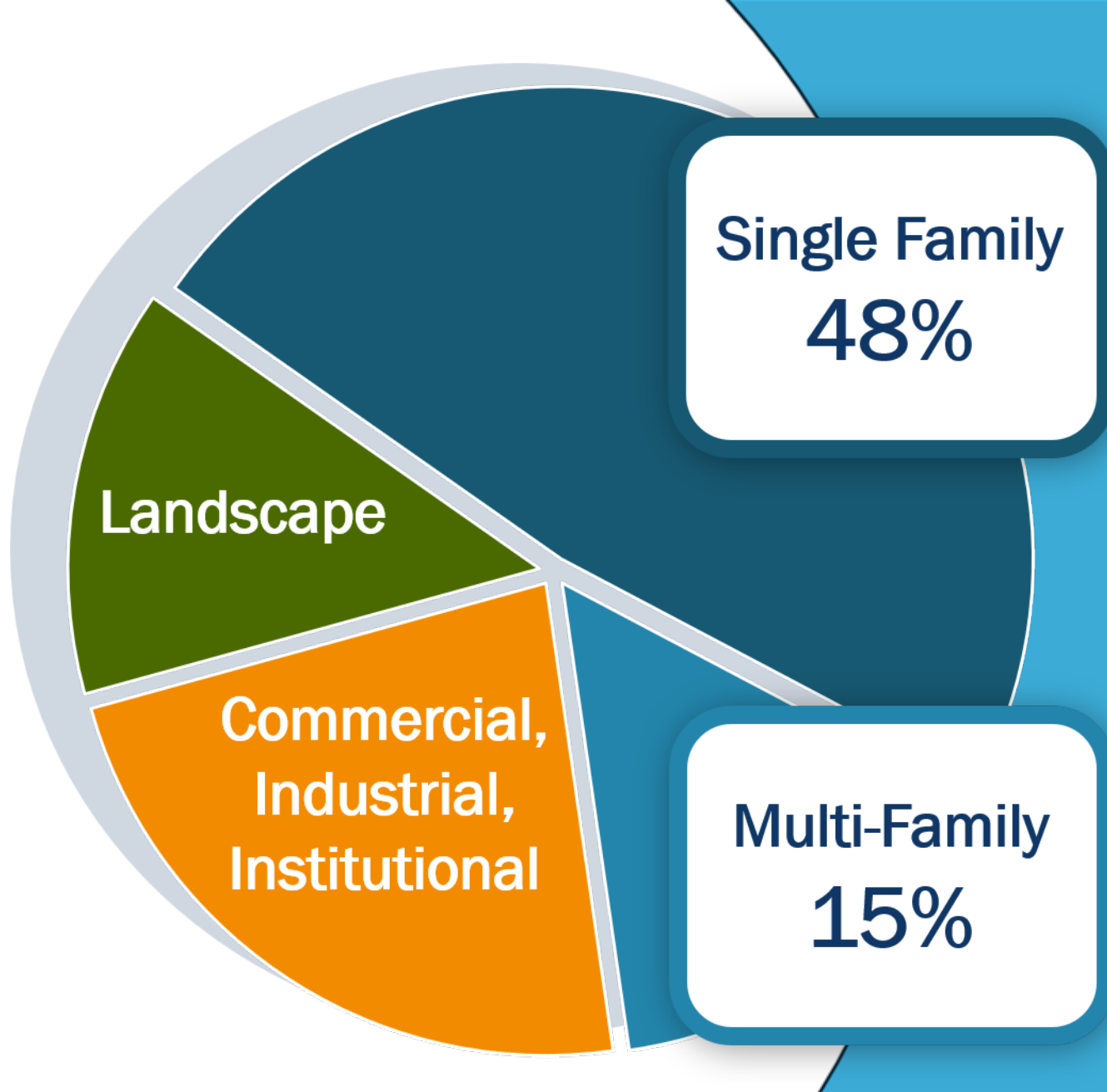
Population and Residential Water Use in Gallons Per Capita Per Day (GPCD)





