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US Fish & Wildlife Service
Pacific Southwest Region
Fire Management



Best Management Practices for Natural Resources & Environmental Compliance

Balancing objectives?



Consider the whole fire environment

- Homes
- Infrastructure
- Topography

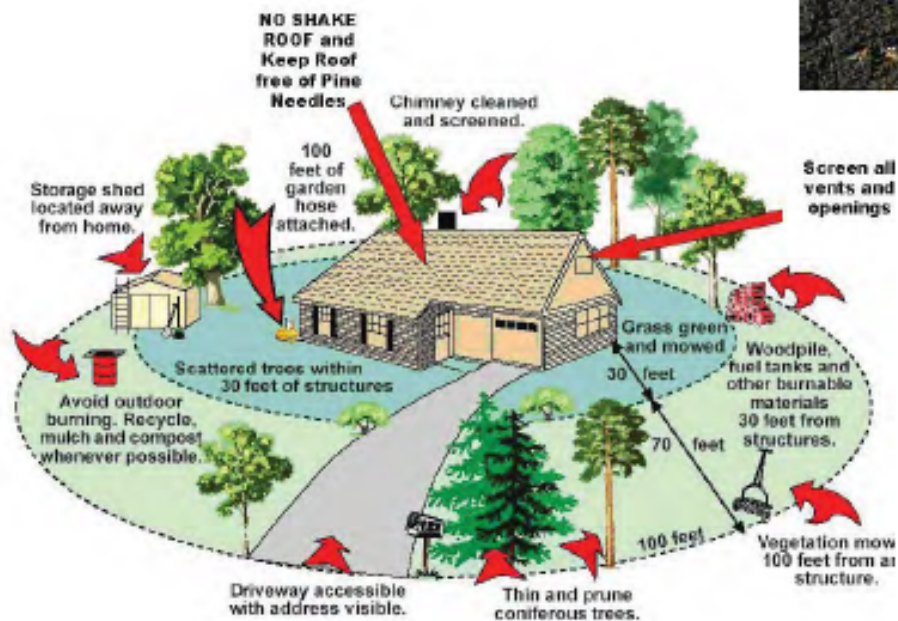


Diagram of the treatment zones surrounding a residence

- Vegetation
- Water
- Wildlife



Federally Protected Species



Contra Costa Goldfields
Lasthenia conjugens
 Federally Endangered
 Annual herb • Up to 1 foot high • Small, yellow flowers in sunflower family (about ¼ inch wide) • Opposite leaves
 Found in vernal pools within open grassy areas • Bloom from March to June • Potential to occur throughout Contra Costa County

