

WESTERN STEWARDSHIP AND CONSERVATION PLAN



Western Forest Products Inc.
WESTERN FOREST PRODUCTS INC.

WFP

Outline




- Update on marbled murrelet and goshawk
- Biodiversity Review
- Western Stewardship and Conservation Plan
- Wildlife and Biodiversity Program
- Review current SFMP indicators with the Wildlife and Biodiversity Program indicators
- Ecosystem and Species Mandatory Discussion Items



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Update on Marbled Murrelet and Northern Goshawk



- Marbled Murrelet Conservation Region Boundary
 - Opportunity to update
- Marbled Murrelet Land Use Regulation Order
 - Order + Q&A document being developed
 - Firm targets at the Conservation Region and Natural Resource District scale (Crown Land only).
 - Some flexibility at the Landscape Unit scale
- Northern Goshawk
 - Genetics study published – Iaingi only on Haida Gwaii
 - Federal Recovery Strategy and BC Implementation Plan – Status Quo until COSEWIC reassessment
 - Meeting between BC ADM and ECCC ADM May 23 to discuss the genetics study

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Biodiversity



- "Biodiversity is the variability among living organisms from all sources and the ecological complexes of which they are part; this includes diversity within species, between species and of ecosystems".

[Canadian Biodiversity Strategy, 1995]
- Fundamental requirement is the conservation of
 - Ecosystems
 - Natural habitats
 - Special focus on scales of time, space and hierarchal order
 - Need to consider climate change

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CSA Core Indicators 


Ecosystem Diversity

- Ecosystem area by types
- Forest area by type or species composition
- Forest area by seral stage or age class
- Degree of within-stand structural retention

Species Diversity

- Degree of habitat protection for selected focal species, including species at risk
- Degree of suitable habitat in the long term for selected focal species, including species at risk
- Proportion of regeneration of native species

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CSA Core Indicators 


Protected Areas and Sites of Special Biological, Geological, Heritage, or Cultural Significance

- Protection of sites of special significance
- Proportion of identified sites with implemented management strategies


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Western Stewardship and Conservation Plan 


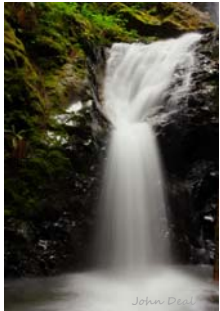
- Goal: To maintain values across the landscape through time
- Connects and align practices through MP, FSP, SFMP to Site Level Management
- Cascades through our existing plans
- Western Planning Standard provides the standardized approach to achieve stewardship results, such as bear den and eagle nest standards.
- Applies to all crown tenures and private land owned or managed by Western on Vancouver Island (including PAFO), Sunshine Coast and Central and North Coast.
- Foundation of Plan:
 - Worker safety is paramount
 - Scientifically credible
 - Operationally feasible
- Building within an SFM framework
- Annual Corporate Sustainability Reporting



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Western Stewardship and Conservation Plan 

- Proposed Programs
 - Wildlife and Biodiversity – final draft
 - Watershed (including fish habitat) – initiated
 - Timber – initiated
 - Carbon/Climate Change – initiated
 - Engagement – initiated

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WILDLIFE AND BIODIVERSITY PROGRAM

Western Forest Products Inc.
LEARNING AND INNOVATION IN FORESTRY

Wildlife and Biodiversity Program

- Science-based
- Three Goals
 1. Conserve the full range of ecosystems
 2. Maintain habitat types and forest structure
 3. Sustain forest dwelling species
- Nine Biodiversity Components
- Organization: Overview document, 2-3 pages/component, Status, Background
- Public document expected by June 30

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Wildlife and Biodiversity Program

1. Conserve the full range of ecosystems
 - Rare Ecosystems
2. Maintain habitat types and forest structure
 - Old Forest
 - Forest Interior Condition
 - Forest Structure - Retention Silvicultural System
 - Forest Structure - Stand-level Retention
 - Forest Structure - Big Trees
3. Sustain forest dwelling species
 - Species at Risk
 - Species of Significant Concern
 - Common Species

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Wildlife and Biodiversity Program – Rare Ecosystems

