



United States Department of Agriculture

# **Wildlife Management Direction for Domestic Sheep Grazing within BHS Range on the OWNF**

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Forest  
Service

Okanogan-Wenatchee  
National Forest



# Importance of Bighorn Sheep to Forest Values

- There are **10** bighorn sheep home ranges that overlap or are within foray distances of the Okanogan Wenatchee N.F.'s administrative boundary.
  - These 10 herds make up over **70%** of the states total bighorn sheep population.
- Bighorn sheep are a Region 6 **Sensitive Species** and will be considered a **Species of Conservation Concern** in this planning effort.
- Bighorn sheep add to the **ecological diversity** of the forest as well as the **sense of place** for forest visitors by providing viewing and hunting opportunities





- **Laws:** (Multiple Use Sustained Yield Act, National Forest Management Act, Endangered Species Act)
  - Develop and administer natural resources for **multiple uses** and include all resources in our planning efforts
  - Require the identification of the **suitability** of lands for resource management
  - **Provide for diversity of plant and animal communities based on the suitability & capability to meet overall multiple-use objectives**





- **Regulations: (36CFR § 219 - Planning)**
  - 219.9 (b)(1) The responsible official shall determine whether or not the plan components... provide the ecological conditions necessary to: contribute to the recovery of federally listed threatened & endangered species, conserve proposed and candidate species, and **maintain a viable population of each species of conservation concern** within the plan area. If the responsible official determines that the plan is...insufficient to provide such ecological conditions, then additional, species-specific plan components, including standards or guidelines, must be included in the plan to provide such ecological conditions in the plan area
  - **219.19 Viable population:** A population of a species that continues to persist over the long term with sufficient distribution to be resilient and adaptable to [stressors](#) and likely future environments.





- **Policy: Forest Service manual**
  - Avoid or minimize impacts to Regional Forester Sensitive Species.
- **Wenatchee Land & Resource Management Plan (LRMP)**
  - Prevent introduction of diseases from livestock into resident herds of bighorn sheep by identifying potential problem areas, and developing a plan to mitigate the identified problems.
- **Okanogan Land & Resource Management Plan (LRMP)**
  - Special management emphasis on providing habitat for Bighorn sheep in the Mt. Hull area.





## Consolidated Appropriations Act, 2016

- The agencies are directed to complete risk of contact analyses using appropriate data sources, such as from the Western Association of Fish and Wildlife Agencies, and to share the findings with the public.
- So what is the Risk of Contact Model and How will it used?





## Risk Of Contact Tool

Model is based on a combination of four primary components that address the probability that foraging bighorn sheep will leave their home range to reach domestic grazing allotments and return

- Habitat suitability (Suitable, Connectivity, Non-habitat)
- Bighorn sheep Core Herd home range
- Distance to the grazing allotments
- Bighorn sheep population parameters (population numbers and ram:ewe ratio)





## What the Risk Of Contact Tool Is/Does

- Based on peer reviewed literature
- A **quantitative** means of assessing the probability of a foraging bighorn ram or ewe contacting an active domestic sheep grazing allotment
- **One tool** to inform management decisions
- Utilizes **local** habitat data and local bighorn sheep population data
- Can serve as a **starting point** for discussing management options where contact between domestic sheep and bighorn sheep is a concern and inform **Range Suitability** for Forest Planning





## What the Risk Of Contact Tool Is Not

- Not a model of **interactions** between domestic sheep and wild sheep or **disease transmission**
- Does not address **domestic sheep that stray** from allotments (during or outside of the authorized grazing period)
- Does not calculate potential risks from **small private flocks/hobby farms/4-H** sheep or goats
- Not a **one-size-fits-all** tool (specific foray probabilities can be used, site specific source habitat parameters can be used)
- Not a **decision**





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# Range Management Perspective...



