



Wildlife Considerations in Oregon County Renewable Energy Permitting

Sarah Reif, Energy Coordinator

Oregon Department of Fish and Wildlife

ODFW – CREA Mitigation Workgroup Virtual Meeting

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Our conversation today...

- ODFW's Role
- Mitigation Policy Overview
- Wildlife Standards in Statute/Rule
- Consultation with ODFW – Timing and Substance
 - Site Selection
 - Biological Surveys
 - Habitat Categorization
 - Facility Design BMPs
 - Mitigation Planning
- ODFW Solar Guidelines – County Input



Location,
Location,
(Co-)Location



ODFW's Role



ODFW Role in Renewable Energy Permitting

Non-regulatory, technical assistance, recommendations, public comment

Wildlife Policy ORS 496.012: It is the policy of the State of Oregon that **wildlife shall be managed to prevent serious depletion...for present and future generations of the citizens of this state.** the State Fish and Wildlife Commission shall **represent the public interest** of the State of Oregon...

Fish and Wildlife Habitat Mitigation Policy (OAR 635 Division 415)





Fish and Wildlife Habitat Mitigation Policy - Overview



Fish and Wildlife Habitat Mitigation Policy

- OAR 635 Division 415
- Requires ODFW staff to use the mitigation policy framework in its own land and water development actions and when commenting on other regulatory agencies' land and water development decisions
- Mitigation Hierarchy
 - Avoid
 - Minimize
 - Mitigate

