WATEREUSE 2026 SYMPOSIUM
In Partnership with The Water Research Foundation

GLOBAL MAPS OF POTABLE REUSE - NEW ENTRIES, NEW DATA!

LOS ANGELES
MARCH 8-11

DANIELLE FRANCIS

WATER SERVICES ASSOCIATION OF AUSTRALIA

TUES 10 MARCH 2026

danielle.francis@wsaa.asn.au

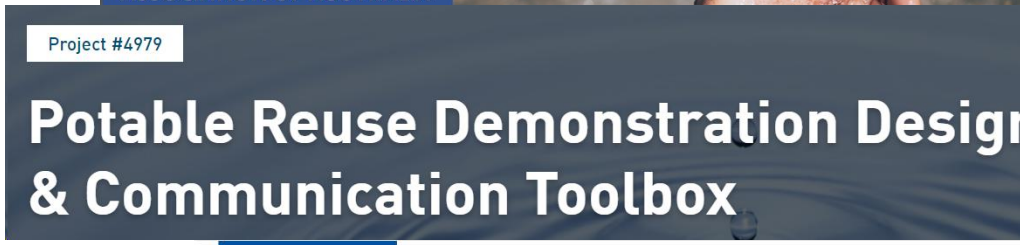
Water Services Association of Australia

Peak body for the Australian/ New Zealand water sector

Like AWWA / WEF

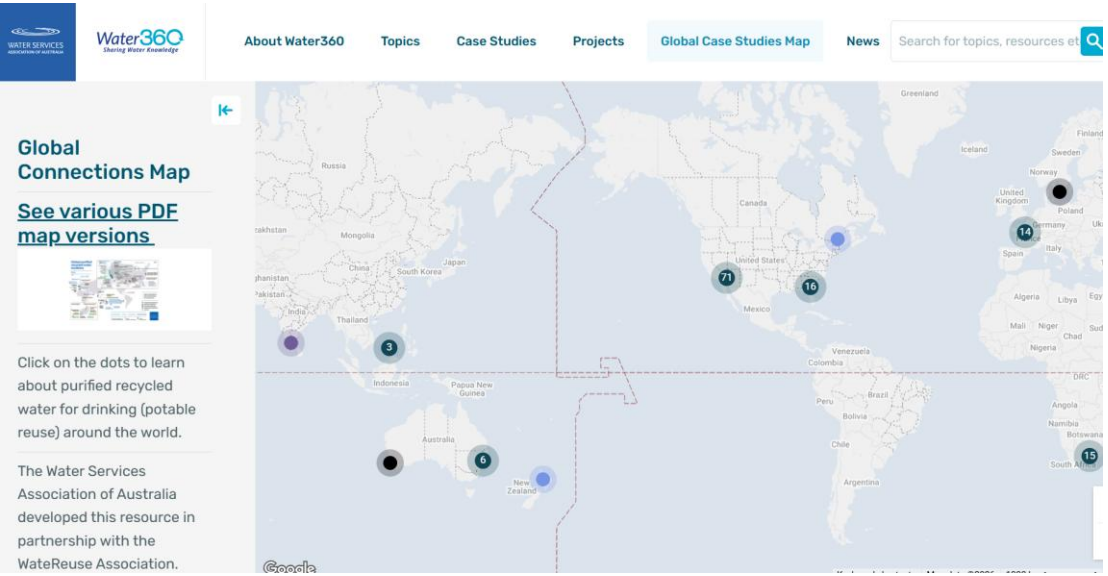
- Advocacy
- Collaboration
- Learning

- Purified recycled water maps & education resources: www.water360.com.au
- PRW Toolkit: www.water360.com.au



Maps went live in 2024, 3 formats:

Table format

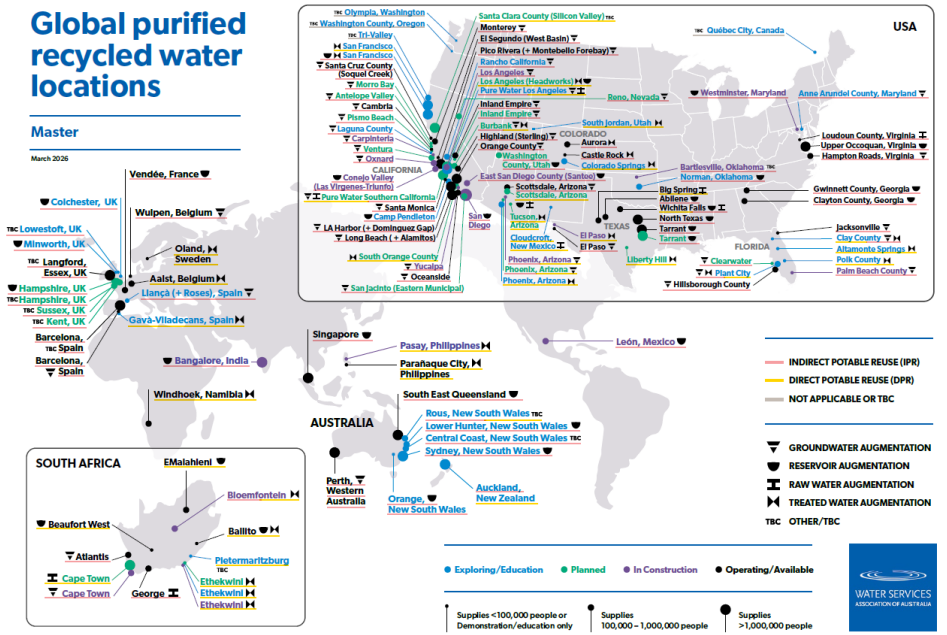


Interactive format

#	Location	State	Country	Region	Stage	Augmentation type	People supplied	IPR/DPR	Start decade	Treatment train simple descriptor
7	Auckland	North Island	New Zealand	Australia/NZ	Exploring/ Education	Other/TBC	>1m	IPR+DPR	2040s/Unknown	Pilot only: UF-RO-AOP-GAC-Cl_2
8	Aurora	Colorado	USA	North/Latin America	Operating/ Available	Treated	100k-1m	IPR	2010s	
9	Ballito	KwaZulu-Natal	South Africa	Africa	Operating/ Available	Reservoir Treated	<100k	DPR	2010s	DPR – MMF – UF – RO – UV – Cl_2 (Pre/Post) – Blend
10	Bangalore	Karnataka	India	Asia	In Construction	Reservoir	>1m	IPR	2020s	
11	Barcelona (Llobregat river augmentation)	Catalonia	Spain	Europe	Operating/ Available	Other/TBC	>1m	IPR	2020s	MF-UV-Cl2 → river replenishment → WTP
12	Barcelona (Seawater intrusion barrier)	Catalonia	Spain	Europe	Operating/ Available	Groundwater	<100k	IPR	2020s	MF-UV-UF/RO → GW recharge (wells) → WTP
13	Bartlesville	Oklahoma	USA	North/Latin America	In Construction	Other/TBC	<100k	IPR	2030s	UV/AOP to River (surface water augmentation) to WTP
14	Beaufort West	Western Cape Province	South Africa	Africa	Operating/ Available	Reservoir	<100k	DPR	2010s	Cl_2 → Sed → MF → UF → RO → UV/AOP → Cl_2
15	Big Spring	Te								
16	Bloemfontein/ Mangaung	Fre Pro								
17	Burbank	Ca								→Cl_2

2026 is their 3rd iteration

Still format

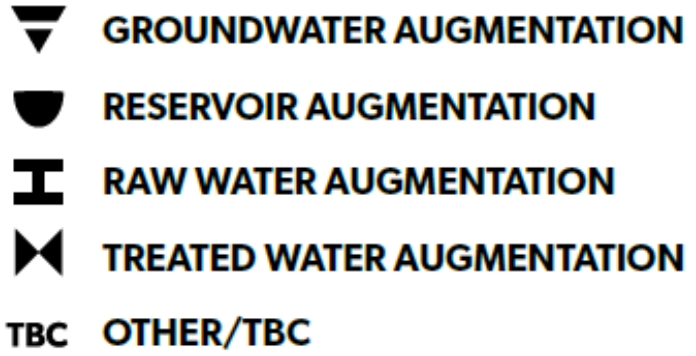


Aim to show global extent of potable reuse

- Many communities rely on purified recycled water
- Gained acceptance to put it in drinking water supply
- It's established, widely practised and proven globally

Maps cover:

- Purified recycled water ('potable reuse') only
  - IPR & DPR – WHO definitions
- The whole journey (4 stages):
  - Exploring/education
  - Planned
  - In construction
  - Operating/available
- 5 Augmentation types:



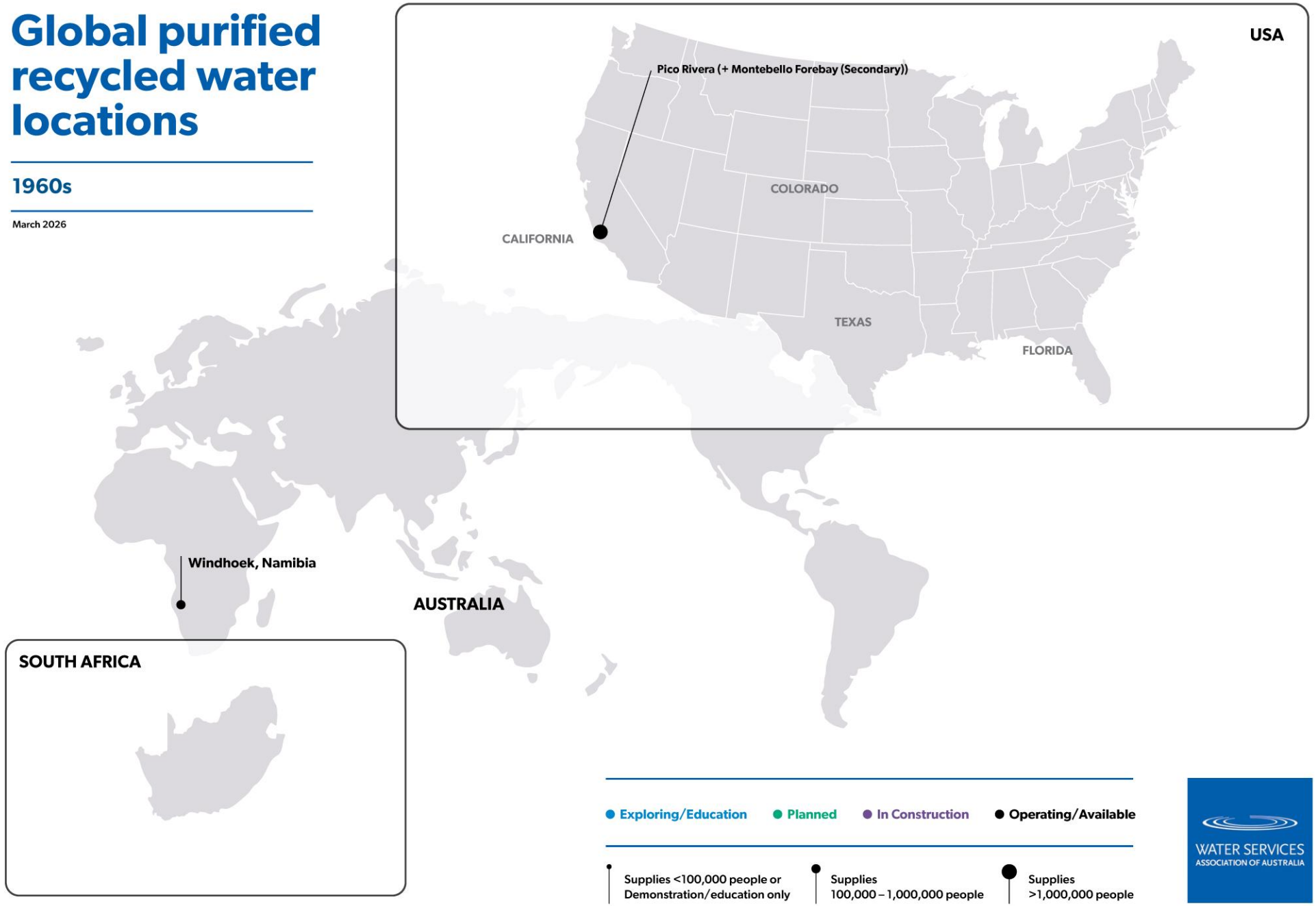
What the maps are / aren't:

- Intent: Show communities that are drinking the water, now or in future
  - Not a map of every single potable reuse projects/assets
- Eg: If 3 projects/assets work together to serve one community:
  - Usually 1 dot (not 3)
  - May count as several if quite different:
  - E.g. Cape Town (3 dots):
    - Atlantis – 1970s groundwater / storm
    - Cape Flats – 2030s groundwater
    - Faure – 2030s DPR
  - E.g. Singapore:
    - 5 plants under NEWater program – 1 dot
  - E.g. Pico Rivera + Montebello Forebay – 1 dot
- Also lists place name (over project)
  - E.g. Conejo Valley (Las Virgenes)

