

Bay Area Carbon Injection & Pipeline Project

**Contra Costa County Hazardous Materials Commission
April 23, 2026**

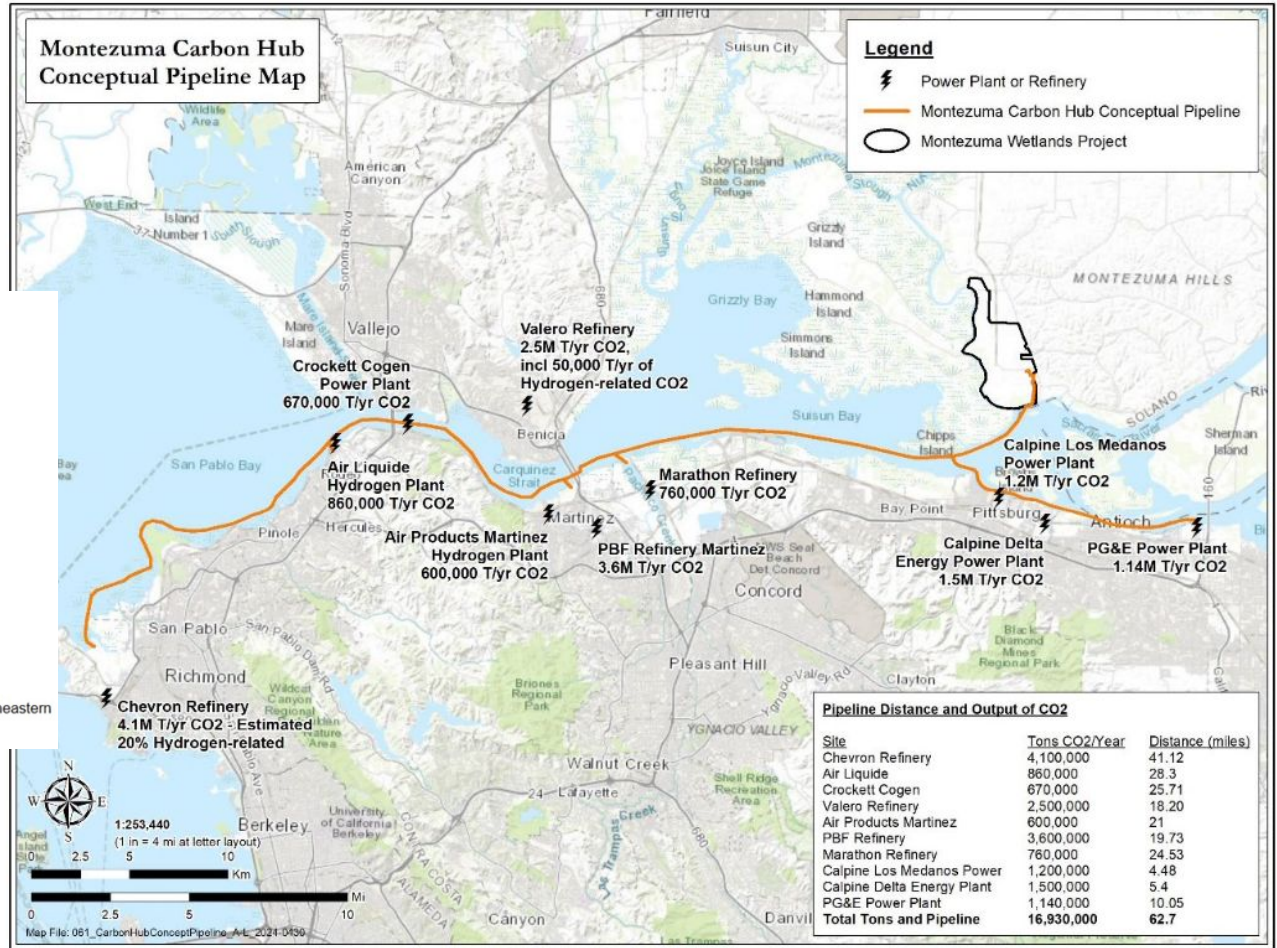
Isabel Penman, Food & Water Watch
Amanda McKay, Pipeline Safety Trust

Getting Situated



Figure 1: The location of the Suisun Marsh study area. The Marsh is situated in the northeastern reaches of San Francisco Bay, just west of the Delta, in Solano County.

