



West Coast Barge CO₂ Transport Project

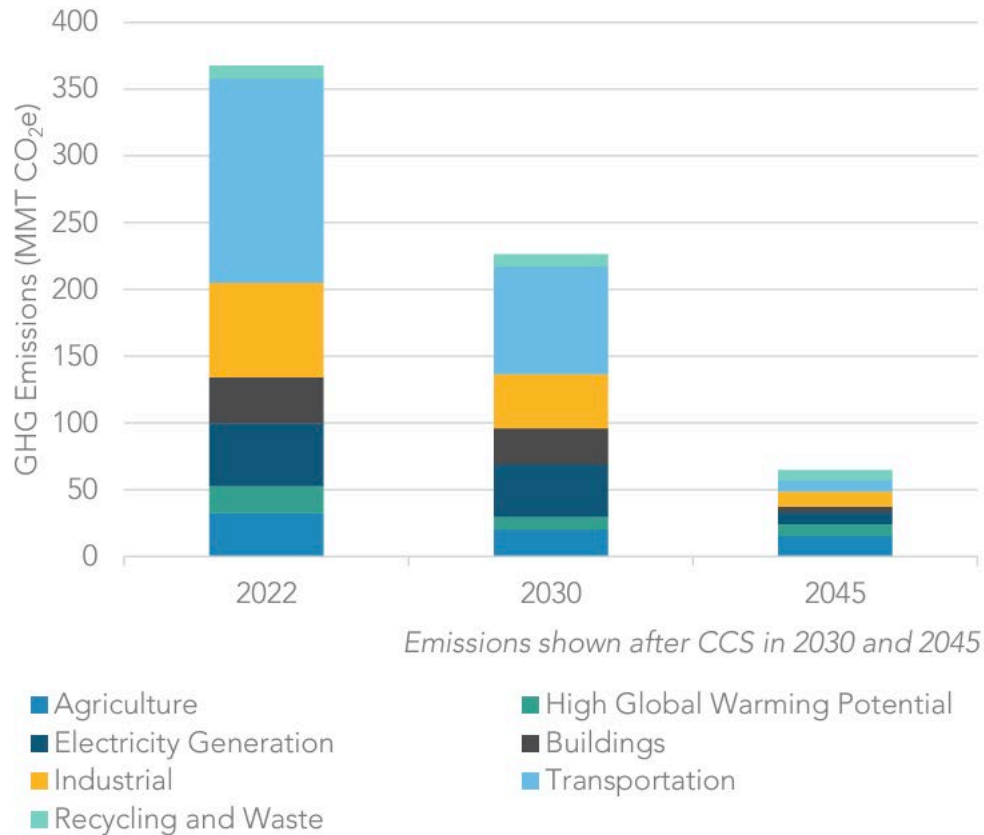
John Zuckerman
ZuCO2 Transport, LLC

August 7th, 2024

► California needs carbon removal

... as do other jurisdictions

Figure 2-5: Residual emissions in 2022, 2030, and 2045 for the Scoping Plan Scenario¹⁵⁵



CA has also temporarily banned CO₂ pipelines

Table 2-3: GHG emissions and removals needed to achieve carbon neutrality and meet the 20 MMTCO₂ removal and capture target in 2030 and the 100 MMTCO₂ removal and capture target in 2045.¹⁶⁴

	2030 (MMTCO ₂ e)	2045 (MMTCO ₂ e)
GHG Emissions	233	72
AB 32 GHG Inventory Sector Emissions	226	65
Net NWL GHG Emissions Across All Landscapes (annual average from 2025–2045)	7	7
Carbon Capture and Sequestration (CCS): Avoided GHG Emissions from Industry and Electric Sectors	(13)	(25)
Carbon Dioxide Removal (CDR) including natural and working lands carbon sequestration, ¹⁶⁵ Direct Air Capture, and Bioenergy with CCS (BECCS).	(7)	(75)
Net Emissions (GHG Emissions + CDR)	226	(3)

► Who we are (ZuCO2, Pelican Renewables)

