

Stribley, Sara

From: Johnson, Charlie
Sent: Wednesday, March 07, 2007 8:32 AM
To: Stribley, Sara
Subject: RE: BO to MoDNR for Confluence State Park 2003

There are some conservation measures for bald eagle and other species that should be included in the BMPs /mitigation

-----Original Message-----

From: Ellie_Milligan@fws.gov [mailto:Ellie_Milligan@fws.gov]
Sent: Wednesday, March 07, 2007 7:33 AM
To: Johnson, Charlie
Subject: BO to MoDNR for Confluence State Park 2003

Charles,

Charlie Scott has requested that I send you the attached BO for the Confluence State Park in St. Charles County, Missouri.

If you need anything else, please let me know.

Elderine

(See attached file: DNRBO20030114.pdf)

~~~~~

Elderine Milligan  
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**CONFIDENTIAL**

*Boltonia*



## United States Department of the Interior

FISH AND WILDLIFE SERVICE  
Columbia Ecological Services Field Office  
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April 25, 2003

**FILE**

Mr. Danny McClendon, Chief  
Regulatory Section  
U.S. Army Corps of Engineers  
1222 Spruce Street  
St. Louis, Missouri 63103-2833

Dear Mr. McClendon:

This is the U.S. Fish and Wildlife Service's (Service) biological opinion on the effects of the proposed Confluence State Park development in St. Charles County, Missouri on the federally threatened bald eagle (*Haliaeetus leucocephalus*) and the decurrent false aster (*Boltonia decurrens*), in accordance with section 7 of the Endangered Species Act (ESA) of 1973, as amended (16 U.S.C. 1533 et seq).

This biological opinion is based on the information provided in the U.S. Army Corps of Engineers' (Corps) November 20, 2002, Public Notice; a December 11, 2002, site survey; a February 28, 2003, letter from the Missouri Department of Natural Resources (MDNR) summarizing management considerations for the decurrent false aster; a March 3, 2003, facsimile from MDNR showing a new bald eagle nest on site; published literature; gray literature; personal communication with species experts; and other sources of information. An administrative record of this consultation is on file in this office.

### Consultation History

On November 22, 2002, the Service received Public Notice P-2361, in which the MDNR requested a Section 404 permit to construct an access road and facilities associated with development of a new state park at the confluence of the Missouri and Mississippi Rivers. Shortly thereafter, the Service contacted Mr. Ken McCarty, MDNR, for more information on the proposed project. During that phone conversation, the Service learned that there appeared to be a new record of the decurrent false aster from the project area. On December 11, 2002, Jane Ledwin of the Service, Ken McCarty with MDNR, and Dr. Marian Smith, SIU, conducted a site visit to confirm the presence, extent, and suitability of the project site for decurrent false aster. Approximately 20 plants were confirmed in a scour hole that will be filled to construct the access road. Those plants undoubtedly would be disturbed and likely buried by project construction.

On December 12, 2002, the Service contacted the Corps to report the results of the site visit, and discuss the need for formal consultation to address project effects to the decurrent false aster. The Service received the Corps January 7, 2003, request for formal consultation on January 9, 2003. The Service acknowledged the Corps request for formal consultation in a letter dated January 13, 2003.

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1. Transplant the existing decurrent false aster plants to a suitable habitat identified near the east end of the property.
2. Collect seed from nearby locations to distribute within the Confluence Point State Park.
3. Distribute part of the seed on a portion of the newly created road banks to produce a seed crop for natural dispersion during floods. No other annual or perennial cover will be established at those areas to give the plants opportunity to mature and produce seed.
4. Distribute additional seed within a low swale near the confluence point which has been identified as excellent decurrent false aster habitat.
5. Establish a small decurrent false aster nursery population at an accessible location on site and maintain it by mowing, weeding, or light cultivation to serve as a seed collection site until viable natural populations establish themselves elsewhere on the property.
6. Design the proposed 10-acre wetland mitigation area to include intermediate terraces or small islands below bank-full elevation that would be inundated at high water but exposed for seed germination by early summer. Distribute additional seed within this wetland mitigation area.

## Status of the Species

### Bald Eagle

#### Species description, habitat and life history

The adult bald eagle (*Haliaeetus leucocephalus*) is a large, powerful brown raptor with a white head and tail. Young eagles are mostly dark brown until four to six years of age and may be confused with the golden eagle (*Aquila chrysaetos*). Bald eagles are the only sea eagles regularly occurring on the North American continent, and range from central Alaska and Canada to northern Mexico. Adult male birds weigh 8-10 pounds and may grow to 3 feet, head to tail; females may weigh up to 14 pounds and grow to 3.5 feet. Bald eagles have a wing-span of up to eight feet. Formerly nesting throughout North America, bald eagles now breed mainly in Alaska, Florida, and Canada and the adjacent states. They winter at widely scattered locations throughout the continent and are a common sight along the Upper Mississippi River.



In 1978, the bald eagle was listed as endangered throughout the lower 48 states, except in Michigan, Minnesota, Wisconsin, Washington, and Oregon, where it was listed as threatened (43

FR 6233). Since then, the bald eagle has made a remarkable comeback and on June 12, 1995, the Service published a final rule reclassifying the bald eagle from federally endangered to threatened throughout the lower 48 states (60 FR 36010). The rule was effective on August 11, 1995. No Critical Habitat has been designated.

Five recovery regions (Pacific, Southwestern, Southeastern, Chesapeake Bay, and Northern States) have been designated for the eagle in the lower 48 states. Missouri is within the Northern States Recovery Region. The Service published the Northern States Bald Eagle Recovery Plan in 1983. Major recovery steps outlined in the plan include: (1) determine current population and habitat status; (2) determine population and habitat levels needed to achieve recovery; (3) protect, enhance, and increase bald eagle populations and habitats; and (4) establish and maintain communication to coordinate and conduct recovery efforts.

Bald eagles are strongly associated with aquatic environments. Nesting eagles are associated almost exclusively with lakes, rivers, or sea coasts where fish, a major item in their diet, are readily available. Winter habitat for eagles also is closely associated with open water where eagles congregate to feed on fish and waterfowl (Osterfeld 1988).

Both nesting and wintering habitats must have adequate perching, roosting, and nesting sites (most often trees) and an adequate food base to support eagles. Preferred perching sites are trees with diameter-at-breast height greater than 12 inches, within 100 feet of water. Larger, more open-branching trees are also favored by wintering eagles for night roosts. At night, wintering eagles often congregate at communal roost trees, in some cases traveling 12 miles or more from feeding areas to roost (U.S. Fish and Wildlife Service 1983). Where they occur throughout the range, cottonwood (*Populus sp.*) and bald cypress (*Taxodium distichum*) trees are often selected over other trees for perching and roosting. Sheltered timber stands are important as alternative night roosts during severe winter weather because of the thermal protection they provide. At lower latitudes in the winter range, however, sheltered communal roosts are probably less important. Although the diet of bald eagles consists largely of fish, they are opportunistic and will take carrion and small mammals, in addition to waterfowl. In some areas, waterfowl are important in eagle diets (Griffin et al 1982).

Eagles usually locate prey by soaring or watching from a high perch, but can also obtain food through piracy. In Missouri, wintering birds typically occur between November 15 and March 1. They begin to move back north again in late February, and, except for breeding pairs, it is rare to see an eagle in Missouri after April 1 (Missouri Department of Conservation 2002).

Bald eagles reach maturity between four and six years of age. Breeding pairs of bald eagles unite for life or until the death of their mate. During the nesting season, bald eagles are rather solitary. Elements important in nest site selection include (1) the proximity of water (usually within 0.5 mile) and a clear flight path to adjacent water; (2) the largest living tree in a span; and, (3) an open view of the surrounding area. The proximity of good perching trees may also be a factor in site selection (U.S. Fish and Wildlife Service 1983). An otherwise suitable site may not be used if there is excessive human activity in the area. Adults tend to use the same breeding area and often the same nest each year. Nest initiation activities may begin as early as January with incubation and rearing of young from March through mid-May. Females lay one to three eggs depending on environmental conditions and the fitness of the female. Incubation lasts about 35 days, and young fledge 10-14 weeks after hatching. Most young fledge from June 1 to mid-July

in Missouri. Bald eagles are long-lived birds with a life expectancy in the wild of up to 30 years.

#### Status and Distribution

Bald eagle populations declined from historic levels primarily because of habitat loss and environmental contamination (U.S. Fish and Wildlife Service 1983). Habitat loss, as well as shooting and trapping, were especially prevalent during the 19th century and are still responsible for eagle deaths each year. During the mid-20th century, the effects of organochlorine insecticides caused significant declines in remaining nesting populations. Dieldrin and endrin were implicated most often in acute poisonings. However, DDE, a metabolic breakdown product of DDT and other organochlorine insecticides caused the largest impacts by inducing production of thin-shelled eggs which cracked under the weight of parent birds during incubation, impairing reproduction.

The ban on use of DDT and other organochlorine insecticides in the 1970s and 80s has profoundly benefitted bald eagle recovery. Nonetheless, pesticide poisoning of eagles has continued. The National Wildlife Health Research Center has diagnosed over 100 cases of contaminant poisoning over the past 15 years. Secondary poisonings of bald eagles have increased in the Plains and Rocky Mountain regions from pesticide-laced carcasses used to kill predators. Eagle reproduction in the Great Lakes is still impaired by persistent contaminants such as PCBs.

Along certain reaches of some regulated rivers (e.g., upper Missouri River), future availability of cottonwoods and other large floodplain trees needed for nesting, roosting, and perching is a concern because of altered flow regimes and channel stabilization that have led to widespread agricultural development of former forested riparian and wetland habitats (U.S. Fish and Wildlife Service 1983). Although reservoir construction and operation have modified river and stream habitats used by eagles, they have, in some cases (e.g., reservoir tailwater areas), expanded eagle feeding habitat and wintering areas.

Human disturbance to nesting and wintering eagles may also negatively affect bald eagles by causing eagles to abandon preferred habitat areas (Hopkins 1988, U.S. Fish and Wildlife Service 1983). Wintering eagles on the Mississippi River abandoned traditional roost areas because of frequent human disturbance from all-terrain vehicle use (Hopkins 1988). Humans on foot and in boats may disturb eagles more than vehicle or airplane traffic (3D/International, Inc. 1996). Human disturbance is a less severe threat in perching and foraging habitats than in roosting habitats (U.S. Fish and Wildlife Service 1994). In many areas, however, eagles have become accustomed to human activity.

Since the bald eagle was listed in 1978, populations have clearly increased and expanded their range (U.S. Fish and Wildlife Service 1995). The improvement is a direct result of the banning of DDT and other persistent chlorohydrocarbon compounds, habitat protection, and other recovery actions. In 1963 only 417 active nests occurred in the lower 48 states, with an average of 0.59 young produced per nest. By 1994, about 4,450 occupied breeding areas were reported by the states with an estimated average young per occupied territory of 1.17 (U.S. Fish and Wildlife Service 1995). Compared to 1974, the number of occupied breeding areas has increased 462 percent, and since 1990 there has been a 47 percent increase. The species is now doubling its breeding population every six to seven years (U.S. Fish and Wildlife Service 1995).



Population increases in the Northern States Recovery Region and Missouri parallel national trends. In 1994, there were 1,772 known occupied territories distributed over 21 states in the recovery region with an estimated 1.26 young per occupied territory (U.S. Fish and Wildlife Service 1995). In 1999, the Service estimated the breeding population exceeded 6,100 pairs. A key reason for the increase is the bald eagle's widening distribution into historic but unoccupied habitat. Since 1990, productivity has averaged around 1.00 young per territory per year. Delisting goals for this region call for 1,200 occupied territories distributed over a minimum of 16 states with an average annual productivity of at least 1.0 young per occupied nest. Delisting goals have been met for breeding areas and productivity in this region. On July 6, 1999, the Service published a proposed rule to remove the bald eagle in the lower 48 states from the list of Endangered and Threatened Wildlife.