FIGURE A-2. REGIONAL FACILITIES CO₂ MAP & POSSIBLE PIPELINE ROUTE (UPDATED DRAFT)



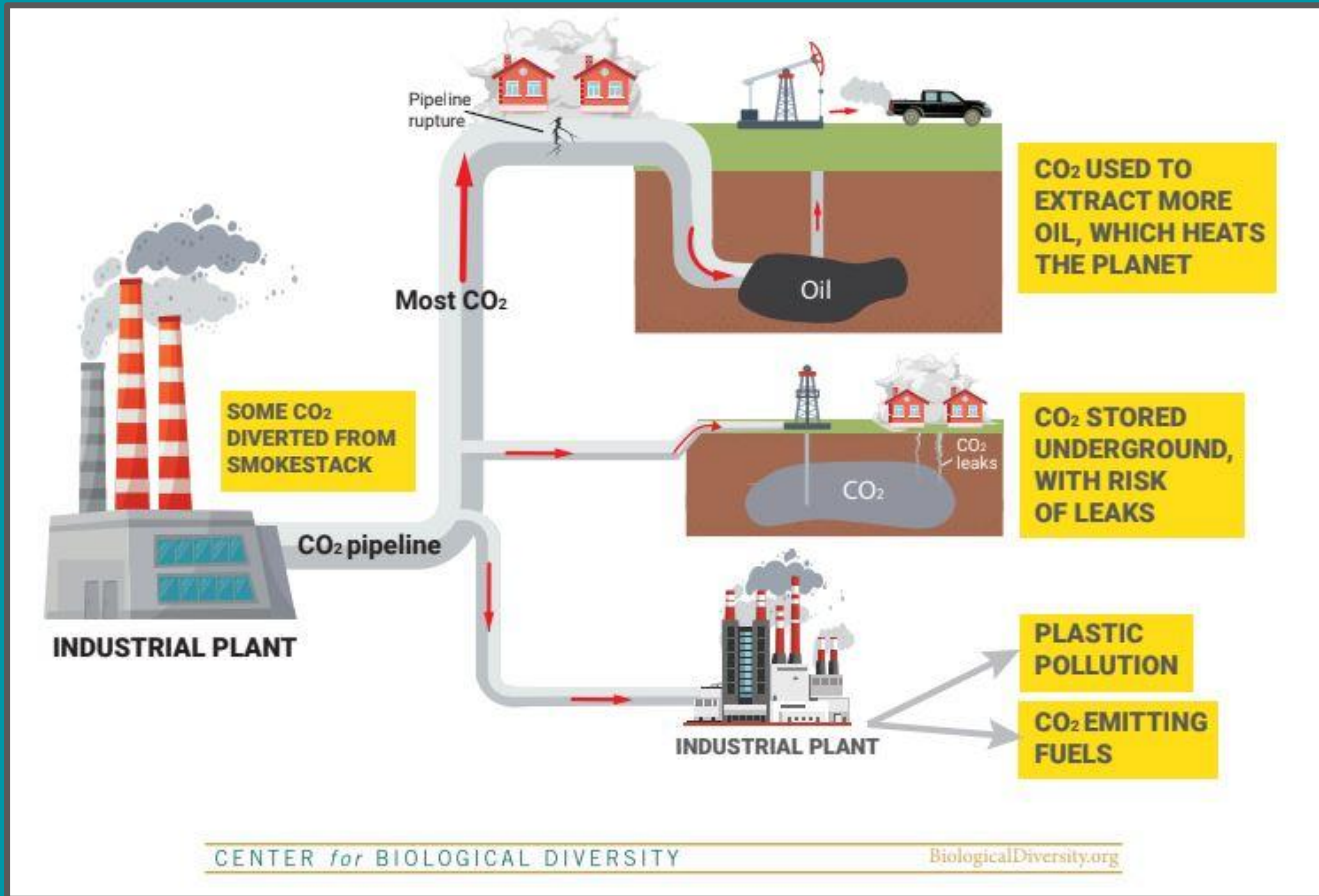
Pipeline Distance and Output of CO ₂		
Site	Tons CO ₂ /Year	Distance (miles)
Chevron Refinery	4,100,000	41.12
Air Liquide	860,000	28.3
Crockett Cogen	670,000	25.71
Valero Refinery	2,500,000	18.20
Air Products Martinez	600,000	21
PBF Refinery	3,600,000	19.73
Marathon Refinery	760,000	24.53
Calpine Los Medanos Power	1,200,000	4.48
Calpine Delta Energy Plant	1,500,000	5.4
PG&E Power Plant	1,140,000	10.05
Total Tons and Pipeline	16,930,000	62.7

