

This is a framework to outline *categories* that can be identified and considered in statewide and ecoregion habitat conservation strategies. *Processes* – natural or applied by humans – that are essential for habitat systems function or maintenance are related to *conservation actions for specific important habitats* and are addressed later in the State Wildlife Action Plan (SWAP).

Important habitats occur at many scales – big to small, regional to sites – and they support the sustainability of species and ecosystem functions that influence people’s well-being and livelihoods. In any project planning, one scale may be the focus (such as restoring a species-specific site) and the relationship to other scales in the framework should be considered ([Sidebar: Example](#)).

Many types of information identify the habitat categories in this framework, inform the conservation actions that people take in the statewide and ecoregion sections of the State Wildlife Action Plan (SWAP), and evolve over time with new information. Washington Department of Fish and Wildlife (WDFW) and Washington Department of Natural Resources (WA DNR) have identified some specific information sources that are used throughout the SWAP. In conservation action planning and implementation, project teams can apply other sources to meet their specific purposes.

The purpose of this framework is to guide habitat and system conservation, research, and management in ecoregions to support fish, wildlife, plants, and human well-being. The framework will

- show relationships among [WDFW’s Priority Habitats](#), [Washington Natural Heritage Plan](#) (2022), important climate resiliency and habitat connectivity values, system and habitat conservation, and Species of Greatest Conservation Need (SGCN) habitats at ecoregional to site scales;
- include conservation contributions in human spaces – parklands, urban riparian corridors, wildland-urban interfaces, agricultural and ranching lands;^A
- use science-based resources and supporting documentation; and,
- communicate the importance of habitat conservation to a wide variety of audiences.

Three important habitat categories are proposed.

Wetland Restoration Project and Important Habitat Considerations

In this example, invasive plants were removed from ponds to support Northern Leopard Frog reintroduction.

This **project sites** have a relationship to the **system** in which those wetlands are located: reducing plant invasion in the rest of the system by reducing seed production, creating better open water and shoreline connectivity among healthy wetlands in the area.

Broad-scale habitat and system considerations in *site* project design (e.g., where to start, how much to treat, what to monitor) can influence long-term and more durable benefits (e.g., reducing invasive plant management costs over time; improving habitat for more wetland-dependent species such as plants, fishes, invertebrates, migratory birds).

Habitat or Biodiversity Support Areas

Places that support long-term habitat and species sustainability and represent ecological concepts that can be applied at any scale from site to landscape, can be supported by data and/or modeled information, are not species-specific, and are important in part or whole to protect habitat function, ecosystem services, and species persistence and adaptability. These places may be single-type habitats or ecosystems (e.g. “shrubsteppe”) or a matrix of various habitat types (e.g., riparian, wetlands, floodplain, and river together), successional stages, and quality to achieve the value(s) of cores, corridors, and/or climate refugia.

- **“Cores”** – in general, these are large, intact, internally well-connected blocks of relatively high-quality habitat or vegetation communities where habitat function is not impaired by human activities. “Large” and “high quality” are relative to the conservation objectives and may differ by a) species/habitat relationships and b) spatial scale of the analysis or planning (statewide, regional, local). “Internally well-connected” means there are relatively few or no human infrastructure barriers or adverse influences on wildlife movement and other essential activities within the area. The ‘edge’ of a core is often a gradient – not a hard line or border – determined by influences on habitat quality (e.g. disruptions in canopy closure or loss of understory, light or noise penetration, non-native species invasion, edge intrusions by human activity) that may affect how the core does or does not support species’ needs.
- **“Corridors”** – well-connected^b habitats with relatively few or no internal barriers that link cores and support fish and wildlife movement (daily, seasonal, annual); facilitate access to food (e.g. winter/summer range for mule deer, foraging/nesting range for marbled murrelet) and shelter; foster genetic diversity (not isolating subpopulations for mating or pollination); and allow natural dispersal/colonization of new suitable habitat.
- **“Climate Refugia”**^c – areas that are more stable in their functions and less impacted by habitat suitability-altering effects of climate change such as water and air temperature extremes, altered wildfire intensity or frequency, or significant changes in precipitation (drought, flood). These areas can protect some native species populations that cannot move or disperse readily under these challenges, potentially conserving genetic diversity and evolutionary potential.

