

**Preliminary Wildlife/Plant Survey Report**

**Project # 0901091  
North Sheridan Interchange  
Sheridan County**

*Prepared for:*

Wyoming Department of Transportation (WYDOT)  
Environmental Services  
Cheyenne, Wyoming 82009

*Prepared by:*

Vern Stelter  
Vern Stelter Consulting  
5020 Maple Way  
Cheyenne, Wyoming 82009

**August 28, 2009**



## INTRODUCTION AND METHODS

The Wyoming Department of Transportation (WYDOT) is proposing a construction project along I-90 north of Sheridan, Wyoming from RM 19.70 – 22.45. The project includes removal of the existing North Sheridan Interchange and reconstruction of it in a different location, and some additional construction activities within the existing I-90 ROW.

Plans for the project have not been finalized, but the Sheridan District WYDOT office was able to identify the project area currently being considered (Paul Jolovich, project engineer, pers. comm.). This project area includes the current I-90 ROW and current North Sheridan Interchange area, and a new interchange area located approximately 0.25 mile west of where I-90 crosses over the Decker Road. The new interchange would extend approximately 200 feet onto the area adjacent to the I-90 ROW. A new connector road would be constructed from the new interchange north to the Decker Road. Another new connector road would be constructed from the new interchange on the south side of I-90 and would parallel I-90 back to the Decker Road; this new road would be located approximately 200 feet south of the existing I-90 ROW. This reconnaissance and assessment was done assuming the current project plans include all areas that could eventually be disturbed by construction.

An assessment of the project's potential conflicts with wildlife was made. This consisted of:

- A habitat description of the project ROW and extending out as far as one mile on either side of these areas in order to include buffer distances for sensitive species potentially affected by the project.
- A synopsis of existing wildlife information regarding potential or actual habitats and past occurrences of important or sensitive species. The Wyoming Game and Fish Department's Decision Support System (DSS), the Buffalo Field Office of the BLM's sensitive species database, and the Wyoming Natural Diversity Database (WYNDD) were queried for information on habitats and past species observations.
- A field reconnaissance of the project area to identify current potential habitat or habitat use, and for some species, to record actual observations of use. Field work took place on August 25-26, 2009. This involved foot surveys of the I-90 and current North Sheridan Interchange ROWs, and visually surveying the adjacent habitat areas to determine their potential and actual use by individual species.

The potential disturbance areas for the new interchange and connector roads outside the current ROW on both the north and south sides of I-90 are irrigated alfalfa fields (Figure 1). Because of their low potential for sensitive species use, these areas were only surveyed visually from I-90.

## HABITAT DESCRIPTION

The proposed project area is adjacent to a combination of urban (Figure 2), rural development (Figure 3), and agricultural production areas (Figure 1). The project area within the I-90 and current North Sheridan Interchange ROW consists of 2.75 miles of native and non-native roadside vegetation. The ROW contains dry uplands dominated by brome (*Bromus*) and wheatgrass (*Agropyron*) (Figure 4), and wetlands containing emergent vegetation including cattails (*Typha*), bulrush (*Scirpus*), sedges (*Carex spp.*) and very narrow strips of riparian habitat; some willow (*Salix*) and a scattering of other shrubs and small trees also occur there (Figures 5 and 6). These wetland areas were located in the borrow ditches mostly west of the Decker Road (Figure 7). The project area's proximity to irrigated cropland west of the Decker Road likely explains the wetland habitat there. The project area outside the current ROW, which will contain the new interchange and connector roads, is all irrigated alfalfa land and contains no native habitat (Figure 1). Goose Creek crosses the project area and provides aquatic and dense riparian grass, shrub, and tree habitats (Figure 8).

## DATABASE AND RECONNAISSANCE RESULTS

### *Proposed, Threatened, and Endangered Species*

The proposed project occurs within the potential range of the Ute ladies'-tresses orchid (*Spiranthes diluvialis*).

#### **Ute Ladies'-tresses Orchid**

No Ute ladies'-tresses habitat or historic sightings were recorded in the WYNDD database for the project area. Potential habitat for this species, as described in WYNDD (2002), includes riparian areas with vegetative cover of typically 75-90%, but usually short (under 20" tall) and with no vegetative overstory.

The riparian habitat along Goose Creek had a 100% tall vegetative cover (well over 20" tall) and also contained a brush/tree overstory (Figure 8), which provided little habitat for the orchid. An orchid survey in the Goose Creek riparian area was done, and no orchids were observed.

