



CFWC

Center for Forest & Wood Certification

Large and Public Ownerships High Conservation Value Forests Worksheet

HCV 1: Forest areas containing globally, regionally or nationally significant concentrations of biodiversity values (e.g., endemism, endangered species, refugia).

Definition of ‘Significant concentrations of biodiversity values’: areas that contain concentrations of rare/threatened/endangered species, natural communities, or other biodiversity values that occur in numbers, frequency, quality, and/or density that are sufficiently outstanding to be considered unique or highly important in comparison with other areas within the *ecoregion* within which the FMU is located.

Definition of Region/Ecoregion: For the purposes of HCVF assessment, the ecoregion will in most cases be consistent with the scale of the USFS Section within which the ownership is located (see Ecoregion Map). If data for the region are limited, or in the cases of very small ecological sections, a larger area may be considered if justified.). Where justified by available data, a comparable classification system (e.g., TNC’s Ecoregion Map) may be used.

Guidance on Data sources: The rigor of the assessment, including choices of data sources consulted, is based on the likelihood of HCVs on the FMU and the risk of negative impacts to the HCVs. Data sources include:

- State Natural Heritage Programs
- State conservation, fish and wildlife Agencies
- State Wildlife Action Plan
- US Fish and Wildlife Service
- National Marine Fisheries Service
- Nature Serve
- Conservation groups whose primary mission is science-based biodiversity protection and management (e.g., The Nature Conservancy, Audubon).
- Local experts (e.g. scientists, tribal experts)
- Forest Management Unit (FMU) cover type maps and forest inventory data
- US Forest Service (USFS) Ecoregions See Appendix D
http://www.fs.fed.us/land/ecosysmgmt/colorimagemap/ecoreg1_provinces.html; or
- <http://nationalatlas.gov/mapmaker> click on *Biology/Ecoregion Bailey/Province and Section*.

Center for Forest and Wood Certification Guidance: During the initial scoping period the CFWC will send your boundaries to your state’s Nature Preserves Commission and the US Fish and Wildlife Service to determine locations of known rare, threatened, and endangered species to help answer guiding question 1.2. It is up to the Cooperating Forester’s professional judgment and experience to answer guiding question 1.1.

Guiding Questions	Discussion
1.1. Does all or part of the FMU contain an area that is legally protected or managed primarily for concentrations of biodiversity values that are significant at the ecoregion or larger scale, or is such an area proposed for protection?	
1.2. Does all or part of the FMU contain an area with significant concentrations of rare, threatened or endangered species or rare ecological communities, endemic (range restricted) species and/or natural communities that are significant at the ecoregion scale?	

HCV 2. Forest areas containing globally, regionally or nationally significant large landscape level forests, contained within, or containing the management unit, where viable populations of most if not all naturally occurring species exist in natural patterns of distribution and abundance.

Areas with this HCV include:

1. Landscape-scale natural forests that have experienced lesser levels of past human disturbance (e.g., minimal timber harvesting) or other management (e.g. fire suppression), or areas within such forests (e.g., part or all of ownerships or management units).
2. Managed forests that are rare at the ecoregion or larger scale because they contain forest communities with successional stages, forest structures, and species composition that are similar in distribution and abundance to natural forests that have been only subject to natural disturbance processes or minimal human intervention., This would also include areas (e.g., part or all of ownerships or management units) within such forests. Because these are managed forests they would not likely contain old growth, but nonetheless they would typically contain an abundance older forest attributes (biologically mature or late successional) characteristic of the forest type, as indicated by tree species composition, tree size, or other attributes applicable to the forest community type, such as coarse woody debris, snags, herb diversity, structural understory diversity, and the lack of invasive plant species.

Examples: HCVFs in this group are more likely to be in public ownership, although areas in private ownership may that have experienced low levels of timber harvesting could also qualify if they are part of landscape-scale forests as described above.

