Chapter 6: Identifying the Plan Area, Permit Area, and Other Areas Analyzed

---

6.1 Determining the Plan Area

In addition to identifying the covered activities, the applicant must identify the plan area (where the Habitat Conservation Plan (HCP) applies) and the permit area (where the incidental take authorization applies).

6.1.1 What is the Plan Area?

The plan area, sometimes referred to as the HCP area, is comprised of all areas that will be used for any activities described in the HCP, including covered activities and the conservation program. It includes all lands necessary for the HCP to be fully implemented. The plan area must at a minimum include the permit area, but it may be larger. The plan area must be clearly delineated in the HCP with a map and written description. The plan area boundary should be defined as exactly as possible to avoid uncertainty about where the HCP applies. The visual and narrative description of the plan area provides everyone with a clear picture of the location of the HCP.

Depending on the nature the HCP, the plan area could: include all or some of the property of a single private landowner or multiple landowners; encompass a large area to allow for anticipated future acquisition or expansion of control by a large company; be a physical boundary, such as a watershed, or an ecological boundary, such as an ecoregion; be a political boundary area such as a city, county, or State under a programmatic HCP that would allow enrollment by multiple landowners over time; or be based on lands under the jurisdiction of a tribe, State agency (e.g., State lands commission), or local entity (e.g., watershed district).

The plan area may be contiguous or include separate locations. For example, there may be separate locations if there is a mitigation or reserve site associated with an HCP that is located

apart from other HCP activities, or if an applicant has separate properties each with project activities that will be included under one HCP.

The plan area may include some areas that are not under the direct control of the applicant(s). This is often the case for landscape-scale HCPs where the plan area is based on a large physical or ecological boundary. Also, a mitigation site associated with an HCP may be controlled by someone other than the applicant, such as another landowner. However, applicants must ensure that they can achieve their responsibilities under an HCP and the associated permit within the plan area where the conditions or requirements will be in effect. This may mean that they have to enter into additional agreements, or memorandums of understanding (MOU) (see the HCP Handbook Toolbox), or use other legal instruments (e.g., contracts) with affected parties.

Determining the exact location of the plan area boundary is often an iterative process that is intertwined with determining other components of the HCP, including covered species, covered activities, anticipated impacts, and conservation opportunities.

6.1.2 Plan Area Size Considerations

There are no minimum or maximum plan area size requirements. For small or single landowner HCPs, the plan area is often some or all of the landowner's property. HCPs with small plan areas usually take less time to develop and National Environmental Policy Act (NEPA) compliance is not usually as complex (e.g., Categorical Exclusion (CatEx) or Environmental Assessment (EA)). However, HCPs with small plan areas may be less efficient at demonstrating conservation value and in some cases more costly to develop on a per acre basis.

Except in the case of a general conservation plan, the final size and configuration of an HCP plan area is up to the applicant(s). To maximize the conservation value of the HCP, the Services often encourage applicants to consider a landscape-scale or regional plan area if it is feasible and consistent with the applicant's land or natural resource use authorities. Even small plan area HCPs can contribute to a landscape-scale strategy. The advantages usually associated with landscape-scale plans are that they:

- allow for pro-active, long-term development planning to conserve species and their habitats in balance with important economic needs of applicants;
- can comprehensively provide for the needs of a covered species because they often can encompass more life history requirements and provide greater conservation opportunities;
- are more efficient to develop and administer on a per acre basis;
- may allow the permittee to address a broader range of activities;
- can avoid the need for many smaller HCPs;
- allow for analysis of a wider range of factors affecting listed species, which maximizes the flexibility needed to develop innovative mitigation programs, and minimizes the burden of ESA compliance by replacing individual project review with comprehensive, area-wide review; and
- minimize the time and workload associated with the Services' review of many individual projects by conducting a single comprehensive, area-wide review instead.

Disadvantages of landscape-scale plan areas are that:

- they may have more covered activities and covered species to address, which increases the complexity, costs, and time needed to develop them;
- achieving consensus gets more challenging as the number of participants increases;
- biological information such as species occurrence and habitat conditions may be less available and more difficult to acquire for a large plan area;
- less data availability for large plan areas can lead to greater uncertainties associated with the impacts of implementing these HCPs;
- more robust monitoring and adaptive management programs are often needed to address the uncertainties associated with large plan areas; and
- they often take longer to prepare.

6.1.3 Plan Area Units

Landscape-scale HCPs and even some smaller HCPs may be simplified by dividing the plan area into separate units with different conditions and requirements for each unit. For example, some units may be identified for development activities and others for conservation purposes. Using plan area units may also help in segregating a phased or multi-applicant approach to implementation for large or long-term HCPs. Plan area units may result from severability considerations as discussed in Chapter 3.4.7.