Global purified recycled water locations

1960s

March 2026



● Exploring/Education ● Planned ● In Construction ● Operating/Available

Supplies <100,000 people or Demonstration/education only

Supplies 100,000 – 1,000,000 people

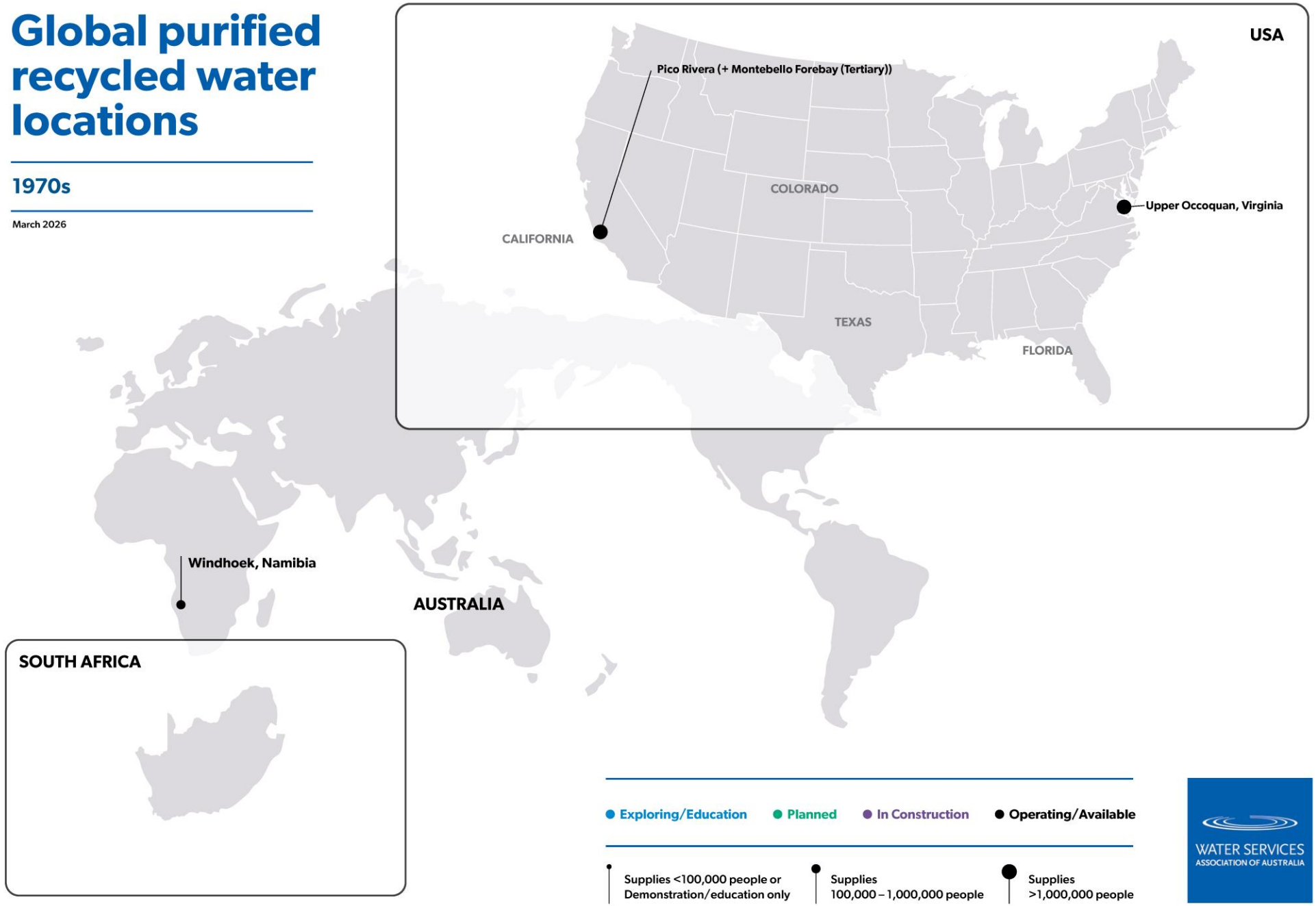
Supplies >1,000,000 people

WATER SERVICES ASSOCIATION OF AUSTRALIA

Global purified recycled water locations

1970s

March 2026



● Exploring/Education ● Planned ● In Construction ● Operating/Available

Supplies <100,000 people or Demonstration/education only

Supplies 100,000 – 1,000,000 people

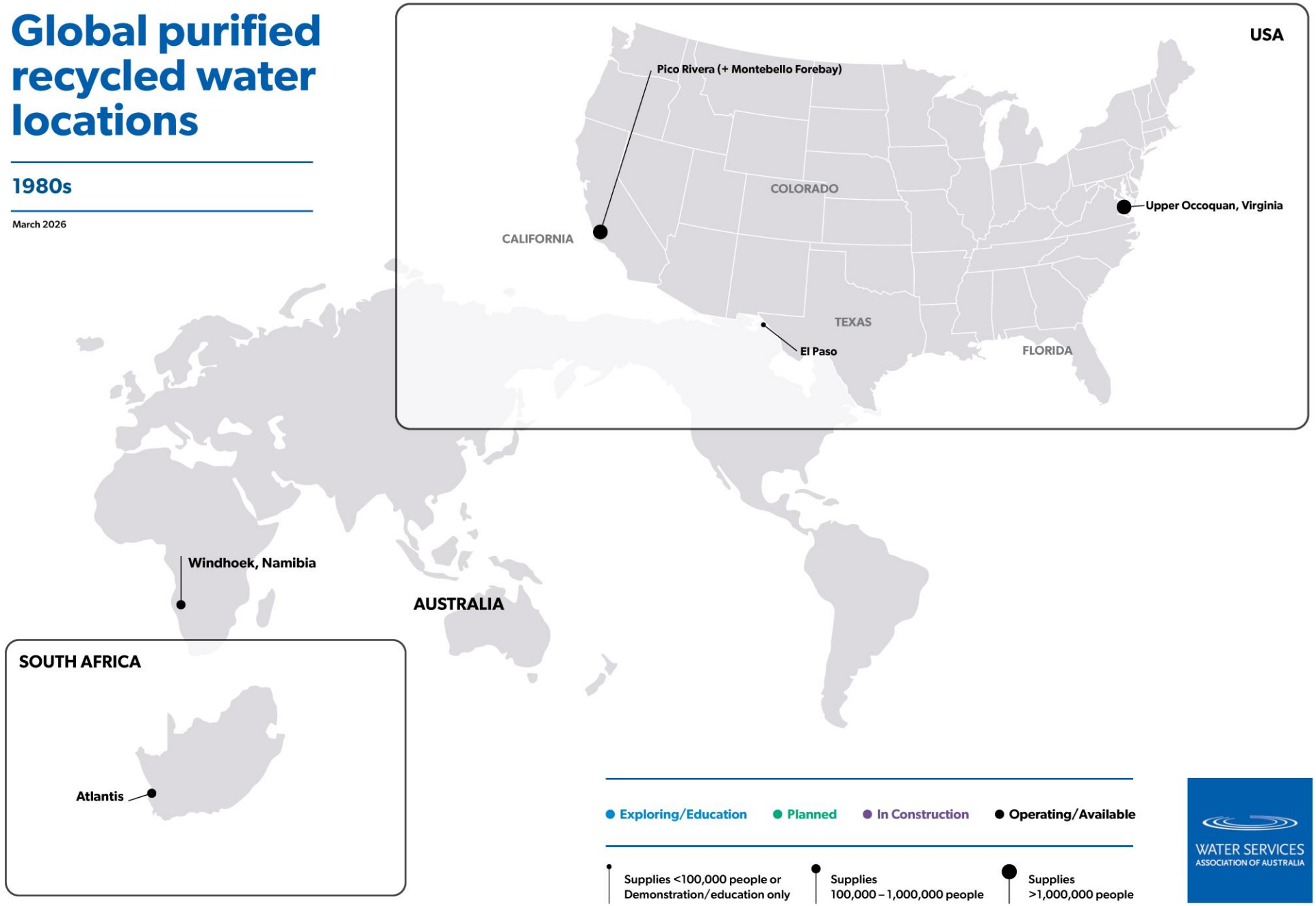
Supplies >1,000,000 people

WATER SERVICES ASSOCIATION OF AUSTRALIA

Global purified recycled water locations

1980s

March 2026



● Exploring/Education ● Planned ● In Construction ● Operating/Available

Supplies <100,000 people or Demonstration/education only

Supplies 100,000 – 1,000,000 people

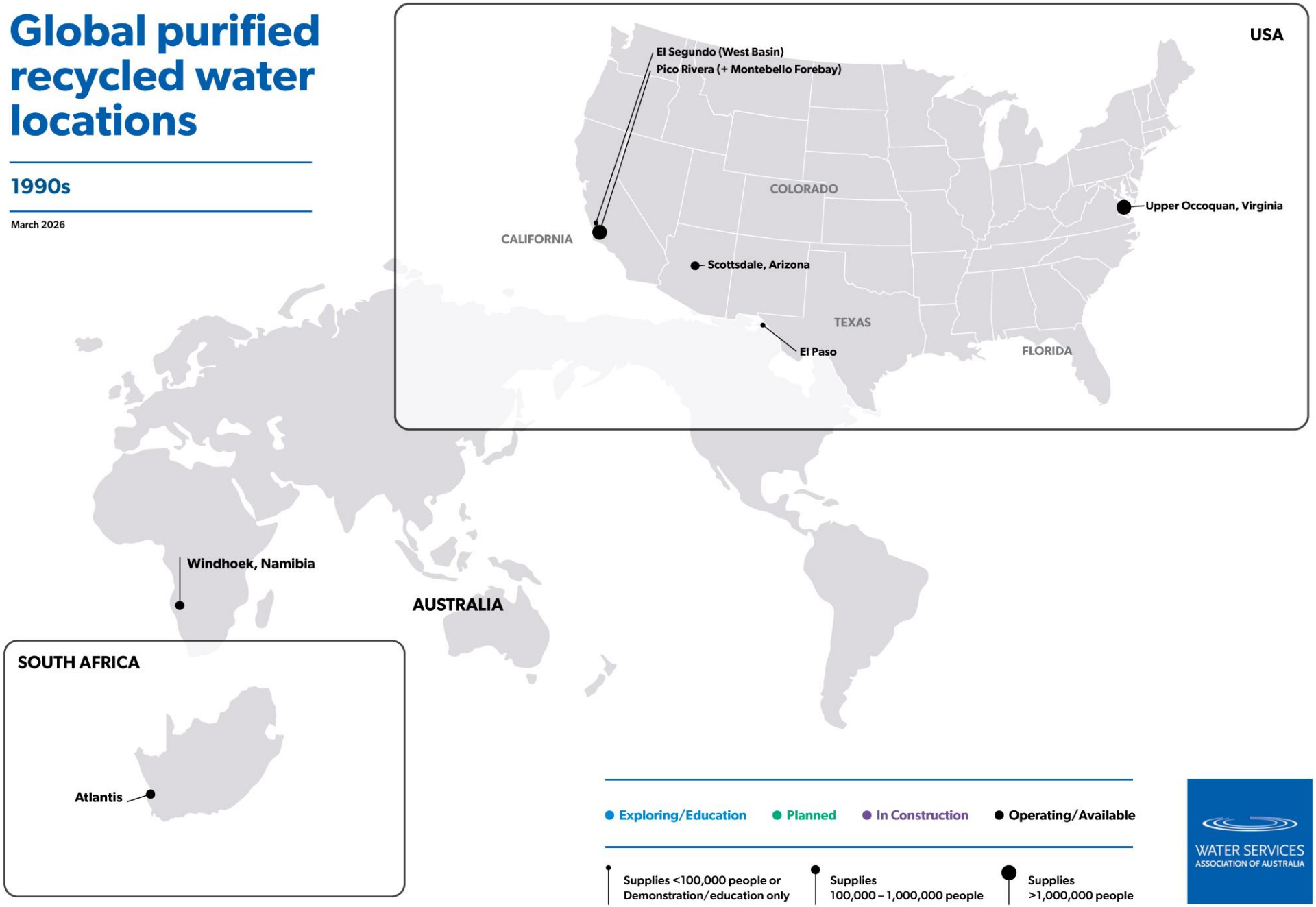
Supplies >1,000,000 people

WATER SERVICES ASSOCIATION OF AUSTRALIA

Global purified recycled water locations

1990s

March 2026



● Exploring/Education ● Planned ● In Construction ● Operating/Available

Supplies <100,000 people or Demonstration/education only

Supplies 100,000 – 1,000,000 people

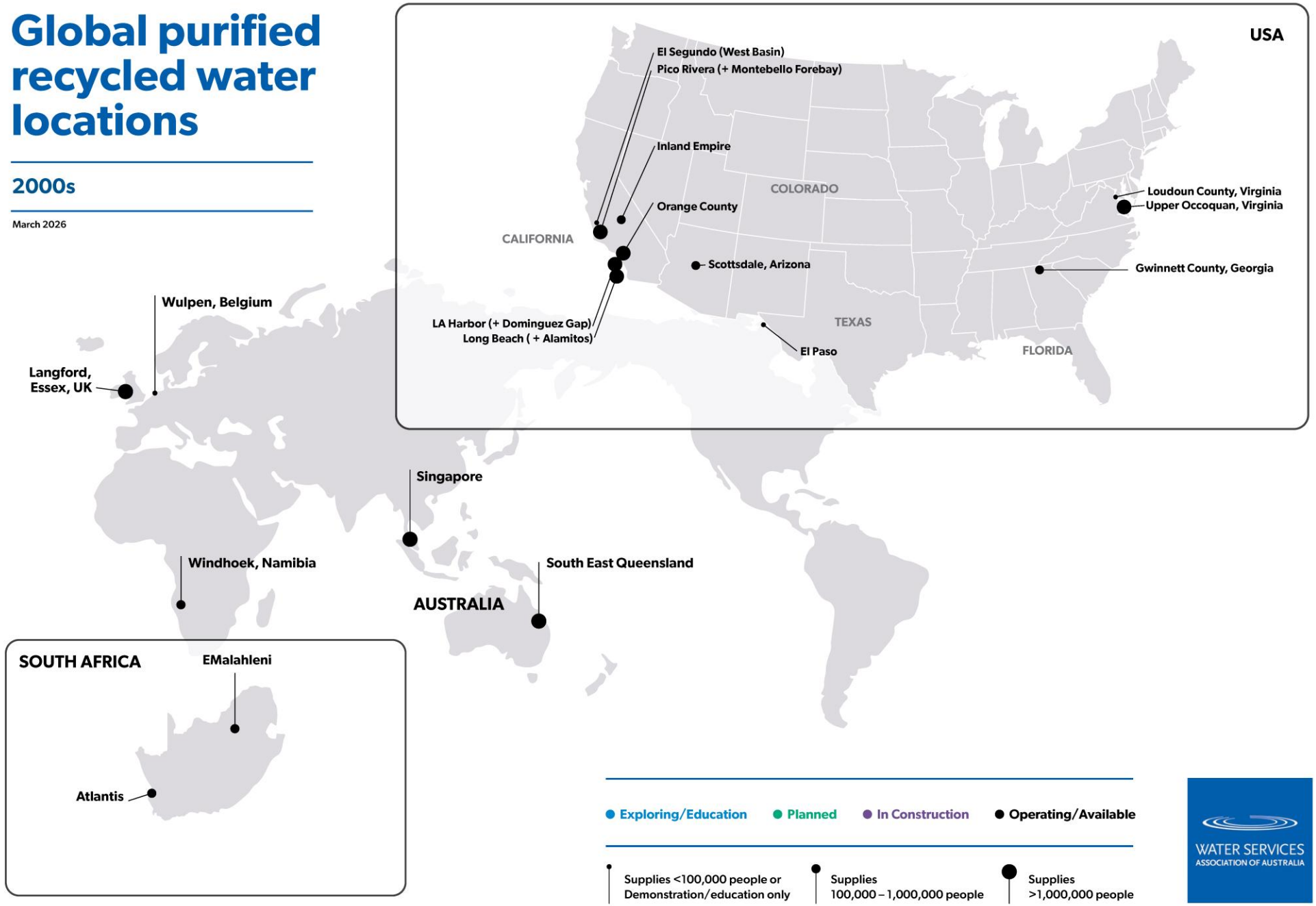
Supplies >1,000,000 people

WATER SERVICES ASSOCIATION OF AUSTRALIA

Global purified recycled water locations

2000s

March 2026



● Exploring/Education ● Planned ● In Construction ● Operating/Available

Supplies <100,000 people or Demonstration/education only

Supplies 100,000 – 1,000,000 people

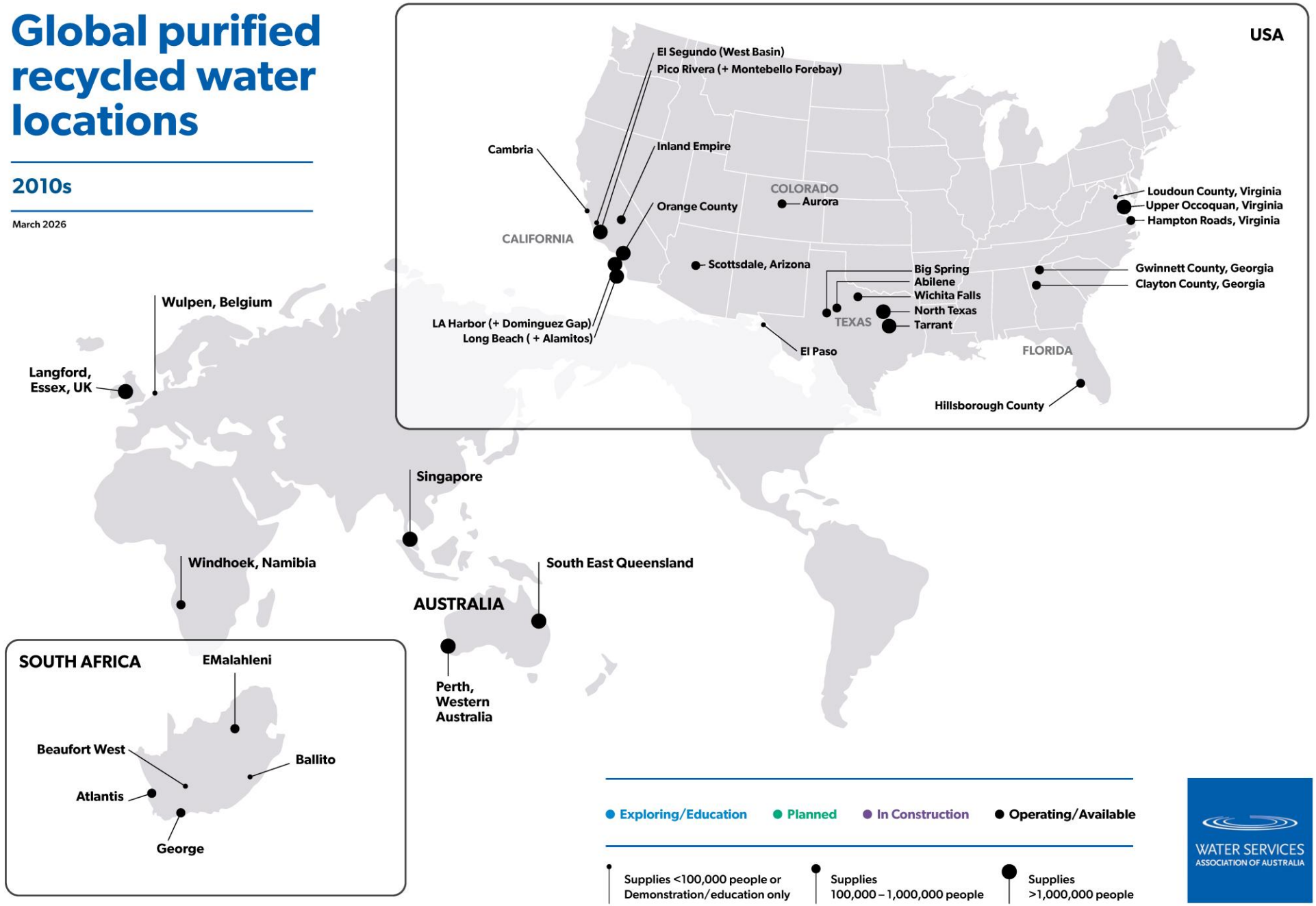
Supplies >1,000,000 people

WATER SERVICES ASSOCIATION OF AUSTRALIA

Global purified recycled water locations

2010s

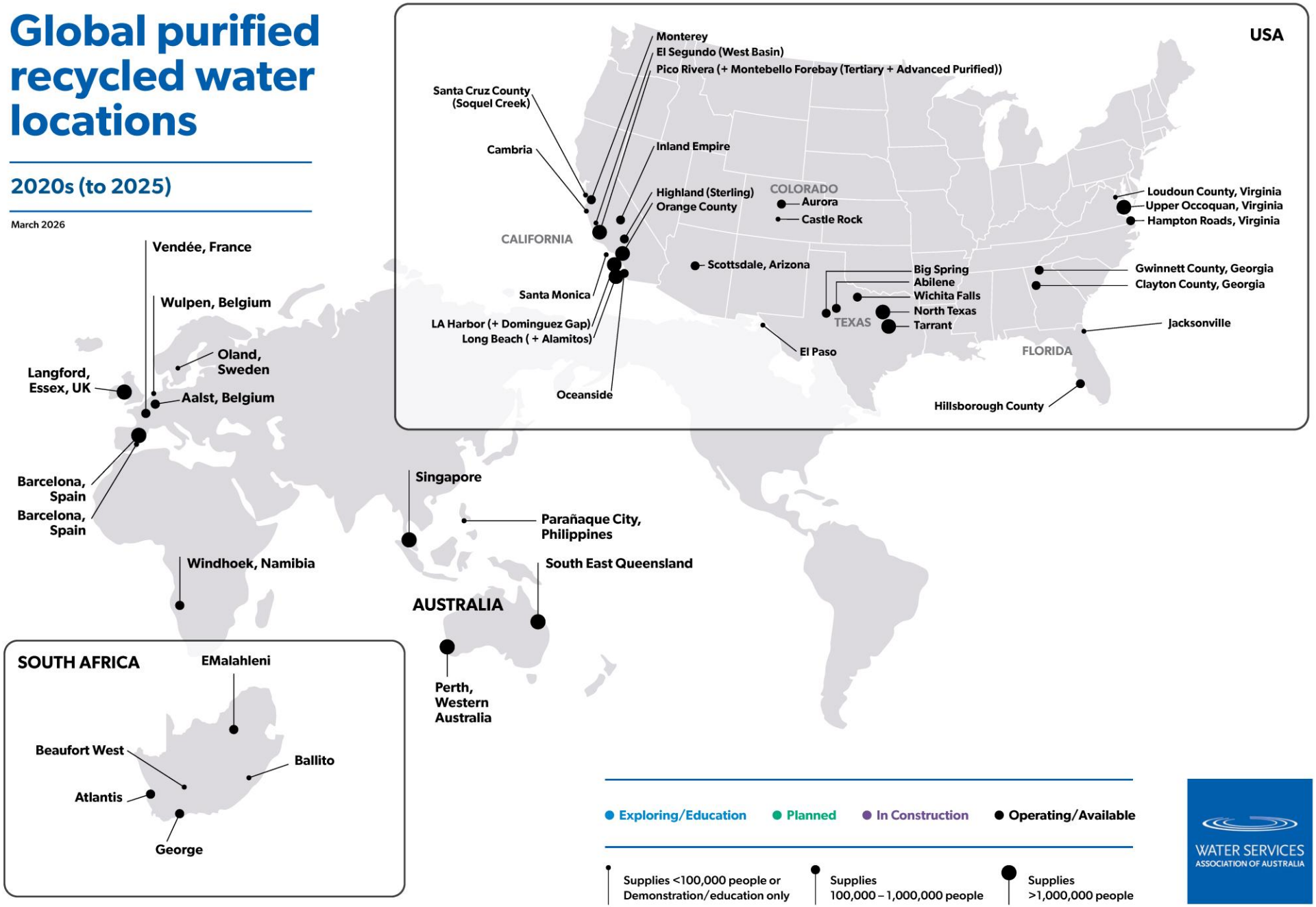
March 2026



Global purified recycled water locations

2020s (to 2025)

March 2026

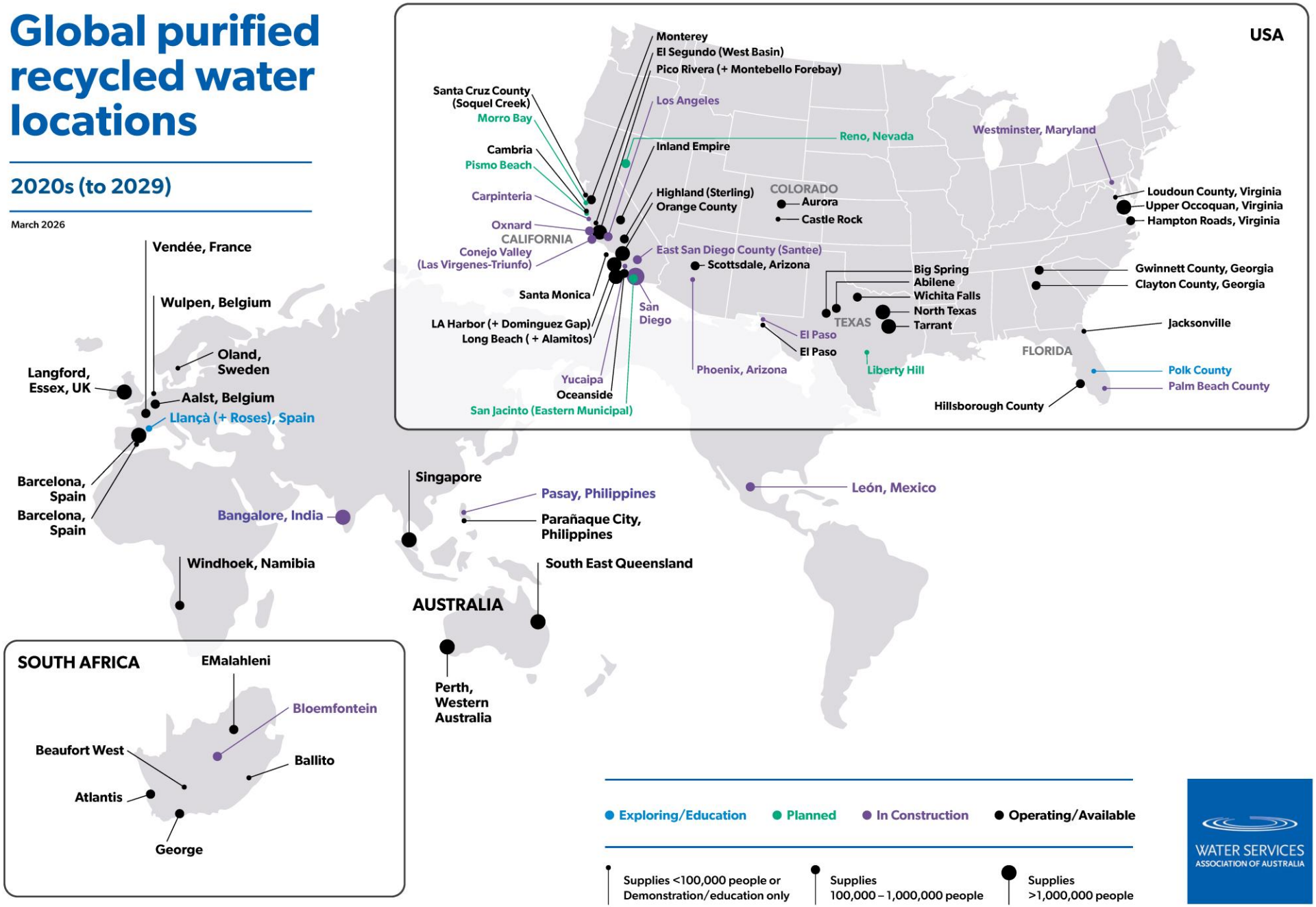


WATER SERVICES ASSOCIATION OF AUSTRALIA

Global purified recycled water locations

2020s (to 2029)