The wetland habitat within the I-90 ROW supports some small areas of riparian habitat that could potentially support the orchid (Figures 5 and 6). However, most of the wetlands had only an extremely narrow band of riparian habitat, if any (Figure 9), due to steep slopes along the edges of the wetlands, and dryland species usually occurred immediately adjacent to the emergent species (Figure 10). Because a small amount of potential habitat was present, an orchid survey was done on all the wetlands areas within the project ROW to determine actual presence. No orchids were observed.

### *Raptor Nesting Habitat*

The BLM database indicated no current or historic raptor nests within one mile of the project ROW. The DSS had records of an active bald eagle (*Haliaeetus leucocephalus*) nest in SWSE section 3, T56N, R84W since 1997. The nest is approximately 0.9 mile from the I-90 ROW, and will be within line of sight of the proposed project area, specifically the new north connector road. The nest has been active for 9 of the last 13 years, and active continually from 2004 through 2009. The nest is less than 0.4 mile and within line of sight of the current Decker Road, and during the years this nest has been active there has been considerable housing development within its 1.0 mile buffer area (Figure 11) and as close as 0.25 mile from the nest. The nest site moved once, in 2004, but only about 200 yards from the first site.

The specific route of the new connector road from the new interchange north to the Decker Road has not yet been identified, but the new road is not anticipated to be any closer to the nest than the existing Decker Road. Thus, there may be construction disturbance as close as about 0.4 mile from the nest, if the new connector road meets the Decker Road where it is closest to the nest site. The level of disturbance near the nest from traffic should not increase post-construction.

This nest site has been inhabited by bald eagles which have, over a number of years, adapted to considerable disturbance much closer than the project area, and have continued to use the nest site successfully. Noise disturbance from construction in the project area is not anticipated to affect these birds. Wyoming Game and Fish Department biologists already monitor this nest annually (Tim Thomas, WGFD biologist, pers. comm.), so additional surveys are unnecessary.

During the field reconnaissance, observations were made of one ferruginous hawk (*Buteo regalis*) and two Swainson's hawks (*Buteo swainsoni*) within 0.25 mile of the project area; all were soaring low over the alfalfa fields in SE section 9, T56N, R84W.

Field reconnaissance indicated potential additional tree nesting habitat for other raptors, primarily along Goose Creek and a few other isolated small stands of trees within one mile of the project area (Figure 12). Considering the level of development that has already occurred near the project area, both in the urban area south of I-90 (Figure 2) and the developed area north of I-90 (Figures 3 and 11); the level of traffic noise along I-90 itself; and the current lack of raptor nest records within a mile of the project area, it is very unlikely that the localized disturbance from road construction would result in additional impacts to nesting raptors.

### *Big Game*

Wyoming Game and Fish Department DSS records indicate the proposed project area is not located within crucial winter range or parturition areas for any big game species. No significant impacts to big game species are expected.

### *Sage Grouse*

Wyoming Game and Fish Department DSS records indicate the proposed project area is not located within a Sage Grouse Core Area or a designated winter use area. The DSS and WYNDD records indicate the project area is not within two miles of an active sage grouse lek.

The field reconnaissance indicated a lack of potential sage grouse habitat, and no sage grouse observations were made. Additional sage grouse surveys are unnecessary, and no impacts to sage grouse are expected.

### *Fisheries*

Goose Creek is a perennial stream passing under the I-90 project area. DSS data indicate the creek at this point may contain any of the following: channel catfish (*Ictalurus punctatus*), creek chub (*Semotilus atromaculatus*), carp (*Cyprinus carpio*), flathead chub (*Platygobio gracilis*), flathead minnow (*Pimephales promelas*), longnose dace (*Rhinichthys cataractae*), shorthead redhorse (*Moxostoma macrolepidotum*), rock bass (*Ambloplites rupestris*), sauger (*Sander canadensis*), smallmouth bass (*Micropterus oldomiei*), stonecat (*Noturus flavus*), and white sucker (*Catostomus commersonii*).

Recommendations regarding aquatic considerations or monitoring for the project area during construction is deferred to the Wyoming Game and Fish Department, and can be specifically addressed once final construction plans and the potential level of disturbance to Goose Creek, if any, can be determined.

### *Wetlands*

The proposed project area contains wetlands (Figures 5, 6, and 7). These were surveyed for Ute ladies'-tresses as described above.