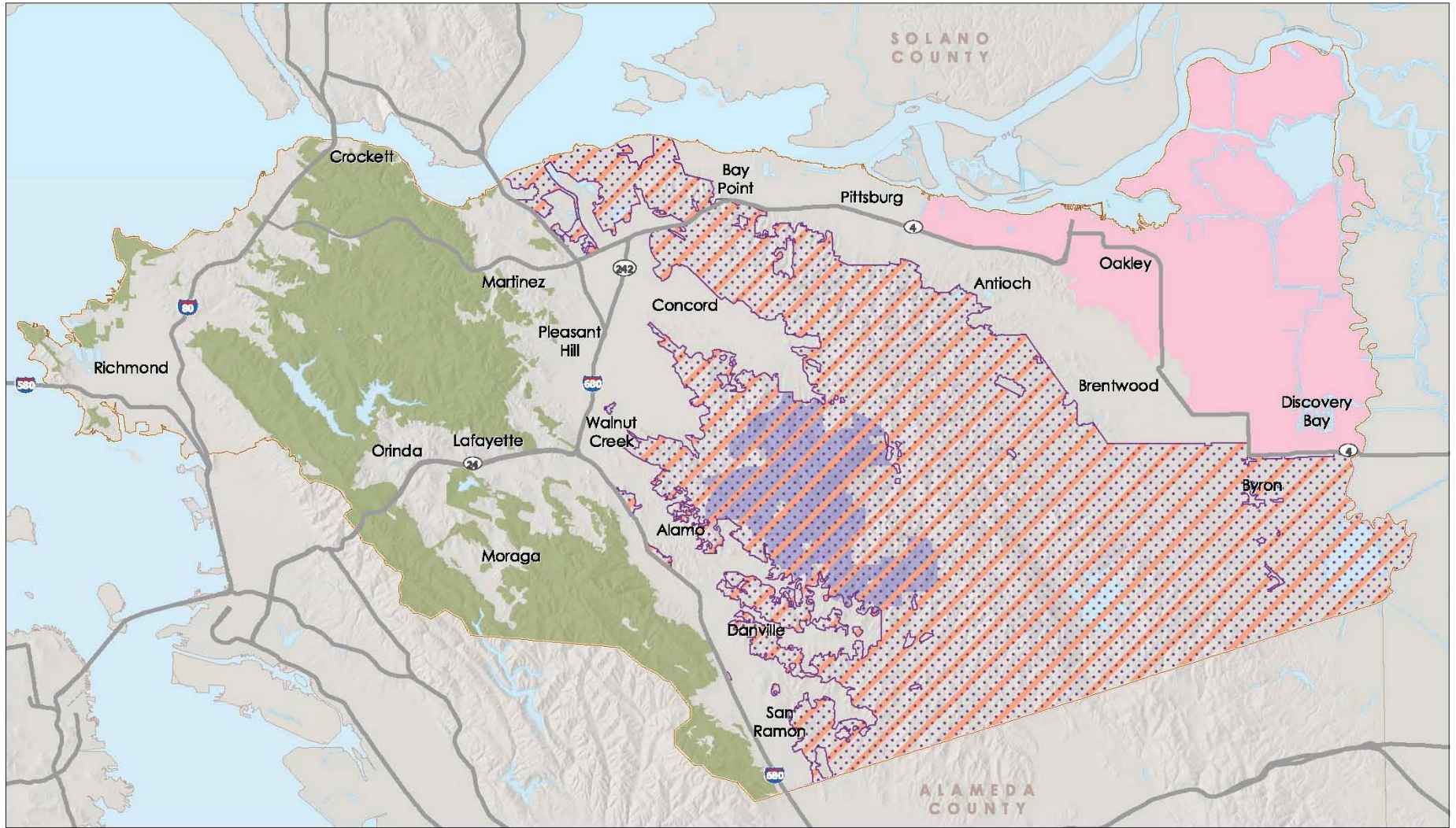


Contra Costa Wallflower
Erysimum capitatum var. gustatum
 Federally Endangered
 Biennial herb • Up to 2.5 feet tall • Woody base • Yellow or yellow-orange flowers up to 1 inch long • Narrow, lance-shaped leaves
 Found in dunes along the San Joaquin River east of Antioch • Bloom from March to July • Potential to occur at Antioch Dunes National Wildlife Refuge



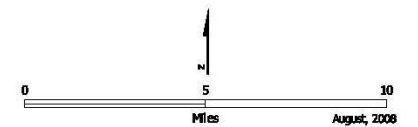
Giant Garter Snake
Thamnophis gsgas
 Federally Threatened
 Up to 6.5 ft long • Brown or olive above • Two alternating rows of small dark spots between stripes on each side
 Occurs primarily in wetland areas (sloughs, streams, ditches, etc.) • Uses rodent burrows for shelter & wintering • Feeds on fish, tadpoles & frogs • Emerges from burrows to breed & forage in April

Grassland Species Ranges



Grassland Species

- Bay Checkerspot Butterfly
- Callippe Silverspot Butterfly
- California Tiger Salamander
- Lange's Metalmark Butterfly
- San Joaquin Kit Fox



Location- Where to do the work

Start with your home- ember awareness

Work around your home – the little things

- abutting vegetation
- ground cover
- irrigation

Work with your environment- landscape planning

- topography
- travel corridors
- mosaic or monotype
- habitat requirements
- sensitive areas (watersheds, T&E habitats)

Treatment- how to do the work

Work in phases- it's harder to put back what you've taken out

- Remove dead/dying vegetation first
- Remove invasive and non native species
- Keep oldest trees and some snags
- Keep mast producing trees
- Keep vegetation islands and or strips

* Less people and less equipment = less impact

* Keep large equipment and vehicles on existing access roads & pavement.

