

Paleontological Resources Technical Report

**State Highway 82 / Entrance to Aspen
Environmental Reevaluation**

February 20, 2007

**Colorado Department of Transportation, Region 3
and
Federal Highway Administration, Colorado Division**

**Prepared by:
HDR Engineering, Inc.**

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1.0 Affected Environment

This report provides a reevaluation of the paleontological resources analysis presented in the 1997 State Highway 82 Entrance to Aspen Final Environmental Impact Statement (FEIS) for the Preferred Alternative selected in the Record of Decision (ROD) issued in August 1998.

1.1 Methodology

The paleontological reports, prepared in 1988 and reassessed in 1990 for the EIS, were reviewed to determine the status of paleontological resources at the time of the FEIS publication. Steve Wallace, Colorado Department of Transportation (CDOT) paleontologist, was contacted to determine what additional reconnaissance work was required to re-evaluate the existing conditions. Wallace (2006) conducted a museum file search to determine if any fossils have been recovered from the project area since the original reconnaissance studies and publication of the FEIS.

1.2 Regulatory Overview

There have been no new or changed regulatory requirements since the publication of the 1997 FEIS. Paleontological resources are governed under the Historical, Prehistorical, and Archaeological Resources Act [Colorado Revised Statute 24-80-401ff, a.k.a. State Antiquities Act], which protects all fossils on state-owned lands and lands controlled by any subdivision of state government. While the requirement to locate and assess the scientific importance of fossils on state-owned lands is not stated explicitly in the law, it is implicit in the requirement to avoid any damage to, destruction or removal of the resource without a permit.

1.3 Description of the Existing Condition

Since publication of the 1997 FEIS, there have been no changes in known paleontological resources in the project area. The FEIS indicated that the geological deposits have potential to yield fossils and have produced fossil remains elsewhere in central and southwest Colorado. However, the results of the 1990 assessment indicated that vertebrate fossils are probably not preserved in the project corridor in appreciable numbers. The file search conducted on July 3, 2006, revealed that no additional fossils have been recovered near the project area (Wallace, 2006).

Two components of the Preferred Alternative have been constructed since the publication of the FEIS and ROD: (1) Owl Creek Road and West Buttermilk Road have been relocated to create a new, signalized

intersection with State Highway 82 near the Buttermilk Ski Area; and (2) the roundabout at the Maroon Creek Road intersection has been completed.

In addition, the Maroon Creek Bridge Replacement Project is currently under construction, scheduled for completion by spring of 2008. This project is being constructed as a bridge replacement without any increase in roadway capacity. However, it will accommodate the Entrance to Aspen Preferred Alternative in the future by removing the center median and re-striping for two general-purpose lanes and two exclusive bus lanes (see the Introduction to the Technical Report Volume for more detail).

The intersection of Truscott Drive and State Highway 82 was completed in 2001. While this intersection is not part of the Entrance to Aspen Project, its configuration accommodates the alignment for the east approach to the Maroon Creek Bridge Replacement Project.

A transportation easement across the Marolt-Thomas Open Space was conveyed from the City of Aspen to CDOT in August of 2002, as part of land exchange and mitigation agreements between CDOT and the City of Aspen and Pitkin County. (Refer to Appendix A and B in the 1998 Record of Decision for details of the open space conveyance agreements and mitigation commitments.)

2.0 Environmental Consequences

This section describes the environmental impacts of the Preferred Alternative that have changed since publication of the FEIS and ROD. Impacts considered included impacts from the construction, operation, and maintenance of the Preferred Alternative.

2.1 Methodology

The changes in existing conditions were compared against the potential construction disturbance (for example, grading and cuts into potential fossil bearing formations). Operational impacts that might expose fossils also were considered for the Preferred Alternative selected in the 1998 ROD. For paleontological resources, there were no changes observed in the existing conditions; therefore, no additional impact analysis was necessary.

2.2 Preferred Alternative

The potential for paleontological resources to be present in the project corridor is low based on the original reconnaissance study and the 2006 research file search. No changes in the existing paleontological conditions have occurred since publication of the FEIS so no additional impact analysis was necessary.

No paleontological resources were encountered during the previous construction of the intersection improvements or roundabout (as evidenced by the 2006 file search), and no resources have been encountered to date in the Maroon Creek Bridge construction area.