Definition of ‘Large landscape-level forests’: Relatively contiguous areas of forest (which may be crossed by land management roads or public roads). At the minimum these forests are likely to be thousands or tens of thousands of acres in size. However, “large” is relative to ecoregion landscape context (particularly the size of forested blocks in the ecoregion) and might be smaller or larger than this figure as indicated by consultation with regional experts. In ecoregions where natural forests are heavily fragmented by forest type conversion or land use conversion, the increased value of smaller occurrences of remaining natural forest should also be included in the assessment. The forest may be in single or multiple ownerships.

Definition of ‘Significant’: The forest is significant in the ecoregion due to its size, condition, and/or importance to biodiversity conservation. Factors to consider include:

- Rarity of forests of this size and quality within the ecoregion
- Less affected by anthropogenic factors than similar areas in the ecoregion.

See additional guidance below.

Definition of Ecoregion: See definition in HCV 1

Data sources: See HCV 1 Guidance on Assessment Process.

HCV 2 also includes the following regional examples discussed in Guiding Question 2.2:

Central Hardwoods

- Old growth
- Old forests/mixed age stands that include trees >160 years old
- Municipal watersheds –headwaters, reservoirs
- Rare, Threatened, and Endangered (RTE) ecosystems, as defined by GAP analysis, Natural Heritage Inventory, and/or the World Wildlife Fund’s Forest Communities of Highest Conservation Concern, and/or Great Lakes Assessment

- Intact forest blocks in an agriculturally dominated landscape (refugia)
- Intact forests >1000 ac (valuable to interior forest species)
- Protected caves
- Savannas
- Glades
- Barrens
- Prairie remnants

North Woods/Lake States

- Old growth
- Old forests/mixed age stands that include trees >120 years old
- Blocks of contiguous forest, > 500 ac, which host RTEs
- Oak savannas
- Hemlock-dominated forests
- Pine stands of natural origin
- Contiguous blocks, >500 ac, of late successional species, that are managed to create old growth
- Fens, particularly calcareous fens
- Other non-forest communities, e.g., barrens, prairies, distinctive geological land forms, vernal pools
- Other sites as defined by GAP analysis, Natural Heritage Inventory, and/or the World Wildlife Fund's Forest Communities of Highest Conservation Concern

Appalachia:

- Forest and community types in the Appalachia region that have HC VF attributes include, but are not limited to:
- Old-growth oak-hickory (*Quercus* spp.-*Carya* spp.) forests on the Cumberland Plateau and on the Highland Rim of Tennessee
- Mixed mesophytic cove sites on the Cumberland Plateau
- Limestone glades in Tennessee and Kentucky
- Pocosins (evergreen shrub bogs) and other mountain bogs in Virginia, Tennessee, and North Carolina
- other forest and woodland plant community types listed by NatureServe as critically endangered, endangered, or vulnerable (G1-G3, N1-N3, and S1-S3) in the region, unless further refined by consultations with heritage programs, local native plant societies, local experts, and ENGOS;
- un-entered old-growth stands and intact old-growth forests;
- roadless areas (areas without roads, logging roads, or skid trails), larger than 500 acres;
- habitats for threatened or endangered species;
- unique and sensitive geophysical features, such as caves and rock outcrops; and
- forested wetlands or glades, such as springs, fens, and seeps.
- Spruce-fir (*Picea rubens*-*Abies fraseri*) forests in southern Appalachia
- Atlantic white-cedar (*Chamaecyparis thyoides*) stands Red spruce (*Picea rubens*) forests in central Appalachia

Guidance:

Areas with HCV 2 are less likely to be mapped than areas qualifying for HCV 1. When it is not clear if this value is present, then analysis of forest inventory and cover type data should be used to determine if HCV 2 occurs on the FMU.

The general approach in assessing for HCV 2 is to compare forest characteristics (such as extent and intensity of

harvest practices, forest communities, successional stages, structures, and species composition and abundance) with natural forests that have only been subject to natural disturbance processes or minimal human intervention. Aerial photography or satellite images of the surrounding landscape should also be considered.

Center for Forest and Wood Certification Guidance: Guidance Question 2.1 can be discussed referencing specific acreage sizes and fragmentation of property. 2.2 can be discussed referencing stand information and comparing to the rare forest types listed above.

