ReGen Monterey Biochar Pilot

Our Partnership

sitos GROUP
A Regenerative Future

REY

Keith Day COMPANY

lied gaia

Our Leadership

Mayo Ryan, AFM
Member
Founder/CEO
Ag Management
Ag Operations

Sheila Macdonald Kyger
Member
Technology Patent Holder

James Macphail, MSc
Member
Carbon Market Founder, Soil Scientist and Biochar Expert

Doug Beck, Ph.D.
Member
Soil Scientist, Winegrape

Daryl Salm
Member
Viticulturalist

Larry Mortorff, Es
Advisor
Corporate Attorne

The ReGen Monterey Pilot Project

1-YEAR BIOCHAR PRODUCTION STUDY AT REGEN MO

- Deploy 1st pilot machine and perfect it's design and operat
- Complete the Puro.earth Life-Cycle Assessment for Carbo Certs.
- Obtain emissions data for MBARD Permit to Operate
- Operate at full production capacity June 2023 through Jur
- Goal is a permanent bioenergy plant with 3 slow-pyrolysis
- Pilot CapEx is $1.2M - project is fully funded

What Do We Produce?

- Our primary product is high-quality **biochar**.

- For every ton of biochar we produce, we supply **3 tons Carbon Removal Certificates (CORC's)** verified through Puro.earth.

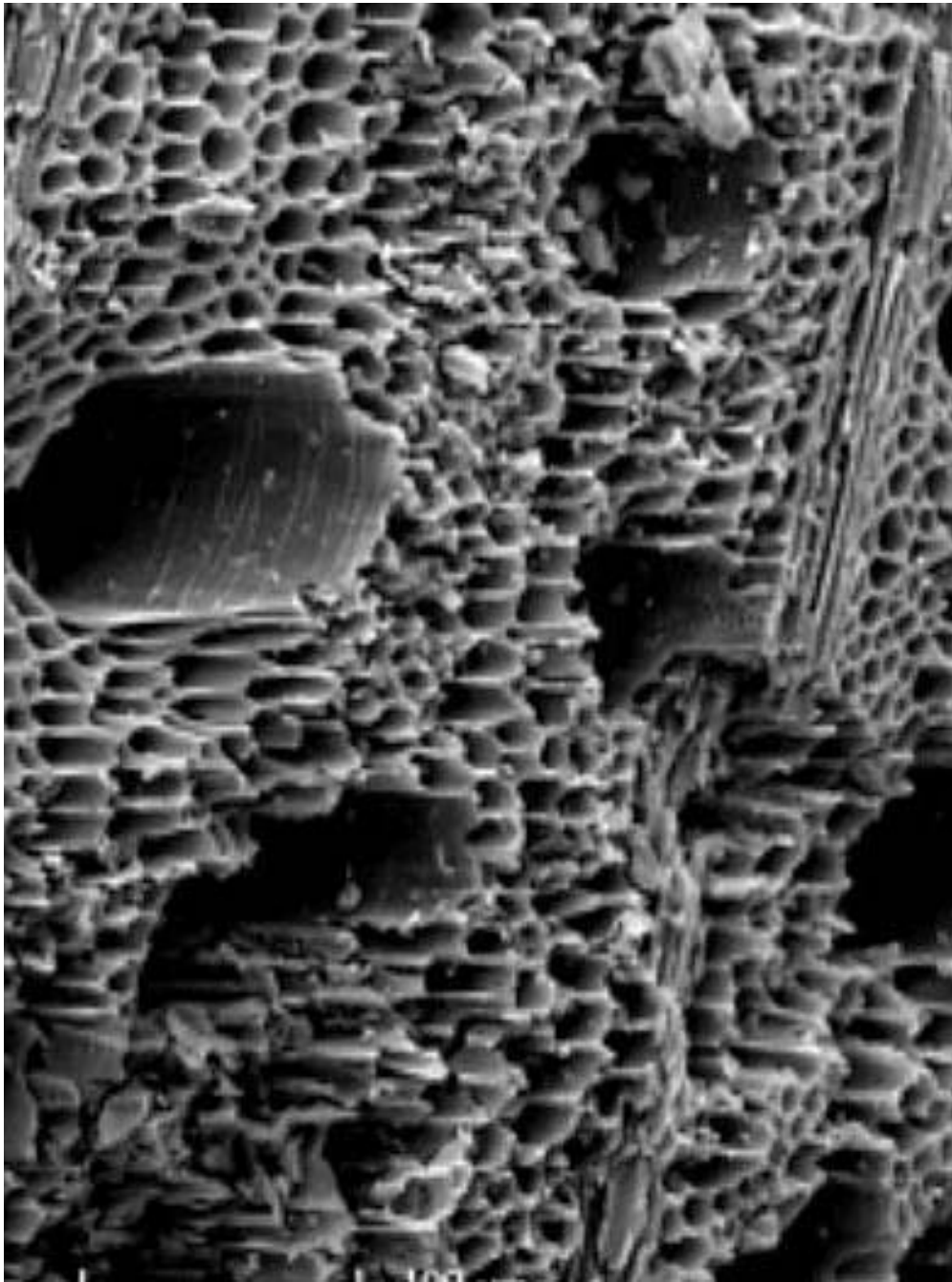
- In addition to biochar and CORC's, we generate significa heat, used for **rotary power** to microgrids from a renewable, non-combustion resource, or steam for

