# Biological Assessment (BA-D7-09-FY2009) for Threatened and Endangered Species Taos Ski Valley 2009 Summer Operations Projects

Questa Ranger District
Carson National Forest

## A. Purpose

This Biological Assessment (BA) analyzes the effects of the proposed 2009 summer maintenance and operations projects at the Taos Ski Valley ski area upon Federal Threatened and Endangered species and to determine whether formal consultation or conferencing with the US Fish and Wildlife Service (FWS) is required. This BA conforms to the legal requirements set forth in Section 7 of the Endangered Species Act (19 U.S.C. 1536 (c), 50 CFR 402.12 (F) and 402.14 (c), and the requirements in Forest Service Manual Direction (FSM 2672.42).

## B. Proposed Action(s)

Items 1 and 2 are actions on existing facilities that are considered standard maintenance but will entail some surface disturbance activities.

### 1. Replace snowmaking line located on the catwalk between Chairs 1 and 2.

The existing 4" water line used for snowmaking operations is over 20 years old and has needed numerous repairs over the past several seasons. The line is proposed to be replaced with a 6" line to more efficiently facilitate pumping water to desired service areas.

The installation will require a trench 18" wide and 12" deep. The trench will be located along the outside edge of the trail where the airline now exists. The old 4" waterline would be removed in the locations where it is the same depth as the proposed line. The disturbed area would be backfilled and reseeded. The duration of the project would be approximately two weeks. The total disturbed area would be approximately 1,500 square feet. No previously undisturbed areas would be affected. The location for this project is not delineated on the location map but may be located by following the catwalk from the top of Chair 1 to the bottom of Chair 2.

### 2. Replace the communications line in *Rubezhal Return Trail.*

The existing telephone line is buried the entire length of the return trail. It is very old and damaged to the point of being unreliable. The telephone line is critical in providing communications to all backside infrastructure and facilities.

The replacement line would be buried in the existing roadbed which runs the length of the trail. The trench would be 18" wide and 12" deep. The length of the project would be approximately 2,400 feet. The disturbed area would be approximately 5,000 square feet including the spoils storage. Excavated soils would be placed on the side of the trench away from the stream. Straw bales will be on site to be placed in any areas where any discharge of silt could reach the stream. If any disturbance occurs outside the roadbed, these areas would be revegetated. No previously undisturbed areas would be affected.

With regard to durations of effects, I evaluated a portion of this area last year for a proposed maintenance project. It entailed the replacement of a short section of defective air line along a portion of this road just above the pond. When I observed the same location this year I asked the TSV maintenance person that was accompanying me why they decided not to do the project. As it turned he was the person that had done the work and replaced the line. The site recovery was such that there was virtually no evidence that the surface had been disturbed again last season.

### 3. Replace the backside Avalauncher Tower.

The avalauncher tower in the *Saluki* area is used frequently during control cycles and is a critical component of avalanche mitigation on Kachina Peak. The tower was accidentally damaged during the winter operations and is no longer useable.

The avalauncher was originally constructed by pinning an old lift tower to a boulder and securing it with cables. The replacement tower would be installed with a foundation similar to the lift towers. The foundation will be buried 5 feet deep and will be a steel reinforced cube 6'x6'x6'. The tower will be bolted to the foundation using 1" anchor bolts. It will be 19 feet tall as is the current tower. The construction would occur in the previously cleared area. Site preparation would include removal of the previously used boulder. Any excess spoils will be distributed over the disturbed area and reseeded. No tree removal will be necessary.

### 4. Move the Race Course Operations to *Lonestar*.

The current NASTAR racecourse was temporarily located on *Honeysuckle* as it was displaced from its old local on *Maxies* due to the expansion of the terrain park. Moving the race operations permanently to *Lonestar* would allow the race operations to be isolated from other skiing activities and could more easily be marked as such. This would increase the safety and ease of operations making it a better alternative than *Totemoff*. *Lonestar* is located in a good central location and is currently underutilized by skiers because of its steepness.

*Lonestar* would be re-graded to reduce the steepness of the upper pitch. This would entail a cut of approximately 10 feet at the top transition and a corresponding 10 feet of fill at the base of the pitch. This would make the slope less steep and more consistent. This portion of the project would be on a previously disturbed and graded slope. The lower portion of the project is just uphill of the howitzer emplacement which would need to be widened to accommodate racing operations. The trees would be removed in an area of 120 feet by 60 feet, or less than 0.2 acres. The total disturbance area of this project would be approximately 3.2 acres.

