Basic Steps for Habitat Gardening with California Native Plants

Step	To Do	Comments	Key Resources
1. SITE EVALUATION	Inventory existing plants and non-living natural features on your property. Inventory existing and future planting areas; note characteristics of *each* area. Your garden may be a good host for only one plant community or multiple communities. Inventory *your* needs.	*Check local regulatory entities, HOAs, other as needed for any restrictions.* a) Soil (sandy, clay, loam) b) Exposure, aka aspect (N, S, E, W, and wind) c) Microclimate (seasonal temps, precip, hardiness) d) Sun/shade e) Arid/humid f) Slope/level Water (slow, spread, sink), erosion control, firescaping…	See page 3 for sample checklist to help inventory your property's habitat features.
2. OBSERVE	Observe your property over time and seasons. Visit state and county parks to see which plants grow together in different locations. Identify plant groupings in locations that most closely match: a) Climate and natural vegetation in your neighborhood. b) Physical characteristics of your property.	Start with the prevailing vegetation – forest, woodland, shrubland (scrub, chaparral), herbaceous. Then work your way down to plant community(ies). (Plant alliances and associations may also be of interest.)	*CNPS Manual of California Vegetation* (online) (MCV) Remember: a) MCV lists only the *dominant* plant species that characterize each plant community, alliance or association. Additional species are often part of these groups. b) Plant communities and alliances are regional. Associations are local.
3. DESIGN FOR WILDLIFE	Multiple vertical levels ("stories") of vegetation. Multiple bloom times throughout the year; plant species that shelter different insects throughout the year. *At mature size*, outer edges of shrubs and perennials should just touch *other* shrubs and perennials. Plan ahead – *make sure spacing is suitable for plants' mature sizes* to avoid frequent pruning, which can disturb wildlife. *Groupings of plants* – intersperse different species among one another instead of grouping by species. Check for hazards to wildlife.	Mimic "architecture" and density/openness of your chosen plant community(ies). Aim for a variety of food sources for each season. Many wildlife species prefer to maintain some cover, protection from predators while visiting. Many wildlife species also like to browse – offer some variety within a few hops or "wing's reach." You do not need to plant a huge number of different species. Veg garden netting, windows…	Audubon Society; National Wildlife Federation; CNPS

Basic Steps for Habitat Gardening with California Native Plants *(continued)*

Step	To Do	Comments	Key Resources
4. COMPILE PLANT LIST	Begin with plant species that attract pollinators and beneficial insects. Some plants are "habitat-generators" throughout the year, with many species suited to different communities. Be sure to include these! Do not plant a problem!	Insects are the foundation of a wildlife-friendly garden. a) Buckwheats b) Phacelias c) Salvias d) Ceanothus e) Oak trees If you hear any plant is invasive, *always ask for specifics* about where. "Coastal scrub" "North slopes" are too general. Present science recommends to *not* plant native cultivars if you live in the WUI.	Richard Merrill, "Attracting Beneficial Insects to the Garden with Beneficial Flowers" PlantRight; California Invasive Plant Council (Cal-IPC) CNPS Genetics Symposium 2020 (online, CNPS-YouTube)
5. SITE PREP	Remove weeds. *Do not fertilize or till soils.* *Before you plant, make sure ALL chemical residues have cleared from soil and plants:* Herbicides can linger in the soil – use water to leach before planting. Pesticides, rodenticides, etc. – be sure plants and other application areas are free of harmful residues. *Do not purchase plants treated with pesticides.*	Herbicides may work better than mechanical for some sites. Tilling harms soil structure and soil micro-organisms. *With any chemical, always follow the manufacturer's label*. Chemicals harm soil micro-organisms *and* can be taken up by the root system and distributed to plant parts that can harm pollinators, beneficials and other wildlife when ingested – leaves, flowers, nectar, other.	Las Pilitas; Cal-IPC Las Pilitas Xerces Society; UC IPM
6. MAINTENANCE	Plant litter – leave in place on top of soil. Do not deadhead flowers. Pruning – time accordingly. Do not disturb wildlife activities (nesting, feeding, larvae). Irrigation – it usually takes 1 year to establish perennials and shrubs; 2 or longer for trees. Many natives need some summer water until established.	*Balance with firescaping needs*. Wildlife rely on seeds, fruit. Some insects spend their larval stage on leaves or stems. *Some natives should NOT have summer water, even during establishment.* Always check summer watering recommendations for during and after establishment.	Fire Safe Council for Monterey County; Cal-Fire CNPS; CCUH; local nurseries

