

A photograph of a large orchard with many trees, likely apple trees, under a bright sun. The trees are arranged in rows, and the ground is covered in green grass. The sun is in the upper right corner, creating a lens flare effect. The overall scene is bright and vibrant.

Aromas Family Farm at the Seely Ranch

Permaculture Course Design Project 2020-2021

By Shen-Shen, Aurore, Amanda, and Danielle

Welcome to Aromas Family Farm



Site: 19211 Pioneer Place Aromas 95004



- **Elkhorn Slough Watershed and Pioneer Place Mutual Water Association**
- **6.86 acres** of Chaparral Oak Woodland and Riparian Zones
- Soil is about half loamy sand and half [“aquic xerofluvents”](#)

Monterey County, California (CA053)			
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Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
Af	Aquic Xerofluvents	2.6	53.4%
AkD	Arnold loamy sand, 9 to 20 percent slopes, MLRA 15	2.3	46.6%
Totals for Area of Interest		5.0	100.0%

Home to Slender Salamanders, California Newts, Red Tailed Hawks, Turkey Vultures, Oak Titmouse, California Quail, Great Horned Owls, Bobcats, Brush rabbits, Black Tailed Deer, Skunks, Opossums, Bats, Foxes, Coyotes, Gophers, Chickens, Dogs, Cats, 5 adults, 1 wild child and a list of plants to numerous to list!

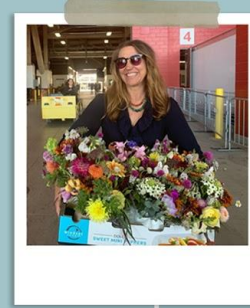
The Amah Mutsun Tribe,
native to the San Juan Valley



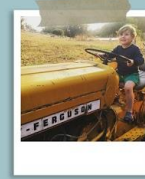
*Aromas, California
Jan 14 1899
Compliments of
Wife and Children
to G. W. Seely*



Over the years, the family
farm kept expanding...



Until 2009, when Amanda took
over the family land to create
Laughin' Gal Flower Farm



In 1893, the Seely bought parcels of land
in Aromas to found an apricot & pear farm



...and was passed
down from generation
to generation



And here we are, 11
years later: the Laughin'
Gal is ready to grow
and apply permaculture
principles to embark
upon a new adventure



