# Landscape Conservation Design

Planning for Success of the Refuge System within the Landscape

# Landscape Conservatior Design



HOW DO WE ADDRESS LARGE-SCALE CHALLENGES ACROSS A LANDSCAPE WHILE MAINTAINING THE INTEGRITY OF MANAGEMENT AND CONSERVATION DELIVERY WITHIN OUR BOUNDARIES?



FOCUS NEXT GENERATION OF PLANNING ON LCD'S DEVELOPED BY THE CONSERVATION COMMUNITY THROUGH PARTNERSHIP AND COLLABORATION



### Establishment of Sheldon and Hart Mountain Refuges

- 1931: 30,000 acre Charles Sheldon Wildlife Refuge established.
- 1936: 539,000 acre Sheldon Antelope Range established...for the conservation of pronghorn antelope and other native species of wildlife...
- 1936: Hart Mountain National Antelope Refuge established ...as a range and breeding ground for antelope and other species of wildlife... Executive Order 7523, Dec. 21, 1936.



Landscape Conservation Design Landscape Conservation Designs (LCD) are living blueprints to meet the current and future habitat needs of wildlife.

LCDs encompass a large network of connected ecosystems and are used to inform conversation, decision making, and planning.

Products are often maps and decision support tools to help make informed, strategic, and coordinated conservation decisions.



# Landscape Conservation Design

What is the Refuge doing to compliment ongoing stewardship and conservation actions that achieve population/habitat goals









- LCD is not prescriptive.
- LCDs can inform the development of management plans (and NEPA compliance documents) within the landscape described by the LCD.
- LCD is linked to Refuge Purpose
- LCDs can employ models to describe potential future conditions under various scenarios.
- LCDs are collaborative and peerreviewed.



- Evidence-based Partner-driven, multistakeholder, collaborative effort
- Three main phases:
  - Convening: To facilitate partners' understanding, agreement, and support for LCD processes and products.
  - Assessment:
    - Identify shared conservation/management priorities – evaluate plans
    - Evaluate landscape drivers and threats
    - "Right-size" and scale
  - Design: Develop a product that addresses identified conservation deficits and can achieve the desired future condition
    - Identify actions to achieve population/habitat goals
    - Identify priorities
- Adopt a surrogate species strategy
  - Sagebrush Core Area
  - Sage grouse
  - Pronghorn



### **LCD Products**



#### **Sheldon-Hart LCD**



- Form Core Team
  - Invite participation
  - Collaborate with partners and community
  - Assess relevant management plans – information – tools
  - Bridge Oregon and Nevada using existing information





Prepared in cooperation with the Western Association of Fish and Wildlife Agencies and the U.S. Fish and Wildlife Service

#### A Sagebrush Conservation Design to Proactively Restore America's Sagebrush Biome



Open-File Report 2022–1081

U.S. Department of the Interior U.S. Geological Survey



SageCon Landscape Planning Tool



#### Nevada Ecostate Map

#### **Ecostate Map: Sagebrush Threats Based** Mapping

Rule set: Shrub >=10%

AFG:PFG 0.333-1.0, Tree <5%

#### Vegetation cover maps based on broad functional groups:

- Specific Mapping Rules based on:
  - Shrub Cover
  - Tree Cover
  - Perennial Grass and Forbs
  - Annual Grass and Forbs

Data from the Rangeland Analysis Platform remotely sensed products

Analyzed in 5-year time slices to average out inter-annual variability

Produced In conjunction with the Oregon Sagebrush Conservation Initiative: https://oe.oregonexplorer.info/externalcontent/sagecon/Oregon\_Ecostate\_Time\_Series\_Map\_Description.pdf





Rule set: Shrub <10% AFG-PEG of 333 Tree (5%)



Rule set: Shrub <10%,

AFG:PFG >=1.0, Tree <5%

Rule set: Shrub >=10%. AFG:PFG >=1.0, Tree <5%





Rule set: Tree >=21





Rule set: Shrub <10 AFG:PFG 0.333-1.0, Tree <5%



## Sage Grouse Core Habitat

ODFW Draft Revised Core and Low Density Habitat, 2023.



# Sheldon-Hart Pronghorn Corridor

Data sources Kaufman. M., et al. 2022.
Ungulate migrations of the western
United States, volume 2: U.S. Geological
Survey Scientific Investigations Report
2022–5008, 160 p.,
https://doi.org/10.3133/ sir20225008.



Figure 39. Migration corridors, stopovers, and winter ranges of the Sheldon-Hart Mountain Interstate pronghorn herd.

#### Oregon Conservation Strategy

 Priority Wildlife Connectivity Areas.
 2023. Oregon Department of Fish and Wildlife.



## What Does a Greater Sheldon-Hart LCD Look Like?

- Identify shared conservation priorities
- Identify threats and limiting factors
- Bridge Oregon and Nevada
- Apply existing planning and spatial tools
- Use existing sagebrush/vegetation spatial data with sage grouse and ungulate migration corridors
- Identify shared priority areas to apply stewardship
  - Invest in the very good and expand