March 2026



● Exploring/Education ● Planned ● In Construction ● Operating/Available

Supplies <100,000 people or Demonstration/education only

Supplies 100,000 – 1,000,000 people

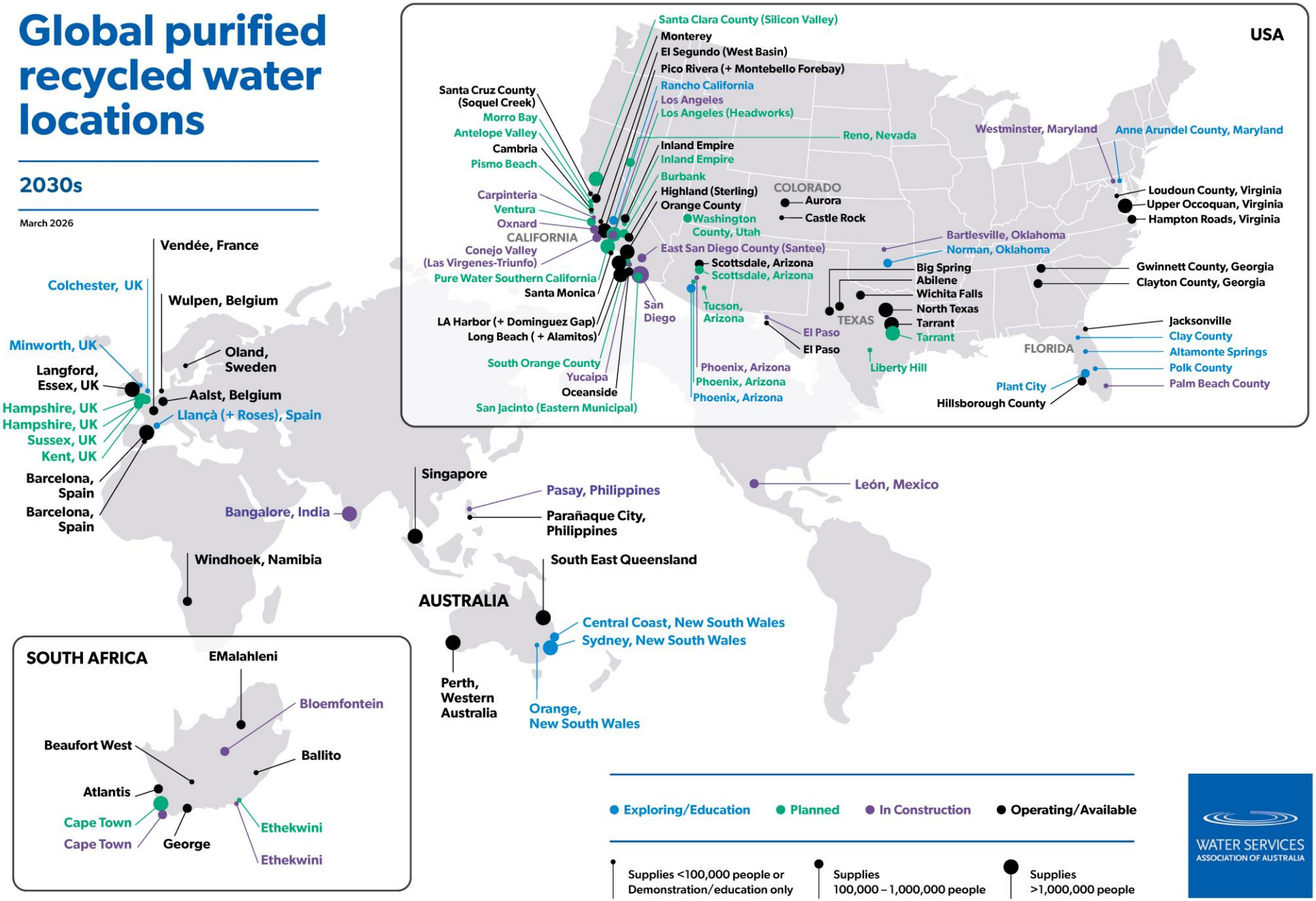
Supplies >1,000,000 people

WATER SERVICES ASSOCIATION OF AUSTRALIA

Global purified recycled water locations

2030s

March 2026



● Exploring/Education ● Planned ● In Construction ● Operating/Available

Supplies <100,000 people or Demonstration/education only

Supplies 100,000 – 1,000,000 people

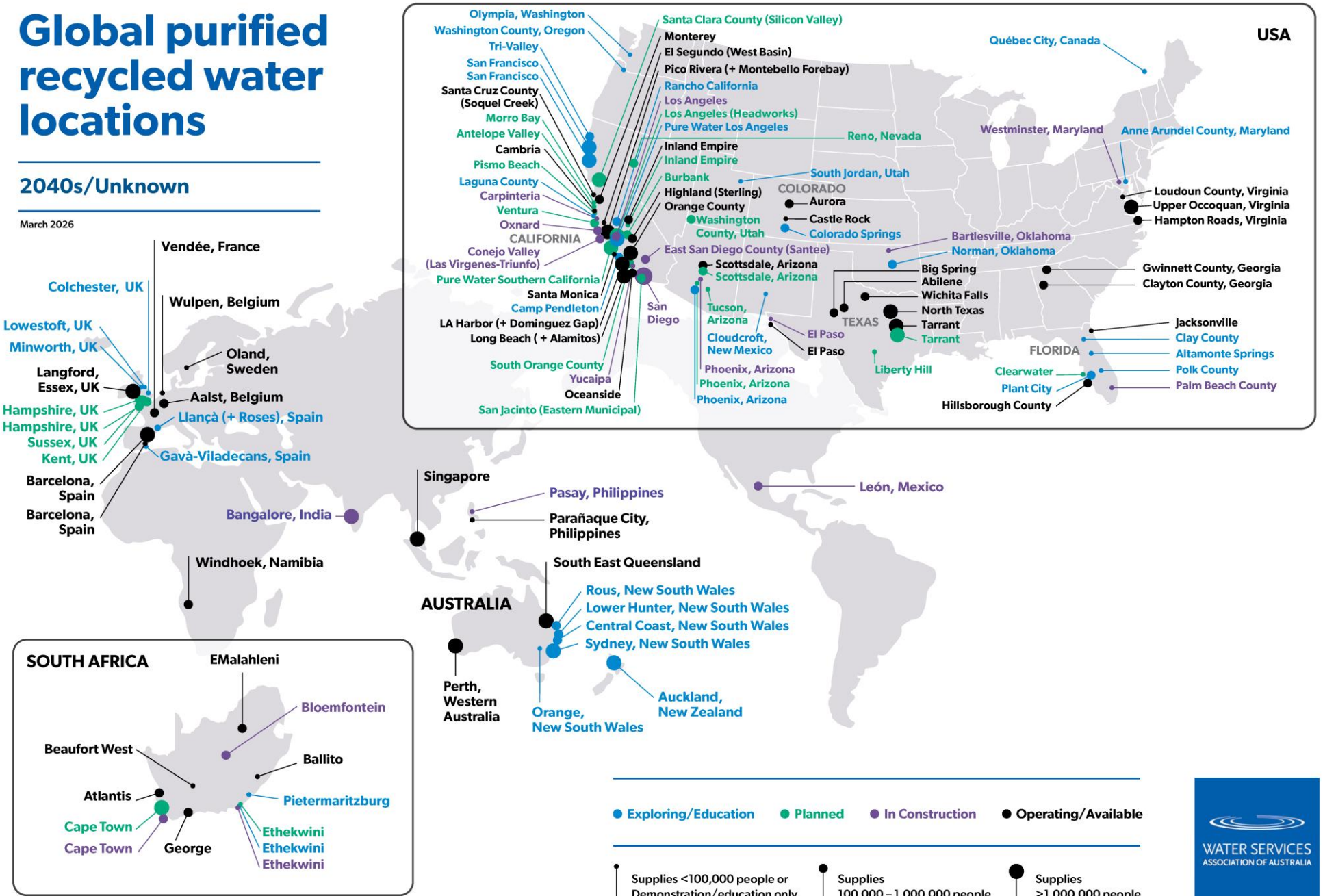
Supplies >1,000,000 people

WATER SERVICES ASSOCIATION OF AUSTRALIA

Global purified recycled water locations

2040s/Unknown

March 2026



● Exploring/Education ● Planned ● In Construction ● Operating/Available

Supplies <100,000 people or Demonstration/education only

Supplies 100,000 – 1,000,000 people

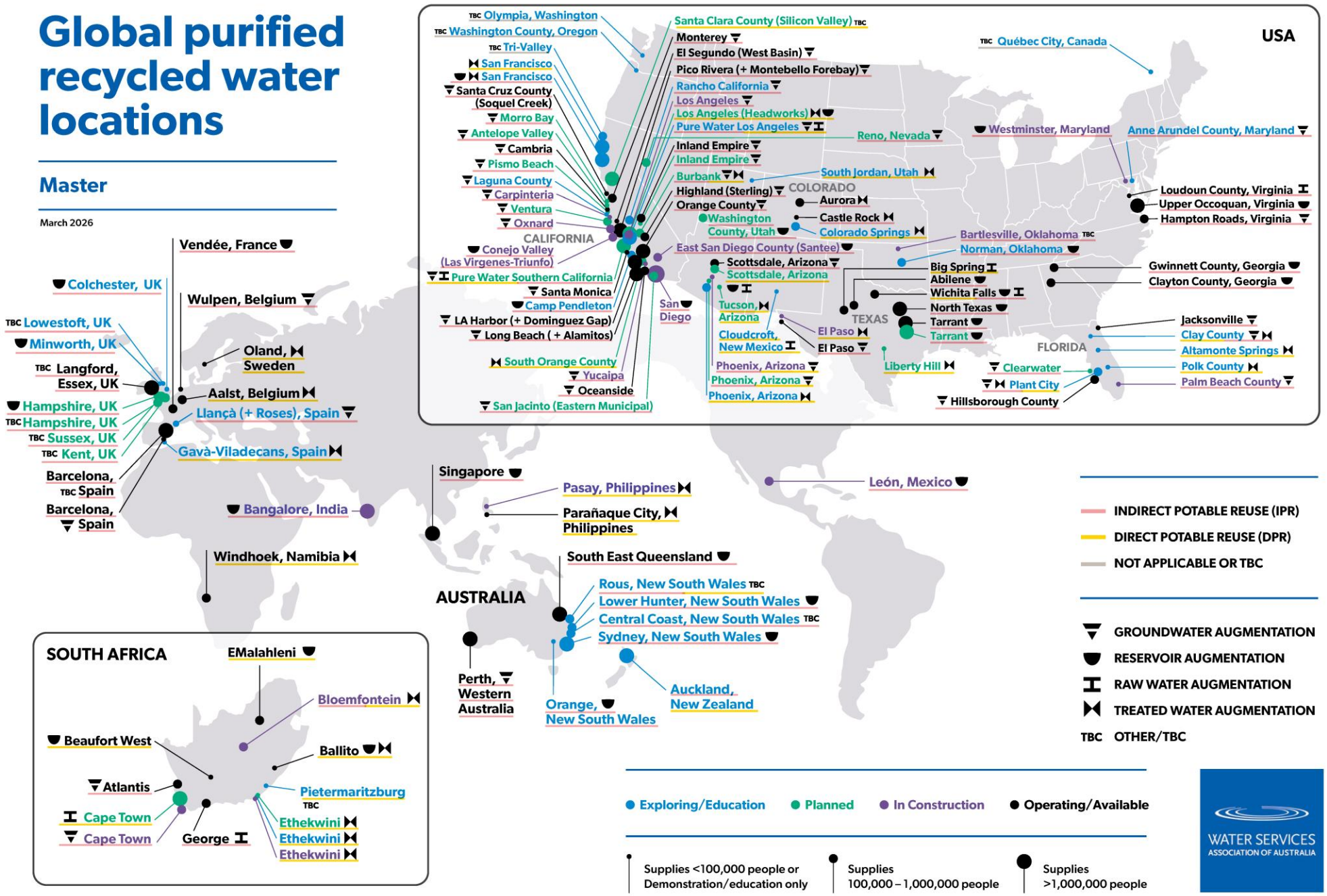
Supplies >1,000,000 people

WATER SERVICES ASSOCIATION OF AUSTRALIA

Global purified recycled water locations

Master

March 2026



INDIRECT POTABLE REUSE (IPR)

DIRECT POTABLE REUSE (DPR)