Strategic Habitats

Ecosystems are defined by their shared characteristics and ‘Strategic Habitats’^d are specific ecosystems that are critical for biodiversity conservation in Washington. These habitats will be defined/described in the ecoregions where they occur, associated to National Vegetation Classification (NVC) Group(s) or Global Ecosystem Typology (GET) Functional Group(s)^e, and related to key threats and strategies for their conservation, including current best-practice resources to support planning conservation projects. Strategic Habitats include

- WDFW Priority Habitats that are not ‘features’^f and which can be related one-to-one or one-to-many to NVC Groups (habitats defined by their vegetation) or GET Functional Groups (aquatic and marine habitats not defined by vegetation);

- WA DNR Natural Heritage Program State Endangered, State Threatened, State Sensitive NVC Groups (Washington Natural Heritage Plan 2022); and
- NVC Groups and GET Functional Groups that support multiple SGCN⁶

Local and Special Habitats

These habitats are fine-scale, difficult to map from satellite data, and can be “swamped” by larger habitat types in which they occur. Usually, these types have specialized function(s), environment, or conditions; may host a suite of rare or endemic species; and are very important to specific SGCN and/or animal concentrations. These include

- PHS ‘features’ – caves, cliffs, talus, snags and logs;
- other ‘features’ that are not currently PHS Habitats – headwaters, sea floor vents, springs;
- PHS and other species aggregation-specific features, even if not for WA SGCN (e.g., winter/summer range, migratory stopovers and routes, haul outs, colonial nesting sites or rookeries, pollinator habitats, hibernacula, maternity colonies, Priority Amphibian and Reptile Conservation Areas⁷);
- State Endangered, State Threatened, State Sensitive NVC Associations (DNR); and
- anthropogenic habitat surrogates for native habitats that have a strong connection to SGCN (e.g., shrubsteppe Conservation Reserve Program lands, established or ‘legacy’ constructed wetlands, artificial reefs)

End Notes – many will be turned into a References section before plan drafting

^A While ideally a higher priority is placed on native wild or conserved spaces, human-space habitats can be crucial to support species during restoration work in native habitats, connect wildlands through urban areas, provide important “stepping stones” of habitat for migratory species, and engage all people in conservation. There is greater confidence that the needs of fish and wildlife can be met in places with fewer human impacts and nearly every place on earth is impacted by humans. In this, conservation actions are often about protecting, restoring, or enhancing habitats to fill the desired functions for species and the ecosystem.

^B “Well-connected” can refer to different types of connectivity: structural, functional, diffuse, and channelized.

^C Climate Refugia Coalition. N.d. About Climate Change Refugia. <https://www.climaterefugia.org/> . Accessed April 2025.

See also <https://www.climaterefugia.org/rccpublications>

Morelli, T.L. (Ed.) 2020. [Climate-Change Refugia: Frontiers in Ecology and the Environment: Vol 18, No 5](#) Ecological Society of America 18:5, pages 225 – 308. Accessed April 2025.

Climate refugia: <https://www.usgs.gov/programs/climate-adaptation-science-centers/science/climate-refugia-and-resilience-atlas>

^D Similar in concept to [Oregon Strategy Habitats](#) (eleven), these broader types provide important benefits to SWAP species and are relatable to ecoregions

^E There is more information in the SWAP (**chapter reference to be determined**) about the NVC Groups and GET Functional Groups that are defined for Washington state, how they are applied in the SWAP and related to SGCN, and the value of these classifications to long-term conservation planning across state agencies and organizations.

^F PHS Priority Habitats that are not features (April 2025):

- Terrestrial: herbaceous balds, inland dunes, juniper savannah, old-growth/mature forest, Oregon white oak woodlands, westside prairie, eastside steppe, shrubsteppe, riparian, aspen stands
- Aquatic: freshwater wetlands and fresh deepwater, instream, open coast nearshore, coastal nearshore, Puget Sound nearshore

PHS Priority Habitats that are features: caves, cliffs, snags and logs, talus.

^G In the 2015 State Wildlife Action Plan, the ‘cutoff’ was 6 SGCN – information about the habitat association and SGCN relationships will be evaluated to determine if there is a reasonable, defensible ‘cliff’ in that data to use as the cutoff and explain the reasons behind the selection of a ‘cutoff.’

^H Partners in Amphibian and Reptile Conservation is an inclusive partnership of agencies, conservation organizations, educational and research institutions, and industries dedicated to the conservation of the herpetofauna–reptiles and amphibians–and their habitats. <https://parcplace.org/habitat/parcas/>