Montezuma Wetlands CCS Project: Capture & Injection Specifics



- **Capture:** 1+ million tons/year of CO₂ (sources)
 - *PG&E Gateway near Antioch, a 530 MW natural gas-fired power plant*
 - *Potential additional CO₂ from Calpine Power Plants, Chevron Refinery, others*
 - *Expand to collect 3-8 million tons of CO₂/year and inject 40-100 million tons of CO₂ in 40 years*
- **Injection:** 3,200-acre, deep-water site near Collinsville, Solano County
 - *Montezuma, LLC owns the property*
 - *3 injection wells proposed*

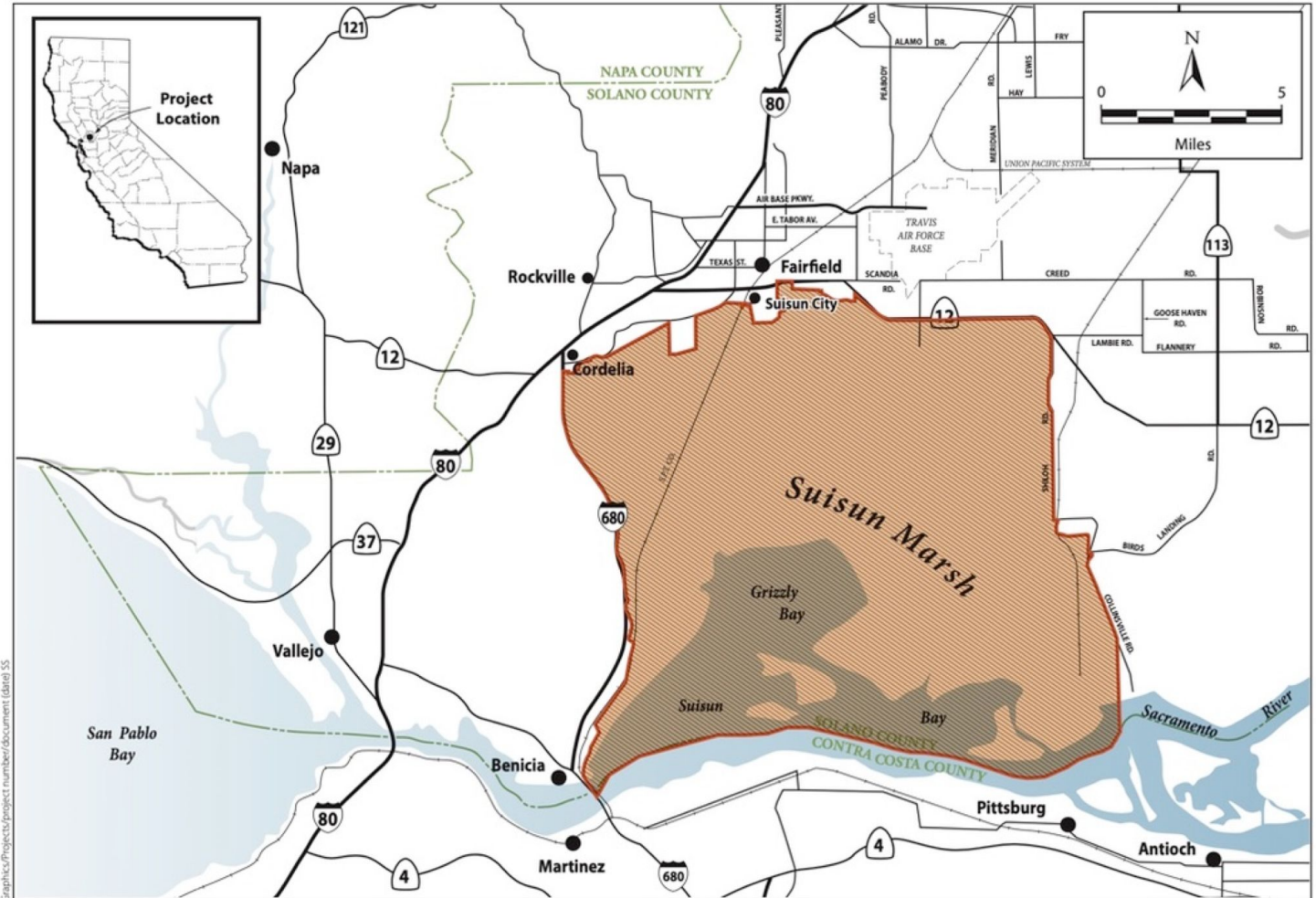
What is Carbon Capture & Storage?



