

Use of Connectivity Group Products in BLM's Resource Management Plan

A presentation to
the Washington Habitat Connectivity Group
November 19, 2013 WebEx

by Jason Lowe, Wildlife Biologist, Spokane District BLM



What is a RMP?

- A land use decision-making document that provides guidance for management decisions in a designated area.
- A 20-30 year plan. Last Spokane District RMP was in 1987.
- WDFW and USFWS are cooperating agencies – CA's assist the BLM in plan development (alternatives) **and** environmental analysis. CA's possess "special expertise" though regulatory authority. BLM must use CA's analyses and proposals to the maximum extent possible consistent with BLM's multiple use responsibility.

Planning Area



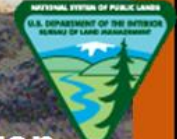
Timeline

- 2010 – Public Scoping Period
- 2011 - Analysis of the Management Situation
- 2011-2012 – Alternative Development (Ch 2)
- 2012 – Cooperating Agencies Review of Alts.
- 2013 – Affected Environment (Ch 3) was written.

Next Steps

- 2014 – Impact Analysis (Ch 4)
- June 1, 2014 - BLM and CA review of Draft EIS (2 months)
- October 1, 2014 – Public Comment Period on Draft EIS
- 2015 – Publish Final EIS

U.S. DEPARTMENT OF THE INTERIOR
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- [Scoping Report \(PDF\)](#)
- [Eastern Washington Management Plan Scoping Report Supplement \(PDF\)](#)
- [Notice of Intent \(PDF\)](#)
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“Use the **best available science**, and give greater consideration to peer-reviewed science and methodology over non peer-reviewed.”

WASHINGTON CONNECTED
LANDSCAPES PROJECT:
STATEWIDE ANALYSIS



WASHINGTON WILDLIFE HABITAT CONNECTIVITY
WORKING GROUP

DECEMBER 2010

WASHINGTON CONNECTED
LANDSCAPES PROJECT:
ANALYSIS OF THE
COLUMBIA PLATEAU ECOREGION



WASHINGTON WILDLIFE HABITAT
CONNECTIVITY WORKING GROUP

FEBRUARY 2012

Two uses of connectivity products:

1. Decisions

- **Goals** – Broad statements of desired outcomes (e.g. maintain ecosystem health and productivity).
- **Objectives** – Specific desired outcomes that are measurable (e.g. manage vegetation for 30-40% canopy cover).
- **Allowable Uses** – Uses that are allowed, restricted, or prohibited to achieve goals and objectives (e.g. lands open or closed or with certain limitations).
- **Management Actions** – Proactive measures to achieve goals and objectives (e.g. administrative designations, identifying restoration opportunities).

*Future BLM projects and authorizations must be consistent with these RMP decisions.

*BLM Land Use Planning Handbook H-1601 for more information.

Two uses of connectivity products:

2. Impact Analysis

- **Direct, Indirect and Cumulative Effects** – Compare the amount and degree of change (impact) caused by each alternative in order to make a reasoned decision.
- **Assumptions** – Explain assumptions when information is incomplete or unavailable (e.g., wildlife movement occurs in corridors).
- **Indicators** – Quantitative measures of impact (e.g., acres affected, stream miles, # of visitor days, etc.).

* BLM National Environmental Policy Act Handbook H-1790 for more information.

Priority Species

- The BLM is to identify “priority species” in the planning area.
- Unique importance for their ecological, recreational, social, cultural, or economic value.
- Warrant special consideration (e.g., decisions and analyses).
- Quantifiable habitat goals are established in the RMP.
- Informed by regional and local habitat assessments, State Wildlife Action Plans, or other appropriate sources.

Federally Listed/Candidate: 7 species

lynx, wolf, grizzly, spotted owl, pygmy rabbit, sage-grouse, WA ground squirrel

State Listed/Candidate: 4 species

sharp-tail grouse, ferruginous hawk, gray squirrel, Townsend’s ground squirrel

Game: 5 species

mule deer, elk, moose, big horn, mtn. goat

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Connectivity Products



Example General Decisions

- **Goal 1 (Habitats and Ecosystems):** Maintain, restore and/or enhance healthy shrub-steppe, grasslands, other non-forested, and forest and woodland ecosystems that provide sustainable commodities for local communities as well as diverse habitats for fish, wildlife, and native plants.
- **Objective 1.8 (Wildlife):** Ensure self-sustaining populations and a natural abundance and diversity of wildlife resources.
- **Objective 1.7 (Special Status Wildlife):** Conserve and/or recover Endangered Species Act (ESA) listed wildlife species and the ecosystems on which they depend so that ESA protections are no longer needed for these species, and reduce or eliminate threats to Bureau sensitive wildlife species to minimize the likelihood and need for listing of these species under the ESA.

Example General Decisions

*Connectivity
Required*

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Example General Decisions

Land Tenure

*Connectivity
may be Required*

Action: Lands that meet the following criteria will be retained or acquired:

- Designated or proposed critical habitat for a federally-listed or proposed threatened or endangered species that significantly contribute to the recovery needs of the species; Lands supporting Bureau sensitive, federally threatened or endangered, proposed, or candidate species that significantly contribute to the recovery needs of the species.

Impact Analysis

Analysis Steps

1. Identify Indicators.

- Quantitative measures of impact (usually acres).
- HCAs and Corridors for 11 priority species.

2. Identify decision causing impact.

3. Provide a qualitative description of the impact.

4. Calculate the acres affected.

- Intersect “decision polygons” with HCA and Corridors.
- Only spatially explicit decisions can be analyzed this way.
- Examples: Open, closed, limited areas for travel, ROW, grazing, and minerals. Also special designations, ACEC, RMA, LWC, and VRM.

Impact Analysis - example

1) Qualitative statement about how ROW's affect sage-grouse:

“Power lines, wind turbines, communication towers and other tall structures may adversely affect sage-grouse through behavioral avoidance, increased predation through increased perching by avian predators, and direct mortality resulting from collisions. These and other ROWs (road use, buried pipes/cables) may also affect sage-grouse by habitat loss, fragmentation, and disturbance (NTT 2009, Stinson and Schroeder 2004, WHCWG 2012).”

2) Table 1: Acres of Sage-Grouse Corridor Affected

	Alt A	Alt B	Alt C	Alt D	Alt E
Open to ROW	100	0	0	0	100
ROW Avoidance	0	0	100	50	0
ROW Exclusion	0	100	0	50	0

3) Conclusionary Statement....