## **CONCLUSIONS**

The proposed project area contains dry upland habitat, wetlands with small amounts of adjacent riparian habitat, and aquatic and dense riparian habitats along Goose Creek within the current I-90 ROW, and irrigated alfalfa fields in the project area outside the I-90 ROW. Database searches indicated no historic records of sensitive species within the proposed project area, and records of one bald eagle nest just under a mile away. Considering the historic level of nearby development and traffic disturbance tolerated by the bald eagles that have continuously and successfully used this nest for several years, the distance of the bald eagle nest from disturbance and the expected level of disturbance from the project, and the lack of other raptor nest records, impacts to these eagles and other nesting raptors during construction are not anticipated.

Field reconnaissance showed the presence of potential habitat for Ute ladies'-tresses, but a follow-up survey failed to discover any plants.

The Wyoming Game and Fish Department should be consulted regarding potential issues with the fishery resource in Goose Creek, if the creek is expected to be effected by construction.

#### LITERATURE AND INFORMATION CITED

Bureau of Land Management. 2009. Review of BLM raptor database information, Jennifer Morton, personal communication, Buffalo Field Office, Buffalo, WY.

Decision Support System (DSS). 2009. Review of database information, Rick Huber, personal communication, Wyoming Game and Fish Department, Cheyenne, WY.

Jolovich, Paul. 2009. Project Engineer, Sheridan District Office, WYDOT. Personal communication.

Thomas, Tim. 2009. Biologist, Wyoming Game and Fish Department, Sheridan. Personal communication.

Wyoming Natural Diversity Database. 2002. State Species Abstract, *Spiranthes diluvialis*, authored by Walter Fertig.

Wyoming Natural Diversity Database. 2009. Data compilation for V.Stelter, completed July 24, 2009. Unpublished report. Wyoming Natural Diversity Database, University of Wyoming, Laramie, Wyoming.



Figure 1. Irrigated alfalfa fields where new interchange and connector roads will be located.



Figure 2. Urban area south of I-90 right-of-way.





Figure 3. Rural development area adjacent to north side of I-90 right-of-way.



Figure 4. Dry upland vegetation area within I-90 right-of-way.



Figure 5. Emergent wetland vegetation within I-90 right-of-way.



Figure 6. Emergent wetland vegetation includes some trees and shrubs.

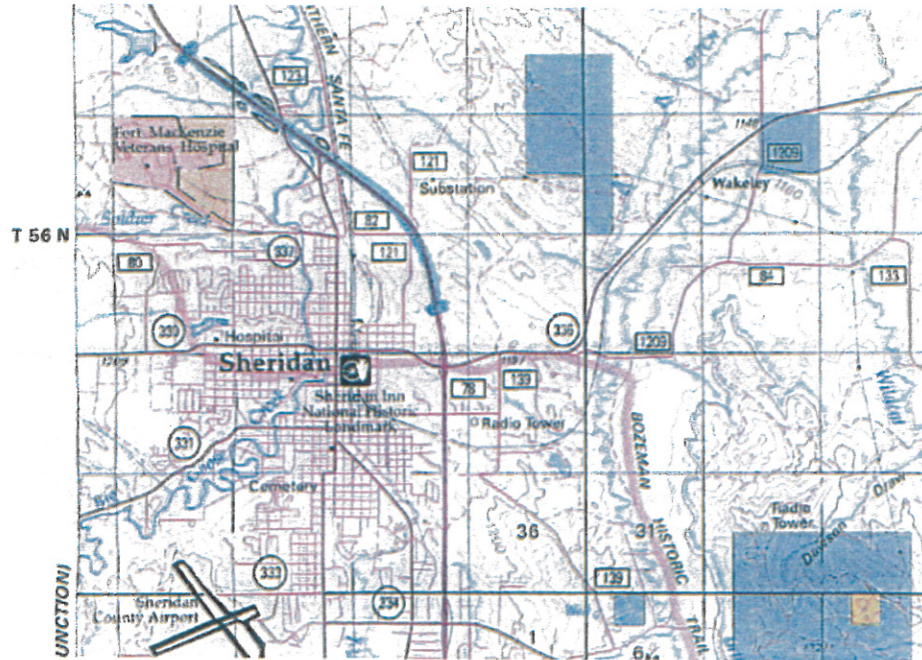


Figure 7. Locations of wetland areas within I-90 right-of-way.

 = I-90 project location



Figure 8. Goose Creek aquatic and riparian habitat at I-90 bridge.



Figure 9. Wetlands area with very narrow riparian strip beside it.



Figure 10. Wetland habitat showing steep slopes and rapid transition to dryland vegetation.



Figure 11. Density of development well within one mile of bald eagle nest.



Figure 12. Scattered potential tree-nesting habitat for raptors within one mile of the project area.