Ecological Impacts to Delta



- **Leaks can produce Carbonic Acid**
- **Carbonic Acid creates dead zones**
- **Dead zones can stretch for miles**
- **Threatened species include: Delta Smelt, CA Least Tern, Harvest Mouse**
- **Unique disaster response for CO₂ leak in Delta**



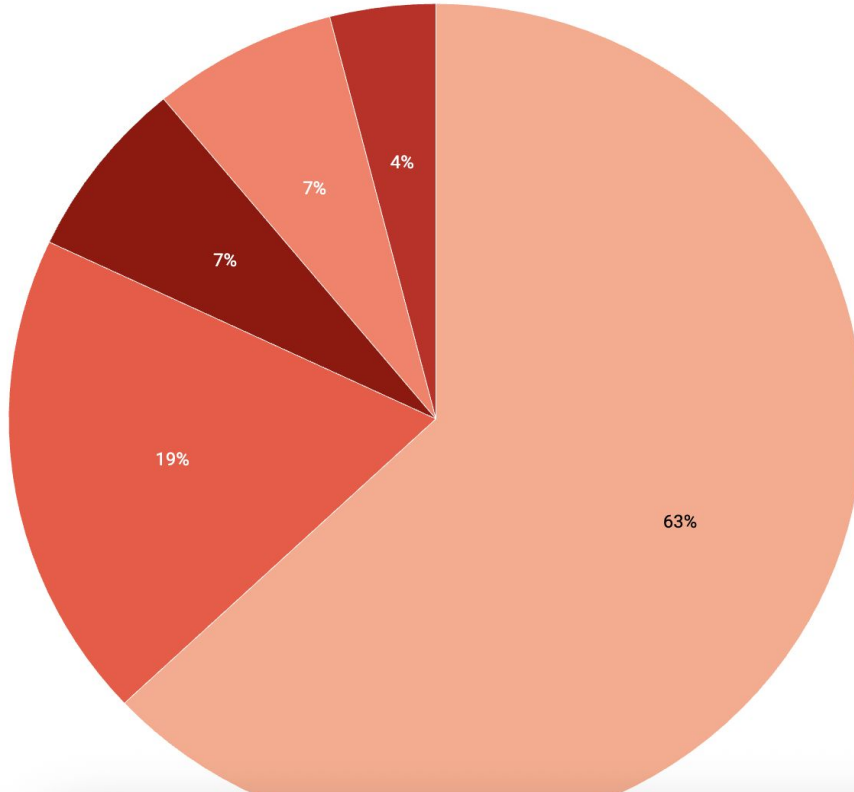
Pipeline Leaks & Health Risks



- **Compressed CO₂ is denser than oxygen**
- **Forces oxygen out of the air leading to asphyxiation**
- **300 evacuated, 45 hospitalized after CO₂ pipeline leak in Satartia, Mississippi**
- **1700 died in Cameroon after natural CO₂ leak**

PM2.5 emissions sources in Richmond-San Pablo

Chevron (63%) Small sources (fireplaces, dry-cleaning facilities, industrial boilers, toxic waste incineration) (19%)
Off-road mobile sources (trains, ships, aircraft, heavy equipment) (7%) On-road mobile sources (motorcycles, cars, trucks) (7%)
Other permitted industries (factories, power plants, gas stations) (4%)



