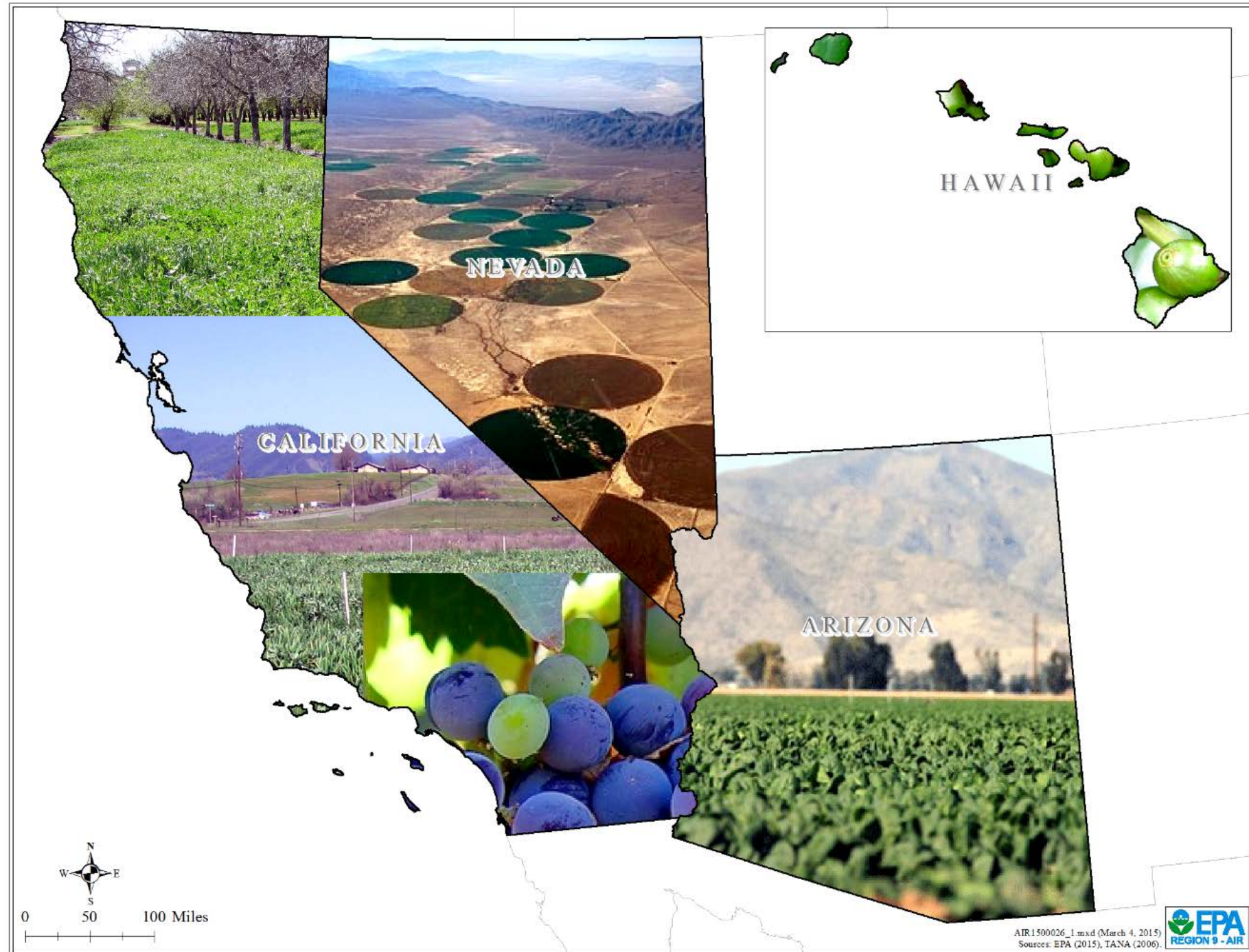


# Region 9 Ag Strategy



# Administrator's Charge

Recognizing the agency's regulatory mission to protect public health and the environment, how can EPA best create a framework for facilitating partnerships that build upon existing resource protection efforts through collaboration and innovation? In what ways can this framework advance the Agency's knowledge, efforts and use of resources to promote soil health, particularly as it relates to water and air, and to the adaptation to a changing climate?



# What is Soil Health

Soil health, also referred to as soil quality, is defined as the **continued** capacity of soil to function as a vital living ecosystem that **sustains** plants, animals, and humans.