Introducing
**Aromas
Family Farm!**

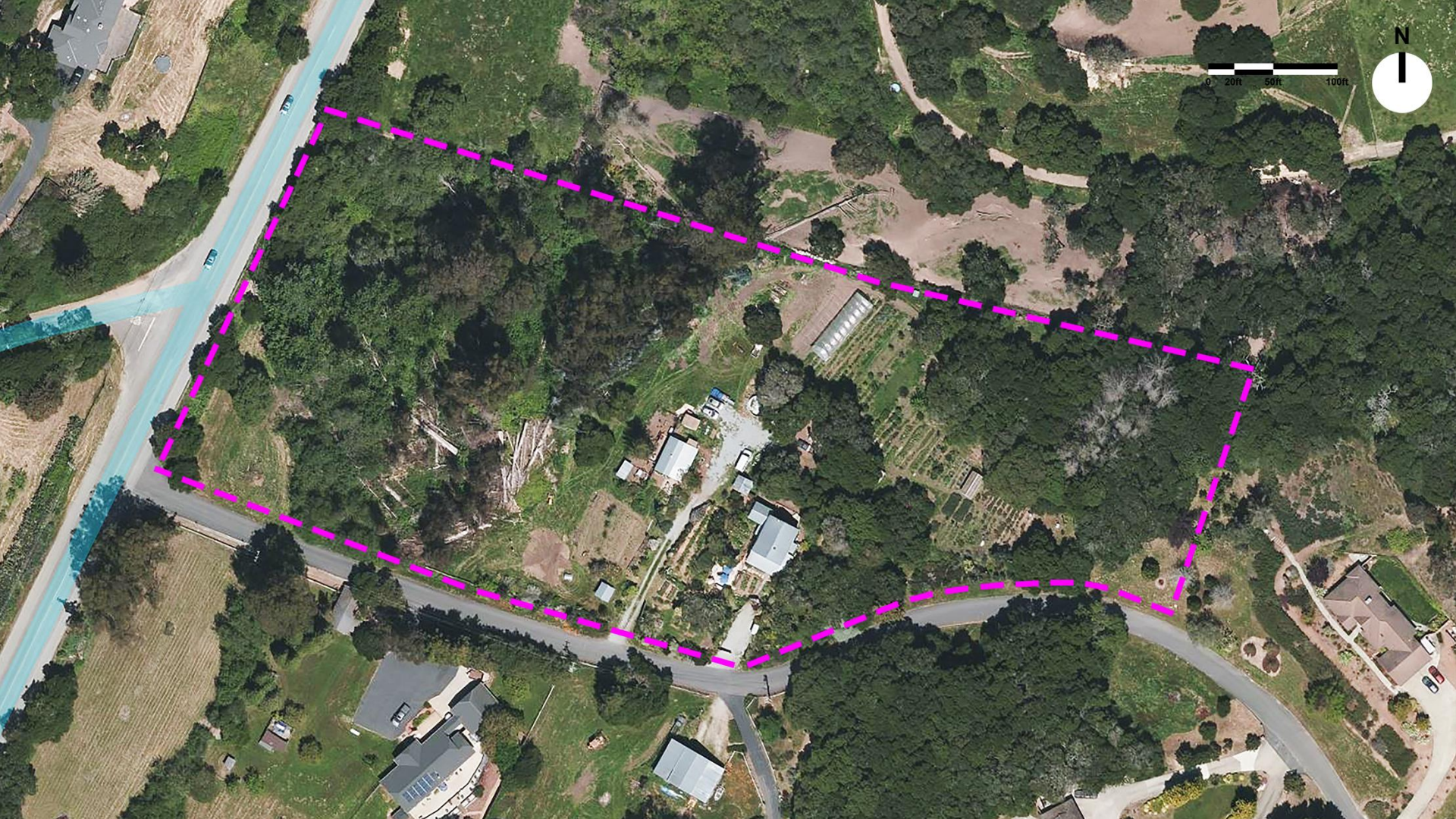


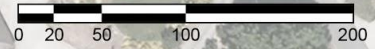
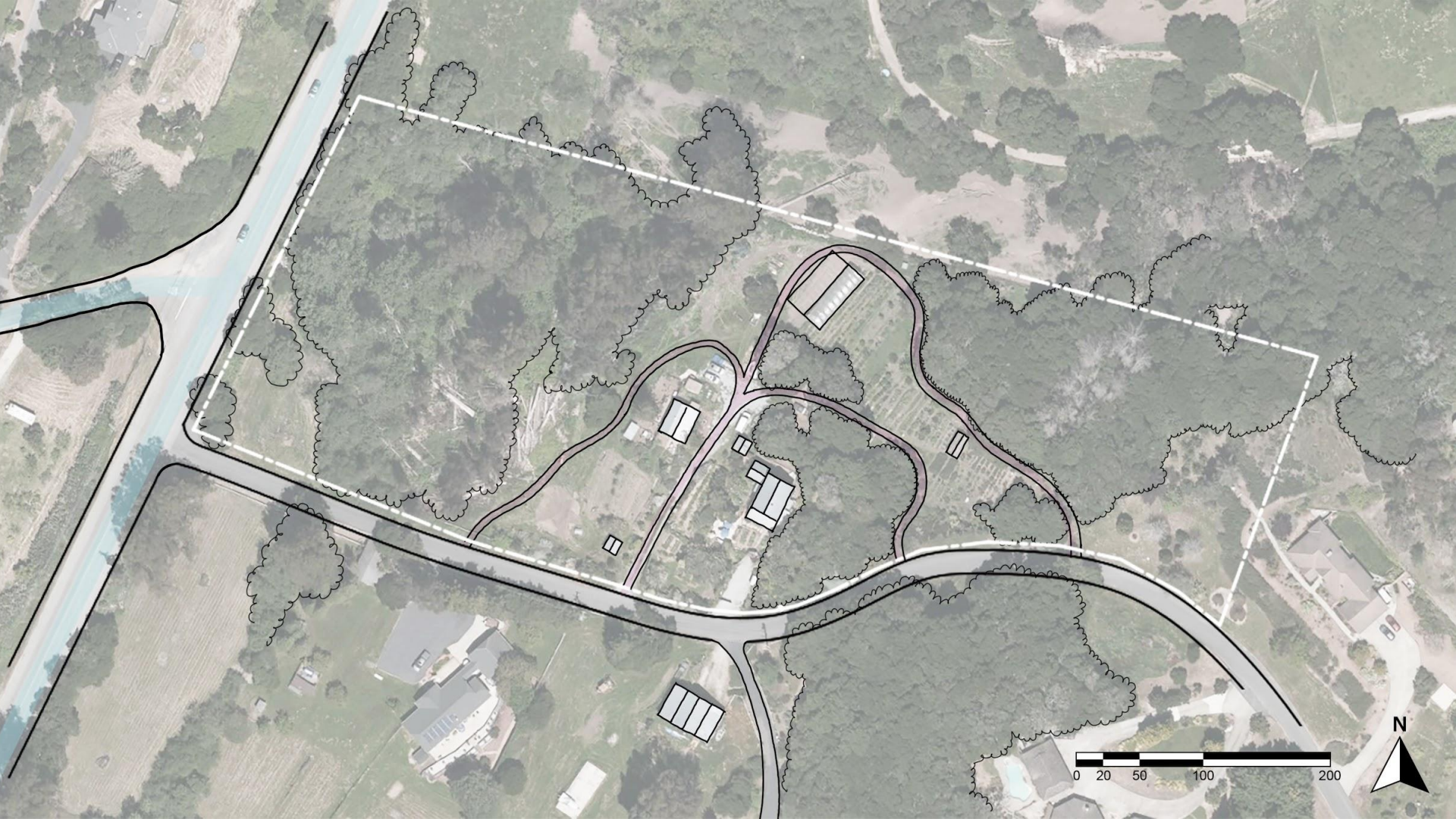
Goals and Mission Statements