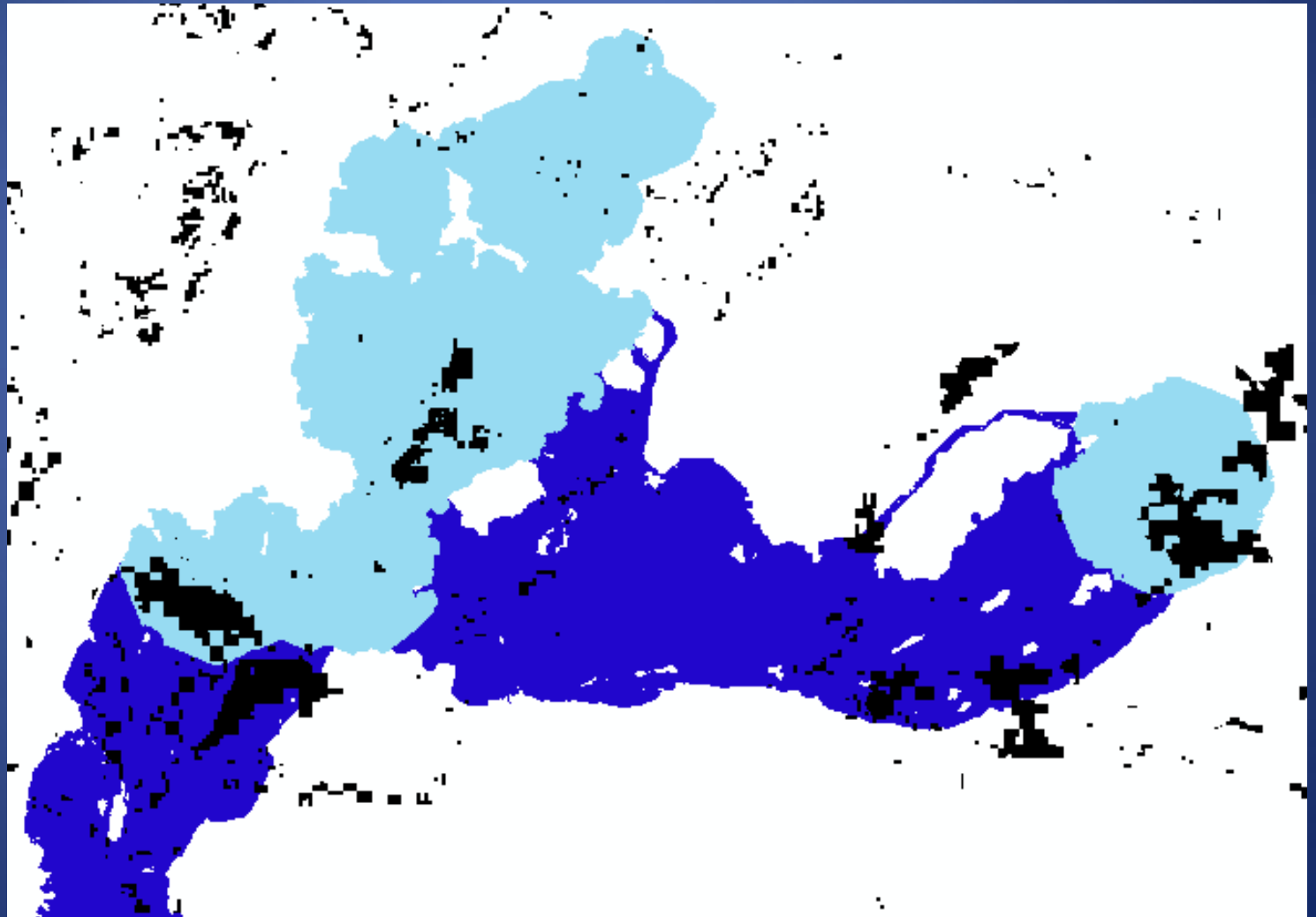
Sage-grouse

Overall, none of the corridors provide ideal connectivity between HCAs because they are all relatively long and affected by transmission lines and large areas of cropland. This suggests that improvement of sage-grouse connectivity within Washington would require expansion of the existing HCAs, development of new HCAs between the existing ones, and/or improving linkage quality (WHCWG 2012).



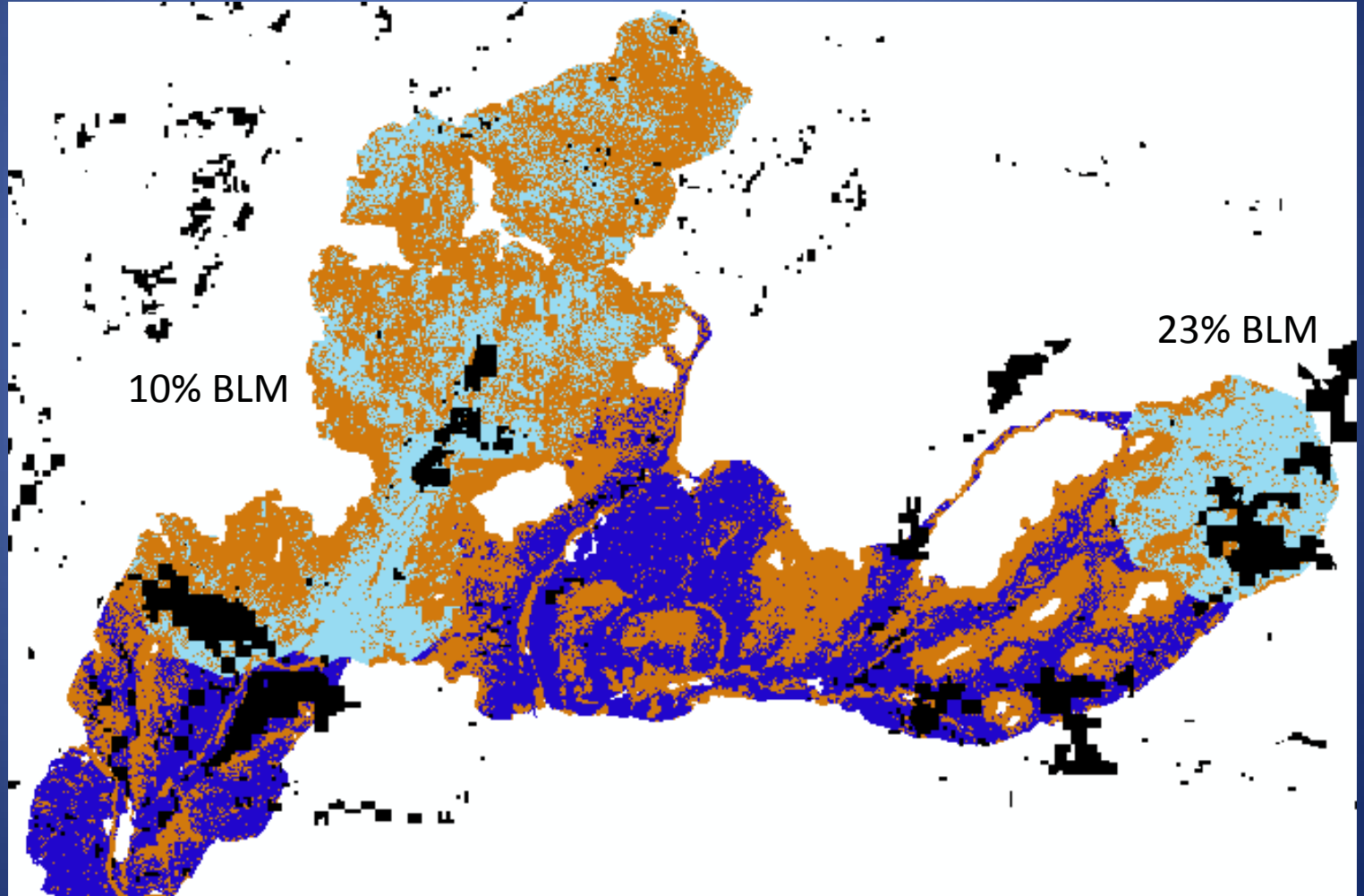
Sub-Objective: Protect sage-grouse Priority Areas for Conservation (PACs) and Recovery Habitat from anthropogenic disturbances that would reduce distribution or abundance of sage-grouse, and manage PACs to meet the habitat requirements needed for breeding, brood rearing and wintering and, where known, migration or connectivity corridors.