What is Biochar?

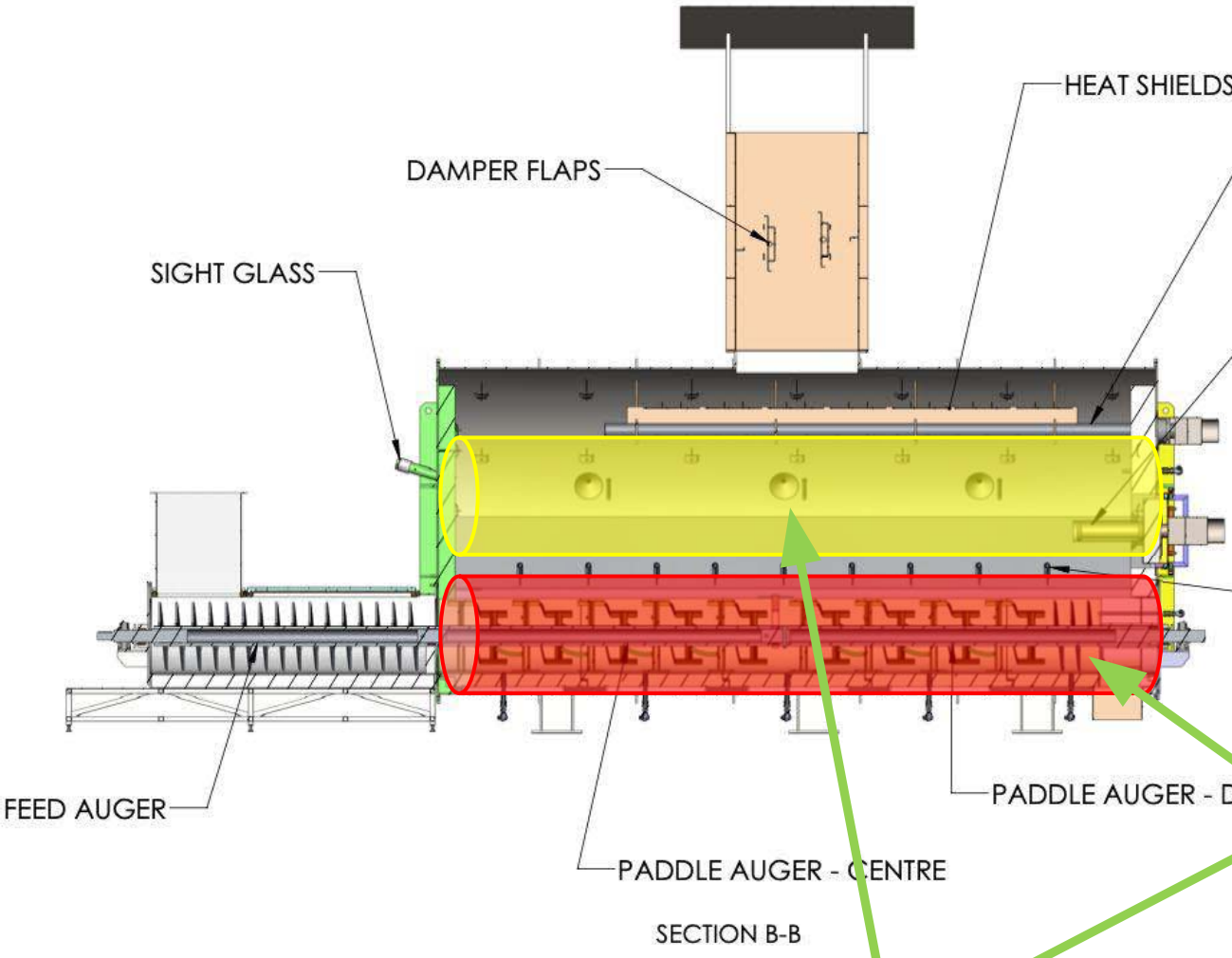
Biochar

/bīō͵CHär /
noun
stable carbon produced from plant matter and stored in the soil as a means of removing carbon dioxide from the atmosphere.

- Produced through pyrolysis at temperatures from about 320°C to 800°C (608°F to 1,472°F). Qualities can be customized
