

Appendix B

Special Considerations for Including Use of Pesticides in Habitat Conservation Plans (HCP)

The Environmental Protection Agency (EPA) authorizes the use of pesticides through the registration and labeling requirements of the Federal Insecticide, Fungicide, and Rodenticide Act (see the [HCP Handbook Toolbox](#)). EPA is required to conduct Endangered Species Act (ESA) section 7 consultation (see the [HCP Handbook Toolbox](#)) with the U.S. Fish and Wildlife Service and National Marine Fisheries Service (FWS, NMFS, or Services) on registration of any pesticide that may affect listed species or their designated critical habitat. If the effects from potential uses of the pesticide according to its label rise to the level of take, the incidental take statement in the resulting section 7 biological opinion would exempt the prohibition on the incidental take from use of that pesticide, as long as those uses would not jeopardize the species. For pesticides that undergo a section 7 consultation, covering such take in an incidental take permit for an HCP is unnecessary. In addition, an HCP would not need to address the use of a pesticide if the Services concurred with EPA that the pesticide was not likely to adversely affect listed species. However, many pesticides did not undergo section 7 consultation at the time of registration and EPA's process to complete these consultations is ongoing. As a result, take from use of those pesticides that have not gone through consultation is not exempted by section 7.

If an applicant requests that the incidental take permit authorize take from the use of a pesticide, check the FWS's Tracking and Integrated Logging System (TAILS) to determine whether EPA has completed section 7 consultation on registration of that pesticide. EPA's Endangered Species Protection Program Web site (see the [HCP Handbook Toolbox](#)) contains completed biological opinions and endangered species bulletins for certain pesticides. However, since a large number of pesticides have not undergone consultation, these bulletins (or lack of a bulletin for a pesticide) are not an accurate indicator of whether consultation has been completed. However, the Web site may provide information on when consultation for some pesticides is anticipated to be completed. The Services' Regional environmental contaminants staff can also help you determine whether a consultation has been completed.

If an applicant prefers to include the pesticide in the HCP instead of waiting for EPA to complete section 7 consultation on it or rely upon EPA's consultation for coverage, be sure to tell them that the HCP and the Services' biological opinion and environmental assessment (EA) or environmental impact statement (EIS) must include an adequate analysis of the effects from the proposed pesticide use. We may authorize associated take on the incidental take permit only after we complete all our necessary effects analyses in our biological opinion, EA or EIS, and set of findings for permit issuance. Also advise them that doing so could add substantial time to the HCP and permitting process.

Always place priority on developing avoidance and minimization measures in the HCP to reduce the exposure to the covered species from pesticide use. Advise the applicant that this will be the most effective way to reduce time and effort when analyzing and offsetting the effects of an activity. Work closely with the Services' environmental contaminants staff in the field and Regional offices for guidance on effective avoidance and minimization measures.

Guidance for Analyzing Effects of Pesticide Use

The primary resources for analyzing effects from pesticide use should be field and Regional environmental contaminants staff. They can provide technical expertise and direct you to other resources to help with the analyses.

Describe the pesticide to be used

Describe the active ingredient to be used (e.g., glyphosate), as well as the specific formulated product (e.g., Roundup[®] Pro). Some products contain multiple active ingredients. Formulated products also contain other chemicals in addition to the active ingredient that may affect the flow, efficacy, adherence, or other characteristics of the pesticide, and these chemicals may have additional effects to the environment that we must consider. If the pesticide requires or the label recommends users add other ingredients, such as a surfactant, name the specific ingredient(s) to be added. State if more than one pesticide will be applied at the same time or mixed together for use (i.e., a “tank mix”). Multiple pesticides mixed together may produce effects that each would have not produced on its own (i.e., additivity, synergy, or in rare circumstances, antagonism).

Describe how the pesticide will be used

Be as specific as possible to provide the necessary information to accurately model the fate and transport of the pesticide and reduce the need to account for effects that are beyond the intended use. Include the application rate (pounds active ingredient/per acre applied), application method and equipment, intended frequency of application, time of year, and time of day. Describe any no-application buffers, no-spray zones, or other minimization measures that will be used, and whether these measures are required or recommended by the label.