The associated infrastructure for race operations would include the snowmaking infrastructure which would be installed on the southeast side of *Lonestar* to provide reliable snow coverage throughout the season. The existing finish building would be relocated to *Lonestar*; however a new start building would need to be constructed; new wood foundations would be required for both buildings. Power and communication lines would be placed within the trail from the proposed Finish Building location to the proposed Start Building location. Ground disturbance associated with the Start and Finish Buildings and power and communication lines would be contained within the *Lonestar* trail grading.

**5. *Rubetzal Return Trail* Realignment.**

The *Rubetzal Return Trail* is the main trail connection for skiers using Chair 5 and Chair 4 on the back side of the mountain, to return the Taos Main Base Area. The *Rubetzal Return Trail* alignment runs parallel to the SUP boundary on NFS lands, and crosses onto private land near the Main Base Area. The Village of Taos is planning to construct a water storage tank in the existing *Rubetzal Return Trail* alignment on private land. Therefore, the *Rubetzal Return Trail* needs to be rerouted to a location uphill of the current alignment.

The *Rubetzal Return Trail* realignment would require approximately 165 feet of new trail to be constructed on NFS lands. The new trail would be approximately 50 feet wide and would result in the removal of approximately 75 trees. Soil disturbance related to tree removal and trail construction (grading and water bars) on NFS lands would be approximately 8,200 square feet (0.2 acre). The new trail and water tank on private lands would result in less than 0.6 acres of disturbance outside the NFS boundary. Immediately following construction, the trail would be revegetated consistent with Forest Service direction. The existing *Rubetzal Return Trail* would be fenced and seeded to allow forest regeneration.

## C. Description of Habitat for the Proposed Project Areas

Taos Ski Valley is proposing five projects to improve existing mountain operations requiring a total of approximately 3.6 acres of ground disturbance. The project area ranges in elevation between 10,000 to 12,000 feet on slopes ranging from about 5% to around 70%. The majority of the work area is open terrain that has been previously cleared, graded and revegetated with grasses, or along existing road beds. Soils are generally shallow with a considerable small rock component. Approximately 1/3 of an acre would require clearing of trees. The trees that would be removed along the east edge of Lonestar are mainly subalpine (cork bark) fir and a few Engelmann spruce. The habitat that would be cleared for the *Rubetzal Return Trail* relocation is mainly aspen and subalpine fir. No streams or springs were identified within the project areas.