- Burning at these temps in an oxygen limited environment stabilizes carbon into a strong, long-lasting bond structure, >85% pure carbon
- This hard, crystal-like form lasts in soil for 100's of years
- Structure creates coral-like "habitat"




ABUS



Syngas Combustion Zone

Bioma Troug

applied gaia

DRAFTING STANDARD: ANSI (MODIFIED)

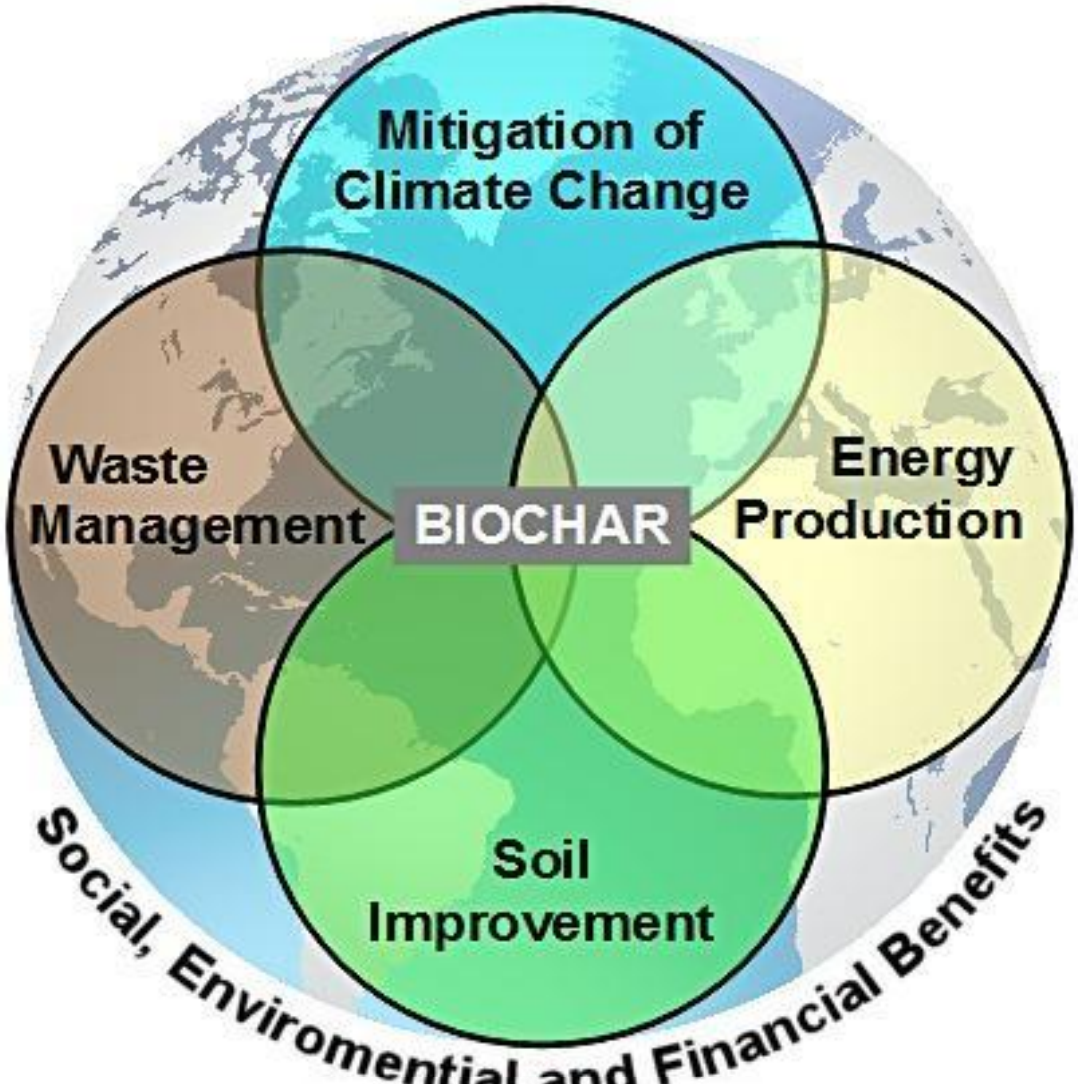
DIMENSIONS ARE MILLIMETERS.