# Benefits of Soil Health

- Erosion resistance
- Infiltration
- Productivity
- Sustainability
- Available Water Capacity
- Cation Exchange Capacity
- Biological activity to process chemicals and pollutants



# Soil Health Facts

- A 1% increase in organic matter results in as much as 25,000 gallons of available soil water per acre. (*Kansas State Extension Agronomy e-Updates, Number 357, July 6, 2012*)
- That same increase in organic matter and a corresponding improvement in soil structure had a soil erosion savings of over 4 tons per acre per year. (based on a simple run of the USLE with assumptions as to R, LS, C and P)

Keep it covered



Disturb less



Plant diversity



Living root



# How to Create Soil Health (Conservation Practices)

- Cover Crop (340)
- Mulching (484)
- Rotational Grazing (528)
- Nutrient Management (590)
- Conservation Crop Rotation (328)
- Residue and Tillage Management, No-Till (329)



# Goals:

The Region 9 ag strategy is intended to increase the acreage of agricultural land adopting a suite of conservation practices that promote soil health resulting in the following benefits:

- *Improved air quality*
- *Improved water quality*
- *Improved retention and breakdown of ag chemicals such as fertilizer and pesticides*
- *Increased diversion of waste streams*
- *Improved pollinator health*
- *Increased sequestration of carbon*



- 1. Communicate the benefits** of soil health practices, including developing a better understanding of the benefits for drought resilience, air quality, water quality, improved retention and breakdown of agriculture chemicals such as fertilizer and pesticides, waste streams, pollinator health, and carbon sequestration, as well as financial benefits to producers.
- 2. Create incentives and leverage funding** for the implementation of soil health practices.
- 3. Address regulatory and other barriers** that prevent the implementation of soil health practices, and
- 4. Measure and record environmental improvements**, including air and water quality, from the implementation of soil health measures.

*Communicate the benefits...*

1.1 Create or join a “Soil Health Initiative” as a collaborative group of agencies and private entities promoting soil health to increase coordination among partners and increase the delivery of information.



*Communicate the benefits...*

1.2 Assemble and connect success stories of soil health practices with partner organizations to help foster relationships and increase outreach of key messages (i.e., RCDs, Ag commissioners, grower's boards/associations, CTIC etc.)

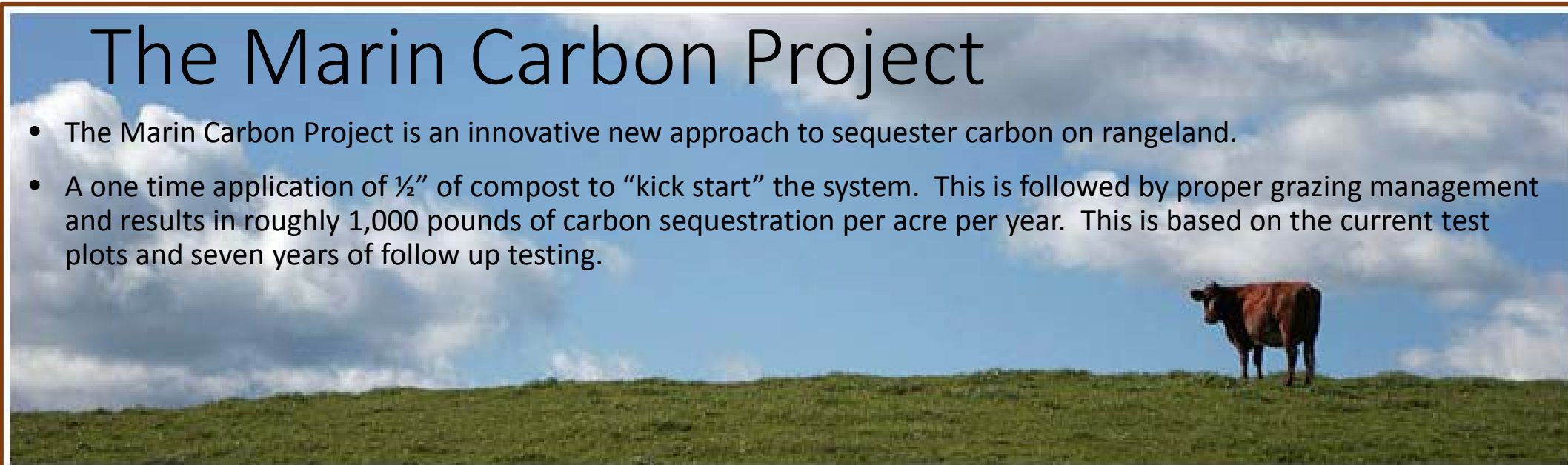


*Communicate the benefits...*

1.3 Partner with organizations and businesses in Region 9 to reduce wasted food through EPA's Food Recovery Challenge. Participants commit to purchasing less food, donating extra food, and composting food scraps to reduce the impact of wasted food on the environment.