Missouri nesting and wintering populations continue to increase. In 1998, at least 56 young were produced in 28 occupied breeding areas (Missouri Department of Conservation 1999). The number of breeding territories and total number of young have increased steadily each year since 1984, and 1999 surveys recorded 53 breeding pairs in Missouri. Missouri, because of its big rivers, many lakes, and wildlife refuges, is especially attractive to bald eagles. Wintering populations have increased 45 percent since 1990 with almost 2,500 birds reported during the 1996 and 1997 mid-winter surveys making Missouri second only to Washington in the number counted in the lower 48 states (Missouri Department of Conservation 2003). Nearly 400 have been counted at one time on Squaw Creek National Wildlife Refuge in northwest Missouri, one of the highest concentrations anywhere (Missouri Department of Conservation 2003).

### **Decurrent False Aster**

#### Species description, habitat, life history

The decurrent false aster is a tall, bushy, wet prairie perennial belonging to the family Asteraceae. This species usually grows to a height of 5 feet, but may reach a height of 6.5 feet or more. It is characterized by conspicuous decurrent leaves; the tissue at the base of the leaf extends downward, along the stem from the point of leaf attachment. The leaves range from approximately 5-15 cm long and 5-20 mm wide. Lower leaves are generally broader and larger. Its branches are somewhat leafy with numerous aster-like heads with yellow disks 7-14 mm wide. The aster-like flowers occur on tall, bushy plants and are 20-25 mm in diameter consisting of yellow disk flowers and white to pale violet ray flowers 1-1.8 cm long. It blooms from July to October and bears seeds from August to October (U.S. Fish and Wildlife Service[USFWS]1990).

Historically, *B. decurrens* occurred in wet prairies, marshes, and along the shores of rivers and lakes. Presumably, the seeds were originally dispersed by rising floodwaters throughout the floodplains where this species occurred. Although it is found in these habitats today, it is most common in disturbed lowland areas where it appears to depend somewhat on human disturbance for survival (USFWS 1990). Appearing to require abundant light (Smith *et al.* 1993) this plant is also found on moist, sandy floodplains in open prairie wetlands, on borders of marshes and lakes, and on margins of bottomland oxbows and sloughs. Although the decurrent false aster prefers a moist habitat, it can tolerate drought. Soil samples from extant populations in Missouri indicated that five sites consisted of silty clay, three of clay, two of sandy loam, one of silt loam, and one of loamy sand (Hickey 1988). In Illinois, *B. decurrens* was observed growing mainly in sandy areas composed of glacial outwash materials (Schwegman 1984).

The decurrent false aster apparently favors recently disturbed areas, and flooding evidently plays a major role in maintaining its habitat (Stoecker *et al.* 1995, Smith *et al.* 1996, Smith and Moss 1998, Smith *et al.* 1998). Although not very tolerant to prolonged flooding, the plant relies on periodic flooding to scour away other plants that compete for the same habitat (Smith and Moss 1998). Highly dense, early successional stands of sandbar willow (*Salix interior*) and eastern cottonwood (*Populus deltoides*), considered invading species, easily out compete the decurrent false aster for suitable habitat. The margins of borrow pits and natural oxbow lakes in St. Charles County, Missouri, have been invaded by these woody species, displacing the decurrent false aster population, which was previously known to occur there in great numbers (Dr. Marian Smith, SIU, pers. com.). According to studies in Illinois, *B. decurrens* did not reproduce sexually in dense weedy areas even in full sunlight, and vegetative regeneration ceased after four or five years in these areas (USFWS 1990). Almost all currently known populations are found in open habitats, which are kept free of woody vegetation and dense herbaceous cover by flooding or occasional cropping (U.S. Corps of Engineers 1995, Smith *et al.* 1996).

The same flood events that can benefit the species can also result in detrimental impacts. Excessive silt deposition in the wake of flooding can stress existing plants and can smother the seeds and seedlings of the decurrent false aster, causing a major decline in its numbers. Additionally, prolonged flooding during the growing season can limit the species' natural reproduction and survival (Smith *et al.* 1993, Stoecker *et al.* 1995, Smith *et al.* 1996).



The Hickey (1988) observed decurrent false aster flowering on two dates in St. Charles County, Missouri. Flowers were first observed on August 23, 1988, on individuals that had not been disturbed during that growing season. Previously disturbed plants, however, flowered in mid-September, 1988. These plants occurred in fields that were fallow at the time of flowering, but had been planted that previous fall in winter wheat, which was harvested in the spring. Other plants that flowered in mid-September were found on embankments (i.e., levees, road sides) that were mowed in early to mid-summer for weed control. The plants that were cut down and did not flower until mid-September were also shorter than the undisturbed plants. In addition, the plants that were cut had few, if any, mature seed heads, even though they had well-developed basal shoots.

The decurrent false aster reproduces both sexually by producing seeds and vegetatively (asexually) by producing basal shoots. Bright sunlight and moist soil are required for seed germination (Smith *et al.* 1993, Smith *et al.* 1995, Smith *et al.* 1998). Approximately 75% of the flowering adult plants originate from basal rosettes of leaves; fall planted seeds produce mature flowering plants and a single leafy basal rosette the first year (USFWS 1990). Some first year flowering plants exceeded 2 m in height. Leafy shoots may appear at the base of the previous year's dead stem. Both rosettes and seeds develop into flowering plants the next year.



(Schwegman and Nyboer 1985). As many as 11 plants have been observed growing from single stem of the previous year, giving a two-year old wild population a definite clumped appearance (USFWS 1990). Production of basal shoots is typical for flowering plants of this species. The plants are prolific seed producers (Schwegman and Nyboer 1985). The Illinois Department of Conservation monitored four Illinois populations and found that *B. decurrens* did not reproduce sexually in dense weedy areas even in full sunlight, and that vegetative regeneration ceased after 4 or 5 years in these stands (USFWS 1990). Fire effects are unknown, as is the significance of the soil seed bank.

The seeds of *B. decurrens* may be carried through the air, but are most often dispersed by floating on floodwaters (Hickey 1988, Smith and Keevin 1998). Seeds and other debris will collect near the edge and be deposited as the water level recedes; seeds are thus dispersed along margins of lakes and rivers. Major flood events have produced perfect conditions for seedling establishment. The great flood of 1993 and the subsequent record flooding in 1995 benefitted this plant by establishing individuals throughout the floodplain in St. Charles County. Dr. Marian Smith (Endangered Species Bulletin 21(4):27) predicted there would be tens of thousands, or perhaps even hundreds of thousands, of plants within the vicinity of a proposed highway project (Smith *et al.* 1998).

#### Status and distribution

The decurrent false aster was officially listed as threatened on November 14, 1988 (53 CFR § 45861). It is listed by Missouri as endangered and is ranked S1 (critically imperiled in the state), G2 (imperiled globally) (MDC 1999). The decurrent false aster formerly occurred along a 400-km stretch between LaSalle, Illinois and St. Louis, Missouri within the Illinois and Mississippi River flood plains. A disjunct population, reported in 1976 but not found since, is known from Cape Girardeau, Missouri 195 km down the Mississippi River from St. Louis (Schwegman and Nyboer 1985).

Schwegman and Nyboer (1985) documented 13 populations of *B. decurrens* in Illinois during extensive surveys conducted from 1980 to 1985. In 1989, a total of 18 populations were reported; 5 previously known populations had disappeared, but 6 new populations were discovered (USFWS 1990). These populations were located along the Illinois River in Jersey, Scott, Cass, Morgan, Schuyler, Fulton, Tazewell, and Marshall counties, and along the Mississippi River in St. Clair County. Five of the 18 are on State of Illinois property, 3 are on National Wildlife Refuges, and the remaining 10 sites are on private property. Naturally regenerating lake shore populations increased markedly during the drought conditions in 1988 and 1989.

In Missouri, *B. decurrens* is only known from sites in St. Charles County. In a 1988 survey, Hickey (1988) searched 227 sites in St. Louis, St. Charles, Lincoln and Pike counties along the Mississippi River, three of which contained historical sites for the species. Prior to this survey only three extant populations of *B. decurrens* were known from Missouri. Although Hickey was unable to find any plants at one of these locations, 10 new sites were discovered in St. Charles County. It was not found in St. Louis, Lincoln or Pike counties. All new locations occur in the vicinity of the two previously known *B. decurrens* sites. Seven of the new locations are considered to be part of the Spatterdock Bottoms populations, and the remaining three new locations are part of the existing Columbia Bottoms population. Of the eight Spatterdock Bottom

sites, three are privately owned, and five are under the jurisdiction of the St. Louis District, U.S. Army Corps of Engineers.

The decurrent false aster began to decline as its floodplain and wetland habitats were converted to agriculture and other land use. Draining wetlands for cultivation and the construction of dams, locks, and levees have altered the natural hydrologic cycle, causing either much drier conditions through a lack of natural flooding or prolonged inundation of floodwaters (Kurz 1981, USFWS 1990). Extant populations have become fragmented and relegated to human-disturbed areas, alluvial soil habitats, old fields, roadsides and disturbed bottomland lake shores. Highly intensive agricultural practices have increased topsoil runoff, which smother seeds and seedlings. Herbicide use may have also added to population declines. Extensive row crop agriculture in the watersheds of the Illinois and Mississippi Rivers and the numerous levee systems on their floodplains continue to affect the species and challenge recovery efforts (Schwegman and Nyboer 1985, USFWS 1990). Almost all currently known populations are found in open habitats that are kept maintained by periodic flooding or low-intensity agriculture. Biologists believe that the plant may actually benefit from occasional farming, which can eliminate competitive plant species such as woody invaders (USFWS 1990). Conversely, drier periods would allow some lower elevation, usually wetter fields to be cultivated (e.g., disced or plowed). The use of herbicides for weed control, however, could be detrimental as well.

Several land-use practices endanger the survival of *B. decurrens* where it does occur. Levees and road embankments are generally well sodded and they are mowed twice during the year. The decurrent false aster has been found growing along these structures and is mowed along with the grasses. In time, this may prove detrimental to the survival of these plants. Although plants do survive under these conditions, they appear weakened and often do not have the opportunity to set seed (Hickey 1988). Tim Smith noted that mowing had greatly diminished *B. decurrens* plants that had been mowed in several areas in the Columbia Bottoms; only a few flower heads were seen from the one-foot-tall plants (MDC memorandum dated 9/27/94).

### Environmental Baseline

The environmental baseline includes the past and present impacts of all Federal, State, or private actions and other human activities in the action area; the anticipated impacts of all proposed Federal projects in the action area that have already undergone formal or early section 7 consultation; and the impact of State or private actions, which are contemporaneous with the consultation in process.

### Status of the Species in the Action Area

#### Bald eagle

Although eagles historically nested along the Mississippi River, until recently they had been absent from the project area for many years. As bald eagle numbers have increased, however, they have returned to nest near the project area. The bald eagle's return was most likely assisted through the efforts of Missouri Department of Conservation and the Service who released 74 young bald eagles in Missouri between 1981 to 1990 (Missouri Department of Conservation 2003). In 1999, there were approximately 53 nesting pairs in Missouri and 36 nesting pair in Illinois (U.S. Fish and Wildlife Service 2003). The new nest in the project area may have been

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poor weather and interrupted feeding behaviors. The level of take is based on harassment that would cause the adult eagles to relocate their nesting territory, possibly out of the project area.