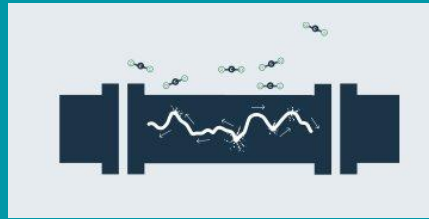
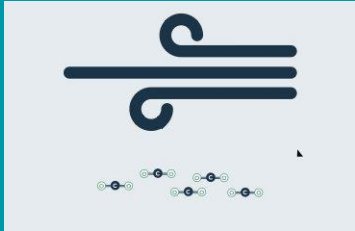
Google

Increase in local pollutants such as:

- **PM2.5**
- **Nitrogen oxides (NOx)**
- **Ammonia**
- **Sulfur dioxide**
- **Hydrogen cyanide**
- **Sulfuric acid**
- **Hydrogen sulfide**

CO₂ Pipeline Considerations

CO₂ has unique physical properties which make transporting it via pipeline extremely dangerous in the event of a rupture



WATER IN CO₂ PIPELINES: POTENTIAL FOR CORROSION



No Corrosion



Corrosion



Severe Corrosion

Historically, CO₂ pipelines have transported relatively dry and pure CO₂. However, the expansion in different sources of CO₂ has the potential to lead to higher water content and more impurities introduced into pipelines. In addition, carbon dioxide mixed with water can form carbonic acid which is extremely corrosive to the internal surface of the pipe.

CO2 Pipeline Risks and Siting/Route Considerations

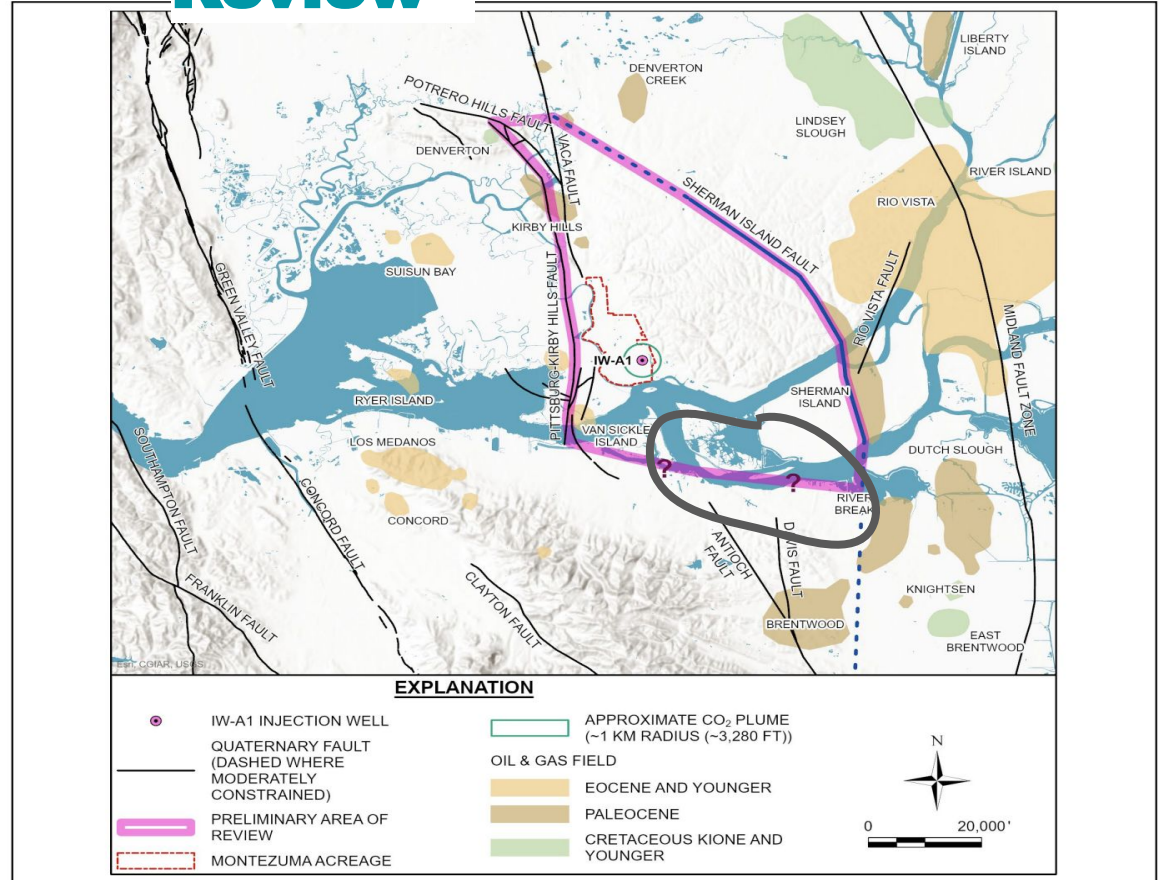
- Current federal regulations on CO2 pipelines are insufficient
- OSFM rulemaking
- Potential areas of impact should be measured in miles
- Anticipate the amount of CO2 that could be released
- Dispersion: wind speed and direction, topography
- Identify populations potentially exposed
- Local coordination with OSFM and pipeline operators