TITLE: B3

Why is Biochar Important, Now?

Carbon Economy

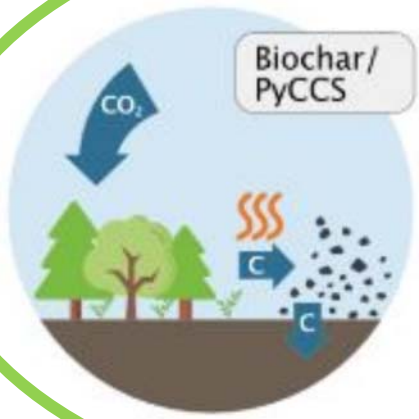
Circular Economy



Regenerative Ag

Six Options for Negative Emissions

Trees extract CO_2 from the atmosphere. Carbon can be bound in the medium to long term by material use of the biomass.

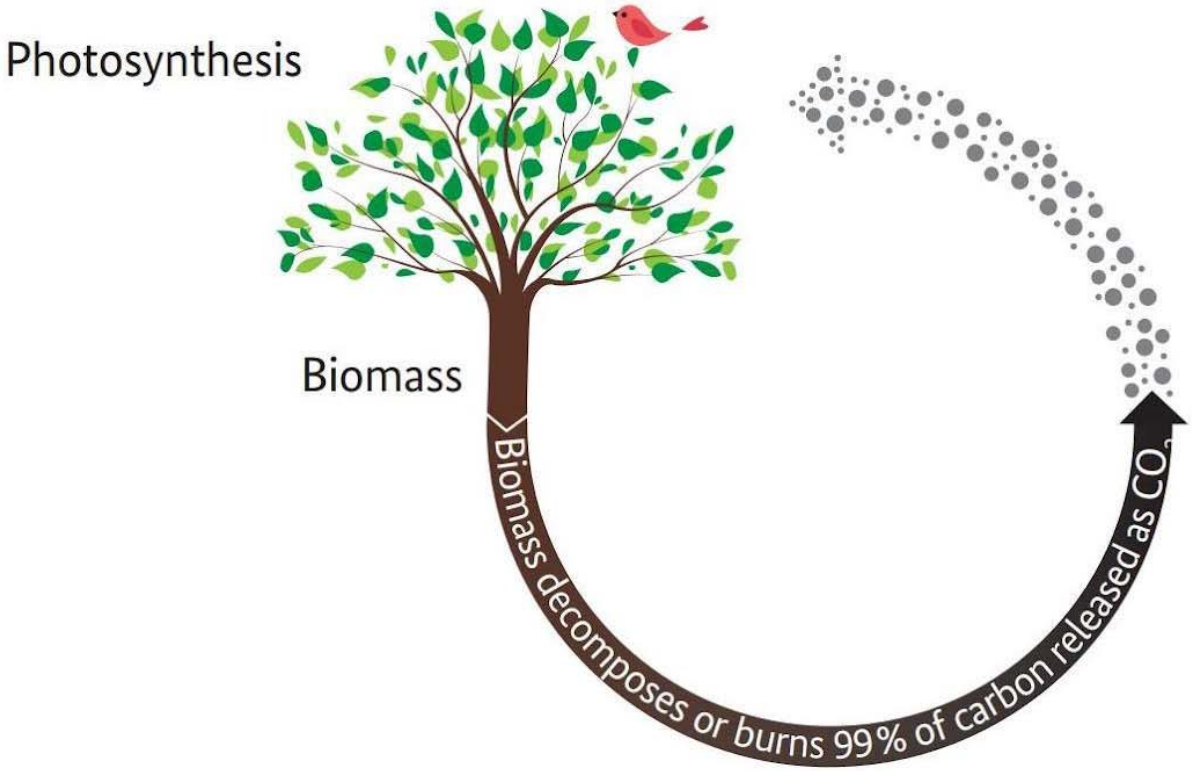


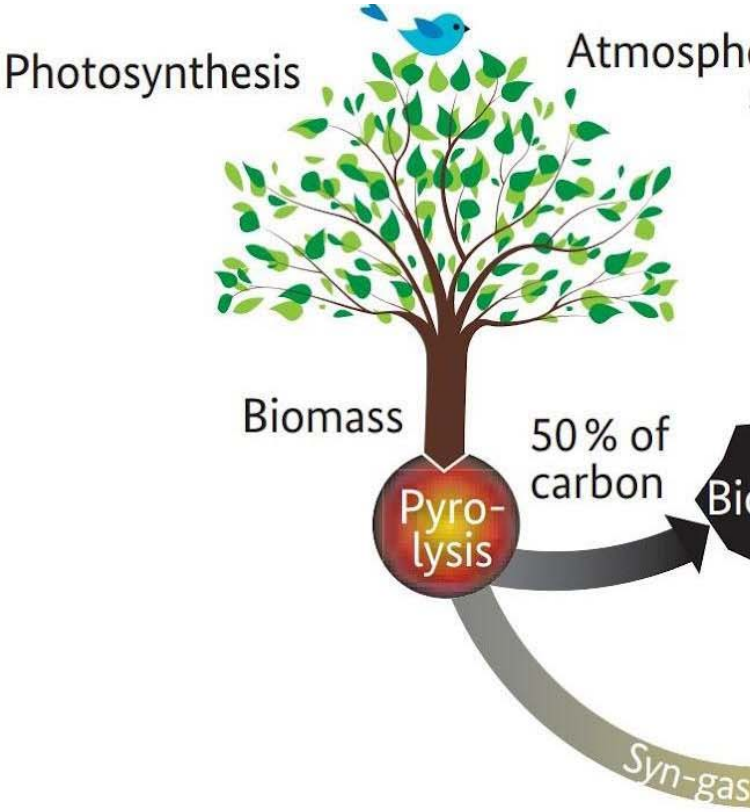
Plants extract CO_2 from the atmosphere. Through pyrolysis, the carbon stored in the plants can be bound in the long term, e.g. in the soil.

Rock is crushed and exposed to natural weathering/ mineralization. The weathering process removes CO_2 from the atmosphere, the carbon is firmly bound in the form of carbonates.

Plants remove CO_2 from the atmosphere. The biomass is used to produce energy, the CO_2 is separated and stored underground.

