

AASHTO NATIONAL ENVIRONMENTAL STEWARDSHIP COMPETITION

Category: Project
 Program
 Institutionalization/Organization Change

Application Title: Shortgrass Prairie Initiative

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The Shortgrass Prairie Initiative is a MOU between CDOT, FHWA, USFWS, state natural resource agencies and The Nature Conservancy that commits the participants to work to mitigate anticipated impacts to the shortgrass prairie ecosystem from CDOT projects identified in the 20 year transportation plan in advance of their construction. By mitigating in advance of impacts, critical species habitat will be preserved and the probability of at risk species requiring protection under the ESA will be reduced. ESA requirements will be addressed on system wide basis, thus expediting project specific processing time. Started in January of 2001, the formal MOU has been signed by all parties, the BA will be signed in April 2003. This Initiative has been awarded FHWA's National Environmental Stewardship Award.

Colorado's portion of the central shortgrass prairie ecosystem covers one third of the state from approximately I-25 to the Kansas border, totaling over 27 million acres, 91 percent of which is in private ownership. The cumulative impact of the loss or decline of important herbivores such as bison, elk, and prairie dog; plowing for agricultural crops; establishment of tree lined water courses; water and wind erosion; development of dams and irrigation systems; invasive species; fire suppression; development; and declining water availability have all contributed to the shortgrass prairie being one of the most imperiled ecosystems in North America. Of over 100 declining species, 54 are globally imperiled, 10 are listed under the ESA, one is proposed, and 6 are candidates.

As development continues in Colorado, habitat diminishes, and the number of federally listed species increases, CDOT has had to spend an increasing amount of time clearing projects – researching species potential to occur at a given site, performing site visits, conducting or contracting out habitat assessments or surveys, drafting Biological assessments, and developing mitigation plans. Species listings under the ESA and those listed as sensitive by the Forest Service continue to increase. Surveys for multiple species can impact project schedules, especially when changes occur. Emergency listings can thrust CDOT projects in construction or scheduled for construction, into formal consultation with the FWS, which can stop or significantly delay a project. Any new

listing also brings a period of uncertainty as the FWS develops internal agreement on acceptable approaches to mitigation.

The impact assessment approach and conservation concept were crafted according to established environmental planning and site assessment principles in partnership with public interest and research organizations, including The Nature Conservancy, the Colorado Natural Heritage Program, and the Rocky Mountain Bird Observatory. The Farm Bureau, the Colorado Cattleman's Association, and local governments historically skeptical of conservation initiatives provided input into the process and were consulted at various points. Environmental organizations such as the National Wildlife Federation, Audubon, and the Sierra Club were consulted at meetings of Colorado's Environmental Roundtable. A wide community of species experts in each taxonomic group contributed to the list of target species, identified range and potential impacts from CDOT projects, and types of mitigation that would benefit the species and ecosystems. TNC's ecoregional planning process assembled and combined the knowledge of federal and state agency, university, and NGO experts to identify viable communities and functional conservation areas, stresses, threats, and how to remove such threats, and promote and measure progress towards improved ecosystem health. CDOT's off-site conservation measures will preserve a large site otherwise subject to imminent development and likely extirpation of several rare plant species. Adaptive management plans to address particular ecosystem enhancement opportunities for the off-site conservation will be developed, employing emerging techniques to preserve ecosystem integrity and viable species communities.

CDOT and FHWA are submitting a programmatic Biological Assessment to the FWS in April of 2003, along with the conference report and conservation strategy for 36 species. The FWS has been a critical partner in the process and in the creation and review of the Assessment, so a Biological Opinion is expected in April 2003. This will coincide with CDOT's Request for Proposal for conservation services or credits (acquisition of easements and long-term adaptive management of the site); the groundwork for such partnerships with interested conservation organizations has already occurred, leading to the identification of, and management planning for sites. The completed BA, conference Report and Conservation Strategy will be available upon request.