- Definition
 - Provincially red or blue-listed ecosystem (candidates for endangered, threatened or special concern)
 - Provincially yellow-listed (not at risk) that are uncommon on Western's tenure (<2% or <500 ha)
- Western's approach to managing ecosystems
- Banner et al 2014
 - Phase 1 – Aspatial evaluation of rare ecosystems
 - Phase 2 – Locate potential high quality occurrences
 - Phase 3 – Field assessment / air photo review
- Focus is High Quality Element Occurrences (HQEO)
 - Rank condition, landscape and size
 - Corporately: 485 HQEO mapped + 27 recruitment.
 - Port Alberni: 82 HQEO + 2 recruitment

Management of Rare Ecosystems within
Western Forest Products' Vancouver Island
and Sunshine Coast Forest Operations

By Mike Barnes, Terence Leach and Dan Hodgson

WFP 02 2014

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Wildlife and Biodiversity Program – Rare Ecosystems



- CSA Z809-16: Core Indicator 1.1.1 (Ecosystem area by type)
- Corporate Indicator:

Value	Objective	Indicator	Target	Variance
Rare Ecosystems	High Quality Element Occurrences by rare ecosystem are maintained	Minimum number of High Quality Element Occurrences	The minimum number of High Quality Element Occurrences by rare ecosystem are maintained as outlined by Banner et al 2014	0%

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WIWAG – Current Indicator (ecosystems)



Indicator	Target	Variance
Ecosystem area by type	All ecosystem types by biogeoclimatic variant have greater than 50% of the productive forest area in mid, mature, and old seral stages annually	-5% by type for up to 10 years

- Excellent Target

Indicator	Target	Variance
% of Planners trained in the Sensitive Ecosystem Inventory in the previous 24 months	75%	-10%

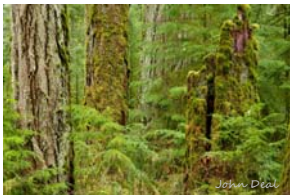
- Sensitive Ecosystem Inventory mapping is out of date
- Consider replacing SEI training indicator with Rare Ecosystem indicator
 - Potential WIWAG Indicator: Number of High Quality Element Occurrences
 - Potential WIWAG Target: Maintain ≥80 High Quality Element Occurrences

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Wildlife and Biodiversity Program – Old Forest



- CSA Z809-16: Core Indicator 1.1.3 – Forest Area by seral stage or age class
- Western’s focus is on Old Forest (>250 years old)
 - Old Growth Management Areas
 - Area old forest and forest managed for recruitment of old forest



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Wildlife and Biodiversity Program – Old Forest



Value	Objective	Indicators	Targets	Variance
Old forest of each ecosystem type	Maintain old forest of each ecosystem type	Amount of each ecosystem type in OGMA at the variant level	Amount of each ecosystem type in OGMA at the variant level ≥ the targets defined in the Landscape Unit Planning Guide (1999).	-2%
		Amount of old forest and forest managed for recruitment of old forest characteristics by ecosystem type	Amount of old forest and forest managed for recruitment of old forest characteristics by ecosystem type ≥ the targets defined in the Landscape Unit Planning Guide (1999).	0%

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WIWAG – Current Indicator (seral)



Indicator	Target	Variance
Forest area by seral stage or age class	81+ age stands are maintained to at least 35% of the productive forest area measured on a five year rolling average	Down to 30% for up to 10 years

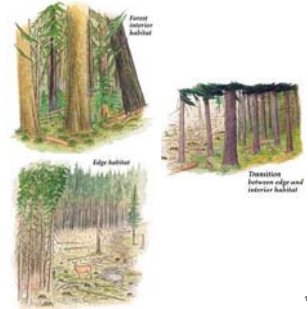
- Excellent Indicator
- Consider adding "OGMA" and old forest indicators

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Biodiversity Program – Forest Interior Conditions



- Definition (based on marbled murrelet)
 - ≥ 100m from a man-made forest edge that is < 30 years old
 - No edge effect if old forest is adjacent to forests ≥ 30 years old
- Important component of biodiversity management



Graphic Source: Foresting Harvesting – Following Natures Lead

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Wildlife and Biodiversity Program – Forest Interior Condition



- Reflects governments intent for "Full" biodiversity management from mid-late 1990's (Biodiversity Guidebook (1995), Landscape Unit Planning Guide (1999))

Value	Objective	Indicator	Target	Variance
A diverse forested landscape	Maintain interior forest conditions across the landscape	Percentage of the area within OGMA's containing forest interior conditions	Percentage of the area within OGMA's containing forest interior conditions ≥ 25%.	-5%

- Not a CSA core indicator
- Consider adding Forest Interior indicator

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Wildlife and Biodiversity Program – Forest Structure: Retention Silv. System



- CSA Z809-16: Core Indicator 1.1.4 (Degree of within-stand structural retention)
- Retention Silvicultural System – 2 parts
 - retain individual trees or groups of trees to maintain structural diversity over the area of the cutblock for at least one rotation, and
 - leave more than half the total area of the cutblock (Net area to be reforested (NAR) + permanent roads) within one tree height from the base of a tree or group of trees, whether or not the tree or group of trees is inside the cutblock.