Debris piles- remove immediately, keep, or mitigate impacts

- keep away from water areas
- reduce access (pile formation or cover/netting)
- repile before burning
- start ignition on one side

Grass- if mowing, then early and often

- survey & avoid
- leave islands or strips

Grasslands & Oak Savanna BMPs

General Guidelines for Treatments in or near Grasslands & Oak Savanna

- Conduct a Pre-Treatment Nesting Bird Survey when working between February & August in Grasslands & between December 15 & August in Oak Savanna for all treatments except grazing
- In areas with Burrowing Owl & San Joaquin Kit Fox (see map on page 33), hand thinning & grazing preferred. Conduct a Pre-Treatment Survey & implement Best Management Practices for mechanical & prescribed burn treatments (see page 53 & below)

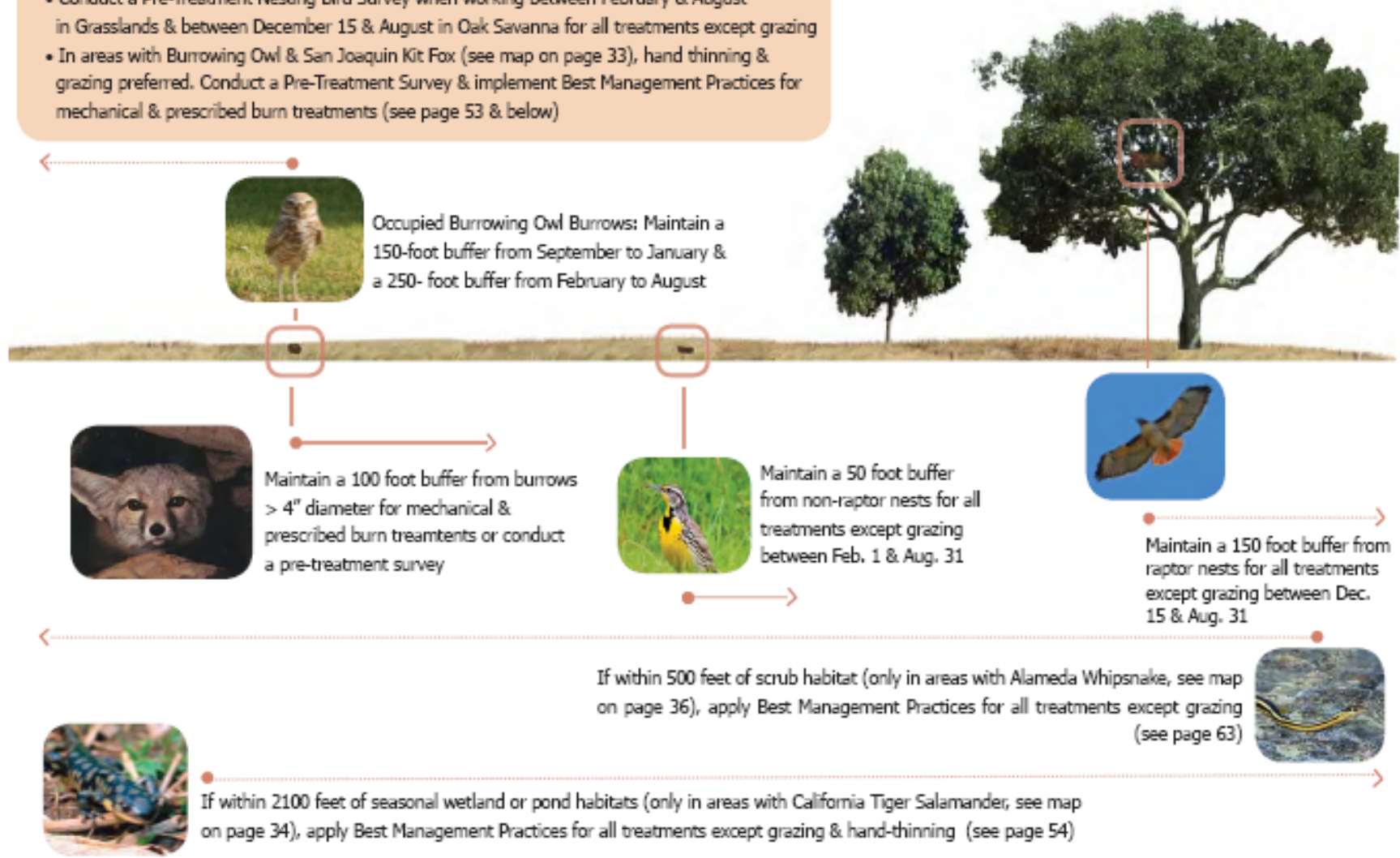


Figure 1. Best Management Practices for Hazardous Fuel Treatments in or near Grasslands and Oak Savanna

Timing- when to do your work

Consider the time of year, time of day and duration of activities

The timing of your activities may need to be modified to avoid impacts to particular species.

Geographic Area	Elevation	Nesting-Fledging Season
Northern Sierra Nevada	Above 3,000 feet	May-August