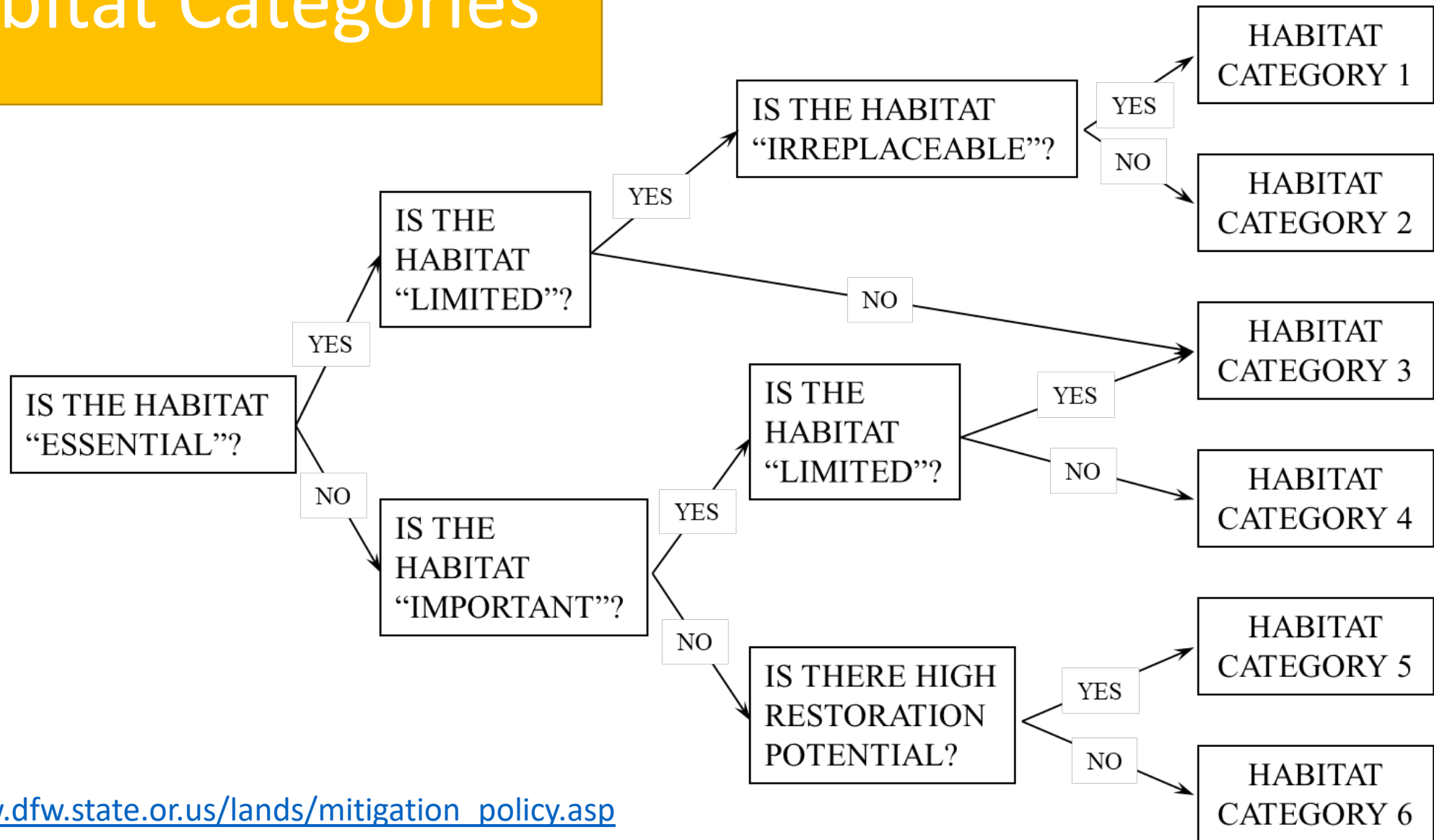


Fish and Wildlife Habitat Mitigation Policy



- Framework & sideboards
- Flexible
- Science-based
- Creates consistency
- Creates documentation and justification

Habitat Categories



Mitigation Goals and Standards

Habitat Category	Mitigation Goal	Achieved By
Category 1	No loss of habitat quantity or quality	Avoidance
Category 2	No net loss of habitat quantity or quality <u>and</u> to provide a net benefit of habitat quantity or quality	In-kind, in-proximity mitigation
Category 3	No net loss of habitat quantity or quality	In-kind, in-proximity mitigation
Category 4	No net loss of habitat quantity or quality	In-kind or out-of-kind, in-proximity or off-proximity mitigation
Category 5	Net benefit in habitat quantity or quality	Actions that improve habitat conditions
Category 6	Minimize impacts	



Wildlife Standards in Renewable Energy Statute/Rules





Statewide Planning Goal 5

OAR 660 Division 23 allows counties to protect significant “wildlife habitat”, and identify other significant Goal 5 resources, such as “energy sources”

Allows for counties to consider impacts to inventoried Goal 5 resources and adopt a program to protect the significant resource.

- Usually tied to underlying zoning
- Protections usually include minimum lot sizes, residential siting standards, and cluster development

Most Goal 5 wildlife habitat maps have not been updated since county plan acknowledgment.

DLCD Solar Rules OAR 660-033-0130 (38)(j) (F) and (G)



320 acres or less, non-arable EFU land

Criteria for county approval:

- F: in the case of Goal 5 resources, 'cooperatively develop a specific resource management plan to mitigate potential development conflicts'
- G: in the case of winter range or migration corridors, state/federal T&E&S, golden eagle, prairie falcon, pigeon springs, applicant shall conduct 'site-specific assessment' and 'the applicant and the appropriate wildlife management agency will cooperatively develop an agreement for project-specific mitigation to offset the potential adverse effects of the facility'
- In the event of disagreement between applicant and ODFW, county is responsible for determining appropriate measures

ORS 215.446 (HB 2329)



- Solar projects between 320 and 1,920 acres on all lands (less on higher class soils)
- Wind projects < 150 MW
- In order to issue a permit, county shall require the applicant:
 - Consultation with ODFW
 - Conduct a habitat assessment
 - Develop a mitigation plan “consistent with the admin. rules adopted by the State FW Commission for the purposes of implementing ORS 496.012” (= Division 415 Mitigation Policy)
 - Consistency with sage-grouse rules
 - County determines if standards have been met

Energy Facility Siting Council Projects

- Solar projects greater than 1,920 acres other lands (> 160 ac. HVF, > 1,280 acres arable farmland)
- Wind projects greater than 150 MW
- Fish and Wildlife Habitat Standard
- Threatened and Endangered Species Standard