Sage-grouse

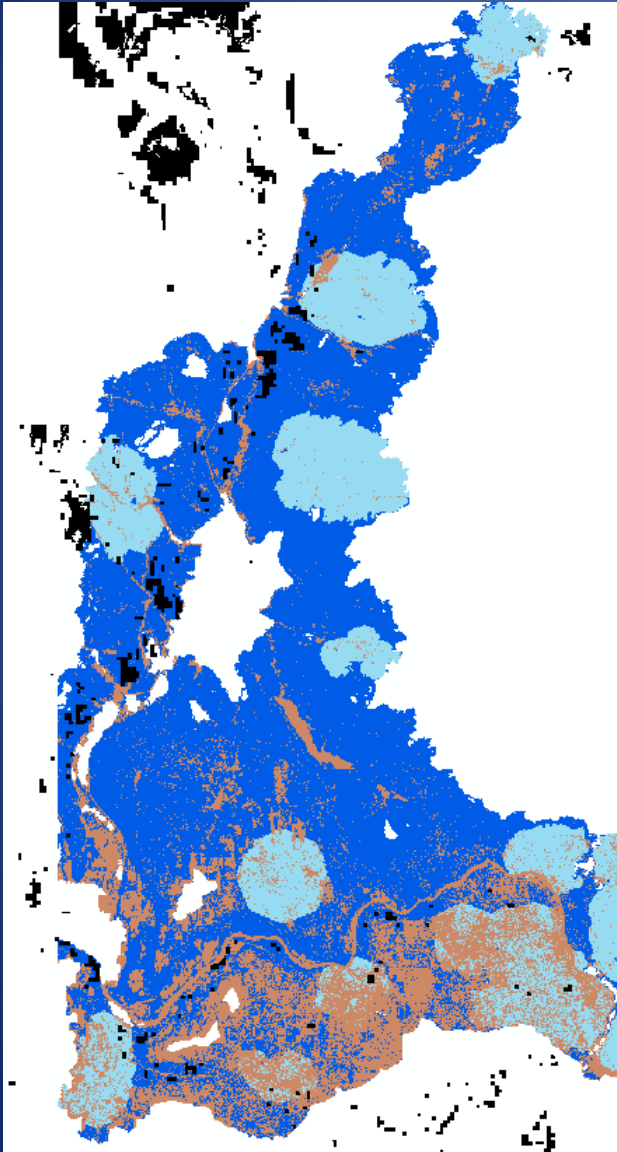


Sage-grouse

The BLM manages 38,164 acres (6 percent) of non-agriculture habitat in HCAs and 5845 acres (7 percent) of non-agriculture habitat in corridors.



Sharp-tailed Grouse



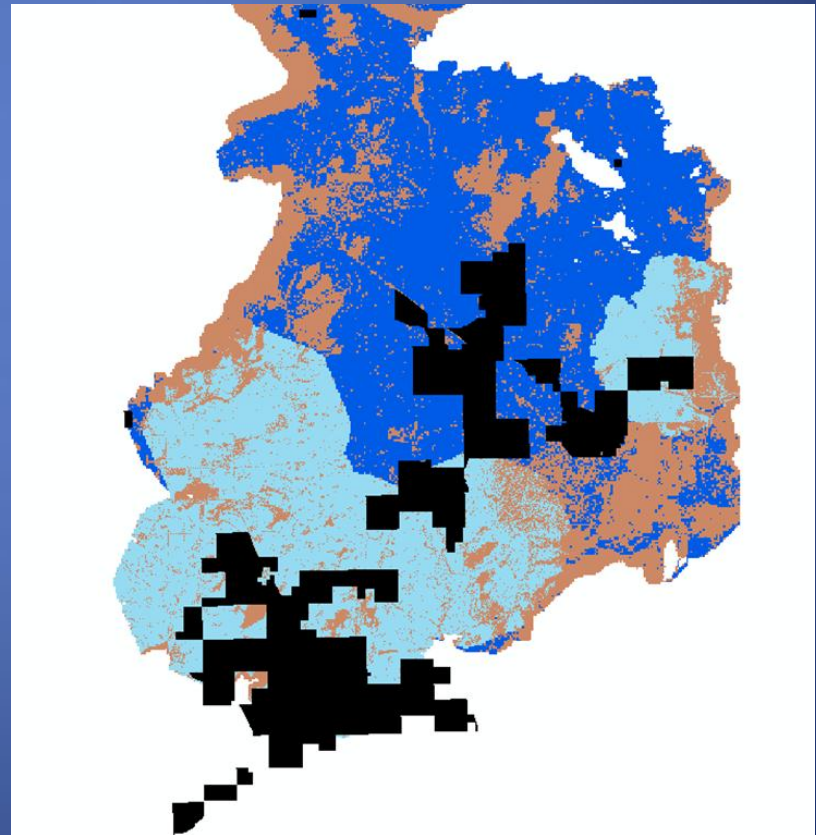
The Washington Wildlife Habitat Connectivity Working Group modeled 27 linkages between 15 HCAs and found HCAs clustered in northern Douglas County and adjacent Okanogan County were the most numerous and have good potential for movement. However, HCAs overall were connected linearly in a “stepping stone” pattern with minimal clustering resulting in cause for concern because loss of any HCA could result in a negative impact on overall connectivity. Additionally, HCAs in Lincoln County, the western side of the Okanogan Valley, and the northernmost HCA are peripheral and potentially at higher risk of becoming isolated (WHCWG 2012).