What we do

- **Pore space** unitization and geologic CO₂ **storage**; **barge CO₂ transport**

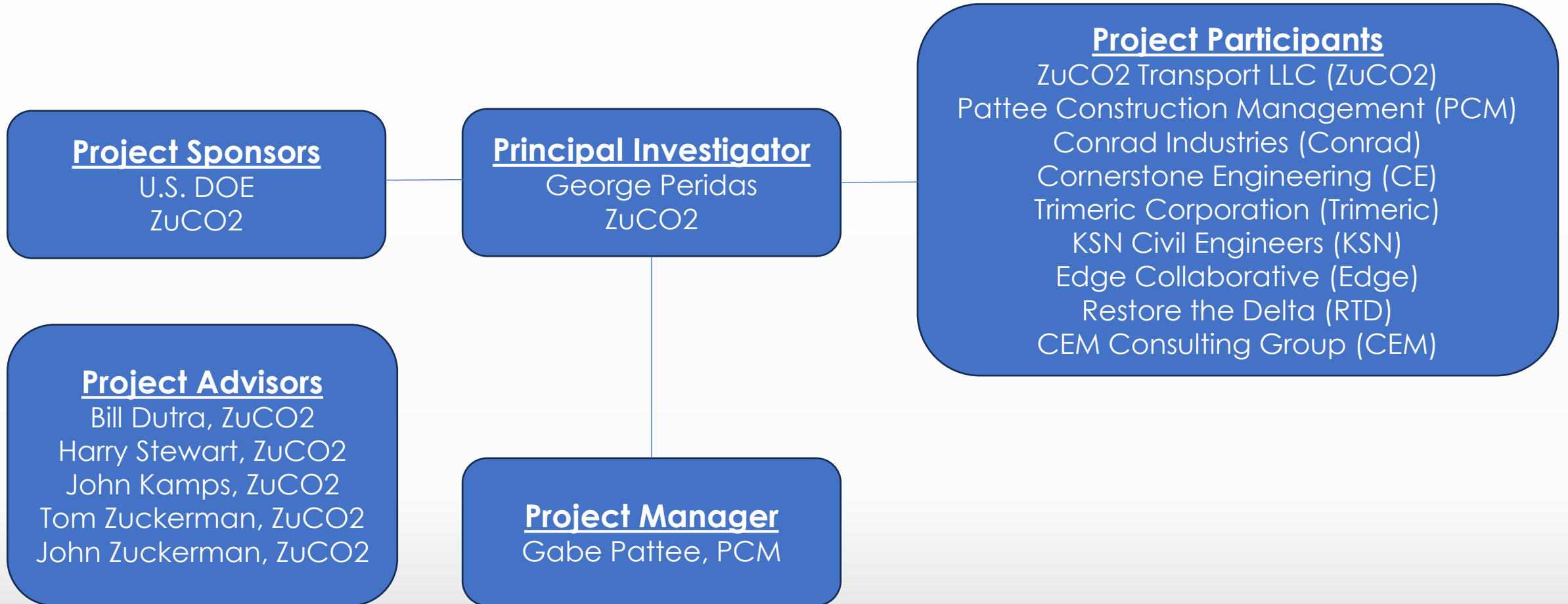
Community-based CCS/CDR

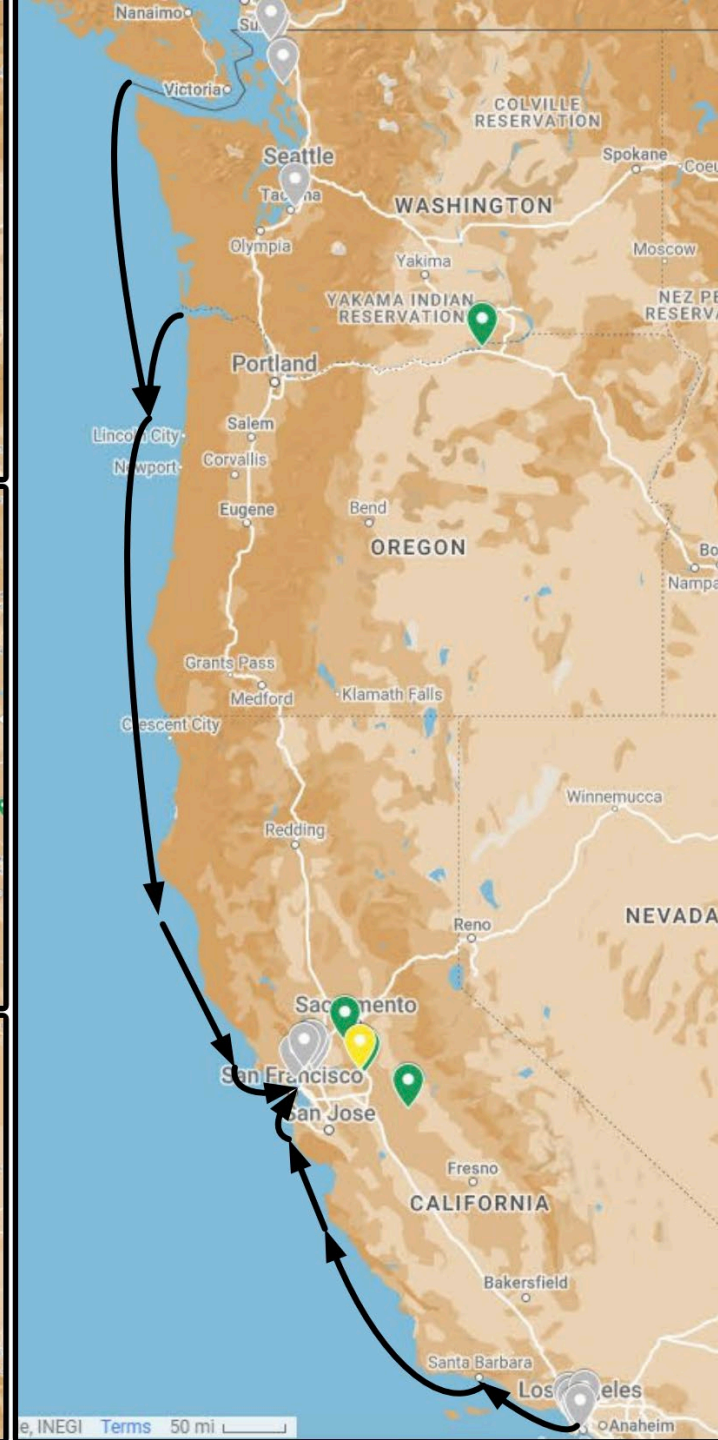
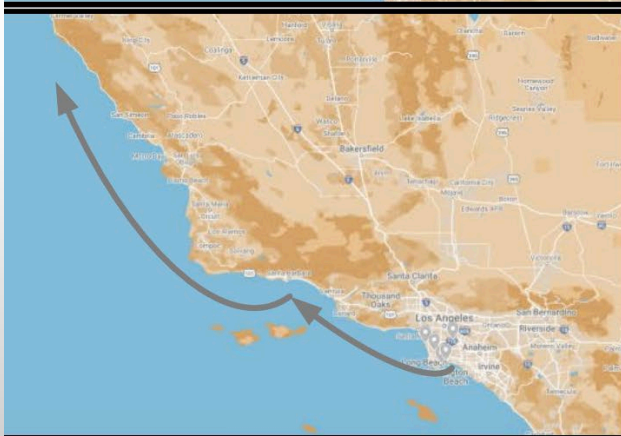
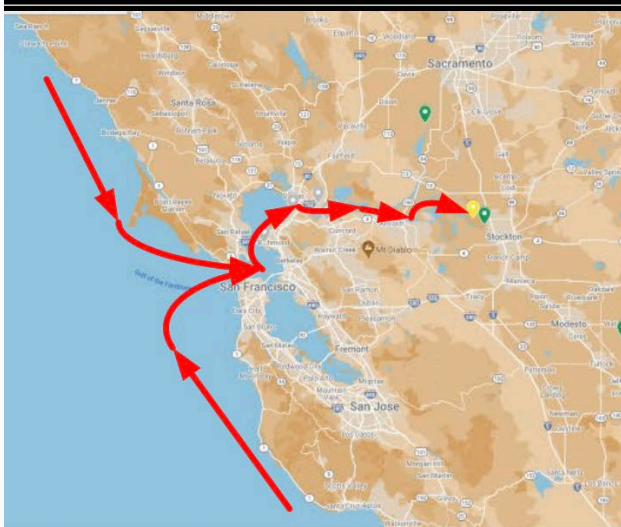
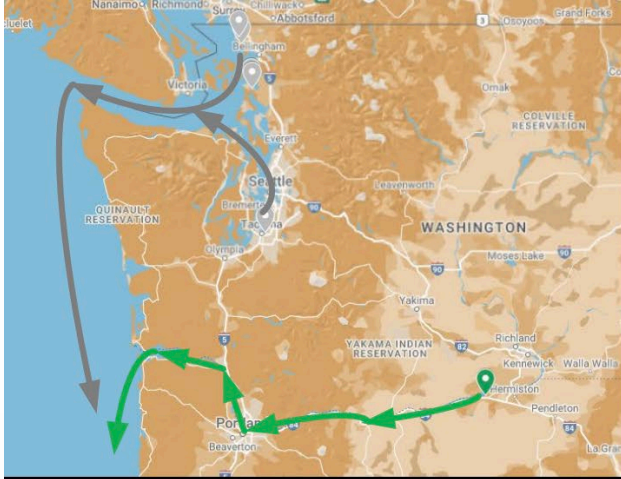
- Founded in 2019 by **local** community members, landowners, and businesspeople in the **Delta** (California)
- 100% **privately** owned
- **Reinvesting** in a cyclic CCS economy meeting critical **community** needs

