LEADERSHIP COUNSEL FOR JUSTICE & ACCOUNTABILITY

Drinking Water Issues in Disadvantaged Unincorporated Communities in the San Joaquin Valley

Presentation by Amanda Monaco

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Drinking water issues are widespread in the San Joaquin Valley.

~64,000 people in 64 disadvantaged unincorporated communities in the SJV receive unsafe drinking water (UC Davis 2018). (*this number excludes those on domestic wells)

During the 2012-2016 drought, the state received **more than 2,500** domestic well failure reports, the majority of which were in the Central Valley (DWR 2018). **2,000** domestic wells have already gone dry in the SJV this year (SHE).

Falling groundwater levels are likely to leave **up to 12,000** more wells dry, impacting up to **127,000** people's primary source of water (Water Foundation 2020).

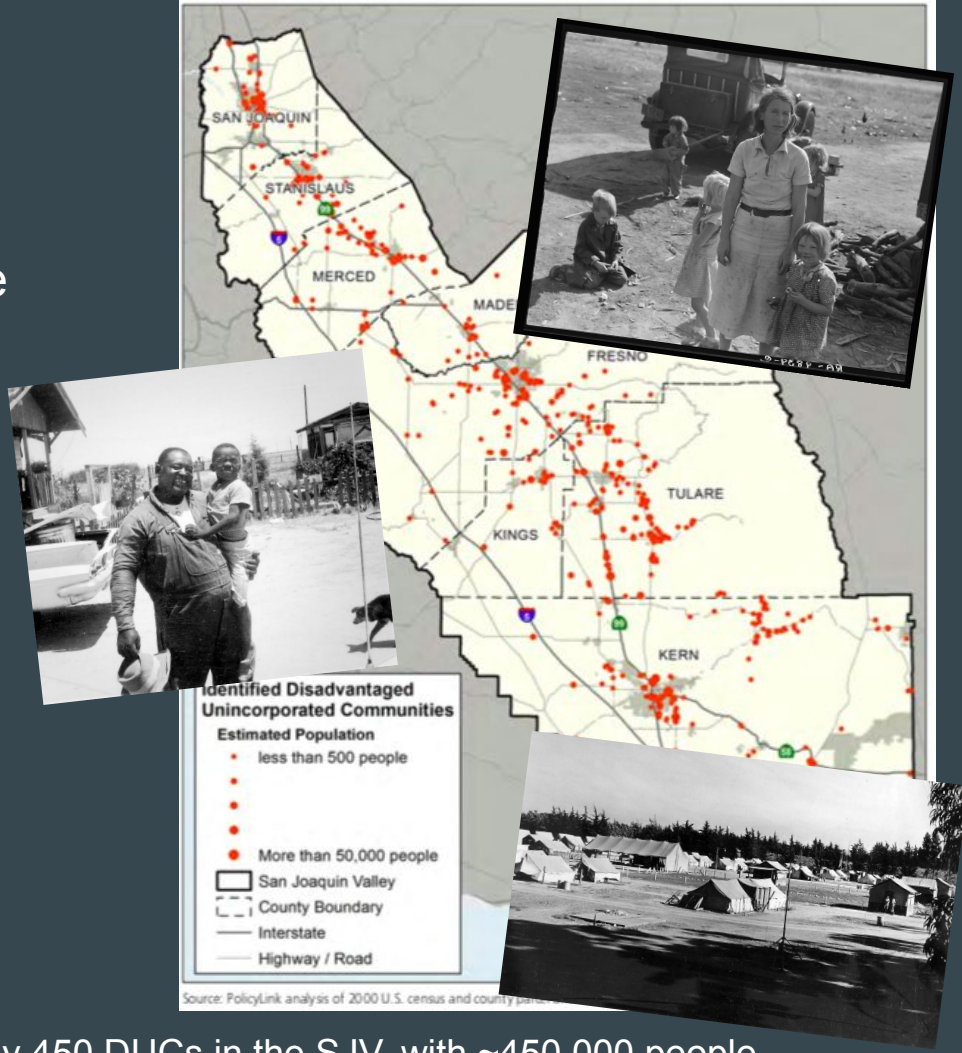
Drinking water issues disproportionately impact **low income communities and communities of color** (UC Davis 2018; Balazs et al 2011; Pacific Institute 2017).