Sharp-tailed Grouse

Sub-Objective: Manage habitat within sharp-tailed grouse recovery units to meet the habitat requirements needed for breeding, brood rearing and wintering and, where known, migration or connectivity corridors.

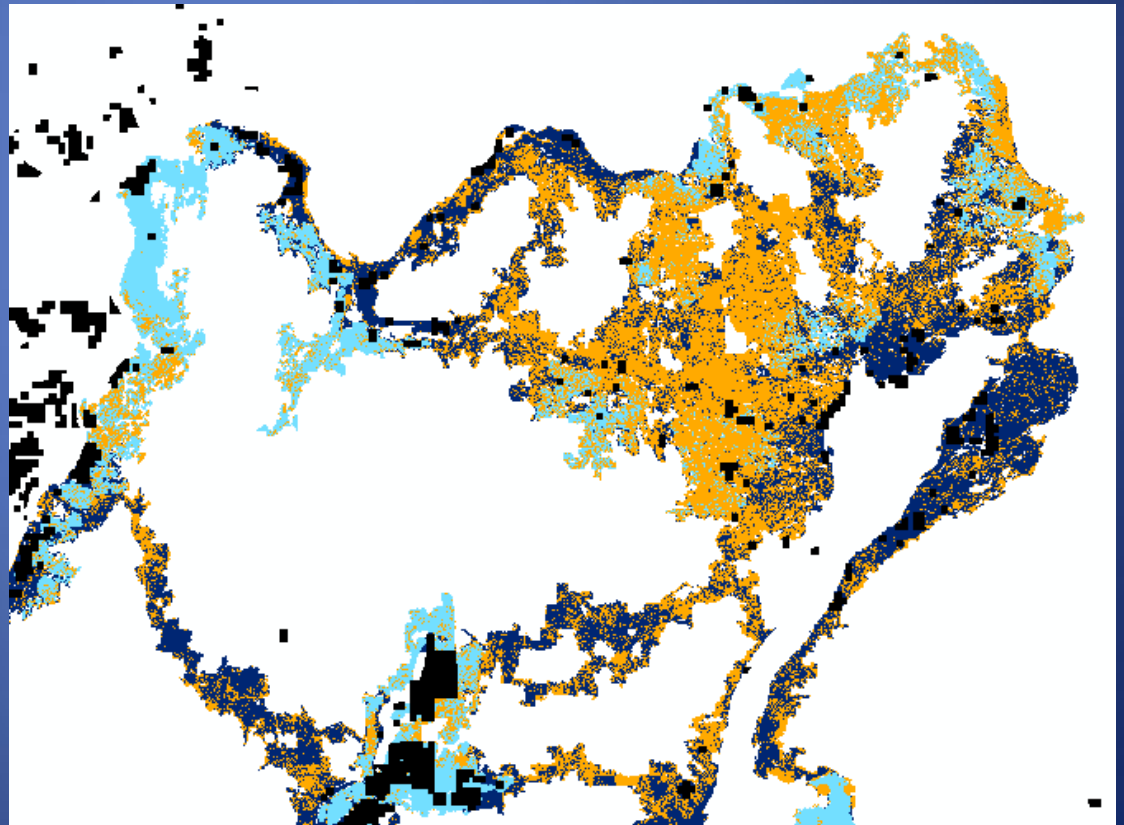
The BLM manages 17,808 acres (7 percent) of non-agriculture habitat in HCAs and 2486 acres (3 percent) of non-agriculture habitat in corridors.



Wash. Ground Squirrel

The Washington Wildlife Habitat Connectivity Working Group modeled 201 linkages between 56 HCAs and found many of the HCAs in Washington appear to be isolated from each other, which reflects the highly fragmented condition of this species' habitat (WHCWG 2012) .

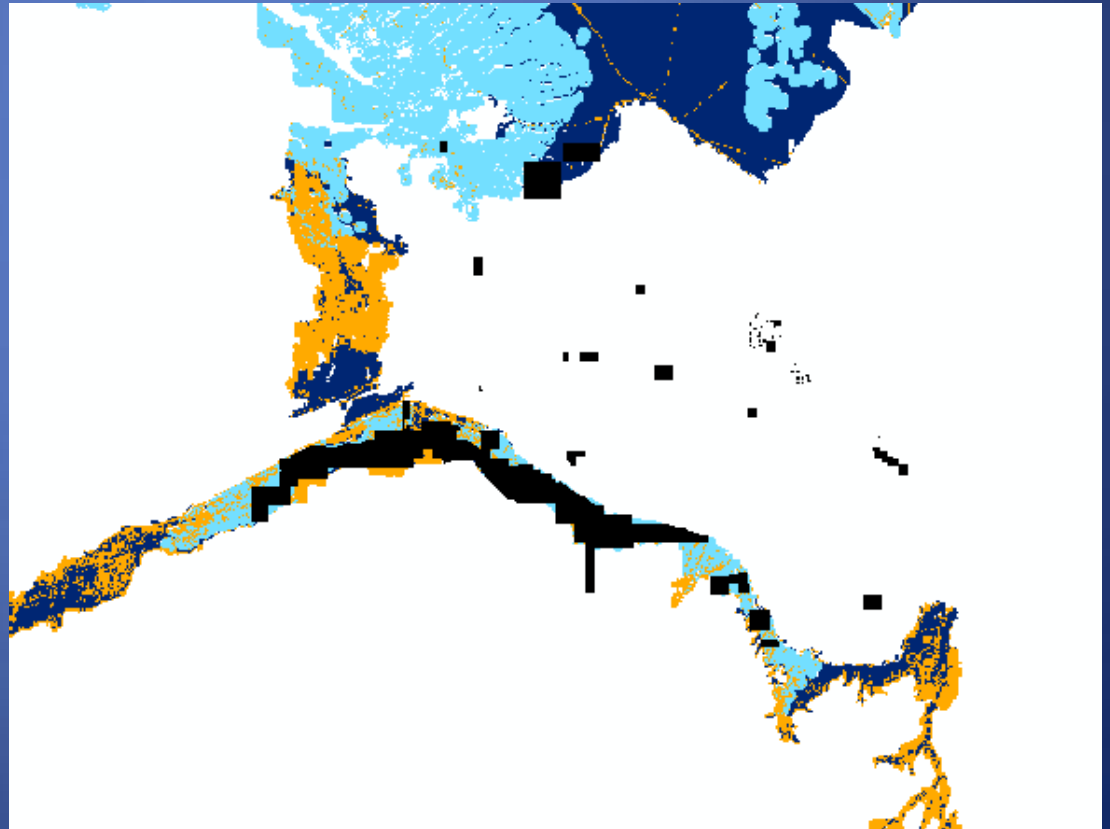
The BLM manages 63,451 acres (10 percent) of non-agriculture habitat in HCAs and 4612 acres (6 percent) of non-agriculture habitat in corridors.



