

## Vulnerability Assessment Workshop Focal Resources/Conservation Targets

<u>Coarse Filter (Ecosystems)</u>	<u>Fine Filter (Species, Assemblages)</u> (ordered according to priority rank)
<b>Subalpine and Alpine</b> Includes CWHR types: <ul style="list-style-type: none"> <li>▪ SCN (Engelmann Spruce, Subalpine Fir, Mountain Hemlock)</li> </ul>	1. Bristlecone pine
	2. Foxtail pine
	3. Whitebark pine
	4. Pika
	5. Skypilot ( <i>Polemonium eximium</i> )
	6. Western white pine
	7. Limber pine
	8. Bighorn sheep (unranked)
	9. Alpine chipmunk (unranked)
<b>Yellow Pine and Mixed Conifer</b> Includes CWHR types: <ul style="list-style-type: none"> <li>▪ PPN (Ponderosa pine, Jeffrey pine, Douglas fir)</li> <li>▪ JPN (Jeffrey pine, Ponderosa pine, Sugar pine)</li> <li>▪ EPN (eastside Ponderosa pine, Jeffrey pine, White fir)</li> <li>▪ SMC (Douglas fir, Ponderosa pine, White fir)</li> <li>▪ DFR (Douglas fir, Tanoak, Ponderosa pine)</li> <li>▪ WFR (White fir, Douglas fir, Sugar pine)</li> </ul>	1. Pacific fisher
	2. California spotted owl
	3. Giant Sequoia groves
	4. Black-backed woodpecker
	5. Northern goshawk
	6. Ponderosa pine
	7. Jeffrey pine
	8. Northern flying squirrel
	9. Sugar pine
	10. California nutmeg
	11. Pacific madrone
	12. Pacific yew
<b>Meadows, Riparian, and Fen Ecosystems</b> Includes CWHR types: <ul style="list-style-type: none"> <li>▪ WTM (Sedge species, Rush species, Tufted hairgrass)</li> <li>▪ PGS (California oatgrass, Hairgrass, Sweet vernalgrass)</li> <li>▪ MRI (Black Cottonwood, Blgleaf maple, White alder)</li> <li>▪ ASP (Aspen, Willows, Alders)</li> </ul>	1. Great gray owl
	2. Willow flycatcher
	3. Willow
	4. Aspen
	5. Foothill yellow-legged frog (unranked)
	6. Yosemite toad (unranked)
<b>Sagebrush (Arid Shrublands)</b> Includes CWHR types: <ul style="list-style-type: none"> <li>▪ SGB (Sagebrush species, Rabbitbrush species, Horsebrush)</li> <li>▪ BBR (Bitterbrush species, Big sagebrush, Rubber rabbitbrush)</li> <li>▪ LSG (Low sagebrush, Black sagebrush, Rabbitbrush species)</li> </ul>	1. Greater sage grouse (unranked)
	2. Pygmy rabbit (unranked)
<b>Aquatic Ecosystems</b>	1. Little Kern golden trout (unranked)
	2. Mountain yellow-legged frog (unranked)

	3. Sierra Nevada yellow-legged frog (unranked)
	4. Cold water fish assemblages (unranked)
	5. Warm water fish assemblages (unranked)
	6. Benthic macroinvertebrate assemblage (unranked)
<b>Chaparral</b> Includes CWHR types: <ul style="list-style-type: none"> <li>▪ MCP (Ceanothus species, Manzanita species, Bitter cherry)</li> <li>▪ MCH (Scrub oak, Ceanothus species, Manzanita species)</li> <li>▪ CRC (Chamise, Redshank, Ceanothus species, Manzanita species)</li> </ul>	1. Mountain quail
<b>Oak Woodlands</b> Includes CWHR types: <ul style="list-style-type: none"> <li>▪ MHW (Canyon live oak, California black oak, Oregon white oak)</li> <li>▪ VOW (Valley oak, California walnut, California sycamore)</li> <li>▪ BOW (Blue oak, Interior live oak, California buckeye)</li> <li>▪ BOP (Foothill pine, Blue oak, Interior live oak)</li> </ul>	1. Valley oak woodlands
	2. Blue oak woodlands
	3. California black oak
	4. Canyon live oak
<b>Red Fir</b> Includes CWHR types: <ul style="list-style-type: none"> <li>▪ RFR (Red fir, Lodgepole pine)</li> </ul>	1. Red fir
	2. Sierra Nevada red fox
	3. Marten
<b>Pinyon-Juniper</b> Includes CWHR types: <ul style="list-style-type: none"> <li>▪ PJN (Pinyon species, Juniper species, Mountain mahogany species)</li> <li>▪ JUN (Juniper species, White fir, Jeffrey pine)</li> </ul>	1. Pinyon pine
	2. Juniper

<b>Ecosystem Services</b>	
Ecological Integrity	1. Biodiversity
Provisioning Services	1. Forage production
	2. Timber production
	3. Freshwater
Regulating Services	1. Carbon storage
	2. Flood protection/Erosion control
	3. Groundwater recharge
	4. Water quality
	5. Nutrient regulation
	6. Fire
Cultural Services	1. Recreational and aesthetic values

**Ecosystem Services Key Terms and Definitions**

Ecosystem Services: the benefits people obtain from ecosystems

Ecological Integrity: necessary for the production of all other ecosystem services (“supporting services” MEA 2005); support and preservation of those processes and structures which are essential prerequisites of the ecological ability for self-organization of ecosystems (Barkmann et al. 2001); based on variables of energy and matter budgets and structural features of whole ecosystems and represent the base for the

other types of ecosystem services

- Includes things such as: abiotic heterogeneity, biodiversity, biotic waterflows, metabolic efficiency, nutrient cycling, storage capacity
- Biodiversity (in the context of Ecological Integrity): the presence or absence of selected species, functional groups of species, or species composition

Provisioning Services: the products obtained from ecosystems (MEA 2005)

- Includes things such as: crops, livestock, capture fisheries, aquaculture, wild foods, timber, wood fuel, energy (biomass), freshwater

Regulating Services: the benefits obtained from the regulation of ecosystem processes (MEA 2005)

- Includes things such as: local and global climate regulation, flood protection/erosion control, groundwater recharge, air quality regulation, nutrient regulation, water purification/quality, pollination

Cultural Services: the nonmaterial benefits people obtain from ecosystems through spiritual enrichment, cognitive development, reflection, recreation, and aesthetic experiences (MEA 2005)

- Includes things such as: recreation and aesthetic values, intrinsic value of biodiversity, spiritual values