Northern Sierra Nevada	Below 3,000 feet	March-August
Southern Sierra Nevada	Above 5,000 feet	May-August
Southern Sierra Nevada	Below 5,000 feet	March-August
Valley/Coast	All Elevations	March-August





California Clapper Rail 1995 ©Mike Danzenbak



California clapper rail habitat

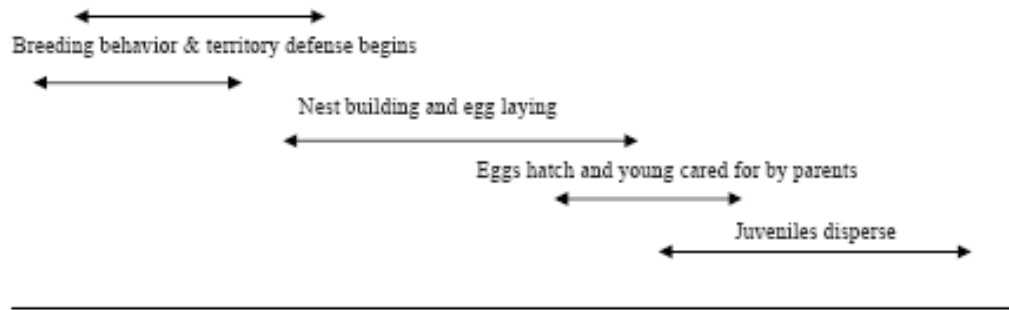
Distribution

- The highest densities have typically been in south San Francisco Bay. Present-day tidal-marsh habitat in the bay is about 15 percent of historical acreage, and remaining habitat is extremely fragmented.
- Within the south San Francisco Bay, the species is found primarily in the larger, more highly channelized, remnant salt marshes including Bair and Greco Islands, and Palo Alto Baylands in San Mateo County; Dumbarton Point and Mowry marshes in Alameda County, and in scattered locations at creek mouths in Santa Clara County.
- Distribution along the central and northern portion of San Francisco Bay includes Corte Madera and Muzzi Marshes, Richardson Bay, Gallinas Creek, and Creekside Marsh in Marin County; Arrowhead and Elsie Romer Marshes in Oakland; Emeryville Crescent, and Inner Richmond Harbor.
- Scattered populations of California clapper rail also occur near creek mouths in northern Alameda and western Contra Costa counties

