

Aon Center 707 Wilshire Blvd.
Los Angeles, CA 90017
LBL Level



Los Angeles Groundwater Replenishment – Initial Phase

Ozone Demonstration Project

Joline Muñoz, LASAN

Yoshiko Tsunehara, LADWP

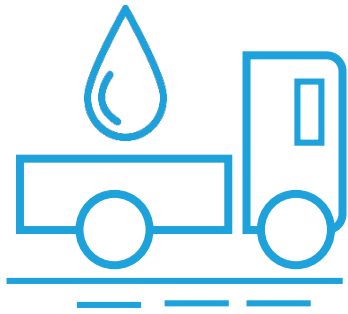


LA GWR Project Overview

- Mayor's Sustainability Plan Goals
- GWR Initial Phase
 - Ozone Demonstration Project
 - Engineering Report/Regulations
- Future Phases – Advanced Treatment
 - Options for Treatment Trains
- Projected Timeline
- Outreach



LA's Water Sustainability Goals



50%

Reduce
purchased
imported
water by 50%

2025

50%



Source
50%
water
locally

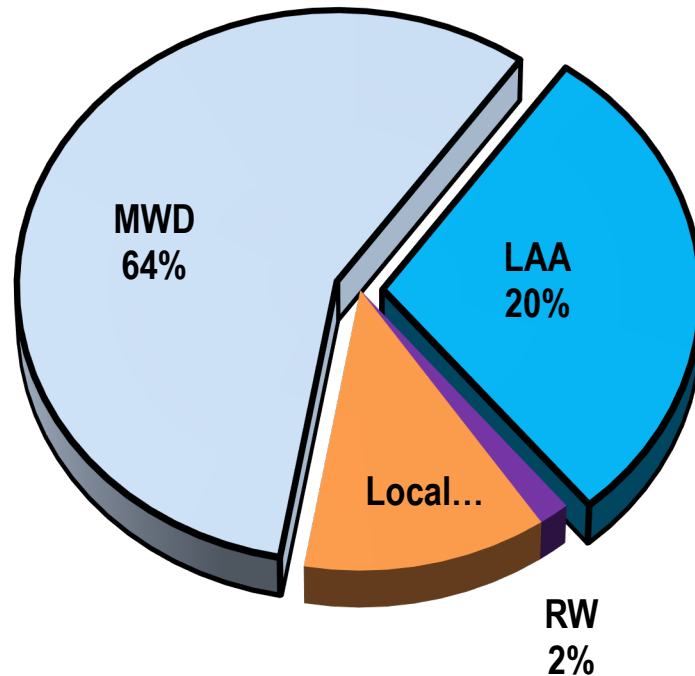
2035

Groundwater replenishment is an important part of meeting LA's water sustainability goals