PyCCS - Interrupting the Carbon Cyc





Statewide Challenge

California produces 40+ million tons of biomass waste e
year:

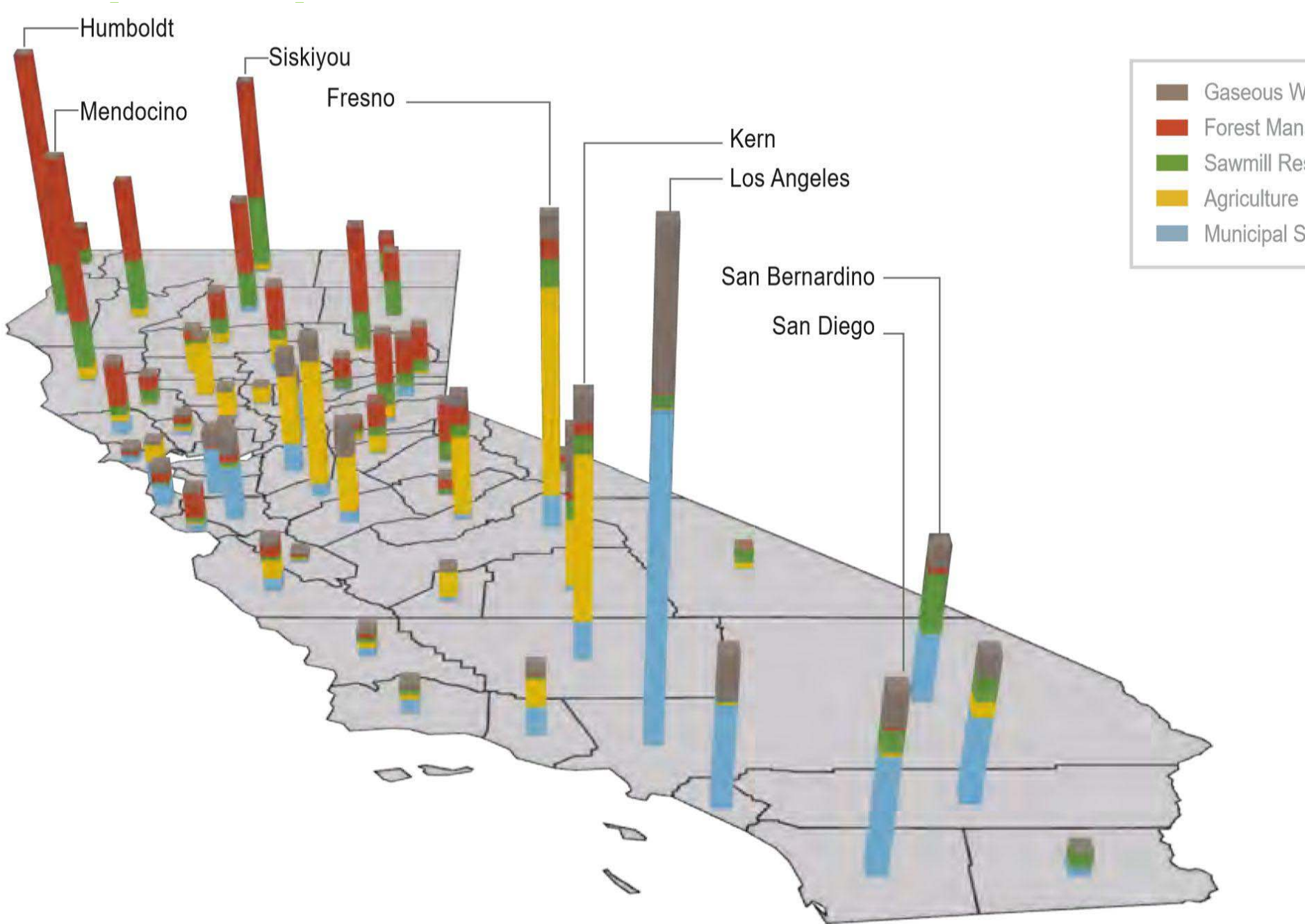
1. **Natural Hazards and Forest Management: 15.1 million t of forest biomass.**
2. **Agriculture: 12.7 million tons of biomass**
3. **Wastewater: 12.9 million tons of bio-solids**

This biomass goes into landfills or gets burned producin million tons of CO_2 every year[1].