Agenda

1. Disadvantaged Unincorporated Communities in the San Joaquin Valley
2. Community drinking water needs and challenges
3. How to address community drinking water challenges

How did DUCs form?

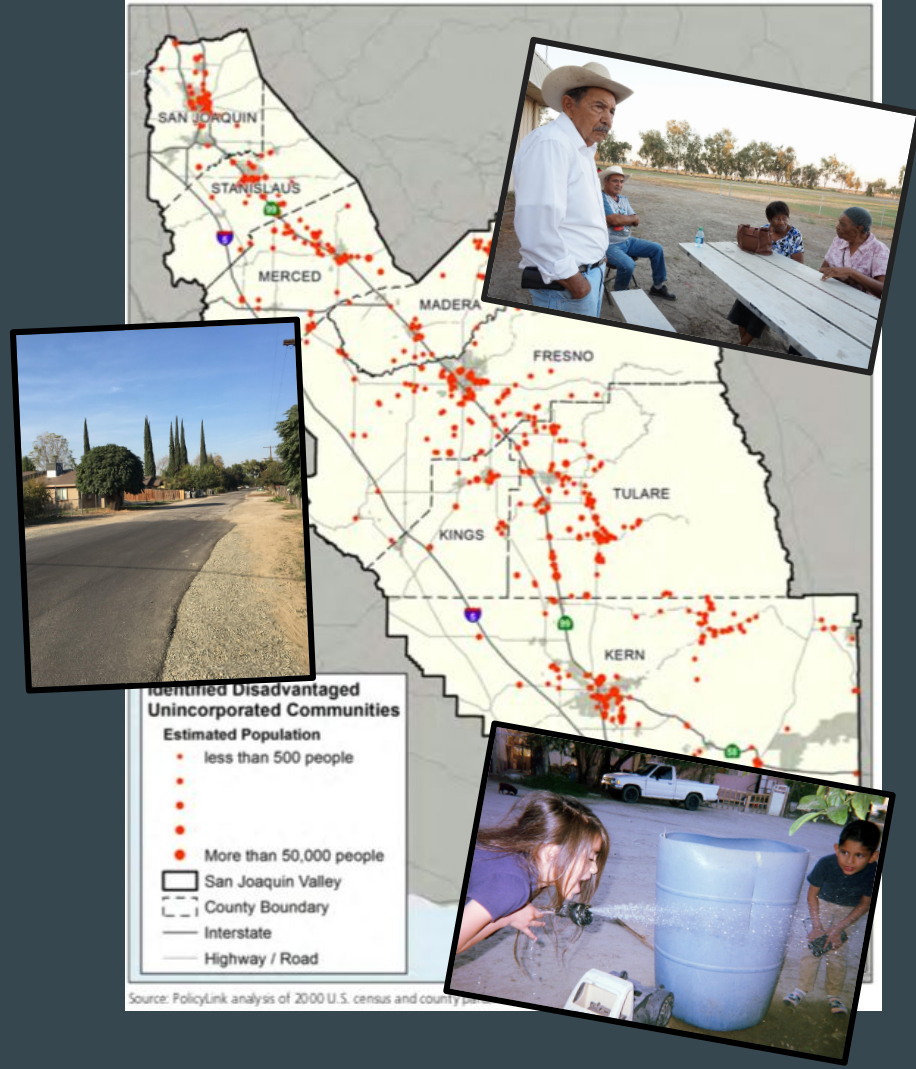
- Early 1900s: agricultural expansion in the San Joaquin Valley. Families came to the region seeking employment.
- Families settled in informal communities
- Despite existing for decades, these communities were not incorporated into nearby cities.
- Still lack essential services (reliable and safe drinking water, safe transportation infrastructure, etc.)