Water Supply Reliability

FYE 2012 - 2016 Average

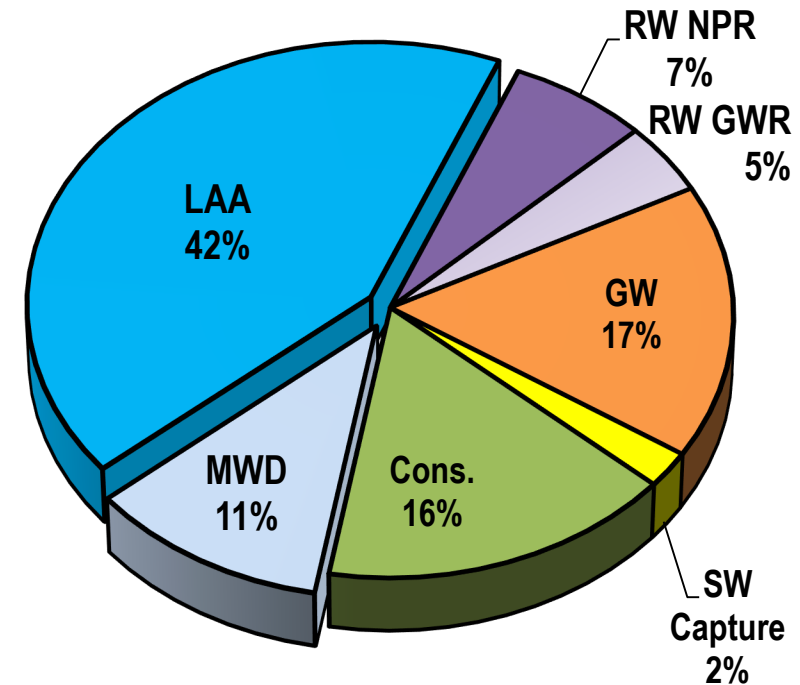
Total Demand: 540,400 AF



*Does not include 118,034 AF of historical conservation

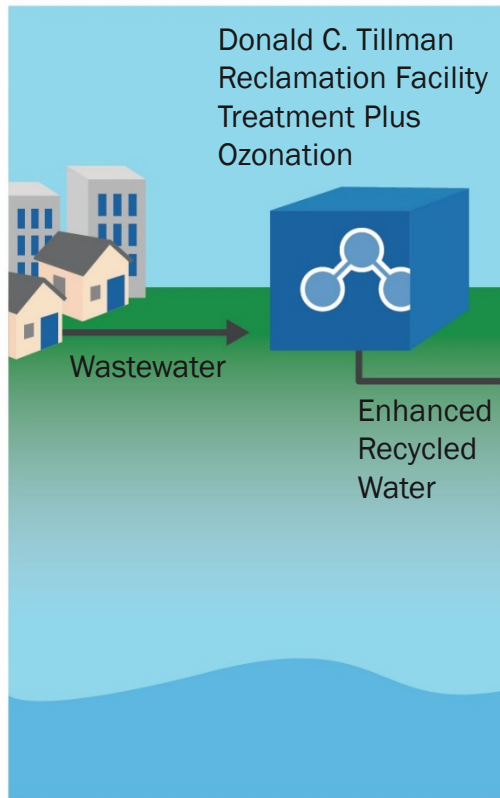
FYE 2040 Average

Total Production: 675,700 AFY

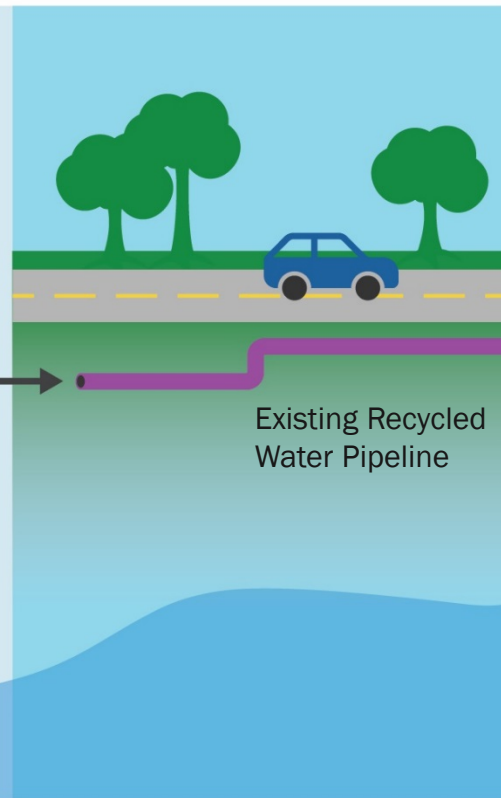


LA Groundwater Replenishment Project

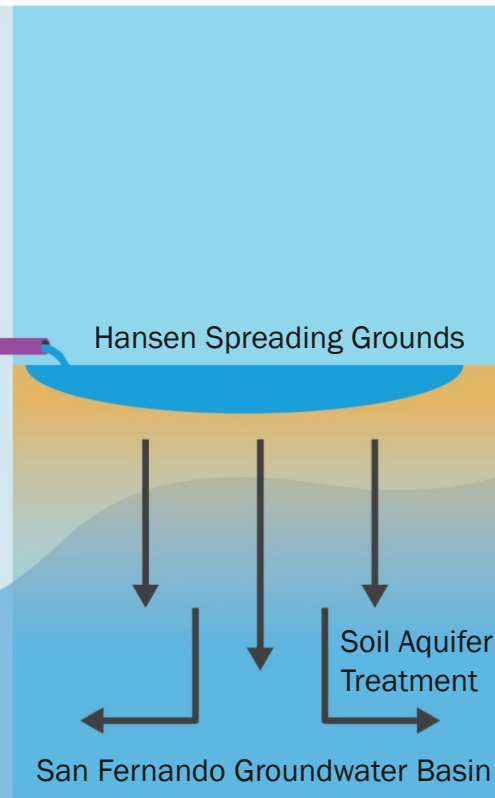
Treatment



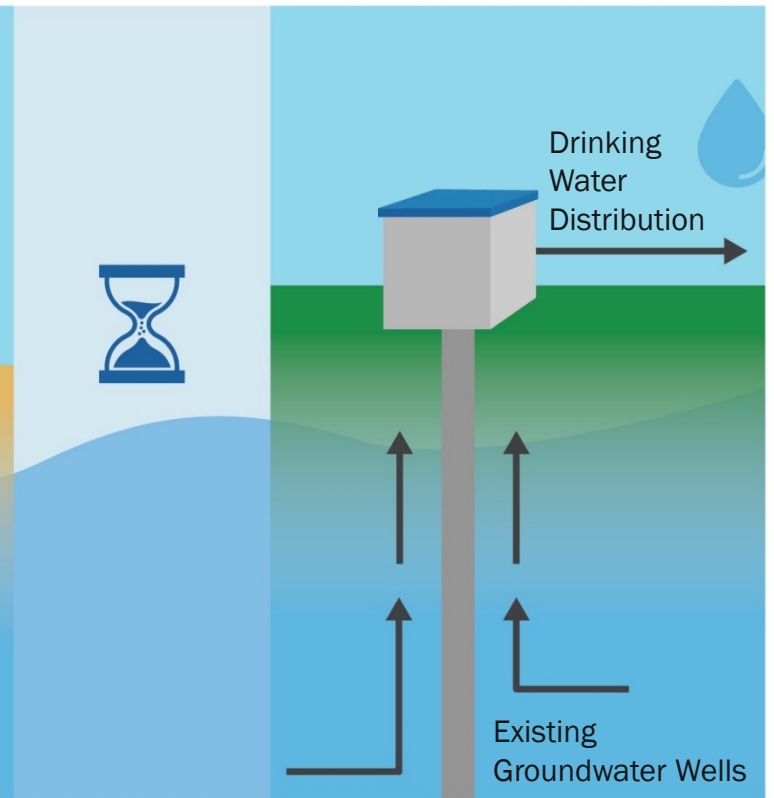
Delivery



Replenishment



Extraction

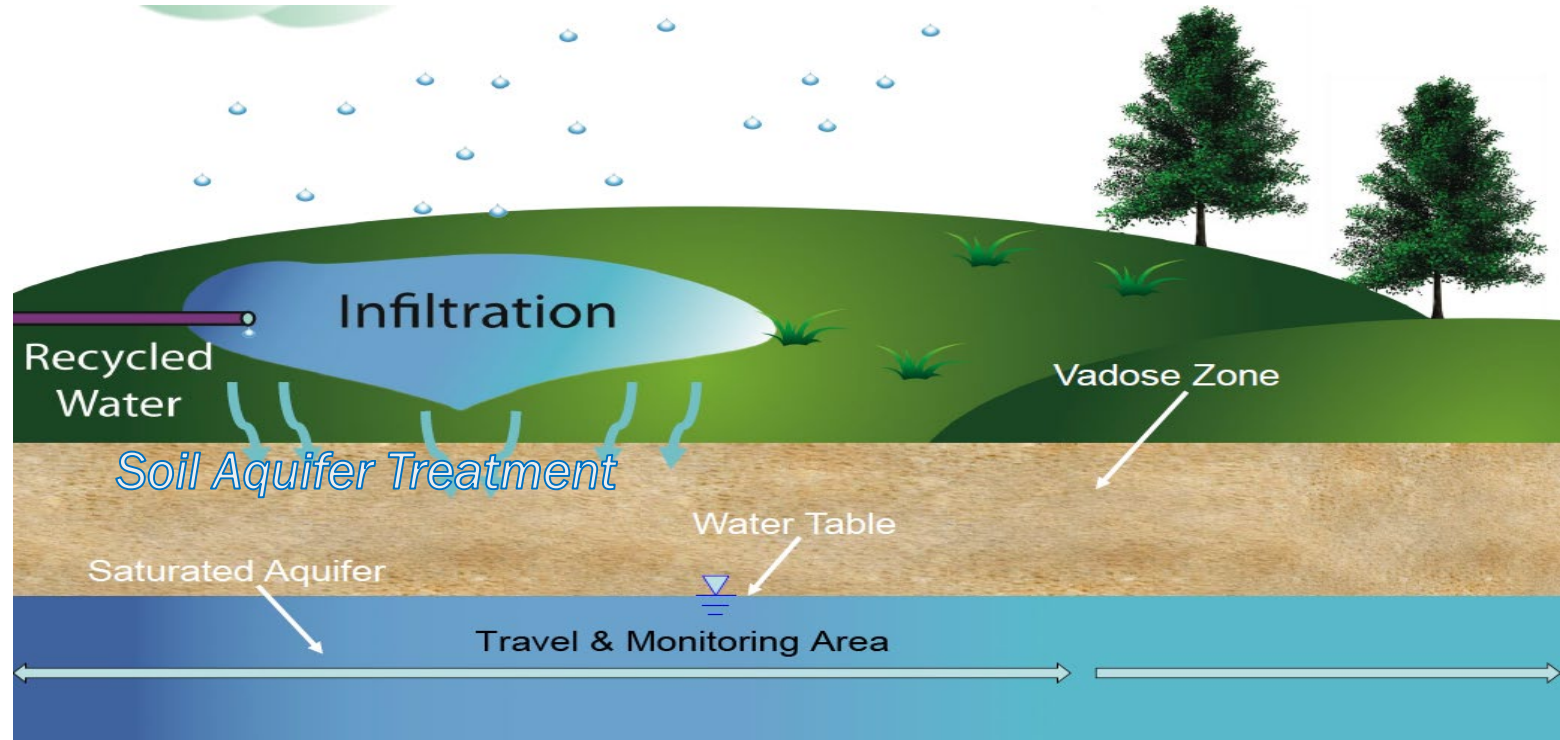
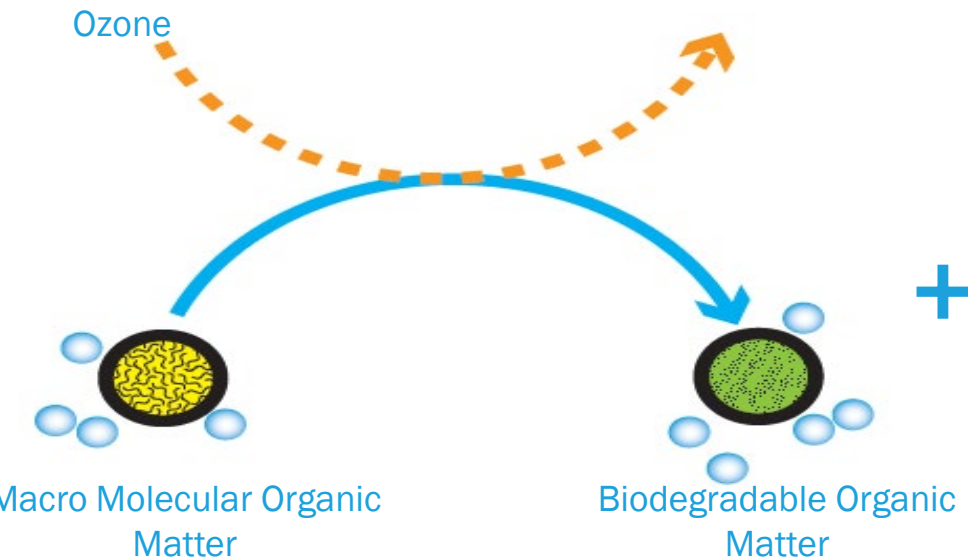