Forest  
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Okanogan-Wenatchee  
National Forest

Wenatchee, WA



## Forest Plan Components

- **Desired conditions** – a desired condition of specific social, economic, and/or ecological characteristics of the plan area, or a portion of the plan area, toward which management of the land and resources should be directed. Desired conditions must be described in terms that are specific enough to allow progress toward their achievement to be determined, but do not include completion dates.
- **Objectives** – An objective is a concise, measurable, and time-specific statement of a desired rate of progress toward a desired condition or conditions. Objectives should be based on reasonably foreseeable budgets.
- **Standards** – A standard is a mandatory constraint on project and activity decision-making, established to help achieve or maintain the desired condition or conditions, to avoid or mitigate undesirable effects, or to meet applicable legal requirements.





## Forest Plan Components

- **Guidelines** – a guideline is a constraint on project and activity decisionmaking that allows for departure from its terms, so long as the purpose of the guideline is met. Guidelines are established to help achieve or maintain the desired condition or conditions, to avoid or mitigate undesirable effects, or to meet applicable legal requirements.
- **Suitability of lands.** Specific lands within a plan area will be identified as suitable for various multiple uses or activities based on the desired conditions applicable to those lands. The plan will also identify lands within the plan area as not suitable for uses that are not compatible with desired conditions for those lands. The suitability of lands need not be identified for every use or activity. Suitability identifications may be made after consideration of historic uses and of issues that have arisen in the planning process...





## Timeline – Policy, Management Actions, & Herd Conditions

- **1960's** Domestic sheep grazing as a permitted action began on the N.F.
- **1998** WNF and WDFW enter into an MOU related to Tieton BHS herd
- **2001** WO issues a memo to Regional Foresters encouraging the use of “A Process for Finding Management Solutions to the Incompatibility Between Domestic and Bighorn Sheep – August 2001; Schommer and Woolever.
- **2009** altered routing in response to BHS presence (Naches)
- **2009 (winter)** Yakima Canyon herd experienced a die-off
- **2011** FS Chief directs forests to run the Risk of Contact Model (ROC) and Identifies a four step process to analyze conditions and options through a NEPA analysis





## Timeline – Policy, Management Actions, & Herd Conditions

- **2012** WAFWA publishes “Recommendations for Domestic Sheep and Goat Management in Wild Sheep Habitat”
- **2013 (winter)** Tieton bighorn herd removed by WDFW to reduce risk of spread
- **2015** The Wildlife Society and American Association of Wildlife Veterinarians issue a nine item joint policy statement regarding the risk of disease transmission
- **2016** Appropriations language directs FS to complete ROC model and share findings with the public, engage ARS in the analysis process, and identify and implement actions to resolve issues
- **2016** OWNF Risk of Contact modeling and report finalized
- **2016 (summer)** OWNF hosts a Stakeholder Meeting in Ellensburg
- **2016** WDFW re-ran ROC model on Management Objective #s and began reducing bighorn sheep herd sizes to reduce foray potential
- **2019** Mount Hull herd began experiencing a die-off
- **2019** The Okanogan Wenatchee NF began the current EIS effort





## From the Risk of Contact User Guide developed by the FS/BLM Bighorn Sheep Working Group

Although there is no guidance on the number of decades required to recover from a disease outbreak, observations of herds that have experienced pneumonic events indicate it likely requires many decades, if the herd recovers at all. Given the severity of respiratory die-offs and the potential link to domestic sheep as a causal factor in outbreaks, management scenarios should allow for long periods of time without interspecies contact. Population recovery is unlikely where interspecies contact, potentially resulting in disease transmission and subsequent disease outbreaks, occurs within a few decades of each other.

As an example, if the **model output is 0.08 contacts** (combined ram and ewe) with an allotment per year, and the assumed probability of a contact with an allotment resulting in an **interspecies disease transmission** and outbreak event is **one in four (0.25)**, the average disease outbreak period would be **50 years**. Although we still lack empirical data to make recommendations on the periodicity of outbreaks and the effects on bighorn sheep, this might be a **good benchmark to ensure population persistence** until better data are available.