There are roughly 450 DUCs in the SJV, with ~450,000 people.

Why do DUCs persist today?

- Housing more affordable for farmworker wages
- Located closer to fields
- Multigenerational communities



Challenges in unincorporated communities in the SJV

- Lack of access to safe, affordable drinking water
- Substandard housing
- Lack of green spaces, parks and community gathering spaces
- Low quality schools
- Lack of safe transportation infrastructure
- Poor air quality
- Polluting industries zoned nearby

Carolina’s family in Tombstone Territory lost water in their home in 2016. Their neighbor let them use his hose, and they had to use a large portion of their income on bottled water. After 4 months, they were finally able to get funding to deepen their well.

“I felt sad that my children couldn’t bathe, couldn’t flush the toilet. They were ashamed to go to school because they couldn't shower regularly and they smelled. I came here to give them a better life...but even in Mexico we had running water.”

“One day my son was using a bucket to shower, and he saved some of the water for me to use. I cried.”

“Every day I live in fear that it’s going to happen again.”

Families need drinking water to serve basic needs:

Drinking
Cooking
Washing dishes, cleaning
Hygiene, bathing, sanitation*

Community drinking water challenges:

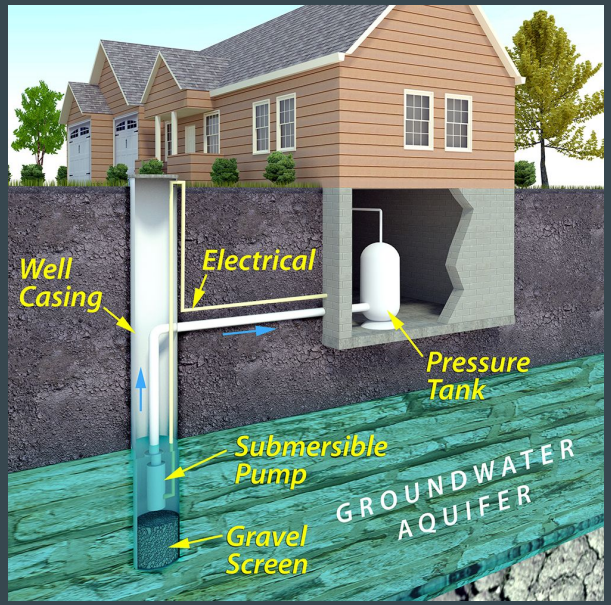
1. Water quality
2. Water supply
3. Unaffordable costs

Clean, Reliable, & Affordable.

Community Drinking Water Infrastructure

Private domestic wells:

Each home has its own well



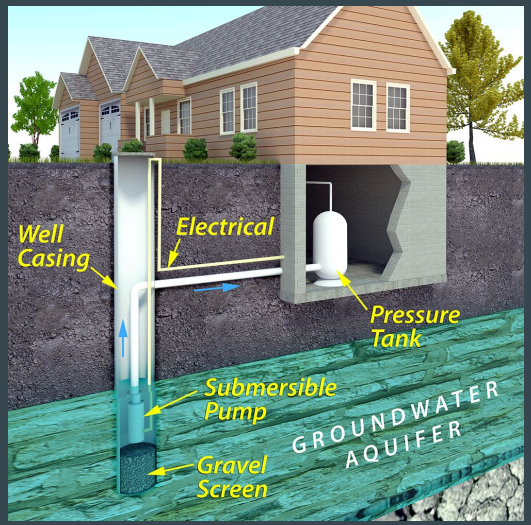
Community water systems:

Homes connected to a central well and treatment systems

Source of community drinking water

Surface Water

Groundwater



Unincorporated communities are overwhelmingly dependent on groundwater. All domestic wells and the vast majority (87%) of community water systems in the SJV are served by **groundwater.**

Source: UC Davis, *The Struggle for Water Justice in California's San Joaquin Valley*

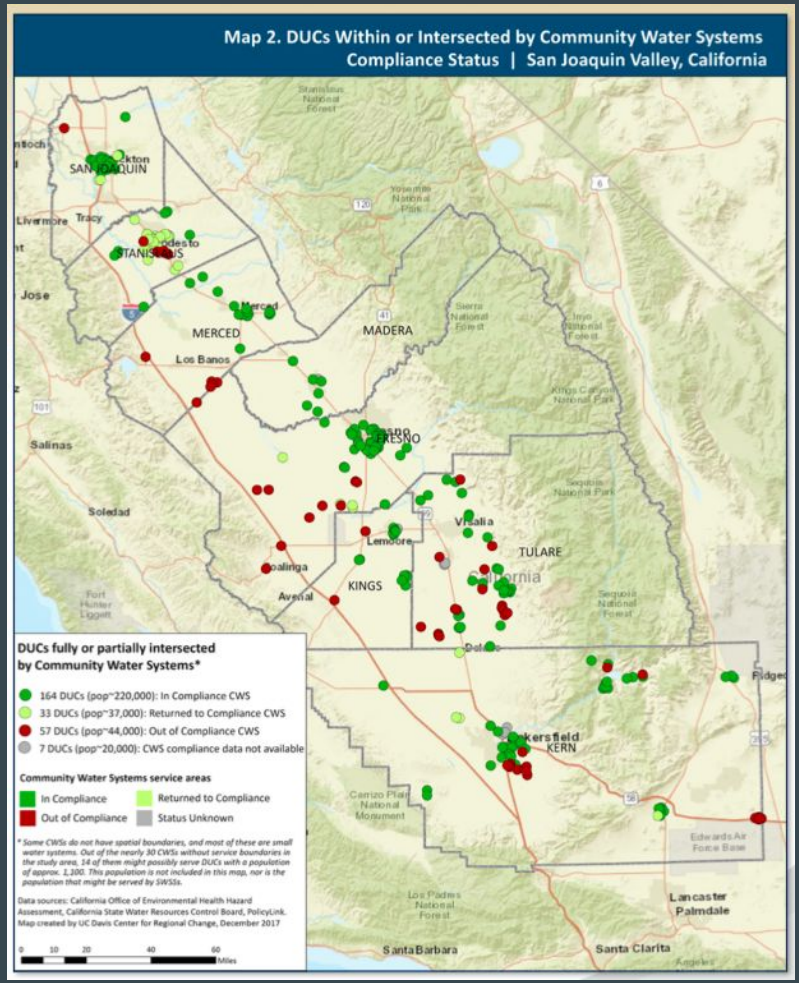
1. Water Quality Issues

Groundwater contaminants:

- Nitrates
- Arsenic
- 123-TCP
- DBCP
- Chrome-6

Surface water contaminants:

- Surface water treatment byproducts



Sources: SWRCB Human Right to Water Portal; UC Davis, *The Struggle for Water Justice in California's San Joaquin Valley*