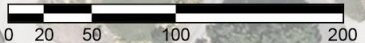
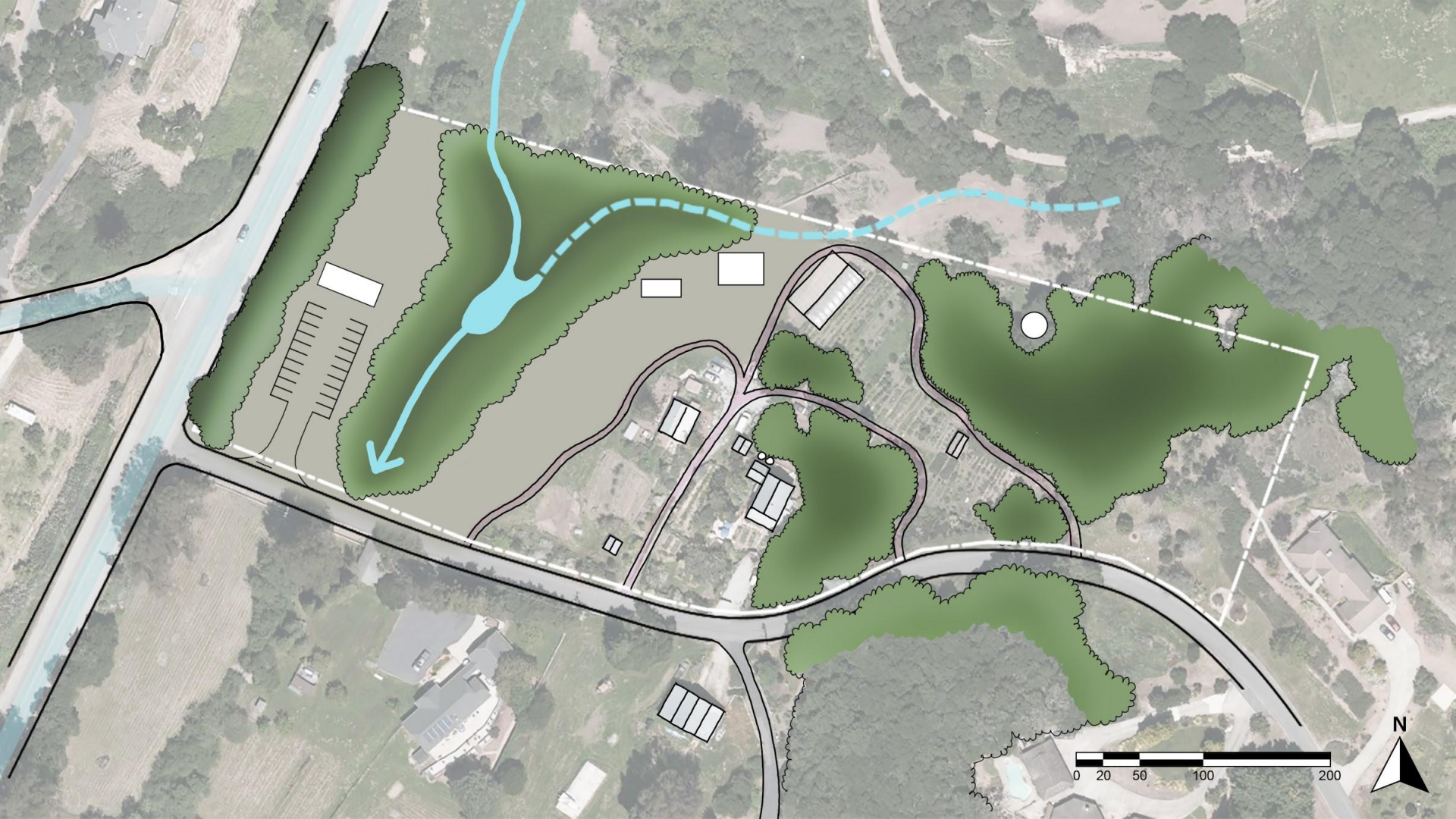
Our goal is to work more efficiently with the land.

We would like to continue to grow high quality cut flowers and foliage while simultaneously expand wildlife habitat, clean water and safe passage.

We would like to create a public space for the sharing of wisdom, food, art, healing, skills, seeds, firewood, compost, labor, love and laughter.









1-2 Year Plan

- Install Hedgerow along 75' of seasonal creek corridor.(March- April 2021)
- Install 500 additional pollinator friendly plants to preexisting hedgerow and perennial harvesting areas(NRCS to deliver plants April 15, 2021)
- Update pre-existing irrigation system to include automated timers and pressure regulators at every water line(March 2021).
- Install Moisture Monitoring Technology for reporting to NRCS(spring 2021-22)
- Install an Owl Box in Oak Woodland to encourage Barn Owl inhabitants(November 2021 for Winter nesting season)
- Add 9 more fruit trees to fringe of perennial flower production areas(Ordered 4 Winds Nursery Feb- March 2021).
- Continue to clear Eucalyptus for long term riparian creek restoration project. This creates firewood for barter/sales and makes flat land available for riparian planting and flower production(ongoing since 2016).
- Rework Chicken/Duck Coop- Install two removable panels/walls for ease of cleanup i.e. getting nutrients from coop into neighboring orchard(Hired contractor for May 2021).
- Build two chicken tractors for the safe grazing and transport of chickens/ducks to graze in understory of oak woodland(May 2021).
- Diversify flower farm income to include on farm classes/workshops(teaching first class March 19, 2021).
- Organize work parties and volunteer days- Labor and Learning days on the Farm.
- Rebrand small flower operation Laughin' Gal Floral, LLC to **Aromas Family Farm**(underway...thank you SC Permaculture Project)

