

The **UC Hopland Research & Extension Center**

is a

multi-disciplinary research and education facility

5,358 acres of oak woodland, grassland, chaparral and riparian environments
purchased by UC in 1951

Our Mission

HREC will **maintain and enhance ecosystem integrity** through

- **applied research**
- **adaptive management**
- **educational activities**

while also **supporting working landscapes** with diverse **agricultural products** and **recognized ecosystem services** derived from these landscapes.

Hedgerow Benefits

Increased biodiversity

- Pollinators
- Birds
- Beneficial insects
- Reptiles and Amphibians
- Mammals

Physical barrier

- Wind
- Animals
- Dust
- Water
- Pesticide drift
- Visual

Soil improvements

- Increased soil carbon
- Reduce erosion
- Protect from wind and rain

Other benefits

- Source of cutting material for propagation
- Materials to harvest: dyes, fruits, herbs, flowers
- Aesthetic beauty
- Animal shelter



Groomed Mature
Hedgerow



Wild Mature Hedgerow

University of California
Agriculture and Natural Resources

Design Considerations

1. What are you trying to achieve?

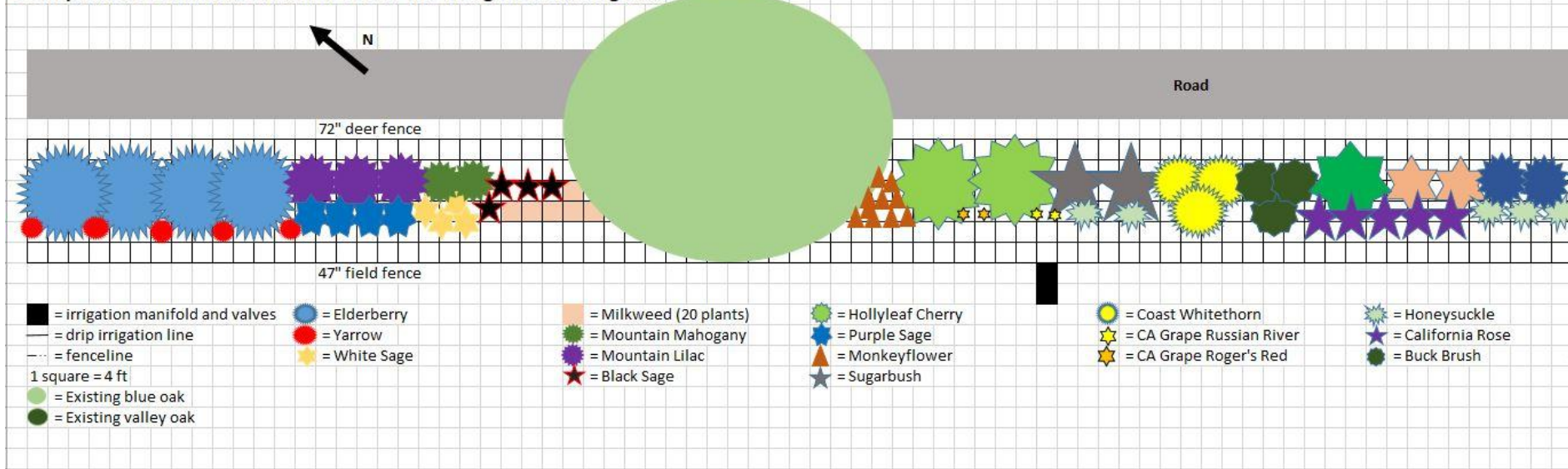
- Habitat (pollinators, birds, mammals, beneficial insects, amphibians)
- Physical barrier (animals, wind, dust, erosion)
- Viewshed barrier
- Cash crop (fruit, flowers, plant material)
- Carbon sequestration

2. What are your resource constraints?

- Climate zone – frost, heat, precipitation
- Land availability
- Irrigation water
- Money
- Time
- Expertise

Implementation Steps

1. Determine goals and constraints
2. Decide on location – length, width, slope
3. Make planting plan – paper, land, weed/pest
4. Source materials – backup plants
5. Prepare ground – mowing, discing, tilling, fence
6. Plant – above grade, spacing, compost
7. Mulch – sheet, compost, chips
8. Irrigation – drip, timing, plant needs
9. Pest control – gophers, weeds
10. Plant replacement and management



Planting Plan

- Easy to do – Excel, pen and paper
- Helps sort through issues, design in benefits
- Draw to scale to make sure to leave enough space for mature plants
- Design in irrigation and weed control
- Huge help when actually laying out field