## Effects of take

The effects of harassment could result in reduced productive success of the nesting pair, however, they may relocate to more suitable habitat elsewhere in the project area. Therefore, such effects may be temporary and limited to that pair. In the accompanying biological opinion, the Service determined that this level of anticipated take is not likely to result in jeopardy to the species or destruction or adverse modification of critical habitat.

## Reasonable and Prudent Measures

The Service believes the following reasonable and prudent measures are necessary and appropriate to minimize impacts of incidental take of the bald eagle:

1. Avoid construction impacts and minimize human disturbance near the eagle nest.
2. Implement a public education strategy to raise awareness of eagle needs among the park visitors and avoid potential for conflicts between park visitors and bald eagles.
3. Monitor eagle reproductive success at the nest and eagle movements in the project area.

## Terms and Conditions

To be exempt for the prohibitions of section 9 of the Act, the Corps and the applicant must comply with the following terms and conditions, which implement the reasonable and prudent measures described above and outline required reporting/monitoring requirements. These terms and conditions are non-discretionary and should be included as conditions in the Section 404 permit.

1. To minimize human disturbance of the eagle nest, the applicant shall establish a buffer area around that nest consistent with the guidelines in the National Bald Eagle Management Guidelines (U.S. Fish and Wildlife Service 2000) to the maximum extent possible:
  - a. Primary zone (within 330 feet of the nest) - Avoid disruptive land uses except those actions coordinated with the Service and necessary to improve and protect the nest site. Prohibit construction activities during the most critical and moderately critical periods (January through June). Minimize motorized access into this zone.
  - b. Secondary zone (within 660 feet of the nest) - Prohibit land uses that result in significant adverse changes in the landscape, such as clear-cutting, land clearing, or major development. Allow actions such as thinning forest stands or significant maintenance of existing improvements except during the most critical and moderately critical periods (January through June). Minimize unnecessary motorized traffic and human entry during the high and moderately-critical periods.

2. Implement a public education strategy to raise awareness of eagle needs among the park visitors and avoid potential for conflicts between park visitors and bald eagles. This should include interpretive information on the bald eagle, their sensitivity to disturbance, and other natural history information. Increasing visitor awareness of the nesting pair (should they remain on site) will lessen the likelihood of adverse effects due to human disturbance.
3. To monitor reproductive success of the eagle nest the MDNR shall :
  - a. Coordinate with the Service and MDC and use acceptable eagle monitoring and survey protocols.
  - b. Begin the monitoring program the first nesting season after project approval and continue for three years (i.e., nesting season) after project completion.
  - c. No later than September 30<sup>th</sup> of each year, submit an annual report documenting eagle reproductive success at the site to the Service's Columbia, Missouri, Ecological Services Office.

The Service believes that no more than 2 bald eagles will be incidentally taken as a result of the proposed action. The reasonable and prudent measures, with their implementing terms and conditions, are designed to minimize the impact of incidental take that might otherwise result from the proposed action. If, during the course of the action, this level of incidental take is exceeded, such incidental take represents new information requiring reinitiation of consultation and review of the reasonable and prudent measures provided. The federal agency must immediately provide an explanation of the causes of the taking and review with the Service the need for possible modification of the reasonable and prudent measures.

The Service will not refer the incidental take of bald eagles for prosecution under the Bald and Golden Eagle Protection Act of 1918, as amended (16 U.S.C. §§ 668-668d), if such take is in compliance with the terms and conditions (including the amount and/or number) specified herein.

#### **Decurrent False Aster**

Section 7(b) (4) and 7(o) (2) of ESA do not apply to the incidental take of listed plant species. However, protection of listed plants is provided to the extent that ESA requires a federal permit for removal or reduction to possession of endangered plants from areas under Federal jurisdiction, or for any act that would remove, cut, dig up, damage or destroy any such species on any other area in knowing violation of any regulation of any State or in the course of any violation of a State criminal trespass law.

#### **Conservation Recommendations**

Section 7(a)(1) of the Endangered Species Act directs Federal agencies to utilize their authorities to further the purposes of the Act by carrying out conservation programs for the benefit of endangered and threatened species. Conservation recommendations are discretionary agency activities to minimize or avoid adverse effects of a proposed action on listed species or critical habitat, to help implement recovery plans, or to develop information.



The Service supports the conservation measure developed by the MDNR, Dr. Marian Smith (SIU), and the Service at the on-site coordination meeting. Those measures listed above were developed to avoid and minimize construction-related adverse impacts to the decurrent false aster and its wetland habitats and to help COE meet their section 7(a)(1) responsibility. Therefore, we recommend that:

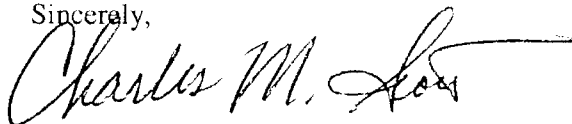
1. The conservation measures should be incorporated as special conditions of the Section 404 permit for the project.
2. The MDNR should establish a buffer area around the proposed 10-acre wetland mitigation site. That area should be planted with native vegetation to reduce sediment runoff and soil erosion from surrounding fields which may degrade water quality and adversely impact aquatic life or transplanted aster plants. These native plantings would also prolong the functionality of the wetland mitigation site.
3. The MDNR should develop a monitoring plan to annually record decurrent false aster occurrence on the site and evaluate the effectiveness of the conservation measures noted above. A written report to the Corps and the Service should be submitted following completion of construction activities and immediately following each of the annual surveys and population estimates within the habitat improvement site.

#### Reinitiation Notice

This concludes formal consultation for upgrading the Confluence Point State Park development in St. Charles County, Missouri. As provided in 50 CFR § 402.16, reinitiation of formal consultation is required where discretionary federal agency involvement or control over the action has been retained (or is authorized by law) and if: (1) new information reveals effects of the agency action that may affect listed species or critical habitat in a manner or to an extent not considered in this opinion; (2) the agency action is subsequently modified in a manner that causes an effect to the listed species or critical habitat not considered in this opinion; or (3) a new species is listed or critical habitat designated that may be affected by the action.

We appreciate the assistance of your staff and the applicant, MDNR, in preparing this biological opinion. If you have any questions about this biological opinion, please contact Jane Ledwin at (573) 876-1911, extension 109).

Sincerely,



Charles M. Scott  
Field Supervisor

cc: MDNR, Jefferson City, MO (K.McCarty)  
MDC, Jefferson City, MO (Policy Coordination and P. Horner)

# LITERATURE CITED

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Stribley, Sara

---

**From:** Charlie\_Scott@fws.gov  
**Sent:** Tuesday, March 06, 2007 1:54 PM  
**To:** Johnson, Charlie  
**Cc:** Stribley, Sara; Rick Hansen; Rick Hansen  
**Subject:** RE: Rockies Express East Project - Mississippi River crossing and Blackburn Island

**Attachments:** USFWS Teleconference 021207.doc



USFWS  
conference 021207.

Charles,

Thanks for the notes and reminder. Assumed Rick gave you an update during meeting with State Dept. in St. Louis last week. We will send to you ASAP (tomorrow) the bald eagle/decurrent false aster BO done for Confluence State Park. Not sure of the status of shape files - Rick has received some GIS info from our Private Lands office but not sure they were segregated for St. Charles Co. I will get with Rick tomorrow and look into what it will take to get the digital info to you. Did Rick provide to you at the St. Louis meeting a copy of the paper map of St. Charles Co. with public lands and duck clubs identified (from the GIS file)?

Charlie Scott

"Johnson,  
Charlie"  
<CJohnson@ensr.ae  
com.com>

03/06/2007 02:31  
PM

<Charlie\_Scott@fws.gov>

"Stribley, Sara"  
<sstribley@ensr.aecom.com>

To

cc

Subject

RE: Rockies Express East Project -  
Mississippi River crossing and  
Blackburn Island

Thanks Charlie.

By the way, I have not heard back from you regarding the conference call that we had for the Keystone Project and couple weeks back. Attached please find a copy of the summary minutes from the meeting and the action item lists discussed.

-----Original Message-----

From: Charlie\_Scott@fws.gov [mailto:Charlie\_Scott@fws.gov]  
Sent: Tuesday, March 06, 2007 8:46 AM  
To: Johnson, Charlie

# CONFIDENTIAL

**Stribley, Sara**

---

**From:** John\_Cochnar@fws.gov  
**Sent:** Tuesday, March 06, 2007 11:28 AM  
**To:** Stribley, Sara  
**Cc:** Charlene\_Bessken@fws.gov  
**Subject:** Re: FW: BMPs for Native Grassland Crossings/Dakota Skipper

**Importance:** High

Hi Sara:

Although there may not be any specific BMPs for the Dakota skipper, it is more important that the proposed Keystone pipeline project not result in an adverse affect to the skipper or its native grassland habitat. That said, it is important that post construction restoration of the disturbed areas within the pipeline right-of-way (ROW) be a restored to conditions as good, if not better than preconstruction conditions so as not to further degrade likely skipper habitat. Further, maintenance plans should include measures that encourage or enhance a healthy native grassland. Measures such as haying, burning, grazing, wood and invasive species invasion, and limited pesticide use need to be incorporated into the maintenance plan and implemented in a way that would benefit the skipper. The pipeline ROW, if restored to a healthy native grassland, could actually be used by the Dakota skipper as a migrational corridor from one grassland complex to another, especially in areas where habitats have been degraded or lost. To better guide you, I have attached a document entitled, "Dakota Skipper Conservation Guidelines" that was developed out of the Service's Twin City Field Office. Hopefully this will help. If you have questions or need additional information, please contact me. Thanks.

John Cochnar  
Assistant Nebraska Field Supervisor  
U.S. Fish and Wildlife Service  
203 West Second Street  
Grand Island, NE 68801  
Office: (308) 382-6468. Ext. 20  
Cell: (308) 379-8550  
Fax: (308) 384-8835  
E-mail: john\_cochnar@fws.gov

"If you pick up a starving dog  
and make him prosperous, he will not bite you;  
that is the principal difference between a dog and a man" - Mark Twain

"Stribley, Sara"  
<sstribley@ensr.a  
ecom.com>

03/05/2007 02:26  
PM

<John\_Cochnar@fws.gov>

To

cc

Subject

FW: BMPs for Native Grassland  
Crossings/Dakota Skipper



**Stribley, Sara**

---

**From:** Stribley, Sara  
**Sent:** Monday, March 05, 2007 1:27 PM  
**To:** 'John\_Cochnar@fws.gov'  
**Subject:** FW: BMPs for Native Grassland Crossings/Dakota Skipper

John,  
Just wanted to pass the information along that there are no BMPs for the Dakota Skipper. I contacted Charlene Bessken after our February 5th meeting, and she replied (below) that no BMPs have been developed yet. Was there something else that I should have requested from her regarding the Dakota skipper, such as a native prairie BMP?  
Thanks John,  
Sara

Sara Stribley  
Environmental Coordinator  
ENSR | AECOM  
1601 Prospect Pkwy  
Ft. Collins, Colorado 80525  
P: 970.493.8878  
F: 970.4930213  
sstribley@ensr.aecom.com  
www.ensr.aecom.com

-----Original Message-----

From: Charlene\_Bessken@fws.gov [mailto:Charlene\_Bessken@fws.gov]  
Sent: Wednesday, February 21, 2007 3:44 PM  
To: Stribley, Sara  
Cc: John\_Cochnar@fws.gov  
Subject: Re: BMPs for Native Grassland Crossings/Dakota Skipper

Hi Sara,

Sorry, but BMP's have not be developed for Dakota Skipper.