Townsend's Ground Squirrel

The Washington Wildlife Habitat Connectivity Working Group modeled 75 linkages between 48 habitat concentration areas (HCAs) and found that one corridor, connecting the eastern Horse Heaven Hills to those in southeastern-most Benton County, where expanded irrigated farming is occurring, appears to be threatened (WHCWG 2012).

The BLM manages 19,489 acres (3 percent) of non-agriculture habitat in HCAs and 1915 acres (4 percent) of non-agriculture habitat in corridors.



Washington and Townsend's ground squirrels



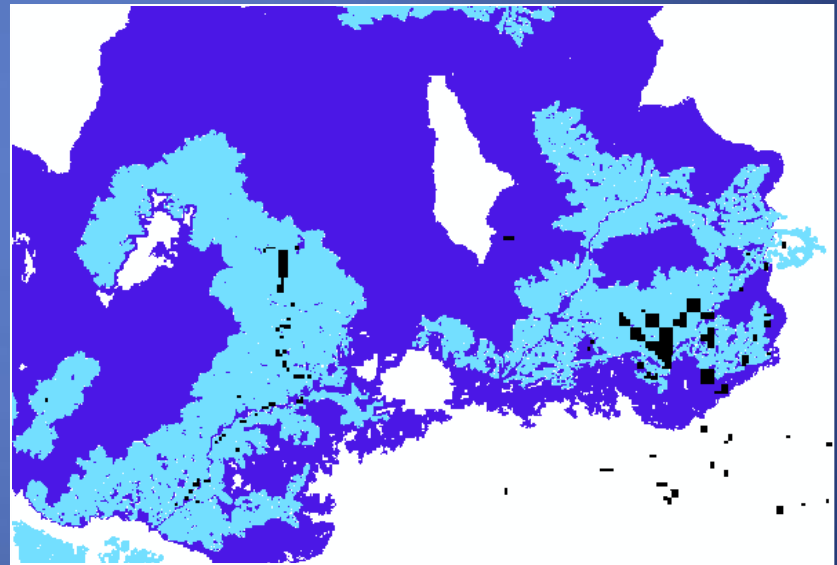
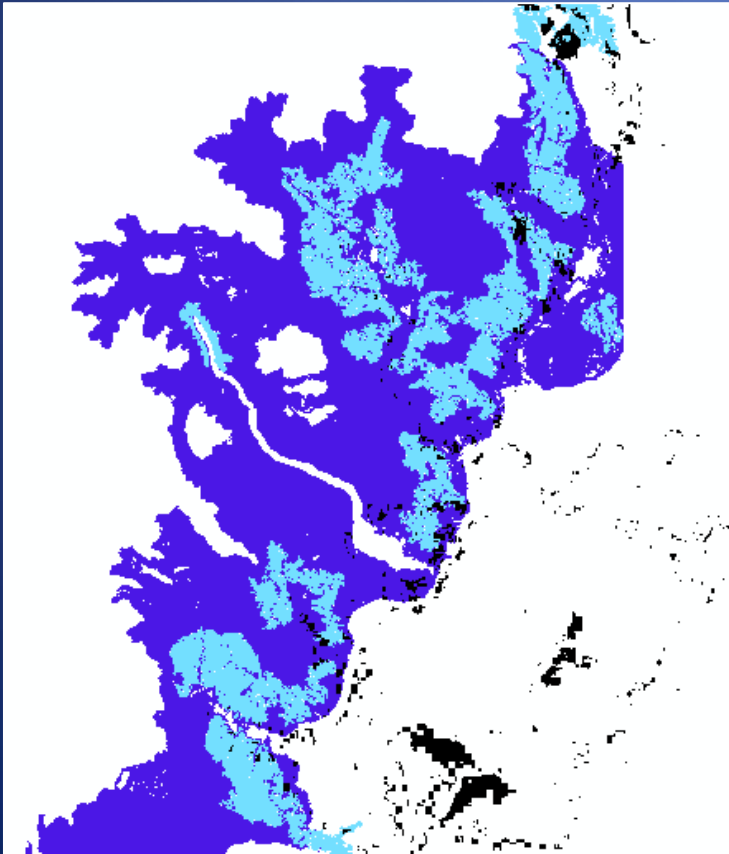
- Sub-Objective: Maintain or enhance connectivity between occupied habitat by retaining/acquiring shrub-steppe habitat in corridors, and maintaining habitat conditions suitable for dispersal.

- Allowable Uses: Washington and Townsend's ground squirrel Habitat Concentration Areas (WHCWG 2012) would be ROW avoidance areas.
- Allowable Uses : Fluid mineral leasing: CSU-4 for Washington and Townsend's ground squirrel Habitat Concentration Areas.