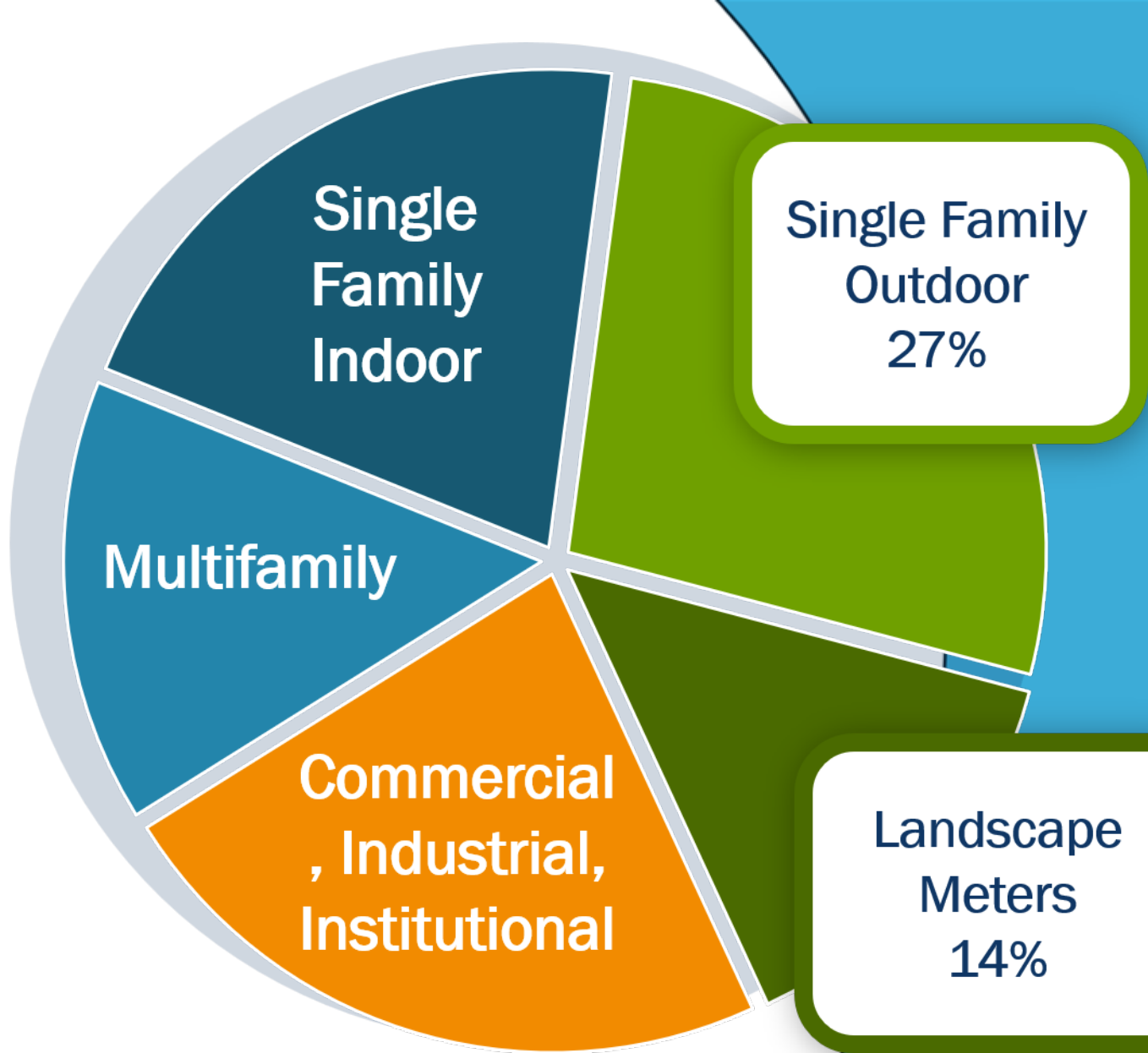
Total Drinking Water Deliveries





Total
Residential
Usage
63%





Total
Outdoor
Usage
41%



What's Changing on the Colorado River



A Bad Climate

- Lowest flow conditions in over 1,200 years.
- Major reservoirs are at low levels.
- Bureau of Reclamation declared shortage in 2022, 2023, 2024, and 2025.



A Bad Climate at a Bad Time

- Rules determining who loses water in shortage expire at the end of this year.
- Federal government has taken unilateral action to implement cuts.
- Cuts to Arizona in 2027-28 are anticipated to be approx. 50% of CAP Canal.





How does the Drought Management Plan fit in



DROUGHT MANAGEMENT PLAN

Water Use Reduction Measures

1

STAGE 1 - WATER ALERT

Insufficient Supply situation appears likely

Declared in June 2022

	Customer Outreach	City Actions	Voluntary Reductions	Audit - Consultation	Rebates (Incentives)	Efficiency Standards	Surcharges	Mandatory Rationing	Moratorium on Growth
Stage 1 – Water Alert	✓	✓							



DROUGHT MANAGEMENT PLAN

Water Use Reduction Measures

2

STAGE 2 - WATER WARNING

Insufficient Supply situation occurs

Possible Late 2026

	Customer Outreach	City Actions	Voluntary Reductions	Audit - Consultation	Rebates (Incentives)	Efficiency Standards	Surcharges	Mandatory Rationing	Moratorium on Growth
Stage 1 – Water Alert	✓	✓							
Stage 2 – Water Warning	✓	✓	✓	✓	✓	✓	✓		



DROUGHT MANAGEMENT PLAN

Water Use Reduction Measures

3

STAGE 3 – *Water Emergency*

Additional Restrictions in Water Supplies

	Customer Outreach	City Actions	Voluntary Reductions	Audit - Consultation	Rebates (Incentives)	Efficiency Standards	Surcharges	Mandatory Rationing	Moratorium on Growth
Stage 1 – Water Alert	✓	✓							
Stage 2 – Water Warning	✓	✓	✓	✓	✓	✓	✓		
Stage 3 – Water Emergency	✓	✓	✓	✓	✓	✓	✓	✓	



DROUGHT MANAGEMENT PLAN

Water Use Reduction Measures

4

STAGE 4 – *Water Crisis*

Additional Measures to Protect Health and Safety

	Customer Outreach	City Actions	Voluntary Reductions	Audit - Consultation	Rebates (Incentives)	Efficiency Standards	Surcharges	Mandatory Rationing	Moratorium on Growth
Stage 1 – Water Alert	✓	✓							
Stage 2 – Water Warning	✓	✓	✓	✓	✓	✓	✓		
Stage 3 – Water Emergency	✓	✓	✓	✓	✓	✓	✓	✓	
Stage 4 – Water Crisis	✓	✓	✓	✓	✓	✓	✓	✓	✓