Charlene "Charlie" Bessken  
Fish and Wildlife Biologist / TWS Certified Wildlife Biologist  
USFWS South Dakota Field Office  
420 South Garfield Avenue, Suite 400  
Pierre, SD 57501  
(605) 224-8693 Ext. 31  
Fax 605-224-9974  
<http://southdakotafieldoffice.fws.gov/>

"Stribley, Sara"  
<sstribley@ensr.aecom.com>

02/21/2007 04:40 PM

<Charlene\_Bessken@fws.gov>

BMPs for Native Grassland Crossings/Dakota Skipper

To

cc

Subject

# CONFIDENTIAL

Charlene,  
John Cochnar mentioned at our Keystone Pipeline Project meeting in Grand Island, NE, that you might be able to provide ENSR with BMPs for the Dakota skipper? I have the Dakota Skipper Conservation Guidelines document, but it doesn't look like there are any BMPs for linear projects? If you have anything that you could send our way, that would be much appreciated!  
Thanks,  
Sara

Sara Stribley

Environmental Coordinator

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1601 Prospect Pkwy

Ft. Collins, Colorado 80525

P: 970.493.8878

970.4930213

sstribley@ensr.aecom.com

www.ensr.aecom.com

**Stribley, Sara**

---

**From:** Stribley, Sara  
**Sent:** Monday, March 05, 2007 11:04 AM  
**To:** 'John\_Cochnar@fws.gov'  
**Cc:** Johnson, Charlie  
**Attachments:** 423 Table 4-2-3.doc

Hi John,

Attached is a table showing acreages of sensitive habitat disturbance along the Keystone Pipeline Project. You had requested this information at our February 5th, 2007, meeting in Grand Island to use for MBTA negotiations. Please let me know if you need any additional information.

Thanks John!

Sara

Sara Stribley  
Environmental Coordinator  
ENSR | AECOM  
1601 Prospect Pkwy  
Ft. Collins, Colorado 80525  
P: 970.493.8878  
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3/5/2007

**Table 4.2-3 Acres of Land Uses Affected by Construction of the Keystone Project**

|                                           | Developed    | Agriculture/<br>Cropland | Grassland/<br>Rangeland | Forest     | Water      | Wetland/<br>Riparian | Total         |
|-------------------------------------------|--------------|--------------------------|-------------------------|------------|------------|----------------------|---------------|
| <b>KEYSTONE MAINLINE</b>                  |              |                          |                         |            |            |                      |               |
| North Dakota                              | 348          | 2,314                    | 379                     | 45         | 9          | 258                  | 3,353         |
| South Dakota                              | 447          | 2,226                    | 544                     | 4          | 10         | 268                  | 3,499         |
| Nebraska                                  | 280          | 2,539                    | 652                     | 34         | 18         | 39                   | 3,262         |
| Kansas                                    | 97           | 984                      | 570                     | 113        | 20         | 113                  | 1,497         |
| Missouri                                  | 398          | 2,102                    | 1,032                   | 538        | 62         | 79                   | 4,211         |
| Illinois                                  | 131          | 567                      | 20                      | 63         | 14         | 31                   | 826           |
| <i>Keystone<br/>Mainline<br/>Subtotal</i> | <i>1,701</i> | <i>10,732</i>            | <i>2,597</i>            | <i>797</i> | <i>133</i> | <i>688</i>           | <i>16,648</i> |
| <b>CUSHING EXTENSION</b>                  |              |                          |                         |            |            |                      |               |
| Nebraska                                  | 15           | 11                       | 18                      | 6          | <1         | 0                    | 51            |
| Kansas                                    | 339          | 1,830                    | 887                     | 104        | 9          | 90                   | 3,259         |
| Oklahoma                                  | 147          | 434                      | 598                     | 28         | 5          | 63                   | 1,276         |
| <i>Cushing<br/>Extension<br/>Subtotal</i> | <i>501</i>   | <i>2,275</i>             | <i>1,503</i>            | <i>138</i> | <i>14</i>  | <i>153</i>           | <i>4,586</i>  |
| <b>Project Total</b>                      | <b>2,202</b> | <b>13,008</b>            | <b>4,100</b>            | <b>935</b> | <b>148</b> | <b>841</b>           | <b>21,234</b> |

Note: Acreage does not include 1,820 acres of disturbance associated with pipe storage/contractor yards or disturbance associated with transmission lines.

**Stribley, Sara**

---

**From:** Castle, Carla  
**Sent:** Monday, February 26, 2007 11:17 AM  
**To:** Carey.Grell@ngpc.ne.gov; John\_Cochnar@fws.gov; Krystal.Stoner@ngpc.ne.gov  
**Cc:** Johnson, Charlie; Stribley, Sara  
**Subject:** Keystone Pipeline Meeting Minutes  
**Attachments:** USFWS\_NGPC Minutes 020507D.doc

Thank you for meeting with ENSR representatives for the Keystone Pipeline Project on February 5, 2007. Please find attached the Draft Minutes for your review. Please reply to all in this e-mail with comments. The meeting minutes will be finalized and posted to the Keystone Sharepoint website on Thursday, March 1<sup>st</sup>. Thank you for your time.

Janie Castle  
Project Coordinator  
ENSR  
1601 Prospect Parkway  
Fort Collins, CO 80525  
T (970) 493-8878  
F (970) 493-0213  
ccastle@ensr.aecom.com

3/9/2007



## **Draft - U.S. Fish and Wildlife Service / Nebraska Game and Parks Commission; Nebraska U.S. Fish and Wildlife Service Field Office, Grand Island, NE**

**Monday, February 05, 2007, 9:30am – 12:00pm**

### **Attendees:**

John Cochnar (USFWS)  
Carey Grell (NGPC)  
Krystal Stoner (NGPC)  
Charles Johnson (ENSR)  
Sara Stribley (ENSR)

### **Meeting Objectives**

ENSR met with the USFWS and NGPC to discuss issues pertaining to wildlife and special status species that have been identified for the Project. The goal of this discussion was to: 1) discuss the 2006 survey results for federally listed and candidate species, and state-listed species; 2) obtain concurrence on the proposed 2007 survey protocols and survey locations; 3) discuss the USFWS' position on the MBTA as it applies to the Project to date; and 4) discuss other issues or concerns that USFWS or NGPC have regarding the Project.

### **Project Update and Overview**

ENSR provided a brief overview of the Project on behalf of Kristal Stoner (NGPC's new T&E lead). ENSR indicated that since the last meeting in 2006, several re-routes have been identified and are currently being evaluated, including the Hecla reroute. ENSR indicated that discussions with the USFWS regarding the Hecla reroute are ongoing and that meetings are planned for February.

In addition to the Mainline portion of the Project, ENSR indicated that they are currently evaluating habitat for special status species along the Cushing Extension. Surveys for special status species habitat and occurrence along the Cushing extension will occur in 2007, in coordination with federal and state agencies.

### **Water Withdrawal from Platte River Drainage**

Consult with individual states regarding potential water withdrawal from the Platte River Drainage. Water withdrawal would result in a streamline consultation process.

Critical period for water withdrawal in the Lower Platte region (Columbus, NE to the Missouri River) is February 1 through July 31.

### **Biological Survey Report Review**

#### Topeka Shiner Report – SD, KS, MO

ENSR provided a synopsis of the results of the South Dakota, Kansas, and Missouri Topeka shiner reports.

#### South Dakota

The SD-USFWS is comfortable with the results of the habitat surveys that were conducted in SD. As mentioned in the SD Topeka shiner report, 5 sites were identified as having suitable habitat for the species. ENSR will follow up with the SD-USFWS (Charlene Bessken) to verify the 5 sites that would be surveyed for the presence of Topeka shiner in 2007.

The USFWS recommends using Best Management Practices (BMP) that was provided by the USFWS in order to minimize potential impacts to this species. These BMPs will be provided by Charlene Bessken.

## Kansas

ENSR discussed the e-mail from Nate Davis (KDWP) regarding his formal response to the Topeka shiner survey report for Kansas. This e-mail was also distributed to Vernon Tabor (KS-USFWS; aquatic specialist) who has been involved in project discussions through John Cochnar. John is comfortable with the discussion regarding sampling/ relocate efforts prior to construction and that further survey efforts at unnamed tributaries to North Elm Creek would not be required since suitable hydrology is not likely to be present (i.e., marginal habitat – as described in the report). ENSR will check the location of the 2 unnamed tributaries to North Elm Creek relative to critical habitat for this species.

As a result, only two sites that occur within critical habitat in Kansas will require sampling/ relocation efforts prior to construction. The USFWS will defer to the KDWP on decisions regarding Topeka shiner surveys in Kansas.

John will provide e-mail from Vernon Tabor regarding the Topeka shiner survey report. Vernon also suggested in his email to follow the Kansas BMPs for stream crossings.

## Missouri

John has not heard anything from the MO-USFWS regarding the Topeka shiner. ENSR indicated that they will follow up with the MO-USFWS, as well as with MDC regarding the Topeka shiner survey report.

## Mussel Survey Report (Higgins eye pearly mussel/ Scaleshell mussel/ Winged mapleleaf)-James River, South Dakota

The USFWS is comfortable with the results and findings from the mussel survey report.

## Grassland Survey Report (Dakota skipper/ Western prairie fringed orchid) – ND, SD

The USFWS is comfortable with the results and findings from the grassland survey report. ENSR indicated that additional sites in North Dakota and Nebraska will be surveyed in 2007. The NGPC will review the grassland report and data-base for known native grassland habitat within the project area. ENSR also will check NGPC data-base information.

## Raptor Survey Report

The USFWS is comfortable with the results and findings from the raptor survey report. ENSR indicated that bald eagle winter roost surveys/nest surveys and raptor surveys are currently underway. The USFWS is comfortable with the survey protocols that have been established for these aerial surveys. The USFWS also verbalized that they have reviewed the list of proposed bald eagle survey locations sent to them in December 2006. The list of survey locations looked appropriate, except that the Salt Fork Arkansas River should be added to the list of bald eagle survey locations. ENSR indicated that the Salt Fork Arkansas River crossing was added to the survey list after it was sent to the USFWS for their initial review, and that the river crossing will be surveyed.

## Indiana Bat Survey Report – MO, IL

John is deferring the report concurrence and the consultation process relative to the development of applicable conservation measures for this species to the respective MO and IL USFWS field offices.

## **2007 Special Status Species Survey Plan**

John Cochnar forwarded the special status species survey plan to all state USFWS representatives. All representatives have responded except for Missouri. John will follow up with Missouri. Few comments were received.

## Dakota skipper

ENSR indicated that based on the February 2, meeting with SDGFP, the survey window for Dakota skipper should be changed to July 1 – July 15. John stated that avoiding Dakota skipper habitat is the best way to protect the species.

## Topeka shiner

As discussed above for Topeka shiner, 5 sites were identified as having suitable habitat for the species. ENSR will follow up with the SD-USFWS (Charleen Bessken) to verify the 5 sites that would be surveyed for the presence of Topeka shiner in 2007 and specific methodology that would be used.

## Western prairie fringed orchid/ Small-white lady slipper

If no plants are found during the scheduled 2007 occurrence surveys, repeat surveys in 2008 if construction has not occurred in areas prior to the flowering period for these plants.

## Bald Eagle

During construction in 2008, John recommended that a biological monitor inspect the ROW and surrounding areas for eagle nests. If a nest is discovered, the FWS should be consulted and a site inspection can be made. Recommendations for mitigation will be based on the site inspection and will vary depending on topography, vegetative buffer, etc. The nest protection buffer can vary between 0.5-1.0 miles. There is generally no nest buffer protection required for an inactive bald eagle nest.