1-2 Year Plan



3 Year Plan

- Retrofit the farmhouse, built in 1897 to support greywater practices at bathroom and laundry room
- Construct Greenhouse with rainwater catchment(NRCS EQUIP grant)
- Install irrigation line from Greenhouse to holding tanks on the top of the hill/property
- Install 3 5,000 holding tanks on top of the property (NRCS grant)
- Partner with professionals in need of a space to conduct classes, hands on training, education and even on farm garden/art therapy
- Clear dead pines, below tanks to expand avocado and citrus orchard
- Install Rainwater catchment system on 2100 square foot farmhouse. Create overflow irrigation to drain into seasonal creek.
- Construct a Yurt in Oak Woodland for use in hosting Woofers and other people interested in work-housing trade.

3 Year Plan



5 Year Plan

- Continue with riparian restoration of perennial creek
- Build a farmstand in lower field along visible and well traversed Carpenteria Rd. Sell goods from neighboring farms in addition to our own. Create a shared farmstand to promote all our local goods and share labor to maintain.
- Continue to expand growing area of perennial shrubs for use in flower arrangements and florist sales
- Apply for grants to expand growing/grazing operations on adjacent 70 acres
- Continue to grow annual and perennial flowers but create market space for orchard species- passionfruit, feijoa, avocado, prunes, pears, rhubarb, citrus

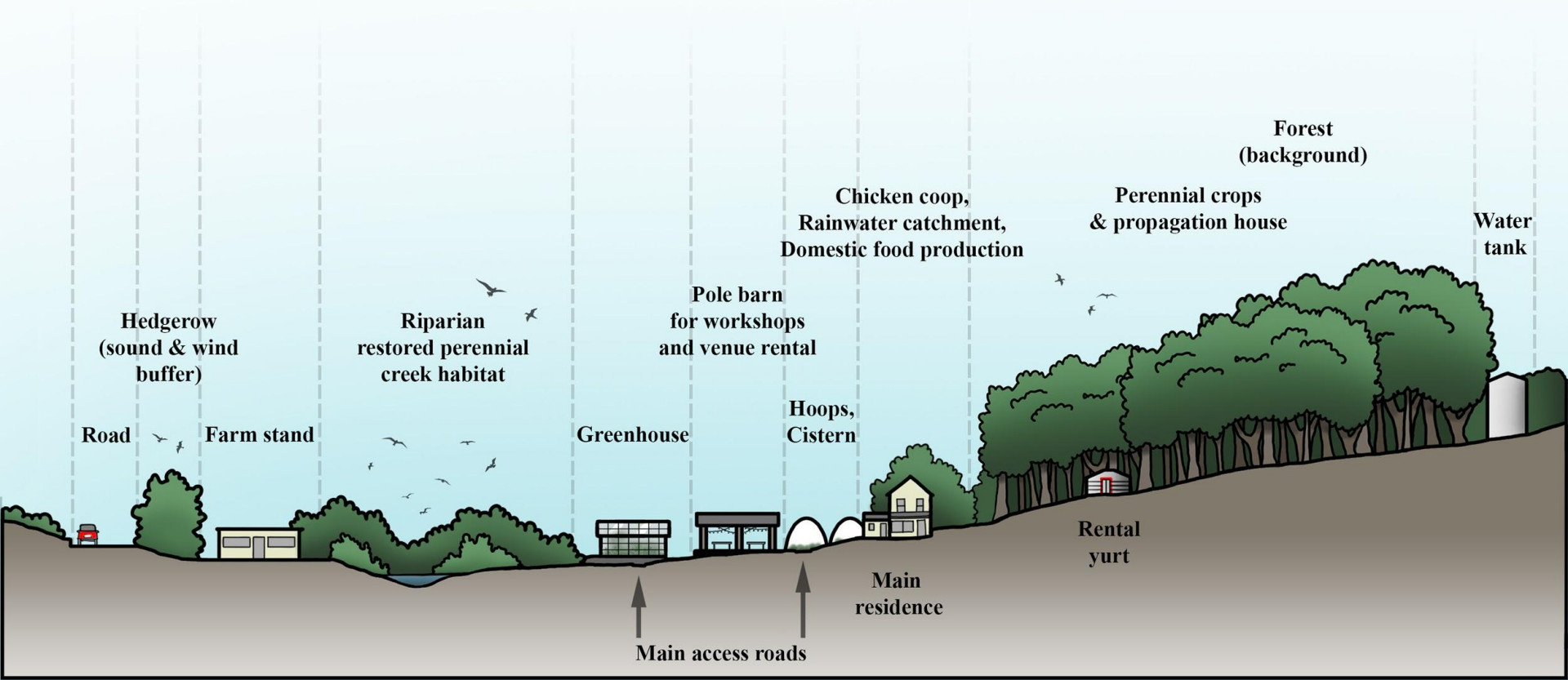
5 Year Plan



10 Year Plan

- Expand farmstand to include a small cafe/community market/gathering space
- Build a pole barn out of lumber from farm(eucalyptus poles) to provide additional space(currently have a large barn) for flower/fruit packaging and storage and onfarm classes- medicinal herb gathering, fruit preservation, wreath making, herbal soap making, cooking demonstrations etc.
- Install a well on the back 70 acres in order to both lease farm land and expand perennial growing operations
- Encourage nephews and nieces(or other interested youth) to join the farm/take over aspects of the operation.