Groundwater Replenishment: Initial Phase



Groundwater Replenishment: Initial Phase – Ozone Demonstration Project

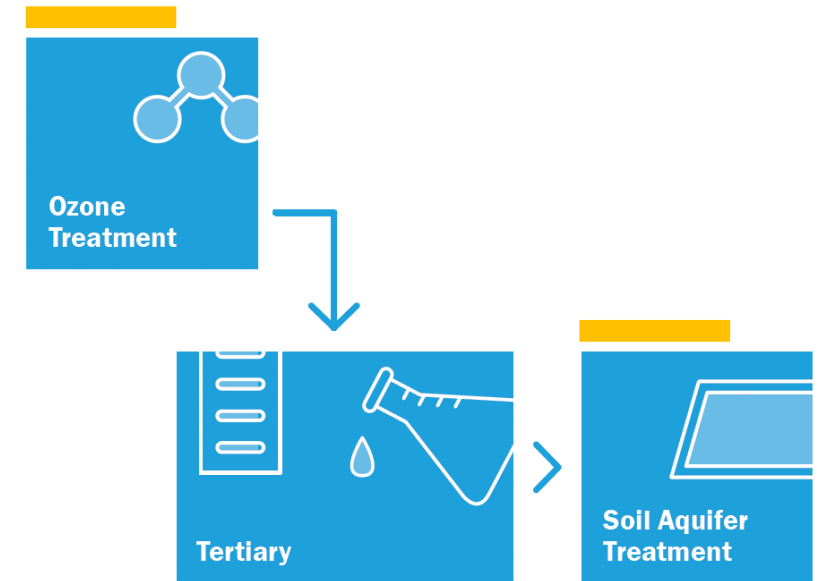
Ozone Demonstration



3,500 AFY

Ozone Demonstration Project

- Produces 3,500 acre-feet per year of enhanced recycled water for spreading
- Addresses immediate need to replenish the groundwater basin
- Shows the effectiveness and benefits of an added step of ozone treatment
- Begins spreading at Hansen Spreading Grounds





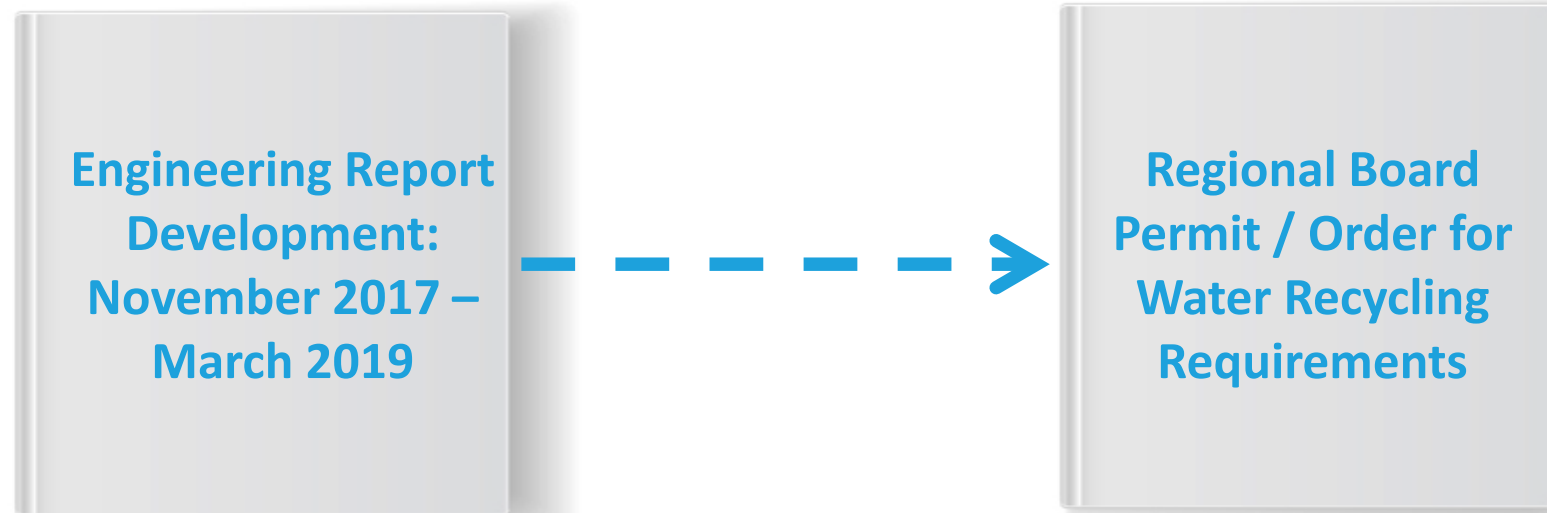
Groundwater Replenishment:

Initial Phase – Status

- Ozone Equipment Fabrication/Delivery and Installation
 - Start up in April 2019
- Draft Engineering Report Submittal to DDW
 - Approximately March 2019
- Full Scale Operation and Spreading
 - Summer 2019 – pending conditional permit