6.2 Determining the Permit Area

The permit area is the geographic area where the impacts of the activity(ies) occur for which an incidental take permit coverage is requested (i.e., the covered activities). Although there is not a minimum permit area size, it must be within the plan area and under the control of the permittee or holder of a certificate of inclusion. The permit area must be clearly delineated with a map and written description in the HCP and the permit. The written description may include township, range, and section information; plat map and parcel numbers; global positioning system (GPS) coordinates; legal descriptions; or whatever is necessary to ensure that there is no uncertainty as to where covered activities may occur and take is authorized.

Depending on the HCP and its permit structure, the permit area may be the same as the plan area or a subset of the plan area. They are often the same when there is a relatively small HCP plan area with just one landowner. Permit areas are often a subset of a plan area for landscape-scale HCPs with multiple applicants or when activities likely to result in incidental take occur only in certain parts of the plan area. Determining the exact location of the permit area is an iterative process that is intertwined with determining other components of the HCP, such as plan area, covered activities, anticipated direct and indirect impacts, and mitigation location.

6.3 Areas Analyzed Under Various Legal Authorities

Under our various legal authorities, we are required to analyze the geographic area within which impacts to a particular resource (e.g., a covered species, soils, water quality, socioeconomics, cultural resources, historic properties) may occur. The areas we analyze may be different for each resource because of their location, how they are affected, and what constitutes a

meaningfully relevant analysis unit for the resource. For example, a far-ranging species would require us to look outside of the plan area to understand the effects to the population.

6.3.1 Section 10

Under section 10 of the ESA, the HCP must specify the impact of the taking on each covered species. The impact of the taking must be determined at the rangewide scale to ensure that the taking does not appreciably reduce the likelihood of survival and recovery of the species. Therefore, the area analyzed to determine the impact of the taking on a covered species is the entire range of that species. However, this analysis is often conducted using a stepwise approach with local and intermediate areas analyzed such as the area occupied by a local population and a recovery unit. Effects associated with these local and intermediate areas analyzed are then used to predict effects associated with the entire range of the species.

6.3.2 Section 7

Under section 7 of the ESA, we are responsible for analyzing impacts to all listed, proposed, and candidate species affected by the proposed Federal action of issuing an incidental take permit, whether the applicant proposed coverage of those species, or not. We conduct this through intra-Service section 7 consultation (see the HCP Handbook Toolbox). There must be a defined action area for us to do this analysis. Section 7 regulations define the "action area" as all areas that will be affected directly or indirectly by the Federal action, and not merely the immediate area involved in the action (50 CFR 402.02). For example, if a proposed project is noisy then the action area would extend out at least as far as where the project's noise levels are above ambient noise levels. Similarly, the action area would extend out as far as necessary to encompass other project effects such as vegetation, sediment, or light impacts. Ultimately, the action area can be represented by a polygon that is the farthest extent of all areas likely to be affected directly or indirectly by the covered activities. Based on the action area, we determine which species and critical habitat are present and provide this information to the applicant to consider as covered species in the HCP. If take is reasonably certain to occur of ESA-listed wildlife species resulting from the covered activities, those species must be included in the HCP. If take can be avoided, the applicant should provide species take avoidance measures to the Services for review and approval and agreed-upon species take avoidance measures should be included in the HCP. The intra-Service consultation will analyze the proposed species take avoidance measures.

The analysis under ESA section 7 may also need to consider the range-wide scale, because under section 7 we analyze effects to each listed species and designated critical habitat, in order to ensure that the action is not likely to jeopardize the species' continued existence or destroy or adversely modify critical habitat. In some instances, a "distinct population segment" has been listed as a threatened or endangered species, and such designations may also affect the scale of analysis. Furthermore, the scale of the section 7 analysis may be influenced by the recovery units established in a final ESA Section 4 recovery plan. Also as with section 10 analyses, we may use a stepwise approach to conduct the section 7 effects analysis with local and intermediate areas identified. For example, we may identify anticipated effects to a local population or a recovery unit first to help predict effects at the range-wide scale. Also, we will need to consider climate change effects relevant over the HCP timeframe (e.g., an HCP that involves some type of

ongoing activity may have different effects over time as listed species distribution or abundance is projected to change).

Under section 7, we are also responsible for determining if the Federal action is likely to destroy or adversely modify designated critical habitat. We determine this based on the effect of the action on the critical habitat as designated in a final rulemaking. When multiple units of critical habitat are designated, we may use a stepwise approach in analyzing impacts to critical habitat. For example, if the action area only includes one unit of critical habitat, we will analyze effects to that unit first to help predict effects to the conservation value and function of critical habitat as a whole.

6.3.3 National Environmental Policy Act

For each alternative in the National Environmental Policy Act (NEPA) analysis, we should analyze impacts to each resource (e.g., soils, water, vegetation, wildlife) (see Chapter 13 and the HCP Handbook Toolbox). For instance, the impact to soils or vegetation from grading a site for a sewage treatment plant may be confined to the building footprint. The impact to water quality may be the entire length of the river where treated wastewater is discharged. For socioeconomic impacts, a city or county boundary may be the logical area to analyze.