NOT APPLICABLE OR TBC

GROUNDWATER AUGMENTATION

RESERVOIR AUGMENTATION

RAW WATER AUGMENTATION

TREATED WATER AUGMENTATION

TBC OTHER/TBC

● Exploring/Education ● Planned ● In Construction ● Operating/Available

Supplies <100,000 people or Demonstration/education only

Supplies 100,000 – 1,000,000 people

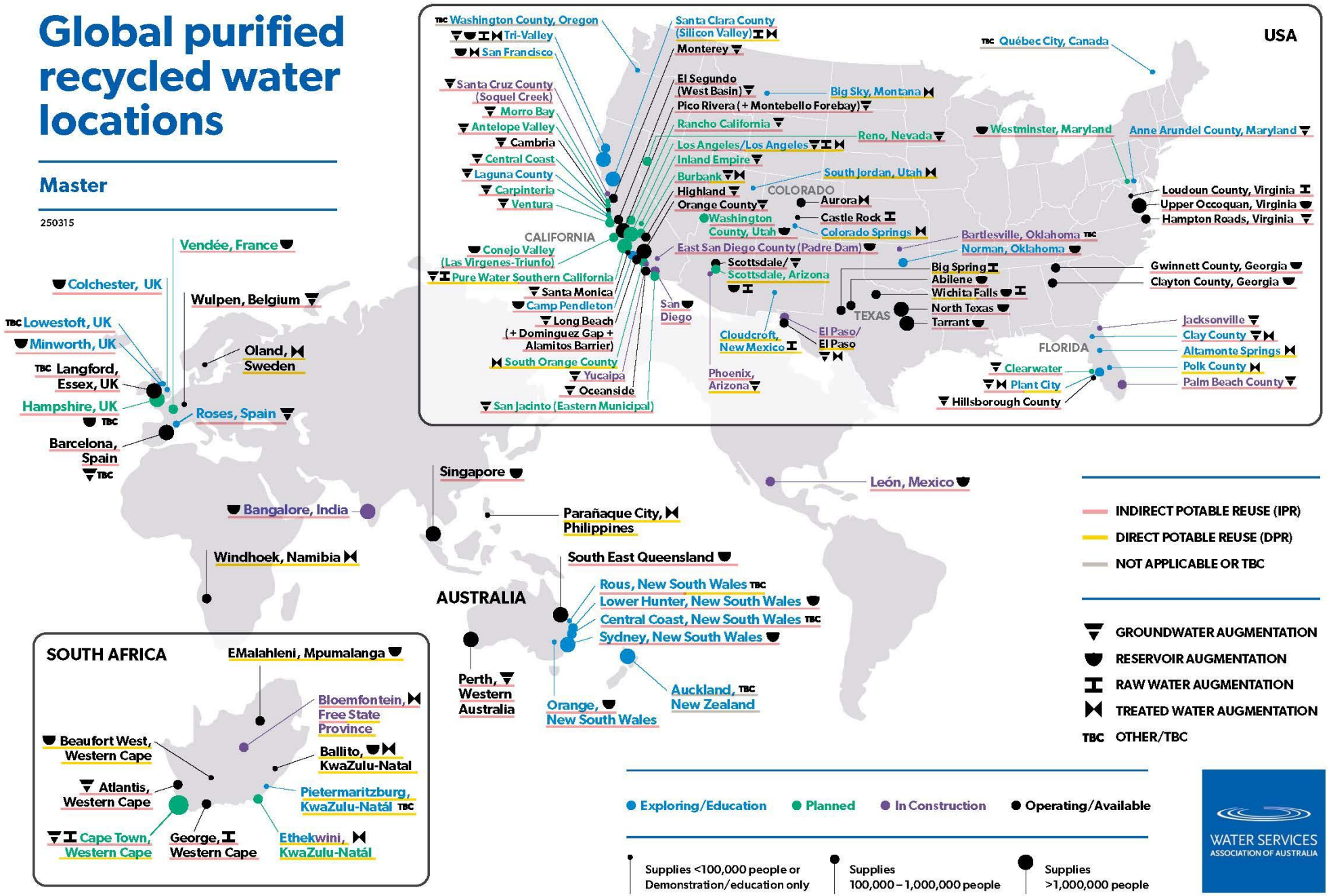
Supplies >1,000,000 people

WATER SERVICES ASSOCIATION OF AUSTRALIA

Global purified recycled water locations

Master

250315

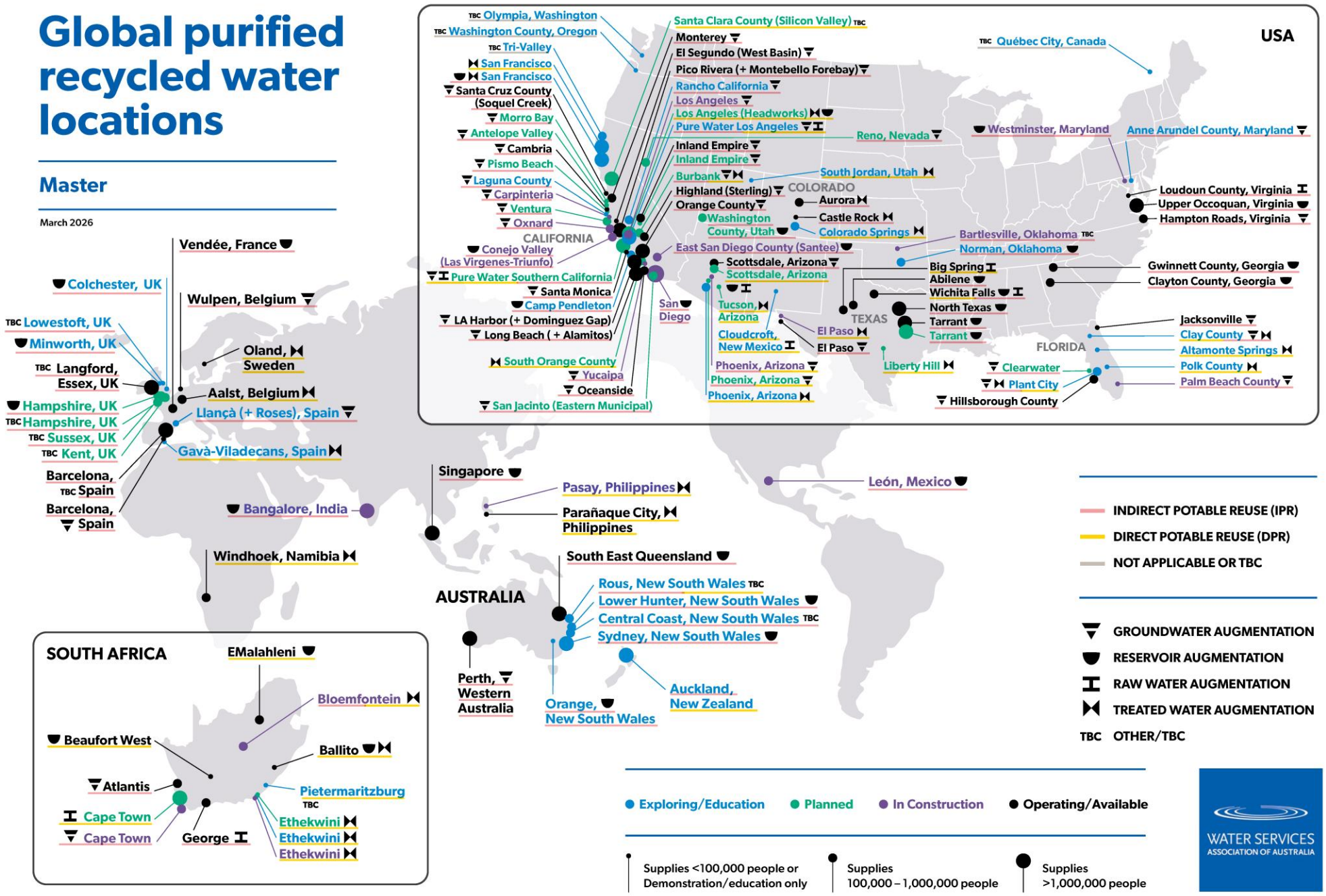


2025 Master

Global purified recycled water locations

Master

March 2026



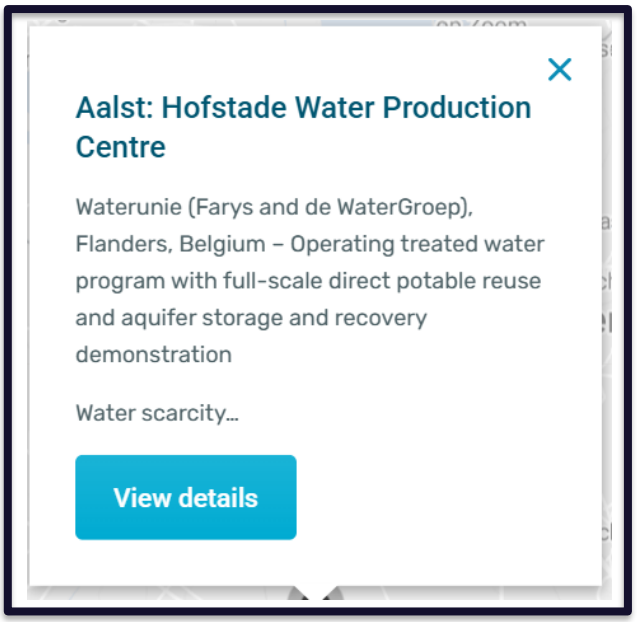
2026
Master

Lots of progress since 2025

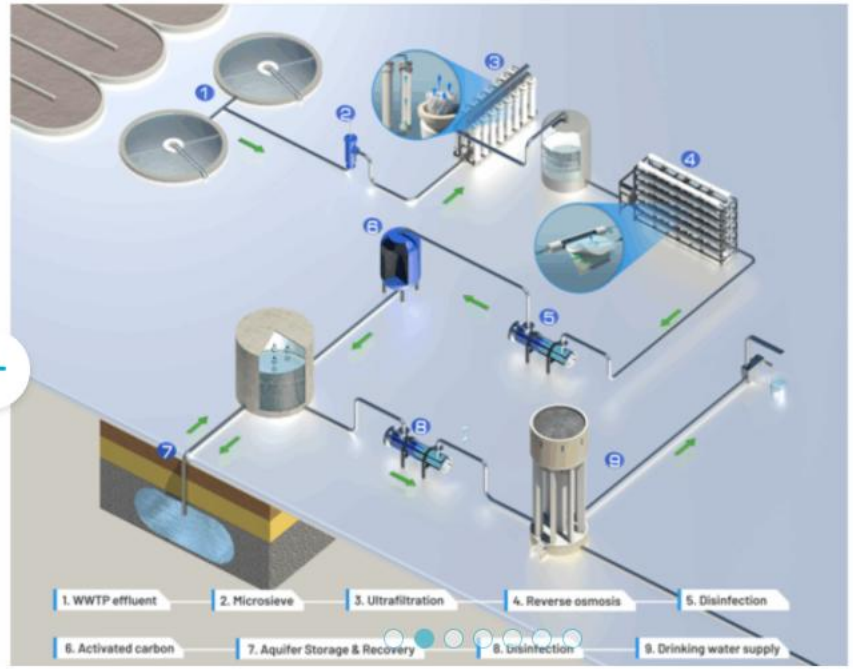
- Moved from **Planned** to **In Construction:**
  - Westminster, Marylands
  - Carpinteria, California
  - Los Angeles Groundwater Replenishment Project
- Moved from **In Construction** to **Operating**:
  - Santa Cruz (Pure Water Soquel) – first flows 1 Dec 2025
  - Vendée, France – operating over a year
  - Jacksonville – water for tasting, into aquifer + fountain at stunning demonstration plant
- Santa Clara County (Silicon Valley) – **Exploring** to **Planned**
- A few dates moved around
- One dropped off – Big Sky, Montana (not an immediate priority)
- Cloudcroft – still on but historic

- **109 dots** → **121**

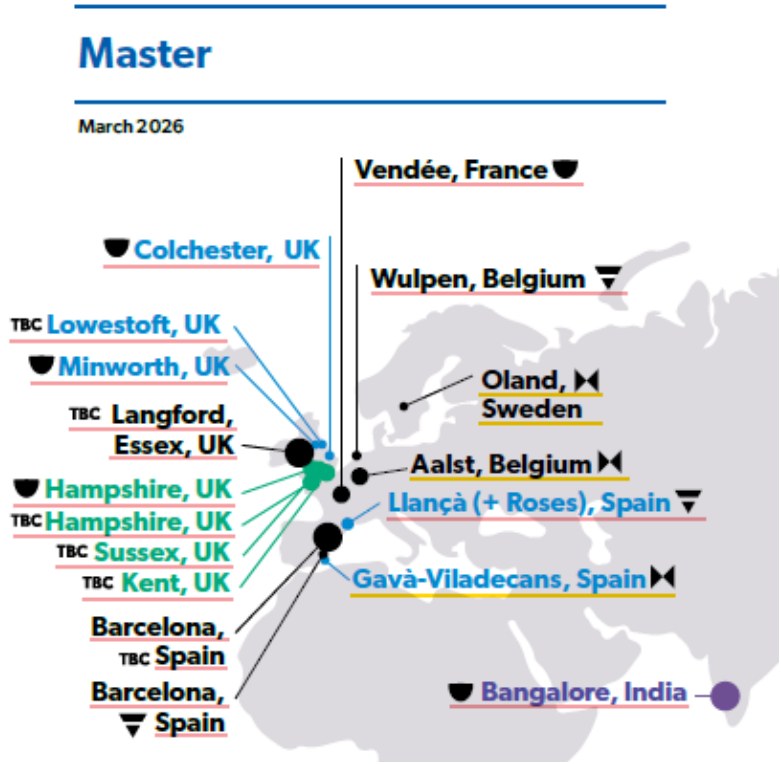
New: Aalst, Belgium



Aalst: Hofstade Water Production Centre

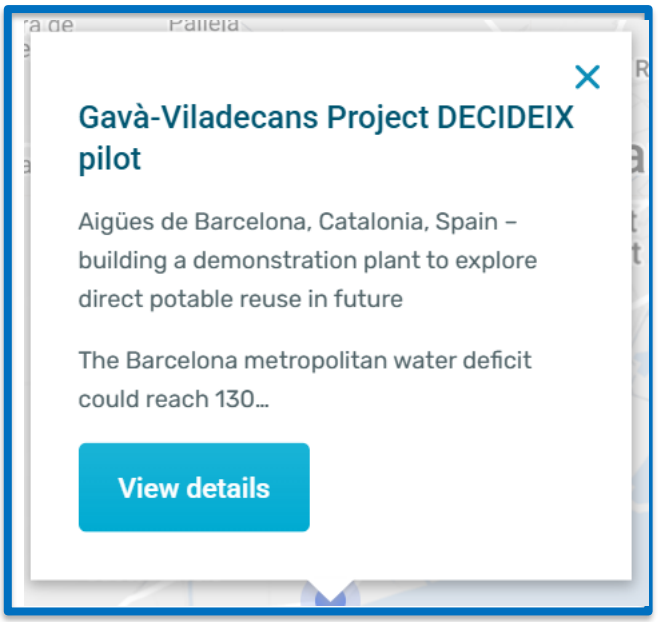


Waterunie (Farys and de WaterGroep), Flanders, Belgium – Operating treated water program with full-scale direct potable reuse and aquifer storage and recovery demonstration



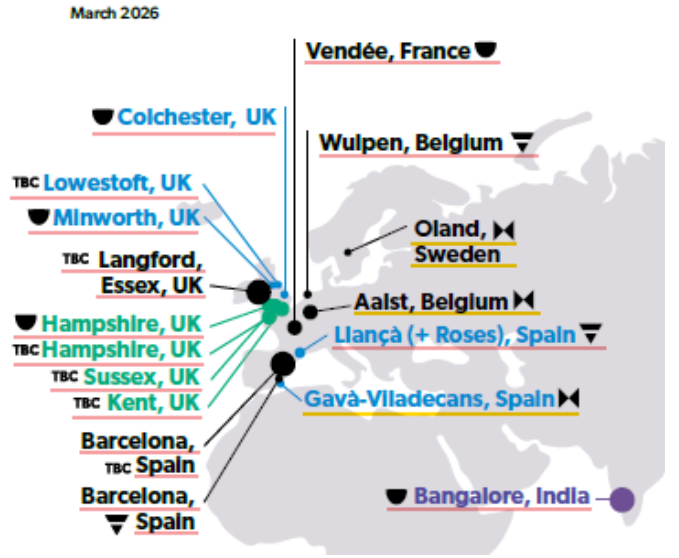
Operating: Treated
Demonstration: Groundwater

New: Gavà-Viladecans



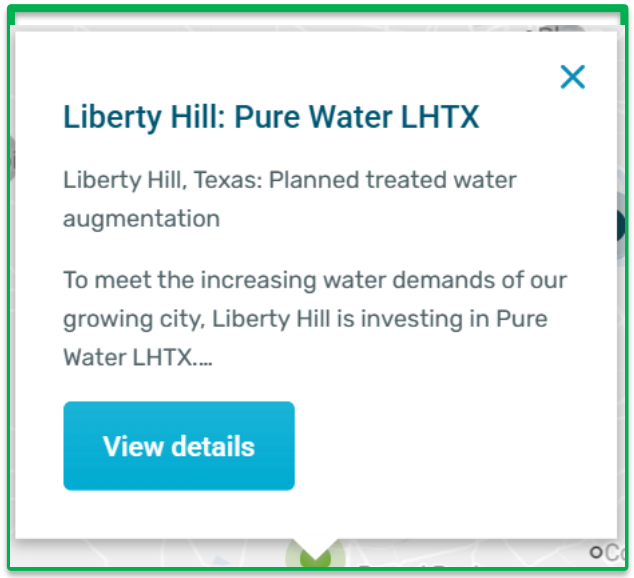
Gavà-Viladecans Project DECIDEIX pilot

Aigües de Barcelona, Catalonia, Spain – building a demonstration plant to explore direct potable reuse in future



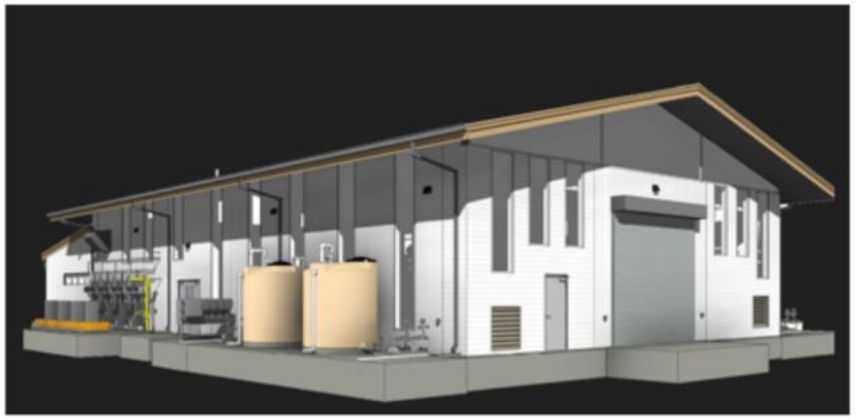
Exploring Direct

New: Liberty Hill, Texas



Thanks Katz team!

Liberty Hill: Pure Water LHTX



Liberty Hill, Texas: Planned treated water augmentation

To meet the increasing water demands of our growing city, Liberty Hill is investing in Pure Water LHTX. This innovative program will create a safe, independently controlled and sustainable new water supply for Liberty Hill.

Currently, Liberty Hill purchases water from the nearby city of Leander, which sources raw water from Lake Travis, before drinking water treatment and distribution. Liberty Hill also owns and operates several wells which extract groundwater and use as drinking water supply. Due to limitations of the groundwater basin and increased pressures on surface water supplies, Liberty Hill is moving forward with advanced water purification as a proven strategy to ensure reliable water supply for its growing community.

Under this program, recycled water from the South Fork Wastewater Treatment Plant will be sent to an advanced water purification facility. This new facility will include a multi-barrier system of proven technologies that safely and efficiently purifies recycled wastewater into drinking water.

This new water supply will improve Liberty Hill's water supply reliability by lessening reliance on purchased surface water from Lake Travis and make Liberty Hill more resilient as drought conditions continue to impact our community year after year.

Pure Water LHTX will allow Liberty Hill to sustain growth while securing our water source for generations to come.

When complete, the advanced water purification facility will produce enough water to meet the entire demand of our service territory.

www.purewaterlhtx.org

Fact Sheet

FAQs

New: Olympia, Washington

Olympia: LOTT Clean Water Class A+ Alliance Purified Water Demonstration Project

Olympia, Washington, USA – Exploring different treatment trains

LOTT Clean Water Alliance's Class A+ Purified Water Demonstration Project, the first project in Washington State to…

View details

Olympia: LOTT Clean Water Class A+ Alliance Purified Water Demonstration Project

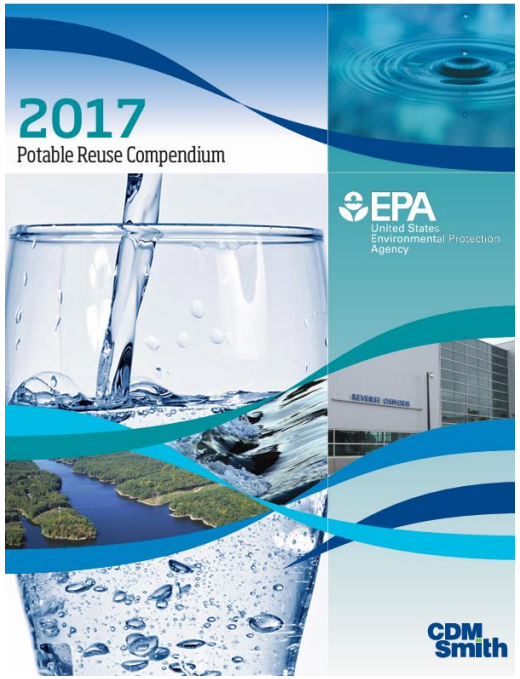
Olympia, Washington, USA – Exploring different treatment trains

LOTT Clean Water Alliance's Class A+ Purified Water Demonstration Project, the first project in Washington State to demonstrate to local communities and regulators advanced purified water as a reliable, sustainable future water supply. Based at the Budd Inlet Treatment Plant in Olympia, Washington, the project will prove that recycled water can be purified to meet Washington State Departments of Health and Ecology's comprehensive water quality requirements, reinforcing the idea that water should be judged by its quality, not its history.

LOTT will pilot two different advanced purification systems: reverse osmosis membranes and activated carbon filtration to inform future treatment approaches in the state. The project includes evaluation of carbon-based treatment as a potentially more energy-efficient option with limited waste products compared to reverse osmosis. Two treatment trains will be run in parallel with extensive sampling and testing of both processes to verify their safety, performance, and effectiveness in removing a wide array of regulated and unregulated contaminates.

The project is supported by a coalition of partners: the Cities of Olympia, Lacey, and Tumwater; Thurston County; Squaxin Island Tribe; Washington State Departments of Health and Ecology; and the South Puget Sound Community College. The goal is to produce Class A+ purified water and create beer in partnership with local breweries for sharing with the community as early as Summer 2027, alongside continued outreach and engagement efforts.