## **Migratory Bird Treaty Act**

The USFWS indicated that as discussed in previous meetings, the DOT is dealing with a very similar issue regarding the MBTA. However, because this is a migratory bird issue, not a law enforcement issue, not everyone is in agreement relative to how the MBTA should be enforced.

Based on the MBTA, issuance of Special Permit 2227 for take can be authorized if there is an ecological significance (such as mitigation) to migratory birds. However, the migratory bird office indicated that they will no longer issue a take permit, even from the Washington Office.

## Current Plan

The Regional Director (Region 6) is preparing a letter with input from other Regional Directors to the pipeline companies (Keystone and REX). The letter will probably be sent to the Washington Office for review, prior to distribution, but will likely be signed by the Regional Directors. The letter will indicate that the companies are doing everything they can to avoid and mitigate take, which would give them a Letter of Exemption under the MBTA. The Letter also may include language regarding the development of a conservation plan to offset impacts to migratory birds. This plan could include potential compensation banking opportunities by the companies in order to offset the loss of native habitats from the projects (e.g., 2:1 for riparian loss), as well as additional mitigation that would be used to offset loss of nests is currently being discussed.

John asked that ENSR prepare a table indicating acreage of native habitats that would be lost, including type of habitat (e.g., riparian, wetland, shrubland, forest, grassland, etc.) by state for both projects.

## **Mitigation Measures**

### Topeka shiner

The SD-USFWS (Charlene Bessken) provided BMPs that should be implemented at stream crossing along the project route in order to minimize potential impacts to aquatic species, including Topeka shiner.

## Dakota skipper

BMPs for the Dakota skipper will be provided by the USFWS to minimize potential impacts to this species. Mitigation measures may include minimization of disturbance within suitable habitat, reestablishment of native species, segregation of topsoil, etc.

## Western prairie fringed orchid/ Small-white lady slipper

If no plants are found during the scheduled 2007 occurrence surveys, repeat surveys in 2008 if construction has not occurred in areas prior to the flowering period for these plants.

If plants are located in the ROW in 2007 or 2008, coordinate FWS and state wildlife department to determine potential mitigation. Because there is no take provision for federally listed plants on private lands, potential mitigation measures (e.g., move plants, collect plants for herbarium, etc.) would be discussed through coordination with the federal and state agencies, if a population is found.

John recommended avoiding construction that would drain wetlands, applying seep collars on pipes, and maintaining elevations, to protect their wetland habitat.

## **Action Items**

### North Dakota

The ND-USFWS asked that ENSR verify easement areas that would be crossed (update). Follow up with Terry Ellsworth (USFWS).

### South Dakota

The USFWS to provide BMPs for the Dakota skipper to minimize potential impacts to this species.

### Nebraska

NGPC to verify monitoring provisions for the massasauga during construction.

ENSR will contact Sam Wilson (NGPC) regarding river otter survey protocol and biologists that could conduct the surveys.

NGPC to provide comments on the sign-off sheet for the 2007 surveys.

ENSR to incorporate comments into the survey protocols.

ENSR to contact Mike Fritz regarding Scientific Collection Permits in the event that state-listed species taken or moved.

ENSR to email John Cochnar updated correspondence regarding federal easement crossings.

### Oklahoma

John Cochnar to contact OK-USFWS regarding the need to address the Arkansas River Shiner at the Cimarron River.

**Stribley, Sara**

---

**From:** Charlene\_Bessken@fws.gov  
**nt:** Wednesday, February 21, 2007 3:44 PM  
**to:** Stribley, Sara  
**Cc:** John\_Cochnar@fws.gov  
**Subject:** Re: BMPs for Native Grassland Crossings/Dakota Skipper

Hi Sara,

Sorry, but BMP's have not be developed for Dakota Skipper.

Charlene "Charlie" Bessken  
Fish and Wildlife Biologist / TWS Certified Wildlife Biologist  
USFWS South Dakota Field Office  
420 South Garfield Avenue, Suite 400  
Pierre, SD 57501  
(605) 224-8693 Ext. 31  
Fax 605-224-9974  
<http://southdakotafieldoffice.fws.gov/>

"Stribley, Sara"  
<sstribley@ensr.a  
ecom.com>

02/21/2007 04:40  
PM

<Charlene\_Bessken@fws.gov>

To

cc

Subject

BMPs for Native Grassland  
Crossings/Dakota Skipper

Hi Charlene,  
John Cochnar mentioned at our Keystone Pipeline Project meeting in Grand Island, NE, that you might be able to provide ENSR with BMPs for the Dakota skipper? I have the Dakota Skipper Conservation Guidelines document, but it doesn't look like there are any BMPs for linear projects? If you have anything that you could send our way, that would be much appreciated!  
Thanks,  
Sara

Sara Stribley

Environmental Coordinator

JSR | AECOM

1601 Prospect Pkwy



Ft. Collins, Colorado 80525

( 970.493.8878

F: 970.4930213

sstribley@ensr.aecom.com

www.ensr.aecom.com

## Stribley, Sara

---

**From:** Stribley, Sara  
**Sent:** Wednesday, February 21, 2007 3:41 PM  
**To:** 'Charlene\_Bessken@fws.gov'  
**Subject:** BMPs for Native Grassland Crossings/Dakota Skipper

Hi Charlene,  
John Cochnar mentioned at our Keystone Pipeline Project meeting in Grand Island, NE, that you might be able to provide ENSR with BMPs for the Dakota skipper? I have the Dakota Skipper Conservation Guidelines document, but it doesn't look like there are any BMPs for linear projects? If you have anything that you could send our way, that would be much appreciated!

Thanks,  
Sara

Sara Stribley  
Environmental Coordinator  
ENSR | AECOM  
1601 Prospect Pkwy  
Ft. Collins, Colorado 80525  
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[www.ensr.aecom.com](http://www.ensr.aecom.com)

# CONFIDENTIAL

FOR INTERNAL KEYSTONE PROJECT USE ONLY

## TransCanada – Keystone Pipeline Contact Summary Form

Location of Meeting ENSR

Date/Time of Meeting February 16, 2007

Keystone Team  
Member(s) Sara Stribley

### Contact Information:

|                  |                                                                        |
|------------------|------------------------------------------------------------------------|
| Name             | Charlene Bessken                                                       |
| Title            | Fish & Wildlife Biologist                                              |
| Organization     | USFWS South Dakota Field Office                                        |
| Address          | 420 South Garfield Avenue, Suite 400<br>Pierre, SD 57501               |
| County           |                                                                        |
| Phone            | (605) 224-8693 Ext. 31                                                 |
| -mail<br>address | <a href="mailto:Charlene_Bessken@fws.gov">Charlene_Bessken@fws.gov</a> |

### Meeting Information:

Type of Contact (phone, in-person, etc.): E-mail

Issue: Follow-up to Topeka shiner and Dakota Skipper Survey Reports

Concern Level: High\_\_\_Moderate\_\_\_Low\_\_\_

### Description:

I called Charlene as a follow-up from our meeting in Nebraska with the FWS. John Cochnar had suggested ENSR contact Charlene regarding clarification on her comments on the Topeka shiner survey report for South Dakota. We briefly reviewed the report findings, and Charlene stated that she was comfortable with the sites identified for further survey work in the "Discussion" section of the report (sites 1, 7, 10, 11, and 13). I explained that the SDGFP had mentioned that ENSR look at the BO that was put together for the South Dakota Department of Transportation. ENSR was under the impression from our meeting with the SDGFPs that if we followed the BMPs developed in this BO, Keystone could construct at any time in the year? Charlene stated that she was not familiar with the BMPs in this BO, and she did not agree that this would allow Keystone to construct year-round. She strongly recommended following the BMPs that were developed by the FWS for SD stream crossings. She stated that John should have handed those out to us at our meeting in Nebraska. I stated that ENSR did receive those BMPs and had them in hand. Charlene recommended that we follow these BMPs, which would require a spawning restriction from May 15<sup>th</sup> through July 31<sup>st</sup>. Charlene thought that these BMPs restricted crossing streams by the open cut trenching method, and that Keystone would have to develop a different crossing method for sites 1, 7, 10, 11, and 13. I questioned that if occurrence surveys were conducted this year, and no Topeka shiners were found at these sites, if Keystone would still have the same crossing restrictions? Charlene suggested that we send the survey results to her, and then she can determine how close the stream crossings are to known Topeka shiner populations. If there are no Topeka shiner populations in close proximity, Keystone can likely cross

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## FOR INTERNAL KEYSTONE PROJECT USE ONLY

the streams by open trench. We should reconsult with Charlene after we have finished our proposed T. shiner occurrence surveys.

Charlene said that she did not have any concerns or comments regarding the grassland survey report.

**Issue:** \_\_\_\_\_

**Concern Level:** High \_\_ Moderate \_\_ Low \_\_.

**Description:**

## ***FWS Meeting Minutes - T&E Plants on Private Lands Discussion, February 12, 2007.***

### ***Participants:***

Charlie Scott (MO-USFWS)

Rick Hansen (MO-USFWS)

Charles Johnson (ENSR)

Sara Stribley (ENSR)

### Plant Protection under the ESA

**Q:** Are plants protected, or are they not protected under the Endangered Species Act (ESA)?

**A:** Plants do not come under the protection of the ESA except for protection against commercial sale and interstate commerce.

**Q:** If ENSR finds a population of listed plants on private land, John Cochnar (USFWS lead) suggested we should contact the Service and contact the state agency. The FWS or state could then come collect the plants. What would your recommendation be?

**A:** Because this Project is a Federal Action, impacts to plants fall under Section 7 of the ESA. We would have to do a Biological Opinion (BO) if we impacted a listed plant population. The FWS rarely collects and moves plants.

**Q:** How would a BO work if there is no protection for plants on private lands?

**A:** Land ownership doesn't matter if it is a federal action; the FWS can come in and write measures to protect the plant. The FWS could write conservation measures to bore, move the population, or re-route around the population. The FWS could potentially write conservation measures without the BO; however, the FWS would never standardize plant collection as a conservation measure. There are no programs to reestablish the plants, and the plants would most likely perish. When the FWS writes a BO for a federal action for plants on private land they would not prepare reasonable prudent measures to minimize incidental take. The FWS could do an informal consultation and come up with conservation measures, such as they did with the Federal Highway Administration on the HWY 94 Project with the decurrent false aster.

- Decurrent False Aster BO was written with the Federal Highway Administration
- If the FWS and ENSR can work out some of the mitigation measures up-front we could potentially avoid having to write a BO. Potential conservation measures could be seed collection, or setting up an area to manage for the plant, etc.

**Q:** Are listed plants protected on private lands?

**A:** Yes, there is protection, primarily prohibiting the selling of plants. However, through Section 7 you still have to assess impacts to the listed plant species when it is a federal action. If the pipeline goes through a listed plant population, you would want to write a BO to prevent a lawsuit suggesting that you didn't comply with section 7 of the ESA. The BO would be unusual because you don't write RPMs, unless the plants are on Federal Lands.

**Q:** What about State Lands, such as the state park – FWS unsure, maybe covered like private lands, except if state lands were purchased with federal funds.

**A:** FWS will have to look further into this.

- *FWS recommended that we survey for the decurrent false aster each year up until construction. This species moves all over. The plant also likes disturbance. Can survive in the seed bank for a long time.*
- We need to stay ahead of the game on some of these issues. Anything we can do to come up with some conservation measures ahead of time will benefit everyone down the line.

#### 404 permit

- The FWS would like to work out a mitigation plan before Keystone applies for the 404 permit so that when it comes out on public notice, they don't have to comment because it has been front loaded.