Plant information and sources										
Common name	Scientific Name	Plant type	Width	Height	Water needs	Quantity	Flowering Season	Size	Price	Source
Sugar Bush	Rhus ovata	shrub	20'	20'	medium		winter, 4spring	1 gallon	8	CalFlora
Goldenrod	Solidago californica	perennial herb	2'	3'	medium		summer, 10fall	4" pot	3.65	CalFlora
Black Sage	Salvia mellifera	shrub	10'	6'	low		winter, spring, 4summer	1 gallon	5.75	CalFlora
Coast Whitethorn	Ceanothus incanus	shrub	10'	10'	low		4spring	1 gallon	6.5	CalFlora
Toyon	Heteromeles arbutifolia	shrub	10'	20'	medium		5summer	1 gallon	8	CalFlora
Wavyleaf Silktassel	Garrya elliptica	shrub	10'	10'	medium		4winter	1 gallon	8	CalFlora
Monkeyflower	Mimulus aurantiacus	shrub	4'	4'	low		winter, spring, 10summer	1 gallon	5.75	CalFlora
Snowberry	Symphoricarpos albus var. laevigatus (Bartlett Springs)	shrub	4'	4'	medium		spring, 24summer	1 gallon	6.5	CalFlora
Buck Brush	Ceanothus cuneatus	shrub	8'	8'	low		winter, spring, 4summer	1 gallon	6.5	CalFlora
Elderberry	Sambucus mexicana	small tree	25'	25'	medium		spring, 5summer	1 gallon	6.5	CalFlora
Great Valley Gumweed	Grindelia camporum	perennial herb		3	5low		spring, summer, 4fall	1 gallon		Mendocino College
Milkweed, narrowleaf	Asclepias fascicularis	perennial herb	1'	3'	low		summer, 20fall	1 gallon		Mendocino College









Hedgerow Costs

- Installation cost from \$2-10 per linear foot
 - For example: 500' hedgerow for \$1000-5000.
- Plant sourcing – \$, expertise, time
- Irrigation water – \$, availability, equipment
- Lost grazing ground
- Pest habitat
- Fencing – expertise, material, time
- Need some horticultural knowledge
- Maintenance on annual basis
 - Weeding, irrigation, pest control (gophers)
 - Plant replacement and pruning

HEDGEROWS AND FARMSCAPING FOR CALIFORNIA AGRICULTURE

A RESOURCE GUIDE FOR FARMERS
2ND EDITION



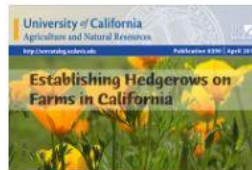
https://www.rcdmonterey.org/images/docs/publications/CAFF_Hedgerow_Manual_2018.pdf

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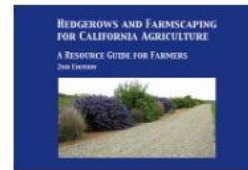
NRCS Conservation Practice Standard—Hedgerow Planting

Information on why and where the practice is applied as well as minimum quality criteria that must be met to achieve the intended purpose.



Establishing Hedgerows on Farms in California

Publication by Rachael Long and John Anderson at UC Davis



Hedgerows & Farmscaping for California Agriculture

In-depth manual by CAFF (Community Alliance with Family Farmers) about choosing and caring for regionally appropriate plants that attract beneficial insects and prevent erosion.



Seedling Identification Guide for Pollinator Hedgerow Forbs of California's Central Valley

USDA-NRCS Publication by Anna Young-Mathews, Agronomist, NRCS Plant Materials Center, Lockeford, CA



Pollinator Habitat Assessment Guide for Farms and Agricultural Landscape

Free downloadable workbook by the Xerces Society for Invertebrate Conservation.



California 422A Hedgerow Planting, Pollinators, Habitat Installation Guide

Free downloadable publication by the Xerces Society for Invertebrate Conservation with region- and state-specific guidelines and in-depth practical advice.



<https://www.csuchico.edu/regenerativeagriculture/ra101-section/hedgerows.shtml>

Funding Your Hedgerow

- USDA NRCS – EQIP, CRP, CREP
- Resource Conservation Districts
- Farm Service Agency
- California Department of Food and Agriculture Healthy Soils Program
 - Incentives Program
- <https://www.csuchico.edu/regenerativeagriculture/ra101-section/hedgerows.shtm>
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