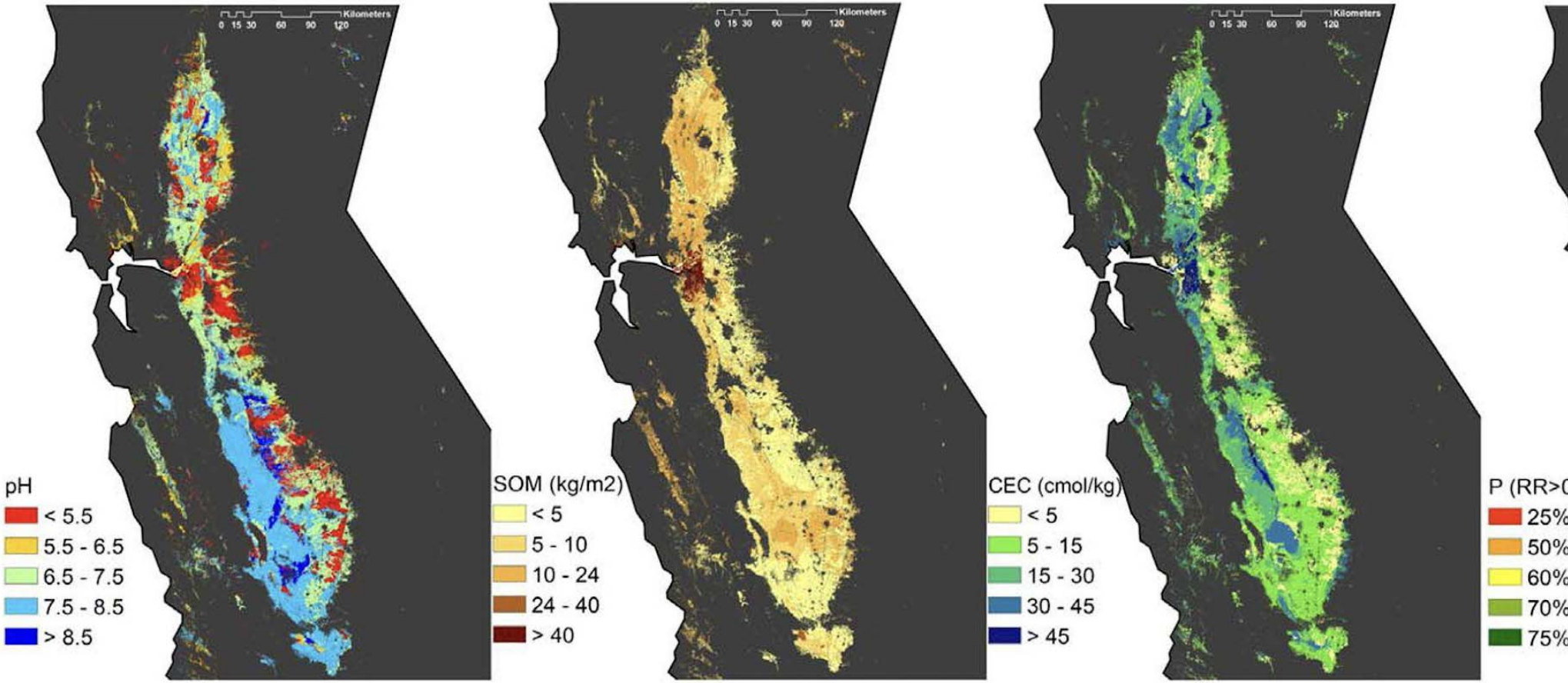
CARB's burning ban and SB 1383 require a timely solutio

[1] Sarah E. Baker et Al. Getting to Neutral: Options for Negative Carbon Emissions in California, January 2020. L