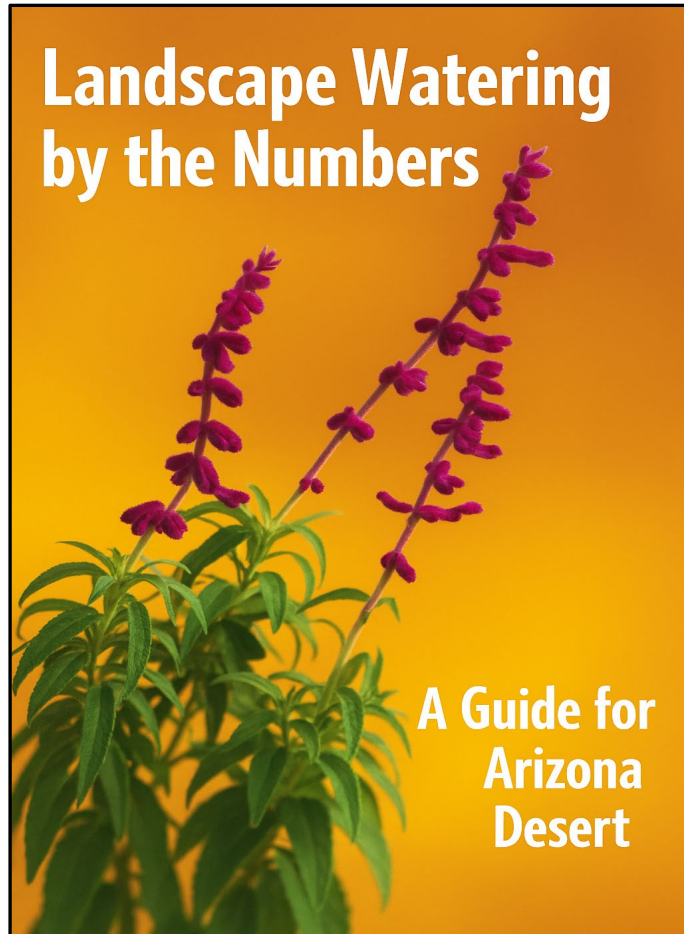




What Steps Has Phoenix Taken to Prepare for Drought



GUIDES & CONSULTATIONS



[Phoenix.gov/water](https://phoenix.gov/water)



Conservation
@phoenix.gov



INCENTIVE PROGRAMS



TOILET

\$75

$\geq$ 3 gallon per
flush or greater



SMI

\$75

Replace old non-
WaterSense
Controller



TURF

Residential

\$2/SF & min 250-SF

Non-Residential

\$2/SF NTE \$250,000
per project