2. Water Supply Issues

Surface water is expensive and increasingly unreliable

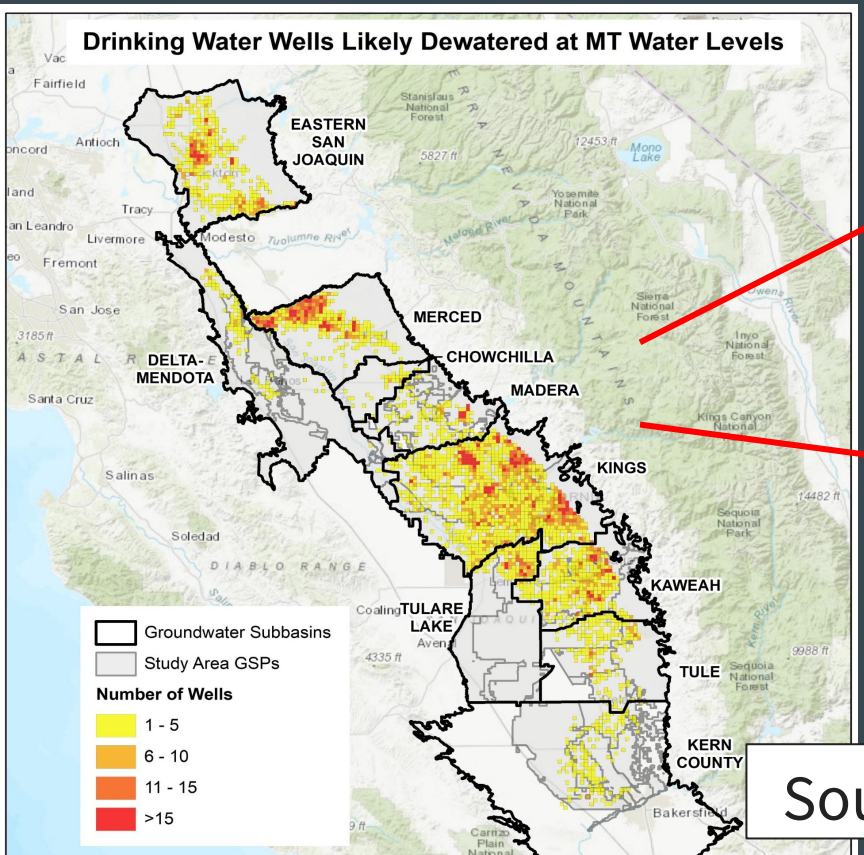
- Climate change = more variability in precipitation and snowfall.

Groundwater levels are steadily dropping, leaving homes with dry wells.

- Climate change and drought restrict already over-pumped groundwater resources.
- 3,000+ dry wells in the SJV during the 2012-2016 drought.

Sources: www.GSPdrywells.com, Water Foundation 2020 report

Studies show severe future impacts to domestic wells in the SJV from declining water levels