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Wildlife and Biodiversity Program – Forest Structure: Retention Silvicultural System



Value	Objective	Indicator	Targets	Variance
A diverse forest stand	A variety of forest structure is maintained at a block level	Percent of the harvest area that utilizes the retention silvicultural system	Percent of the harvest area utilizing a Retention Silvicultural System is a) ≥50% across Western over a five year rolling average, and b) Consistent with targets in Table 1.	0% 0%

Wildlife and Biodiversity Program – Forest Structure: Retention Silvicultural System



Table 1. Retention silvicultural system targets by Forest Stewardship Zone.

Forest Stewardship Zone	Target percent of harvest area using a retention silvicultural system over a five year rolling average
Enhanced Basic	≥50%
Enhanced Dry	≥60%
Enhanced Windy	≥30%
General Basic	≥60%
General Dry	≥70%
General Windy	≥40%
Special	≥90%

WIWAG – Current Indicator (Retention)



Indicator	Target	Variance
Degree of within stand structural retention	The average within-stand retention level of all outblocks harvested in the year is no less than 15% of the total area under prescription	-1%

- Current target only addresses retention within a stand
- Consider adding retention silvicultural system consistent with Table 1.

Wildlife and Biodiversity Program – Forest Structure: Stand-level Retention



- CSA Z809-16: Core Indicator 1.1.4 (Degree of within-stand structural retention)

Value	Objective	Indicator	Targets	Variance
A diverse forest stand	A variety of forest structure is maintained at a block level	Percent of stand level retention	Percent of stand level retention for retention blocks is consistent with targets in Table 2. Average annual percent of stand-level retention for clearcut with reserve blocks ≥7% of total area under prescription.	-2% -1%

Wildlife and Biodiversity Program – Forest Structure: Stand-level Retention 

Table 2. Stand-level targets for retention silvicultural system blocks by Forest Stewardship Zone.

Forest Stewardship Zone*	Stand-level Retention Target (%)
Enhanced Basic	10%
Enhanced Dry	15%
Enhanced Windy	10%
General Basic	15%
General Dry	20%
General Windy	15%
Special	20%

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WIWAG – Current Indicator (Stand-level Retention) 

Indicator	Target	Variance
Degree of within stand structural retention	The average within-stand retention level of all outblocks harvested in the year is no less than 15% of the total area under prescription	-1%

- Consider replacing current indicator with:
 - Target on stand-level retention within retention silvicultural system blocks
 - Target on stand-level retention within clearcut with reserve blocks

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Wildlife and Biodiversity Program – Forest Structure: Big Trees 

- CSA Z809-16: Core Indicator 1.1.4 (Degree of within-stand structural retention)
- A tree:
 - meeting the species specific diameter at breast height (dbh) requirement set in Table 3 below; or
 - ≥80m tall.
- dbh based on 50% of the largest tree in the BC Big Tree Registry



Table 3. Minimum dbh by tree species and/or ≥80m tall for retention.

Species	Minimum dbh (cm) for retention
Western redcedar	300
Yellow-cedar	210
Coastal Douglas-fir	210
Sitka spruce	220

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Wildlife and Biodiversity Program – Forest Structure: Big Trees 

Value	Objective	Indicator	Target	Variance
A diverse forest stand	Maintain Big Trees across the landscape	Percent of Big Trees not considered a risk to forest operations retained	Retain 100% Big Trees and assemblages of Big Trees (Table 3). Retain all trees in COBP Big_Tree_Retention	0% for safe trees

Indicator	Target	Variance
Proportion of identified sites with implemented management strategies	100% of identified sites have implemented management strategies	-1 site per year

- Current Indicator/Target under 1.4.2 consistent with above


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Wildlife and Biodiversity Program – Species at Risk 