Email for More Information: conservation@phoenix.gov



ACQUIRED WATER RESOURCES

H
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H
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E



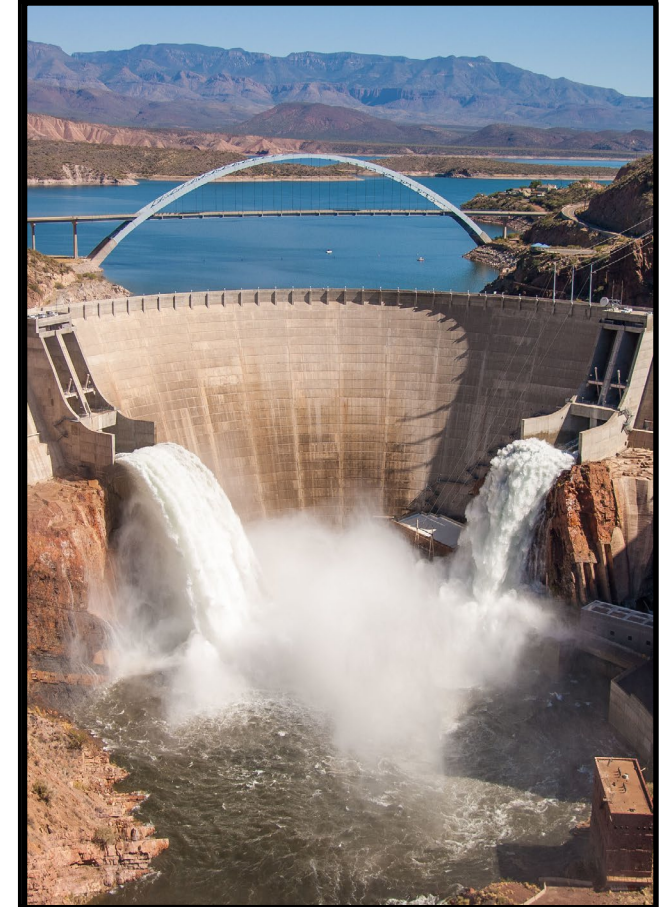
1949 | 77,295 AF

C
A
P



1993 | 194,357 AF

R
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1996 | 136,250 AF



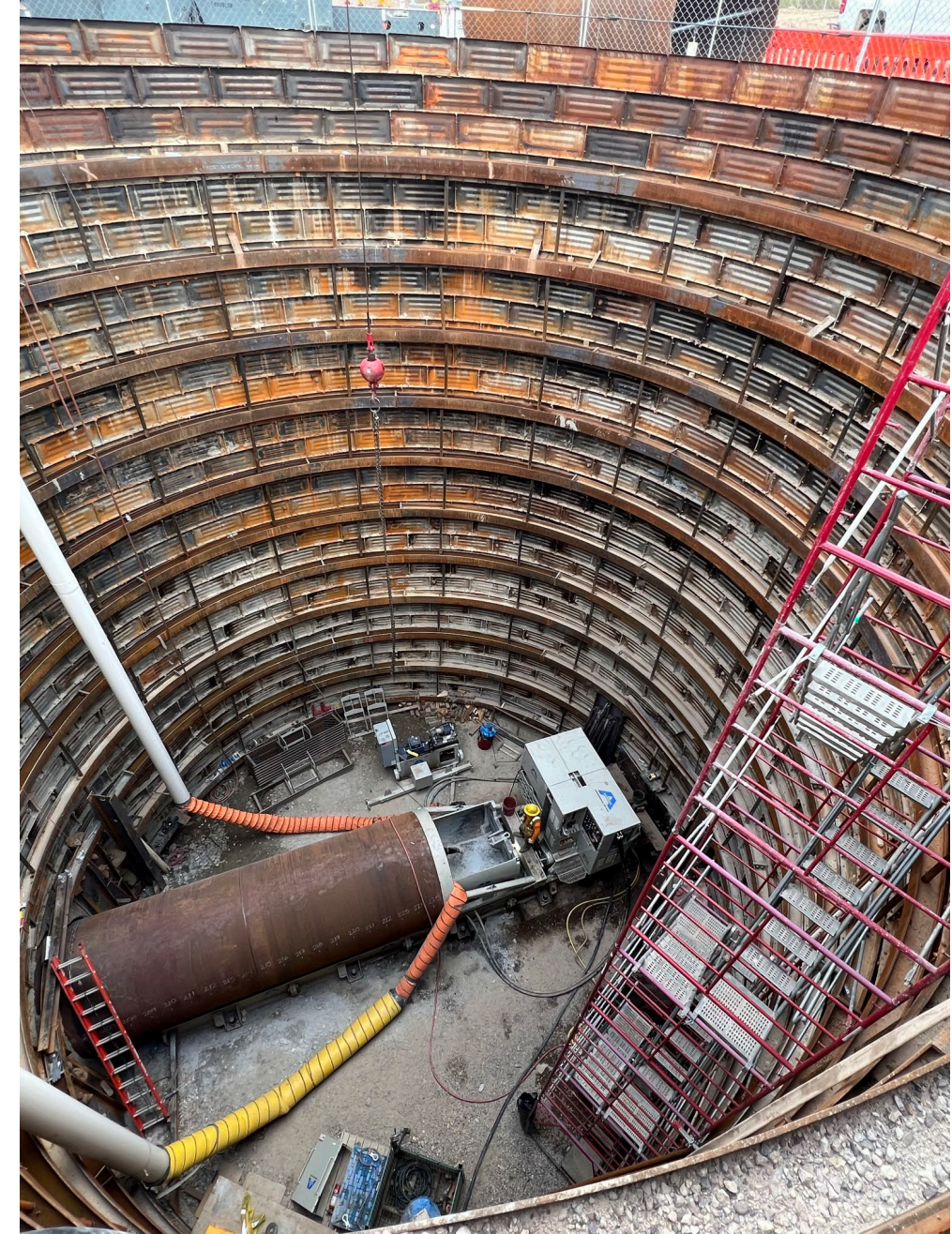
PHOENIX STORED WATER UNDERGROUND FOR TIMES OF FUTURE NEED