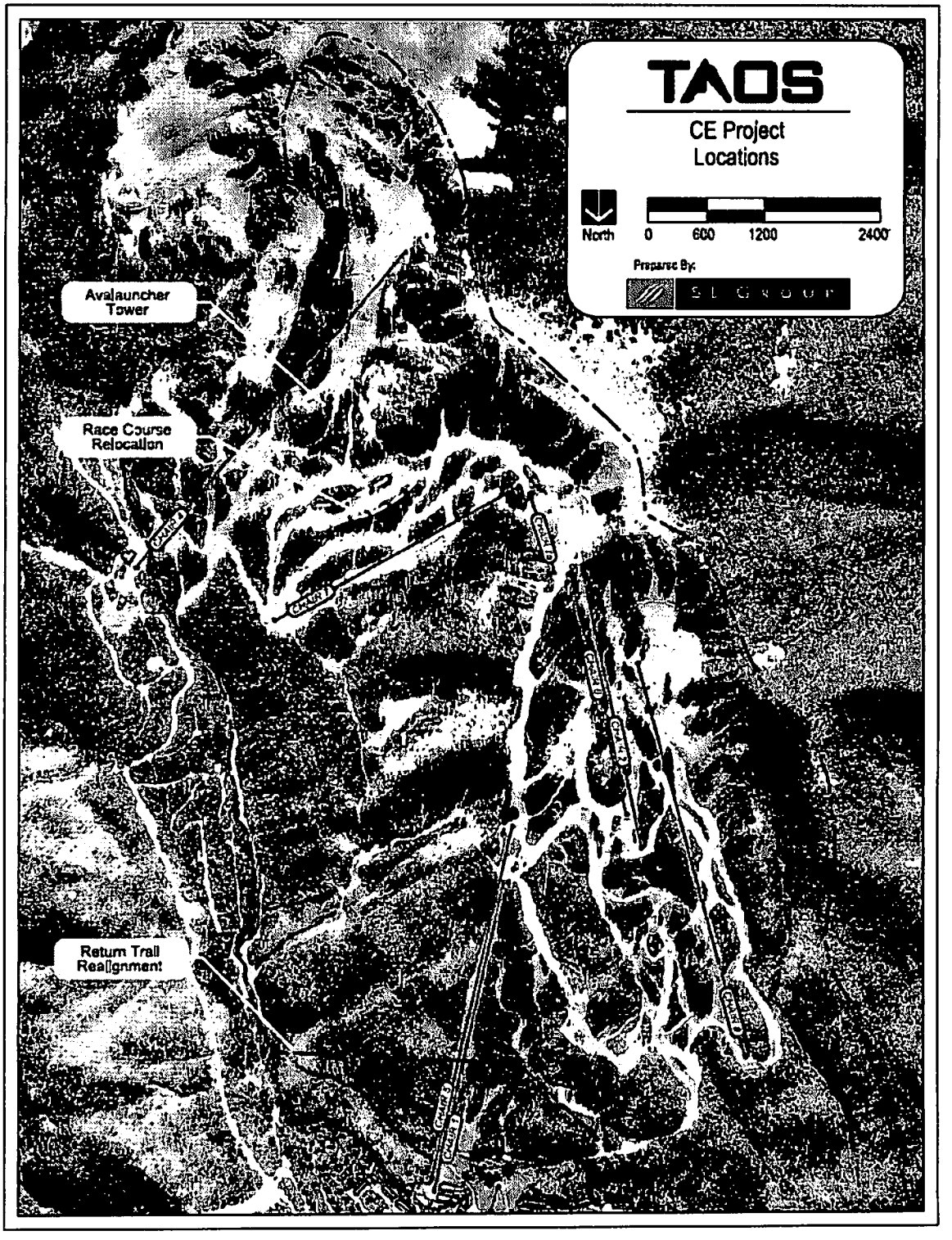


Figure 1. Locations of proposed actions

## D. Federally Listed Species in Taos County

The following list of species was obtained from the US Fish and Wildlife Service Ecological Services Office web site as of June 29, 2009. This provided the most current list of species and listing status.

| Federally Threatened (T), and Endangered (E), | | | | |
|---|---|---|---|---|
| **Species** | **Status** | **Species Occurrence (Yes/No)** | **Habitat present (Yes/No)** | **Details about species occurrence & habitat condition (including surveys, protocols etc).** |
| Mexican Spotted Owl (*Strix occidentalis lucida*) | T | No | No | No effect due to lack of habitat. No critical habitat present. |
| Southwestern Willow Flycatcher (*Empidonax traillii extimus*) | E | No | No | No effect due lack of habitat No critical habitat present. Outside species range |
| Black-footed Ferret (*Mustela nigripes*) | E | No | No | No effect due to lack of habitat. Outside species range |

An on-the-ground survey of all of the proposed activity areas described above has been conducted with any potential effects to these species being considered. After surveying the entire area it is my determination that none of the above species or their habitat occurs within or adjacent to any of the proposed project areas. It is my determination there would be ***"no effect"*** on any federally listed or candidate species. There is no designated critical habitat for any listed species on the proposed sites.

**Prepared by:**
Ben Kuykendall
Journeyman, Wildlife Biologist
Taos, New Mexico

**Signature:**

/s/ *Ben Kuykendall* **Date:** July 7, 2009

**Reviewed by:**

Alyssa Radcliff and George Long
East Zone Carson NF Biologists

Signature:

**/s/ Alyssa Radcliff** **Date**: July 23,009

**Date:** July 23,009

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File Code: 2660 TSV Special Use Permit Date: July 23, 2009
Route To:

Subject: Taos Ski Valley 2009 Maintanence Projects

To: Genevieve Master, Questa District Ranger

Taos Ski Valley (TSV) has proposed several summer operation projects. Based on review of the Forest Terrestrial Ecosystem Survey (TES), the TSV proposed projects are within the TES units 305 and 308, and are approximately 3.2 acres in size. Vegetation the could be found in units 305 and 308 are the following: white fir, corkbark fir, Engelmann spruce, aspen, cliffbrush, alder, Scouler's willow, buffaloberry, huckleberry, whortleberry, sprucefir fleabane, strawberry, pineywood geranium, purple avens, western rattlesnake plantain, twinflower, bluebells, cinquefoil, spearmint, feathery false lily of the valley, pennycress, vetch, gooseberry, Jacob's ladder, and spike trisetum. There is nothing unique about the species occurring in the project area. These species are common and can be readily found in the surrounding area.

