



November 12, 2009

VIA EMAIL: MHERMES@rfta.com

Mike Hermes
 Director of Property and Trails
 Roaring Fork Transportation Authority
 0766 Industrial Place
 Carbondale, CO 81623

Re: Non-winter Rio Grande Trail ecological monitoring update

Dear Mike:

In 2008, the RFTA Board requested that Colorado Wildlife Science, LLC (CWS) expand the Rio Grande Trail (RGT) monitoring effort to include additional taxa during the non-winter months. The additional monitoring serves 2 purposes: (1) Provide additional information regarding the trajectory of ecological communities within the Rock Bottom Ranch (RBR) to Catherine Store Road section of the RGT to the RFTA Board so that they can make informed decisions regarding management of that trail section; and (2) Help RFTA meet the monitoring requirements of the CDOT Categorical Exclusion. CWS proposed to use the following methods in 2009 to produce information on the status of target species or suites of species:

TAXA	METHOD	TIME PERIOD(S)	NEW or ONGOING	RECOMMENDATION
Birds	Point Transect	Early summer	Ongoing	Continue
Mammals	Winter Track Surveys	Dec 1 – April 30	Ongoing	Continue
Mammals	Motion Sensitive Monitoring Cameras	12 months	Ongoing with non-winter period added	Continue
Mammals	Pellet/Scat Surveys	May 1 – November 30	New	Terminate/Replace
Bald Eagles	Surveys concurrent with track surveys	Dec 1 – April 30	Ongoing	Continue
Great Blue Herons	Heronry monitoring	March 1 – July 15	Ongoing	Continue
Waterfowl	Ground surveys	Breeding (March-June) Fall Migration (Sept-November) Spring Migration (February-May)	New	Continue

Efficacy of Added Methods

The 2009 season was essentially a pilot for the new monitoring efforts. While some of the methods were successful and provided valuable information, others were not.

1. **Motion Sensitive Monitoring Cameras (Non-winter months)** – The cameras were re-located off the RGT to avoid capturing human trail users. The non-winter locations are positioned along game trails within the right-of-way. The cameras are working and providing valuable information regarding use of the trail corridor by elk and mule deer, temporal variation in abundance of deer and elk, and presence/absence and seasonal use information for other species such as black bears, bobcats, and wild turkeys. Unfortunately, 2 of the cameras were tampered with mid-summer and all of the photos to that date were lost. In response, CWS has improved the security precautions and, with Mike Hermes' approval, increased the frequency of maintenance visits.
2. **Pellet/Scat Surveys** – Unfortunately, this effort revealed little information. The survey protocol was based on the approach outlined in detail by Smith et al. (1969). This approach uses linear transects with circular plots spaced at regular intervals along the transect. The plots are counted and cleared each month. The surveys were coordinated with the trail sweeping schedule to ensure that sign found during surveys was not re-counted. Although spring surveys provided information on both mule deer and elk, the number of pellet groups found on the trail declined rapidly as spring progressed to summer. By late June, few if any pellet groups were found. In late September, the number of pellet groups began to increase again. This method failed to provide adequate, consistent information throughout the non-winter months and has been terminated.
3. **Waterfowl Surveys** – Surveys were conducted every 14 days throughout the spring migration (February-May), breeding season (March-June), and fall migration (September-November). The 2009 pilot season started in late June and continued until mid-September with a total of 9 survey periods. The Total Count (TC) survey method was used. In the TC method, all waterbirds seen and heard within 100 meters on either side of the transect (that consists of the entire length of the trail corridor from RBR to Catherine Store Road) are recorded. In the 2009 pilot season, this method provided information on waterfowl that was previously uncollected. Species richness and composition of waterfowl within the trail corridor can be determined. Over time, use of the trail corridor by waterfowl as a group and, if sample sizes are sufficient, by individual species will be analyzed for trends.

Proposed Changes

Since it is the desire of the RFTA Board to monitor ungulates in the non-winter months, and the pellet counts were unsuccessful, CWS proposes to replace that monitoring effort with **Spotlight Counts**. Ungulates are generally difficult to observe during daylight hours because of their secretive behavior and low activity at that time. At night, however, ungulates move into open areas to feed and they tend to be less easily alarmed. Ungulates can be readily detected with spotlights at night because the light reflects from the tapetum of their eyes. Spotlight counts are essentially simple night time encounter counts that use roads, or in this case the RGT, as transects. Subsequently, the assumptions and requirements for spotlight counts are similar to

those for transects. They are used both to estimate population density (absolute abundance), as indices of abundance (relative abundance) and to monitor population trends from year to year.

Please let me know if you have any questions.

Sincerely,
COLORADO WILDLIFE SCIENCE, LLC



Jonathan Lowsky
Wildlife Biologist/Principal

Literature Cited

Smith, R. H., D. J. Neff, and C. Y. McCulloch. 1969. A model for the installation and use of a deer pellet group survey. Arizona Game and Fish Department. 30 pp.