- Stored more than 400,000 acre-feet of water in the Phoenix area.
- Developed an unprecedented program to store 275,000 acre-feet of water in the Tucson area.



PHOENIX BUILT INFRASTRUCTURE TO DEPLOY THESE SUPPLIES

- Drought Pipeline allows renewable surface water supplies to be served in areas that traditionally received CAP water.
- Significantly increased well capacity, especially in areas most vulnerable to CAP shortages.

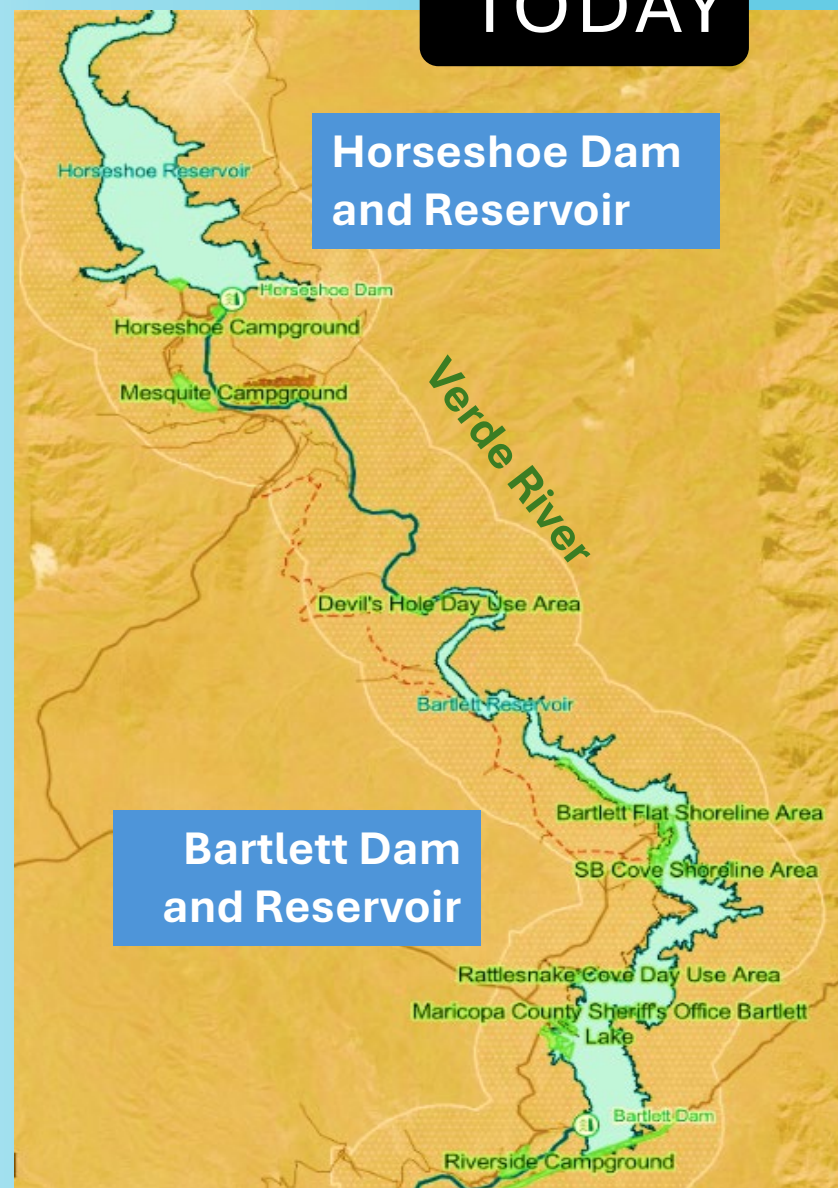


What are the next steps

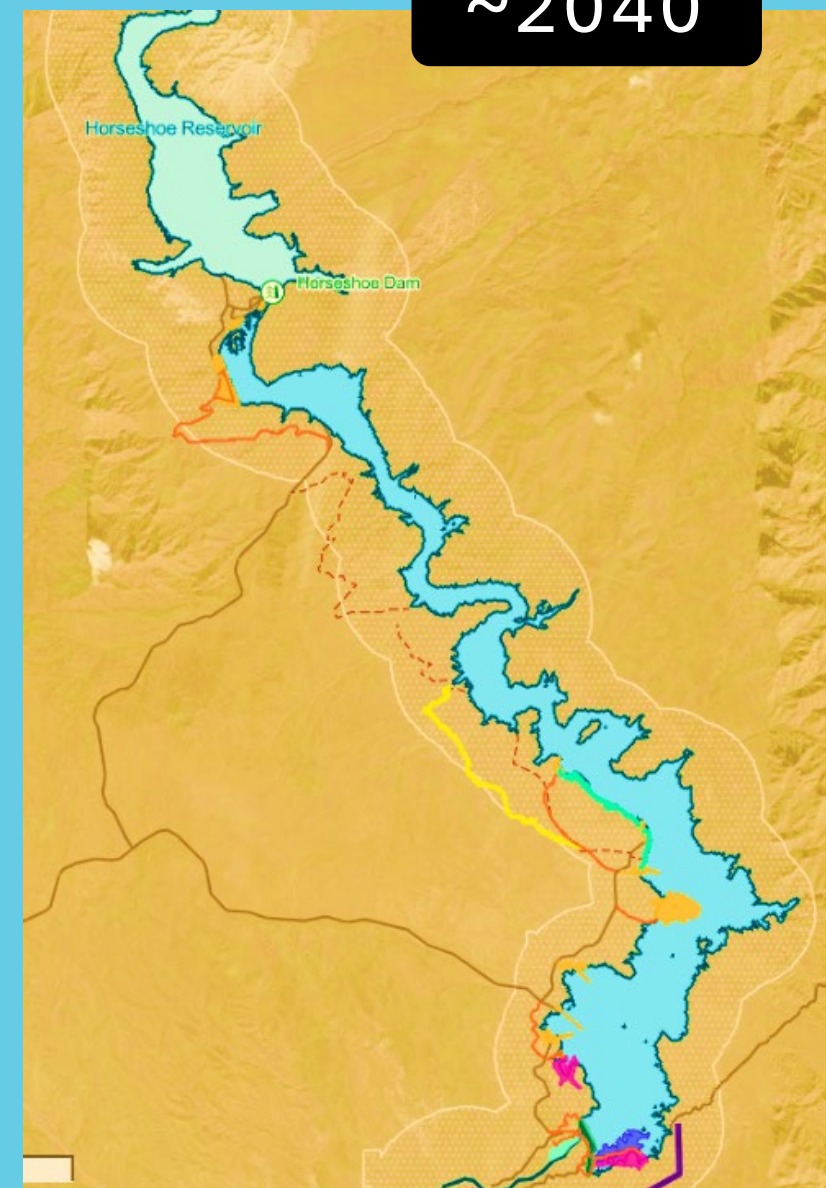


Bartlett Dam Expansion

TODAY



~2040



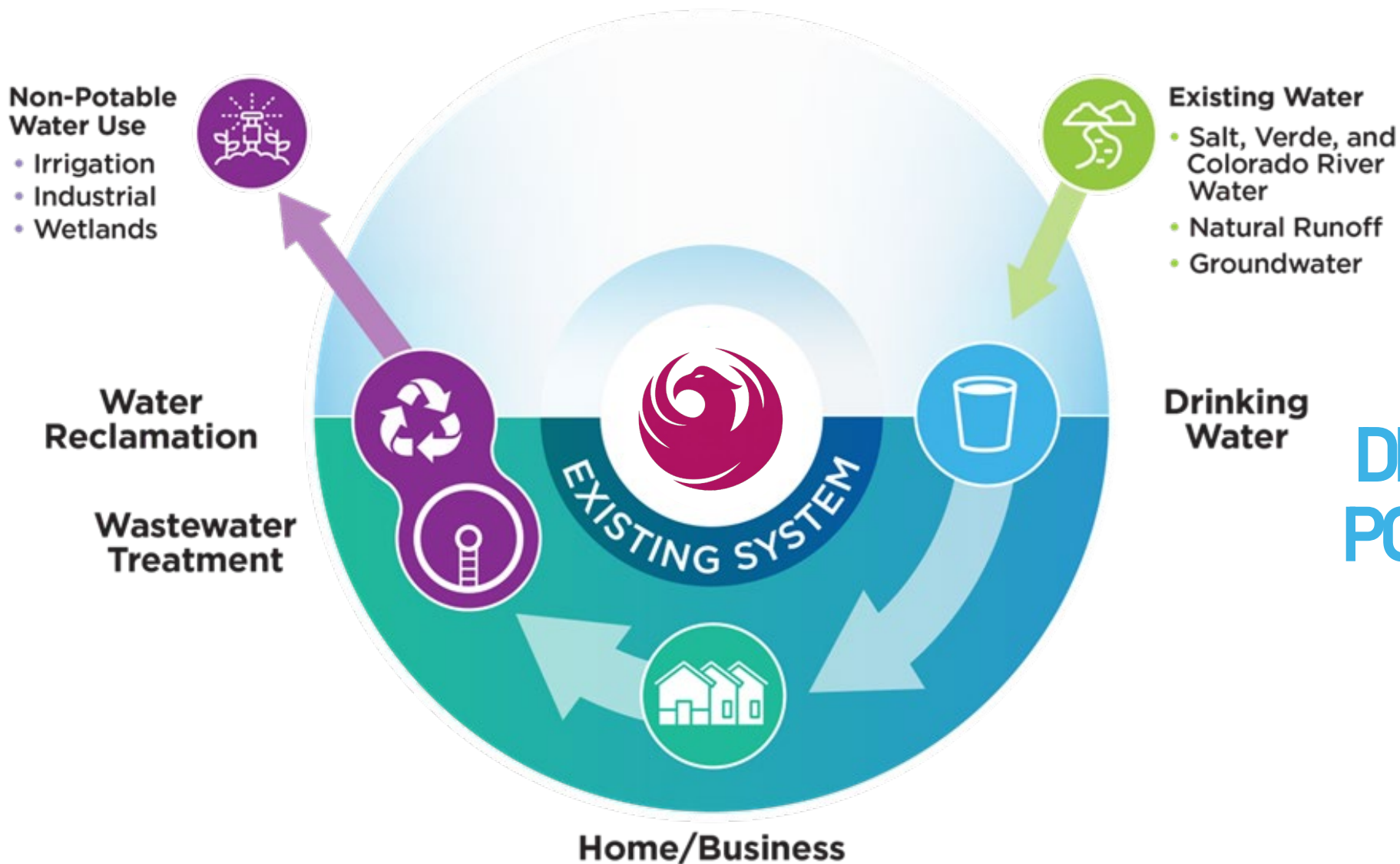


PURE WATER PHOENIX