- CSA Z809-16: Core Indicators 1.2.1 (degree of habitat protection) and 1.2.2 (degree of suitable habitat in the long term)
- Currently limited to Threatened or Endangered under SARA and
 - For fish species - a final Recovery Strategy or
 - Non-fish – a final Provincial Implementation Plan
- For Port Alberni Forest Operation
 - Marbled murrelet
 - Northern goshawk




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Wildlife and Biodiversity Program – Species at Risk 


Value	Objective	Indicators	Targets	Variance
Habitat for Threatened and Endangered species.	Maintain or increase habitat for Threatened and Endangered Species, where habitat is a limiting factor causing the decline	Western's proportional share of the BC Implementation Plan area targets for suitable marbled murrelet nesting habitat.	Conserve Western's proportional share of the BC Implementation Plan area targets for suitable marbled murrelet nesting habitat.	-1%

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Wildlife and Biodiversity Program – Species at Risk 

Value	Objective	Indicators	Targets	Variance
		Western's proportional share of the BC Implementation Plan number of new WHAs for Northern Goshawk. laingl ssp SBR	Conserve proportional share of the BC Implementation Plan number of new WHAs for Northern Goshawk. laingl ssp	-1%

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WIWAG – Current Indicator (Species at Risk) 

Indicator	Target	Variance
Degree of habitat protection for selected focal species, including species at risk	The amounts (in ha) of habitat protected for selected focal species remains the same or increases year after year	Decrease by 1%

- BC Habitat MAMU protection will have mapped (WHA and MAMU OGMA) and unmapped components

Indicator	Target	Variance
Degree of suitable habitat in the long term for selected focal species, including species at risk	The amount (in ha) of potentially suitable habitat available within WHA, UWR, OGMA and NCLB remains the same or increases over time (measured every five years)	UWR – decrease by 1% MAMU – decrease by 2%

- BC plan sets long-term goals so modelling will not be required
- Consider adopting proposed indicators to reflect current recovery planning

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Biodiversity Program – Species of Significant Concern

- Definition (SFI):
 - Species that are special concern, rare, provincially red and blue listed species that are of provincial significance
- Species List
 - Ungulates – deer, elk, goats
 - Black Bear
 - Large Stick nests – eagles, herons, hawks
 - Red-legged Frog and Western Toad
- Standards
 - Bear dens (in prep)
 - Eagle (in prep)
- Training levels
 - Planners: detailed training on identification
 - Loggers: EMS Awareness - Level 1



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Wildlife and Biodiversity Program – Species of Significant Concern

- CSA Z809-16: Core Indicators 1.2.1 (degree of habitat protection) and 1.2.2 (degree of suitable habitat in the long term)

Value	Objective	Indicators	Targets	Variance
Habitat for species of significant concern	Maintain or increase habitat for species of significant concern	Area of Ungulate Winter Range	(i) Area (ha) of winter habitat protected for ungulates remains the same or increases.	-1%
			(ii) Area (ha) of winter habitat managed for ungulates at Stillwater Forest Operation remains the same or increases.	0%

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Wildlife and Biodiversity Program – Species of Significant Concern

Value	Objective	Indicators	Targets	Variance
		Percent of high quality safe bear dens retained.	Where worker safety will not be compromised, retain 100% of high quality, black bear dens across WFP tenure.	-1%
		Percent of raptor and heron nests that are protected with species specific reserves and disturbance restrictions	Retain 100% of raptor and heron nests are retained with a species specific reserve and disturbance restrictions are followed if the nest is active.	0%
		Percent of known breeding ponds for amphibians of significant concern (Red-legged Frog and Western toad) managed with site specific prescriptions	100% of the site prescriptions for known amphibians of significant concern are followed.	-1%

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WIWAG – Current Indicator


Indicator	Target	Variance
Degree of habitat protection for selected focal species, including species at risk	The amounts (in ha) of habitat protected for selected focal species remains the same or increases year after year.	Decrease by 1%



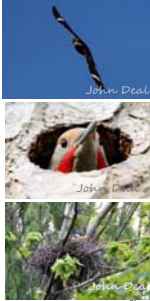
Indicator	Target	Variance
Degree of suitable habitat in the long term for selected focal species, including species at risk	The amount (in ha) of potentially suitable habitat available within WHA, UWR, OGMA and NCLB remains the same or increases over time (measured every five years)	UWR – decrease by 1% MABU – decrease by 2%


- UWR wording is consistent with species of significant concern
- Consider adding species of significant concern under Indicator 1.4.2 (raptor nests, heron nests, or Indicator 1.2.1 (red-legged frog breeding ponds).