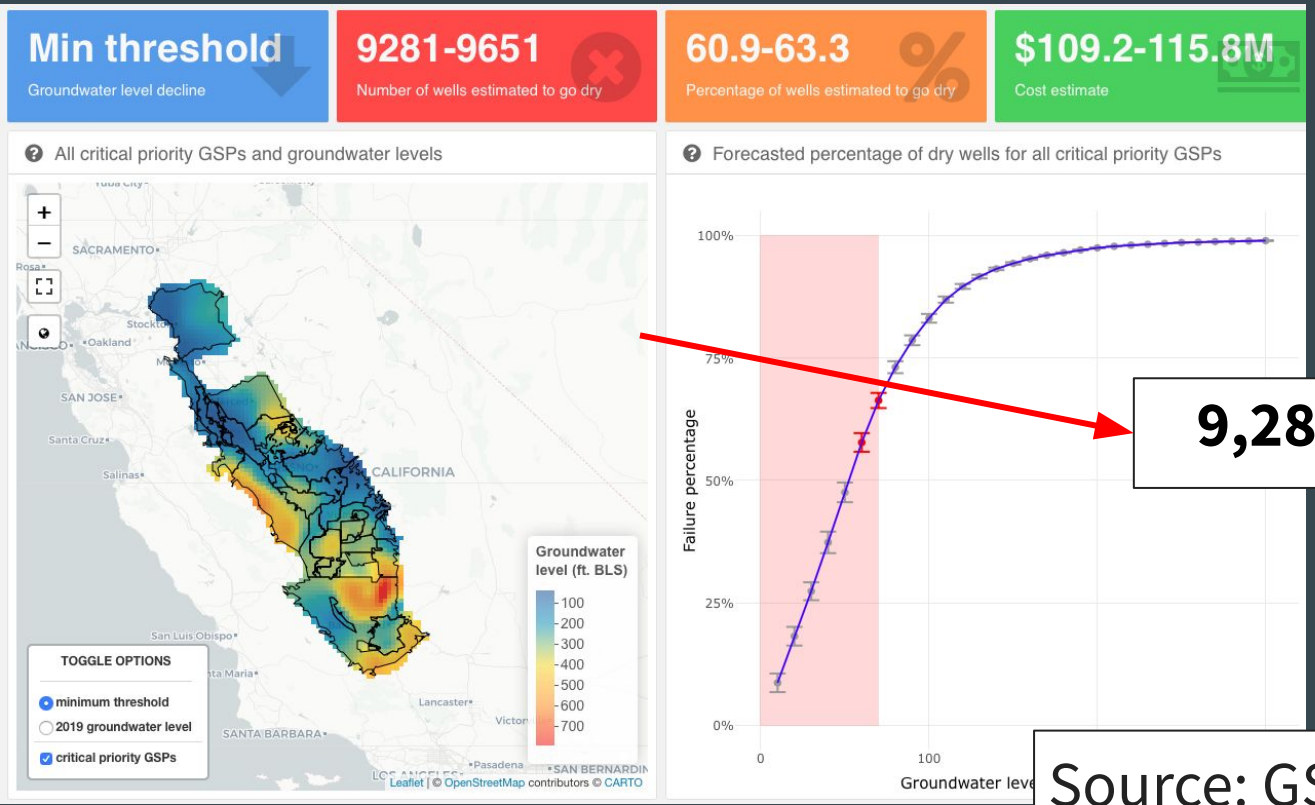


9,800 – 12,000 dry wells

106,000-127,000 people affected

Source: Water Foundation

Studies show severe future impacts to domestic wells in the SJV from declining water levels



