

9802 Cultural and Other Resources at Risk

This sub-section includes information specific to Geographic Response Areas concerning resources at risk which are not geographically localized, identified, or are variably distributed between years. For example, though cultural resource sensitivity is noted on Sensitive Site Summary pages, most cultural resource information is highly confidential and not publicly available. Therefore, local key contacts with access to this information are included here.

9802.1 Cultural and Historic Resources

An important and immediate consideration in the event of an oil spill in California marine waters is whether areas that are culturally sensitive or contain historical or archaeological resources may be impacted. The effects of oil upon these resources can be extremely damaging. Often of greatest concern to the preservation of cultural and historical resources are the response actions such as establishment of equipment staging areas. The location of cultural and historic resources is often not publically available information and are often difficult to identify visually; therefore pre-spill planning becomes essential to avoid damaging these resources.

Historical resources are defined under the California Environmental Quality Act (CEQA) to include, but not limited to: "any object, building, structure, site, area, place, record, or manuscript which is historically or archaeologically significant, or is significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California." These sites or areas would either be listed or eligible to be listed on the California Register of Historical Resources or the National Register of Historical Places.

The CEQA defines an important archaeological resource as one that: "A) is associated with an event or person of; 1) recognized significance in California or American history, or 2) recognized scientific important in prehistory; B) can provide information which is both demonstrable public interest and useful in addressing scientifically consequential and reasonable archaeological research questions; C) has a special or particular quality such as oldest, best example, largest, or last surviving example of its kind; D) is at least 100 years old and possesses substantial stratigraphic integrity; E) involves important research questions that historical research has shown can be answered only with archaeological methods."

Culturally Sensitive Areas

Cultural or historic resource details are noted on the site summary pages for locations where sensitive sites overlap cultural sites. However, most cultural resource information is confidential and is only available from specific sources. The California Historical Resources Information System (CHRIS) is an elaborate database maintained by the Office of Historic Preservation of the California Department of Parks and Recreation and local Information Centers. Access to this database is restricted to certified archaeologists, including the State Historic Preservation Officer, in order to keep these resources as secure as possible.

Cultural and historic resource impact mitigation is addressed in Appendix XIX of the Regional Contingency Plan. The key guidance is the *Emergency Response Program*

Guidelines to Implement the National Programmatic Agreement on Protection of Historic Properties (Guidelines). These guidelines provide the process for the Federal On-Scene Coordinator (FOSC) to protect and conserve cultural and historic resources during a response through the FOSC's Historic Properties Specialist.

The ACP contains contact information for local and regional historic experts who may be able to assist with the protection of these sensitive resources.

Sources for Cultural and Historic Resources Information:

- California has many identified historical or archaeological sites of significance near marine waters of the State. The Office of Historic Preservation (OHP) within the California Department of Parks and Recreation, maintains the California Register of Historical Resources. The California Historical Resources Information System (CHRIS) may also be accessed through the OHP.

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- The Information Center of the California Archeological Inventory is under agreement with the OHP to integrate newly discovered sites and information on known sites into the California Archeological Inventory, supply information on known sites and archeological surveys to governments, institutions, and individuals who have a justifiable need to know, and supply a list of consultants who are qualified to do archeological field work within their area.

Information Center

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- The California State Lands Commission maintains a database of known shipwrecks and other underwater marine archaeologically significant resources in state waters.

California State Lands Commission

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- Many of the coastal areas of significance to Native Americans are known or have been identified, but are often confidential information and therefore not included in this ACP. The California Department of Parks and Recreation owns State park and beach properties along the coast. At the time of a spill, State Park Archeologists should be notified to evaluate known cultural resources sensitivity within park lands and to determine if a Native American representative is required to be on scene of a response. Contact information for local or regional Native American representatives may be obtained from the Native American Heritage Commission. All coastal areas for each tribe are considered economically significant, because fishing and other traditional uses span the length of coast line for each group.

Native American Heritage Commission

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9802.2 Essential Fish Habitat

“Essential Fish Habitat” is a required element ACPs. “Essential Fish Habitat” is legally and distinctively different than “Critical” habitat and includes areas important to sustaining commercial species as well as threatened and endangered species habitats "essential" for the conservation.