Year 10 Section-Elevation

USDA NRCS EQIP Grant

- USDA = United States Department of Agriculture
- NRCS = Natural Resources Conservation Service (<https://www.nrcs.usda.gov/>)
- EQIP = Environmental Quality Incentives Program
- NRCS helps agricultural producers confront challenges while conserving natural resources like soil, water, and air
- Through EQIP, agricultural producers can voluntarily implement improvements (i.e. conservation practices), and NRCS works one-on-one to plan, co-invest, and implement

NRCS Grant Summary (2021 - 2023)

- Structures
 - Hedgerow planting
 - Owl box
 - Greenhouse
- Water management
 - Rainwater catchment, pipeline, reservoir
 - Micro-irrigation line
 - Soil sensors and irrigation scheduling

Structures

Hedgerow Planting

- ~70 feet planted along the property line
- Wind, sight, sound barrier
- Multiple uses - medicinal, edible, habitat, aesthetic



Ceanothus impressus



Ceanothus papillosus



Ceanothus gloriosus



Arctostaphylos glauca



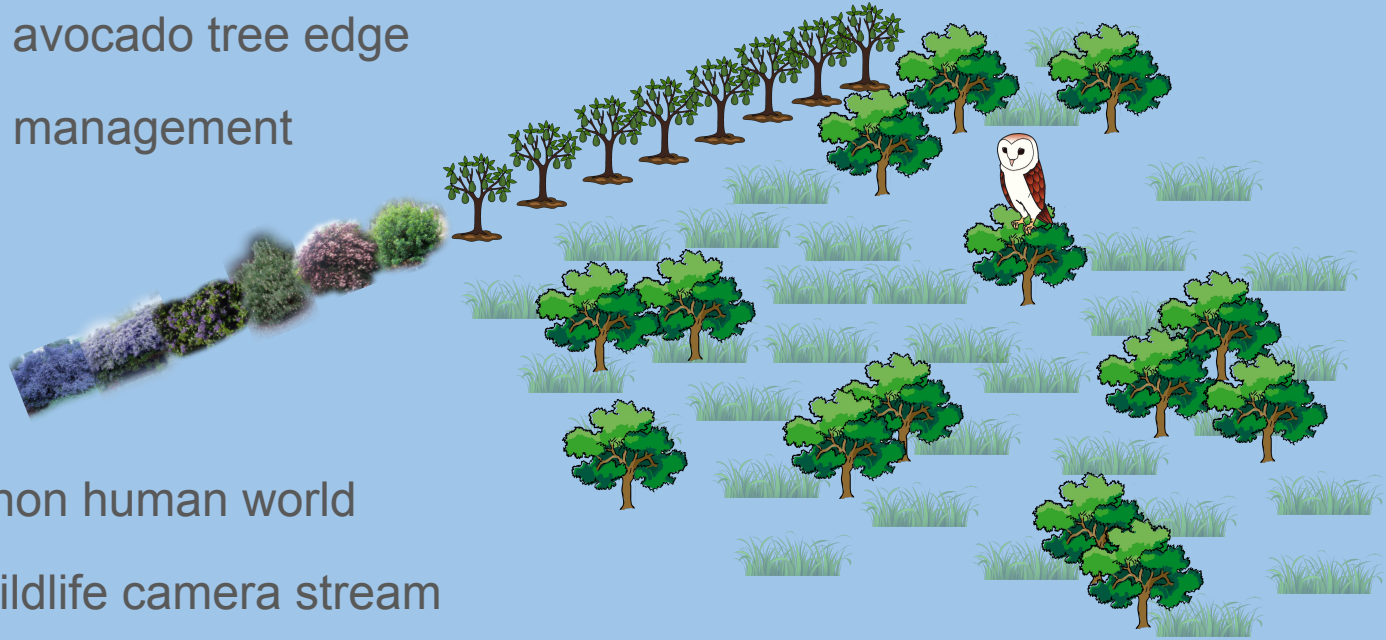
Sambucus nigra



Rhus integrifolia

Owl Box

- Oak grove with avocado tree edge
- Integrated pest management



- Considers the non human world
- Could start a wildlife camera stream

Greenhouse

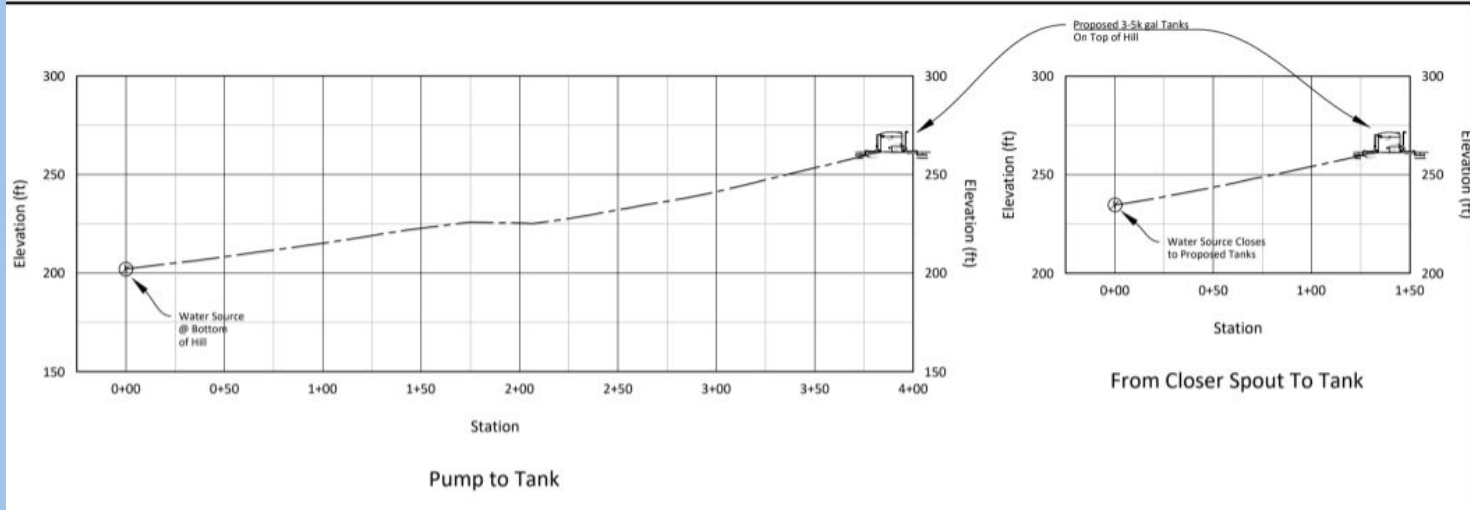
- Open floor to plant directly in fertile soil
 - Increase production of commercial plants
- With rainwater catchment system



Water Management

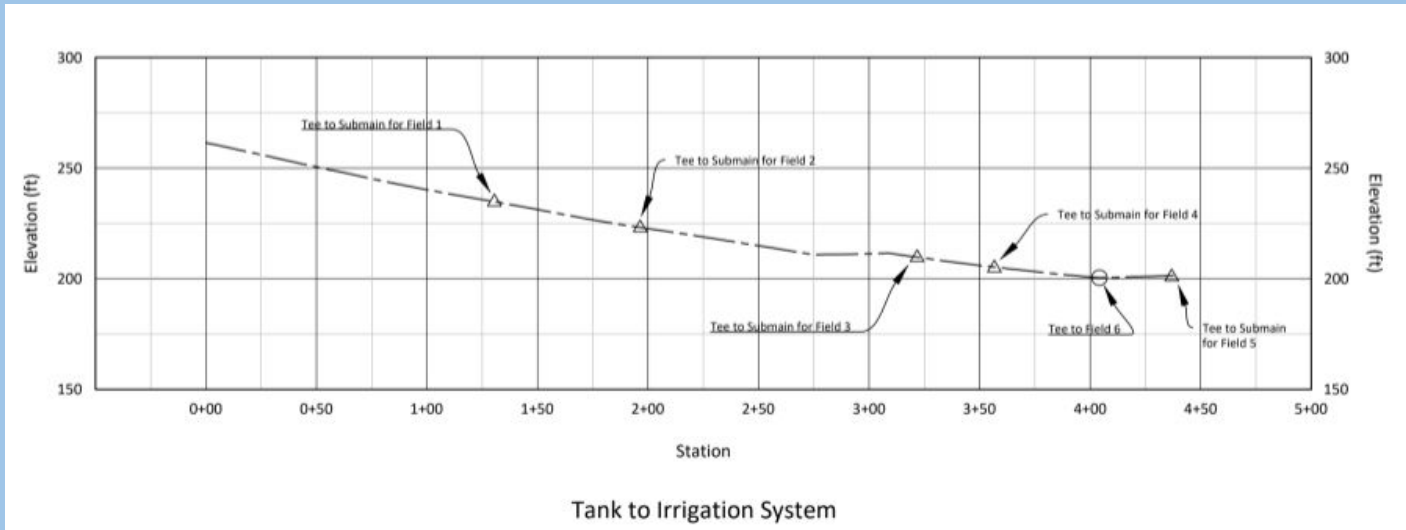
Rainwater Catchment

- Collected at greenhouse and pumped uphill to plastic tanks at top of hill
- Reduce stormwater runoff
- Emergency water source



Irrigation

- Gravity fed downhill from tanks to fields via PVC pipes
- Free, non-treated water for irrigation



