

REVISED DRAFT
AGRICULTURAL POLICY ADVISORY COMMISSION
GUIDELINES FOR PLANTING AND MAINTENANCE OF
NATIVE CALIFORNIA SHRUBS AND TREES

Site Preparation and Planting

Preparing a site for planting trees and shrubs is relatively straightforward: clear off weeds, dig a hole the same size as the planting container, add a shovelful of compost (optional), pour in a bucket of water, plant the shrub or tree, fill in soil, pour on another bucket of water.

Spacing: Shrubs may be spaced 4' to 6' apart; trees can be at 10' spacing. The spacing can be reduced or increased, as the landowner desires.

Fertilization: Native plants do not need fertilization: they tend to grow too fast and then fall over. They have evolved growing in relatively harsh and sterile soils.

Irrigation

Native California shrubs and trees purchased from nurseries generally require irrigation for three years, unless long-term drought conditions exist.

Drip irrigation systems work well for irrigating native plants. Shrubs can be irrigated at 1 gallon per hour (GPH), trees at 2 GPH, for 3 to 5 hours a week, depending on soils. Insert two emitters per plant into the tubing, 6" to either side of the plant. Irrigation may be required once a week for 40 weeks per year, depending on rainfall, or could be only for 25 weeks. Monitoring soil moisture (stick your finger down into the soil) will let you know if you need to irrigate more or less.

Over-irrigation is the major cause of mortality to native plants. Annual water use to keep native shrubs and trees alive and growing is minimal: an average would be 320 gallons per year per tree, and 160 gallons per year per shrub. (For comparison, average DAILY household use ranges from 360 to 750 gallons.)

Weed Management

After the plant is in the ground, apply layers of cardboard and/or 6" layer of mulch to suppress weeds, conserve moisture, and create a biologically active soil surface. Synthetic weed fabric may also be

used. Periodic hoeing or physical removal of weeds is another alternative, and may be necessary with cardboard, mulch or weed fabric. As the plants grow larger over the years, they may suppress weedy growth.

Rodent Management

If gophers or ground squirrels are a major problem, wire root cages or plant protection sleeves can be used.

Nov. 8, 2014

11/20/2014 APAC- ORIGINAL DRAFT

CHART SHOWING DIFFERENT SCENARIOS FOR IRRIGATING APAC RECOMMENDED BUFFER PLANTINGS

Prepared by Sam Earnshaw

IRRIGATION FOR 3 YEARS

Shrubs irrigated at 1 gallon per hour (GPH); trees at 2 GPH, 3 to 5 hours a week, depending on soils.

Irrigation once a week for 40 weeks per year (high estimate-could be only 25 weeks).

as with all good estimates, double them:

THREE IRRIGATION SCENARIOS:

SHRUBS 16 shrubs at 6-foot spacing Per 100 feet

Irrigation weekly for 40 weeks per year:

shrubs	1GPH X 3 hrs/wk X 40 weeks = 120 gallons per plant per year	annual gallons for 16 plants	Ac-ft/yr/100'	Ac-ft/yr/100'
	1GPH X 5 hrs/wk X 40 weeks = 200 gallons per plant per year	1920	0.005	0.01
		3200	0.009	0.018

Irrigation weekly for 25 weeks per year:

shrubs	1GPH X 3 hrs/wk X 25 weeks = 75 gallons per plant per year	1200	0.004	0.008
	1GPH X 5 hrs/wk X 25 weeks = 125 gallons per plant per year	2000	0.006	0.01

TREES 10 trees at 10-foot spacing Per 100 feet

Irrigation weekly for 40 weeks per year:

trees	2GPH X 3 hrs/wk X 40 weeks = 240 gallons per plant per year	2400	0.007	0.014
	2GPH X 5 hrs/wk X 40 weeks = 400 gallons per plant per year	4000	0.01	0.02

Irrigation weekly for 25 weeks per year:

trees	2GPH X 3 hrs/wk X 25 weeks = 150 gallons per plant per year	1500	0.005	0.01
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2GPH X 5 hrs/wk X 25 weeks = 250 gallons per plant per year 2500 0.008 0.016