Essential Fish Habitat

Ocean fisheries are managed under the Fishery Conservation and Management Act of 1976, now known as the Magnuson-Stevens Fishery Conservation and Management Act (MSA). The Act provided the National Marine Fisheries Service (NMFS) legislative authority for fisheries regulation in the United States, in the area between three-miles to 200 miles offshore.

In 1996, the Magnuson-Stevens Act was re-authorized and amended by the Sustainable Fisheries Act of 1996 (Public Law 104-267) to emphasize the sustainability of the nation's fisheries and establish a new standard by requiring that fisheries be managed at maximum sustainable levels and that new approaches be taken in habitat conservation. This habitat is called “Essential Fish Habitat” (EFH). The Act established procedures designed to identify, conserve, and enhance EFH for those species regulated under a Federal fisheries management plan.

The purpose of addressing habitat in this act is to provide for one of the nation’s overall marine resource management goals – maintaining sustainable fisheries. As evidenced for all wildlife resources, suitable habitat is essential for their subsistence. Although the concept of EFH is similar to that of “Critical habitat” under Endangered Species Act (ESA), measures recommended to protect EFH by NMFS or a Council are advisory, not proscriptive. An effective EFH consultation process is crucial to ensuring that Federal actions serve the Magnuson-Stevens Act resource management goals. For those species currently listed under ESA, but not necessarily under EFH, individuals and habitats must be protected and consultation with NMFS and/or United States Fish & Wildlife Service (USFWS) should be implemented.

The MSA requires Federal agencies to consult with NMFS on all actions, or proposed actions, authorized, funded, or undertaken by the agency, that may adversely affect EFH (MSA §305(b)(2)). See ACP Section 4800 for consultation procedures.

EFH means “those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity” (MSA §3). For the purpose of interpreting this definition of EFH: Waters include aquatic areas and their associated physical, chemical, and biological properties that are used by fish and may include aquatic areas historically used by fish where appropriate; substrate includes sediment, hard bottom, structures underlying the waters, and associated biological communities; necessary means the habitat required to support a sustainable fishery and the managed species’ contribution to a healthy ecosystem; and “spawning, breeding, feeding, or growth to maturity” covers a species’ full life cycle (50 CFR 600.10). Adverse effect means any impact which

reduces quality and/or quantity of EFH, and may include direct (e.g., contamination or physical disruption), indirect (e.g., loss of prey or reduction in species fecundity), site-specific or habitat-wide impacts, including individual, cumulative, or synergistic consequences of actions (50 CFR 600.810).

The EFH mandate applies to all species managed under a federal Fishery Management Plan (FMP). For the Pacific West Coast (excluding Alaska), there are FMPs, covering groundfish, coastal pelagic species, and Pacific salmonids. Therefore, Federal agencies must consider the impact of a proposed action on EFH for any species managed under those FMPs. A brief description of EFH identified in each FMP follows. Detailed descriptions are contained in the references following the EFH Assessment template.

Groundfish: EFH for Pacific coast groundfish is defined as the aquatic habitat necessary to allow for groundfish production to support long-term sustainable fisheries for groundfish and for groundfish contributions to a healthy ecosystem. Descriptions of groundfish EFH for each of the 83 species and their life stages result in more than 400 EFH identifications. When these EFHs are taken together, **the groundfish EFH includes all waters from the mean higher high water line, and the upriver extent of saltwater intrusion in river mouths, along the coasts of Washington, Oregon and California seaward to the boundary of the U.S. exclusive economic zone (EEZ).**

Coastal pelagic species: Amendment 8 to The Coastal Pelagic Species Fishery Management Plan describes the habitat requirements of five pelagic species: Northern anchovy, Pacific sardine, Pacific (chub) mackerel, jack mackerel and market squid. These four finfish and market squid are treated as a single species complex because of similarities in their life histories and habitat requirements. EFH for coastal pelagic species is defined as: **The east-west geographic boundary of EFH for CPS is defined to be all marine and estuarine waters from the shoreline along the coasts of California, Oregon and Washington offshore to the limits of the EEZ and above the thermocline where sea surface temperatures range between 10o – 26o C. The southern boundary is the U.S.-Mexico maritime boundary. The northern boundary is more dynamic, and is defined as the position of the 10o C isotherm, which varies seasonally and annually.**