Groundwater Replenishment: Initial Phase – Regulations

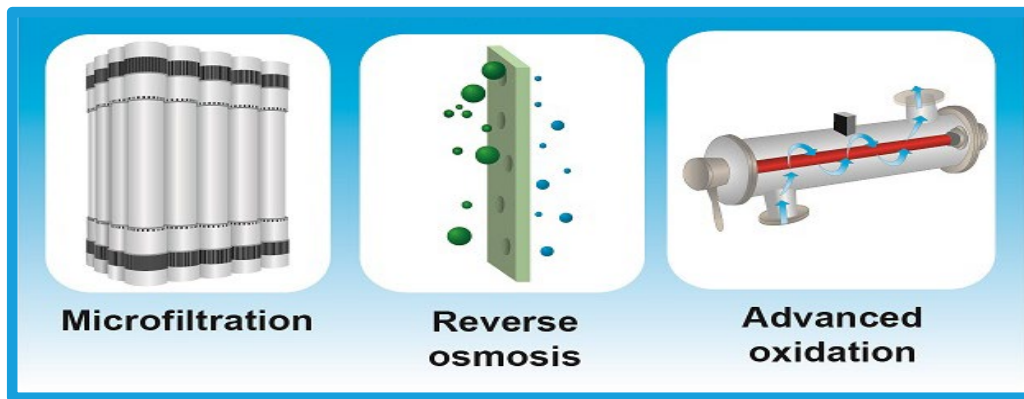


Groundwater Replenishment: Future Phases

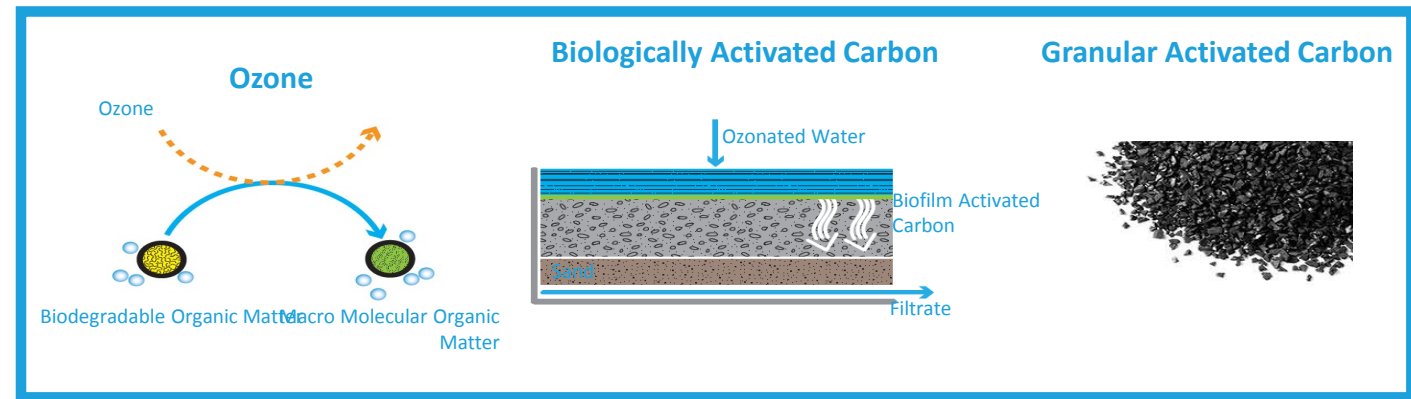


Groundwater Replenishment: Advanced Treatment Options

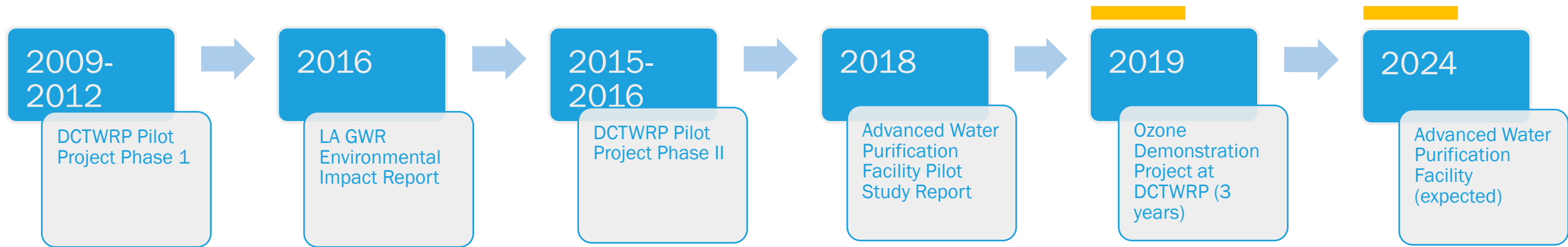
Full Advanced Treatment



Alternative Advanced Treatment with RO sidestream

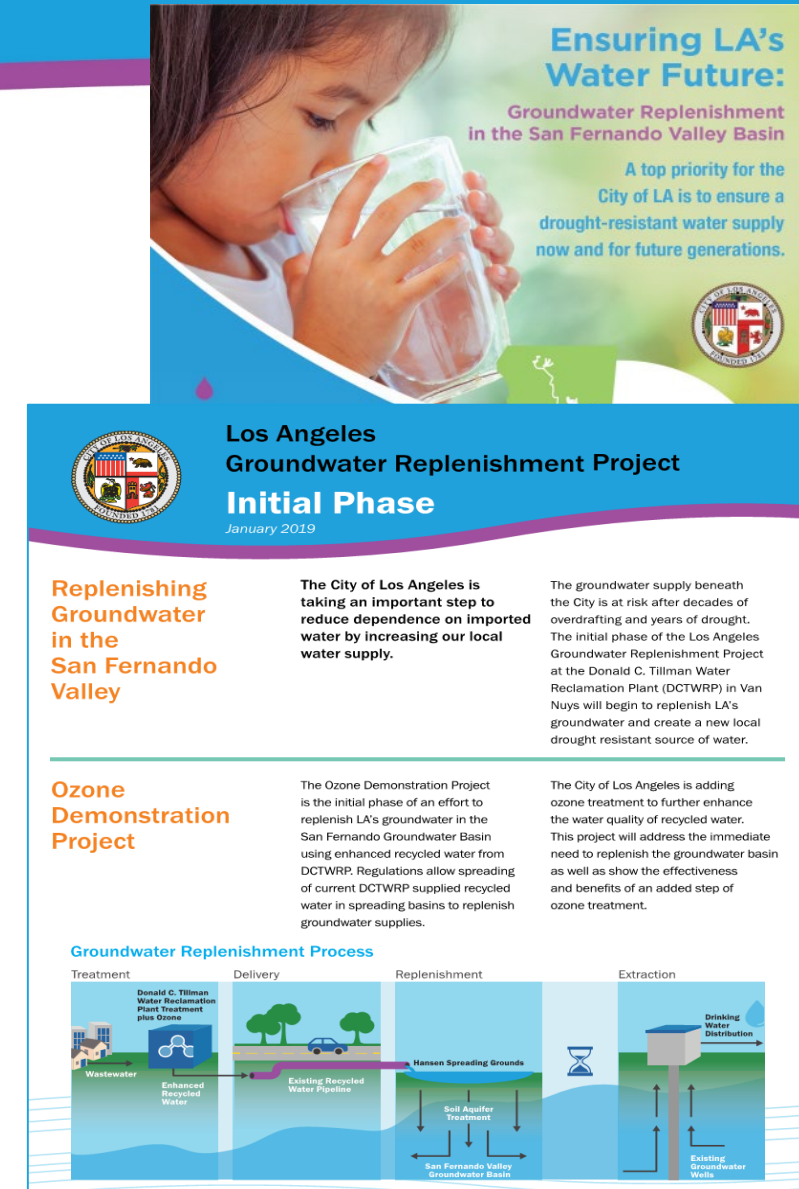


Timeline



Groundwater Replenishment: Initial Phase – Outreach

- **Completed Activities**
 - Initial Brochure
 - 3 Focus Groups and Survey (828 city voters)
 - Communications Work Plan
 - Key messages
 - List of key stakeholders
 - Fact Sheet and Frequently Asked Questions
 - Presentation Template
- **Planned Activities**
 - Stakeholder Presentations
 - External FAQ
 - Updated Project Website
 - Media Kit
 - Tours



The brochure is titled "Ensuring LA's Water Future: Groundwater Replenishment in the San Fernando Valley Basin". It features a photo of a child drinking water. The text states: "A top priority for the City of LA is to ensure a drought-resistant water supply now and for future generations." The City of Los Angeles seal is in the bottom right.

Los Angeles Groundwater Replenishment Project Initial Phase
January 2019

Replenishing Groundwater in the San Fernando Valley

The City of Los Angeles is taking an important step to reduce dependence on imported water by increasing our local water supply.

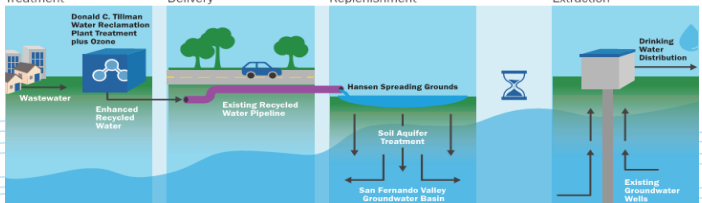
The groundwater supply beneath the City is at risk after decades of overdrafting and years of drought. The initial phase of the Los Angeles Groundwater Replenishment Project at the Donald C. Tillman Water Reclamation Plant (DCTWRP) in Van Nuys will begin to replenish LA's groundwater and create a new local drought resistant source of water.

Ozone Demonstration Project

The Ozone Demonstration Project is the initial phase of an effort to replenish LA's groundwater in the San Fernando Groundwater Basin using enhanced recycled water from DCTWRP. Regulations allow spreading of current DCTWRP supplied recycled water in spreading basins to replenish groundwater supplies.

The City of Los Angeles is adding ozone treatment to further enhance the water quality of recycled water. This project will address the immediate need to replenish the groundwater basin as well as show the effectiveness and benefits of an added step of ozone treatment.

Groundwater Replenishment Process



The diagram illustrates the process in four stages: 1. Treatment: Wastewater is processed at the Donald C. Tillman Water Reclamation Plant (plus ozone) to create enhanced recycled water. 2. Delivery: The enhanced recycled water is transported via an existing recycled water pipeline. 3. Replenishment: The water is spread at Hansen Spreading Grounds, passing through soil aquifer treatment into the San Fernando Valley Groundwater Basin. 4. Extraction: Water is pumped from existing groundwater wells and distributed as drinking water.

Market Research for LA GWR

- **Purpose**

- Gauge current sentiment on recycled water and LA GWR
- Quantitative data on public understanding, perceptions and messages
- Inform public communication and outreach strategies

- **Approach**

- Focus Groups
- Survey (polling)
- One-on-one stakeholder interviews

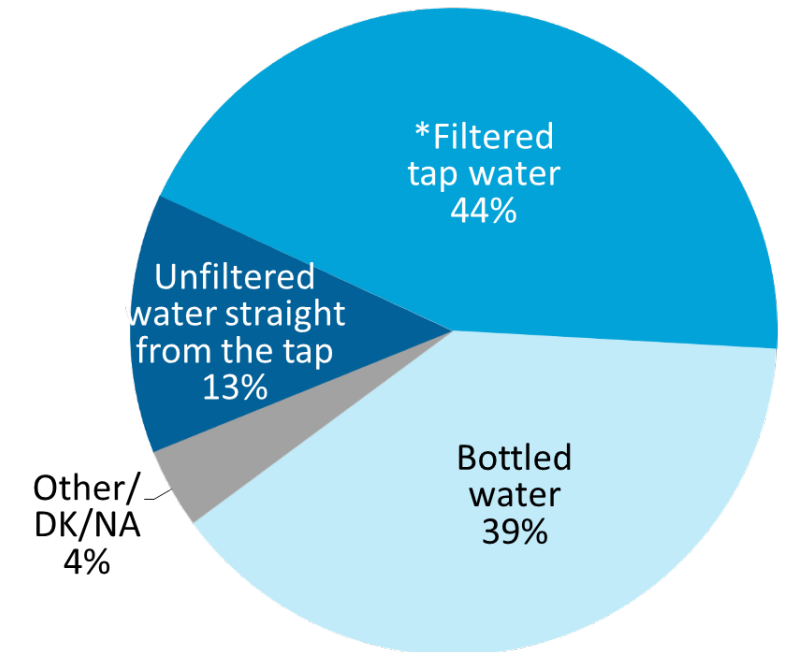
- **Market Research Project Team**

- Carollo Engineers, Inc. (Jeff Mosher)
- Katz & Associates (Sara Katz, Karen Snyder, and Camille Stephens)
- FM3 Research (Dave Metz and Laura Covarrubias)



Market Research on Potable Reuse

- **Three Focus Groups** (May 2018)
 - San Fernando Valley Latinos
 - San Fernando Valley Non-Latinos
 - Other City residents
- **Survey** (July 14-30, 2018)
 - Via cell phone, landline, and online
 - 828 voters registered in the City
 - English and Spanish
 - Margin of error for the full sample was 3.4%
- **One-on-one Interviews** (Aug-Oct, 2018)
 - 20 key stakeholders
 - One-on-one discussions on key topics



Q: Thinking about the water that you drink at home, what do you most often drink?

