Guidance for Critical Habitat Analysis
Required for Submitting Release Permits

Question: *Provide a GPS coordinate for the proposed release site. Ideally this should be located close to the center of the proposed release location. If the exact location of the release site has yet to be determined, provide GPS coordinates for the boundaries that encompass the possible area that will contain the release site and the area to be monitored.*

Guidance: There are websites that offer GPS information, some with free downloads, that would be useful in determining the coordinates.

Question: *Approximately how long (years) has this location been under managed agricultural production? Specify the type of agricultural activity - e.g. cropping, pasture, orchard, managed forest.*

Guidance: Go back as far as possible, but do not be overly concerned with detailed history of agricultural activities beyond ten years. The point of this question is to provide information allowing comparison between the anticipated activites of the proposed release and the historical use of the land in order to determine if there is a change that could affect the habitat.

Question: *Is the release site and/or the area requiring monitoring (or the area within the boundaries of the possible release/monitoring area for sites where the release has yet to be determined) within designated critical habitat for a listed threatened or endangered species or within habitat proposed for designation under the Endangered Species Act (16 U.S.C., Section 1531, Endangered Species Act (ESA) of 1973, as amended)*?

Guidance: The United States Fish and Wildlife Service (USFWS) is developing a database for public use that will provide current information on the status of critical habitat including spacial data. This tool will not be available this growing season. For now, there are a few methods that can be used to make this determination by using the USFWS endangered species site (http://www.fws.gov/endangered/wildlife.html#Species). However, the site has limitations. The listed species can only be searched to the state level. The critical habitat portal (http://crithab.fws.gov) provides data to the county level, but it is incomplete. The critical habitat portal also has a mapping feature that can be used to provide more detail as to the geographic location of the habitat, however, not all spatial information is available on the website and reliance on the mapping feature alone will not provide data that ensures compliance with the Act. Proposed critical habitat, the habitat's constituent elements, special information for some species, and other information must be obtained from Federal Register notices. Depending on the location of the release, some methods may work better than others. Knowing the precise boundaries of the action area will make all determinations easier. Below are some suggested methods that can be used, but use of these methods is not required. Applicants may use any method they chose

provided it identifies all designated critical habitat and habitat proposed for designation within the action area.

To obtain information on species with designated critical habitat:

Method A. This method may work best for states with few listed species.

1. Go to the USFWS endangered species state listing page (http://ecos.fws.gov/tess_public/StateListing.do?state=all) to view all listed species in the state.
2. Use each species link to see if the species has critical habitat.
3. If it does, follow the link to the Federal Register document to obtain specific information on the location of the critical habitat.

Method B.

1. Go to the USFWS endangered species state listing page (http://ecos.fws.gov/tess_public/StateListing.do?state=all) to view all listed species in the state.
2. Go to the critical habitat portal (http://crithab.fws.gov).
3. Search "by state/county" to obtain a list of species that have designated critical habitat within the county or counties containing the action area. Follow the link to the Federal Register notice to determine if the designated critical habitat is within the area of the release or the area being monitored. This search will capture 95% of species with designated critical habitat but will not include those without digitized critical habitat information.
4. There are two ways to search for species with designated critical habitat without digitized critical habitat information.
    a. Use the "by taxonomy" search list to look at information for all listed species within the state with designated critical habitat that were not brought up by the state/county search list.
    b. Use the **accompanying spreadsheet** of listed species with designated critical habitat without GIS information to see if there are any listed species found in the state.
5. For the species identified in 4a or 4b above, follow the link to the Federal Register notices to determine if the designated critical habitat is within the area of the release or the area being monitored.

To obtain information on species with proposed critical habitat:
The USFWS website does not provide a listing of proposed critical habitat, making this task more difficult. Below are possible methods:

Method A.

1. Go to the USFWS webpage for species proposed for listing http://ecos.fws.gov/tess_public/SpeciesReport.do?listingType=P.
2. Follow the link for individual species to the Federal Register notices for these species. Look for one proposing designated critical habitat and look to see if the release site and/or monitoring area are geographically included in the proposed

designation. This will identify proposed critical habitat for species proposed for listing.

3. USFWS sometimes proposes designated critical habitat for species that have already been listed, and sometimes the rule for listing the species may be final while the decision on critical habitat is still pending. To look for these, go to the USFWS webpage that provides a state by state list of all listed species within a given state http://ecos.fws.gov/tess_public/StateListing.do?state=all.
4. For each species, search for a Federal Register notice proposing critical habitat and review the document to see if the release site or monitoring area are geographically included in the proposal.

Method B. Another and perhaps easier way to determine if the release site and/or area requiring monitoring is in proposed designated habitat is to look at the USFWS centralized library for Federal Register Documents. This method will likely be easier for states with many listed species.