Montezuma CO₂ Injection Site & “Area of Review”

AOR = Area of Review

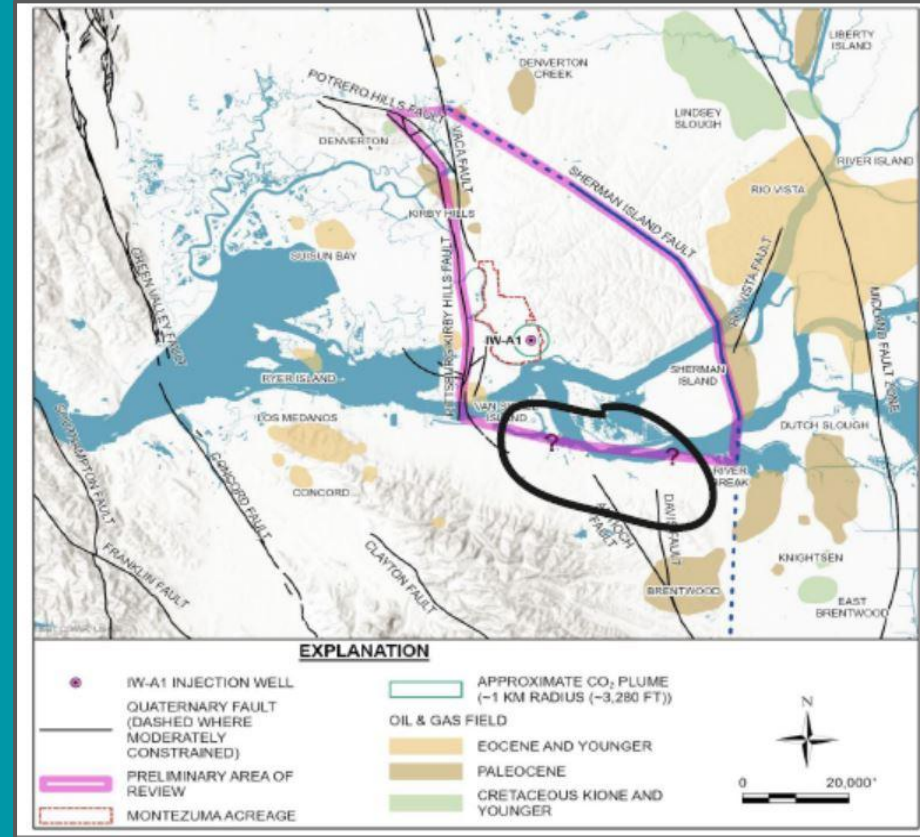
- Pressure & CO₂ plume model
- *Remember: model only as good as inputs!*