Market Research Takeaways

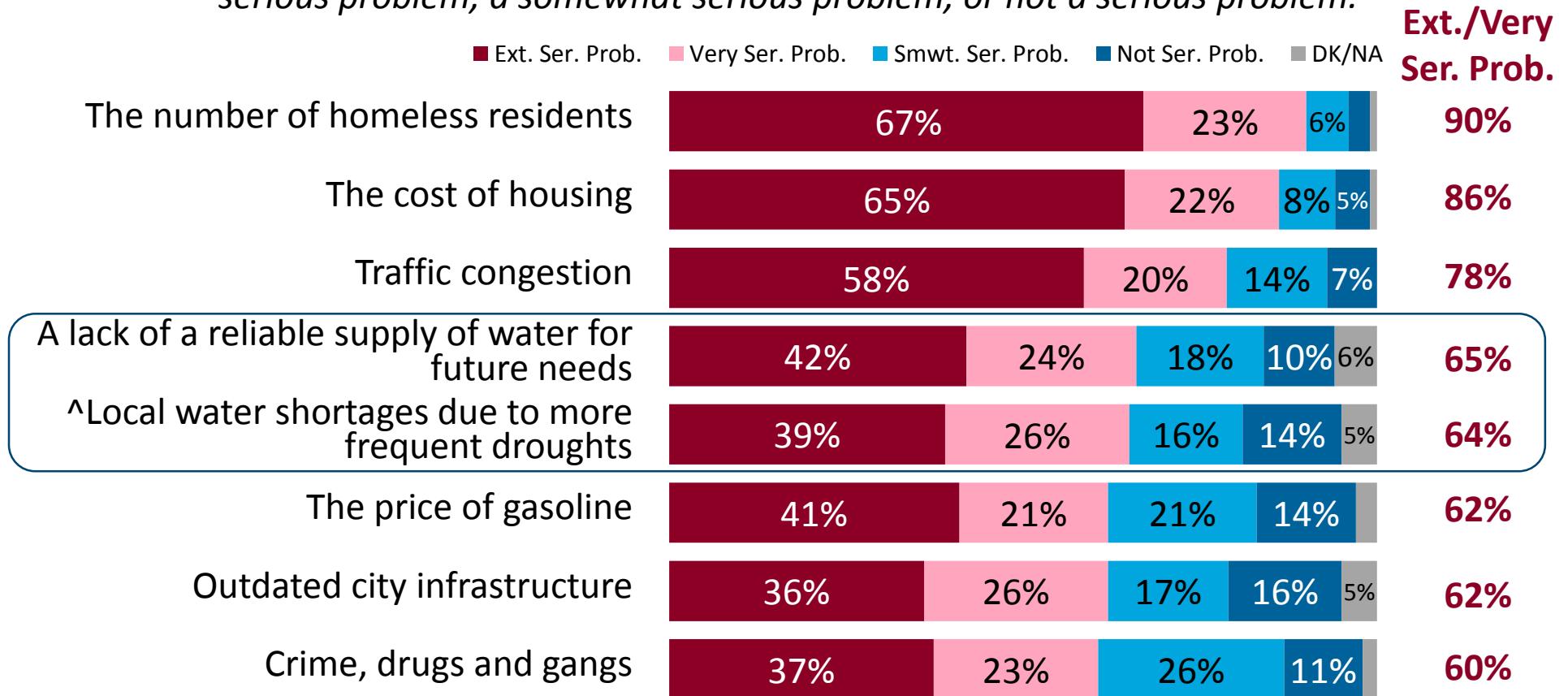
- Focus Groups
 - Support for the **LA Groundwater Replenishment Project** increases with “Positive Messages” (see chart)
 - Results “revealed an encouraging level of support for the project, though **not without some reservations and apprehension**”

Position	Initial Ask	After Positive Messages
Strongly Support	7	17
Somewhat Support	13	9
TOTAL SUPPORT	20	26
Strongly Oppose	0	1
Somewhat Oppose	9	2
TOTAL OPPOSE	9	3

Focus Group Support for LA GWR (No. of People)

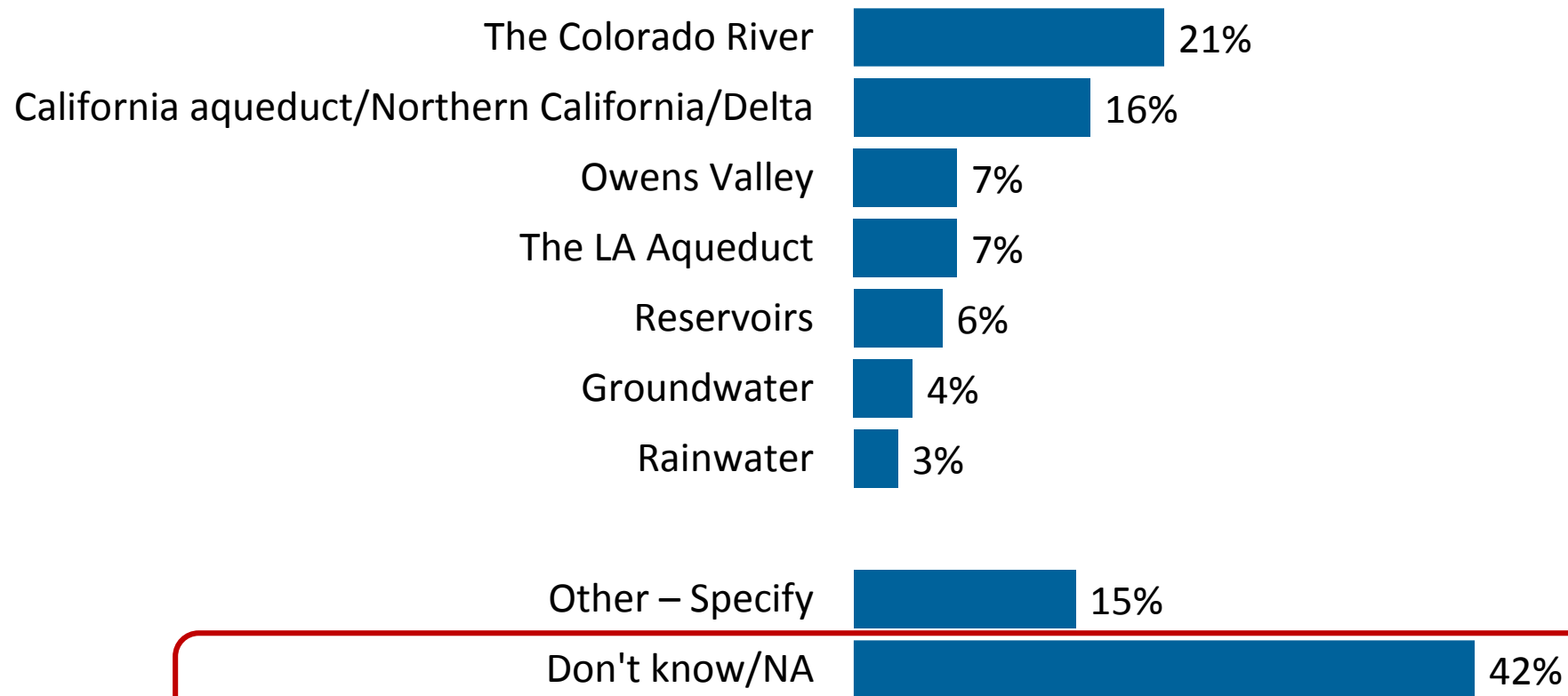
Most voters believe water issues are serious problems, although housing and traffic issues spark greater concern.

I'm going to read you a list of issues that some people say are problems in your area. Please tell me if you think it is an extremely serious problem, a very serious problem, a somewhat serious problem, or not a serious problem.