1. Go to the USFWS endangered species state listing page (http://ecos.fws.gov/tess_public/StateListing.do?state=all) to view all listed species in the state.
2. Go to the USFWS centralized library for Federal Register Documents (http://www.fws.gov/policy/frsystem/default.cfm). Look under proposed rules for the species identified in step 1.
3. For each species, search for a Federal Register notice proposing critical habitat and review the document to see if the release site or monitoring area are geographically included in the proposed designation. Caution: The USFWS guidelines are to reach a determination on designating the habitat as critical within one year of the proposal. However, this target is frequently not met and some may be pending for years. To assure compliance, it will be necessary go back several years to look at all notices proposing critical habitat.

Another method that can be used to obtain information on designated critical habitat and proposed critical habitat for a given area is to directly contact the USFWS. Links to the various FWS regional and field offices can be found at http://www.fws.gov/endangered/contacts.html#R1.

Additional information can be obtained from the USFWS Endangered Species Consultation Handbook (http://www.fws.gov/endangered/consultations/s7hndbk/s7hndbk.htm). Although written as internal guidance, it provides a wealth of information including a glossary of terms.

It is important to note that critical habitat is not limited to the geographical area occupied by the species at the time of listing, but may include other areas if determined to be essential for the conservation of the species. Critical habitat may be unoccupied for a number of reasons including the extirpation of the species from this portion of the range. Critical habitat may be in areas unsuitable for the species, but may be restored to suitability with proper management. Some critical habitat may never be occupied by the species, but

was designated or proposed because it is essential for conserving the species by maintaining factors constituting the species' habitat. An example would be designating the headwaters of a stream as critical habitat in order to provide sufficient water quality for a species living downstream.

Question: *If "Yes" to above question, provide the genus/species name and common name for all species that have designated critical habitat or habitat proposed for designation within the release site and monitoring area*.

Guidance: Self explanatory.

Question: *If "Yes" to above question, provide an analysis of the effects of the proposed release on designated critical habitat and habitat proposed for designation. Indicate if the proposed release will have "no effect" or "may affect" the designated critical habitat and/or habitat proposed for designation*.

Guidance: The Federal Register notice that designates particular critical habitat provides useful information on the constituent elements (biological and physical attributes that are essential to the species' conservation, such as: space; food, water and nutrition; cover or shelter; reproduction; and special habitats) that were the reason for the decision to designate or propose the habitat as critical. However, some critical habitat designations predate the requirement for identification of constituent elements or habitat qualities necessary to allow a species to survive and recover from the threat of extinction. In such cases, the analyst should use the best available scientific and commercial data available to determine and document those characteristics of the designated or proposed critical habitat that support the species' survival and recovery.

Keep in mind that the "action" includes all aspects of the release and field trial including interdependent actions (having no independent utility apart from the proposed action) and interrelated actions (part of a larger action and depend on the larger action for justification). The analysis must consider both the direct (immediate) and indirect (later in time, but reasonably certain to occur) effects.

<u>The focus of the effects analysis should be on the habitat's constituent elements, not on the species.</u> If the constituent elements are not found in the release site and area being monitored, it is likely that the release would have "no effect." If the release site and area being monitored does contain constituent elements of the habitat, a "may affect" determination may be appropriate. The nature of the regulated article, related activities (staging, processing etc.) within the action area, past and current land use activities, and the constituent elements of the designated habitat should be considered. Generally, it would be expected that if a release site is currently in agricultural production, there would be no effect on the habitat because there would be no change in the use. However, this needs to be carefully reviewed, as each situation is different. The nature and activities of the field trial in relation to prior agricultural use should be considered and discussed, especially if they are a key factor supporting the final determination.

The effects analysis will result in either a "no effect" or "may affect" determination for the effect of the action on designated critical habitat. In supporting the determination, focus on the effects on the constituent elements of the habitat, not on the effect on the species. A "no effect" determination is made when the proposed action will not affect the designated critical habitat. "May affect" is an appropriate determination when a proposed action may have any effect on the designated critical habitat, even if they are entirely beneficial. If a "may affect" determination is reached, it must be determined if the action is likely or not likely to adversely affect the designated critical habitat. A "may affect, not likely to adversely affect" determination is appropriate when effects on designated critical habitat are expected to be discountable, insignificant, or completely beneficial. Discountable effects are those that are extremely unlikely to occur. Insignificant effects relate to the size of the impact. An example of this would be a situation where runoff from an agricultural field would have an effect on a constituent element of the habitat, but the field release is so minor compared to other agricultural activities in the vicinity that the added effect of the field release would be immeasurable. Beneficial effects are positive effects without any adverse effects (there can be no "balancing" wherein the benefits of the action would be expected to outweigh the adverse effects).