Update on EPA 2017 Potable Reuse Compendium



Ion Exchange; LC – Lime Clarification; MBR – Membrane Bioreactor; MF - Microfiltration; O3 – Ozone Disinfection; PAC – Powdered Activated Carbon; RO – Reverse Osmosis; UF - Ultrafiltration; UV – Ultraviolet Radiation

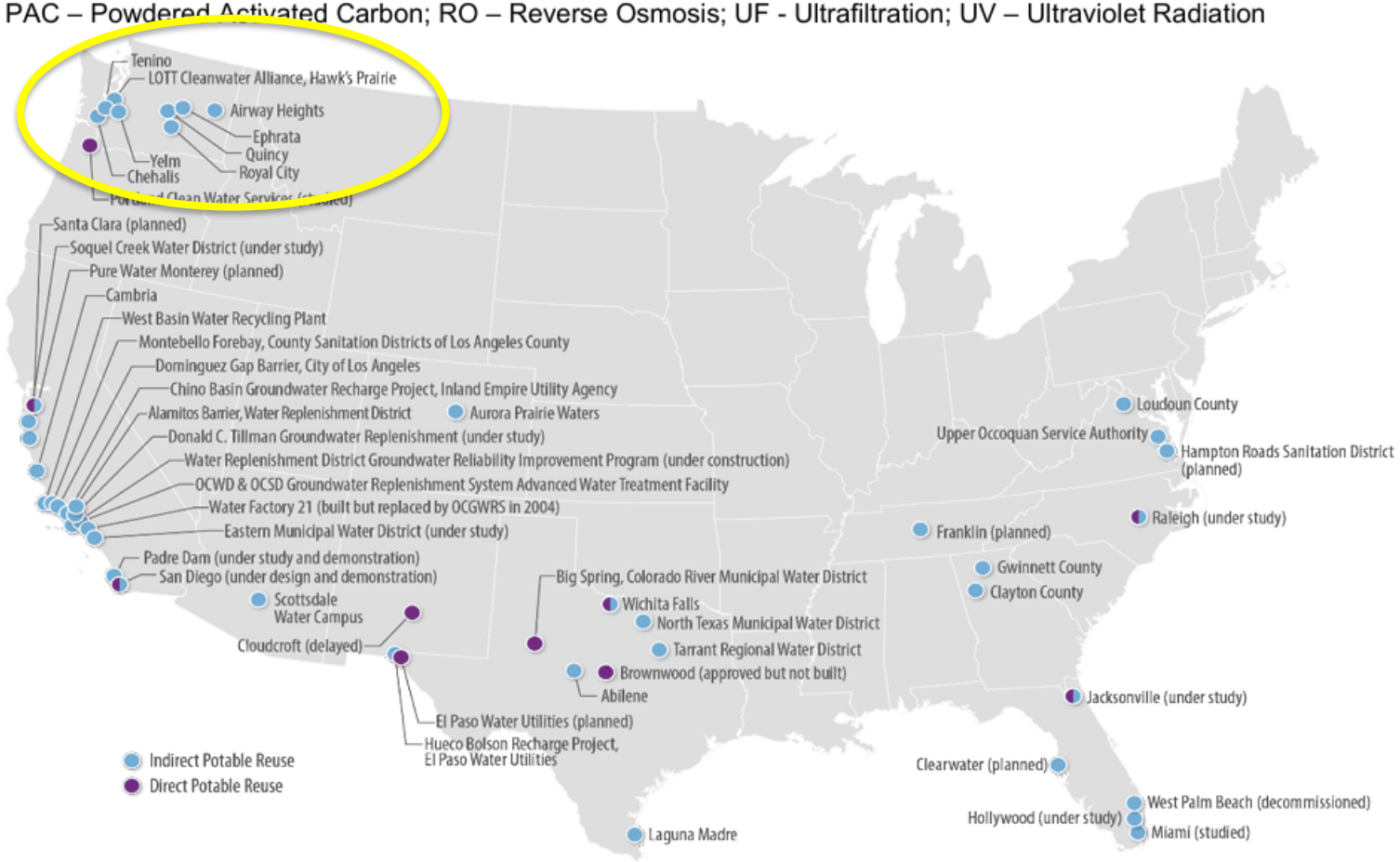
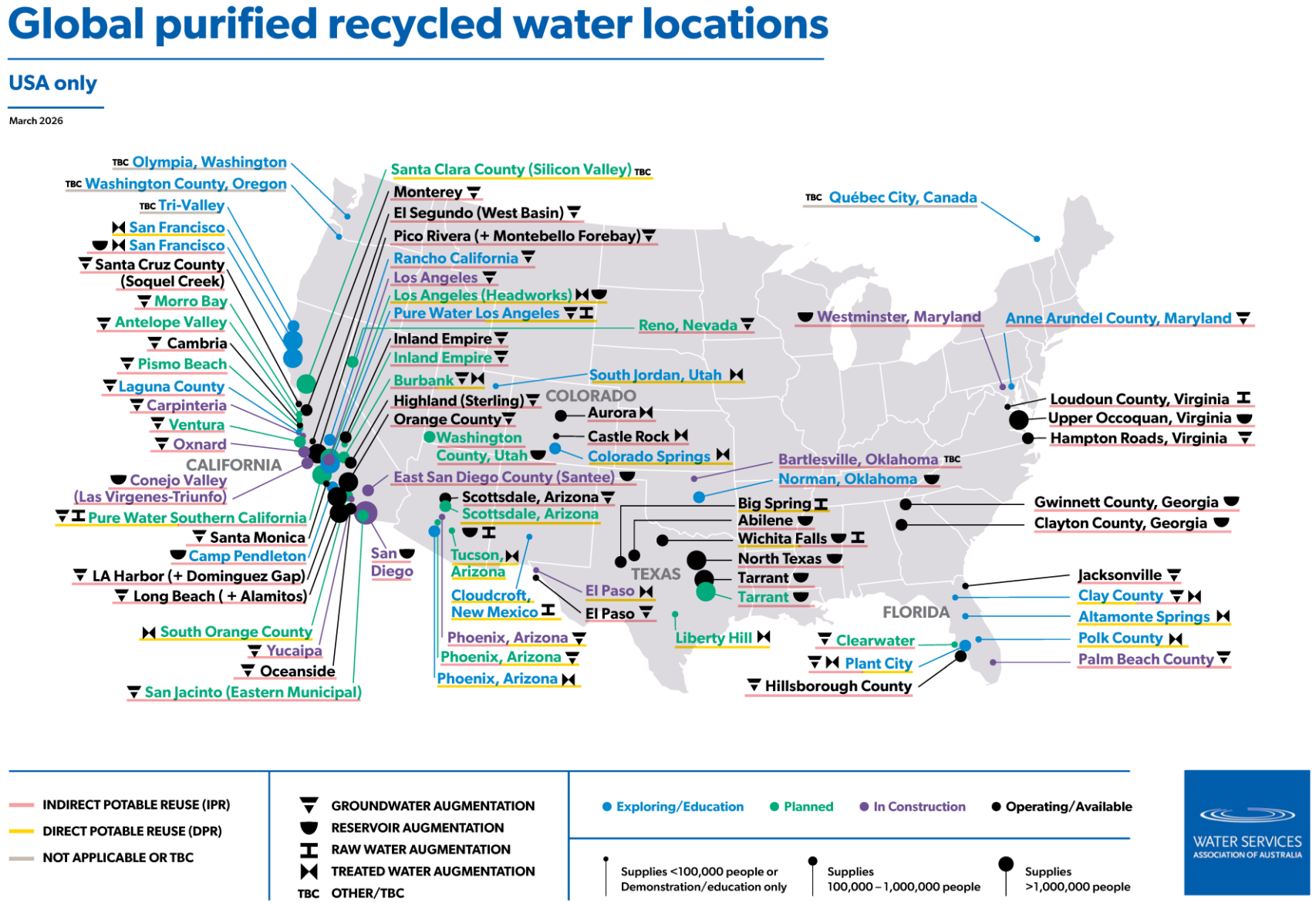
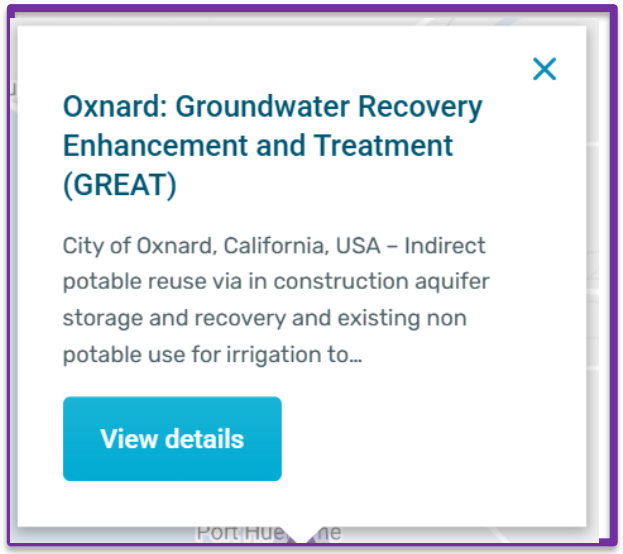


Figure 2-1. Planned and constructed IPR and DPR projects in the United States as of 2017

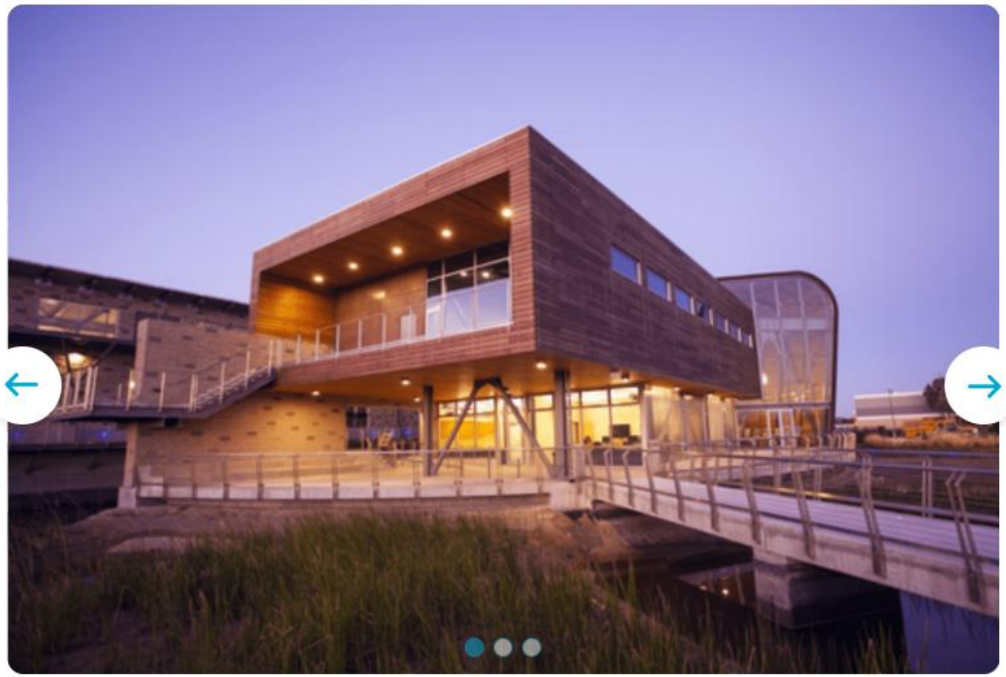
This year’s maps include a USA only version



New: Oxnard



Oxnard: Groundwater Recovery Enhancement and Treatment (GREAT)



City of Oxnard, California, USA – Indirect potable reuse via in construction aquifer storage and recovery and existing non potable use for irrigation to local users

Oxnard initiated the Groundwater Recovery Enhancement and Treatment (GREAT) program to secure additional local water supplies, to prevent shortages in future. Beneficial reuse of locally available water:

- is independent of outside influences, such as the climate, water demands by other cities or regions, and judicial rulings.
- is dependable, locally controlled and beneficial to the environment.
- recycled water will decrease the city's dependence on imported water and provide a reliable source of local water.
- it takes less energy to produce recycled water in Oxnard than to import water from Northern California.

Advanced Water Purification Facility

Oxnard constructed the advanced water purification facility in 2014.

Advanced Water Purification Facility

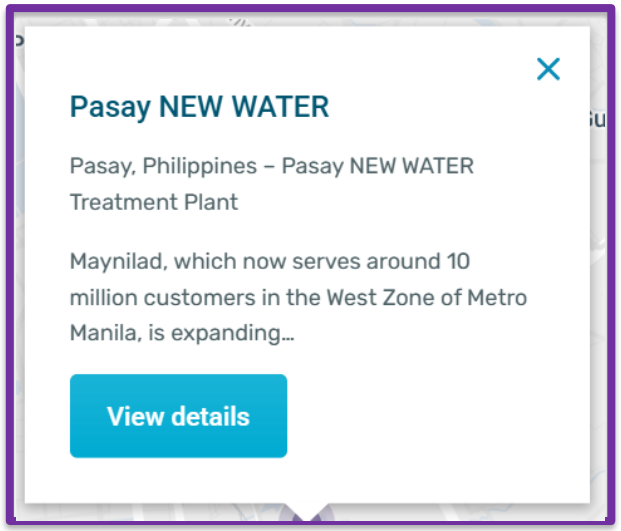
Oxnard constructed the advanced water purification facility in 2014.

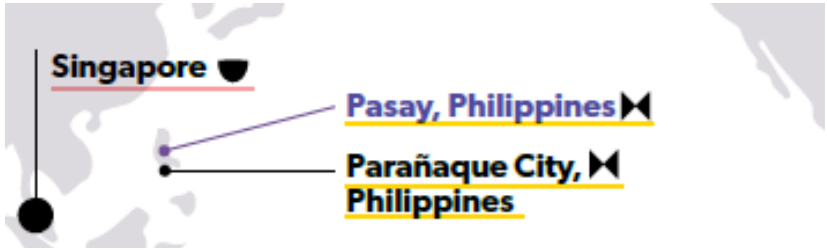
This innovative facility uses highly developed purification processes to produce safe, clean water from treated wastewater. Water that is usually sent to the ocean, is further purified using microfiltration, reverse osmosis, and advanced oxidation with ultraviolet light and hydrogen peroxide. At this time, the high-quality recycled water is used for irrigation and industry.

Oxnard is constructing an Aquifer Storage and Recovery well test system which will inject recycled water from the Advanced Water Purification Facility into the local groundwater basin. After underground storage, the water can be pumped back out and blended with existing potable water supplies. Testing results from initial trials will be used to develop an operational and water treatment plan for future use as drinking water.

City of Oxnard recycled water page

New: Pasay, Philippines





Pasay NEW WATER

Pasay, Philippines – Pasay NEW WATER Treatment Plant

Maynilad, which now serves around 10 million customers in the West Zone of Metro Manila, is expanding its trailblazing potable water reuse initiative with the development of the Pasay NEW WATER facility – its second direct potable reuse installation in the Philippines.

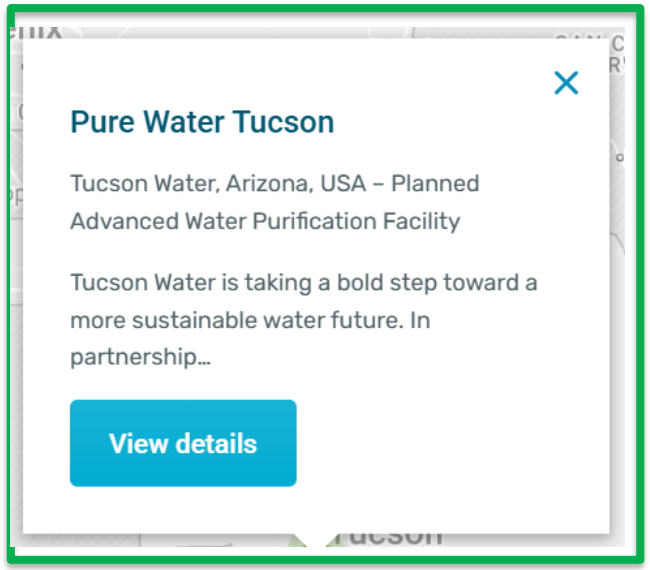
This initiative is part of Maynilad's long-term strategy to diversify water sources and strengthen supply resilience in the face of growing demand and the increasing vulnerability of existing sources like Angat Dam. As climate change continues to intensify weather extremes such as droughts and typhoons, direct potable reuse offers a sustainable, climate-adaptive solution for enhancing water security.

The Pasay NEW WATER facility will draw its raw water from the treated effluent of Maynilad's Pasay Water Reclamation Facility. Rather than discharging this effluent – already compliant with standards of the Department of Environment and Natural Resources – into nearby receiving bodies of water, it will undergo further treatment through advanced purification processes to meet the 2017 Philippine National Standards for Drinking Water.

Set for completion by the fourth quarter of 2025, the facility will produce 12 million liters per day, directly benefiting around 78,500 people in the Malibay area of Pasay City. Once operational, the combined output of Maynilad's Parañaque and Pasay NEW WATER facilities will account for approximately 0.7% of the company's overall water supply.

While the Pasay site does not yet feature a visitor center, Maynilad welcomes tours by request to promote public awareness and support for water reuse innovations.

New: Tucson, Arizona



Pure Water Tucson

Tucson Water, Arizona, USA – Planned Advanced Water Purification Facility

Tucson Water is taking a bold step toward a more sustainable water future. In partnership with the U.S. Bureau of Reclamation, Tucson Water is moving forward with the construction of a state-of-the-art Advanced Water Purification facility.

Funded through an $US 86.7 million federal capital program agreement signed in January 2025, this new facility will treat and purify up to 2.5 million gallons (9.4 million litres) of recycled water per day. The Advanced Water Purification plant is a cornerstone of Tucson's One Water 2100 Plan, which emphasises using every drop of water wisely and keeping water local.

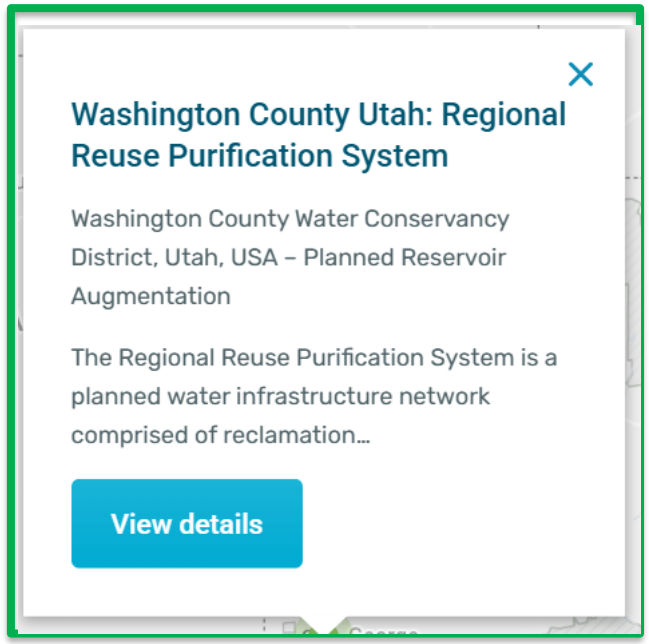
In exchange for the funding, Tucson Water will conserve a total of 56,000 acre-feet (69,000 million litres) of water in Lake Mead in a ten-year period – equivalent to enough water to serve thousands of Tucson households. This innovative project not only supports long-term water reliability but also strengthens regional water security across Southern Arizona.

By investing in advanced purification technology today, we're protecting Tucson's water future for generations to come.

Read more about Pure Water Tucson

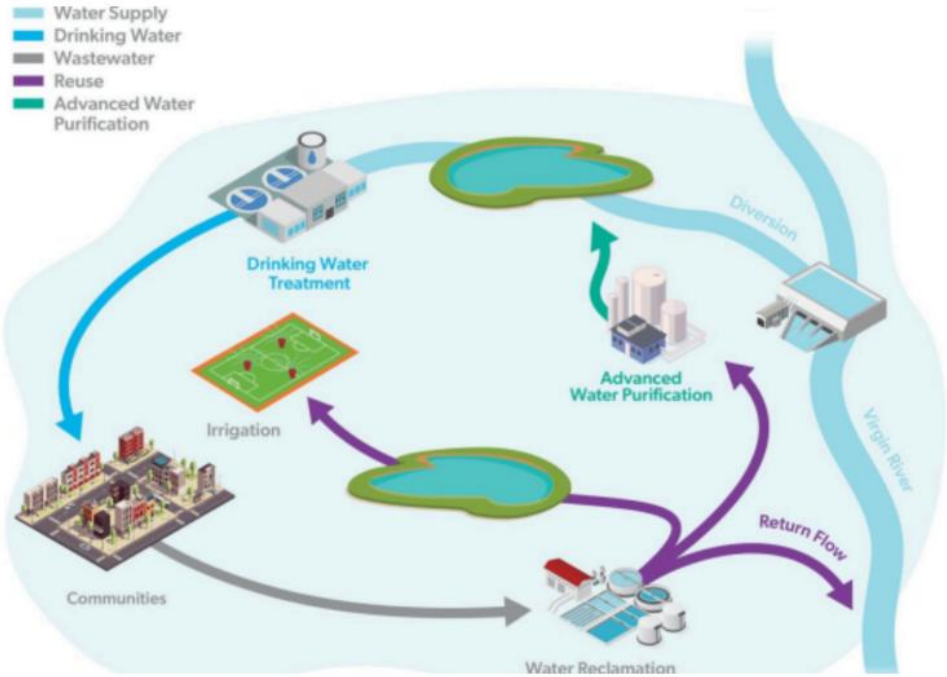
Tucson Water One Water 2100 Plan

New: Washington County, Utah



Thanks Katz team!

Washington County Utah: Regional Reuse Purification System



Washington County Water Conservancy District, Utah, USA – Planned Reservoir Augmentation

The Regional Reuse Purification System is a planned water infrastructure network comprised of reclamation facilities, advanced water purification technology, conveyance and storage facilities to optimise the use of all existing water supplies and create new local water resources for the communities of Washington County, Utah.

The system will extend the region's reusable supply, making it available to residents, businesses and farms. With a focus on improving resilience, the system is a key pillar of One Water Washington County, which aims to make the most efficient use of all water throughout the region.

Washington County is one of the fastest growing regions in the United States and is dependent on one limited water source – the Virgin River Basin. The region's drinking water supply comes from a combination of surface and groundwater sources in this basin. Reuse has been used for irrigation since 2006.