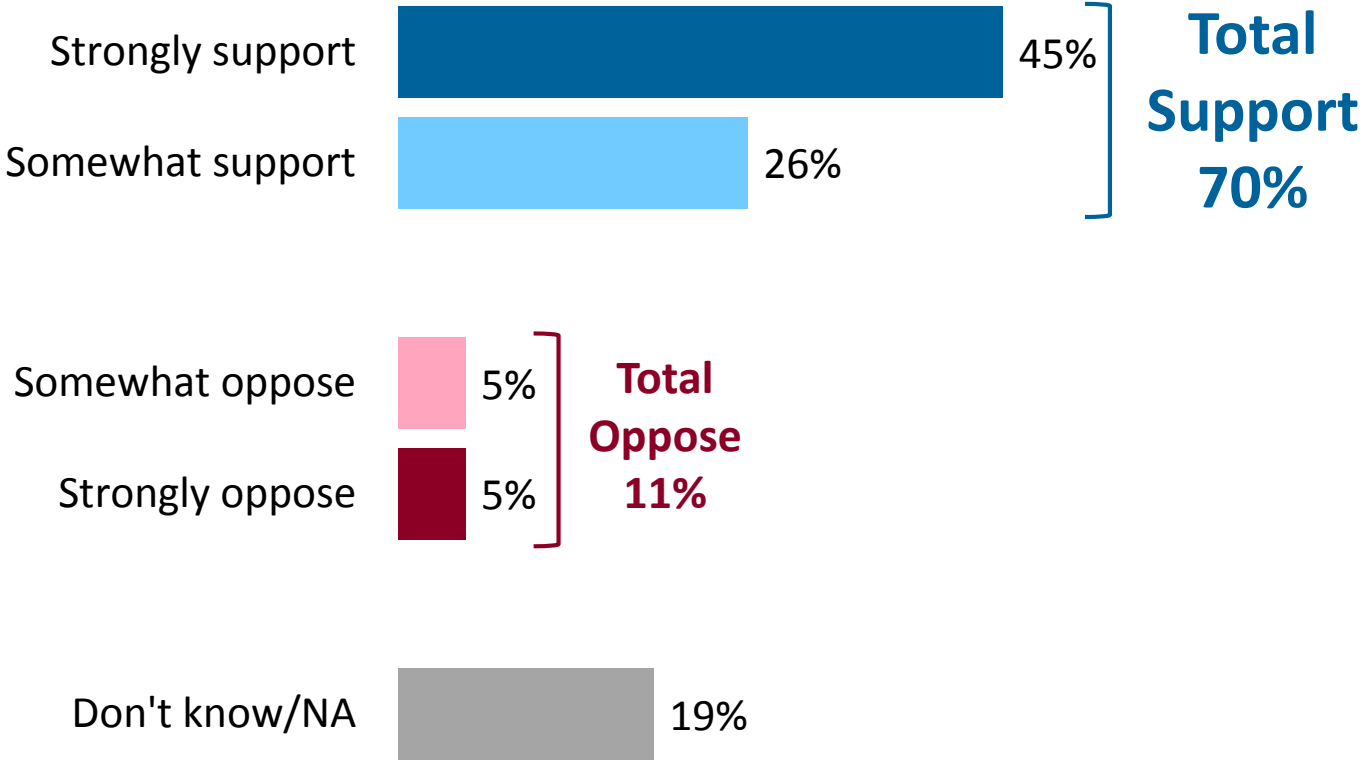
Over four in ten voters are uncertain about the source of the city's drinking water.

So far as you know, where does the City of Los Angeles get its drinking water from?



Seven in ten voters support the City of Los Angeles' goals to reduce the purchase of imported water and increase water obtained from local sources.

One goal is to reduce the purchase of imported water by 50% by the year 2025; and the second is to get 50% of the city's water from local sources by the year 2035.

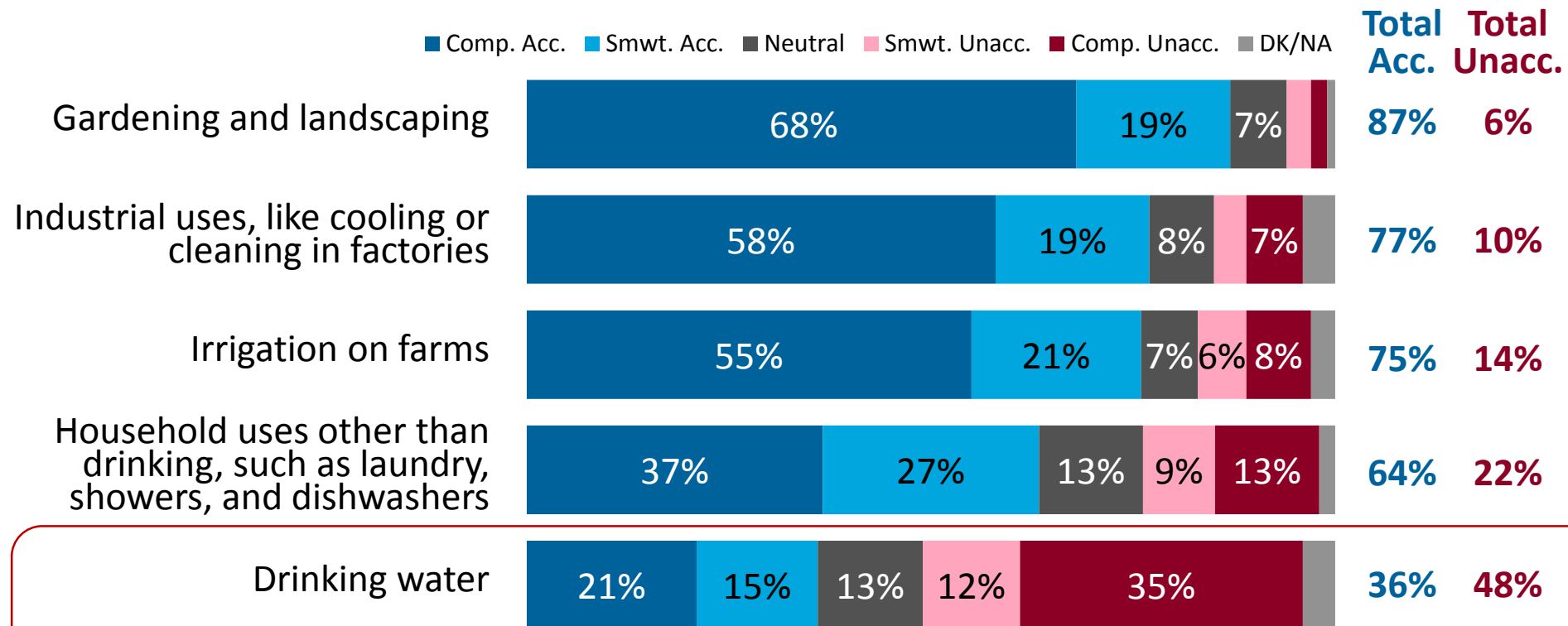


Most Supportive:

- Believes community is going in the right direction (82%)
- Very Liberal (82%)
- Democratic Men (82%)
- Democrats Ages 18-49 (82%)
- Somewhat Liberal (80%)

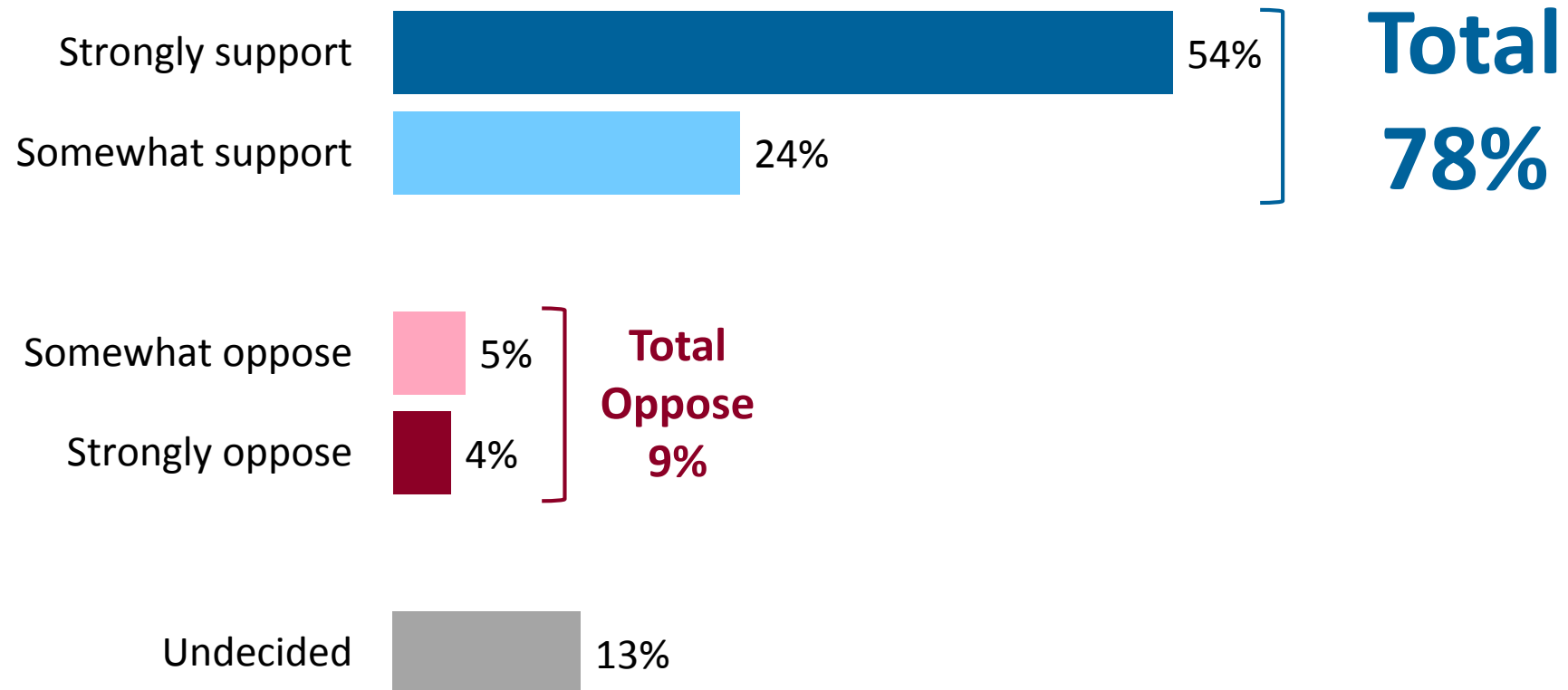
Voters accept most uses of recycled water – with the notable exception of drinking water.