BRS will be required to consult with FWS for any "may affect" determination on designated critical habitat. If the determination is "may affect, not likely to adversely affect," an informal consultation with FWS is required. Failure to obtain FWS concurrence with this determination requires initiation of formal section 7 consultation as does reaching a "may affect, likely to adversely affect" determination. This determination is appropriate when the effect of the action is not discountable, insignificant, or beneficial or the overall effect is beneficial, but is also likely to cause some adverse effects. The formal consultation process will end with a decision by the FWS (usually written in a Biological Opinion) on whether the action will result in adverse modification/no adverse modification of designated critical habitat.

For habitat proposed for designation, a conference with FWS is required if the action is likely to "adversely modify" the proposed critical habitat, as opposed to the lesser threshold of "may affect" when dealing with habitat currently designated as critical habitat. The term "adverse modification" is defined by FWS as the direct or indirect alteration that appreciably diminishes the value of critical habitat for the conservation of the species. The modification to the habitat must have the effect of jeopardizing the existence or recovery of a species. Generally, it must affect all proposed designated critical habitat or a part that is vital for survival of the species. Keep in mind that FWS would be making or concurring with this call as a result of the conference.

The final analysis report should include the following:

a. A list of species in the release area and monitoring area that have designated critical habitat.

b. A list of species in the release area and monitoring area that have critical habitat proposed for designation.

c. For each species, an effects analysis of the action on the critical habitat. Provide a brief description of the critical habitat including its constituent elements. Focus on the effect of the action on the "constituent elements" that are essential to the species. Include all activities that will be part of the action including mobilization, harvesting, processing, and demobilization.

d. Explain any proposed measures to reduce or avoid impacts.

e. Conclusions (for each species, a determination of "no effect" or "may affect" designated critical habitat. If a "may affect" determination is reached, it must be determined if the action is likely or not likely to adversely affect the designated critical habitat. For proposed designated critical habitat, determine if there is "adverse modification" to the habitat or "no adverse modification."

f. Literature cited.

g. List of preparers with contact information.

h. Maps, diagrams, photos if appropriate.

