

Wildlife Habitat Evaluation Guides

Biology Technical Note 27 (revised)

May 2018

These Wildlife Habitat Evaluation Guides (WHEGs) have been developed to provide a relatively simple and rapid qualitative assessment of general wildlife habitat suitability on different land uses. In addition to this guidance document, Tech Note 27 includes 5 WHEGs, a brief reference section, and a glossary.

The WHEGs are structured to evaluate habitat conditions in the context of the use of the land that is being evaluated with the recognition, that while all land provides habitat for wildlife, different uses tend to have different opportunities and constraints. They are designed to directly evaluate land where wildlife is either a primary or secondary objective. When wildlife is the primary objective and the landowner wishes to address management for a specific species or group of species, the general land use WHEG should be coupled with a species-specific limiting factor/threats checklist (e.g. as with sage grouse).

The thoughts behind the structure of the WHEGs and species-specific limiting factors checklists are:

1. The underlying logic of the revised WHEGs is that different land uses and management systems (e.g., annual vs. perennial crops) will have different opportunities and constraints when it comes providing wildlife habitat. In this case, good land management for wildlife is viewed through the lens of a particular land use and management system.
2. The individual sections within the WHEGs address the general habitat elements that are necessary to provide wildlife habitat. The elements include: Food, Cover/Shelter, Habitat Continuity/Space, and Water.
3. The WHEGS evaluate habitat elements and associated management activities that contribute to wildlife concerns and/or opportunities and are designed to reflect the effect of management adjustments on general habitat elements.
4. The underlying concept driving the use of species-specific checklists is that, at a species-specific level, the response to any of the habitat elements is likely to vary. While you may have addressed general habitat elements with the WHEG, there may be additional elements or enhancements necessary for a particular species to thrive.
5. Given that different species utilize different components of the landscape, the species-specific limiting factors/threats checklist may be seen as an extension of the WHEG. Once the WHEG has been used to ensure that the basic habitat elements are in reasonable condition, a species-specific checklist will identify the habitat elements or features that must be present or enhanced to provide quality habitat for a chosen species. There will be instances where those factors run contrary to elements in the WHEG. For instance, streaked horned larks in the Willamette Valley require bare ground. The WHEG would encourage establishing a plant community that does NOT leave bare ground. In the case of focusing management on the streaked horned lark, the limiting factor would trump the WHEG criteria.

The limiting factors/threats vary by species but will typically include things like providing: supplemental water when managing for game birds, a minimum patch size in order to provide sufficient habitat for a

species home range, increased winter browse for mule deer, specific timing and depth of water for water birds, etc.

Instructions

1. Use Toolkit to delineate the planning unit(s) to be evaluated.
2. Scoring the WHEG is best done in the field with the landowner. Enough of the CMU should be visited, evaluated on the aerial photo, and discussed with the landowner to accurately evaluate habitat conditions.
3. Based on the landowner's and your knowledge of the area, identify whether there are any wildlife concentration areas or areas typically used for movement.
4. Evaluate each land use separately on the appropriate WHEG.
5. This guide may be used in one of two ways: 1) each land use in the CMU should be evaluated using the appropriate evaluation guide (Crop/hay, Pasture, Orchard/vineyard, Range, or Forest). The weighted (by acreage) average score must be 0.5 or greater; or 2) the dominant land use in the CMU will be evaluated using the appropriate evaluation guide (Crop/hay/pasture, Orchard/vineyard, Range, or Forest). The WHEG score must be 0.5 or greater to meet planning criteria for wildlife habitat concerns.

It is inevitable that you will encounter situations where the WHEGs do not precisely fit what you are looking at. Keep in mind that they are simply guides and that no general evaluation will ever capture the complexity that you face in your day to day work. Use your best professional judgment to complete the form. If the categories offer scores of 0.5 or 1 and you feel the condition of that habitat element falls in the middle, score it 0.75. Each of the WHEGs has a comments section where you can briefly document your rationale, which is essential to help other people who read the file (and can even serve as a reminder to yourself). When you are uncertain about what to do, reach out to specialists and colleagues and discuss your thoughts with them. Taking the time to place those phone calls and have those discussions is the one of best ways to further develop your professional judgment.

FAQs

How many WHEGs do I need to do?/When do I need to do more than one?

If you are evaluating a fairly homogeneous unit, one WHEG should be sufficient. If, however, there is a change in land form or some other factor that leads to a distinct shift in plant community, additional WHEGs should be completed.

When is the sensitive wildlife period?

March 1 to July 15. This period includes the majority of bird nesting and fawning/calving activities (really most animal breeding – amphibian and reptiles as well).

How do I determine what the plant community should look like to score Plant Community Composition?

If you are unable to find what you are looking for in references such as ESDs, agency literature and websites ([This is a hyperlink to an example data set of species distributions within Oregon. Specifically, this links to the Oregon explorer database, which provides location information for declining species.](#)), or other reputable sources, call one of your specialists.

How do I score a site for Water Availability & Accessibility if there was never any water there?

The score would be 0.5 in that instance. This habitat element seeks to address management and accessibility of naturally occurring water. If there was no water there to begin with, the score would be 0.5. Keep in mind that supplemental water may be necessary when managing for a chosen species but that would be addressed through a limiting factors checklist.