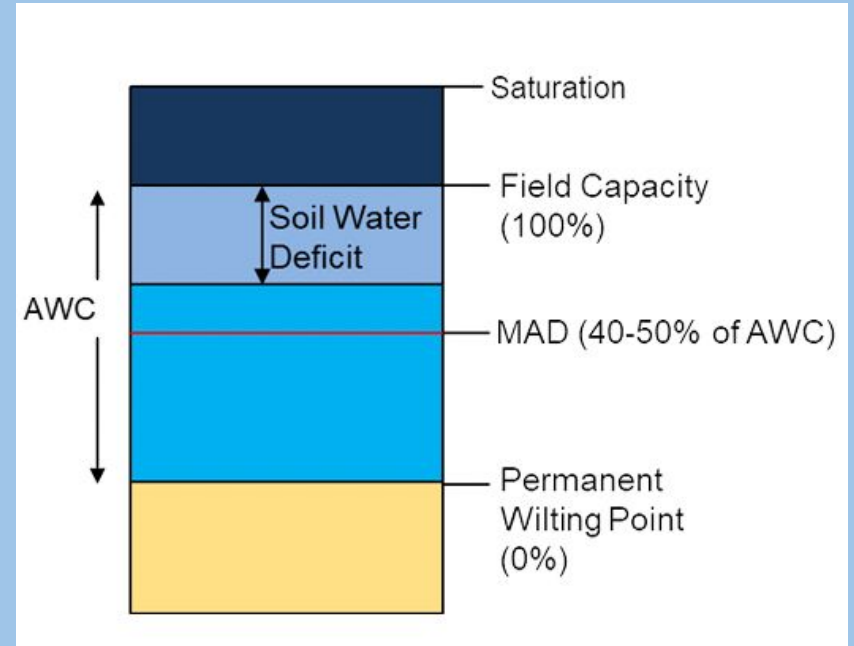
Irrigation (continued)

- Micro-irrigation line
- Soil Moisture Sensors with Data Recorder
 - Volumetric water content (VWC) sensors measure the volume of liquid water per volume of soil. Usually expressed as a percentage (e.g. 25% VWC means 0.25in³ of water per 1in³ of soil)
 - Soil water tension or matric potential sensors. Soil water tension indicates the energy required by plant roots to extract water from soil particles. As soil water is removed from soil, soil tension increases. When the soil is full of water, soil water tension is close to zero.



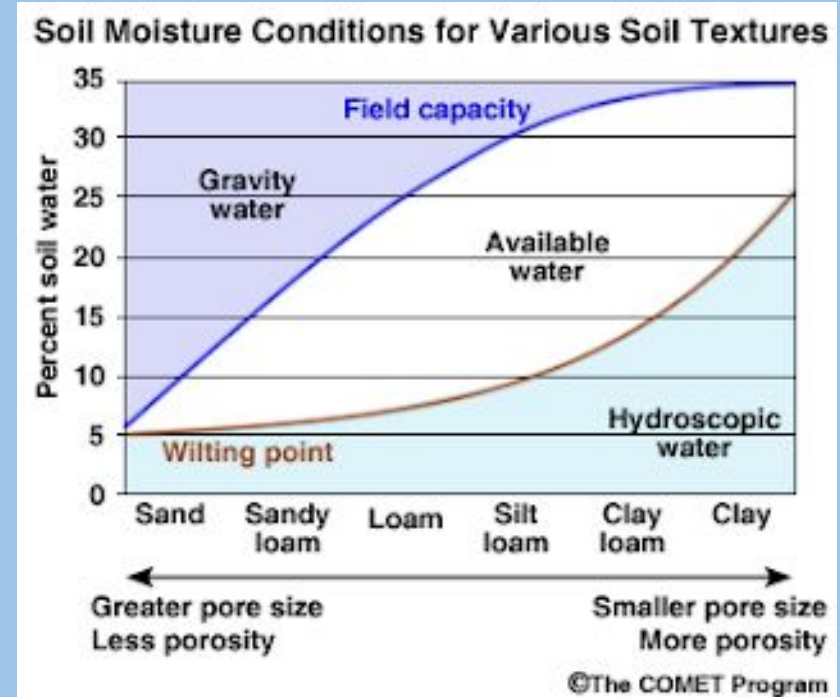
Irrigation Water Management

- Process of determining and controlling the volume, frequency, and application rate of irrigation water
 - Measure soil moisture
 - Understand available water holding capacity (AWC): the amount of water that soil can store to be extracted by the plant
 - Understand management allowable depletion (MAD): soil water content where crops begin to experience water stress
 - Water when you reach the MAD



Irrigation Water Management (continued)

- Always irrigate to replenish the soil moisture to less than field capacity so there is space for potential rainfall
- Flag location of sensors for easy accessibility



Budget

Economic Outflows

Category	Item	Labor	Materials	Total
Hedgerow Planting	Hedgerow planting	\$960	\$379	\$1,339
Water Management	Micro-irrigation line	\$320	\$1,192	\$1,512
	Moisture sensors	\$640	\$1,576	\$2,216
	Automated management	\$160	\$1,305	\$1,465
	Irrigation pipeline	\$960	\$338	\$1,298
	Irrigation reservoir	\$320	\$18,450	\$18,770
Structures	Greenhouse	\$320	\$7,306	\$7,626
	Owl boxes	\$40	\$84	\$124
	Totals	\$3,720	\$30,630	\$34,350