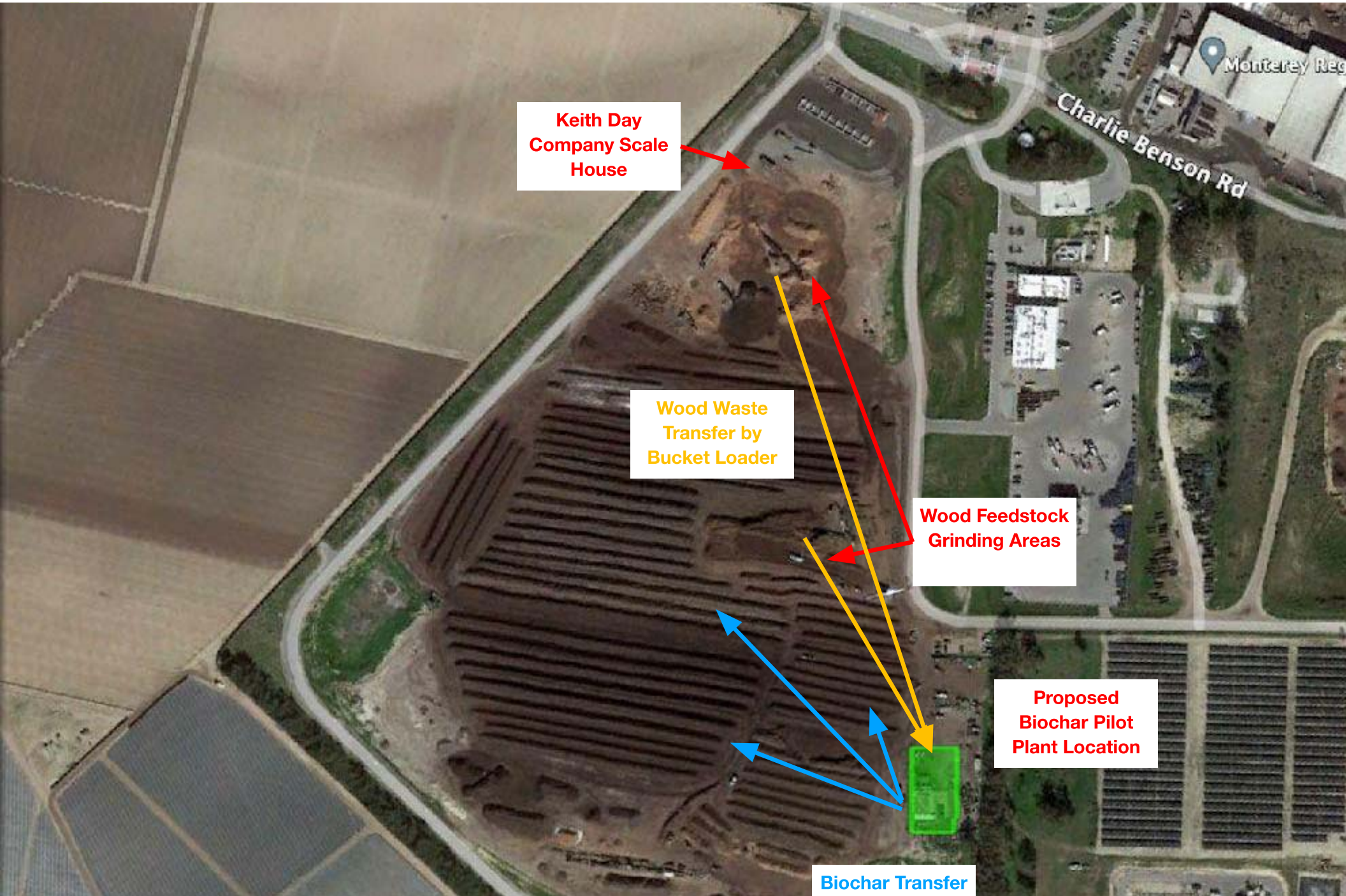
Where is CA's waste



The Need for Customized Biochar



Why


Keith Day Company Scale House
Charlie Benson Rd
Wood Waste Transfer by Bucket Loader
Wood Feedstock Grinding Areas
Proposed Biochar Pilot Plant Location
Biochar Transfer


Thank You!
Questions?