Describe the potential exposure of the pesticide in the environment

The exposure analysis should consider the mobility, persistence, volatility, and potential for bioaccumulation of the pesticide product and any other ingredients that will be applied. Depending on these fate characteristics, the affected area may not just be the application area, but could be anywhere the chemicals might reach as a result of drift, runoff, leaching to groundwater, or atmospheric transport. For bioaccumulative chemicals, transport may occur through biota that move off site after feeding in the application area. Calculate the estimated environmental concentration using the appropriate terrestrial or aquatic models (many current-use models can be found on the EPA Web site (see the [HCP Handbook Toolbox](#)).

Identify which species and habitats of concern are likely to be affected

For the HCP, use a process to break down the proposed action into components for analysis (see chapter 5.3 of the HCP Handbook) to identify which covered species and habitats may be exposed to and affected by proposed pesticide use. Consider migratory species or other species that may only seasonally use the area where the pesticide would be applied. For the NEPA analysis, use available tools to identify sensitive natural resources and other factors of the human environment that use of the pesticide may impact.

Describe the potential effects of the pesticide in the environment

The effects analysis should consider all relevant toxicological information on the active ingredient and its degradates, the formulated product, and any other chemicals, such as surfactants or other pesticide products, that will be mixed with or applied near the product under consideration.

For direct effects, describe the toxicity data regarding mortality, as well as any reproductive, growth, behavioral, and other sublethal effects to fitness of individuals. Include information from EPA's assessment, EPA's ECOTOX database (see the [HCP Handbook Toolbox](#)), and the open literature. EPA requires certain toxicity data for the registration of a pesticide, but the availability of further information varies based on the research performed since the pesticide's registration. It is often necessary to extrapolate toxicity data from one or more standard test species to the species that you are evaluating. Compare the concentrations at which effects have been noted with the estimated environmental concentration predicted by drift and runoff models based on the label use rate and application technology. If effects are likely to occur, describe the duration and magnitude to the extent possible, and the number of individuals that will likely be affected. For chemicals that accumulate in tissue, consider food chain effects. For indirect effects, use the same toxicity information to assess effects to the habitat of the species of concern, including but not limited to reduction in prey, reduction in cover, and changes in community composition.

Consider any available information on the toxicity of mixtures that may be concurrently applied (tank mixtures or formulated product mixtures) or that may result from adding a new chemical to those that may already be present in the area of concern (environmental mixtures). In the absence of information indicating synergy or antagonism, assume the effects of any two chemicals on an individual to be additive.

Describe the potential effects of the pesticide to individuals and habitat characteristics

For covered species and designated critical habitats that may be affected, determine whether the direct and indirect effects described above are: (1) insignificant (effects that can't be meaningfully measured, detected, or evaluated), (2) discountable (extremely unlikely to occur), or (3) completely beneficial (positive effects without any adverse effects). For designated critical habitats, consider effects to all physical and biological features (formerly called 'primary constituent elements') and determine whether the effects are insignificant, discountable, or completely beneficial.

If you determine that effects to covered species would not be insignificant, discountable, or completely beneficial, describe the various types of effects you anticipate are reasonably likely to occur. In the analysis, include any potential measures to avoid or reduce the severity of these effects. Determine what the remaining impacts would be to develop appropriate mitigation measures in the HCP.

Pesticide Use and No Surprises in HCPs

Keep in mind that, in the future, EPA may change required label restrictions based on new information and section 7 consultation on the pesticide in question. Because authorized take on the permit is valid only for otherwise lawful activities, the permittee would need to comply with any changed label instructions, even if an approved HCP is based on an out-of-date label. Advise the applicant that should such an event occur, the No Surprises rule does not apply even if the new label is more restrictive because label compliance is legally required. The HCP's changed circumstances section should identify this possibility along with contingency responses for potential adjustment of conservation measures.