Wildlife Agency Consultation – Timing, Substance



Integrating Wildlife into the Process

Early Scoping

- Prior to pre-application
- Site selection
- Avoidance of T&E, sensitive areas, crucial corridors

Pre-application

- Early scoping
- Biological survey planning
- Habitat Categorization

Application Development

- Survey results
- Facility design - minimization measures
- Preliminary mitigation plan

Complete application

- Complete habitat mitigation plan

Pre-construction

- Finalize habitat mitigation implementation plans
- Flagging sensitive area buffers

Construction

- Implementation of mitigation plan
- Avoidance of sensitive areas

Operation

- Fatality monitoring
- Mitigation plan implementation – monitoring – reporting – adaptive management

What is a well-sited renewable project?

- Previously-disturbed landscapes
 - Example: commercial building rooftop, brownfields, wheatfields, fallow ag, industrial zones, co-location with other dev. or infrastructure
- Wildlife values to consider
 - State and federal T&E habitats
 - Wetlands and riparian corridors
 - Big game winter range and migration corridors
 - Irreplaceable habitat features for Oregon Conservation Strategy Species
 - Raptor/Eagle nests
 - Bat Roosts/Hibernacula
 - Burrowing complexes: pygmy rabbits, WAGS, white-tailed jackrabbits, kingsnakes