Recycled water refers to wastewater from homes and businesses that is thoroughly cleaned and treated so that it can be used for other purposes. I am going to read you a list of potential uses for recycled water in Los Angeles. Please indicate whether you consider each item to be a completely acceptable, somewhat acceptable, somewhat unacceptable, or completely unacceptable use for recycled water.



Over three-fourths indicate they support the Groundwater Replenishment Project, with over half *strongly* in favor.

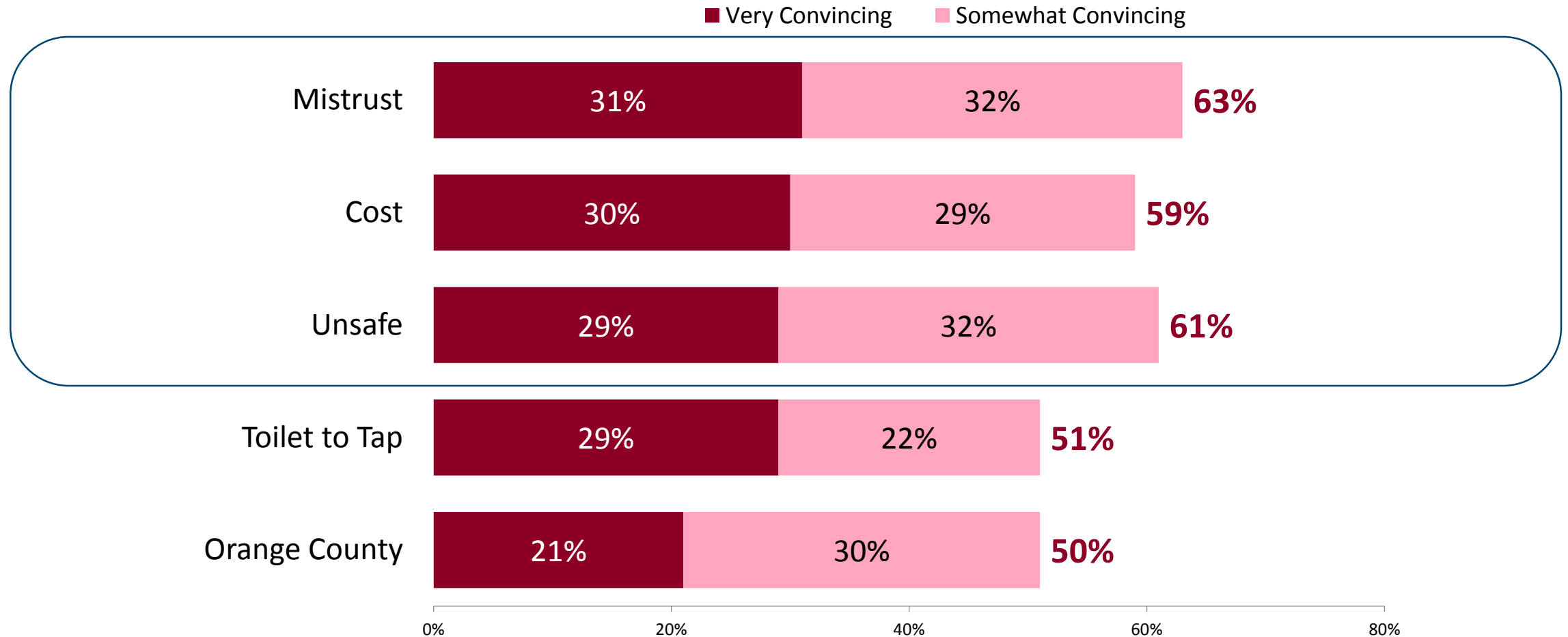
From what you have heard, would you say that you support or oppose the LA Groundwater Replenishment Project?



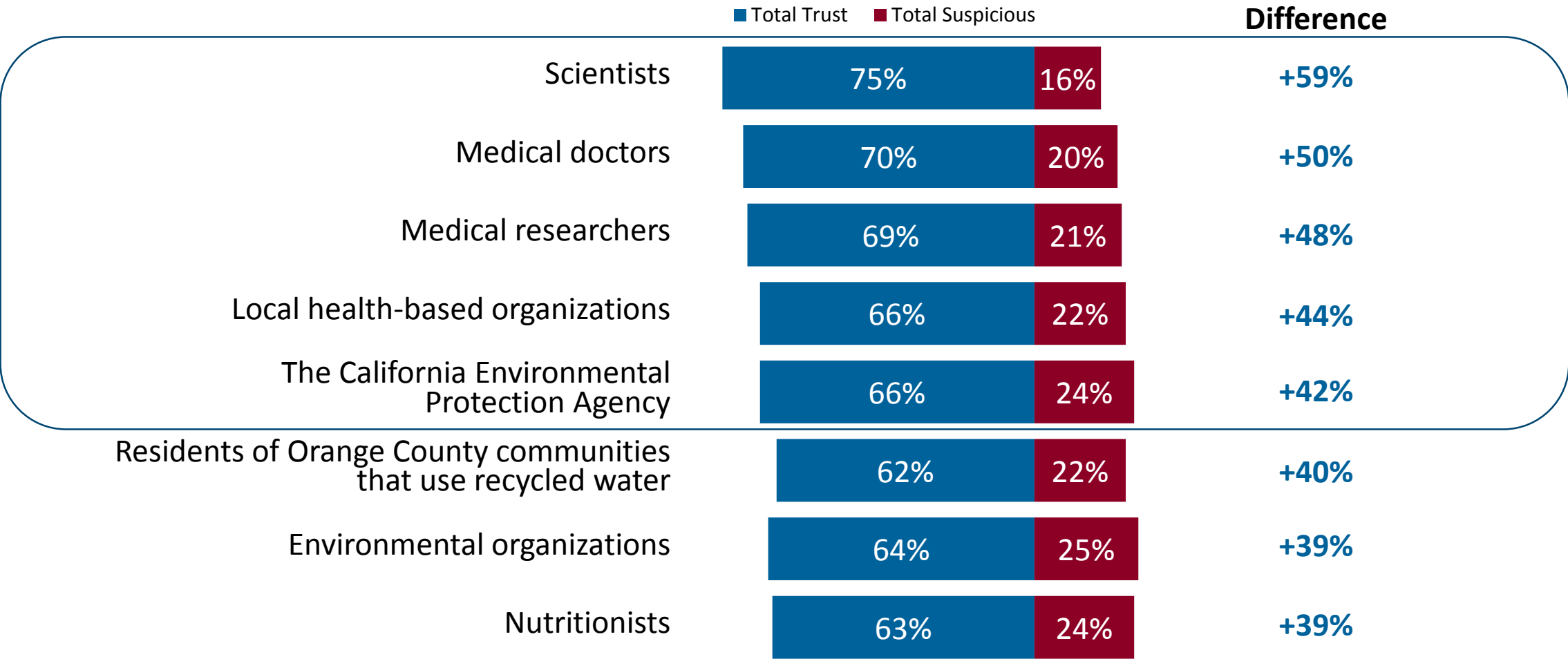
Profile of the Segments

Consistent Strongly Support	Swing	Ever Oppose
37% of the Electorate	43% of the Electorate	20% of the Electorate
Liberals	Independents	Republicans
Democratic Men	Ages 30-49	Very Conservative
Ages 18-29	Mixed-Party Households	Women Ages 50+
Democrats Ages 18-49	Women Under 50	Ages 65-74
Interviewed in Spanish	Somewhat Liberal	Conservative
Men Ages 50+	Latino Men	Ages 50-64
Democrats	Parents	Ages 50+
Caucasians	HH Income \$75K - 100K	Democrats Ages 50+
Men	Election Day Voters	Ages 65+
HH Income <\$60,000		Voters of Color