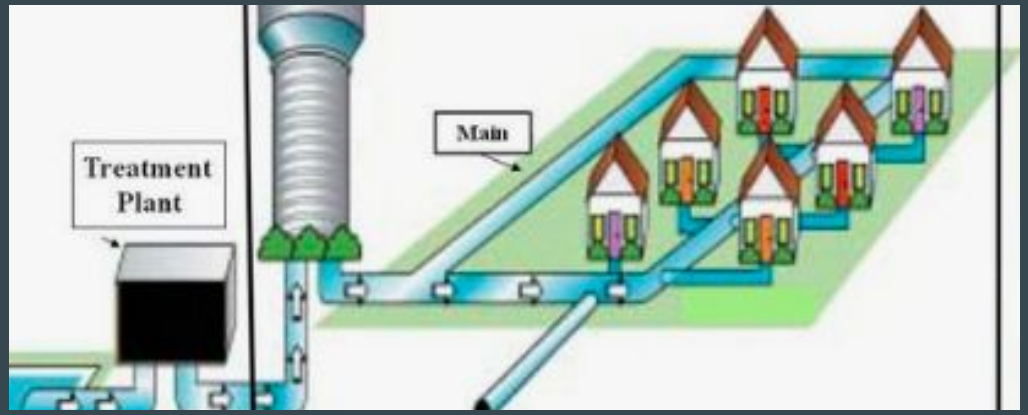
9,281 - 9,651 dry wells

Source: GSPdrywells.com

3. Unaffordable costs of water

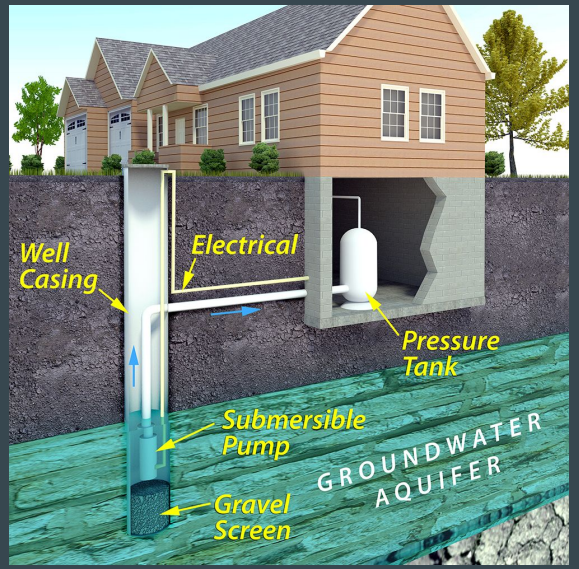
- Ongoing operations and maintenance
- Addressing dry wells
- Treating contaminated water

Costs of ongoing operations and maintenance



Community drinking water systems

- treatment systems
- storage tanks
- distribution lines
- well pumps
- meters



Private domestic wells

- pump repairs
- maintaining point of use/point of entry filters

Costs of addressing contaminated water:

Bottled Water	$75 per month, per house
Point of Use Filters	$1,000 to $4,500 per unit per home, for one year
Water Tank	$3,680, plus up to $900 for tank refills
Water Treatment System	costs vary
Alternate Supply Source	costs vary
Prevention or remediation of contamination	unknown

Source: Framework for a Drinking Water Mitigation Program

Costs of addressing dry wells:

Bottled Water	$75 per month, per house
Water Tank	$3,680, plus up to $900 for tank refills
Lowering well pump	$5,000 to $10,000
Deepening a domestic well	$20,000 to $45,000
Deepening a community well	up to $1.5M
Alternate Supply Source	costs vary
Prevention of water supply loss	unknown

Source: Framework for a Drinking Water Mitigation Program

Other factors impacting affordability

- Income level of residents
- Economies of scale: ability to spread cost across a number of homes
- Local and state support for drinking water solutions
- Regulatory requirements
- Water use and contamination surrounding the community

Despite these obstacles, residents are dedicated to making their communities healthy & safe places for their families to live

How do we solve community drinking water challenges?

1. Leverage existing community resources (& respect community expertise)
2. Support with additional expertise and resources

1. Leverage existing community resources

Communities have:

- Expertise about their needs, ability to pay, water use, contamination, infrastructure and service issues
- Expertise about what solutions will work for them
- Creative problem-solving given complete information
- Community buy-in and leadership
- Expertise about policy processes and issues in their communities: water, jobs, air quality, infrastructure and more

Respect community expertise

Before implementing a project to benefit community drinking water needs:

- Respect and listen to community expertise
- Create trust
- Collaborate with community at every step of the process

2. Support with additional expertise and resources

Every community has different needs. Some potential needs are:

- Funding (infrastructure, O&M, water bills)
- Water management that prioritizes drinking water
- Incentives/deterrents for private water use that impacts community drinking water
- Deeper hydrogeological expertise
- Research into all alternative solutions
- Assistance with project design
- Assistance with project implementation
- Assistance advocating for solutions that protect communities' Human Right to Water

DO:

- Work with any community groups and community-based organizations in the area
- Honor community expertise- ensure that community is helping lead the whole process, from start to finish
- Ensure the product will have a concrete and substantial benefit to community
- Be clear about expectations
- Be prepared to work on a different timeline. Plan to spend time discussing and making decisions with residents
- Meet residents where they're at (come to their meetings)

DON'T:

- Come in with inflexible ideas
- "Parachute in" - spend time to build relationships and trust!
- Use community time and energy for a project that will not benefit community directly
- Design or implement a solution without consulting community
- Take all the credit

Questions?

Amanda Monaco
Water Policy Coordinator

Leadership Counsel for Justice and Accountability

amonaco@leadershipcounsel.org