Inverted Common Name	Scientific Name	Population	Listing Date	Lead Region	Field Office
Bat, Indiana	Myotis sodalis		3/11/1967	3	BLOOMINGTON ESFO
Butterfly, Fender's blue	Icaricia icarioides fenderi		1/25/2000	1	OR FISH AND WILDL OFC
Cavefish, Alabama	Speoplatyrhinus poulsoni		9/9/1977	4	JACKSON ESFO
Crane, Mississippi sandhill	Grus canadensis pulla		6/4/1973	4	JACKSON ESFO
Daisy, Willamette	Erigeron decumbens var. decumbens		1/25/2000	1	OR FISH AND WILDL OFC
Darter, snail	Percina tanasi		10/9/1975	4	COOKEVILLE ESFO
Fox, San Miguel Island	Urocyon littoralis littoralis		3/5/2004	8	VENTURA FISH AND WILDL OFC
Fox, Santa Catalina Island	Urocyon littoralis catalinae		3/5/2004	8	CARLSBAD FISH AND WILDL OFC
Fox, Santa Cruz Island	Urocyon littoralis santacruzae		3/5/2004	8	VENTURA FISH AND WILDL OFC
Fox, Santa Rosa Island	Urocyon littoralis santarosae		3/5/2004	8	VENTURA FISH AND WILDL OFC
Frog, mountain yellow-legged	Rana muscosa	southern California DPS	7/2/2002	8	CARLSBAD FISH AND WILDL OFC
Liliwai	Acaena exigua		5/15/1992	1	PACIFIC ISLANDS FISH AND WILDL OFC
Lo`ulu	Pritchardia munroi		10/8/1992	1	PACIFIC ISLANDS FISH AND WILDL OFC
Lupine, Kincaid's	Lupinus sulphureus (=oreganus) ssp. kincaidii (=var. kincaidii)		1/25/2000	1	OR FISH AND WILDL OFC
Lynx, Canada	Lynx canadensis	lower 48 States DPS	3/24/2000	6	MT ESFO
Milk-vetch, Braunton's	Astragalus brauntonii		1/29/1997	8	VENTURA FISH AND WILDL OFC
Milk-vetch, Holmgren	Astragalus holmgreniorum		9/28/2001	6	UT ESFO
Milk-vetch, Lane Mountain	Astragalus jaegerianus		10/6/1998	8	VENTURA FISH AND WILDL OFC
Milk-vetch, Shivwits	Astragalus ampullarioides		9/28/2001	6	UT ESFO
Monardella, willowy	Monardella linoides ssp. viminea		10/13/1998	8	CARLSBAD FISH AND WILDL OFC
Mouse, Alabama beach	Peromyscus polionotus ammobates		6/6/1985	4	DAPHNE ESFO
No common name	Silene lanceolata		10/8/1992	1	PACIFIC ISLANDS FISH AND WILDL OFC
No common name	Abutilon eremitopetalum		9/20/1991	1	PACIFIC ISLANDS FISH AND WILDL OFC
Pentachaeta, Lyon's	Pentachaeta lyonii		1/29/1997	8	VENTURA FISH AND WILDL OFC
Salamander, California tiger	Ambystoma californiense	U.S.A. (CA - Sonoma County)	1/19/2000	8	SACRAMENTO FISH AND WILDL OFC
Salmon, chinook	Oncorhynchus (=Salmo) tshawytscha	upper Willamette R.	8/2/1999	11	NMFS
Salmon, chinook	Oncorhynchus (=Salmo) tshawytscha	Puget Sound	8/2/1999	11	NMFS
Salmon, chinook	Oncorhynchus (=Salmo) tshawytscha	spring/summer Snake R.	4/22/1992	11	NMFS
Salmon, chinook	Oncorhynchus (=Salmo) tshawytscha	spring upper Columbia R.	8/2/1999	11	NMFS
Salmon, chinook	Oncorhynchus (=Salmo) tshawytscha	fall Snake R.	4/22/1992	11	NMFS
Salmon, chinook	Oncorhynchus (=Salmo) tshawytscha	winter Sacramento R.	4/6/1990	11	NMFS
Salmon, chinook	Oncorhynchus (=Salmo) tshawytscha	lower Columbia R.	8/2/1999	11	NMFS
Salmon, chinook	Oncorhynchus (=Salmo) tshawytscha	CA coastal	12/29/1999	11	NMFS
Salmon, chinook	Oncorhynchus (=Salmo) tshawytscha	CA Central Valley spring-run	12/29/1999	11	NMFS
Salmon, chum	Oncorhynchus (=Salmo) keta	Columbia R.	8/2/1999	11	NMFS
Salmon, chum	Oncorhynchus (=Salmo) keta	summer-run Hood Canal	8/2/1999	11	NMFS
Salmon, coho	Oncorhynchus (=Salmo) kisutch	OR, CA pop.	6/18/1997	11	NMFS
Salmon, sockeye	Oncorhynchus (=Salmo) nerka	U.S.A. (Snake River, ID stock wherever found.)	1/3/1992	11	NMFS
Salmon, sockeye	Oncorhynchus (=Salmo) nerka	U.S.A. (Ozette Lake, WA)	3/25/1999	11	NMFS
Sea turtle, green	Chelonia mydas	except where endangered	7/28/1978	4	JACKSONVILLE ESFO
Seal, Hawaiian monk	Monachus schauinslandi		11/23/1976	11	NMFS
Sea-lion, Steller	Eumetopias jubatus	western pop.	4/10/1990	11	NMFS
Sea-lion, Steller	Eumetopias jubatus	eastern pop.	4/5/1990	11	NMFS
Shrimp, Kentucky cave	Palaemonias ganteri		10/12/1983	4	KY ESFO
Skipper, Laguna Mountains	Pyrgus ruralis lagunae		1/16/1997	8	CARLSBAD FISH AND WILDL OFC
Steelhead	Oncorhynchus (=Salmo) mykiss	central CA coast	6/17/1998	11	NMFS
Steelhead	Oncorhynchus (=Salmo) mykiss	upper Columbia R. Basin	6/17/1998	11	NMFS
Steelhead	Oncorhynchus (=Salmo) mykiss	middle Columbia R.	8/2/1999	11	NMFS
Steelhead	Oncorhynchus (=Salmo) mykiss	south central CA coast	6/17/1998	11	NMFS
Steelhead	Oncorhynchus (=Salmo) mykiss	Snake R. Basin	6/17/1998	11	NMFS
Steelhead	Oncorhynchus (=Salmo) mykiss	lower Columbia R.	6/17/1998	11	NMFS
Steelhead	Oncorhynchus (=Salmo) mykiss	upper Willamette R.	8/2/1999	11	NMFS
Steelhead	Oncorhynchus (=Salmo) mykiss	southern CA coast	6/17/1998	11	NMFS
Steelhead	Oncorhynchus (=Salmo) mykiss	Central Valley CA	6/17/1998	11	NMFS
Whipsnake (=striped racer), Alameda	Masticophis lateralis euryxanthus		12/5/1997	8	SACRAMENTO FISH AND WILDL OFC
Wolf, gray	Canis lupus	lower 48 States, except MN and where XN; Mexico	3/11/1967	6	ARD-ECOL SVCS