Western Gray Squirrel



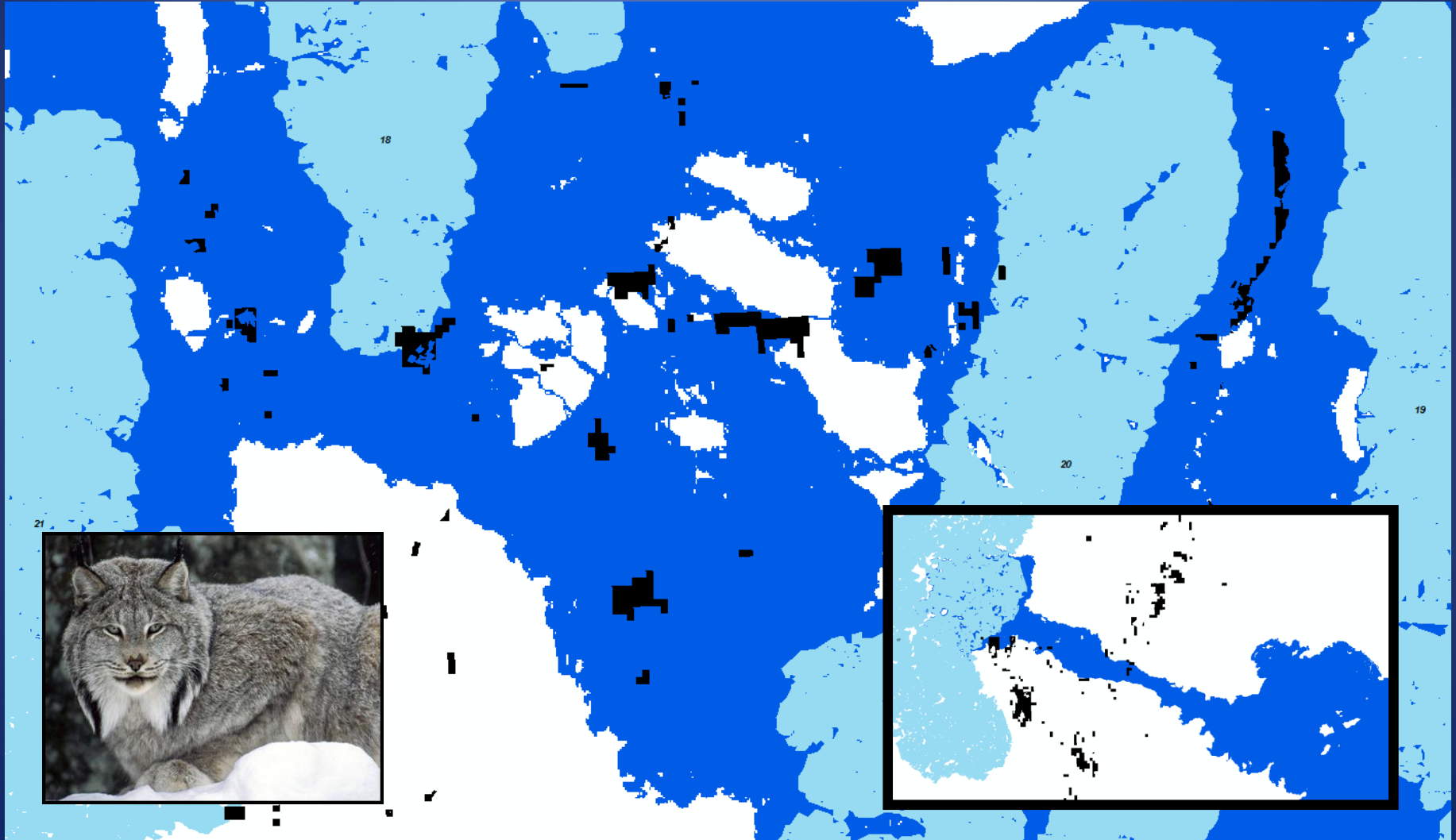
The Washington Wildlife Habitat Connectivity Working Group modeled 35 linkages between 26 HCAs and found there is no connection to the Puget Sound population west of the Eastern Washington RMP planning area. Within the planning area, there were several potential connections between occupied and unoccupied HCAs connecting the north and south recovery areas in the Cascades (WHCWG 2010).



The BLM manages 34,975 acres (3 percent) of oak woodland and forested habitat in HCAs and 2607 acres (1 percent) of habitat in corridors.

Canada Lynx

The Washington Wildlife Habitat Connectivity Working Group modeled 13 linkages between 31 HCAs and found north-south connectivity to be relatively good, but east-west connectivity between the North Cascades is interrupted by major river valleys (Okanogan, Upper Columbia, and Pend Oreille) that include low-elevation forests and human activities (WHWG 2012).



Ungulates

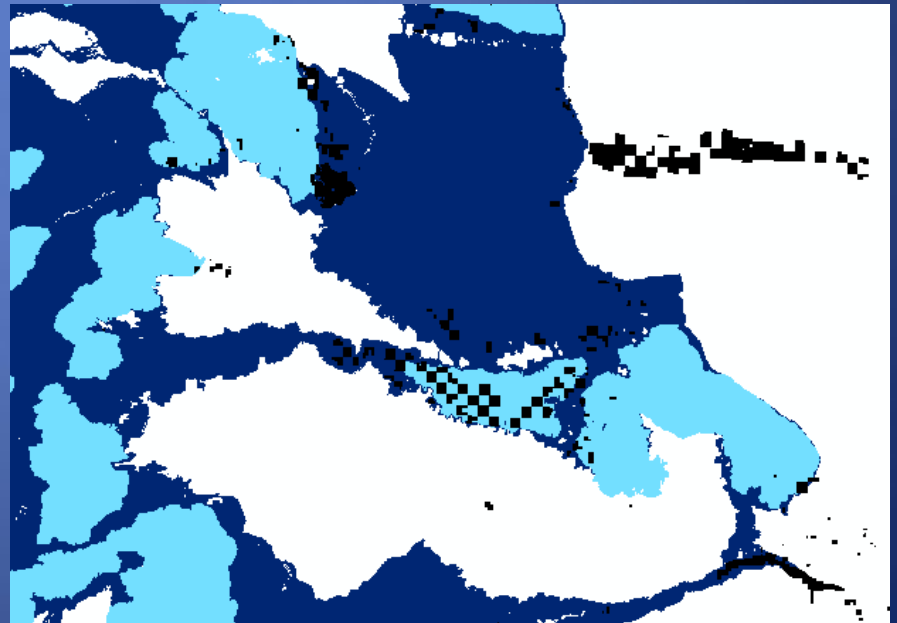
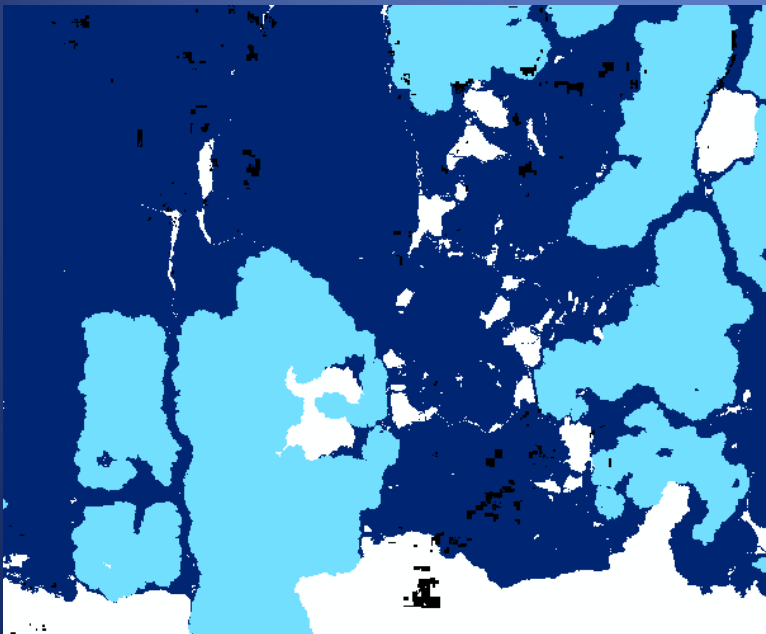
Sub-objective: Manage wild ungulate fawning, wintering and concentration areas to provide adequate forage and security and maintain connectivity in travel corridors.