The interagency vision, and the opportunity to realize it, is made possible by several factors:

- ● The recognition by CDOT, FHWA, FWS, and DOW that the consultation process was often just that, a verbal conferral and documentation process, that often resulted in little tangible contribution to the listed species or recovery, much less to imperiled non-listed species and threatened ecosystems.
- ● Impending listing of the Mountain Plover and its interdependence with the federal candidate species, the Black-tailed Prairie Dog, colonies of which host a large number of declining migratory bird species.

- - The existence of a collaboratively developed and scientifically based conservation plan for the central shortgrass prairie ecoregion – one of the most imperiled ecosystems in the nation – compiled by The Nature Conservancy following data collection and meetings with interagency, university, NGO, and biological specialists and researchers.
- - The willingness of the FWS Colorado Division to utilize best available data and develop their programmatic biological opinion and conference report based upon presumed presence of species and a habitat-based impact assessment. Importantly, FWS has provided CDOT with an adequate basis of assurance to justify CDOT’s investment in advance, off-site conservation measures for 18 additional species. On-site, programmatic Best Management Practices were also developed for a number of these species to ensure project designs incorporate environmental needs on a project as well as on a planning level. Avoidance and minimization of impacts and enhancement of habitat on-site comprise the conservation measures for 18 species, mainly aquatic species and butterflies.
- - CDOT’s instigation of revolving loan funds for advanced environmental mitigation, to realize conservation and recovery opportunities, and associated regulatory streamlining, in a timely manner.

CDOT’s Shortgrass Prairie Initiative emerged from a shared vision that public transportation agencies can make a contribution to recovery of declining prairie ecosystems and a large number of associated species listed as threatened or endangered, proposed, or candidate species at the federal and/or state level, as well as for sensitive and otherwise imperiled species while simultaneously greatly streamlining current and future consultation requirements. In total 36 species and six, aggregated, habitat types will be protected under this programmatic ESA section 7 consultation and conference report. It will also benefit a large number of other associated species. Discussions are underway for the conservation (preservation, restoration of certain areas, and adaptive management for species and ecosystem viability) of no less than 15,000 acres and likely around 50,000 acres, via conservation easements and perpetual management agreements. The project is designed to satisfy current and future ESA section 7 consultation requirements for listed, and non-listed species including the impact analysis and conservation area design, thus avoiding future project and process delays while protecting and enhancing the environment.

The conservation strategy will offset potential permanent habitat loss through large-scale habitat protection. During a 20-year time period, the maximum percent of existing roadways within Colorado’s central shortgrass prairie anticipated to undergo construction of safety, re-construction, or capacity improvements is estimated at 22% by CDOT. This estimate is based upon estimated funding levels as of 2000 and 2001, and that amount of time required to complete construction projects. Therefore, “maximum potential impact” was determined to be 22% of the number of acres of presumed presence within the impact zone for each species. Once the maximum potential impact was calculated for

each species, impact zones for each species were overlaid to subtract overlap amongst species (i.e., to account for areas providing potential habitat for multiple species).

Yearly reports will be required demonstrating that the off-site preserve is providing adequate habitat for the species it is intended to cover. This will be assured through the used of an adaptive management plan approved by the FWS. CDOT is also responsible for yearly reporting on the areas and types of impacts that have occurred.

The Shortgrass Prairie Initiative represents the magnitude of what agencies can accomplish when they work together towards a common goal, and as such is deserving of a best practices award. Agency partners felt that the project-by-project section 7 consultation process takes a great deal of time and resources that might be better invested towards proactive species conservation. Furthermore, addressing species needs on a project-by-project basis can yield scattered and fragmented habitat conservation or improvement, which contributes little to the long term viability of a species and the habitats and ecosystems upon which these species depend. By contributing to multi-species recovery in an integrated and comprehensive fashion, the partners will aid in the recovery of listed species, alleviate the need for additional listings under the ESA, and by early compliance with the ESA, improve the predictability of scheduling the project development process. The interagency team also expects wiser utilization and investment of public funds, and avoidance of increased land costs, which have increased approximately 10% annually in recent years.