Pacific salmonids - chinook, coho, steelhead and Puget Sound pink salmon: EFH for the Pacific coast salmon fishery means those waters and substrate necessary for salmonid production needed to support a long-term sustainable salmonid fishery and salmonid contributions to a healthy ecosystem. To achieve that level of production, EFH includes all those streams, lakes, ponds, wetlands, and other currently viable water bodies and most of the habitat historically accessible to salmon in Washington, Oregon, Idaho, and California. Southern steelhead may have occupied as much as 15% of the winter steelhead range in California, but the present distribution in southern California has been reduced to perhaps 1% of the stream miles they formerly inhabited (E. Gerstung, in: CDFG, 1995). **The Evolutionary Significant Unit includes all naturally spawned populations of Southern California steelhead (and their progeny) in streams from the Santa Maria River to Malibu Creek. -In the estuarine and marine areas, salmon EFH extends from the near shore and tidal submerged environments within state territorial waters out to the full extent of the exclusive economic zone (370.4 km) offshore of Washington, Oregon, and California north of Point Conception. - Freshwater EFH for Pacific salmon includes all those streams, lakes, ponds, wetlands, and other water bodies currently, or historically accessible to salmon in**

9805 Shoreline Access

Some Area Committees have provided detailed shoreline access to aid Planning and Operations Section managers in the rapid deployment of field response personnel and equipment on coastal beaches during the emergency phase of spill response. If this information is available for a particular Area Committee area of responsibility, it will be found in this section of the respective Geographic Response Area.

9806 California Strategy Concepts, Systems Approach, and Nomenclature

Every geographic area has its own approach and a certain amount of variability in language. This section will aid responders unfamiliar with California response understand local methods, concepts, and vernacular.

9806.1 Booming Systems

Boom and booming systems are described here to enable planners and operations staff to better achieve their objectives. First, boom terminology used on the west coast is different than much of the rest of the U.S. and the World Oil Spill Catalog. In general, harbor boom (see definition below) is used as primary site protection in the San Francisco Bay/Delta Area, although some strategies call for swamp boom (river boom - see below). For response and planning purposes, harbor boom may be substituted for swamp boom and two consecutive layers of swamp boom are roughly equivalent to one layer of harbor boom. Swamp boom may be used in low energy applications: areas with little chop or waves and light currents.

However, responders should be aware of several issues and amend actions as necessary. Long-skirted booms in shallow channels can aggravate entrainment problems. In such instances, it may be inadvisable to substitute harbor boom for swamp boom.

Also, wherever oil accumulates against booms in rough or choppy conditions, there can often be the problem of oil washing over the flotation. This nullifies the booming. To avoid this problem, protective strategies are designed to avoid collection of oil in pockets (except for the purposes of skimming), and instead, are oriented to keep oil moving along booms to collection or deflection as much as the situation permits. Responders, both in operations and planning will need to adjust boom configurations to prevent excessive "pocketing" so as to minimize entrainment and over-wash. This may mean altering boom angles. This may also be unavoidable and require back-up layering of boom. Some strategies include this as a contingent alternative, but regardless, if over-wash is a problem, then a second layer should be viewed as the containment and deployed in the "shadow" of the becalming first layer. In some instances the lesser freeboard of swamp boom may provide adequate control once the wave has been broken.

Regardless of strategy design, deployment and adjustment remain key to successful booming. If strategies are not properly deployed, whether prescribed or amended, and maintained through proper anchoring and tending, the protective booming will be

neutralized. Every effort by managers and responders should be made to ensure proper execution.

9806.2 Skimming Systems

This paragraph provides an introduction to skimming issues in site strategies. In the following strategies, the inclusion of self-powered skimming vessels is minimized in recognition that the first response resource priority is on-water skimming: the best protection for sensitive sites is to minimize oil impacting sites by best available means (ON WATER RECOVERY). However, shore-side skimming and defection offshore to skimming are integral parts of protecting the sensitive site or nearby sites at risk. The philosophy of strategy development includes the intent to leverage opportunities to control, capture, immobilize or collect oil at shorelines where possible. Once oil has been immobilized, either contained or confined nearshore, oil skimming efficacy dramatically improves. Also, once oil has impacted a site, it may be a reasonable tactic to keep it at that locale rather than let it re-mobilize to impact yet another site.

