

Overview – Keystone Pipeline Project Biological Survey Reports

March 2007

Biological Surveys and Reports

Construction and operation of the Keystone Pipeline Project may affect habitats and populations of species protected under the federal Endangered Species Act and by individual State legislation. During 2006, TransCanada Keystone Pipeline, L.P. (Keystone) initiated contact with the U.S. Fish and Wildlife Service (USFWS), and state natural heritage programs and wildlife agencies to identify species and habitats of concern. After receiving lists of species and habitats, Keystone developed field survey protocols, target survey areas, and survey schedules. These protocols were submitted to the USFWS and state agencies for review. No agencies objected to the proposed protocols; agency comments received on the protocols were incorporated into survey protocols. Agency coordination documentation and survey protocols were filed by Keystone with the Department of State (DOS) on September 15, 2006, and in January 2007. Further Agency coordination that has taken place since the January filing date is included in this March 2007 supplemental filing.

Biological field surveys along the proposed Keystone Mainline pipeline right-of-way were initiated in late summer and fall of 2006. Additional field surveys will be conducted in 2007 where necessary to determine species occurrence in the appropriate season, to survey pipeline reroutes, pump stations, pipe storage yards, and contractor yards, as well as pipeline segments where access was not previously available. Field surveys also will be conducted along the Cushing Extension and its pump station sites, pipe storage yards, and contractor yards during 2007.

The biological survey reports included in this filing will be used for: 1) preparation of a Biological Assessment as part of the USFWS Section 7 consultation; 2) documentation for the Environmental Impact Statement; and 3) preparation of state agency permit applications.

The reports filed herein include the results of field work completed in the winter, 2007. In addition, desktop analysis reports were prepared based on agency correspondence (e.g., USFWS, Missouri Department of Conservation, and Natural Heritage Program/NatureServe), and species habitat association, in combination with aerial habitat surveys and wetland/waterbody field surveys, U.S. Geological Survey Land Use Land Cover data, and aerial photography, and are included in this filing.

Wetlands Report

Construction and operation of the Keystone Pipeline Project may also affect wetlands and Waters of the U.S. (WUS). During 2006, Keystone initiated contact with the U.S. Army Corps of Engineers (USACE) and USFWS regarding wetlands survey protocols and potential impacts. Wetland survey protocols were submitted to the individual USACE Districts along the proposed right-of-way (ROW) for review. These include the Omaha, Kansas City, St. Louis, and Tulsa Districts. Agency comments received were incorporated into wetland survey protocols. Agency coordination documentation and survey protocols were filed by Keystone with the DOS on September 15, 2006. Further Agency coordination that has taken place since the September filing date is included in this March 2007 supplemental filing.

Wetlands and WUS surveys along the proposed Keystone Mainline pipeline ROW were initiated in summer 2006. Wetlands and WUS surveys along the proposed Cushing Extension pipeline ROW were initiated in the spring of 2007. These surveys were conducted along the pipeline ROW that was filed with the DOS on September 15, 2006. Additional field surveys will be conducted in 2007 where necessary to complete survey requirements in each District, including reroutes and pipeline segments where access was not previously available.

The report filed herein includes the results of all wetlands survey work completed along the Cushing Extension to-date.

Biological and Wetlands Survey Progress

The attached table outlines Keystone's process for the collection and submission of biological and wetlands/WUS data.

Keystone Pipeline Project – Biological Survey Report Completion Plan – March 2007