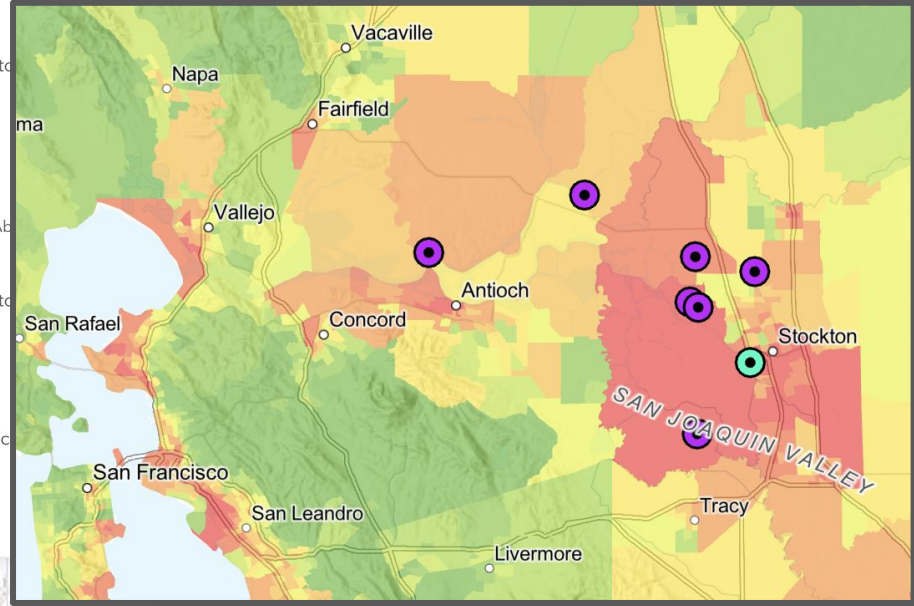
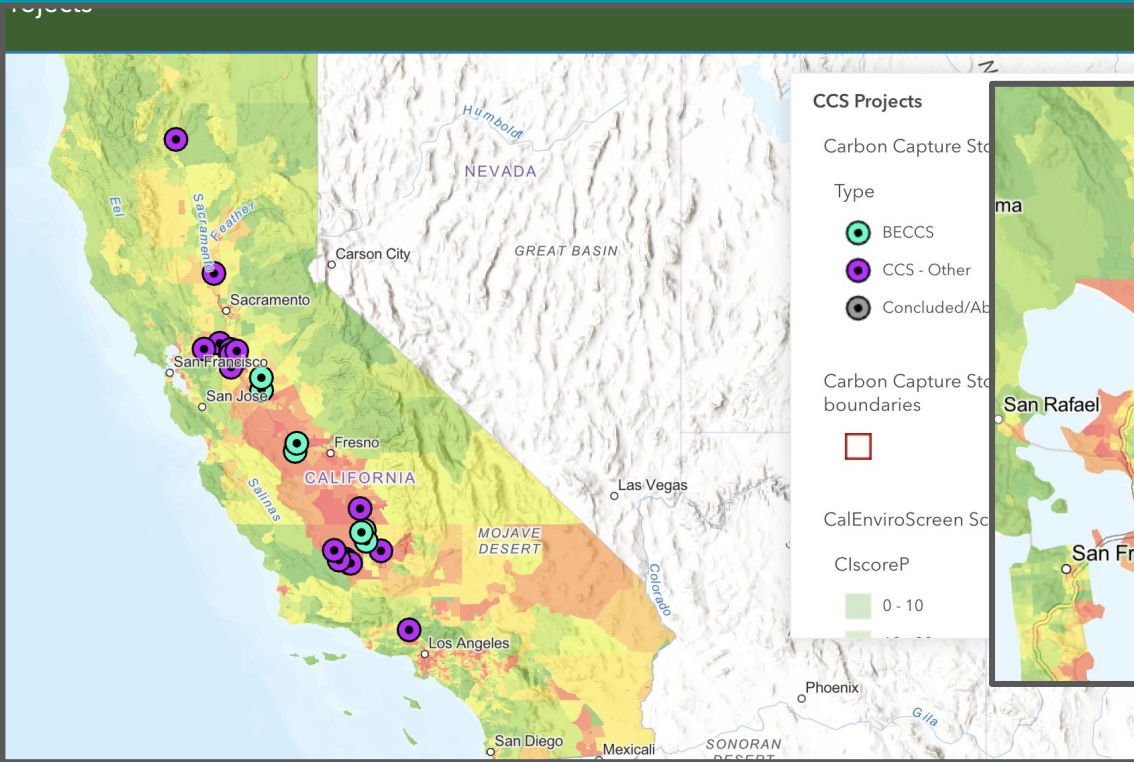
Unknown AOR behavior along southern border



Where Are We in the Regulatory Process?

