Sonoma County Biochar Project

North Coast Resource Partnership
October 15, 2015

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Sonoma County Water Agency
Sonoma Biochar Initiative

Sonoma Biochar Initiative
Building Healthy Soils
Redirecting Carbon

SONOMA COUNTY WATER AGENCY

SONOMA ECOLOGY CENTER

North Coast RC&D Council

NEB

SONOMA COUNTY WATER AGENCY

USDA

Gold Ridge Resource Conservation District

Sonoma Biochar Initiative

Redirecting Carbon
Building Healthy Soil

Biochar – A New (Old) Technology

…that shows great promise for Agriculture, Energy Production, Bioremediation, and Carbon Sequestration

Benefits of Biochar:

- Soil health
- Water conservation
- Biomass utilization (forest fuel reduction)
- Carbon sequestration
- Reduce GHG
- Bioremediation (filtering capabilities)
- Jobs, economic growth

Purpose:

2015
International
Year of Soils

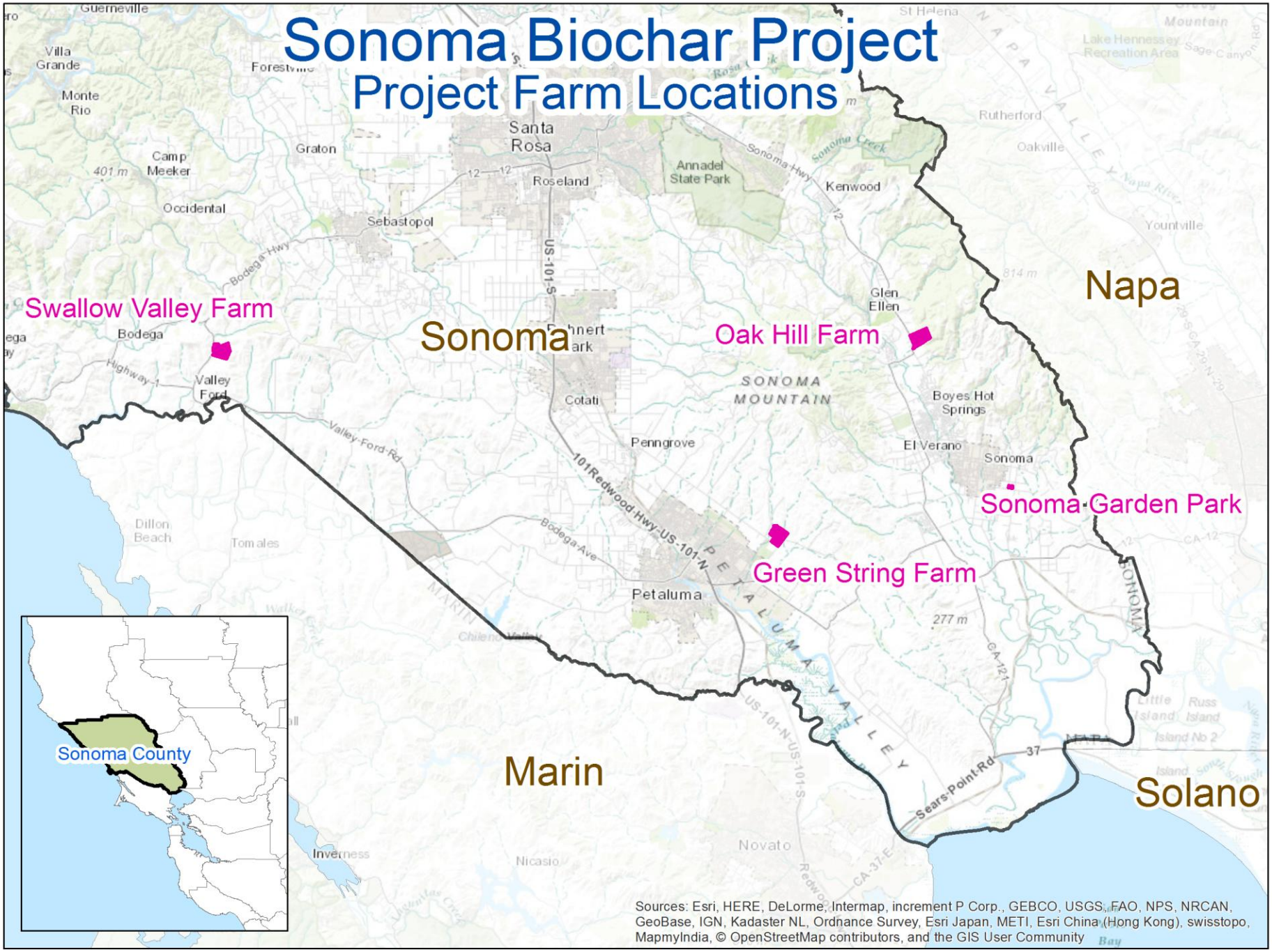
- Demonstrate small scale local production
- Conduct field trials on varying soil types
- Evaluate water conservation and soil health properties
- Study renewable energy possibilities
- Explore adaptation strategies for farmers and land managers

Primary local feedstock : pine, eucalyptus, bay

Adam Retort Biomass Processing Unit

Sonoma Biochar Project

Project Farm Locations



Swallow Valley Farm
Valley Ford

Green String Farm
Petaluma

Oak Hill Farm
Glen Ellen

Field testing using USDA-NRCS protocols:

- Soil health indicators
- Moisture retention
- Crop yield
- Farmer survey of management

Oak Hill Farm: 25% higher moisture retention

Yield: crop weight & number of plants doubled

"As most biochar research has been conducted at the laboratory- or bench-scale, large-scale field applications of biochar practices and technologies are needed..."

Eric Byous, Physical Scientist, Water Efficiency Sustainable Infrastructure Office, USEPA, Region 9

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