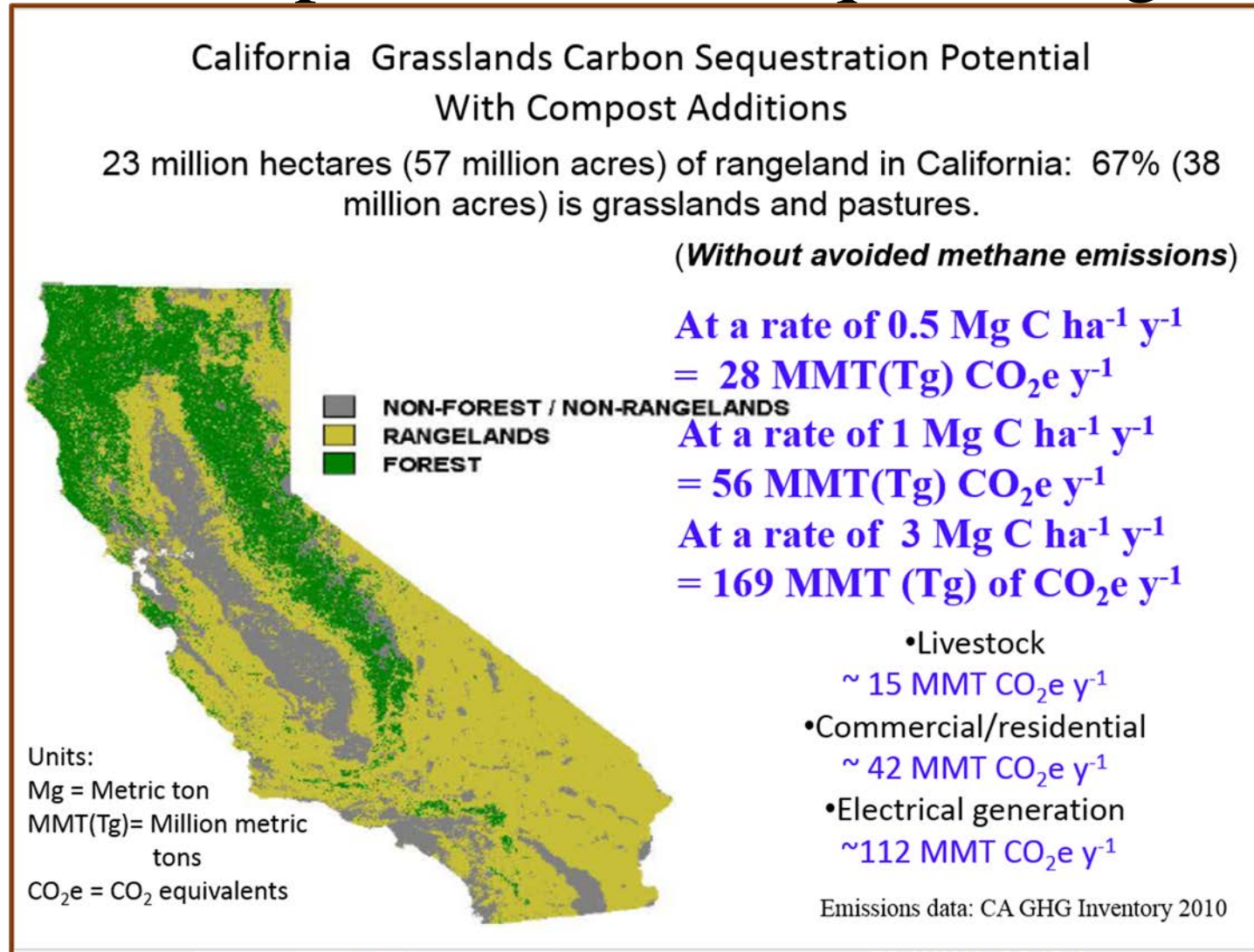
## The Marin Carbon Project

- The Marin Carbon Project is an innovative new approach to sequester carbon on rangeland.
- A one time application of ½" of compost to "kick start" the system. This is followed by proper grazing management and results in roughly 1,000 pounds of carbon sequestration per acre per year. This is based on the current test plots and seven years of follow up testing.