Natural History Summary

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec

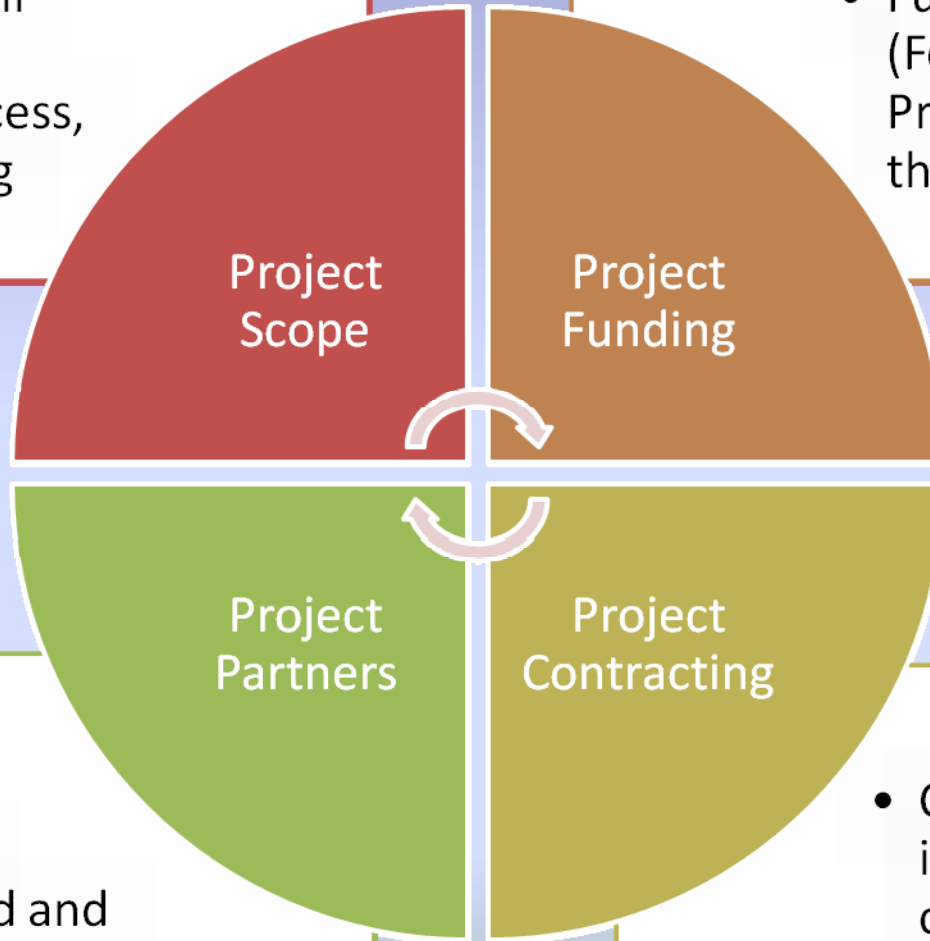
Breeding season call-count survey period: Jan 15 to Mar 15 (usually extended to April 15).