Survey Objective	Survey Status	September 2006 DOS Filing	November 2006 DOS Filing	January 2007 DOS Filing	March 2007 DOS Filing	Future DOS Filing Dates
Rare Plants (western fringed orchid, eastern fringed orchid, small white ladies slipper orchid, decurrent false aster, running buffalo clover, prairie spiderwort, royal catchfly, spring ladies tresses)	<p>Survey completion status: Western prairie fringed orchid: Habitat surveys – 90% Occurrence surveys – 0%</p> <p>Other rare plants: Habitat surveys – 0% Occurrence Surveys – 0%</p> <p>2007 spring /summer – Occurrence surveys (Keystone Mainline and Cushing Extension).</p>	<p>Agency consultation records and species lists.</p> <p>Preliminary survey areas.</p>	<p>Documentation of potential suitable orchid habitats in North and South Dakota, and Nebraska (including photographs and habitat suitability for western fringed orchid is provided in the Native Prairie Survey Report above discussed below).</p>	<p>Agency consultation records.</p>	<p>Agency consultation records.</p>	<p>August 2007</p> <ul style="list-style-type: none"> Summary of surveys completed; occurrence data.
Wetlands and Waters of the U.S.	<p>2006 delineation surveys Keystone Mainline survey completion status as of December 2006</p> <p>ND – 95% SD – 83% NE – 100% KS – 98% MO – 83% IL – 89%</p> <p>Overall – 85%</p> <p>Spring 2007-Cushing delineation surveys. Cushing survey completion status as of February 23, 2007</p> <p>NE – 100% (L)</p>	<p>Consultation records with USACE.</p> <p>Preliminary survey areas.</p>	<p>Summary of survey progress.</p> <p>List of wetland crossings by type, and distances crossed.</p>		<p>Wetlands Survey Status Report – Cushing Extension.</p>	<p>April 2007</p> <ul style="list-style-type: none"> Cushing Extension – additional survey reports and wetland crossing list. <p>September 2007</p> <ul style="list-style-type: none"> 404 Applications filed with USACE Districts.

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	KS – 84% (L) OK – 50% (M) Overall – 85% (L) Overall – 50% (M)					
Native Prairie	Survey completion status: SD, ND -90% (Keystone Mainline) NE– 0% (Keystone Mainline) KS, OK – 0% (Cushing) Fall 2006 – Preliminary Spring 2007 – Supplemental surveys (Keystone Mainline, Cushing Extension).	Agency consultation records and species lists. Preliminary survey areas.	Habitat Assessment for ND and SD	Agency consultation records.	Agency consultation records.	May 2007 <ul style="list-style-type: none"> Keystone Mainline - Supplemental surveys with site descriptions (reroutes). April or May 2007 <ul style="list-style-type: none"> Cushing Extension habitat descriptions.
Mussels	Survey completion status - SD (James River) - 100% KS (Cottonwood River, Doyle Creek) – 0% 2007 late summer/fall – habitat/occurrence surveys completed along Cushing Extension	Agency consultation records and species lists. Preliminary survey areas.	Survey methods and results, habitat descriptions. No listed mussels were found.	Agency consultation records.	Agency consultation records.	Fall 2007 <ul style="list-style-type: none"> KS (Cushing) survey reports based on spring/summer field reconnaissance

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Dakota Skipper butterfly	<p>Survey completion status: Habitat – 90% Occurrence – 0%</p> <p>Summer 2007 (Occurrence Surveys -Keystone Mainline in ND and SD).</p>	<p>Agency consultation records</p> <p>Preliminary survey areas.</p>	Documentation of potential suitable habitats in North and South Dakota (including photographs and habitat suitability for Dakota skipper is provided in the Native Prairie Survey Report above discussed above).	Agency consultation records.	Agency consultation records.	<p>July 2007</p> <ul style="list-style-type: none"> • Occurrence surveys with site descriptions.
Topeka Shiner	<p>Survey completion status: Habitat Surveys SD, KS, MO – 94% (Keystone Mainline) KS – 0% (Cushing) Occurrence Surveys KS, MO – 100% (Keystone Mainline) SD, KS – 0%</p> <p>Spring 2007 Keystone Mainline and Cushing occurrence surveys – SD, KS (Cushing)</p>	<p>Agency consultation records.</p> <p>Preliminary survey areas.</p>	Survey methods and results, habitat descriptions.	<p>Updated KS/MO Topeka shiner survey report.</p> <p>Agency consultation records.</p>	Agency consultation records.	<p>July 2007</p> <ul style="list-style-type: none"> • Survey reports based on spring/summer field reconnaissance in SD and KS (Keystone Mainline and Cushing).
Fish (Arkansas River shiner, Arkansas darter, silver chub, speckled chub, Neosho madtom)	<p>Survey completion status: Habitat surveys: KS – 0% (Cushing) Occurrence surveys: KS – 0% (Cushing)</p> <p>Spring 2007 habitat and occurrence surveys – KS (Cushing)</p>	No information filed.	No information filed.	Agency consultation records.	Agency consultation records.	<p>Fall 2007</p> <ul style="list-style-type: none"> • Survey reports based on spring/summer field reconnaissance in KS (Cushing).