3.0 Mitigation Measures

The mitigation measures described in the 1997 FEIS (page VI-4) have been implemented for components of the Preferred Alternative already constructed or currently under construction. These measures also would be implemented during construction of future components of the Preferred Alternative, and are adequate to protect potential paleontological resources in the project area. No additional mitigation would be needed, based on current conditions and regulations.

4.0 Summary of Impacts and Mitigation

Impacts are summarized below in Table 4-1 as identified in both the FEIS and this reevaluation. Mitigation measures listed in the table are those from the 1998 ROD, unless additional measures are noted as being required due to findings of the reevaluation.

**Table 4-1
Summary of Impacts and Mitigation Measures**

Topic	FEIS Impact	Reevaluation Impacts	Mitigation Measures
Paleontological Resources	No impacts identified	No change	If any paleontological resources are uncovered along the alignment during construction, work in the immediate vicinity will cease, CDOT staff paleontologist will be notified, and the material will be evaluated by a qualified paleontologist and coordinated with the SHPO.

5.0 Agency Coordination and Consultation

The CDOT paleontologist, Steve Wallace, was contacted on June 30, 2006 to discuss the previous paleontological resources report that was prepared for the 1997 FEIS. As a result of the discussion, the paleontologist conducted a file search on any paleontological recoveries in the area since the FEIS. File searches were conducted with the University of Colorado Museum and the Denver Museum of Nature and Science. No additional records of paleontological finds were recorded in either file search. The results of the file search are provided in Appendix A.

6.0 References

Colorado Department of Transportation (CDOT). No Date. CDOT Paleontology Analysis and Documentation Procedures. Available at:
<http://www.dot.state.co.us/environmental/CulturalResources/Paleontology.asp> accessed on June 30, 2006.

CDOT, August 1995. State Highway 82 Entrance to Aspen Draft Environmental Impact Technical Reports. *Paleontology*.

Wallace, Steve. 2006. Personal Communication between Steve Wallace, CDOT Paleontologist and Laura Lutz-Zimmerman, HDR Engineering regarding re-evaluating paleontological resources.

7.0 List of Preparers

Laura Lutz-Zimmerman, Environmental Scientist, HDR Engineering, Inc.

Appendix A: Results of File Search

Zimmerman-Lutz, Laura R.

From: Wallace, Steven [Steven.Wallace@dot.state.co.us]
Sent: Thursday, July 06, 2006 4:15 PM
To: Zimmerman-Lutz, Laura R.
Subject: RE: Follow up on Aspen Re-evaluation

Laura,

The Denver Museum has recorded no fossil localities anywhere in Pitkin County, ever. Therefore, I believe the paleontological assessment presented in the old Entrance to Aspen FEIS is still valid.

Steve

From: Zimmerman-Lutz, Laura R. [mailto:Laura.Lutz-Zimmerman@hdrinc.com]
Sent: Thursday, July 06, 2006 2:58 PM
To: Wallace, Steven
Subject: RE: Follow up on Aspen Re-evaluation

Steve - Thanks for the update. Let me know what you find out this afternoon. --Laura

Laura R. Lutz-Zimmerman

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From: Wallace, Steven [mailto:Steven.Wallace@dot.state.co.us]
Sent: Thursday, July 06, 2006 1:31 PM
To: Zimmerman-Lutz, Laura R.
Subject: RE: Follow up on Aspen Re-evaluation

Laura,

I received an e-mail response yesterday from the University of Colorado Museum; they have no new localities within the Entrance to Aspen EIS limits. The keeper of the records at the Denver Museum of Nature and Science is out of the office until July 17, so I am going to have to go up there myself and see if they have any new localities (which I seriously doubt since they rarely, if ever, work up in the Aspen area). I was planning to go up there (to the Museum) this afternoon, and the car I had signed out to go up there just now got back to the office, so I should be leaving shortly to find what I can find out. I'll let you know as soon as I have results.

Steve

From: Zimmerman-Lutz, Laura R. [mailto:Laura.Lutz-Zimmerman@hdrinc.com]
Sent: Thursday, July 06, 2006 1:24 PM
To: Wallace, Steven
Subject: Follow up on Aspen Re-evaluation

7/10/2006

Good Afternoon Steve -

We spoke on Friday regarding the Aspen Re-evaluation project. You indicated that you would complete the file search to make sure no additional resources were found since the original EIS. When we spoke, you indicated to follow up via email this week to see what you found; I am following up as agreed. Please let me know what you found. Below is my contact information. Thank you.

Laura

Laura R. Lutz-Zimmerman
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