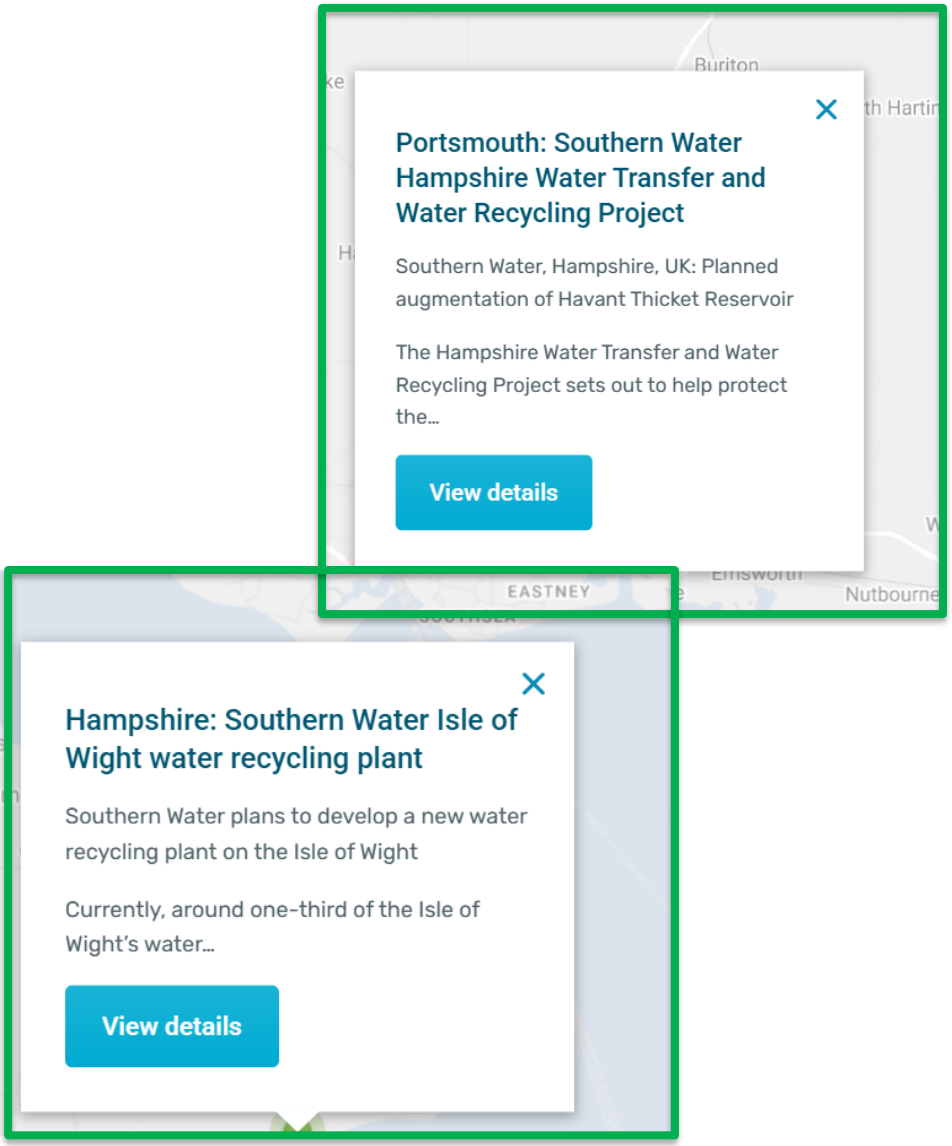
The system will serve approximately 350,000 full-time residents by the 2040s as well as a high number of seasonal populations and visitors, which increase resident population by almost 40 per cent. By 2045, approximately 20 per cent of water demand will be met with purified recycled water.

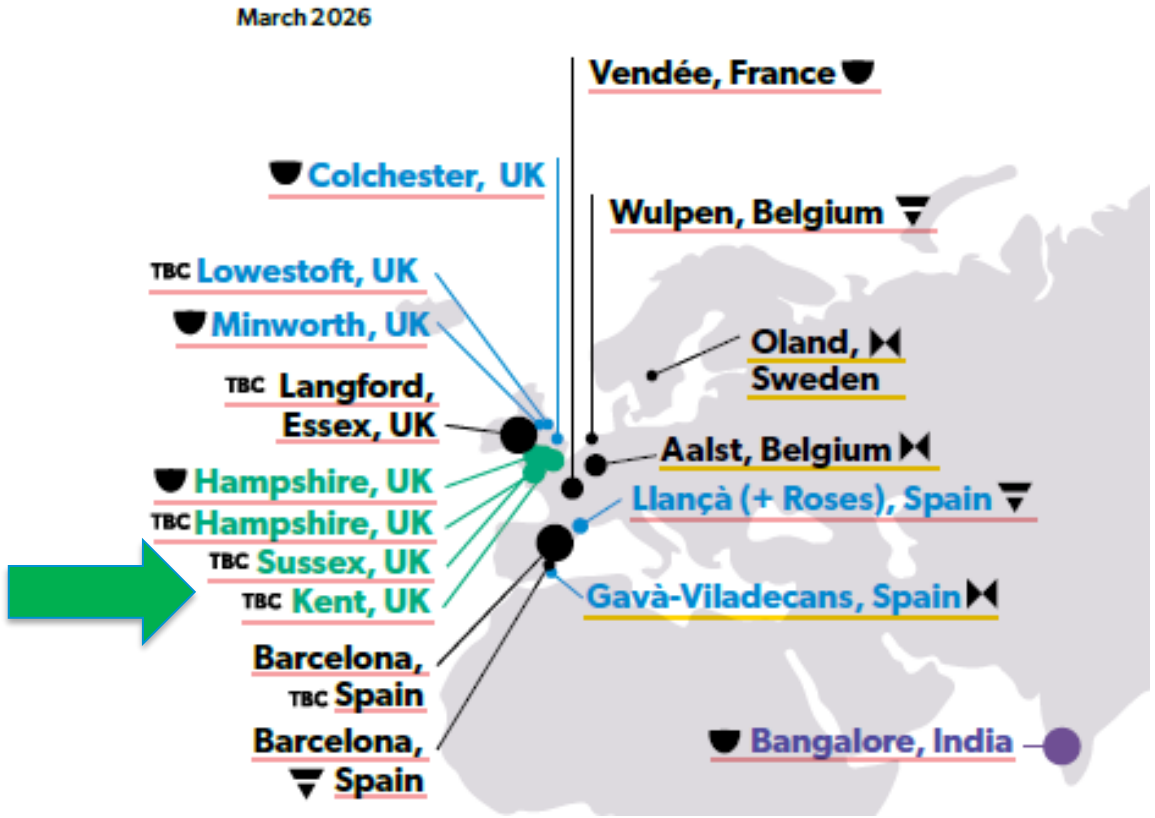
An advanced water purification demonstration facility is currently in the design phase with an anticipated completion date of 2028. The facility will produce purified water that meets or exceeds drinking water standards.

Wcwcd.gov/onewater

Wcwcd.gov/reuse

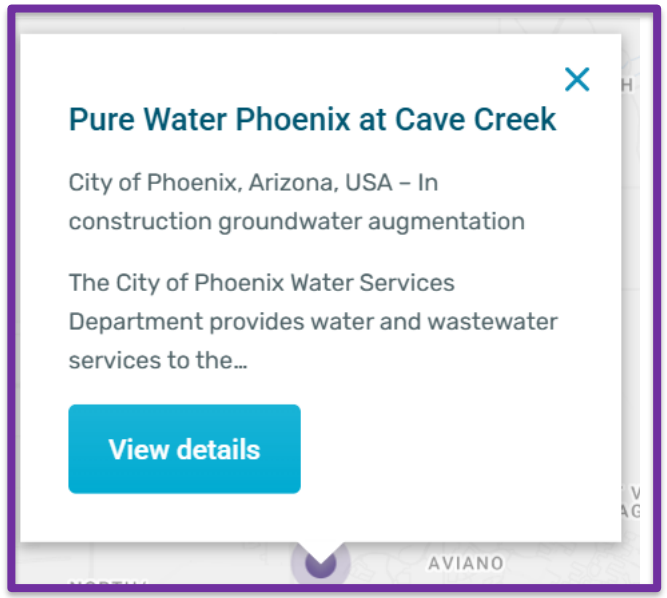
Hampshire – was Portsmouth + Isle of White

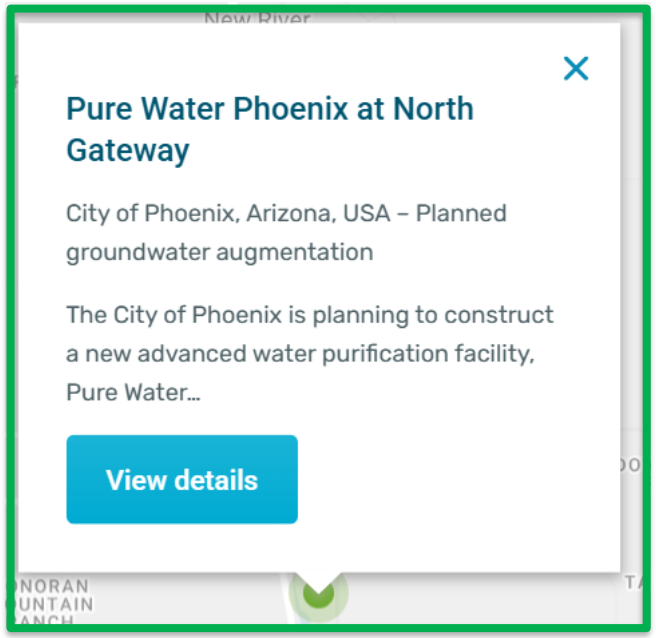


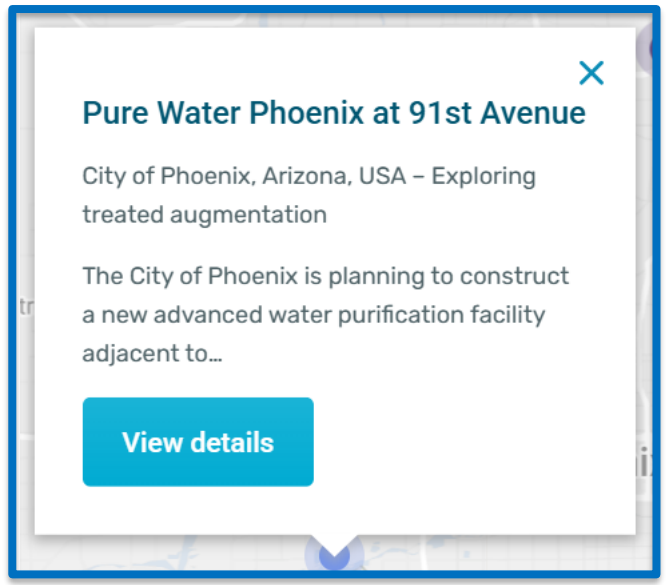


New planned projects in Kent + Sussex (Other)

Phoenix – was 1 (Cave Creek – In Construction)



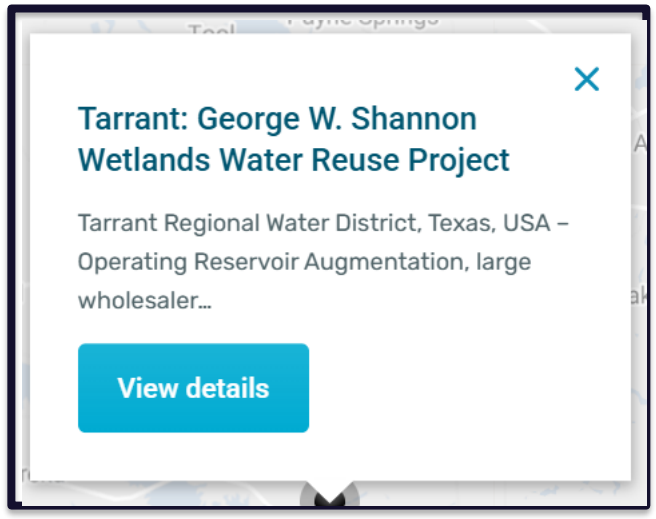


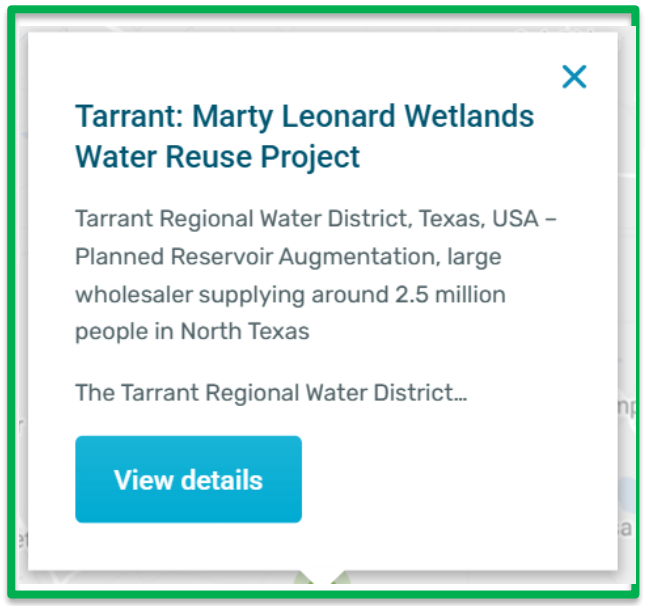


New projects:

- North Gateway (Planned, ground)
- 91st Avenue (Exploring, treated)

Tarrant – was 1 (George Shannon Wetlands)





New: + Marty Leonard Wetlands

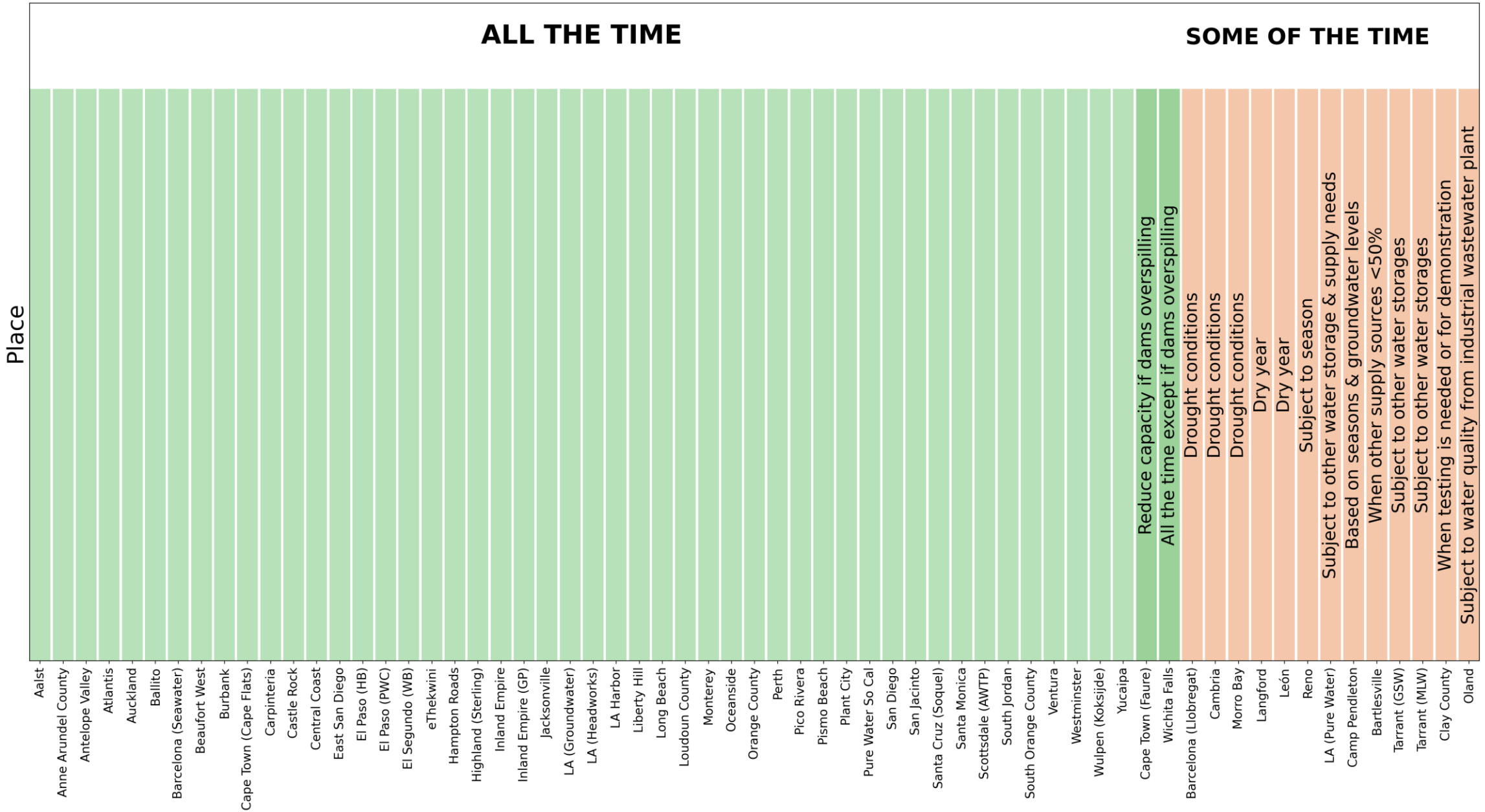
3 new data points:

NEW: Simple treatment train (where provided)

#	Location	State	Country	Region	Stage	Augmentation type	People supplied	IPR/DPR	Start decade	Treatment train simple descriptor
30	Colorado Springs	Colorado	USA	North/Latin America	Exploring/ Education	Treated	100k-1m	DPR	2040s/Unknown	Demonstration vehicle: O_3-BAC-UF-GAC-UV/AOP-Cl_2
31	Conejo Valley (Las Virgenes-Triunfo)	California	USA	North/Latin America	In Construction	Reservoir	100k-1m	IPR	2020s	UF-RO-UVAOP-Reservoir-WFP
32	East San Diego County (Santee)	California	USA	North/Latin America	In Construction	Reservoir	100k-1m	IPR	2020s	UF – RO – UV/Cl_2 – Stabilisation – Res Aug – Conv WTP (O_3)
33	El Paso (Hueco Bolson Recharge)	Texas	USA	North/Latin America	Operating/ Available	Groundwater	<100k	IPR	1980s	Lime – SF – O_3 – GAC – Cl_2 – Storage
34	El Paso (Pure Water Center)	Texas	USA	North/Latin America	In Construction	Treated	<100k	DPR	2020s	MF – RO – UVAOP – GAC – Cl_2 – Storage
35	El Segundo (West Basin)	California	USA	North/Latin America	Operating/ Available	Groundwater	<100k	IPR	1990s	MF/UF-RO-UV/AOP-Stabilisation (Co2/Lime)-Chloramination/Cl2-Engineered storage
36	e-Malahleni	Mpumalanga Province	South Africa	Africa	Operating/ Available	Reservoir	100k-1m	DPR	2000s	
37	eThekwini (KwaMashu + Northern)	KwaZulu-Natal	South Africa	Africa	Planned	Treated	100k-1m	DPR	2030s	
38	eThekwini (UMbilo)	KwaZulu-Natal	South Africa	Africa	Exploring/ Education	Treated	100k-1m	DPR	2040s/Unknown	
39	eThekwini (Remix)	KwaZulu-Natal	South Africa	Africa	In Construction	Treated	100k-1m	DPR	2030s	
40	Gavà-Viladecans	Costa Brava, Catalonia	Spain	Europe	Exploring/ Education	Treated	<100k	DPR	2040s/Unknown	