What about organic pesticides in Question 1 of the Orchard/Vineyard WHEG?

While organic pesticides might be less impactful, they would still reduce the amount of prey for insectivorous wildlife, which is one of the main purposes of this question.

What about things such as NoMate, which turns all codling moth worms female?

If there are no direct effects to other species, this would maintain a prey base for insectivorous wildlife and should not be counted against the WHEG score.

Forest WHEG References

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Functional Groups and Common Species

Cool Season Perennial Bunchgrass

Idaho fescue (FEID)
Bluebunch wheatgrass (PSSP6)
Thurber's needlegrass (ACTH7)
Basin wildrye (LECI4)
Sandberg's bluegrass (POSE)
Bottlebrush Squirreltail (ELEL5)
Prairie junegrass (KOMA)
Siberian wheatgrass (AGFR)
Crested wheatgrass (AGCR)
Russian wildrye (PSJU3)
Tall wheatgrass (THP07)
Blue wildrye (ELGL)
Orchardgrass (DAGL)
Timothy (PHPR3)
Meadow foxtail (ALPR3)
Snake river wheatgrass (ELWA2)
Bulbous Bluegrass (POBU)

Warm Season Perennial Bunchgrass

Sand dropseed (SPCR)

Cool Season Perennial Sod Forming

Western wheatgrass (PASM)
Intermediate wheatgrass (THIN6)
Smooth brome (BRIN2)
Elk sedge (CAGA3)
Kentucky bluegrass (POPR)
Pinegrass (CARU)

Cool Season Annual Grass

Medusahead rye (TACA8)
Cheat grass (BRTE)
Ventenata (VEDU)
Other annual brome (Brome sp)

Perennial Forb

Arrowleaf balsamroot (BASA3)
Western yarrow (ACMI2)
Phlox (PH sp.)
Buckwheat (ER sp.)
Desert Parsley (LODI)
Lupine (LU sp.)
Alfalfa (MESA)
Blue flax (LIPE2)
Small burnet (SAMI3)

Annual Forb

Mustard (spp.)
Filaree (ERIC6)
Fiddleneck (AMME12)

Shrubs

Wyoming big sagebrush (ARTRW8)
Basin big sagebrush (ARTRT)
Rabbitbrush (CHRYS9)
Cur leaf mountain mahogany (CELE3)
Wax current (RICE)
Woods rose (ROWO)
Antelope bitterbrush (PUTR2)
Mountain snowberry (SYOR2)
Chokecherry (PRVI)
Willow (Salix sp.)

Trees

Western juniper (JUOC)
Ponderosa pine (PIPO)
Douglas-fir (PSME)
Cottonwood (POBAT)
Aspen (POTR)

Glossary

Beneficial organisms: These are species that tend to provide ecosystem services that we find helpful to management, including predation of insects and pollination of plants. Beneficials include such things as bees, bats, birds of prey, beetles, etc.

Interspersion/Connectivity: Interspersion is defined as the intermixing of patches of different habitat types in a landscape. Connectivity refers to the degree to which a landscape facilitates movement of wildlife among resource patches.

See diagram below and determine which scenario best describes the planning unit.

Poorly Interspersed & Connected



Poorly Interspersed, Well Connected



Well Interspersed, Poorly Connected



Well Interspersed & Connected



Non-production areas: Uncultivated, relatively undisturbed vegetation (grasses, forbs, shrubs, vines, or trees) used primarily for non-agricultural purposes. Non-production areas provide shelter and food to wildlife living in the agricultural landscape. Cover may include native habitat, odd areas, field borders, hedgerows, buffers, shelterbelts, pivot corners, CRP/CREP lands, etc. Consider only areas that are under the control of the cooperator and are within or adjacent to the planning unit.

Patch-Corridor-Matrix: For our purposes, patches are relatively homogeneous areas of a particular plant community type. Landscapes are normally composed of multiple patch types. Corridors are generally linear patch types that facilitate movement through a landscape. The matrix is the dominant patch type, by both extent and connectivity, in a given landscape. What makes a “patch” is determined by how we are looking at the landscape (often through the eyes of a species of interest).

Sensitive wildlife period: The period when reproduction occurs for most animals. In Oregon, the dates are March 1 to July 15. If you think about it, this time period encompasses fawning/calving of big game, nesting of birds, and breeding and nesting of reptiles and amphibians.

Wildlife-friendly harvest techniques: Specific precautions taken during harvest or haying to minimize harm to wildlife in the planning unit. Some combination of the following techniques should be used: 1) use flush bars, 2) reduce cutting speed, 3) cut during daylight hours, 4) harvest from the center to the outside of the field, 5) harvest from one side of the field back and forth across the field.

Wildlife-friendly fence: Criteria for “wildlife-friendly fence”: 1) Distance from ground to top wire/rail does not exceed 42 inches (total fence height), 2) top 2 wires/rails are spaced at least 12 inches apart, 3) distance from ground to bottom wire/rail is at least 16 inches, and 4) bottom wire must be smooth.

Spacing requirements can be waived if total fence height does not exceed 30 inches. Woven wire fences of any size will NOT be considered wildlife friendly. Let-down fences that are managed to allow for wildlife passage do not have to meet these criteria.