Key personnel

- Bill Dutra, Harry Stewart (**dredging, marine operations**)
- John Kamps (**fuel distribution**)
- Jeffrey Klein (**pore space/unitization**)
- George Peridas (**science/policy**)
- Tom Zuckerman (**legal, community**)
- Brian Zuckerman (**geotechnical**)
- John Zuckerman (**finance/partnerships**)

► Project Team







Sacramento

Rindge Tract

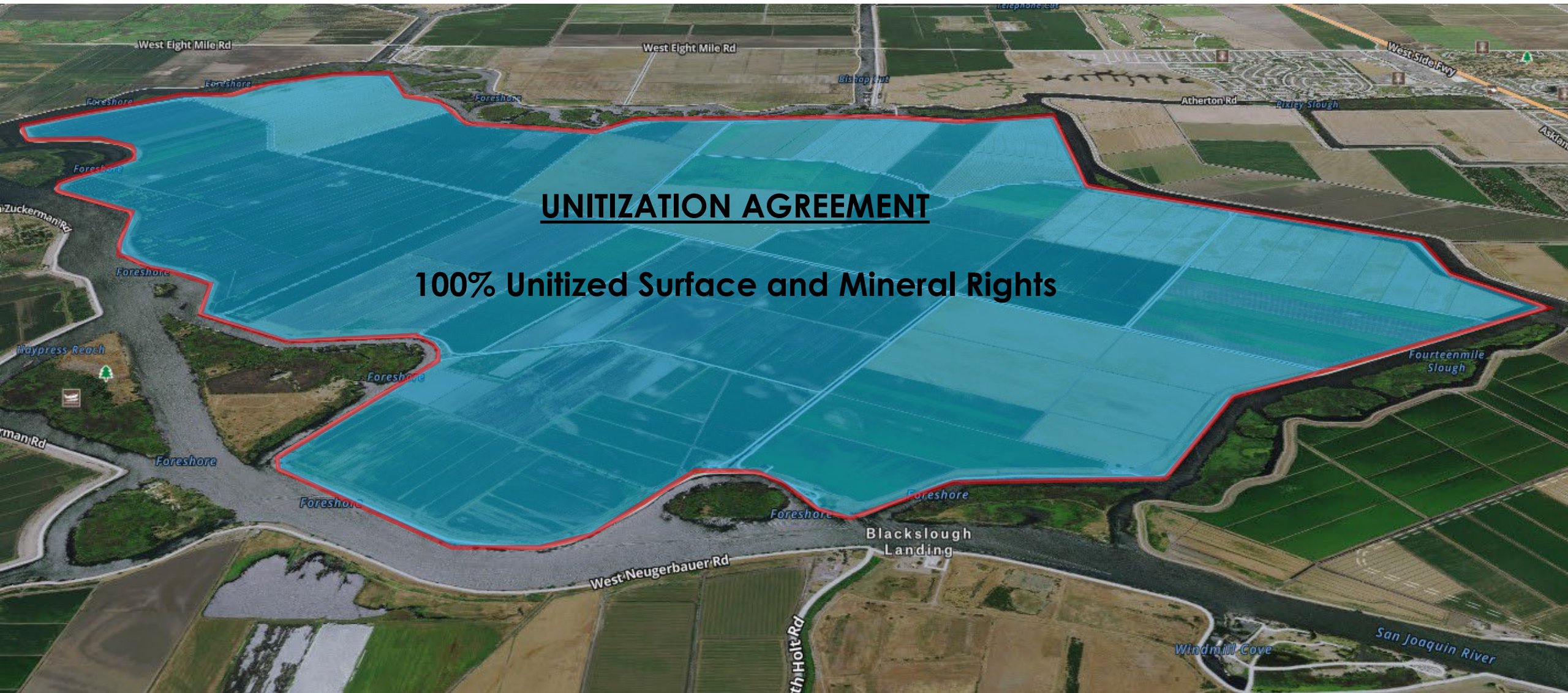
Delta

Stockton

Port of Stockton

San Francisco

► Storage Site | Rindge Tract



UNITIZATION AGREEMENT

100% Unitized Surface and Mineral Rights



Pelican
Renewables



Port of Stockton

CO₂ Storage Process

Rindge Tract

Step 3: From Port Docks load CO₂ transported via Tug and Barge in the Stockton Deep Water Channel



Step 1: Capture Facility sends compressed CO₂ back to Pelican

**Pelican
Capture
Facility**

Step 2: CO₂ travels via Pelican Infrastructure to the Port Docks



► Project objectives

Technical

- Complete FEED study on barge CO₂ transport system
- Further examine regulatory/permitting path for barge CO₂ transport


Community

- Expand community outreach and incorporate feedback into transport system design
- Establish community benefit structures and job pathways

Project duration: 2y; DOE contribution: \$3M;
cost share \$1.7M

► Preliminary Project Timeline

Tasks	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8