- Key permitting agencies: EPA Region 9 & Solano County
- Injection well permit application submitted in November 2023
- EPA deemed application incomplete in Summer 2024
- Developer was asked to provide additional geologic info after drilling test well
- The developer has applied for a test well permit





Carbon TerraVault Projects Proposed in California

II

San Joaquin County

22 MMT/CO2 total

5 Class VI wells

III

San Joaquin, Contra Costa, and Alameda Counties

70 MMT/CO2 total

6 Class VI wells

IV

Sacramento County

34 MMT/CO2 total

8 Class VI wells

V

San Joaquin County

17 MMT/CO2 total

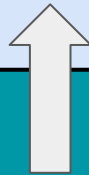
6 Class VI wells

VI

Fresno County

102 MMT/CO2 total

7 Class VI wells



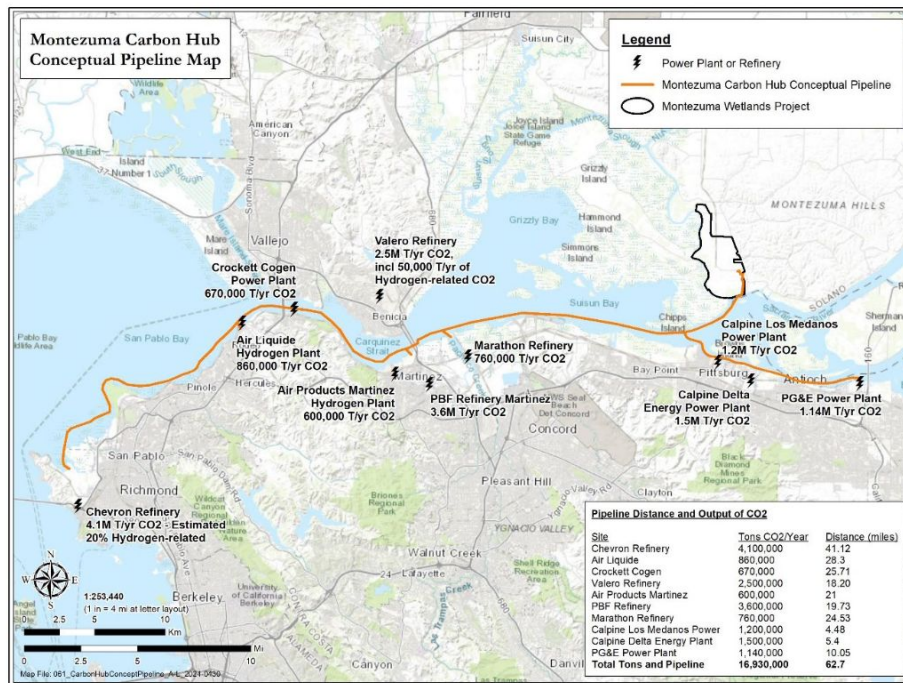
Local Government Tools

- Franchise or easement agreements
- Zoning
- Notification and disclosure
- Public engagement

Summary: Threats to Contra Costa County

- Proximity of new pipelines to communities
- Pipeline leaks & catastrophic failure scenario
- Potential for increased pollutants from refineries
- Unknown AoR

FIGURE A-2. REGIONAL FACILITIES CO₂ MAP & POSSIBLE PIPELINE ROUTE
(UPDATED DRAFT)





Thank You!



Now What?

- **Class VI permit pending from EPA Region 9 (decision likely 1 year+ away)**
 - *Application is online.*
<https://www.epa.gov/uic/uic-permits-epas-pacific-southwest-region-9>
- **Montezuma can start CEQA & LCFS processes**
 - *Opportunities for public comment*
 - *Who is lead agency? Solano County, Planning Division*
 - *Test Well Permit pending*
- **Regulations & Safety Guardrails for CCS and CO2 Pipelines**
- **Stronger Protections for Wetlands and Farm/Ranch Land**
- **Active Advocacy and Opposition!**