Early
Scoping

COMPASS





DATA ACTIVE TOOLS **LEGEND**

ALL STRATEGY HABITATS

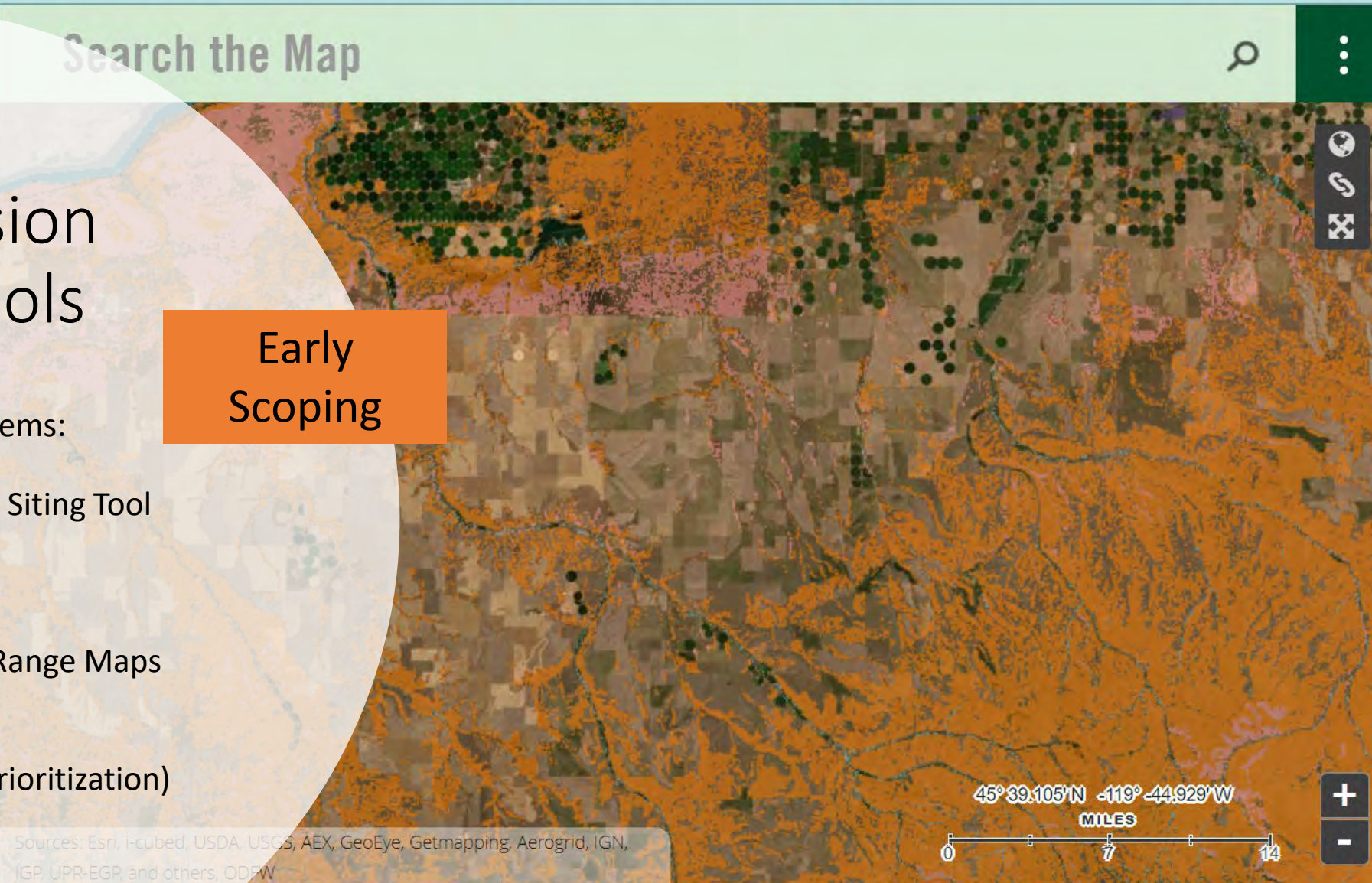
Strategy Habitats

- Aspen Woodlands
- Coastal Dunes
- Estuary
- Flowing Water and Riparian
- Grasslands
- Late Successional Forest
- Natural Lakes
- Oak Woodlands
- Ponderosa Pine Woodlands
- Sagebrush Habitats
- Wetlands

Tutorial



Search the Map



Siting Decision Support Tools

Early Scoping

- Available decision support systems:
 - Goal 5 Resource Maps