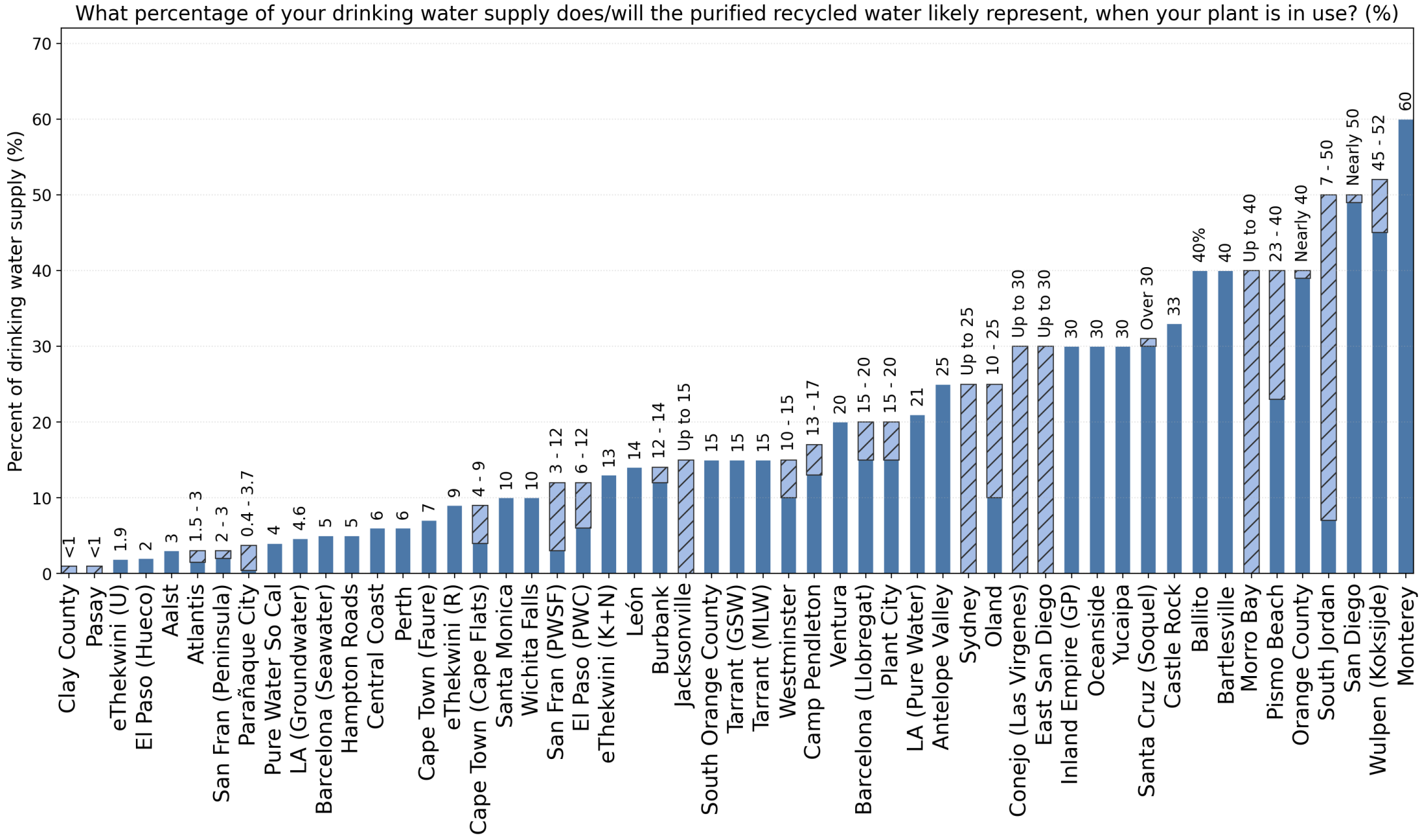
NEW: We asked if places intend to operate all the time or intermittently. For those that gave data:

Is the intent of your full-scale plant(s) (either operating or future), to operate all the time, barring maintenance/faults?



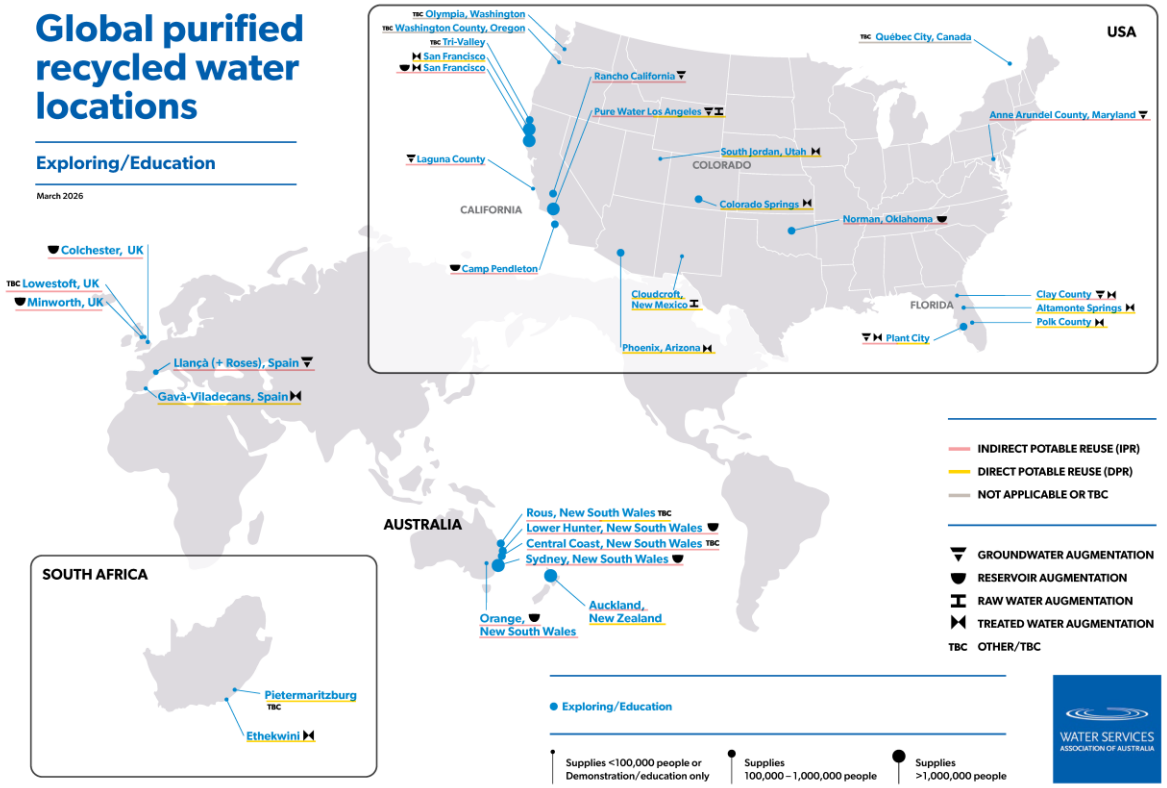
NEW: We asked what % of drinking water supply the water does/will in future represent:

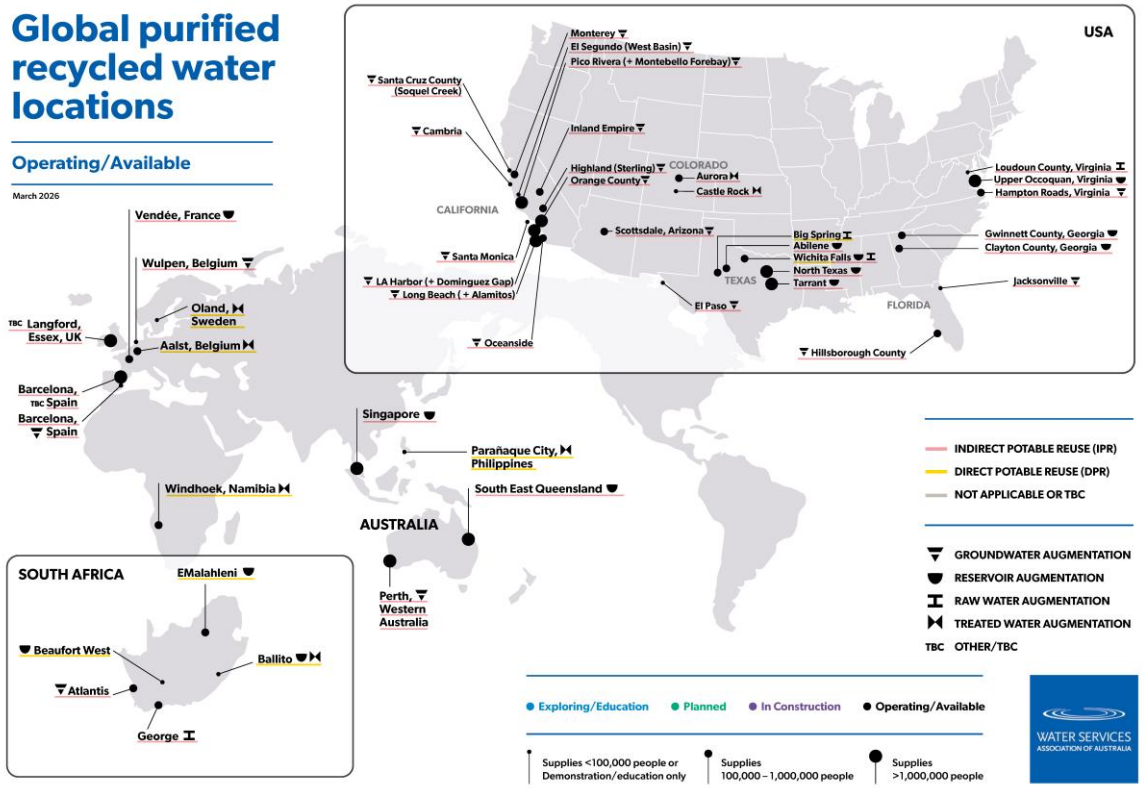
For those that provided data:



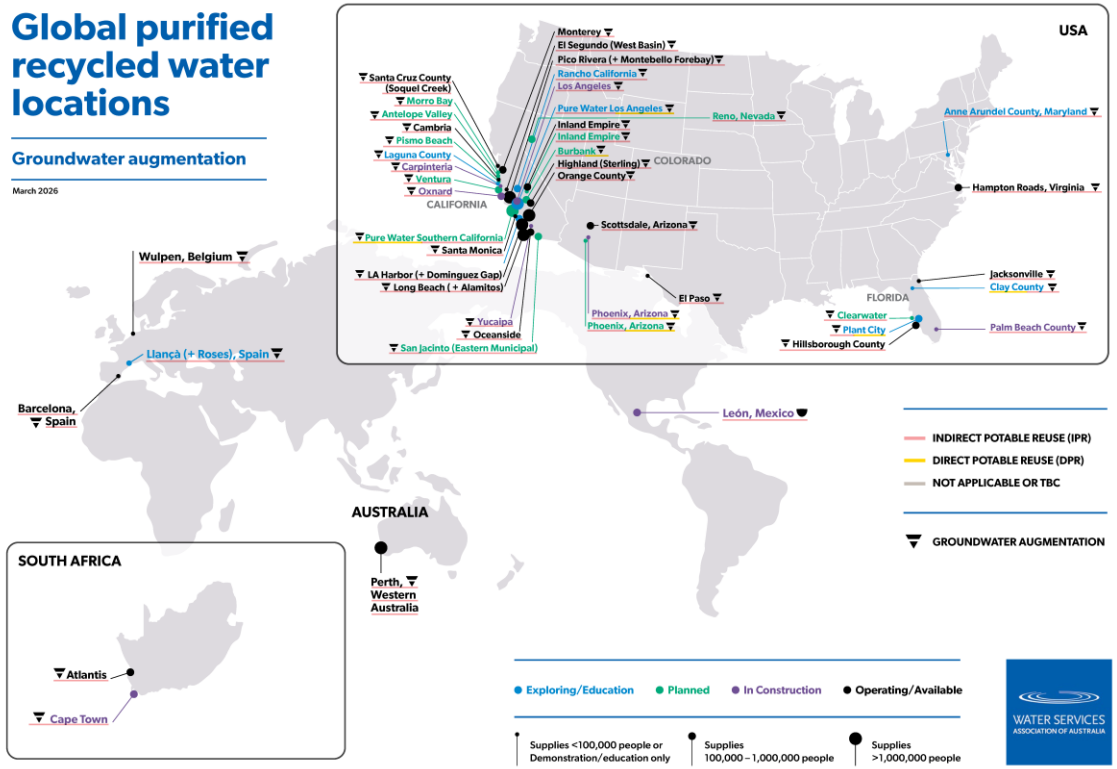
2026 maps package includes maps by stage: Exploring/ education, Planned, In Construction, Operating/Available

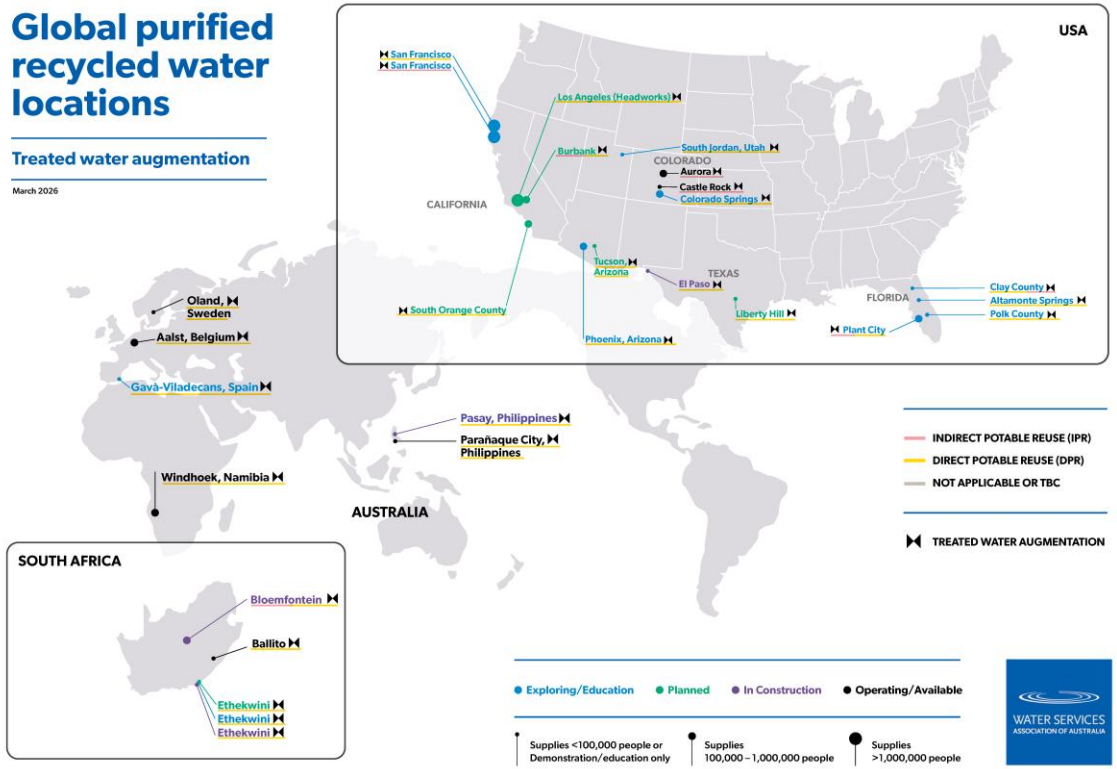
For example:



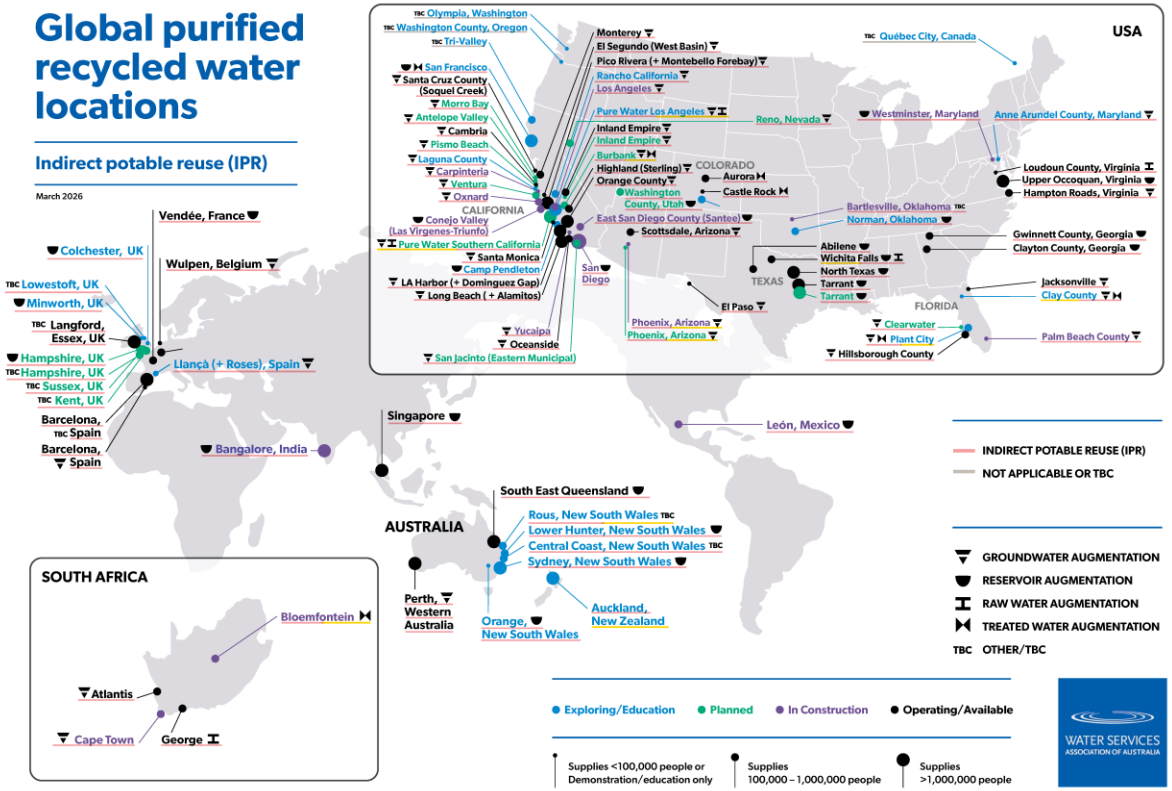


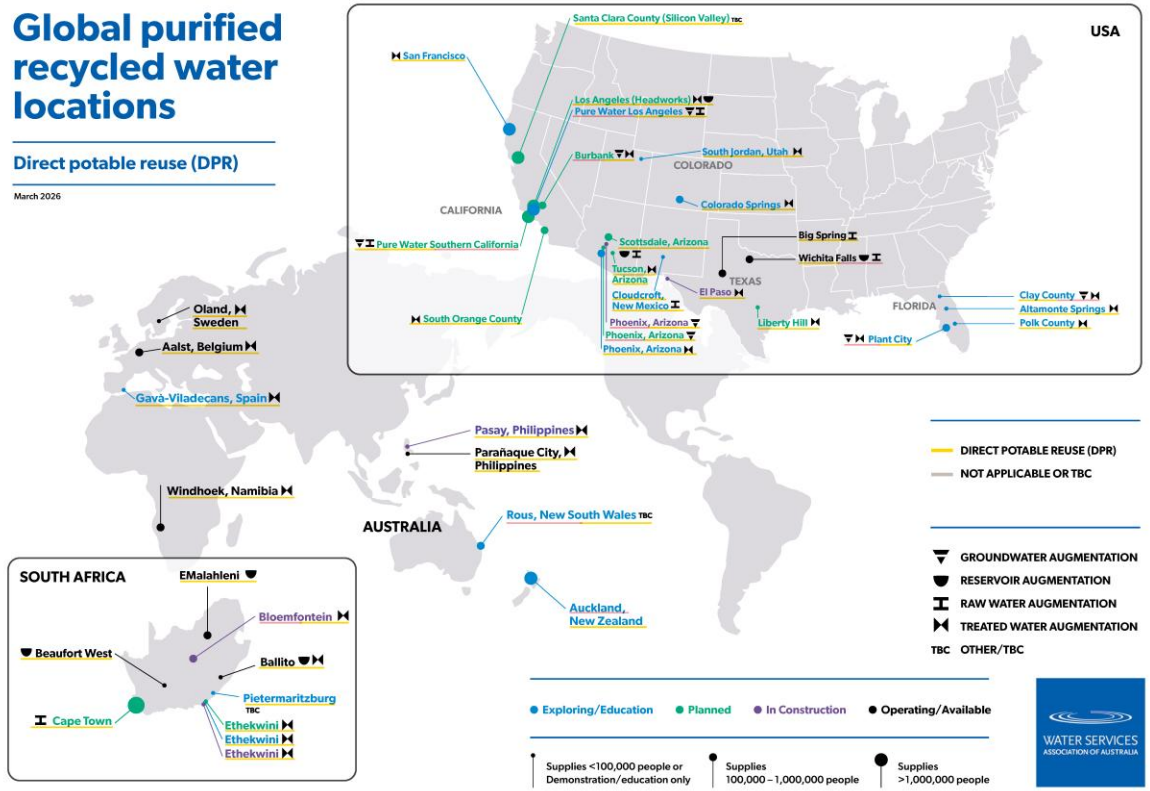
Also augmentation type: Groundwater, Reservoir, Raw, Treated, Other
For example:





Also Indirect and Direct

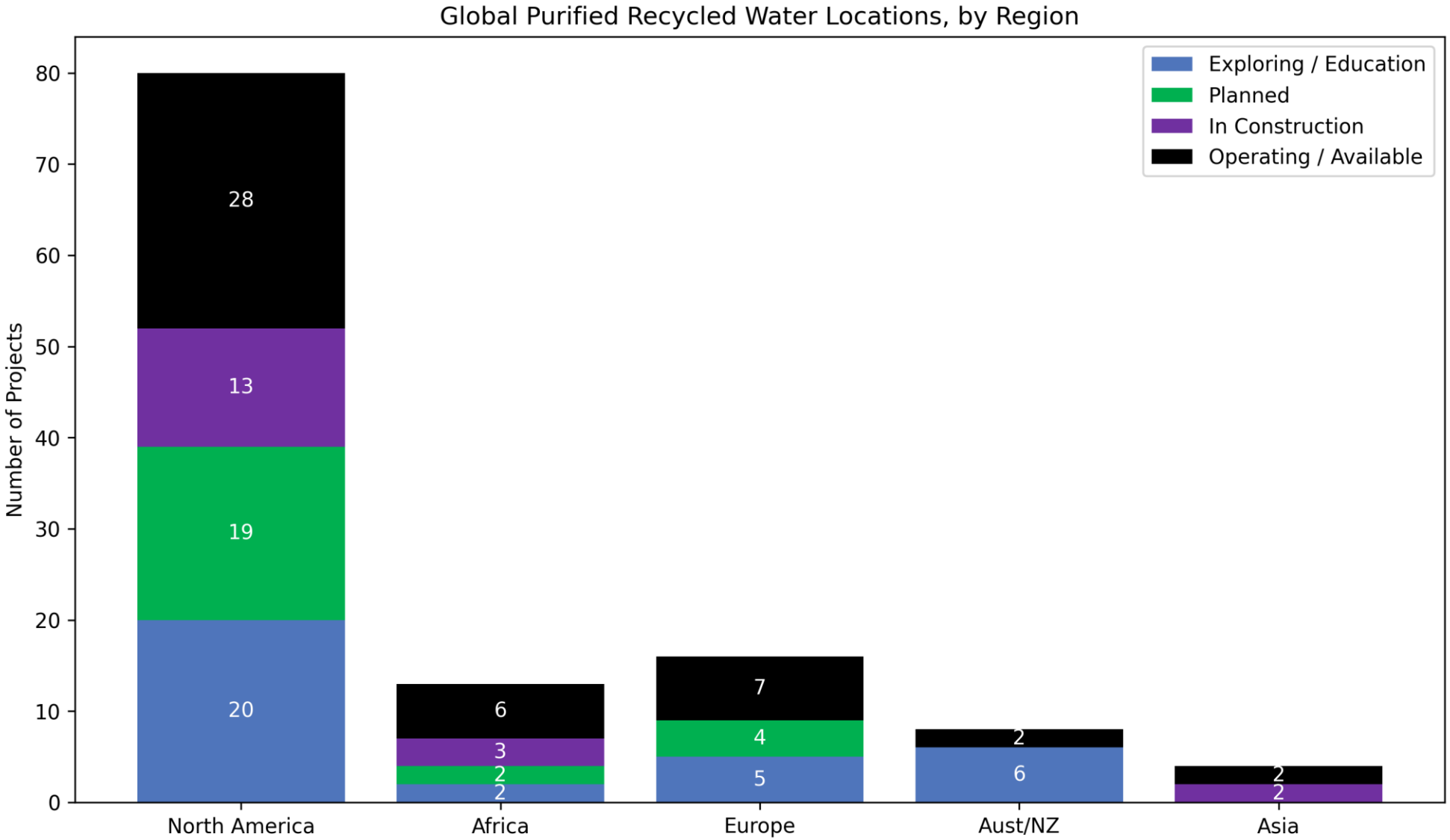




Global purified recycled water locations

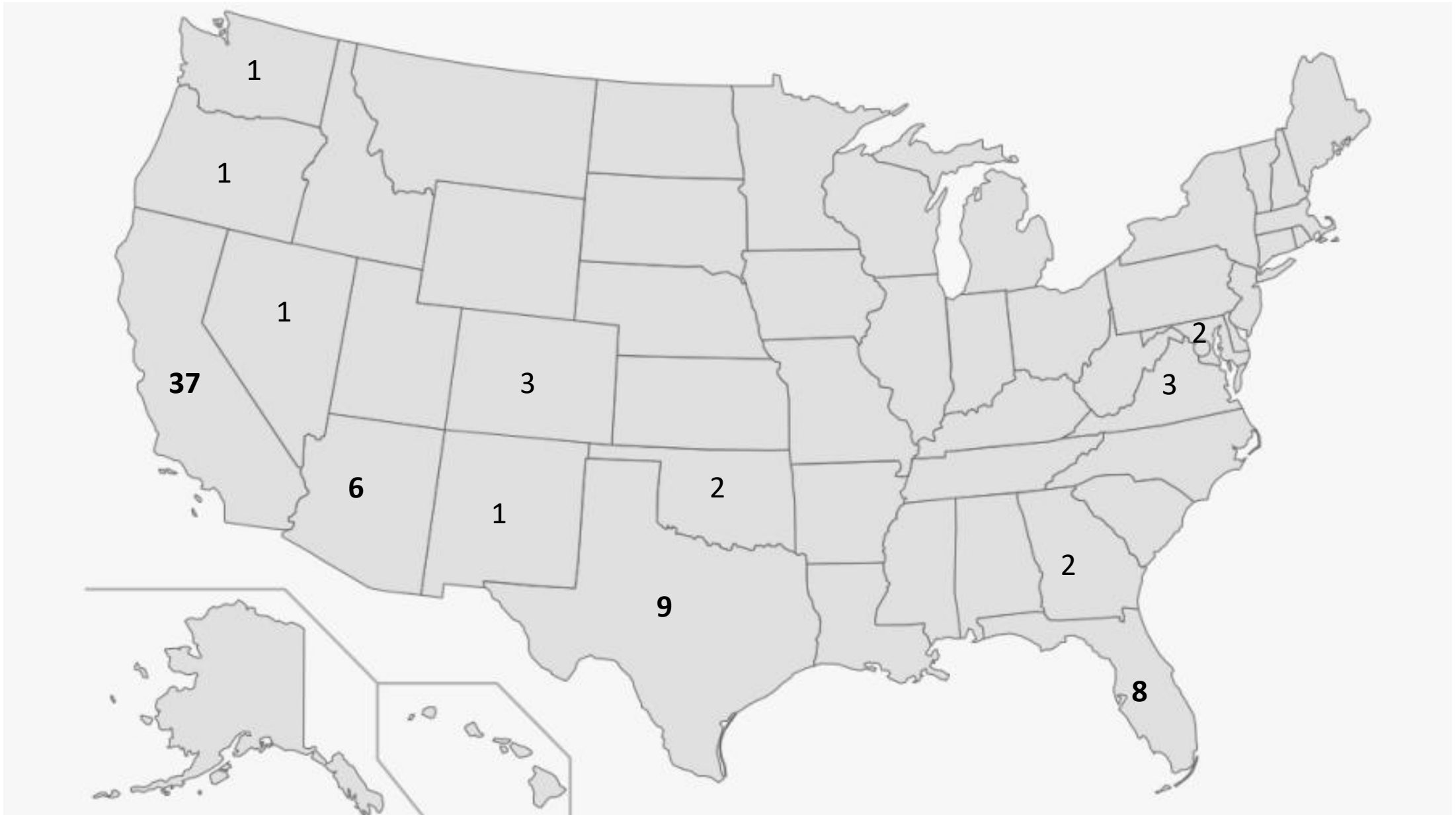
15 countries

America is still leading, other places catching up

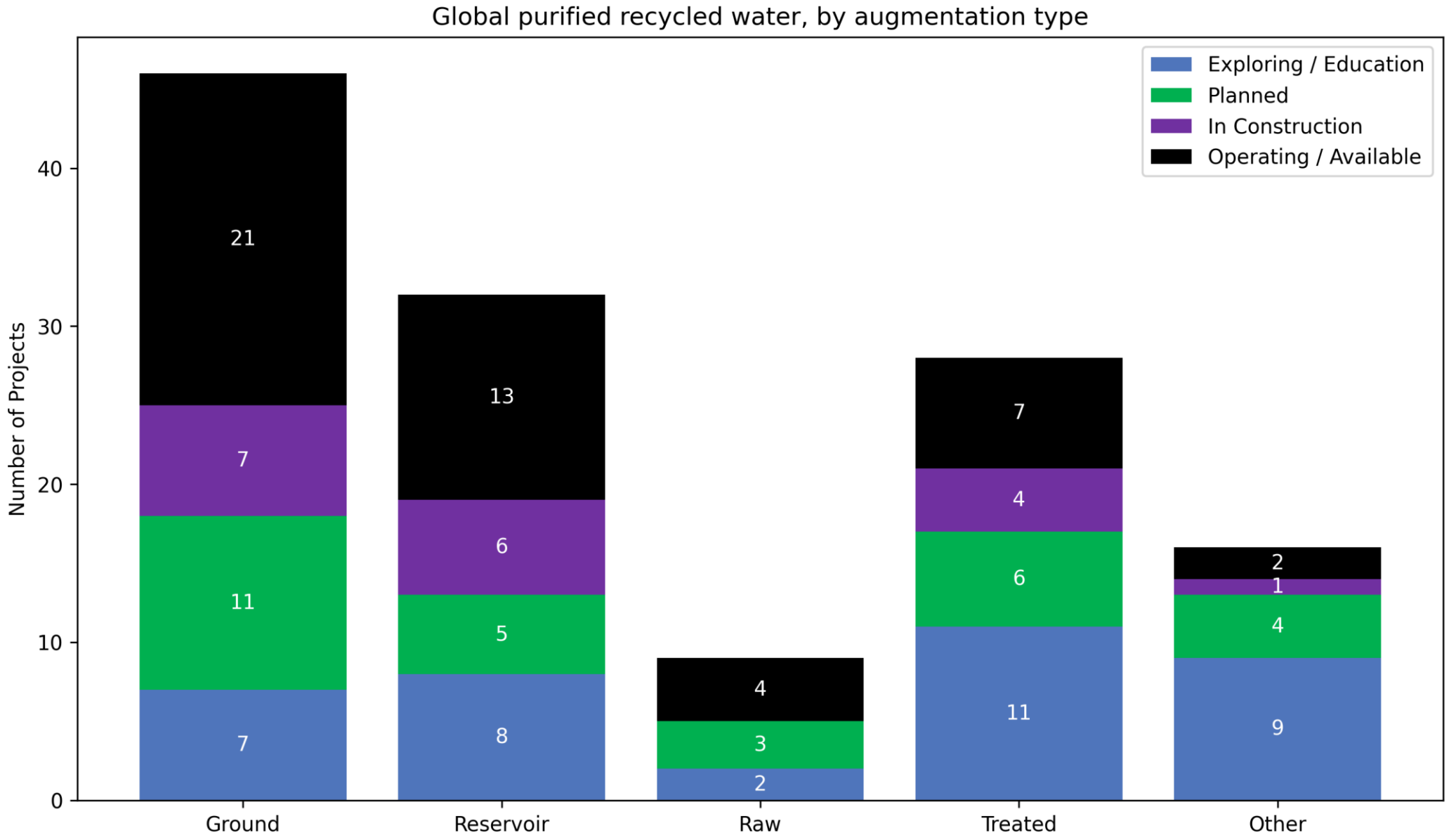


'Available':
Majority run full time; a few in limited conditions eg drought, tidal, permit limits.
See new chart on intermittency.

US purified recycled water locations, by state



Purified recycled water locations by augmentation type



Operating indirect (groundwater & reservoir) are the largest

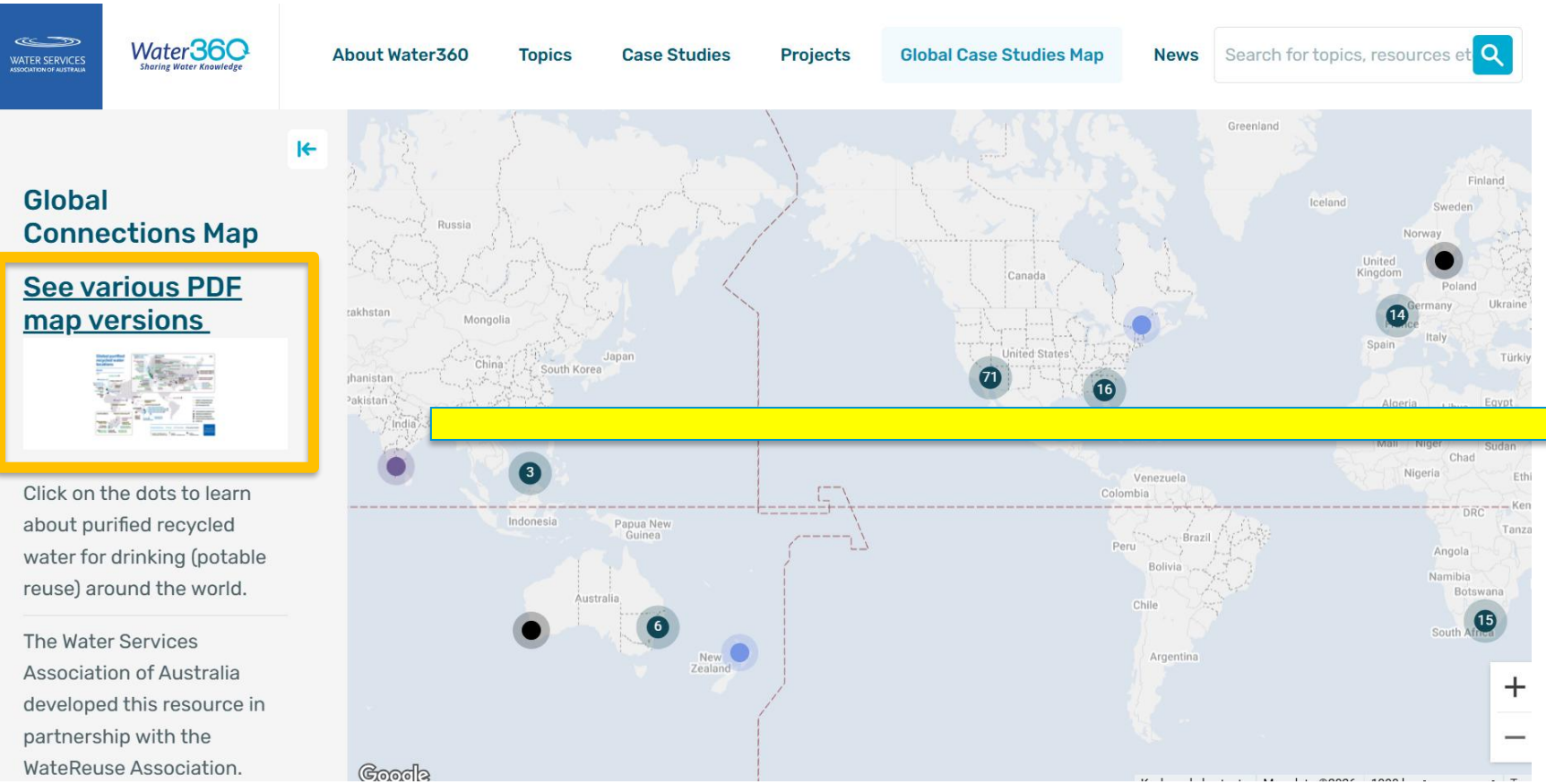
(Since California DPR regulations, more direct coming through)

Other: River discharge – UK, Spain, Oklahoma

Key messages:

- All water is recycled: many towns drink some water used by upstream towns, even if it isn't always well understood.
- Purified recycled water isn't new: It's been growing globally since the 1960s, and at least 35 cities/communities around the world have already adopted it as part of their drinking water supply.
- There are over 70 more cities/communities moving towards it. Some are coastal, some inland, and not just places with arid climates.
- The configurations don't really matter – all produce safe drinking water.
- By 2050, over 100 cities/communities could be using it as part of their drinking water supplies.
- Locations can be big cities, small villages, lakes that supply whole counties, large wholesalers that sell the drinking water to dozens more cities/municipalities.
- This water is being safely drunk by 30 million people, in hundreds of municipalities, right now – and this could well pass 55 million by 2050.

Tried to make the PDFs, table more obvious:



Download latest PDF maps for different aug types & stages, charts, plus 2026 master list

What should I interrogate next year?

- Does this help you influence policy?
- Which elements are most useful?
- Let me know about places/projects that might want to join
- Link your website to it
- Thanks to WateReuse for the collaboration
- danielle.francis@wsaa.asn.au

WATER SERVICES
ASSOCIATION OF AUSTRALIA

GLOBAL CONNECTIONS MAP

The Water Services Association of Australia developed this resource in partnership with the WateReuse Association. to learn about purified recycled water for drinking (potable reuse) around the world.

SCAN QR HERE

Thanks to all my contributors & collaborators

- Linda MacPherson (New Water ReSources, USA)
- Ben Glickstein, Alex Cross, Monika Merk, Rosario Cortes, Noelle George (WateReuse Ass'n, USA)
- **Chris Swartz (Water Utilization Engineers, South Africa)**
- **Jenn Swart (Water Replenishment District, USA)**
- **John Rehring,** Lydia Holmes, Pranjali Kumar, Andy Salveson, Eva Steinle-Darling (Carollo, USA)
- **Claire Johnson, Emily Calderon, Jason Dadakis (OCWD, USA)**
- David Ammerman (Altamonte Springs, USA)
- Rupam Soni (Metropolitan Water District, USA)
- Peter Asteberg (Norconsult, Sweden)
- Dave Pederson (LVMWD, USA)
- Ian Law (IBL Solutions, Australia)
- Stuart Khan (University of Sydney, Australia)
- Darrel Andrews, Nicole Rutigliano, Chad Lorance (City of Tarrant, Texas)
- Tack Roberts (Astound, USA)
- David Sloan (Freese Nichols, USA)
- Dave MacNevin, Greta Zornes (CDM Smith, USA)
- Lillian Xie (Zone 7 Water, USA)
- Daniel Nix (Wichita Falls, USA)
- Manisha Kothari (San Francisco Public Utilities Commission, USA)
- Uday Kelkar (NSJEI, India)
- Yvan Poussade (Veolia, France)
- Megan Schalkwyk (Umgeni, South Africa)
- Stephen Katz (Veolia, Canada)
- Freddie Clayton (Journalist, Spain)
- Slade Smith (Design, Australia)
- Vivo (Web design, Australia)
- And the many others who contributed data, thoughts and goodwill

Dale Watson
Rakshit Malik
Rose Nguyen
WSAA