Task 1.0 Project Management and Planning								
Milestone: Update PMP								
Milestone: Workforce Readiness Plan								
Task 2.0 Engineering Design Package								
Milestone: Engineering Design Package								
Task 3.0 Regulatory Plan								
Milestones: Initial and Final Regulatory Analysis Plan								
Task 4.0 Community Benefits Plan								
Subtask 4.1 Community and Labor Engagement								
Milestone: Staff Carbon Capture and Storage (CCS) Specialist hire								
Milestone: Community Contact List								
Milestone: Community Engagement								
Deliverable: Community Feedback Summary								
Subtask 4.2 Investing in Job Quality and a Skilled Workforce								
Milestone: Unionized Labor Commitment								
Milestones: Initial and Final Union Identification								
Subtask 4.3 Diversity, Equity, Inclusion, and Accessibility								
Milestones: Initial and Final Workforce Pathways Scoping								
Deliverable: Recruitment Blueprint Development								
Subtask 4.4 Justice40 Initiative								
Milestone: Refine Ways to Share Future Project Revenues with Local Communities								
Milestone: Project Benefits Summary								
Task 5.0 Business Case Analysis								
Milestones: Initial and Final Business Case Analysis Complete								
Task 6.0 ES&H Analysis								
Milestones: Initial and Final ES&H Analysis Complete								



ZuCO₂

Contact: jz@zuco2.com