 - Oregon Sage-Grouse Dev. Siting Tool
 - ODFW COMPASS
 - Oregon Explorer
 - USFWS iPAC
 - ODFW Big Game Winter Range Maps
 - (OCAMP)
 - (ORESAs)
 - (ODFW Aquatic Habitat Prioritization)

Sources: Esri, i-cubed, USDA, USGS, AEX, GeoEye, Getmapping, Aerogrid, IGN, IGP, UPR-EGP, and others, ODFW

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MILES
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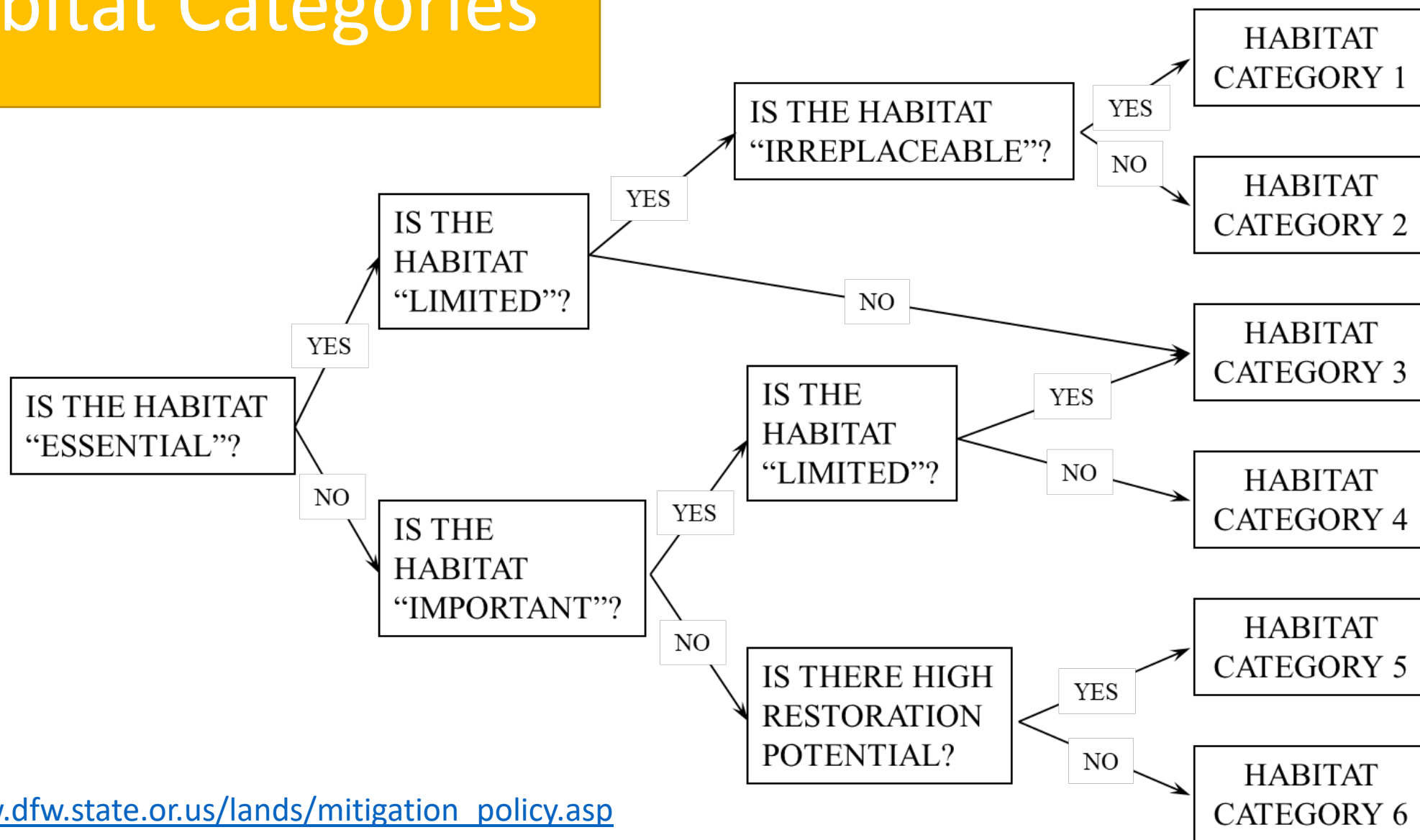
Biological Surveys

