

ENCLOSURE 4
Utah Northern Goshawk Project
PROPOSED MANAGEMENT DIRECTION FOR
HABITAT OF THE NORTHERN GOSHAWK
Ashley, Dixie, Fishlake, Manti-LaSal, Uinta, Wasatch-Cache National Forests

HOME RANGE (FORAGING, NEST AND POST-FLEDGLING AREAS)

NATIVE PROCESSES

GOAL: Restore or emulate natural disturbance regimes and other ecological processes to maintain or restore ecosystem integrity within landscapes important to sustaining habitat for the northern goshawk and its prey.

(G) Management actions should be designed to encourage conditions that are within the historic range of variation (HRV), remaining within the variability of size, intensity, and frequency of native disturbance regimes characteristic of the subject landscape and ecological processes.

(G) Within disturbed ecosystems, management actions should be designed to be consistent with restoration objectives .

COMPOSITION

GOAL: Maintain or restore the native characteristics of ecosystem composition important to sustaining habitat for the northern goshawk and its prey.

(G) Native plant species from locally adapted seed sources are preferred for use in all management activities. Non-native plant species have the potential to cause systems to move outside of historic range of variation (HRV), therefore the use of non-native species should be justified to indicate how their use is important to maintain or restore a cover type to functioning conditions.

(G) When initiating vegetative management treatments in forested cover types, provide for a full range of seral stages, by forested cover type, that achieve a mosaic of habitat conditions and diversity. Each seral stage should contain a strong representation of early seral tree species. Recruitment and sustainability of early seral tree species in the landscape is needed to maintain

ecosystem resilience to perturbations. While species composition may vary by location, an expected species mix is as follows:

COVER TYPE	EARLY SERAL	MID SERAL	LATE SERAL
Ponderosa Pine	PP = AS	PP>AS	PP>AS
Mixed Conifer (montane)	PP=AS>DF>BS>TF	PP=AS=DF>BS>TF	DF>BS>TF=PP>AS
Mixed Conifer (boreal)	LP>ES>TF	LP=ES>TF	ES>LP>TF
Spruce / Fir	AS>ES>TF	AS=ES>TF	ES=TF>AS
Aspen	AS	AS	AS
Lodgepole Pine	LP	LP	LP>TF
Aspen/Lodgepole	AS>LP	LP=AS	LP>AS=TF

PP = ponderosa pine; AS = aspen; DF = Douglas-fir; TF = white or subalpine fir; LP = lodgepole pine; BS = blue spruce; ES = Engelmann spruce.

Equal sign (=): both species may be expected to be found within the cover type. Depending on site, either species may dominate or both may co-dominate the site.

Greater than (>): the first species would normally be expected to be more prevalent than the second species.

STRUCTURE

GOAL: Maintain or restore the mix of forest vegetative structural stages needed to sustain the desired mature and old forest stages in a landscape. The desired amount of mature and old is 40% in the portion of the landscape covered by conifers and 30% in the portion covered by aspen, well distributed. This is necessary to sustain habitat and habitat connectivity for the goshawk and its prey.

(G) Assess landscapes at the 5th-6th order Hydrologic Unit Code (HUC) or equivalent ecological scale (tens to hundreds of thousands of acres), to determine distribution of forest vegetative structural classes. Use the best existing available information to complete this assessment. These assessments should be used to describe the existing structural conditions and then determine opportunities to move the existing conditions toward the desired structural habitat conditions.

(G) Planned vegetative management treatments (excluding unplanned and unwanted wildland fire) in the mature and/or old structural stages in a landscape that is at or below the desired percentage of land area in mature and old structural stages (40% conifer, 30% aspen), should be designed to maintain or enhance the characteristics of these structural stages. The percentage of land area in mature and old structural stages treated should not move out of the mature and old structural stage. Planned treatments may vary from this guideline if the action was assessed through the biological evaluation (BE) process, and the BE concluded that the action is consistent with the intent of the Conservation Strategy and Agreement for Management of the Northern Goshawk in Utah.

GOAL: Manage forested cover types within landscapes to retain, and sustain over time, standing dead trees (snags) and their distribution important to the habitat needs of goshawk prey species and characteristic of healthy, functioning ecosystems.

(G) When initiating vegetative management treatments in forested cover types, leave the following minimum number and size of snags. If the minimum number of snags is unavailable, green trees should be substituted. If the minimum size is unavailable, then use largest trees available on site. It is desirable to have snags represented in all size classes above the minimum available on the site. The number of snags should be present at the stand level on average and, where they are available,

distributed over each treated 100 acres. This distribution is needed to meet the needs of prey species that utilize this habitat.

COVER TYPE	MINIMUM SNAGS (per 100 acres)	MINIMUM PREFERRED SIZE
Ponderosa Pine	200	18" dbh / 30'ht
Mixed Conifer	300	18" dbh / 30'ht
Spruce / Fir	300	18" dbh / 30'ht
Aspen	200	8" dbh / 15'ht
Lodgepole Pine and Aspen/Lodgepole Pine	300	8" dbh / 15'ht

GOAL: Manage cover types within landscapes to retain down logs and woody debris and their distribution characteristic of healthy, functioning ecosystems. These habitat components are important to the habitat needs of goshawk prey species.

(G) When initiating vegetative management treatments, prescriptions should be designed to retain the following minimum amount and size of down logs and woody debris. These habitat components should be present at the stand level on average and, where they are available, distributed over each treated 10 acres. This distribution is needed to meet the needs of prey species that utilize this habitat.