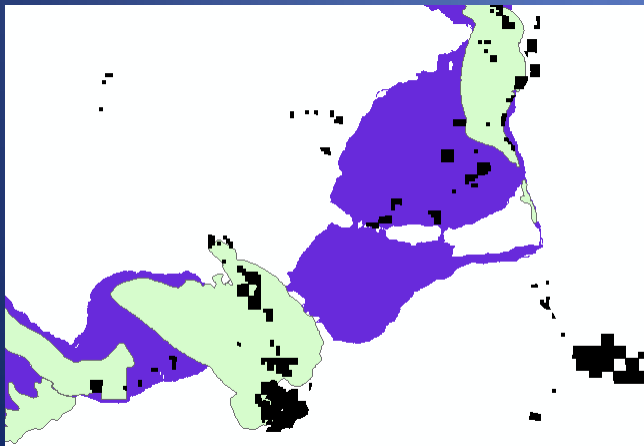
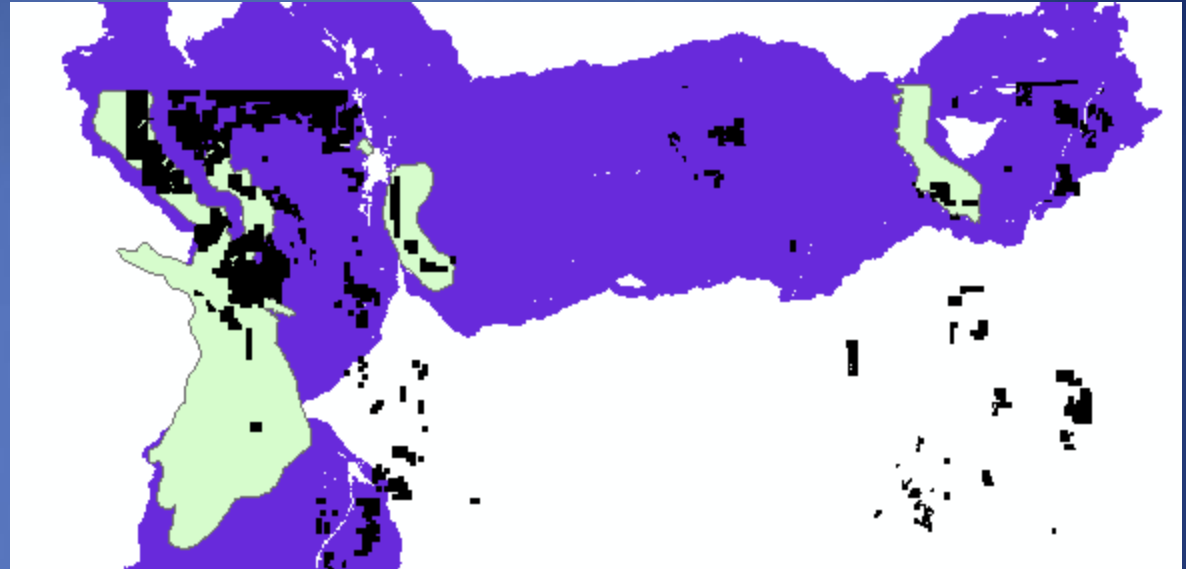
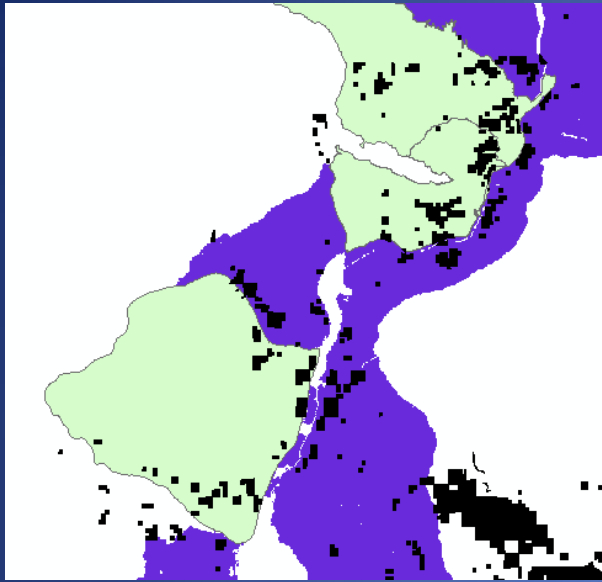
Elk

Connectivity is good between the north and central Cascades and the south Cascades and north of the Colville Indian Reservation into Canada; however elk at the Arid Lands Ecology Reserve and Rattlesnake Hills are associated with limited corridor opportunities though the Yakima River Canyon connecting them with the Colockum Wildlife area and upper Yakima River.

The BLM administers 25,057 acres (1 percent) of elk HCAs and 10,894 acres (2 percent) in elk linkage corridors in the planning area.