Since there are a variety of skimming units that may be included in the strategy, this preamble provides an opportunity to define skimming systems so that the elaborate descriptive verbiage need not be repeated in each strategy. A number of acronyms for skimming systems are included in the Acronyms and Nomenclature section below: TSA, SFS, SPS, and SSS.

A skimming system includes four elements: a skimming device, storage for skimmed oil, a pumping device to move captured oil from skimming device to storage, and a power supply capable of enabling all devices.

9807 Glossary of Acronyms and Nomenclature Used in Strategies

To minimize repetitious verbiage in protection strategies, the following acronyms and nomenclature may be used in strategies and in Strategy Pages (and SISRS database).

Anchoring Systems – Whether expressly stated or not, anchoring systems must be sufficient to hold boom in the aggressive currents where boom may be deployed. To insure successful anchoring, the anchoring system should include: anchors with anchor buoys to control placement, anchor chains which equal or exceed the weight of anchors indicated, enough line to produce adequate scope to hold anchors (rule of thumb is 3:1 (line to depth), but 5-7:1 for high current areas), and a buoy between anchor line and boom (crown buoys) to keep the anchor from sinking the boom under tension conditions.

BBE - boom boat equivalent – the capability of a vessel to transport and deploy 600 feet of Hboom or 1800 ft of swamp boom.

Boom boats - a boat suitable for transporting, towing and deploying large amounts of boom, usually crewed with a helmsman and two crew for deployment, usually referenced in terms of BBE. Boom boats must be capable of grounding without sustaining damage. (Also see Shallow Water Boom boats and Very Shallow Water Boom Boats.)

Bboats - see boom boat

Danforth - refers to “danforth anchors” with chain, typically presented as a number of anchors and minimal weight (e.g., 3/12+ - means three anchors of a minimum of 12 lbs each) with at least an equal weight of anchor chain weight whether specified or not. Without substantial anchor chain weight, anchors will not hold. Northill anchors are equivalent.

Hboom - see harbor boom

Harbor boom - an inland waters type boom (greater than 18" and less than 42" overall (flotation and skirt)) of a curtain boom design (skirted boom with solid flotation). Early strategies attempted to clarify boom size by indicating flotation and skirt as follows: 9X9+ which indicated a boom with at least 9" of flotation and 9" of skirt, and would be interpreted as at least 18" overall.

sorbm - sorbent boom, with or without a skirt
Shallow water boom boats - a boom boat capable of working in three feet of water or less, and should be able to withstand stranding without sustaining damage.

Skiff - a small two person craft able to operate in 3 foot waves or larger and capable of delivering personnel and equipment to shores.

Skf - see skiff

SFS - stationary floating skimmer - a floating platform supporting a skimmer and storage – which could be a VOSS.

SPS - self-propelled skimmer - a small to medium sized skimmer with its own propulsion and storage – which could be a VOSS.

SSS - shore side skimmer, includes a skimming unit, such as a ropemop or weir skimmer and its support pack and a storage container such as a vacuum truck, baker tank, or other tank.

swpbm - see swamp boom

Swamp boom - a river boom type (less than 18" overall) of a curtain boom design

Towed skimming array - a skimming system with two boats towing collection booms which funnel oil to a skimming system

TSA - towed skimming array - an array with two boats towing collection booms which funnel oil to a skimming system

VOSS – Vessel of Opportunity Skimming System – a skimming system (skimming device, pump, power supply, and storage) placed on a vessel which was not designed for skimming per se.

VSA – “V”-Skimming Array -Same as TSA

“V”-Skimming Array -Same as TSA

Very shallow water boom boats - a boom boat capable of working in two feet of water or less, and should be able to withstand stranding without sustaining damage.

xboom – is any boom other than harbor boom, swamp, or sorbent boom. This term is used to simplify equipment tables. A type designator should be used as well as a length.

Type designators include:

TB or **TBB** – tidal barrier boom;

OB – ocean boom;

FB – fence boom;

OS – oil snare;

BB – bushy boom

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