After review of the proposed action, TES, and site visits, 0.3 acres of spruce and fir would be removed and 2.9 acres of grassland vegetation disturbed. I have determined that individual vegetation species may be impacted by these projects, however there would be no affect to overall populations of the above listed vegetation species.

Alyssa Radcliff
East Zone District Wildlife Biologist

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East Zone District Wildlife Biologist

TERRESTRIAL ECOSYSTEM SURVEY
Interpretations

Map Symbol: 305
Present Major Uses: Timber production, wildlife habitat
Potential Foreseeable Uses: same as above

**4.0 Interpretations for Selected Uses:**

| Map Unit Components | 4.1 | 4.2 | 4.3 | 4.4 |
|---|---|---|---|---|
| Potential Productivity | | | | |
| Grazing | | lb/ac/yr - dry weight | | |
| Herbaceous/Woody | 100 | | | |
| Forage | 75 | | | |
| Forage (Caninum) | 3750 | | | |
| Timber | | Site Index | | |
| Plan | 65 | | | |
| Abco | 60 | | | |
| Psmg | 60 | | | |
| Fuelwood | | cd/ac | | |
| | --- | | | |
| Potential for: | | Rating | | |
| Revegetation | Moderate | | | |
| Reforestation | Moderate | | | |
| Source Suitability: | | | | |
| Topsoil | Poor | | | |
| | Too Cobbly | | | |
| Roadfill | Poor | | | |
| | Too Cobbly | | | |
| Wildlife Habitat Suit: | | | | |
| Elk | Important | | | |
| Red Squirrel | Important | | | |
| Hairy Woodpecker | Essential | | | |
| Turkey | Used | | | |
| Limitations for: | | | | |
| Timber Harvest | Moderate | | | |
| Cutbank Stability | Slight | | | |
| Unsurfaced Roads | Moderate | | | |
| Trails | Moderate | | | |
| Campgrounds | Severe | | | |
| | Too Steep | | | |
| Wheeled O.H.V. | Severe | | | |
| | Erode easily | | | |
| Management Problems: | | | | |
| Erosion(Sheet & Rill) | Severe | | | |
| Mass Wasting | Soil Creep | | | |
| Windthrow | Severe | | | |
| Plant Competition | Slight | | | |
| | CAREX | | | |

**5.0 Composition of Plant Community:**

| Map Unit Components | | 5.1 | 5.2 | 5.3 | 5.4 |
|---|---|---|---|---|---|
| Scientific Name | Symbol | % Canopy Cover | | | |
| Abies concolor | Abco | 15. | | | |
| Abies lasiocarpa arizonica | Abla | 10. | | | |
| Picea engelmannii | Plen | 25. | | | |
| Populus tremuloides | Potr5 | 5.0 | | | |
| Pseudotsuga menziesii glauca | Psmg | 25. | | | |
| Holodiscus dumosus | Hodu | T | | | |
| Jamesia americana | Jaam | T | | | |
| Juniperus communis | Juco6 | 2.0 | | | |
| Pachystima myrsinites | Pamy | 1.0 | | | |
| Salix scouleriana | Sasc | T | | | |
| Shepherdia canadensis | Shca | 0.2 | | | |
| Symphoricarpos oreophilus | Syor2 | 0.2 | | | |
| Vaccinium myrtillus | Vamy | 10. | | | |
| Vaccinium scoparium | Vasc | 15. | | | |
| Aquilegia elegantula | Agel | 0.5 | | | |
| Campanula rotundifolia | Caro2 | T | | | |
| Erigeron eximius | Erex | 5.0 | | | |
| Fragaria americana | Fram | 1.0 | | | |
| Fragaria ovalis | Frov | T | | | |
| Geranium caespitosum | Geca3 | T | | | |
| Geranium richardsonii | Geri | 0.5 | | | |
| Gondyera oblongifolia | Goob2 | 0.5 | | | |
| Maplopappus parryi | Mapa6 | 0.5 | | | |
| Lathyrus arizonicus | Laar | T | | | |
| Linnaea borealis | Libo3 | T | | | |
| Mertensia ciliata | Meci3 | T | | | |
| Polemonium viscosum | Povi | T | | | |
| Pyrola secunda | Pyse | 1.0 | | | |
| Sedlacina racemosa | Sara | 1.0 | | | |
| Thalictrum fendleri | Thfe | T | | | |
| Vicia americana | Viam | T | | | |
| Bromus ciliatus - | Brci2 | 0.4 | | | |

**5.0 Management Implications:**

5.1 This soil has a high percentage of sand and rock fragments in the subsoil. Inherent fertility and base saturation are low and are limiting factors for soil productivity.