Project Compliance Triggers

- Project scope will influence the compliance process, costs, and timing

- Funding source (Federal, State, Private) may direct the compliance process



- Partners may determine the compliance lead and process

- Contracting may influence compliance requirements

Estimated timeline for permit issuance after application

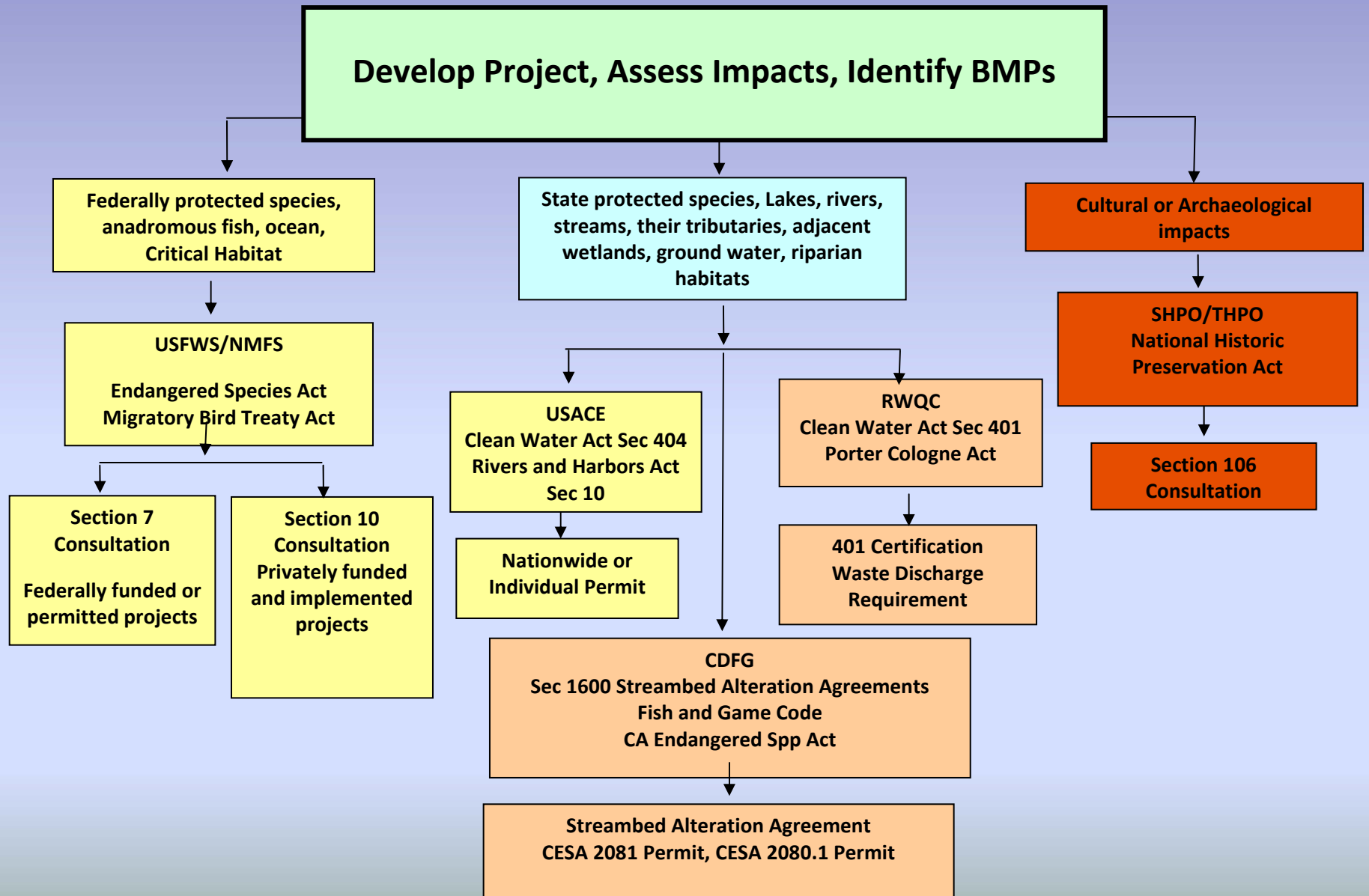
Permit Type	Day 1 to 30	Day 31 to 60	Day 61 to 90	Day 91 to 120	Day 121 to 150	Day 151 to 180
§ 7 Consultation with U.S. Fish and Wildlife Service⁴			Consultation must be concluded within 90 days, unless an extension is granted (16 USC § 1536(b)(1)(A)).		USFWS has a maximum of 150 days to conclude consultation without obtaining consent of the permittee (16 USC § 1536(b)(1)(B)).	May extend the consultation past 150 days with the approval of the permittee. If an approval is obtained from the permittee, there is no maximum time limit, unless expressly stated in the approval (16 USC § 1536(b)(1)(B)).
California Endangered Species Act Incidental Take (CDFG is CEQA responsible agency)	CDFG has 30 days to conduct an initial review and to determine if the application is complete (14 CCR § 783.5).		CDFG has 90 days to process the application, unless an extension is granted. An extension may be granted up to 60 days (14 CCR § 783.5).		CDFG has an absolute maximum of 150 days to complete the application (14 CCR § 783.5(c)).	
California Endangered Species Act Incidental Take (CDFG is CEQA lead agency)	CDFG has 30 days for an initial review and to determine if the application is complete (14 CCR § 783.5).			CDFG has 120 days to process the application, unless an extension is granted. An extension may be granted for an additional 60 days (14 CCR § 783.5(d)).		CDFG has an absolute maximum of 180 days to complete application (14 CCR § 783.5(d)).
Consistency Determination (Fish and Game Code § 2080.1)	CDFG shall make a determination within 30 days whether a federal incidental take permit or federal incidental take statement is consistent with California Endangered Species Act (Fish and Game Code § 2080.1).					