# Create incentives and leverage funding...

## 2.1 Work with ARB, CDFA and Department of Conservation for the development of offset protocols for sequestering carbon on agricultural land.



*Create incentives and leverage funding...*

2.2 Work with the air district and water board to adopt a coordinated suite of conservation practices that could serve to meet some of the requirements of both the air district's conservation management practices rule and the water board's irrigated lands program, therefore reducing duplicative requirements



*Create incentives and leverage funding...*

2.3 Utilize the efforts in 1.1 to help leverage funds to provide assistance and incentives to farmers to implement soil health practices.



*Create incentives and leverage funding...*

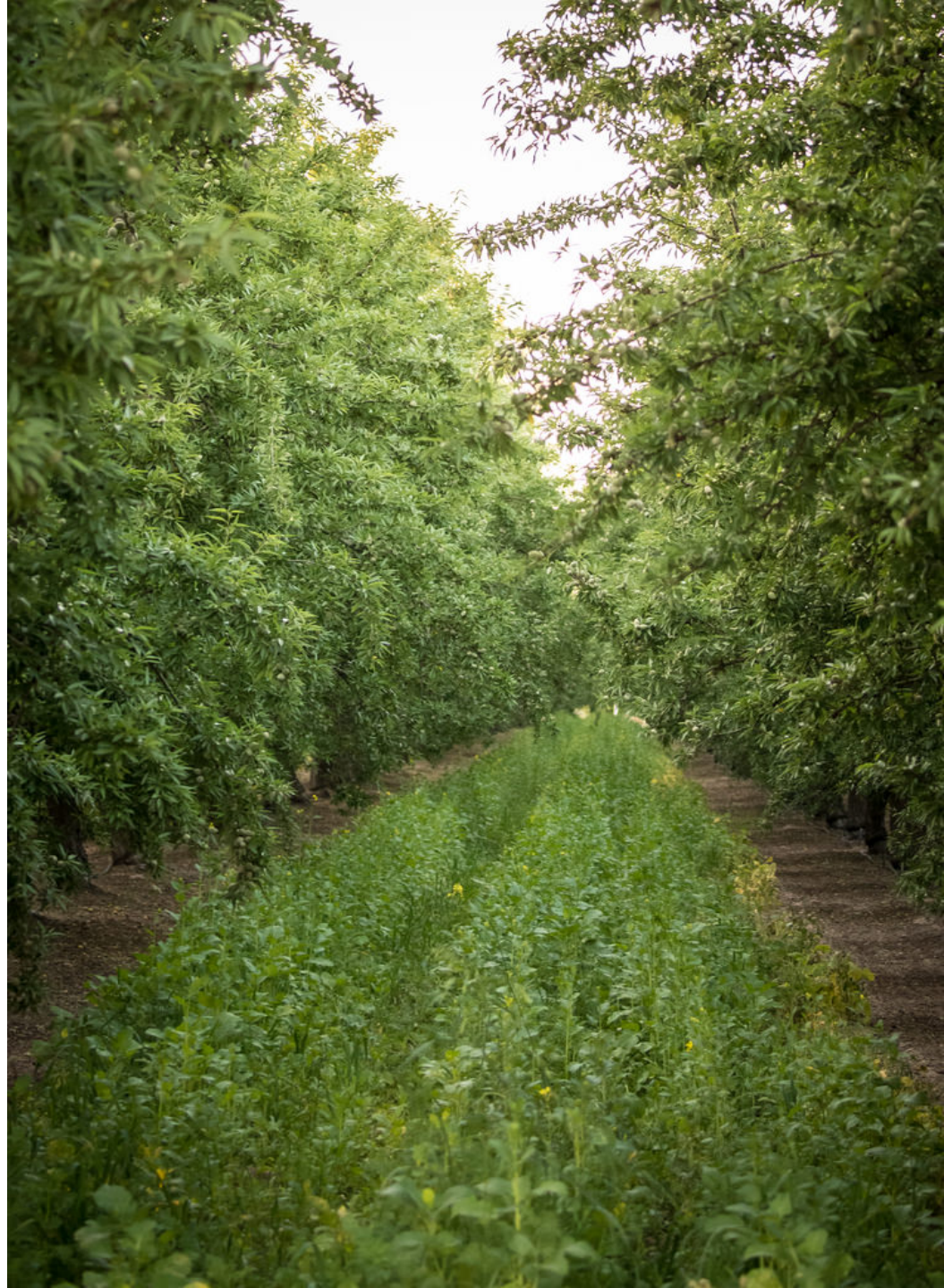
2.4 Use supplemental environmental projects to incentivize and highlight soil health practices