- Terrestrial Visual Encounter Surveys for sensitive species
- Preliminary Habitat Category Mapping
- Goal 5 considerations: raptors, wetlands, riparian, others
- Raptor surveys
- Pygmy rabbit, jackrabbit, burrowing owl, kingsnake, etc. if applicable
- Bat roost surveys, bat acoustic monitoring (wind)
- 2 years of survey ideal, not always possible

Pre-
Application



Habitat Categories



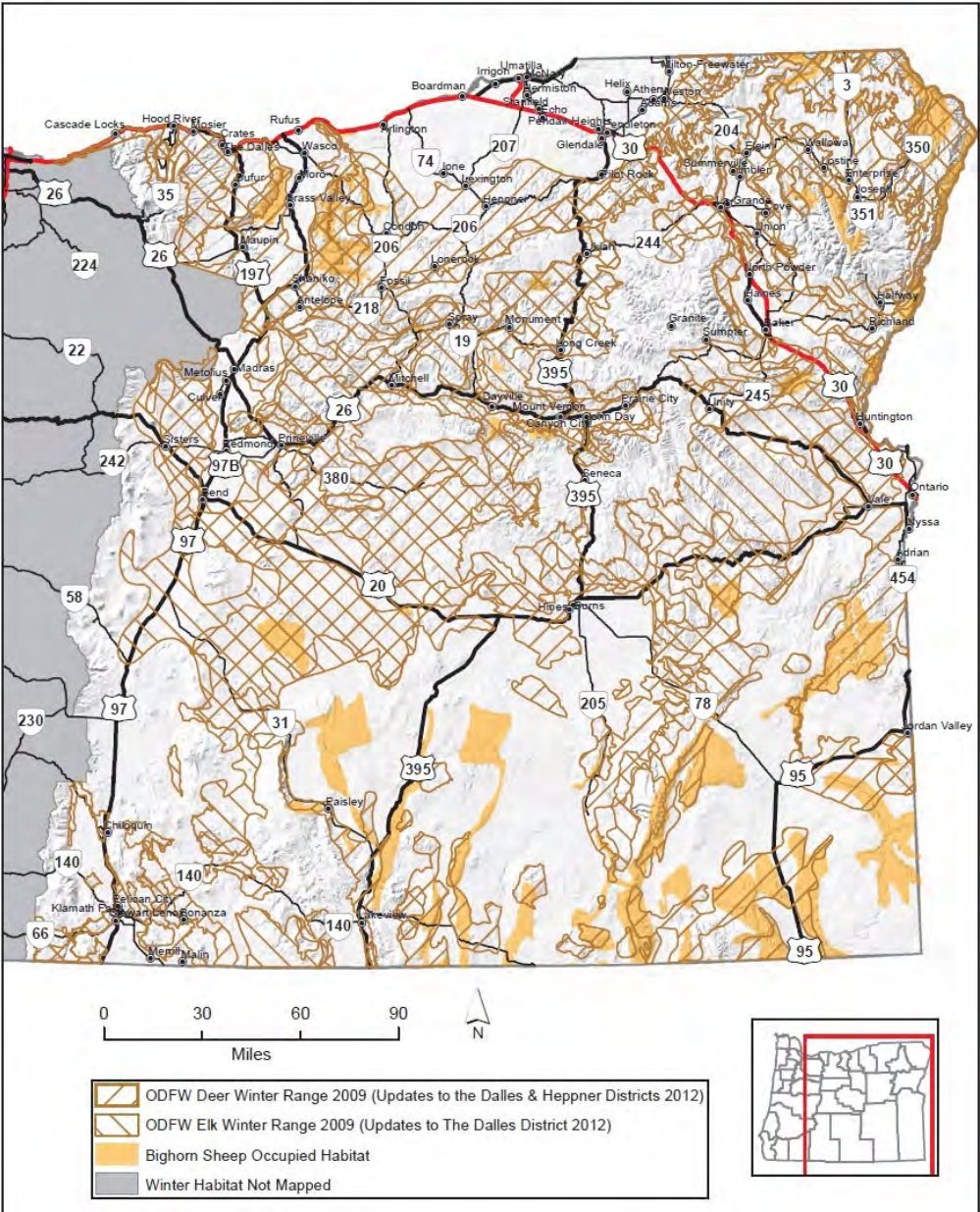
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ODFW Big Game Winter Habitat: Deer & Elk Winter Range, Bighorn Sheep Occupied Habitat for Eastern Oregon

Pre-Application

Big Game Winter Range – Category 2



An aerial photograph of a landscape, possibly a coastal or wetland area, with numerous small, circular green patches scattered across a greyish-brown terrain. Overlaid on the image are several large, irregular clusters of small, multi-colored dots (purple, green, blue, yellow, orange, pink) and several solid red rectangles of various sizes. The text "Cumulative Effects" is centered in white.

Cumulative Effects

Facility Design – Minimization BMPs Solar

- Co-locate with transmission ROWs, roadways, agriculture, battery storage
- 8-foot fencing to preclude big game entry, avoids entrapment, consider
- Invasive weed prevention and control
- Re-seeding desirable vegetation to hold soil, prevent runoff, benefit pollinators
- Avoidance of burrow complexes, streams, wetlands, nests, roosts
- Seasonal restrictions for construction in proximity to nesting, wintering features
- Minimize open trench periods, provide escape ramps
- Nearly horizontal storage of panels at night to reduce collision risk
- Kevlar sheathing of underground wires/cables
- APLIC standards for gen-tie lines and substations

Development
of Application

Facility Design – Minimization BMPs Wind

- Co-locate with transmission ROWs, roadways, agriculture, battery storage
- Invasive weed prevention and control
- Re-seeding desirable vegetation to hold soil, prevent runoff, benefit pollinators
- Avoidance of burrow complexes, streams, wetlands, nests, roosts
- Seasonal restrictions for construction in proximity to nesting, wintering features
- APLIC standards for gen-tie lines and substations
 - Setbacks from cliff edges, mountain saddles
 - Raising cut-in speeds in areas of bat sensitivity or where post-construction fatality monitoring identifies high fatality rate
 - Deterrence technologies