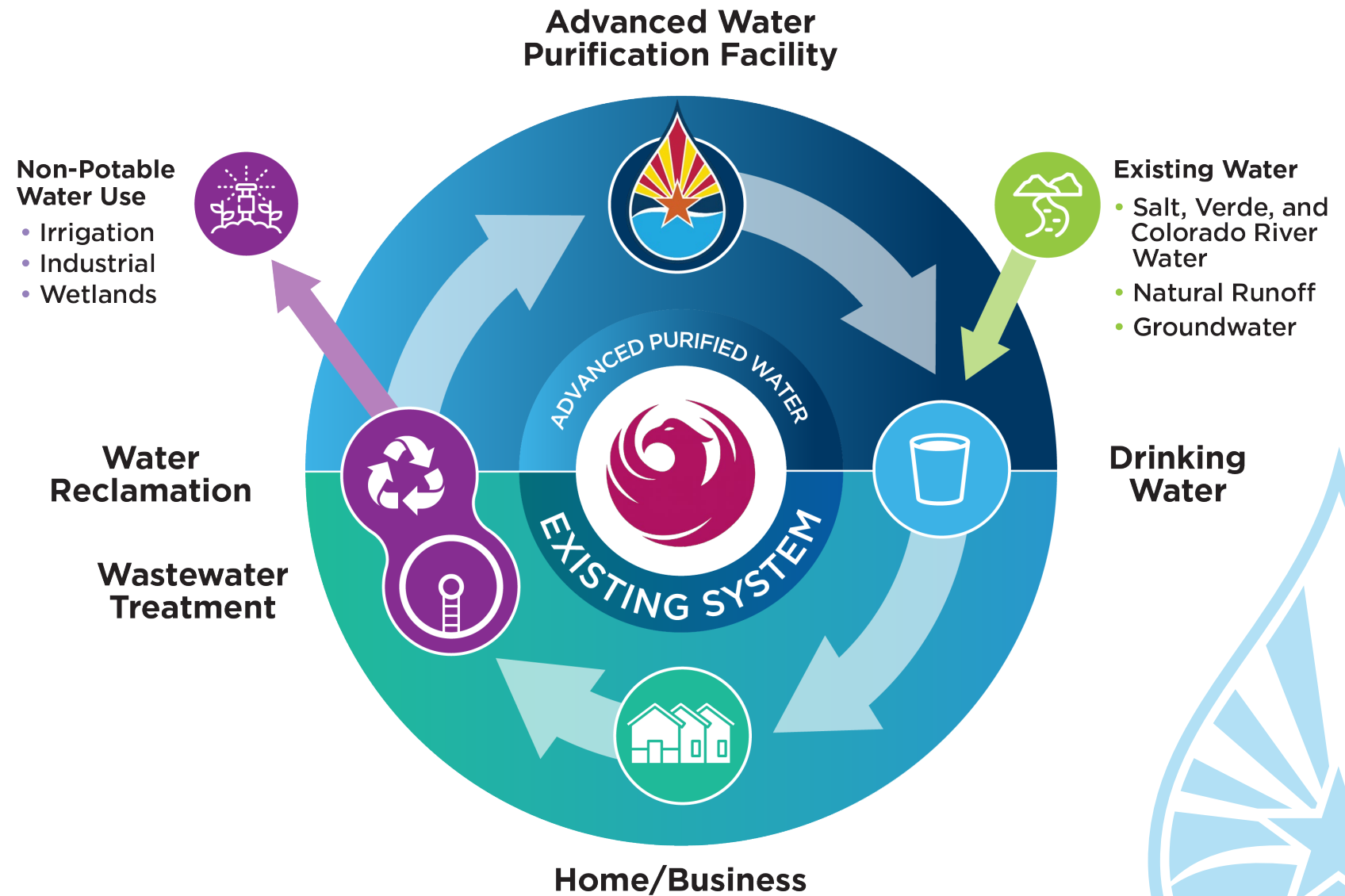


PHOENIX'S EXISTING REUSE SYSTEM

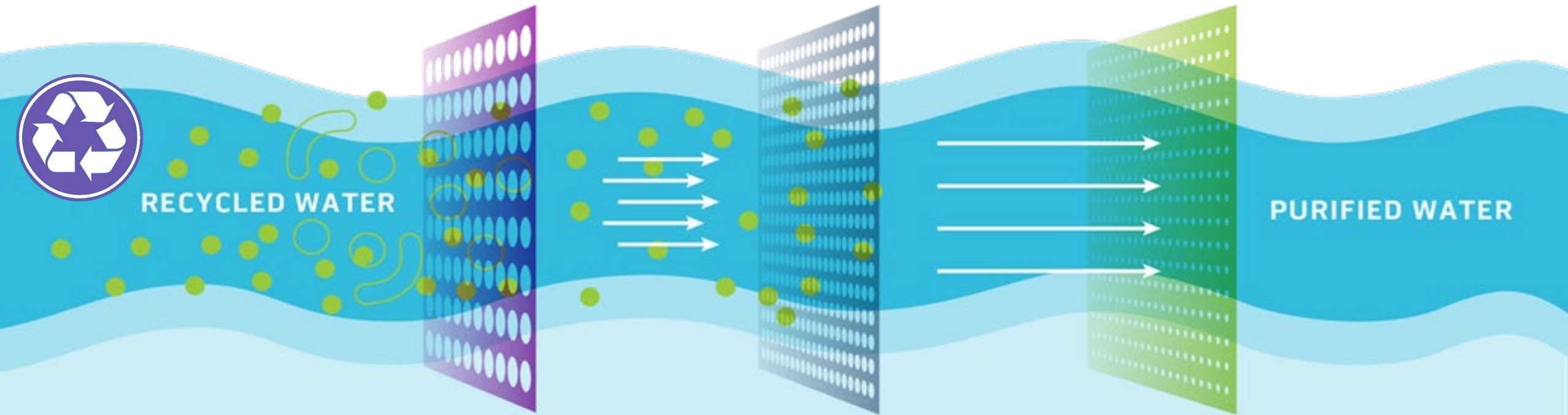
DELIVERS NON- POTABLE REUSE



ADVANCED WATER PURIFICATION COMPLETES THE WATER CYCLE



WHAT IS ADVANCED WATER PURIFICATION?



MULTI-STEP BARRIER
SYSTEM TO:

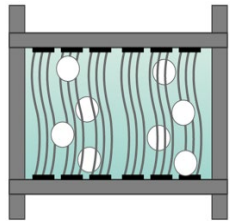
Remove pathogens
and organics in
the water

Remove chemicals
and byproducts
from the water

Reduce
water
salinity



ADVANCED WATER PURIFICATION TECHNOLOGIES



MEMBRANE
BIOREACTOR (MBR)

BIOLOGICAL & PHYSICAL PROCESS:

→ Micro-organisms breakdown organic matter and Ultra-filtration membrane barrier to physically remove constituents



VIRUS

PARASITES

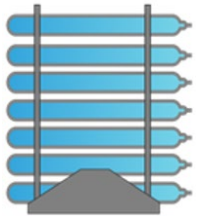
MICO/NANO
PLASTICS

Highly Effective



PERSONAL CARE
PRODUCTS

Effective



REVERSE
OSMOSIS (RO)

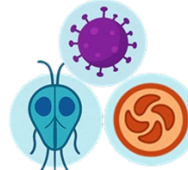
OSMOSIS & PHYSICAL PROCESS:

→ Semi-permeable membrane barrier designed to allow water to diffuse through the membrane, while rejecting dissolved chemicals and pathogens



Na

Cl



MICO/NANO
PLASTICS



PFAS
CHEMICALS



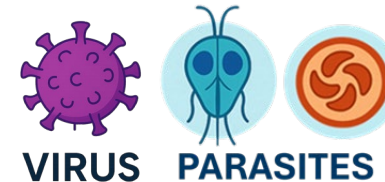
Highly Effective



UV AOP

CHEMICAL PROCESS:

→ Combines water, chlorine, and ultraviolet light to create a powerful chemical oxidant that inactivates pathogens and breaks apart chemicals