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Reptiles and Amphibians (Massasauga, Kirtland's snake, Western fox snake)	<p>Survey completion status: Habitat Surveys: MO, IL – 100% of accessible sites IL – 0%</p> <p>Occurrence Surveys: MO, IL– 0%</p> <p>Spring 2007 – Complete habitat surveys – MO, IL.</p> <p>Spring/summer 2007 – Occurrence surveys.</p>	<p>Agency consultation records.</p> <p>Preliminary survey areas and protocols.</p>	No information filed.	<p>Habitat survey reports based on surveys completed in fall/winter 2006. Report letters detailing further survey work to be completed.</p> <p>Agency consultation records.</p>	Habitat survey reports based on winter 2007 field reconnaissance.	<p>May 2007</p> <ul style="list-style-type: none"> Habitat Survey Reports based on spring 2007 field reconnaissance and updated agency consultation records. <p>August 2007</p> <ul style="list-style-type: none"> Snake Survey Reports.
Least tern and piping plover	<p>No 2006 Surveys were conducted.</p> <p>Occurrence Surveys – 2007 (Keystone Mainline and Cushing Extension).</p>	<p>Agency consultation records.</p> <p>Preliminary survey areas.</p>	Documentation of potential suitable habitats.	No information filed.	Agency consultation records.	<p>August 2007</p> <ul style="list-style-type: none"> Results of 2007 surveys (Keystone Mainline and Cushing)
Raptor Nests (including bald eagle)	<p>Spring 2006 –</p> <ul style="list-style-type: none"> Preliminary Survey 2006 Survey Completion Status – 70% <p>Spring 2007 –</p> <ul style="list-style-type: none"> Aerial Surveys – 2007 Conducted Keystone Mainline and Cushing Extension Raptor Surveys within construction ROW. Potential Preconstruction 	Agency consultation records.	List of raptor nests and locations encountered during spring 2006 helicopter surveys.	Agency consultation records.	Results of 2007 aerial raptor/bald eagle surveys (Keystone Mainline and Cushing Extension).	

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	Surveys – 2008 (Keystone Mainline and Cushing Extension).					
Greater Prairie Chicken	<p>Winter 2007 – Phone surveys with landowners to determine potential presence. Completion status – 100%.</p> <p>Spring 2007 – breeding surveys, depending on phone survey results.</p>	<p>Agency consultation records.</p> <p>Preliminary survey areas and protocols.</p>	No information filed.	Agency consultation records.	Phone survey report detailing results of phone surveys with landowners in MO and agency coordination regarding further survey requirements.	<p>August 2007</p> <ul style="list-style-type: none"> Results of breeding surveys, if surveys are required by the Missouri Department of Conservation.
King rail	Spring 2007 MO - Surveys may be conducted in large complex wetlands.	<p>Agency consultation records</p> <p>Preliminary survey areas and protocols.</p>	No information filed.	Agency consultation records.	Desktop habitat analysis report based on wetland delineations.	<p>April 2007</p> <ul style="list-style-type: none"> Further agency coordination regarding survey requirements, and survey protocols. <p>August 2007</p> <ul style="list-style-type: none"> Habitat survey report, if surveys are necessary based on wetland habitat assessment.

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Barn owl	To date, no structures will be destroyed during construction, therefore; no surveys planned. However, 2008 preconstruction surveys in MO, IL would be conducted if structures (old barns or homes) would be affected by construction activities.	Agency consultation records Preliminary survey areas and protocols.	No information filed.	Agency consultation records.	No information filed.	Spring 2008 <ul style="list-style-type: none"> Report filed only if habitat is present.
Bats (Indiana bat, gray bat)	Survey completion status: Fall 2006 habitat surveys: MO – 84% of accessible sites, IL – 100% of accessible sites Completions status - 84% Spring 2007 – Complete habitat surveys Spring/summer 2007 – Potential Mist net surveys – MO, IL.	Agency consultation records Preliminary survey areas and protocols.	No information filed.	Habitat survey reports (MO, IL) based on surveys completed in fall/winter 2006. Report letters detailing further survey work to be completed.	Habitat survey reports based on spring 2007 field reconnaissance and updated agency consultation records.	Fall 2007 <ul style="list-style-type: none"> Mist Net/Occurrence survey reports – MO, IL (if required).
River otter denning	2007 – Occurrence surveys in NE, IL	Agency consultation records	No information filed.	No information filed.	Agency consultation records.	August 2007 <ul style="list-style-type: none"> Results of surveys conducted in NE and IL.

Note on Migratory Birds: Keystone will discuss options for complying with the Migratory Bird Treaty Act with the USFWS. Future surveys will depend on the outcome of these discussions.