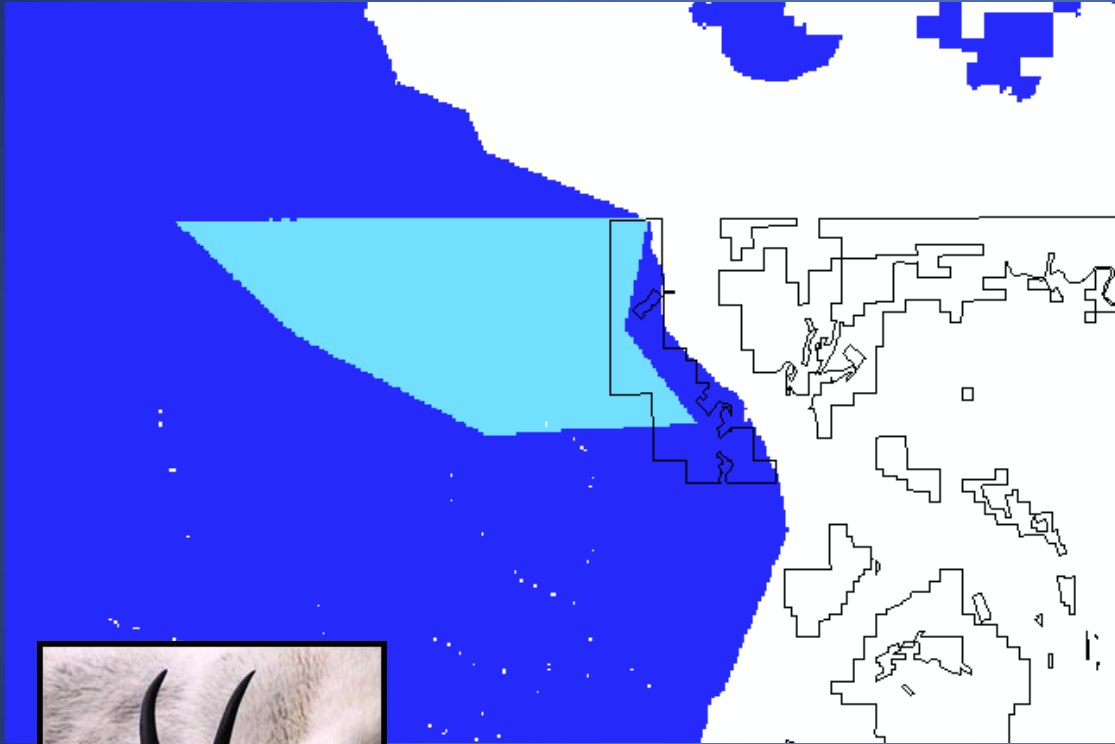


Big Horn Sheep



Especially isolated are the Quilomene, Swakane, Lincoln Cliffs, and Vulcan Mountain herds. Other herds are connected to nearby neighbors potentially forming metapopulations (e.g., the former Tieton, Mount Clemens, and Umtanum herds are connected, as are the Chelan Butte and Lake Chelan herds), however these are in turn not connected to other herds in the State (WHCWG 2010).

Mtn. Goat



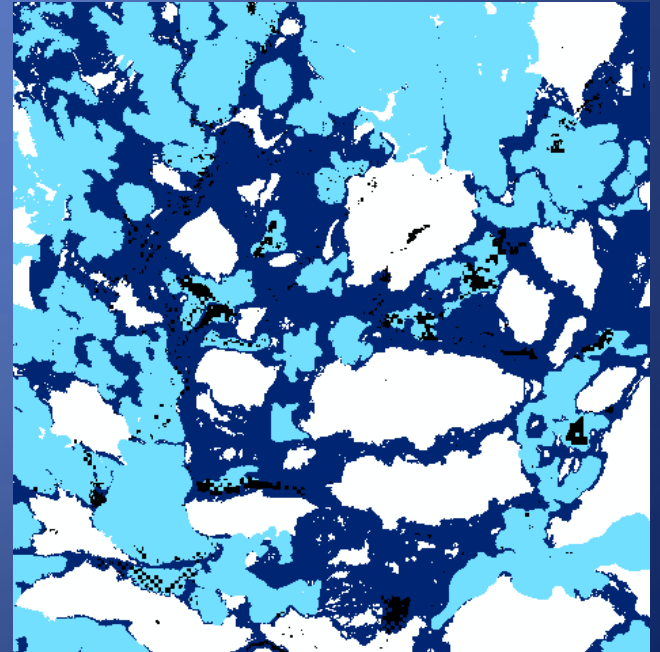
Connectivity results indicate most mountain goat HCAs exist within large cores of remote mountainous terrain that are not impacted by anthropogenic causes and appear highly connected (WHCWG 2010).



The BLM manages 2153 acres (1 percent) of mountain goat HCAs and 557 acres (<1 percent) in mountain goat linkage corridors in the planning area.

Mule Deer

- Both the state-wide and Columbia Plateau connectivity projects (WHCWG 2010; 2012) modeled mule deer habitat concentration areas (HCAs) and linkage corridors.
- At the state-wide scale, HCAs were extensive over much of the mountainous regions and indicated good conditions for deer movement, but the Columbia Plateau had only few HCAs.
- Finer scale modeling at the Columbia Plateau scale resulted in numerous, smaller HCAs. Overall, in the Columbia Plateau, movement between HCAs is relatively short in distance and unimpaired mainly following the remnant tracts of natural vegetation and avoiding large expanses of agriculture.
- However, HCAs in the Cheney-Palouse flood tract (Escure BLM-administered land) were the most isolated having good connections only to the north (through Fishtrap BLM-administered land and Turnbull National Wildlife Refuge). Other important linkages correspond to Rock Creek in Klickitat County and Moses Coulee in Douglas County.



Decisions – Let's Review

- **Goals and objectives** are treated generally in this RMP, and connectivity is not explicitly stated in these. However, the need for connectivity is implicit and required to meet goals/objectives when broad language such as “healthy,” “self-sustaining,” or “eliminate threats” is used.
- **Sub-objectives** for those priority species where connectivity is known to be an issue (grouse, ground squirrels, pygmy rabbit, wild ungulates) explicitly state that connectivity is to be maintained or enhanced. (This is largely a function of the increase in awareness the WHCWG has provided).
- **Land tenure** (acquisitions and conveyances) is a tool BLM will use to maintain or improve connectivity if it “significantly contributes to the recovery needs of the species.”
- **Washington and Townsend's ground squirrels** do not have recovery plans, so Connectivity Group Products are a de-facto recovery plan. HCAs are used to limit allowable uses to only those ROWs and fluid mineral leases that can avoid impacts. (This was based on CA involvement)

Impact Analysis – Let's Review

- BLM manages <1% to 2% of HCAs and Corridors for some priority species.
 - Canada Lynx
 - Mountain Goat
 - Gray Squirrel
 - Mule Deer
 - Elk
- BLM lands contribute the most connectivity for grouse and ground squirrels when ag, water, and developed are not considered.
 - Sharp-tailed Grouse (3%)
 - Townsend's Ground Squirrel (4%)
 - Washington Ground Squirrel (6%)
 - Sage-grouse (7%)
- Some BLM lands are locally important.
 - Crab Creek and Douglas County sage-grouse HCA
 - Crab Creek sharp-tailed grouse HCA
 - Horse Heaven Hills Townsend's ground squirrel corridor
 - Yakima River Canyon elk corridor
 - Cheney-Palouse mule deer corridor
 - Chopaka Mountain mountain goat HCA
- Impact analysis not yet done (CA may assist) 😊