Sometimes the area we analyze for a particular resource changes with different alternatives. For example, analyzing three or four different locations for a sewage treatment plant means analyzing impacts to vegetation and species in each of those different locations. If the Services agree with the areas established for the covered species and covered activities in the HCP, then it would be appropriate to analyze these same areas for the proposed action alternative and possibly other alternatives in the NEPA analysis.

It is not necessary to draw boundaries or collect data to describe resources that are not likely to be affected by the NEPA alternatives. If the resources don't need to be described, the descriptions in the affected environment section of the document should be no longer than is necessary to understand the effects of the alternatives that are described in the environmental consequences section of the NEPA analysis.

In cases when we cooperate with another Federal agency in our NEPA review, the plan area map for the HCP should include areas of concern specific to the cooperating agency's authority.

6.3.4 National Historic Preservation Act

To determine the Area of Potential Effect (APE), under the National Historic Preservation Act (NHPA) (see the HCP Handbook Toolbox), we must first understand the extent of the Federal undertaking. We define the Federal undertaking as the issuance of the permit and the associated conservation measures in the HCP, specifically the minimization and mitigation measures. The APE includes the areas where the FWS proposes to authorize take through an incidental take permit and where the permit conditions for the avoidance, minimization, and mitigation measures would be implemented and is typically located within the plan area. It may include reasonably foreseeable impacts outside areas associated with conservation measures if the permit causes such impact, but be sure that such impacts would not already occur without the permit.

FWS staff should coordinate closely with their Regional Historic Preservation Officers (RHPO) early in the HCP development process to help determine the APE and to consult with the State Historic Preservation Officers. See Appendix A for additional information regarding NHPA compliance.

6.4 Maps and Data Needs

For those resources that will sustain impacts, collecting accurate and adequate data on their present status (location, nature, condition, scope, size, etc.) is critical in determining impacts, and must be available in time for baseline analyses. A geographic information system (GIS) or other mapping system can be the basis of these analyses, and we can use these data to decide how best to develop or manage resources. Quality data will help in making quality decisions. This applies to all phases of HCP development, including implementation of the HCP. For more information about data requirements see Chapter 10.4. However, some data and geographic locations, particularly in the case of an HCP developed by an energy industry provider (e.g., oil, natural gas, wind, solar, geothermal, hydropower, etc.), may be proprietary or need to be protected for national security purposes (see also Chapter 7.8.1).

6.4.1 Maps and Analyses

GIS is an important tool for creating maps and for conducting multiple analyses. Applicants and the Services should carefully consider what mapping and analytical needs there are, who will develop them, where the data will be housed, and how the data will be shared. The following are the GIS analyses to routinely consider for HCPs:

- general map making;
- land ownership, management and patterns;
- species occurrence, richness, abundance, and range distribution;
- species-habitat suitability and characterization;
- direct and indirect estimated impacts to covered species' habitat;
- estimated availability of covered species' habitats/vegetation; and
- connection corridors for covered species.

6.4.2 Metadata and Data Documentation

What is metadata?

In its simplest form, metadata is basic information, that accompanies other data to describe what it is and make it easier for others to find it, understand it, and use it. As data are used and modified, users must update the documentation to reflect changes.

Why is metadata important?

Updated and complete metadata are critical to maintaining data quality and make it possible for others to understand and use the data. Data without accompanying metadata are hard to trust and understand, so it is difficult to use them with any degree of confidence.

Basic metadata that must be captured include:

- description of how the data were created,
- purpose of the data,
- time and date of creation,
- updated time and date stamps,
- data author,
- location on a computer network where the data were created, and
- data standards used.

Metadata should be prepared for all data that are collected or developed for the HCP (Federal Geographic Data Committee (FGDC) or ISO 19115 metadata standards, see the HCP Handbook Toolbox).

6.4.3 Data Management Plans

There should be a data management and sharing plan for any HCP where the Services and the applicant develop maps, conduct analyses, or collect data (Data Management Plan information, see the HCP Handbook Toolbox). It should be described in full as part of the HCP. This includes during development, implementation, and monitoring of the HCP. A data management plan describes the data that will be developed and by whom, what will be shared, how it will be shared, and how it will be managed throughout its lifetime. For small plans where very little or no mapping is done, or where the Services prepare the maps and analyses, a data management plan may not be required.

The data management plan should include:

- the types of data that will be created,
- the data standards that will be used,
- how the data will be stored,
- who will have access to the data,
- plans for eventual transition or termination of the data collection in the long-term,
- how and what data will be shared between the permittee and the Services, and
- schedule for sharing data.

More information about data management plans can be found in Chapter 10.4.