- FWS uses BMPS from MDC.
- FWS was concerned over the Kansas City district COE's approach to issuing the Nationwide Permit. There are over 100 wetlands crossings, and they are looking into issuing a nationwide permit for every single crossing. That is large number cumulatively, and mitigation is not required in all cases. The FWS doesn't agree with issuing 150 nationwide permits stacked on top of each other. This could cause a backlash when it comes out for public comment.

**Q:** Does the FWS have a copy of the Missouri BMPS?

**A:** Go to MDC website and look under Nature> Section Links>What rare and endangered species are in Missouri?> Best Management Practices for Endangered Species>Management Recommendations for T&E, Streams, Wetlands

**Q:** If we used these BMPs would the Service be okay?

**A:** These BMPs just give the best recommendations on how to construct; however, they don't address loss of wetlands and how those will be compensated for. The FWS will ask for mitigation for unavoidable losses. They encourage these BMPs, but will also pursue mitigation.

**Q:** Doesn't the 404 permit require 2:1 mitigation for wetland loss?

**A:** Forested wetlands in Missouri can be greater than 2:1, and farmed wetlands can be 1:1. It can vary depending on wetland type.

**Q:** What about isolated wetlands?

**A:** Kansas City district and St Louis district vary in their definition of isolated wetlands.

## US Fish and Wildlife Service, Missouri Field Office Teleconference, Monday, February 12, 2007

### ***Participants:***

Charlie Scott (MO-FWS)  
Rick Hansen (MO-FWS)  
Charles Johnson (ENSR)  
Sara Stribley (ENSR)

### ***Purpose of Meeting:***

The Missouri US Fish and Wildlife Service (MO-FWS) contacted ENSR to discuss concerns regarding wetlands, and threatened and endangered species and sensitive lands associated with wetlands, in St. Charles County, which could potentially be impacted by the Keystone Pipeline Project.

### ***Wetland Impacts***

- The MO-FWS stated that they have been in contact with the Kansas City District Army Corps of Engineers (COE). This district has jurisdiction over the western half of Missouri. The FWS has not had contact with the St. Louis COE district regarding wetland impacts. However, the FWS has concerns over impacts to wetlands in the St. Louis district, particularly in St. Charles County, and wanted to verbalize these concerns with ENSR. The FWS also wanted to gain an understanding of how ENSR plans to deal with impacts to wetlands in this county.
- The FWS stated that there are numerous wetlands, duck clubs, endangered species, and special management areas that may be impacted by the proposed route in St. Charles County. It would be beneficial for Keystone to coordinate with all of the different parties that will be impacted by the Project in St. Charles County, sooner than later, to discuss wetland mitigation and restoration plans.
- ENSR stated that they have been in contact with the St. Louis district, and that wetland surveys are currently being conducted to gather more wetland data along the proposed route. Keystone will be applying for a 404 nationwide permit in the St. Louis COE district.
- *FWS Questions:*
  - **Q:** Does the Keystone Mainline follow an existing ROW through the entire county?
  - **Q:** Did ENSR receive comments or input from any private duck clubs in St. Charles County during their public scoping meetings?
  - **Q:** What are ENSR's plans for working with these duck clubs?



## **Confluence State Park**

- The FWS is aware that several individuals at the Missouri Department of Natural Resources responsible for planning restoration at Confluence State Park have concerns with how the pipeline will affect land management practices at the park.
- Currently, the park is undergoing heavy flood management and the COE is carrying out an “ecological restoration” effort in the park.
- The FWS has one-million dollars invested in the park, and have a strong interest in what happens in this area.
- *T&E Species in Confluence State Park*
  - The FWS mentioned that there is a known bald eagle nest at the confluence of the Mississippi and Missouri rivers in the park. It appears that the nest will be very close to the HDD site planned for the Mississippi River crossing.
  - ENSR explained that an aerial raptor survey has just been completed along the entire Project route, and that the survey should have picked up this nest site with GPS. The FWS mentioned that a BO has been written on this nest.
  - The FWS also mentioned that the federally protected decurrent false aster is common in Confluence State Park, and the chances of finding populations within the ROW are high.

## **Sensitive Lands Occurring in St. Charles County**

- *FWS Mitigation Lands:*
  - The MO-FWS stated that there are hundreds-of-acres that have been purchased as “mitigation lands”, and are being managed, for the FWS in St. Charles County under the FWS Coordination Act. The FWS is preparing to buy an additional 500 acres at the Confluence State Park for additional mitigation lands. This land is owned by the COE, but is managed for FWS mitigation.
- *FWS/MDC Wetland Restoration Projects:*
  - There are numerous wetland restoration projects being carried out on private lands in St. Charles County through coordination with the FWS and Missouri Department of Conservation (MDC).
- *MDC Wildlife Areas:*
  - There are several MDC solely-owned wildlife areas in St. Charles County.
- *Duck Club Lands:*
  - There are several privately owned duck clubs that own land in St. Charles County and are managing for wetlands.
  - The MO-FWS stated that they are fairly certain that the proposed Project route will cross several of the private duck club lands.
- *Wildlife Refuge Land:*
  - There is a soon-to-be wildlife refuge land in St. Charles County that will be owned and managed by the FWS.
- Due to the rapid development occurring in St. Charles County, it has become a fairly contentious area.

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- There is a great diversity of lands specifically managed for wildlife in St. Charles County. Many of these sensitive lands are owned by different parties, and the FWS wants to begin the coordination process on how these lands will be managed and restored. The FWS stated that we should begin to work out mitigation impacts for wetlands, and possibly identify re-routes to avoid sensitive areas.

## **Action Items:**

- **TO DO:** ENSR will review public scoping comments for Missouri to identify any private duck clubs that may have concerns with the Project.
- **TO DO:** ENSR will contact the MO State Parks (MO DNR) regarding the proposed Confluence State Park crossing.
- **TO DO:** The MO-FWS will provide ENSR with the bald eagle BO written for the nest site located in Confluence State Park.
- **TO DO:** FWS will send ENSR land ownership shapefiles and T&E locations in St. Charles County so that ENSR can synthesize a GIS basemap file. ENSR will identify sensitive lands crossed by the proposed Project route in St. Charles County and will reconvene with the MO-FWS to discuss the analysis.
- **TO DO:** If GIS analysis warrants a meeting, ENSR will set up a meeting with the FWS, MDC, and MO to discuss these sensitive lands and how mitigation and restoration should be addressed.

**Stribley, Sara**

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**From:** Stribley, Sara  
**Sent:** Friday, February 09, 2007 3:46 PM  
**To:** 'John\_Cochnar@fws.gov'  
**Cc:** Johnson, Charlie  
**Subject:** Thank you

John,  
Charles and I just wanted to thank you for taking time to meet with us this past week. We will be distributing meeting minutes for your review in the next few days to ensure that we accurately represented the information we discussed at our meeting. We really appreciate your feedback and input, and your willingness to work with us so that we can get accomplished all that we need to do on a project of this size! Once again, if you ever have any concerns or questions, please feel free to give us a call or send us an email! Thanks again.  
Sincerely,  
Sara

Sara Stribley  
Environmental Coordinator  
ENSR | AECOM  
1601 Prospect Pkwy  
Ft. Collins, Colorado 80525  
P: 970.493.8878  
F: 970.4930213  
[s.tribley@ensr.aecom.com](mailto:s.tribley@ensr.aecom.com)  
[www.ensr.aecom.com](http://www.ensr.aecom.com)

2/9/2007

**Stribley, Sara**

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**From:** John\_Cochnar@fws.gov  
**Sent:** Wednesday, January 24, 2007 9:46 AM  
**To:** Caddis, Karen  
**Cc:** Johnson, Charlie; Ellis, Scott; Stribley, Sara; Lorenz, Patricia  
**Subject:** Re: Keystone Pipeline Project - Aerial Bald Eagle Surveys, January 2007

**Importance:** High

**Attachments:** eagle sites012307kc.xls



eagle  
s012307kc.xls (18 K)

Karen and all:

I apologize for not answering most calls or return them immediately. The lack of sufficient staff to cover all bases have left those of us that are here having to do double and triple duty. I have been involved in numerous conference calls and meetings since returning back to the office since the holidays that there just doesn't seem to be enough time in the day to get every thing done. In addition, all field offices are involved in a nationwide data call regarding the bald eagle. As you may know, the US Fish and Wildlife Service (Service) is under a court ordered deadline to delist the eagle by mid-February. Because eagles are also protected under the Bald and Golden Eagle Protection Act, there are numerous things that have to be done (i.e., regulations) before delisting. This has consumed some of my time as well. Further, most of the federal government is under continuing resolution with no budget. As a supervisor, this requires me to be more vigilant of our spending than when we have a budget. Moreover, the issue of the Migratory Bird Treaty Act (MBTA) has been at the forefront with this office as well as the Regional Offices. In our last conference call, I indicated that I would try and arrange a meeting between you folks and our Division of Law Enforcement (LE) to discuss MBTA compliance and the Keystone as well as Rockies Express pipeline projects. That meeting was never arranged because LE felt that this issue at this time was one for the Division of Migratory Bird. I have been involved in several conference calls as well as preparing several briefing papers for our administration on the subject. Since both pipeline projects cross into several Service Regions, it has been decided that this issue is one that will need to be decided upon in the National Headquarters in Washington D.C. On Friday of this week, I will be involved in another briefing on this issue. I will keep you posted as I receive information and guidance.

Due to the excellent working relationship that I have had with all of you, I just wanted you to be aware of my situation and that I am not ignoring your phone calls and requests. I realize that these projects are on a fast track and do have national significance. I will continue to be as responsive to needs and requests as I can.

Further, I have received many survey reports for the two projects and am continuing to coordinate with the other Service field offices for comments/recommendations. I know that your reports have reporting forms that you would like filled out. However, it is my plan to put together a letter that addresses all listed species and identify whether we concur with what has been done or will offer recommendations to get us to a point that we can concur.

Karen and Sara, in response to your request for input on bald eagle surveys.

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- 1) Timing: OK as long as it is not too dark to distinguish birds.
- 2) Survey distance: One mile on each side of the pipeline corridor is good.
- 3) Survey locations: OK no field office requested any additional locations.

Additional recommendations regarding bald eagle winter roost surveys:

We are currently working with the Nebraska Game and Parks Commission to develop a protocol for surveying bald eagle during the winter and nest surveys. Preliminarily, we would be looking at the following:

## Winter Roost Surveys

For the purposes of avoiding adverse impacts to wintering bald eagles, two types of roosts are defined. Transitory roosts are defined as 3 or more eagles, within 100 meters of each other, for at least 2 nights in an area with no previous knowledge of winter communal roosting. Communal roosts are defined as 6 or more eagles in a small area for extended periods of time or used for multiple years. Communal roosts in Nebraska are monitored, so typically their existence will be known and conservation measures established prior to construction.

If construction will be occurring in an area near suitable habitat (near open water with large trees present) where there is no prior knowledge of a communal roost site and construction will be occurring between October 1 and January 31 winter roost surveys are necessary. Winter roost surveys should begin at least 1 day prior to the first date of construction. Winter roost surveys should be conducted daily at dawn as the eagles are likely to leave the roost to forage within the first hour of daylight (depending on weather conditions). These surveys need only be conducted in the area of active construction, not the entire project area. Surveys may be completed by a trained individual using appropriate binoculars or spotting scope. Survey reports should be submitted weekly to the Nebraska Game and Parks Commission and US Fish and Wildlife Service. Evidence of a roost should be reported immediately.

Please note, eagles seen soaring over a construction site should be watched to observe potential nesting or roosting, but construction does not need to terminate due to soaring behavior.