Guiding Questions	Discussion
2.1. Does all or part of the FMU contain a globally, regionally or nationally significant large landscape-scale forest where viable populations of most if not all naturally occurring species exist in natural patterns of distribution and abundance?	
2.2. Does all or part of the FMU contain a landscape-scale forest recognized as being significant to biodiversity conservation at the ecoregion scale because it contains landscape-scale biodiversity values that are not present on other forests due to landscape-scale habitat modifications on surrounding lands, (such as land use conversion or forest management practices that have significantly altered forest biodiversity values)?	

HCV 3. Forest areas that are in or contain rare, threatened or endangered ecosystems.

Guidance: Rare, threatened and endangered ecosystems include old growth, roadless areas, and other ecosystems that are considered ‘rare’ at a global, regional, or local (state) level.

- Distinctiveness in terms of size, quality (particularly lack of human disturbance), or location within the ecosystem’s geographic range may be considered in assessing ecosystem rarity.
- For areas that have not been surveyed by state Natural Heritage programs or other plant community experts, forest manager should conduct a survey for assemblages of HCV3 attributes.
- For old growth, stand-level assessments are appropriate
- For roadless areas, cover type maps, and site reconnaissance information is appropriate.

Definition of Old growth: (1) the oldest seral stage in which a plant community is capable of existing on a site, given the frequency of natural disturbance events, or (2) a very old example of a stand dominated by long-lived early- or mid-seral species. The onset of old growth varies by forest community and region. For example, in the Pacific Coast region, old growth often begins around 200-250 years of age, whereas in the Northeast old growth is generally begins at 150-200 years after stand-replacing disturbances. Depending on the frequency and intensity of disturbances, and site conditions, old-growth forest will have different structures, species compositions, and age distributions, and functional capacities than younger forests. Old-growth and late successional stands and forests include: A) **Type 1 Old Growth:** stands that have never been logged and that display late successional/old-growth characteristics. B) **Type 2 Old Growth:** stands that have been logged, but which retain significant late-successional/old-growth structure and functions.

Definition of Roadless Area: Roadless areas are forested areas without evidence of roads or skid trails.

Data sources: Sources of information may include but are not limited to:

- FMU cover type maps and forest inventory data
- Nature Serve
- State Natural Heritage Programs
- Conservation NGOs
- Local experts (e.g. scientists, tribal experts)
- For Rare ecosystems, the primary data sources are the rare ecosystem information gathered as per Criteria 6.1, 6.2 and 6.4 in the FSC-US Forest Management Standard.

Center for Forest and Wood Certification: It is up to the professional judgment, with some consultation with CFWC personnel, to determine if old growth stands are present. During initial scoping the Center will consult with the state’s Nature Preserve Commission to determine if rare, threatened, or endangered forest communities are present.

Guiding Questions	Discussion
3.1. Does the FMU contain old growth stands?	
3.2. Does the FMU contain or is it part of a roadless area >500 acres in size or that has unique roadless area characteristics?	
3.3. Does the FMU contain any other rare, threatened, or endangered ecosystems?	

HCV 4. Forest areas that provide basic services of nature in critical situations (e.g., watershed protection, erosion control).

Intent: HCV 4 is focused on basic services of nature for human needs.

Guidance on ‘critical situations’ – general. FSC-US cannot provide clear thresholds on when an area provides critical protection. An operable question to help address this question may be, “What is the impact of converting the forest in question to a non-forest use?”

Guidance on ‘critical situations’ – watershed protection: A forest that is part of a local drinking water catchment or irrigation supply system, or is a critical source for a remote location (i.e., water is pumped to a remote location) may be considered a ‘critical situation’, particularly when people are dependent on the guarantee of water for drinking or irrigation, or where the regulation of water flow guarantees the existence of fishing grounds or agricultural land on which the local people are dependent, protects downstream communities from flooding, or provides critical protection to rare, threatened, or endangered aquatic species.