⁴Section 10 Consultation does not have a statutory timeframe. It has been known to take 2-10 years to complete.

Best Management Guidance

- Contra Costa County BMP Guide- extensive
- San Diego County BMP Guide- simple
- Butte County BMP Guide- draft
- Wildlife Considerations for A Fire Wise Landscape (handout provided)
- CA Fire Alliance- The Environmental Component
- Sierra Nevada Conservation & Community Fire Protection Plan Guide
- Home Landscaping for Fire (UC ANR)
- Forest Stewardship Series (UC ANR)
- Fire Effects Information System
- Fire in California Ecosystems (textbook)

Overview of Potential Permits



Federal Endangered Species Act

*Establishes a broad framework to save species from extinction.

*Requires the U.S. Fish and Wildlife Service (USFWS) and the National Marine Fisheries Service (NMFS) to:

- list species as Threatened or Endangered
- designate Critical Habitat
- develop Recovery Plans



Prohibits anyone from “taking” (i.e. harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect)

If you think you may affect a listed species or its habitat, you must consult with USFWS or NMFS.

Who Do I Contact?

US Fish and Wildlife Service:

Sacramento Office: (916) 414-6600, <http://www.fws.gov/sacramento> (for California's Central Valley, Sierra Nevada, Lassen, Tahoe and San Francisco regions)

Arcata Office: (707) 822-7201, <http://www.fws.gov/arcata> (for Del Norte, Humboldt, Mendocino, Siskiyou, and Trinity Counties)

Yreka Office (an Arcata sub-office): (530) 842-5763 <http://www.fws.gov/Yreka>

National Marine Fisheries Service:

Sacramento Area Office, Sacramento, CA (916) 930-3600,
<http://swr.nmfs.noaa.gov/sac/index.htm>

Southwest Regional Office, Long Beach Office of Protected Species
Management: (562) 980-4020

For Endangered Species Permits and Conservation Plans apply online at:
http://www.nmfs.noaa.gov/pr/permits/esa_permits.htm

Migratory Bird Treaty Act

Was enacted to put an end to the commercial trade of birds and their feathers. Prohibits killing, possessing, or trading migratory birds (native). Applies to whole birds, parts of birds, bird nests and eggs. Does not provide protection of habitat of migratory birds.



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National Historic Preservation Act

Intended to preserve historic and archaeological sites in the U.S.

- National Park Service to maintain a National Register of Historic Places that identifies districts, sites, buildings, structures and objects worthy of preservation.
- Properties on the list are not automatically protected from damage or destruction, **but federally-funded (or permitted) projects** that will impact sites listed, or eligible for listing, must complete the “Section 106 Review Process”



Who Do I Contact?

Advisory Council on Historic Preservation:

<http://www.achp.gov/nhpa.html>

State Historic Preservation Office:

<http://ohp.parks.ca.gov/> or

calshpo@parks.ca.gov or call 916-653-6624