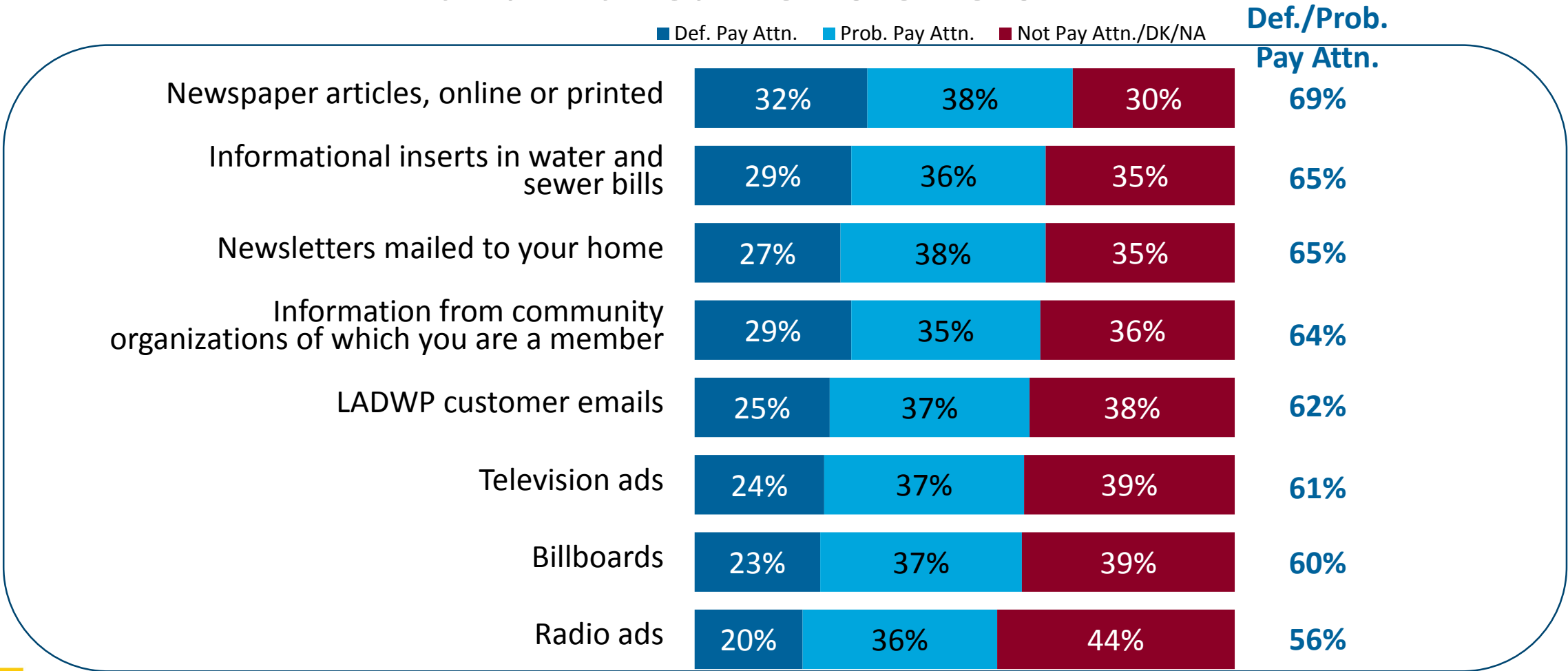
The most convincing opposition messages focused on distrust in local authorities and on the cost of the project.



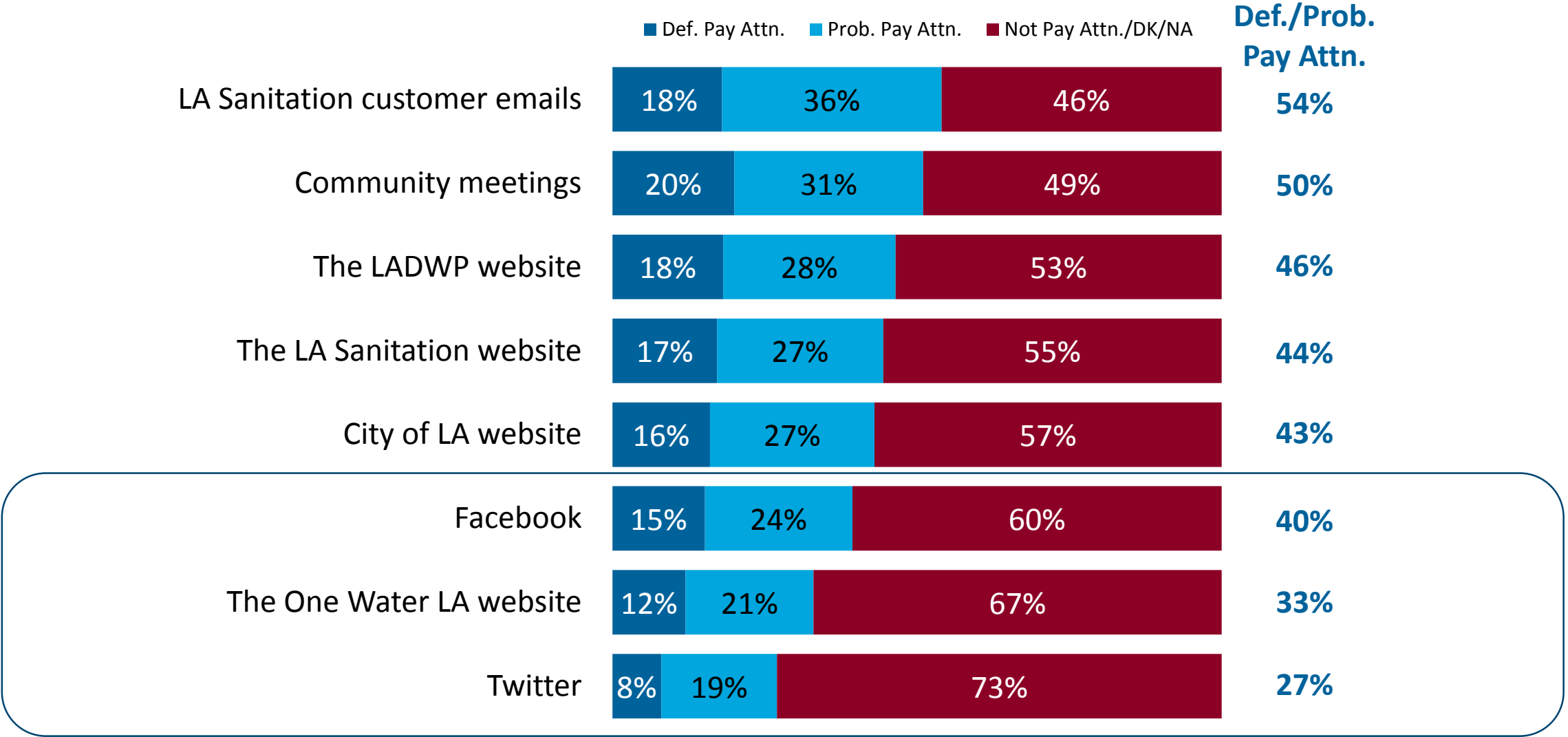
Voters find scientists' and medical doctors' opinions about the Groundwater Project the most trustworthy.



Voters are most likely to pay attention to information about the Groundwater Project via newspaper articles, informational inserts, and mailed newsletters.



Voters are least likely to pay attention to Twitter and the One Water LA Website.



Market Research Conclusion

While there are obstacles to public support for the project, the research suggests that careful messaging and an ongoing program of strategic communications and engagement can create a durable majority that finds it acceptable.

Groundwater Replenishment: Next Steps

- RFQ for the AWPf has been issued
- RFP will be issued to a pre-qualified list of D/B Teams
- Ozone Demonstration Project Equipment Arrival on site
 - Installation/Start-up
- Finalize Engineering Report and obtain conditional permit
- Begin Spreading





Thank you!