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Wildlife and Biodiversity Program – Common Species 

- Yellow-listed (not at risk) by the BC Conservation Data Center
- Focus is on Forest Birds
 - Utilize a wide variety of habitat types
- Six Species Groups (UBC)
 - Group 1 – Generalists, species that inhabit many habitat types or respond positively to forest practices;
 - Group 2 – Species that has a validated association with a certain broad habitat types as defined within VRI (e.g. recently disturbed, and old conifer);
 - Group 3 – Species with strong dependencies on specific habitat elements (e.g. snags or understory);
 - Group 4 – Species restricted to specialized and highly localized habitats; and
 - Group 5 – Species for which patch size and connectivity are considered important.
 - Group 6 – Is included for completeness. It contains species known or expected to occur in the area, but that are not dependent upon forested environments and are not monitored.



Wildlife and Biodiversity Program – Common Species 


- Target needs more discussion


Value	Objective	Indicator	Target	Variance
Habitat for forest birds	Maintain a diversity habitat types for forest birds on tenure Western manages	Number of habitat types for forest birds	Maintain all habitat types for forest birds	n/a

- Habitat Types
 - Recently Disturbed (<20)
 - Conifer – 3 age classes (21-60; 61-140; 141+)
 - Deciduous – 2 age classes (0-39; 40+)
 - Riparian
- Currently a weak target
- Recommend further discussion on bird habitat class target and then incorporate into SFMP

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Questions

Western Forest Products Inc.
DEFINING A HIGHER STANDARD™ 

Recap of Mandatory Discussion Topics 

Forest Habitat connectivity and conservation at the landscape scale

- Rare ecosystems
- Old Forest
- Riparian corridors (not discussed but under Watershed Program)
- Retention Silvicultural System
- Species at Risk
- Species of Significant Concern

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Recap of Mandatory Discussion Topics



Management in the context of natural disturbance regimes and patterns and range of natural variation

- Old Forest
 - Targets based on Natural Disturbance Types
- Retention Silvicultural System
 - Better emulates natural disturbance compared to clearcuts
- Big Trees
 - Big Douglas-fir often survive fires

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Recap of Mandatory Discussion Topics



Maintenance of populations and communities over time

- Western does not have the authority to manage populations – just habitat
- Rare Ecosystems
 - Maintain High Quality Element Occurrences
- Old Forest
 - Maintain old forest for lesser known species
- Retention Silvicultural System
 - Life boating effect
- Species at Risk
 - Implementation Plans
- Species of Significant Concern
- Common Species
 - Maintaining all habitat types

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Recap of Mandatory Discussion Topics



Local and regional protected areas and integrated landscape management

- Rare Ecosystems
- Old Forest
 - OGMAs, Ungulate Winter Range and Wildlife Habitat Areas
- Retention Silvicultural System
 - Better emulates natural disturbance compared to clearcuts
- Species at Risk
- Species of Significant Concern

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Recap of Mandatory Discussion Topics



Silviculture regimes and practices such as integrated pest management and pesticide use, structural retention and timber harvesting practices

- Retention Silvicultural Retention System
- Stand-level Retention
 - Retention blocks
 - Clearcuts with reserves
- Big Trees
- Bear dens, large stick nests

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Recap of Mandatory Discussion Topics



Management and protection of biological resources of cultural heritage significance

- Big Trees
- Ungulate Winter Ranges
- Old Forest
 - OGMA's used to protect some features of cultural significance

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Recap of Mandatory Discussion Topics



Processes and methods for identifying sites with special biological and cultural significance

- Western Planning Standard
- Training
- Large stick nests, bear dens, amphibian ponds
- Rare ecosystems

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Recap of Mandatory Discussion Topics



Conservation of old forest attributes

- Old Forest
 - OGMA's
 - Non-harvestable land base
- Forest Interior
- Retention Silvicultural System
- Stand-level Retention
- Species at Risk
- Species of Significant Concern

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Recap of Mandatory Discussion Topics



Participation in government programs to protect threatened and endangered species

- Species at Risk
 - Marbled Murrelet
 - Goshawk
- Senior Biologist role
 - Federal and Provincial governments
 - Recovery Planning
- Wildlife Biologist role
 - Coordination of goshawk inventory
 - Recovery Planning; Training
- Reporting new goshawk nests annually
- Rare ecosystem management
- Inventory, Monitoring and Research, e.g., goshawk genetics

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