Representative 100' plant buffer: 4 trees and 10 shrubs, irrigated for 40 weeks per year					
4 trees	2GPH X 4 hrs/wk X 40 weeks = 1280 gallons per year				
10 shrubs	1GPG X 4 hrs/wk x 40 weeks = 1600 gallons per year				
	2,880 gallons per year			0.008 ac-ft per year per 100 feet	

COMPARATIVE WATER USAGES:					
Annual water usage for one household					
131,000 gallons @ 360 gallons/day			0.4 ac-ft		
279,300 gallons @ 750 gallons/day			0.9 ac-ft		
Apples	Strawberries	Lettuce			
Ac-ft/yr/ac	Ac-ft/yr/ac	Ac-ft/yr/ac			
0.5	2.0+	2.0			

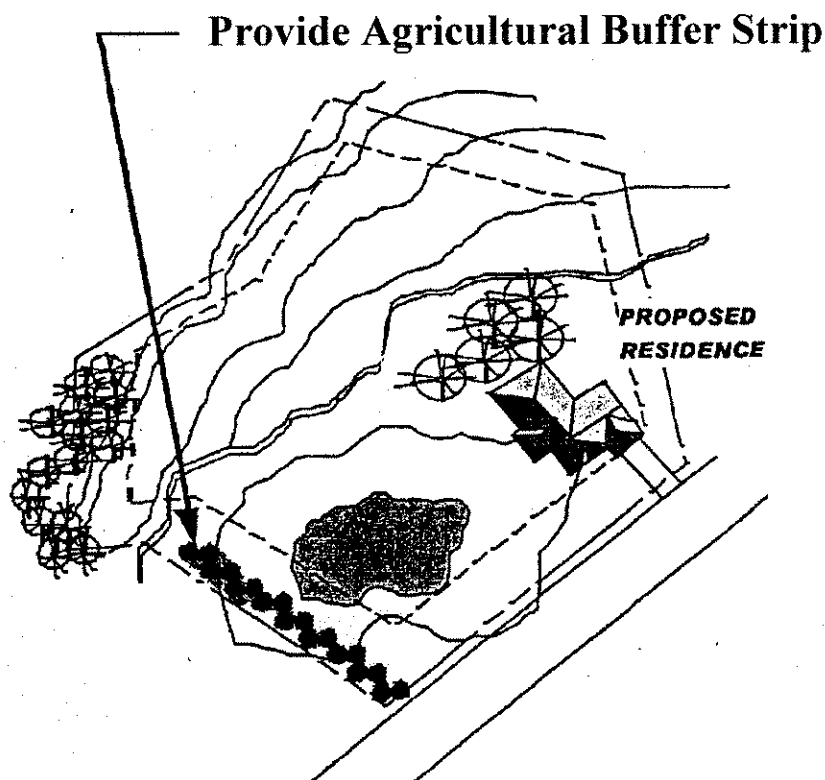
Notes:

1 ac ft - 325,851 g

Native plants are too frequently overwatered, which is the major reason for mortality.

Plant spacing can be greater than 6' for shrubs and 10' for trees. Oaks can be 25'; Prunus 10'; Shrubs interplanted.

RECOMMENDED AGRICULTURAL BUFFER PLANT LIST¹



COMMON NAME

Manzanita
 Coyote brush²
 California lilac³
 California buckwheat
 Flannelbush
 Coast silktassel
 Toyon⁴
 Deergrass
 Catalina cherry⁵
 Holly-leaf cherry
 Coast Live Oak
 Coffeeberry
 Sugar bush

BOTANICAL NAME

Arctostaphylos sp.
 Baccharis pilularis
 Ceanothus sp.
 Eriogonum fasciculatum
 Fremontodendron californica
 Garrya elliptica
 Heteromeles arbutifolia
 Muhlenbergia rigens
 Prunus lyonii
 Prunus ilicifolia
 Quercus agrifolia
 Rhamnus californica
 Rhus ovata

¹ Refer to UC Extension and California Food and Agriculture websites for current information regarding host plants that may be associated with agricultural pests.

² Not for planting adjacent to rangeland.

³ Not for planting adjacent to vineyards.

⁴ Not for planting adjacent to apple or pear orchards.

⁵ Attractive to birds because of their fruit.