Development
of Application



Mitigation Planning

- ODFW recommends consistency with OAR 635-415-0020(8)
 - Plan considers the nature, extent, and duration of impacts
 - Describes mitigation actions to achieve standards of - 0025
 - Description and mapped location of mitigation actions
 - Monitoring the effectiveness of mitigation: protocols, methods, schedule
 - Be effective throughout project life or duration of impacts
 - Consider performance measures (success criteria)
 - Provide for long-term protection and management of the site (durability)

Complete
Application



Demonstrating Durability of Mitigation

Protection of mitigation actions

- Ideally fee-title acquisition or Conservation Easement (ORS 271)
- At a minimum:
 - Life of project's impacts including decommissioning and reclamation
 - Enforceable and recordable (CE, landowner agreement, MOU, etc.)
 - Held by third party consistent with ORS 217
 - References and is consistent with Habitat Mitigation Plan
 - ID of and restrictions on conflicting uses or ID of allowable uses
 - Clear roles, monitoring, enforcement

Complete
Application



Habitat Mitigation Actions

- Benefit the same species, populations, habitat types as the impact site (in-kind, in-proximity)
- Should be preliminarily identified and mapped in the approved mitigation plan
 - Specific prescriptions and implementation plans could be finalized pre-construction
- Typical projects: juniper removal, noxious weed treatment, reseeding desirable grasses shrubs and forbs, grassland restoration, pollinator enhancement, fence removal/retrofitting
- Determined collaboratively with District Wildlife Biologist
- Plan should clearly identify responsible party

Complete
Application



Regarding Ratios

- Mitigation policy does not include quantitative ratios
- Depends on:
 - Functions and values being impacted (Cat 2 vs. 3-4)
 - Failure risk of the proposed mitigation actions
- Narrow ratios do not buffer from risk
- Precedent 2:1 for Category 2 BGWR
- Higher ratios in wetlands, sage-grouse, preservation-oriented projects

Complete
Application

Integrating Wildlife into the Process

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What makes a good monitoring plan?

- PCFM – post construction fatality monitoring
- Mitigation monitoring
 - Success criteria
 - Measure the effectiveness of the mitigation actions
 - Be quantitative and measurable where possible
 - Have clearly identified thresholds for adaptive management
 - Include a clear schedule and process for reporting, and how review will be coordinated by county in consultation with ODFW

Operation

Aspen Valley Ranch Vicinity

Mitigation Plan Examples

- Lake County: Obsidian Solar – traditional permittee mitigation with a creative working lands agreement CUP-027
- Crook County:
 - Prineville CUP (Aspen Valley)
 - Gala CUP (Aspen Valley)



ODFW Solar Guidelines Development

To promote responsible development of utility scale PV solar consistent with Oregon's wildlife habitat protection policies

- Summarize the science of solar-wildlife impacts,
- Navigate and clarify the wildlife habitat standards in Oregon's renewable energy statutes and rules, as well as the ODFW Fish and Wildlife Habitat Mitigation Policy,
- Optimize project siting and design to avoid and minimize wildlife impacts,
- Establish minimum expectations and current best practices for agency consultation, biological surveys, facility construction and operation, monitoring, and mitigation.

Goal of stakeholder engagement: raise awareness, build support, solicit input on how to make guidelines most useful, use best available science, ensure consistency with regulatory process

ODFW Solar Guidelines Development

- How can these guidelines best support you?
- What is not clear to you or what questions do developers ask you?
- What concerns do you have?





Thank You

sarah.j.reif@odfw.oregon.gov
503-947-6082

Mitigation Planning – Payment to Provide

- Mitigation policy allows for consideration of mitigation banks or payment to provide (advance payment to ODFW or third party)
- ODFW not currently accepting payment outside sage-grouse ILF program
- Third party PTP very similar to permittee-responsible mitigation
- Requires appropriate formula calculation

Mitigation Planning – Payment to Provide

- Formula should consider, at a minimum:
 - Acres
 - Multiplier (ratio)
 - Restoration costs per acre + contract admin costs to implement
 - Restoration maintenance costs per acre
 - Land value per acre (appraised, actual, or negotiated value with 3rd party)
 - Stewardship endowment costs per acre determined by 3rd party
- Challenges: lag time for implementation, uncertainty, inflation of costs, restoration implementation and performance, liability