



AMERICAN WATER

PFAS Treatment Options

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About California American Water



FACTS AT A GLANCE:

Customers served: 750,000 people throughout California

Employees: 318

Annual infrastructure investment: \$200 million (2025)

Water storage facilities: 173

Distribution storage capacity: 118 mgd

Fire hydrants: 15,789

Feet of pipeline: 12,291,141 (2,328 miles)

Charitable contributions (CAW and AWCF): \$1 million (2025)

Water quality: 650 different tests on more than 25,000 water samples

The above numbers are approximations.

Decision Framework

Start with the system, not the product



1 Characterize PFAS profile, chemistry, flow

2 Screen Treatment and source options

3 Validate Bench or pilot testing

4 Deliver Design, permit, construct

5 Sustain Operate, monitor, fund

GRANULAR ACTIVATED CARBON

GAC: The Utility Workhorse



Why utilities choose it

Proven and familiar

Adsorption-based treatment with established full-scale operating experience.

Flexible operation

Lead-lag vessels provide polishing and help utilities use media efficiently.

Watch the water matrix

Natural organic matter and other constituents can reduce media life.

Best fit: many medium and large utility applications

ION EXCHANGE

Compact & Selective

Specialized resin beads capture PFAS ions.

Shorter contact time can reduce the treatment footprint.

Performance remains highly dependent on source-water chemistry.

Advantages

Compact footprint
Strong performance in selected applications

Tradeoffs

Resin replacement
Residuals and disposal planning

Design lens

Competing ions
Chlorine and pretreatment needs

Best fit

Smaller groundwater systems
Space-constrained sites

The GAC-versus-IX decision is a site-specific lifecycle comparison.

Reverse Osmosis & Nanofiltration

Membranes: Broad rejection, greater complexity



Strength

High removal across a broad range of PFAS and other constituents.

Tradeoffs

Higher energy
More complex operations
Concentrate management.

Best when PFAS is one of several treatment objectives.

Alternatives Beyond Treatment

Sometimes the best treatment is a supply strategy

BLEND

Combine sources to manage finished-water concentrations.

REPLACE

Use an alternative source where supply is available.

REST

Temporarily or permanently remove a source from service.

OPTIMIZE

Change pumping or system operations to reduce reliance.

Evaluate the entire system before committing to a treatment process.

CALIFORNIA CASE STUDY

Nut Plains Well – 950 GPM



2017

GAC treatment placed in operation

MONITOR

Mid-bed results guide media management

18–24 MO.

Approximate historical changeout cycle

Key Takeaways

The challenge is selecting, delivering, and sustaining the right solution.

1

PROVEN OPTIONS

GAC, ion exchange, and membranes can remove PFAS.

2

SITE-SPECIFIC CHOICE

Water chemistry, footprint, residuals, and operations determine fit.

3

LIFECYCLE COMMITMENT

Affordability includes decades of monitoring, media, energy, and labor.

Sound Science • Thoughtful Engineering • Disciplined Operations • Affordability



Thank you!