COVER TYPE	MINIMUM DOWN LOGS (per 10 acres) (Down logs take precedence over tons of coarse woody debris)	MINIMUM LOG SIZE (Diameter / Length) (Mid-point diameter; or if minimum size not available, largest available on the site)	MINIMUM COARSE WOODY DEBRIS, ≥3" DIAMETER (Tons per 10 acres, inclusive of down logs)
Ponderosa Pine	30	12" / 8'	50
Mixed Conifer	50	12" / 8'	100
Spruce / Fir	50	12" / 8'	100
Aspen	50	6" / 8'	30
Lodgepole Pine and Aspen/Lodgepole Pine	50	8" / 8'	50

GOAL: In land areas dominated by mid-aged, mature, and old structural stages (VSS 4,5,6) within a landscape, maintain or restore canopy closure to provide habitat for the goshawk and its prey.

(G) When initiating vegetative management treatments in land areas dominated by mid-aged, mature, and old structural stages (VSS 4,5,6) within a landscape, treatments should be designed to maintain or restore an average of ≥40% canopy closure. If 40% canopy closure is not within the historic range of variation, manage for canopy closures that are consistent with HRV.

HOME RANGE (NEST AND POST-FLEDGLING AREAS ONLY)

GOAL: Provide well distributed habitat for successful goshawk nesting and brood rearing (post-fledgling area) within and across landscapes (5th-6th order HUC or equivalent ecological scale). This will provide for habitat connectivity across the state and continuous recruitment of

individuals into the population, both of which are important to sustaining viable populations of goshawks.

(G) If a historic nest is not associated with an active nest area, management direction for home range habitat should be applied.

(S) When an active nest area has been identified, identify 2 alternate nest areas and 3 replacement nest areas. The next two guidelines provide recommended direction for implementation of this standard.

(G) Each nest area (active, alternate and replacement) should be approximately 30 acres (total of approximately 180 acres) in size when sufficient suitable habitat exists. If sufficient amounts of suitable habitat are not present, use existing suitable habitat that is available.

(G) Alternate nest areas should be identified in suitable habitat with similar vegetative structures as the active nest areas. Replacement nest areas should be identified in habitat which will develop similar vegetative structures as the active nest area at the time the active and alternate nest areas are projected to no longer provide adequate nesting habitat.

(S) Prohibit forest vegetative manipulation within active nest areas during the active nesting period. The active nesting period will normally occur between March 1st and September 30th.

(G) Restrict management activities and permitted human use (i.e., those activities for which a written permit is issued) in active nest areas during the active nesting period unless it is determined that the disturbance is not likely to result in nest abandonment. If the disturbance is likely to result in abandonment, a biological evaluation (BE) must be completed. To implement the action the BE must conclude that the action is consistent with the intent of the Conservation Strategy and Agreement for Management of the Northern Goshawk in Utah.

(G) Forest vegetative manipulation within active, alternate and replacement nest areas should be designed to maintain or improve desired nest area habitat. Use the active nest area habitat characteristics as an indicator of the desired nest area habitat, and as the best available information for nest area habitat for that cover type.

(G) Identify a Post-Fledgling Area (PFA) which encompasses the active, alternate and replacement nest areas and additional habitat needed to raise fledglings. A PFA should be approximately 420 acres in size (exclusive of nest area acres) when sufficient suitable habitat exists. If sufficient amounts of suitable habitat are not present, use existing suitable habitat that is available.

(G) Forest vegetative manipulation within the PFAs should be designed to maintain or improve the same habitat features as discussed for the goshawk home range (i.e., stand structure, snags, down logs, nest trees important in the life histories of the goshawk and its prey species common to the geographic location), except:

- a) In VSS 4,5,6, provide canopy closure in excess of 50% when available. If 50% canopy closure is not within the historic range of variation, manage for canopy closures that are consistent with HRV.

b) Openings created as a result of mechanical vegetative treatments should not exceed the following by cover type:

COVER TYPE	MAXIMUM CREATED OPENING SIZE
Ponderosa pine and Mixed conifer	2 acres
Spruce/fir	1 acre
Aspen and Lodgepole pine	Follow current management direction

c) Management activities should be restricted during the active nesting period. The active nesting period will normally occur between March 1st and September 30th.

d) Where timber harvest is prescribed, plan a transportation system to minimize disturbance.

PROPOSED MONITORING REQUIREMENTS

ACTIVITIES, EFFECTS AND RESOURCES TO BE MEASURED	MONITORING METHOD	PRECISION/RELIABILITY	MEASUREMENT FREQUENCY	REPORTING PERIOD	VARIATION WHICH WOULD CAUSE FURTHER EVALUATION AND/OR CHANGE IN MANAGEMENT DIRECTION.
Goshawk territory occupancy.	FOREST LEVEL: Whichever is greater: Random sample of at least 20 territories or 50% of all known territories.	Moderate/High	Annually	every 3 years	If monitoring reveals a 20% decline in territory occupancy over a 3 year period.
Goshawk habitat connectivity and Habitat diversity	FOREST SCALE: Use GIS to track the spatial location and size of the mature and old forest structure.	Moderate/High	Completion or update of a landscape assessment	5 years	FOREST SCALE: If a landscape scale assessment finds that less than 40% of the coniferous or 30% aspen forested area are dominated by mature and old structure patches.
Goshawk habitat diversity Snag Management	PROJECT SCALE: Monitor snag requirements for timber harvest and prescribed fire projects affecting forested habitat. Random sampling of 100 acres blocks which cover 10% or more of a project area.	Moderate/ Moderate	Annually sample 25% of completed projects	5 years	If 25% of the blocks sampled do not meet guideline requirements.
Goshawk habitat diversity Down Woody Material	PROJECT SCALE: Monitor down woody requirements for timber harvest and prescribed fire projects affecting forested habitat. Random sampling of 10 acre blocks which cover 5% or more of the project area.	Moderate/ Moderate	Annually sample 10% of completed projects	5 years	If 25% of the blocks sampled do not meet guideline requirements.