Data sources: Data sources may include, but are not limited to:

- Soil, watershed and aquifer maps
- Hydrologists and soil scientists in state or federal agencies or research institutions.
- Local or regional water management districts.

Center for Forest and Wood Certification: CFWC considers areas that are critical for watershed protection to directly border and drain into drinking water catchments. Areas critical for erosion control are only defined when the potential threat of erosion threatens local communities or their resources.

Guiding Questions	Discussion
4.1. Is all or part of the FMU owned or managed for the primary purpose of providing a source of community drinking water?	
4.2. Does all or part of the FMU play a ‘critical watershed role’ in protecting community drinking water supplies?	
4.3. Does all or part of the FMU include extensive floodplain or wetland forests that are critical to mediating flooding or in controlling stream flow regulation and water quality?	
4.4. Is all or part of the FMU critical to control erosion, landslides, or avalanches that would threaten local communities?	

HCV 5. Forest areas fundamental to meeting basic needs of local communities (e.g., subsistence, health, well-being).

Guidance and Definitions

Definition of ‘basic human needs’: Local people use the area to obtain resources on which they are critically dependent. This may be the case if local people harvest food products from the forest, or collect building materials or medicinal plants where no viable alternative exists. Forest uses such as recreational hunting or commercial timber harvesting (i.e., that is not critical for local building materials) are not basic human needs.

Definition of ‘fundamental’: Loss of the resources from this area would have a significant impact in the supply of the resource and decrease local community well-being. FSC-US has not set a threshold to determine the amount of basic human needs that constitute “fundamental.” Outside of the US, precedent has been set in at least one HCVF “toolkit” at 25% (Indonesia; see Rayden 2008).

Data sources: In most cases assessment of local community rights (i.e., legal or customary tenure or use rights) and Native American rights consistent with Criterion 2.2, Principle 3, and Criterion 4.4 will be sufficient to determine if there is potential for this HCV to occur on the forest. HCV 5 sits alongside these requirements as additional safeguards for exceptional circumstances. Sources of assessment information may include but are not limited to:

- Native American tribes, bands, and organizations
- Community groups dependent upon the forest for basic needs as identified
- Federal and state government agencies with responsibilities to Native American groups and local communities
- Anthropologists or social scientists with local forest expertise

Center for Forest and Wood Certification: No additional guidance

Guiding Questions	Discussion
5.1. Is all or part of the FMU fundamental to the basic needs of a local community?	

HCV 6. Forest areas critical to local communities’ traditional cultural identity (areas of cultural, ecological, economic or religious significance identified in cooperation with such local communities).

Definition of ‘cultural significance’: These include religious/sacred sites, burial grounds or sites at which regular traditional ceremonies take place. They may also include outstanding natural landscapes that have evolved as a result of social, economic, administrative, and/or religious imperative (i.e., fossils, artifacts, areas representing a traditional way of life); or areas that by virtue of their natural properties possess significant religious, artistic or cultural association.

Definition of ‘critical’: Loss of cultural resources from this area would have a significant impact to the traditional cultural identity of local and regional communities.

Data sources: In most cases, assessments of local community rights (i.e., legal or customary tenure or use rights) and Native American rights consistent with Criterion 2.2, Principle 3, and the social impact evaluation of Criterion 4.4 will be sufficient to determine if there is potential for this HCV to occur on the forest. HCV 6 sits alongside these requirements as additional safeguards for exceptional circumstances. Sources of assessment information may include but are not limited to:

- Native American tribes, bands, and organizations
- Federal and state government agencies with responsibilities to Native American groups and local communities
- Anthropologists or social scientists with local forest expertise
- State cultural heritage list

Center for Forest and Wood Certification: During initial scoping the CFWC will contact any Native American tribes and the state’s Archaeological Survey to determine if any known special sites are on Group Member’s forestland.

Guiding Questions	Discussion
6.1. Does all or part of the FMU contain specific forest area that is critical to the tribe and local community’s cultural identity?	
6.2. Are significant cultural features created intentionally by humans present?	
6.3. Are outstanding natural landscapes present that have evolved as a result of social, economic, administrative, and/or religious imperative?	