February 5 meeting:

At this time, I am available to meet on February 5 in my office to discuss ENSR's work on the pipeline projects. A 9:30 start time with staff from the Nebraska Game and Parks Commission will work for me. I have reserved our conference room for the meeting. If you could provide me as well as the State discussion topics, it would help us be better prepared to discuss.

Again, thanks for your good work and patients as we move forward with these pipeline projects.

John Cochnar  
Assistant Nebraska Field Supervisor  
U.S. Fish and Wildlife Service  
203 West Second Street  
Grand Island, NE 68801  
Office: (308) 382-6468. Ext. 20  
Cell: (308) 379-8550  
Fax: (308) 384-8835  
E-mail: john\_cochnar@fws.gov

If you pick up a starving dog  
and make him prosperous, he will not bite you;  
that is the principal difference between a dog and a man" - Mark Twain

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"Caddis, Karen"  
<kcaddis@ensr.aecom.com>

01/23/2007 06:33 PM

<John\_Cochnar@fws.gov>

To

cc

"Stribley, Sara"  
<sstribley@ensr.aecom.com>,  
"Johnson, Charlie"  
<CJohnson@ensr.aecom.com>, "Ellis,  
Scott" <SEllis@ensr.aecom.com>  
Subject  
Keystone Pipeline Project - Aerial  
Bald Eagle Surveys, January 2007

Sara Stribley asked me to contact you regarding the wintering bald eagle surveys scheduled for next week along the proposed Keystone Pipeline ROW. I have also left messages on your office phone and cell phone.

Myself and another biologist will be conducting the survey beginning Tuesday, January 30, at the eastern terminus of the line in Illinois. I have attached a table with the river crossing locations we have identified as potential survey areas. These locations include but are not limited to areas, such as the South Fork of the Arkansas River, that have known wintering eagle concentrations, and the areas included in Sara's previous e-mail to you as identified below. We plan to survey these locations from approximately 6:30 am to about 7:30 am and approximately 4:00 pm to 5:00 pm (generally first and last light, respectively). We will not be surveying for eagles when it is dark. The survey area at each waterbody crossing on the list will include 1 mile on either side of the ROW corridor centerline for a total of a 2-mile wide survey area. If wintering concentrations are observed, GPS coordinates will be taken of the site. In addition and if possible with minimal disturbance, estimates will be made of the number and age classes of eagles observed and habitat type (e.g. cottonwood snags on the west side of the Missouri River). We would appreciate it if you would review our attached table of proposed survey locations and provide any corrections if necessary. Thanks for your input!

Regards,

Karen

-----Original Message-----

From: John\_Cochnar@fws.gov [mailto:John\_Cochnar@fws.gov]

Sent: Friday, December 22, 2006 10:47 AM

To: Stribley, Sara

Cc: Johnson, Charlie

Subject: Re: Keystone Pipeline Project - Aerial Bald Eagle Surveys, January 2007

Importance: High

Hi Sara:

I have forwarded your request to the other field offices where the

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Hi John,  
ENSR would like to conduct bald eagle winter roost surveys this January along the Keystone Pipeline Project route. We are proposing to conduct surveys at the following the major river crossings along the Keystone Mainline and Cushing Extension:

## Mainline:

Missouri River (Yankton, SD)  
Elkhorn River (Stanton County, NE)  
Platte River (Colfax/Butler County, NE)  
Big Blue River (Marshall County, KS)  
Missouri River (KS/MO state line)  
Mississippi River (MO/IL state line)

## Cushing:

Little Blue River (Washington County, KS)  
Republican River (Clay County, KS)  
Smoky Hill River (Dickinson County, KS)  
Arkansas River (Cowley County, KS)  
Cimarron River (Payne County, OK)

Aerial surveys will be conducted by helicopter and will extend 0.5-mile from each side of the centerline. Surveys will be conducted from approximately 1-hour before sunrise to 1-hour after sunrise. At this time

we are not proposing to conduct surveys at smaller river crossings such as the Pembina, Tongue, James rivers, etc, as they are more than likely frozen

over. Does this survey plan sound appropriate to you? Please let me know if you have any comments or suggestions. Your input is appreciated!

Sincerely,  
Sara

Sara Stribley

Environmental Coordinator

ENSR | AECOM

1601 Prospect Pkwy

Ft. Collins, Colorado 80525

P: 970.493.8878

F: 970.4930213

stribley@ensr.aecom.com

www.ensr.aecom.com



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(See attached file: eagle sites012307kc.xls)



KEYSTONE PIPELINE  
REX-WEST PIPELINE  
JANUARY 23, 2007

MEETING AT USFWS OFFICE, COLUMBIA, MO

---

**Attendees:** Theresa Davidson (FWS)  
Rick Hansen (FWS)  
Charlie Scott (FWS)  
Dirk Peterson (REX-West)  
Buster Gray (Keystone)  
Rick Clawson (MDOC)  
Charles Johnson (ENSR □ AECOM)  
Amy Henry (BHE Environmental)  
Russ Rommé, via speakerphone (BHE Environmental)

**Meeting Agenda:**

**1.0 Objective**

Discuss strategies and opportunities to optimize pipeline project scheduling and conservation benefits to Indiana bats.

**2.0 Discussion topics**

1. Overview of the REX-West and Keystone pipeline projects in Missouri  
(Charles Johnson)
2. Recap of Section 7 consultation regarding Indiana bats in Missouri to date  
(Russ Rommé)
3. Studies completed to date and planned investigations  
(Amy Henry)
4. Strategies to optimize pipeline project scheduling and conservation benefits to Indiana bats (Russ Rommé to introduce, discussion by all)
  - On site and off site opportunities
  - In kind and out of kind opportunities

## Summary of Critical Conversation

CJ: Opened the meeting and thanked everyone for attending. Provided overview of Keystone Project. BG noted planned construction dates are summer 2008 and summer 2009.

DP: Provided overview of REX-West Project. Noted planned construction dates May 1 through August 2007. Construction will be completed concurrently on seven spreads, each 90-100 miles long.

RR: The history of Section 7 consultation for the two projects was discussed, including the preparation of plans to assess Indiana bat habitat (and in the case of REX-West to survey for the presence of bats), and the FWS approval of those plans.

AH: Field surveys to date on the REX-West project and the Keystone project were summarized as follows:

| Pipeline | Cos.         | Wooded Crossings                                                                           | Crossing Length >200 feet           | >13% Forest Cover w/in 3.5 km      | No. Assessed                       | No. of Sites to Survey          | Size of Forested x'ings | Area Within ROW Where Habitat Quality Index 0.6 or greater* |
|----------|--------------|--------------------------------------------------------------------------------------------|-------------------------------------|------------------------------------|------------------------------------|---------------------------------|-------------------------|-------------------------------------------------------------|
| REX-West | 7            | 417 (360 ac.)                                                                              | 172                                 | 121                                | 109                                | 42                              | 0.5 to 8 ac             | 94 ac*                                                      |
| Keystone | 10, 4 unique | 631 x'ings<br>417 coloc.<br>214 unique<br><br>710 acres<br>360 ac. coloc<br>350 ac. unique | 321<br><br>172 coloc.<br>149 unique | 211<br><br>121 coloc.<br>90 unique | 126<br><br>109 coloc.<br>17 unique | 44<br><br>42 coloc.<br>2 unique | 1 to 12 ac              |                                                             |

\* this number is likely to increase as the habitat assessment work is ongoing.

RR: Introduced issue of working compensation measures into Section 7 compliance process.

TD: Whatever conservation measures are planned should be worked into the project. These measures are to be considered a fundamental aspect of the proposed action, rather than a mitigation measure conceived late in the project.

CS: Formal consultation, and its 135 day timeline, may be avoided if we can agree on measures to avoid direct take of Indiana bats, and can agree on appropriate conservation measures.

TD: Asked if tree clearing could be done during the winter period - i.e., between October 1 and April 1. In discussion TD, RH, and CS verified that only the PRTs, as defined in the Study Plans, in the areas with an HSI of more than 0.6, would need to be dropped.

DP: Indicated this is an opportunity REX-West will likely take advantage of. 90% of the ROW has been purchased, and tree clearing can begin immediately.

BG: Keystone will likely clear necessary PRTs in the winter, however because ROW has not been purchased, this effort may not occur during the cutting window spanning 2006/2007.

RR: Requested input from the FWS and MDOC regarding potential conservation measures, to potentially include onsite/offsite, and in kind/out of kind measures. TD indicated that if we assess impacts based upon area (acres), we should consider a 2:1 ratio for the conservation lands. That ratio is likely to be

used for establishing conservation measures in a MODOT project that is affecting occupied Indiana bat maternity habitat.

CS: Measures should address conservation of summer habitat. Measures to improve winter habitat could not be tied to anticipated project impacts sufficiently.

RR: BHE's GIS analysis assessed the presence of state and federally owned lands within 4 km of the REX-West centerline, where opportunities might exist to purchase lands to donate to the state, or otherwise provide funds earmarked for conservation of Indiana bat habitat. We found no federally owned lands, and ten tracts owned by the State. The FWS agreed that it would be appropriate to broaden our search to 50 miles either side of the centerlines in Missouri. RC stated that measures to conserve Indiana bat summer habitat anywhere in northern MO would be a benefit. RC indicated we should focus our search for state lands on Wildlife Management properties; but State Park lands may provide other opportunities. Specific management of natural areas as will likely be prescribed here is somewhat outside the mission of the State Parks. CS made a similar comment regarding the suitability for National Wildlife Refuge lands for this effort.

RC: Suggested a study assessing Indiana bat habitat use at a maternity colony proximate to the centerline before, and after the construction. Discussion on this topic generally centered upon the idea that no such locations are known. The FWS believed research of this kind may be unsuitable as a conservation measure for this project.

Group: Several potential state-owned land tracts were discussed as options, including:

- Pigeon Hill Conservation Area in Buchanan County (MDOC),
- Smithville Lake, Clay County (USACOE Property)
- Swan Lake National Wildlife Refuge (Chariton County)
- Point State Park (St. Charles County)
- Cuivre River State Park (Lincoln County)
- Pershing State Park (Laclede County). This park is in need of funds for land acquisition.

## ACTION ITEMS/FOLLOW UP

RR: BHE will implement a GIS analysis to identify the presence of state owned and federally owned property within 50 miles of the REX-West centerline in Missouri, and within 50 miles of the Keystone centerline in MO.

BHE will prepare a white paper identifying potential conservation measures.

CS: Charlie agreed to send to DP an email indicating the FWS position regarding the potential for a "May affect, not likely to adversely affect" finding on the project, in light of a seasonal cutting restriction and application of appropriate conservation measures. The contents of this email, received January 24, 2007 are attached.

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From: Charlie\_Scott@fws.gov  
Sent: Wednesday, January 24, 2007 10:15 AM  
To: alice\_weekley@kindermorgan.com  
Cc: lakeandlandmgt@tconline.net; cjohnson@ensr.aecom.com;  
buster.gray@keystone.trow.com; Russ Romme; Theresa\_Davidson@fws.gov;  
Rick Hansen; Rick Hansen; richard.clawson@mdc.mo.gov  
Subject: followup from yesterday's meeting on Indiana bats and Rockies  
Express Pipeline (West) and Keystone Pipeline

Dirk,

As we discussed yesterday, the US Fish and Wildlife Service, Missouri Ecological Services Field Office, could concur with a finding that construction of the Rockies Express Pipeline (West) in Missouri is not likely to adversely affect (i.e., impacts are insignificant/discountable) the Indiana bat provided:

1. Rex West will remove all potential roost trees (PRT's) within the ROW before April 1, 2006 (prior to arrival of Indiana bats to their summer habitat). This measure will avoid the direct take of Indiana bats by removing PRT's before use by Indiana bats.