*Address regulatory and other  
barriers...*

3.1 Work to resolve the conflict  
between food safety and soil health  
practices.



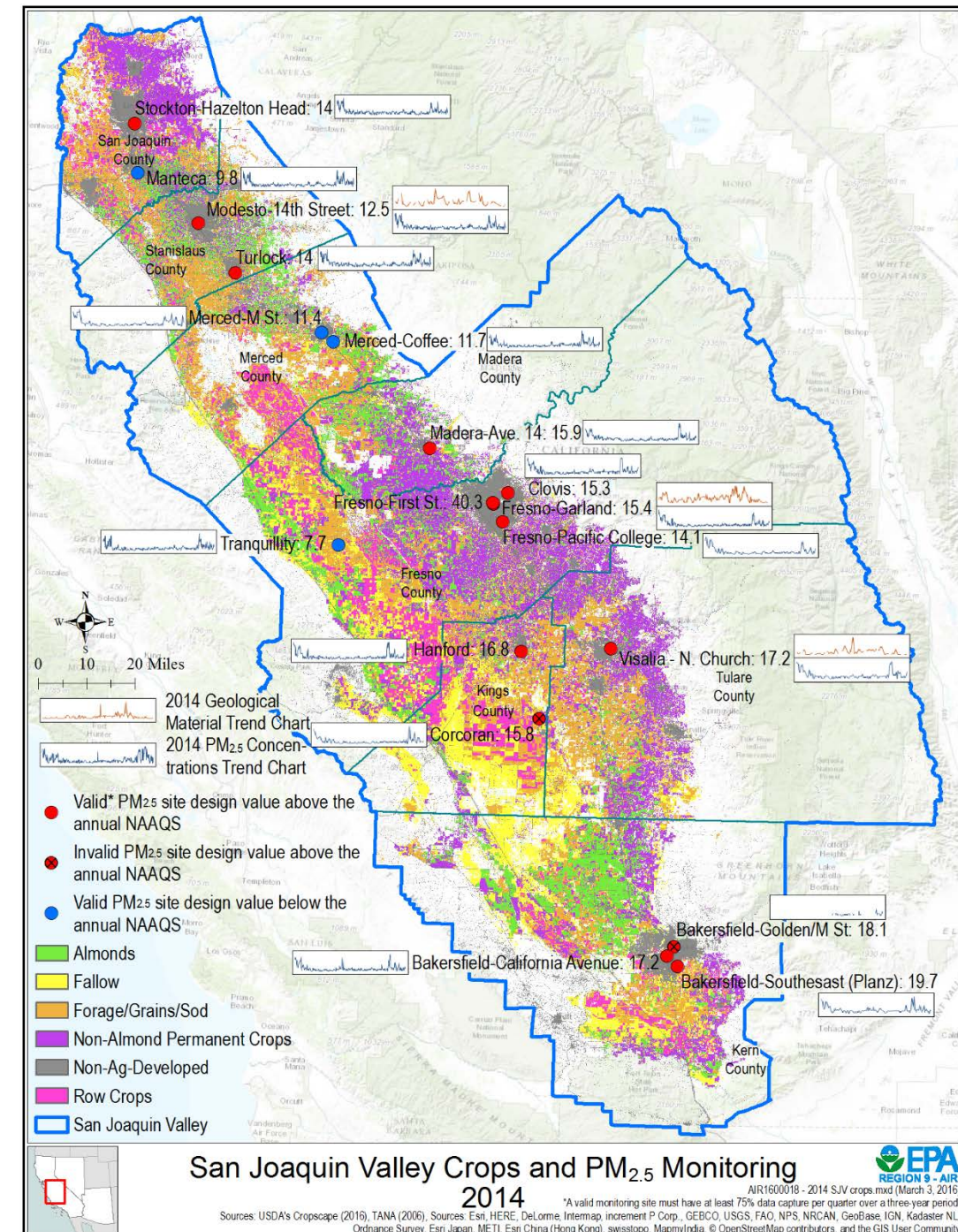
*Address regulatory and other barriers...*

3.2 Work with grower organizations and equipment suppliers to understand the technology gap between conventional agriculture and conservation management practices.



# Measure and record environmental improvements...

4.1 Track the acreage of land in the SJRW adopting specific soil health practices with the goal of quantifying air and water quality expected benefits



*Measure and record environmental improvements...*

4.2 Connect information from existing monitoring networks for direct measurement of practice implementation effects. Results can be assessed for refining expected benefits listed in 4.1.



# Questions?

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