Habitat Features Checklist

Adapted from "Introduction and Scope" section of the California Wildlife-Habitat Relationships System and "CWHR Habitat Element Checklist."

Live Vegetation Elements		**Habitat Edge Interfaces** *(herbaceous includes grasses)*		**Aquatic Elements**	
Forest (closed cone, mixed evergreen, rdwd…)				**Vernal pool, pond** (seasonal)	
Woodland		**Forest / Woodland**		**Pond** (permanent)	
Shrubland (scrub, chaparral)		**/ Shrubland**		**Stream** (intermittent)	
Herbaceous (incl. grasses)		**/ Herbaceous**		**Stream** (permanent)	
Trees, hardwood		**/ Water**		**Mud flats** (tidal)	
Trees, pine *(pinus)*		**/ Agriculture**		**Spring, seep** (freshwater)	
Trees, fir *(abies)*		**Woodland / Shrubland**		**Bog** (low-lying, poorly drained)	
Trees, broken top		**/ Herbaceous**			
Trees, loose bark		**/ Water**		**Habitat – Vegetative Resources**	
Trees with cavities		**/ Agriculture**		**Lower Plants**:	
Riparian inclusion (creek, seep)		**Shrubland / Herbaceous**		FUNGI LICHENS MOSS FERNS ALGAE	
Aquatic veg. (submerged)		**/ Water**		**Higher Plants**:	
Aquatic veg. (emergent above sfc)		**/ Agriculture**		GRASSES FORBS SHRUBS	
		Herbaceous / Water		TREE LEAVES SAP ROOTS	
Dead Vegetation Elements *(snags are upright, > 10' high)*		**/ Agriculture**		**Fruits**:	
				SEEDS ACORNS BERRIES FRUITS	
Snag > 30" diam: sound		**Physical Elements - Soils**		NUTS CONES FLOWERS NECTAR	
rotten		**Soil texture**: SANDY CLAY LOAM			
Snag 15"-30" diam: sound		**Soil structure**:		**Habitat – Animal Resources**	
rotten		Friable		**Invertebrates**:	
Snag < 15" diam: sound		Organic		Insects – TERRESTRIAL FLYING	
rotten		Gravely		Spiders	
		Well-draining and aerated		Aquatic	
Vegetation Residues *(dead and decaying vegetation; stumps are upright, < 10' high)*		Saline or Alkaline		**Vertebrates**:	
				FISH AMPHIBIANS REPTILES	
Duff (non-structured)		**Physical Elements - Geologic**		Birds – SMALL MEDIUM LARGE	
Litter (< 1" diam.)		**Barren** (devoid of vegetation)		Mammals – SMALL MEDIUM LARGE	
Slash 1"-3" diam.		**Bank**		Eggs – BIRD REPTILE	
Slash 3"-10" diam: sound		**Sand Dune**			
rotten		**Burrow** (animal-made)		**Human Elements & Hazards**	
hollow		**Cave**		**Impacts On Habitat (good or bad):**	
Log 10"-20" diam: sound		**Cliff**		BUILDINGS FENCE DOCK WINDOWS (birds)	
rotten		**Lithic** (scatter of rocks < 10" diam.)		NOISE OUTDOOR LIGHTING PETS NETTING	
hollow		**Rock** (outcrop, rocks > 10" diam.)		**Wildlife Structures**:	
Log > 20" diam: sound		**Talus** (slope formed by rock debris)		NEST BOX FEEDER WATER	
rotten		**Steep Slope** (> 50%)			
hollow				**Other**	
Stump: sound					
rotten					