

Restoring a PFAS-impacted Groundwater Supply for Potable Use

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Orange County Water District



ORANGE COUNTY WATER DISTRICT (OCWD)

- Formed in 1933
 - Manage the OC Groundwater Basin
 - Protect rights to Santa Ana River water
- Provide groundwater
 - 19 municipal and special water districts
 - 2.5 million residents
- Basin provides 77% of the water supply for north & central OC



Extent of Current PFAS Impact in OCWD Service Area

Current California PFAS Drinking Water Advisories

Notification Levels

PFOA = 5.1 ng/L

PFOS = 6.5 ng/L

PFBS = 500 ng/L

Response Levels

PFOA = 10 ng/L

PFOS = 40 ng/L

PFBS = 5,000 ng/L

Draft Public Health Goals

PFOA = 0.007 ng/L

PFOS = 1 ng/L

- **11 water retailers** in the OCWD service area impacted by 10 ng/L PFOA Response Level
- Wellhead treatment for **59 of ~200** large municipal wells
- **Up to ~ 1/3 of groundwater basin** production (100,000 acre-ft/year) unable to be served
- **~ >\$50 million/year** additional alternative water supply cost (treated *imported* surface water)

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OCWD Policy Response to PFAS

- OCWD Board Policy established
 - OCWD to fund 100% of PFAS treatment system capital expense
 - Retail agency to own & operate treatment system
 - O&M costs split 50/50 between OCWD and Retailer



- Supported by non-affected retail agencies



Litigation filed in December 2020

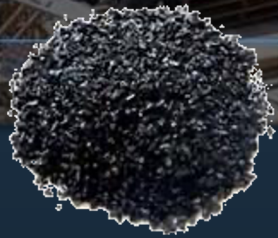
- Preliminary long-term response cost estimates > \$ 1 billion
- OCWD and 10 impacted retail water systems filed suit in Orange County Superior Court against 3M, Dupont, Chemours, and others



Ongoing PFAS Treatment & Piloting Study at OCWD



- What adsorbent should be used in the treatment vessels to best remove PFAS, and for the best value?
- Treatment Study: Test various products at *lab* and *pilot* scale; began Dec 2019



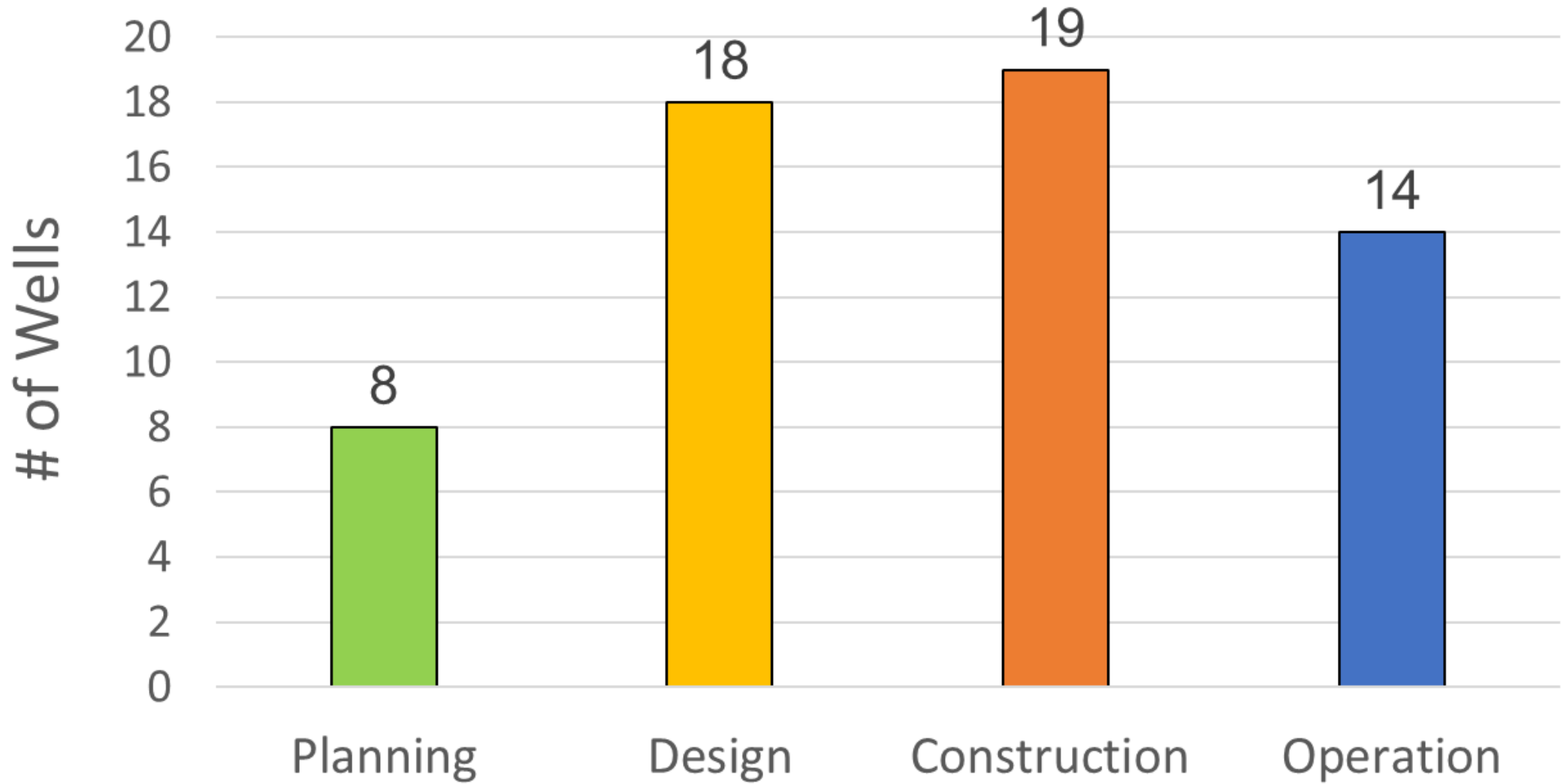
Granular Activated Carbon (GAC)

Ion Exchange (IX) Resin

Alternative Adsorbents



PFAS Impacted Wells Summary



Thank you!

To learn more, please go to:

<https://www.ocwd.com/what-we-do/water-quality/pfas/>

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