2. That Rex West will implement appropriate conservation measures to address the loss of Indiana bat summer habitat. Rockies Express Pipeline and its contractor BHE will work with Keystone Pipeline, USFWS, Missouri Department of Conservation (MDC), and other potential cooperators (e.g., Missouri Department of Natural Resources) in the development of these conservation measures.
3. Once there is agreement by all parties on the conservation measures, Rex West or its contractor (e.g., BHE) would provide to the USFWS in writing their commitment to implement these measures in addition to the removal of PRT's before April 1, 2006 (#1 above) and state its determination that based on these actions the project is not likely to adversely affect the Indiana bat. Rockies Express Pipeline will coordinate this action with FERC as needed and appropriate.

Please contact me if you have any questions or need further clarification.

Charlie Scott, Field Supervisor  
USFWS, Missouri Ecological Services Field Office  
101 Park DeVille Dr., Suite A  
Columbia, MO 65203  
573-234-2132 ext. 104

**Correspondence Summary Sheet**

By: William J Stark

Date: 01/22/2007

Talked With: Charlene Bessken

Project Number: 10623-004

Title: USFWS, Pierre SD.

Project Name: Keystone

Of: USFWS

Subject: Report Review

Telephone Number: 605 224 8693 Ext. 31

Facsimile Number:

Email or Internet Address (if applicable):

Supplemental Information Attached?

YES

NO X

Indicate Documentation Type: Telephone

X

Facsimile

Internet

Email

I telephoned Charlene Bessken (USFWS) to discuss the Topeka shiner survey. She has replaced Natalie Gates as the reviewer in Pierre, SD office. In general, she was positive regarding the content and quality of the report. She would like to see the fish surveys move forward as suggested in the report, but would provide written comments to John Cochnar (USFWS, NE) and provide me with a follow up email outlining specific recommendations that would follow their best management practices guidelines.

My general perception was that Charlene saw no "red flags" in the current information but would like to see the final survey results before making final assessment.

\_\_\_\_\_  
William J. Stark\_\_\_\_\_  
Signature

Distribution:

(1) File

(2) Self

(3) Report



## Correspondence Summary Sheet

By: William J Stark

Date: 01/22/2007

Talked With: Vernon Tabor

Project Number: 10623-004

Title: USFWS, Manhattan KS.

Project Name: Keystone

Of: USFWS

Subject: Report Review

Telephone Number: 785-539 3474 Ext 110

Facsimile Number:

Email or Internet Address (if applicable):

Supplemental Information Attached? YES NO X

Indicate Documentation Type: Telephone X Facsimile Internet Email

I telephoned Vernon Tabor (USFWS) to discuss the Topeka shiner survey. He had a couple of questions regarding the refusal location in Marshall Co. KS. I explained the situation and described the conditions of the site as I view it from the county road right-of-way. He did not seem to be too concern after hearing the circumstances. He indicated that he had few comments to send on to John Cochnar (USFWS, NE) and did not share specifics. I believe he is familiar with all or most of the mitigation steps suggested by Nate Davis (KDWP).

My general perception was that Vernon had skimmed the report, at the time I returned his call, and saw no real problems but had not decided on what written comments he would send.

\_\_\_\_\_  
William J. Stark  
Signature

Distribution: (1) File (2) Self (3) Report



**ENSR**

1601 Prospect Parkway, Fort Collins, Colorado 80525  
T 970.493.8878 F 970.493.0213 www.ensr.aecom.com

January 17, 2007

John Cochnar  
U.S. Fish and Wildlife Service  
Ecological Services Field Office  
203 West Second Street  
Federal Building, Second Floor  
Grand Island, NE 68801

Dear Mr. Cochnar:

At this time, ENSR Corporation (ENSR) is providing you with information regarding the implementation of the 2007 biological survey program for the Keystone Mainline and Cushing Extension Pipeline Projects, and requesting your feedback and concurrence on certain proposed actions.

**Project Description**

As provided in previous communications, TransCanada is planning to construct and operate an approximately 1,845-mile-long interstate crude oil transmission system from an oil supply hub near Hardisty, Alberta, Canada, to destinations in the Midwestern United States (U.S.). The proposed Project would consist of approximately 1,078 miles of new pipeline constructed from the U.S.-Canada border in Cavalier County, North Dakota, to terminals and refineries in Wood River (Madison County) and Patoka (Marion County), Illinois. This pipeline is referred to as the Keystone Mainline. Approximately 283 miles of the Keystone Mainline would parallel the proposed Rockies Express Pipeline - West (REX-West) Project in Kansas and Missouri. In addition, TransCanada proposes to construct a 292-mile pipeline extension (Cushing Extension) that would extend from the Keystone Mainline south from the Nebraska/Kansas border to Cushing, Oklahoma. TransCanada proposes to begin construction of the Keystone Mainline in early 2008, with the system in-service by the end of 2009. Work on the Cushing Extension will begin in late 2009 or early 2010, with a Cushing Extension in-service date of 2010. The project also will require the construction of pump stations, valves, meters, and other ancillary facilities. The hydraulic characteristics of the pipeline will determine pump station and valve locations. Electrical powerlines and facility upgrades will be required in some locations to provide power for the new pump stations, though these facilities will be constructed by local utility companies, not Keystone.

**Biological Survey Program**

In 2006, biological surveys were initiated for several species potentially located along the Keystone Mainline Project route. ENSR sent these 2006 biological survey reports to you in a package dated December 19, 2006, for your review and evaluation. Additional surveys are planned throughout 2007 for the species surveyed in 2006, and for the majority of remaining sensitive species that may be located within the Keystone Mainline and Cushing Extension Project vicinity (see attached survey schedules). Sensitive species and survey locations have been determined through consultation with the appropriate state wildlife agencies, natural heritage programs, and the U.S. Fish and Wildlife Service (USFWS). Some survey areas have been refined based on information obtained through habitat surveys conducted in 2006. To facilitate your review of the 2007 Keystone Mainline and Cushing Extension biological survey program, ENSR is providing you with the following materials, and asking for your signed concurrence on several proposed actions:

John Cochnar  
January 17, 2007  
Page 2

- Proposed Threatened and Endangered Species Survey Schedule (2006-2007) – This document is provided to give an overview of when and where species specific surveys have been, and will be conducted. Please sign and return the survey schedule concurrence form as “concur” or “do not concur.” Please also provide specific comments in the area provided if you “do not concur,” in order for ENSR to promptly address concerns.
- Biological Survey March-Charts (2007) – These charts are provided as a visual tool to guide your assessment of the proposed Threatened and Endangered species surveys. The y-axis provides information on approximate survey windows. This axis shows the general timeframe in which ENSR proposes to complete the surveys for a specific species (based on nesting, spawning, flowering periods, etc.) The x-axis provides information on the Mainline or Cushing extension milepost marker where appropriate habitat has been determined to exist for a species. This axis shows where ENSR proposes to complete species specific surveys.
- Survey Protocols – These documents provide detailed information on how specific surveys will be conducted for Threatened and Endangered species. Wherever possible, survey protocols were produced directly from state or federal agency feedback. Please sign and return the survey protocol concurrence form as “concur” or “do not concur.” Please also provide specific comments in the area provided if you “do not concur,” in order for ENSR to promptly address concerns.
- 1:100k U.S. Geological Survey (USGS) Topographic Maps of the Keystone Mainline and Cushing Extension – Provided for geographic reference to the Project.

Copies of these materials also have been distributed to the appropriate state wildlife representatives. ENSR would like to meet with you in early February to discuss this material in further detail, and you should have already been contacted by ENSR regarding a meeting date and time. If you have any questions regarding the enclosed materials, please contact me at (970) 493-8878 ext. 181 or email [cjohnson@ensr.aecom.com](mailto:cjohnson@ensr.aecom.com).

Sincerely,



Charles Johnson  
Senior Wildlife Biologist

CJ/ss

Ref: 10623-004

Enc: Proposed Threatened and Endangered Species Survey Schedule  
Biological Survey March-Charts  
Survey Protocols  
1:100k USGS Topographic Maps

# CONFIDENTIAL

**Stribley, Sara**

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**From:** John\_Cochnar@fws.gov  
**Sent:** Tuesday, January 16, 2007 4:49 PM  
**To:** Stribley, Sara; Lorenz, Patricia; Johnson, Charlie  
**Subject:** RE: Keystone and Rockies Express Pipeline Projects

**Importance:** High

Hello folks.

I know that you all have been calling to discuss various items related to the 2 pipeline projects over the past several weeks. I have been out of the office for the past 3 weeks and thus not able to return your call. I will be calling you this week (either tomorrow or Thursday at the latest) and at that time we can discuss the various aspects of the projects that need discussions. Regarding the February 5 meeting, I may have a conflict with that date, but hope to know for sure when I call. Thanks for your patience.

John Cochnar  
Assistant Nebraska Field Supervisor  
U.S. Fish and Wildlife Service  
203 West Second Street  
Grand Island, NE 68801  
Office: (308) 382-6468. Ext. 20  
Cell: (308) 379-8550  
Fax: (308) 384-8835  
E-mail: john\_cochnar@fws.gov

"If you pick up a starving dog  
and make him prosperous, he will not bite you;  
that is the principal difference between a dog and a man" - Mark Twain



CONFIDENTIAL

## Correspondence Summary Sheet

By: William J Stark

Date: 01/16/2007

Talked With: Rick Hansen

Project Number: 10623-004

Title: USFWS, Columbia MO.

Project Name: Keystone

Of: USFWS

Subject: Report Review

Telephone Number: 573 234 2134 Ext. 106

Facsimile Number:

Email or Internet Address (if applicable):

Supplemental Information Attached? YES NO X

Indicate Documentation Type: Telephone X Facsimile Internet Email

I telephoned Rick Hansen and discussed the outcomes of the Topeka Shiner Survey Report. As of this time the report was in his supervisor's office and he had yet to see it. However, upon hearing that no Topeka shiners were found during the survey and the marginal nature of the habitat, he saw no need for additional mitigation at stream crossing with regard to Topeka shiners. He also indicated that he received no negative comment from the Missouri Department of Conservation. He will respond as indicated above to the Nebraska office [John Cochner, USFWS] (my brackets) and to ENSR via email as soon as he sees the report (he hoped today).

\_\_\_\_\_  
Signature

Distribution: (1) File (2) Self (3) Report



CONFIDENTIAL

## Correspondence Summary Sheet

By: William J Stark

Date: 01/16/2007

Talked With: Natalie Gates

Project Number: 10623-004

Title: USFWS, Pierre SD.

Project Name: Keystone

Of: USFWS

Subject: Report Review

Telephone Number: 605 224 8693 Ext. 34

Facsimile Number:

Email or Internet Address (if applicable):

Supplemental Information Attached?

YES

NO X

Indicate Documentation Type: Telephone X Facsimile Internet Email

I telephoned Natalie Gates (USFWS) to discuss the Topeka shiner survey. She had not seen the report but indicated that probably her supervisor had it and would be assigning it for review. I requested that she contact me if she received it for review, or that she inform me if it was assigned to someone else. I indicated that I would follow-up in a week or so, to check on the review process and ensure that her office did receive a copy.

William J. Stark

Signature

Distribution: (1) File

(2) Self

(3) Report