VIRUS

PARASITES

Highly Effective



PERSONAL CARE
PRODUCTS

Effective



CAVE CREEK ROAD ADVANCED WATER PURIFICATION FACILITY

2020 – 2027
Design and Construction

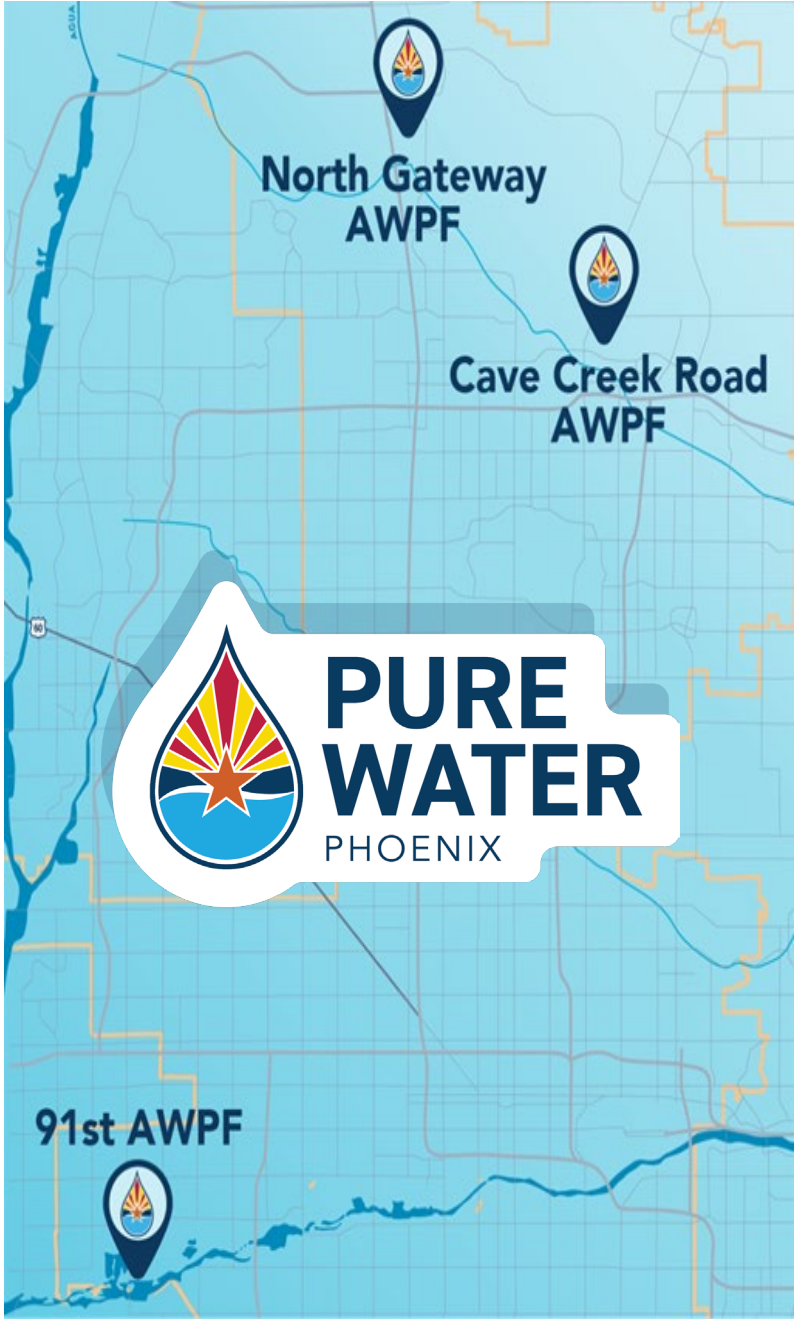
2028
Full-scale Pilot Testing

2029
Direct use



8-MGD

30,000



CAVE CREEK RD ADVANCED WATER PURIFICATION FACILITY



2020 – 2027	2028	2029
Design and Construction	Full-scale Pilot Testing	Direct use

8-MGD

30,000
Homes

NORTH GATEWAY AWPf



2026 – 2031	2032	2033
Design and Construction	Full-scale Pilot Testing	Direct use

8-MGD

30,000
Homes

91ST AVENUE AWPf

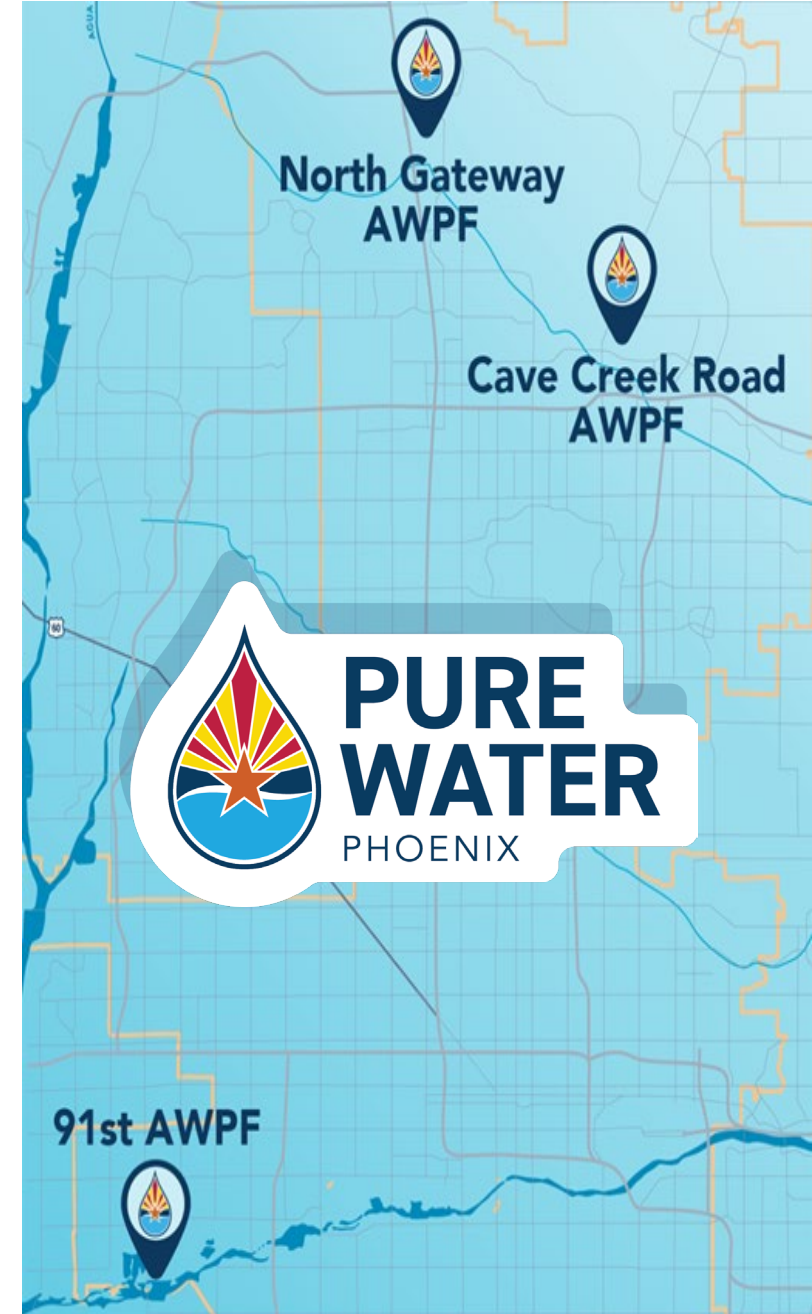


2028 – 2033	2034	2035
Design and Construction	Full-scale Pilot Testing	Direct use



50-80
MGD

190,000 –
300,000
Homes



LEARN MORE



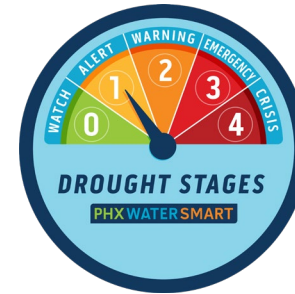
watersmart@phoenix.gov



conservation@phoenix.gov



PURE WATER
PHOENIX
phoenix.gov/purewater



phoenix.gov/waterfuture



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