Economic Inflows

Category	Item	Amount	Notes
NRCS	Year 1 - 2021	\$578	Hedgerow must be complete by 12/31/2022
	Year 2 - 2022	\$28,747	Water management system must be implemented by 12/31/2023
	Year 3 - 2023	\$1,305	Greenhouse must be started by 12/31/2023
Education	Classes and workshops	\$6,000	1 class every other month for 2 years with 10 students/class at \$50/student
Rental	Barn, woodwork shop	\$2,080	Renting out the barn for 1 hour/week for 2 years at \$20/hr
Equipment Lease	Garden beds, bee boxes	\$2,500	5% of revenue generated from land, assuming \$50,000 generated over 2 years
	Total	\$41,210	

SWOT Analysis

Strengths to build on

- 6th generation farm, Community Engagement and Relationship building
- Regeneration of the land using organic and ethical practices
- Perennial and Seasonal Creek, wildlife haven
- Medicinal Herb Apothecary
- Ecologically diverse plant species - native and global

Weaknesses to improve upon

- Need to diversify markets, Narrow stream of business in floral industry alone
- Increase Marketing and Online Presence
- Small business, currently 2 employees

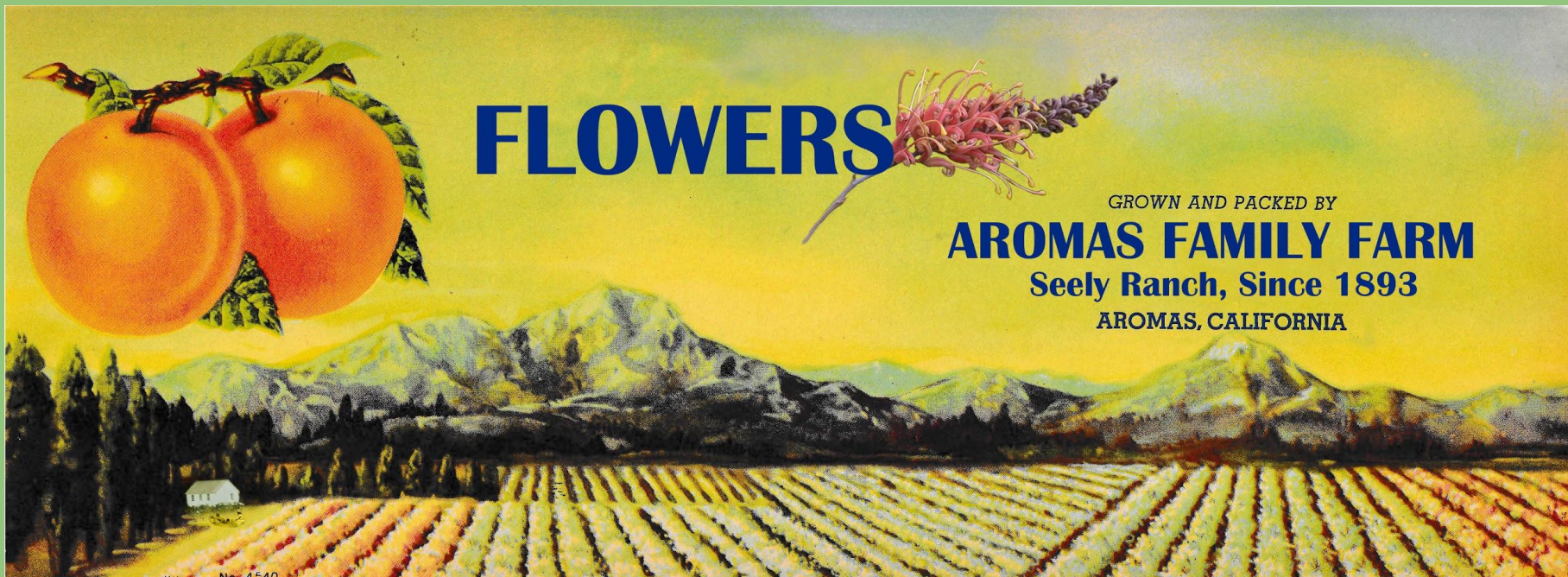
Opportunities to invest in

- Federal and State Grants (RCD, NRCS)
- Wildland Foraging / Bushcraft/ Self Sufficiency School
- Outdoor Classroom / Community Gathering Space
- Healing Sanctuary

Threats to monitor

- Wedding Floral Industry uncertain due to COVID, trend can negatively impact business
- Small business- what if ill or injured employee
- Liability issues, insurance, inflation, tax increases
- Wildfire risk

Rebranding the old
family logo



Community Engagement

- Outdoor Classroom
- Educational Workshops - sliding scale
- Elevate the voices of the local indigenous and minority communities
- On-site Apprenticeship or work trade opportunities (ex: Beekeeping Herbal Tea Making, Compost Tea, Wreath Making)
- Sudden Oak Life Workshops in Oak Woodland
- Seed Collection/Seed Sharing
- iNaturalist Citizen Science Opportunity



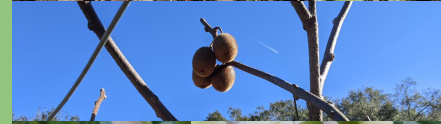
iNaturalist Biodiversity Index

Biodiversity Index: total number of species divided by total number of individuals in an area

Species Richness: number of different species in an ecological community

[iNaturalist Guide to the farm](#)

- Plant Species Richness: 74
- Animal Species Richness: 20



Thank you for your time!