5.2

5.3

5.4

Notes: Soils in this map unit have also formed from colluvium. Parent materials also include quartzite.

TERRESTRIAL ECOSYSTEM SURVEY
Interpretations

Map Symbol: 308
Present Major Uses: Timber production and wildlife habitat
Potential Foreseeable Uses: Recreation

| 4.0 Interpretations for Selected Uses: | 4.1 | 4.2 | 4.3 | 4.4 |
|---|---|---|---|---|
| Map Unit Components | | | | |
| Potential Productivity | 16/ac/yr - Dry Weight | | | |
| Grazing | | | | |
| Herbaceous/woody | 100 | | | |
| Forage | 25 | | | |
| Forage (maximum) | 2200 | | | |
| Timber | Site Index | | | |
| Pien | 70 | | | |
| | | | | |
| | | | | |
| Fuelwood | cd/ac | | | |
| | --- | | | |
| Potential for: | Rating | | | |
| Revegetation | Moderate | | | |
| | | | | |
| Reforestation | Low | | | |
| | too cold | | | |
| Source Suitability: | | | | |
| Topsoil | Poor | | | |
| | Low fertile. | | | |
| Roadfill | Fair | | | |
| | | | | |
| Wildlife Habitat Suit: | | | | |
| Elk | Used | | | |
| Red squirre. | Important | | | |
| Hairy woodpecker | Essential | | | |
| | | | | |
| | | | | |
| | | | | |
| Limitations for: | | | | |
| Timber Harvest | Moderate | | | |
| | | | | |
| Cutbank Stability | slight | | | |
| | | | | |
| Unsurfaced Roads | Moderate | | | |
| | | | | |
| Trails | Moderate | | | |
| | | | | |
| Campgrounds | Severe | | | |
| | too steep | | | |
| Wheeled O.H.V. | Severe | | | |
| | trods easily | | | |
| Management Problems: | | | | |
| Erosion(Sheet & Rill) | Severe | | | |
| | | | | |
| Mass Wasting | Soil Creep | | | |
| | | | | |
| Windthrow | Severe | | | |
| | | | | |
| Plant Competition | Slight | | | |
| | CANBX | | | |

| 5.0 Composition of Plant Community: | | | | | | |
|---|---|---|---|---|---|---|
| Map Unit Components | | 5.1 | 5.2 | 5.3 | 5.4 | |
| Scientific Name | Symbol | % Canopy Cover | | | | |
| Abies lasiocarpa arizonica | Ablaa | 40. | | | | |
| Picea engelmanii | Pien | 55. | | | | |
| | | | | | | |
| Juniperus communis | Juco6 | 1 | | | | |
| Ribes montigenum | Rimo2 | 1 | | | | |
| Vaccinium myrtillus | Vamy | 20. | | | | |
| | | | | | | |
| | | | | | | |
| Erigeron oxidius | Erox | 2.0 | | | | |
| Goodyera oblongifolia | Goob2 | 0.4 | | | | |
| Haplopappus parryi | Hapa6 | 1.0 | | | | |
| Linnaea borealis | Libo3 | 1 | | | | |
| Martensia ciliata | Macl3 | 1 | | | | |
| Polemonium delicatum | Pode | 5.0 | | | | |
| Polemonium viscosum | Povi | 1 | | | | |
| Pyrola secunda | Pyse | 1 | | | | |
| Thalictrum fendleri | Thfe | 1 | | | | |
| | | | | | | |
| Trisetum spicatum | Trsp | 5 | | | | |

6.0 Mangement Implications:

6.1 Absence of aspen in this ecosystem retards natural reforestation and development of a litter layer after site disturbance. Consequently, without this shading reforestation is a slow process. Inherent fertility and base saturation of this soil is low and are limiting factors for soil productivity.

6.2

6.3

6.4

Notes: