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FOR INTERNAL KEYSTONE PROJECT USE ONLY

TransCanada – Keystone Pipeline Contact Summary Form

Location of Meeting ENSR

Date/Time of Meeting August 14, 2006

Keystone Team Member(s) Sara Stribley

Contact Information:

Name	Chris Phillips
Title	Herpetologist
Organization	Illinois Natural History Survey
Address	1816 S. Oak Street Champaign, IL 61820
County	
Phone	217-244-7077
Email address	chrisp@inhs.uiuc.edu

Meeting Information:

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

Issue: Contact Information for Specialists that could conduct reptile/amphibian surveys

Concern Level: High Moderate Low

Description:

Sara:

All scientists at the Illinois Natural History Survey conduct independent, externally funded research and thus are in a position to conduct research under contractual agreement with a variety of agencies, NGO's and the private sector.

There are very few private-sector contractors in Illinois who are qualified to do the survey work for the amphibians and reptiles in the vicinity of the Keystone Pipeline. The big environmental engineering firms usually sub-out these kinds of surveys and my lab has conducted several dozen over the past 15 years for projects such as natural gas pipelines, a haul road for coal fired power plant expansion, the placement of a new pumping station for a municipal water company and various housing developments. In addition, the Natural History Survey is currently under contract with the Illinois Department of Transportation on the Illinois Toll Highway Authority to conduct natural resource review for almost all of their road projects. The combined annual total for both contracts is over \$ 2.5 million.

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If you are interested, I can send you a bid for the three species of herps in the Illinois portion of the Keystone Pipeline. My lab is also in a position to conduct surveys for amphibians and reptiles in other portions of the pipeline in both the United States and Canada. In addition, other Survey scientists may be interested in bidding on surveys of other groups of plants and animals.

Feel free to call if you have any questions. I can also give you contact info for the few environmental firms in Illinois who might be interested in conducting the Illinois surveys under subcontract to ENSR.

Sincerely,

Chris

----- Original message -----

>Date: Mon, 7 Aug 2006 15:09:55 -0400

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

>Subject: Keystone Pipeline Project ENSR - Massasauga, Kirtland's snake, Illinois Chorus Frog Specialists

>To: <chrisp@forbes.inhs.uiuc.edu>

>Cc: "Johnson, Charlie" <CJohnson@ensr.aecom.com>

>
> Hi Chris,
> We are trying to line up some specialists to conduct
> surveys for a few species along the Keystone
> Pipeline Project route. We would like to try and
> survey for the Massasauga and Kirtland's snake this
> fall, if possible. Do you have any contacts for
> specialists who might be able to conduct some of
> these surveys? Additionally do you have any names of
> qualified Illinois Chorus Frog surveyors? We
> wouldn't be conducting these surveys this fall, but
> just for a future reference! Also, for your
> reference, I have attached our preliminary survey
> table for the project. This was distributed to the
> Illinois DNR Office, but if you have any additional
> input on survey areas or counties for the reptiles
> and amphibians on the list that we should include or
> exclude (aside from the information you previously
> provided me over the phone back in July, mainly
> habitat and what time of year to conduct
> surveys), your input would be greatly appreciated!
> Thanks for any information you can provide!

> Sincerely,
> Sara

> Sara Stribley
> Staff Specialist
> ENSR Corporation
> 1601 Prospect Pkwy
> Fort Collins, CO 80525
> 970.493.8878 ext. 168
> sstribley@ensr.aecom.com

> Illinois Special Status Species.PDF (818k bytes)

istopher A. Phillips
Assistant Professional Scientist
Center for Biodiversity
Illinois Natural History Survey

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607 E. Peabody Drive
Champaign, IL 61820 1601 Prospect Pkwy
Ft Collins, CO 80525
493.8878 ext. 168
sstribley@ensr.aecom.com

Issue: Surveys for the Massasuga, Kirtland's Snake, and Illinois Chorus Frog

Concern Level: High__Moderate__Low__.

Description:

After receiving Chris Phillips' email, I called to request a bid from him. He said he would be interested in conducting the surveys, and that he would also be interested in potential surveys in Missouri. He requested that I send him maps of the route, and a description of the project, including the required survey area. He mentioned that he would be able to plot occurrence data and veg. data along the route and come up with "hot spot" areas along the route that would need to be surveyed for. I told him that I would send him the requested information in an email so that he could provide us with a bid. I sent him mapbooks of the route in Illinois and Missouri, and a word document with a general project description.

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TransCanada – Keystone Pipeline Contact Summary Form

Location of Meeting ENSR
Date/Time of Meeting August 7, 2006
Keystone Team Member(s) Sara Stribley

Contact Information:

Name	Chris Phillips
Title	Herpetologist
Organization	Illinois Natural History Survey
Address	1816 S. Oak Street Champaign, IL 61820
County	
Phone	217-244-7077
E-mail address	chrisp@inhs.uiuc.edu

Meeting Information:

Type of Contact (phone, in-person, etc.): _____ Email

Issue: Contact Information for Specialists that could conduct reptile/amphibian surveys

Concern Level: High ___ Moderate ___ Low .

Description:

Hi Chris,
We are trying to line up some specialists to conduct surveys for a few species along the Keystone Pipeline Project route. We would like to try and survey for the Massasauga and Kirtland's snake this fall, if possible. Do you have any contacts for specialists who might be able to conduct some of these surveys? Additionally do you have any names of qualified Illinois Chorus Frog surveyors? We wouldn't be conducting these surveys this fall, but just for a future reference! Also, for your reference, I have attached our preliminary survey table for the project. This was distributed to the Illinois DNR Office, but if you have any additional input on survey areas or counties for the reptiles and amphibians on the list that we should include or exclude (aside from the information you previously provided me over the phone back in July, mainly habitat and what time of year to conduct surveys), your input would be greatly appreciated! Thanks for any information you can provide!
Sincerely,
Sara

Sara Stribley
Staff Specialist
ENSR Corporation

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1601 Prospect Pkwy
Fort Collins, CO 80525
970.493.8878 ext. 168
.stribley@ensr.aecom.com

Johnson, Charlie

From: Johnson, Charlie
Sent: Tuesday, August 01, 2006 12:36 PM
To: 'bob.hammel@Illinois.gov'
Cc: Giere, Molly; Castle, Carla; Dufresne, Doree
Subject: FW: Yankton Missouri River crossing
Attachments: 060726 Keystone Yankton Geotech NPS.pdf; Information - Descriptive of Proposed Geotechnical Work..pdf; 060801 - Geotechnical Explorations.pdf

Hello Bob, as discussed on the phone, TransCanada is interested in conducting geotechnical test drills to determine the geology and feasibility to HDD Hurricane Creek and Kaskaskia River. Attached is geotechnical survey information that you requested for your review and input. Could you please identify biological issues (e.g., special status species restrictions/surveys) and any other issues (e.g., cultural) that would require surveys prior to geotechnical activities. Are there any permits that would be required to conduct these surveys? Based on informal consultation with the USFWS lead for the project, the only requirement for geotechnical surveys would be to conduct piping plover/least tern surveys at the Missouri (Yankton-SD) and Platte River crossings, if these activities occur during the breeding season. Geotech activities could occur anytime from August to mid-September.

Keystone Yankton Geotech NPS

This plan outlines the main components of geotech testing. As with the Missouri River Crossing at Yankton, drilling depth would extend to 100 feet.

Descriptive of Proposed Geotechnical Work

This pdf provides an overview of geotech work that would be conducted.

Geotechnical Exploration

Provides lat-long information for test drill locations.

Thanks you in advance for your review and input.

Thanks

Charles Johnson
Senior Wildlife Biologist
ENSR Corporation
1601 Prospect Parkway
Fort Collins, CO 80525
Phone (970) 493-8878
Fax (970) 493-0213

8/11/2006

Johnson, Charlie

From: Johnson, Charlie
Sent: Monday, July 31, 2006 4:11 PM
To: 'rpietruszka@dnrmail.state.il.us'
Cc: Giere, Molly; Castle, Carla
Subject: FW: Keystone Pipeline Environmental Report

Rick - I understand that you have not received a copy of the Keystone Environmental Report for you review. Since the Keystone Environmental Report is a Department of State (DOS) document, ENSR has little control over its distribution and the DOS would like to know who has a copy of the document. Consequently, in order for the IL-DNR to obtain a copy, please request a copy (s) directly from the DOS. Below is the contact information for the DOS lead. Please let me know if you have any problems.

Matthew T. McManus
Division Chief, Energy Producer Country Affairs
U.S. Department of State
2201 C Street, N.W.
EB/ESC/IEC
Room 7525
Washington, D.C. 20520
(202) 647-3423
McManusMT@State.gov

Charles Johnson
Senior Wildlife Biologist
ENSR|AECOM
1601 Prospect Parkway
Fort Collins, CO 80525
(970) 493-8878
cjohnson@ensr.aecom.com

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TransCanada – Keystone Pipeline Contact Summary Form

Location of Meeting Phone _____
Date/Time of Meeting July 31 _____
Keystone Team Member(s) Charles Johnson _____

Contact Information:

Name	Rick Pietruszka
Title	District Biologist
Organization	IL DNR
Address	
County	
Phone	(217) 785-4992
Mail address	

Meeting Information:

Type of Contact (phone, in-person, etc.): _____ Phone _____

Issue: Wildlife & T&E

Concern Level: High ___ Moderate X Low ___

Description:

I contacted Rick to follow up on the Special Status Species Tables that were mailed to Rick for his information and review, and to determine if he had any issues relative to potential geotechnical drilling activities at the Mississippi River, Kaskaskia River, and Hurricane Creek.

Special Status Species

Rick indicated that he did not review the tables. He is assuming that ENSR incorporated all the information that we received from IL relative to species locations.

Geotechnical Surveys

I indicated that there would be geotechnical drilling surveys that would need to be conducted at the Mississippi River, Kaskaskia River, and Hurricane Creek, and if Rick would have any species issues relative to this work.

He indicated that we should be contacting Bob Hammel (Carlyle Lake), The CORE (Carlyle Lake and River crossing). The IL-DNR would only be able to comment on state owned properties. The CORE owns Carlyle

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Lake and has jurisdiction for activities adjacent to the Mississippi.

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TransCanada – Keystone Pipeline Contact Summary Form

Location of Meeting ENSR
Date/Time of Meeting July 11, 2006
Keystone Team Member(s) Sara Stribley

Contact Information:

Name	Dave Enstrom
Title	Ornithologist
Organization	Illinois Natural History Survey
Address	1816 S. Oak Street Champaign, IL 61820
County	
Phone	217-244-6872
E-mail address	denstrom@inhs.uiuc.edu

Meeting Information:

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

Issue: Survey Protocols for Illinois State Threatened/Endangered Bird Species

Concern Level: High Moderate **Low** .

Description:

Hi Dave
I had left a message for you last week, and followed it up with an email. Just wanted to check to see if you were back in the office and had received my messages? Do you think you will be able to provide me with some information on the species that I had listed in my email?

Thanks for your help,

Sara Stribley
Staff Specialist
ENSR Corporation
1601 Prospect Pkwy
Fort Collins, CO 80525
970.493.8878 ext. 168
sstribley@ensr.aecom.com

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TransCanada – Keystone Pipeline Contact Summary Form

Location of Meeting ENSR

Date/Time of Meeting July 11, 2006

**Keystone Team
Member(s)** Sara Stribley

Contact Information:

Name	Steve Bailey
Title	Ornithologist
Organization	Illinois Natural History Survey
Address	1816 S. Oak Street Champaign, IL 61820
County	
Phone	217-244-2174
E-mail address	sdbailey@inhs.uiuc.edu

Meeting Information:

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

Issue: Survey Protocols for Illinois State Threatened/Endangered Bird Species

Concern Level: High Moderate **Low**

Description:

Hi Steve,
I had left a message for you last week, and followed it up with an email. Just wanted to check to see if you were back in the office and had received my messages? Do you think you will be able to provide me with some information on the species that I had listed in my email?

Thanks,

Sara Stribley
Staff Specialist
ENSR Corporation
1601 Prospect Pkwy
Fort Collins, CO 80525
970.493.8878 ext. 168
stribley@ensr.com

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TransCanada – Keystone Pipeline Contact Summary Form

Location of Meeting ENSR
Date/Time of Meeting July 6, 2006
Keystone Team Member(s) Sara Stribley

Contact Information:

Name	Chris Phillips
Title	Herpetologist
Organization	Illinois Natural History Survey
Address	1816 S. Oak Street Champaign, IL 61820
County	
Phone	217-244-7077
E-mail address	chrisp@inhs.uiuc.edu

Meeting Information:

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

Issue: Survey Protocols for Illinois State Threatened/Endangered Reptiles/Amphibian Species

Concern Level: High Moderate Low

Description:

I spoke with Chris Phillips regarding information on survey methods/protocols for the Eastern Massasauga, Kirtland's Snake, and the Illinois Chorus Frog. The following information is what we discussed for each species:

Illinois Chorus Frog: This frog is aboveground only for a short period of time during the mating season. In Madison county mating occurs from February to March. The remainder of the year, this species remains hidden in underground burrows. The best way to survey for the species is to conduct "calling surveys." These calling surveys are best done during rainy nights.

Eastern Massasauga: The best time to survey for this species is done during the spring egress out of the crawfish burrows. This occurs from March to April. The massasauga will bask during this period, unless the temperatures get hot quickly. It also helps to survey directly following the winter burn, when the previous year's grass has been burned off. Massasaugas are not very mobile, and usually do not travel more than 200 m from their burrows.

Kirtland's Snake: This species is extremely secretive and elusive, and nocturnal. The best way to survey for this species is by turning objects in its appropriate habitat. It is very difficult to find especially when it retreats down into crawfish burrows. The best time to look for this species is from March to April.

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TransCanada – Keystone Pipeline Contact Summary Form

Location of Meeting ENSR
Date/Time of Meeting July 6, 2006
Keystone Team Member(s) Sara Stribley

Contact Information:

Name	Bill Handel
Title	Botanist
Organization	Illinois Natural History Survey
Address	1816 S. Oak Street Champaign, IL 61820
County	
Phone	217-244-2109
E-mail address	whandel@inhs.uiuc.edu

Meeting Information:

Type of Contact (phone, in-person, etc.): _____ **Phone** _____

Issue: Survey Protocols for Illinois State Threatened/Endangered Plant Species

Concern Level: High___Moderate___**Low**__.

Description:

Bill gave me the following information for survey methods/recommendations:

Eastern Prairie Fringed Orchid: This species is found only in native prairie. Probably does not occur along the project route unless the route crosses any native prairie remnants. The best time to survey for this species is during the flowering period, end of June through mid-July.

Prairie bush clover: don't need to survey for this species, it does not occur in project area.

Prairie spiderwort: This species prefers disturbed areas, and has been found near railroad ballasts in sandy or gravelly soil. It is known to occur in the Poag Road Prairie west of Collinsville. The best time to survey for this species is during the flowering period, May to early-June.

Royal catchfly: Hasn't been seen in Madison county since 1985. May occur in the Poag Road Prairie or the Railroad Prairie.

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Spring Ladies' tresses: has shown up sporadically around Madison County. Can show up anywhere for a few years and then disappear and show up in a different area. Perennial that flowers from late summer to fall. Best time to survey is during the flowering period.

Surveys can be conducted the previous year to construction to allow for an entire growing season for surveying.

Dave Ketzner with the ILNHS may have more information on the Royal catchfly and Spring Ladies tresses (217-244-8821).

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TransCanada – Keystone Pipeline Contact Summary Form

Location of Meeting ENSR
Date/Time of Meeting July 6, 2006
Keystone Team Member(s) Sara Stribley

Contact Information:

Name	Dave Enstrom
Title	Ornithologist
Organization	Illinois Natural History Survey
Address	1816 S. Oak Street Champaign, IL 61820
County	
Phone	217-244-6872
E-mail address	denstrom@inhs.uiuc.edu

Meeting Information:

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

Issue: Survey Protocols for Illinois State Threatened/Endangered Bird Species

Concern Level: High Moderate **Low** .

Description: Called Dave and left him a message about trying to get a hold of survey protocols for the following species: Barn Owl Henslow's Sparrow Least bittern Loggerhead shrike Peregrine falcon Pied-billed grebe Yellow crowned night-heron

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TransCanada – Keystone Pipeline Contact Summary Form

Location of Meeting	ENSR
Date/Time of Meeting	July 6, 2006
Keystone Team Member(s)	Sara Stribley

Contact Information:

Name	Dave Enstrom
Title	Ornithologist
Organization	Illinois Natural History Survey
Address	1816 S. Oak Street Champaign, IL 61820
County	
Phone	217-244-6872
E-mail address	denstrom@inhs.uiuc.edu

Meeting Information:

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

Issue: Survey Protocols for Illinois State Threatened/Endangered Bird Species

Concern Level: High Moderate **Low** .

Description:

Hi Dave,
I left a message for you earlier, but thought I would also send you a quick email. ENSR is conducting the environmental surveys for the Keystone Pipeline Project. I am currently trying to put together survey information and am looking for survey methodology (time of year, distance to survey out from centerline, construction restraints, etc.) or any other recommendations for the following species:

Barn Owl
Henslow's Sparrow
Least bittern
Loggerhead shrike
Peregrine falcon
Pied-billed grebe
Yellow crowned night-heron

These are all species that we have received information from the IL NHP that may occur along the project route. The Keystone Pipeline Project passes through Madison, Bond, Fayette, and Marion counties. It crosses the Mississippi River

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just south of Hartford and ends just north of Patoka (<http://www.transcanada.com/keystone/index.html>). It also crosses through the north section of the Carlyle Lake WMA. Any information you are able to provide would be greatly appreciated! Thanks for your help!

Sincerely,

Sara Stribley
Staff Specialist
ENSR Corporation
1601 Prospect Pkwy
Fort Collins, CO 80525
970.493.8878 ext. 168
sstribley@ensr.aecom.com

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TransCanada – Keystone Pipeline Contact Summary Form

Location of Meeting ENSR

Date/Time of Meeting July 6, 2006

Keystone Team Member(s) Sara Stribley

Contact Information:

Name	Steve Bailey
Title	Ornithologist
Organization	Illinois Natural History Survey
Address	1816 S. Oak Street Champaign, IL 61820
County	
Phone	217-244-2174
E-mail address	sdbailey@inhs.uiuc.edu

Meeting Information:

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

Issue: Survey Protocols for Illinois State Threatened/Endangered Bird Species

Concern Level: High Moderate Low

Description:

Called Steve and left him a message requesting survey information for the following species:

Barn Owl
Henslow's Sparrow
Least bittern
Loggerhead shrike
Peregrine falcon
Pied-billed grebe
Yellow crowned night-heron

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TransCanada – Keystone Pipeline Contact Summary Form

Location of Meeting ENSR

Date/Time of Meeting July 6, 2006

Keystone Team Member(s) Sara Stribley

Contact Information:

Name	Steve Bailey
Title	Ornithologist
Organization	Illinois Natural History Survey
Address	1816 S. Oak Street Champaign, IL 61820
County	
Phone	217-244-2174
E-mail address	sdbailey@inhs.uiuc.edu

Meeting Information:

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

Issue: Survey Protocols for Illinois State Threatened/Endangered Bird Species

Concern Level: High Moderate Low

Description:

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I left a message for you earlier, but thought I would also send you a quick email. ENSR is conducting the environmental surveys for the Keystone Pipeline Project. I am currently trying to put together survey information and am looking for survey methodology (time of year, distance to survey out from centerline, construction restraints, etc.) or any other recommendations for the following species:

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Henslow's Sparrow
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Loggerhead shrike
Peregrine falcon
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just south of Hartford and ends just north of Patoka (<http://www.transcanada.com/keystone/index.html>). It also crosses through the north section of the Carlyle Lake WMA. Any information you are able to provide would be greatly appreciated! Thanks for your help!

Sincerely,

Sara Stribley
Staff Specialist
ENSR Corporation
1601 Prospect Pkwy
Fort Collins, CO 80525
970.493.8878 ext. 168
sstribley@ensr.aecom.com

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TransCanada – Keystone Pipeline Contact Summary Form

Location of Meeting ENSR

Date/Time of Meeting 6/30/06

Keystone Team
Member(s) Sara Stribley

Contact Information:

Name	Diane Tecic
Title	Natural Heritage Regional Administrator
Organization	Illinois Natural Heritage Program
Address	4521 Alton Commerce Parkway Alton, IL 62002
County	
Phone	618-462-1181
E-mail address	diane.tecic@illinois.gov

Meeting Information:

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

Issue: Sensitive Species Survey Protocols

Concern Level: High Moderate Low

Description:

Sara,
here are a few people who should be able to give you detailed info on survey methods. They are all staff from our Illinois Natural History Survey, headquartered out of Champaign, IL. They are, more or less, the research branch of our agency. Please let me know if you need any additional info or contacts. I am sure these people will be able to help you.

Steve Bailey, (birds)
217-244-2174
sdbailey@inhs.uiuc.edu

Dave Enstrom, (Birds)
217-244-6872
denstrom@inhs.uiuc.edu

Bill Handel, (Plants)

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217-244-2109
whandel@inhs.uiuc.edu

Chris Phillips, (Reptiles, herps)
217-244-7077
chrisp@inhs.uiuc.edu

PLEASE NOTE NEW EMAIL ADDRESS: diane.tecic@illinois.gov

Diane Tecic
Natural Heritage Regional Administrator
4521 Alton Commerce Parkway
Alton, IL 62002
618-462-1181
618-462-2424 fax

>>> "Stribley, Sara" <sstribley@ensr.aecom.com> 06/30/06 10:53 AM >>>

Hi Diane,
Rick Pietruszka had sent me your name as the person I should try to contact to gather some information on sensitive species. I am trying to put together survey information for several species in Illinois that may need to be surveyed for along the proposed Keystone Pipeline Project route. If you have any survey suggestions/protocols for the following species, or can point me towards the people who would, that would be very much appreciated!!!

Least bittern
Loggerhead shrike
Henslow's sparrow
Yellow-crowned night heron
Pied-billed grebe

Kirtland's snake
Illinois chorus frog

Eastern prairie fringed orchid
Prairie bush-clover
Royal catchfly
Prairie spiderwort
Spring ladies' tresses

I know this is quite a long list, but if you can provide any input, that would help tremendously!
Thanks for your assistance!
Sincerely,
Sara

Sara Stribley
ENSR Corporation
1601 Prospect Pkwy
Fort Collins, CO 80525
970.493.8878 ext. 168
sstribley@ensr.aecom.com <<mailto:sstribley@ensr.aecom.com>>

ENSR

1801 Prospect Parkway, Fort Collins, Colorado 80525-9769
T 970.493.3878 F 970.493.0218 www.ensraecom.com

June 26, 2006

Rick Pietruszka
Illinois Department of Natural Resources
One Natural Resources Way, 2nd Floor
Springfield, IL 62702

Dear Mr. Pietruszka:

As discussed in the January 24, 2006 letter, TransCanada is planning to construct and operate a 1,830-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 1,070 miles of new pipeline constructed from the U.S.-Canada border in Pembina County, North Dakota to terminals and refineries in Salisbury (Chariton County), Missouri, Wood River (Madison County), and Patoka (Marion County), Illinois. Approximately 283 miles would parallel the proposed Rockies Express Pipeline - West (REX-West) Project in Kansas and Missouri. In addition, TransCanada is considering the construction of a 291-mile pipeline extension that would extend the Keystone Pipeline south from the Nebraska/Kansas border to Cushing, Oklahoma. TransCanada proposes to begin construction of the new pipeline in early 2008, with the system in-service by the end of 2009. 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.

At this time, ENSR Corporation (ENSR) is providing information regarding the Keystone Mainline portion of the project. As the Cushing Extension portion of the project develops, we will provide additional information for your review and input.

Attached for your review are state-specific special status species tables (i.e., federally listed, proposed and candidate species; state listed species) (**Tables 1 and 2**) that include a brief description of species habitat, miles of potential habitat crossed by the project, and approximate mileposts where potential habitat has been preliminarily identified along the project route. **Table 3** provides potential species habitat by state and county. Habitat for special status species was determined based on species habitat association, known distribution, and agency correspondence (e.g., U.S. Fish and Wildlife Service [FWS], state wildlife agencies, and National Heritage Program/NatureServe), in combination with aerial habitat surveys, Land Use-Land Cover (LULC) data, and aerial photography. Survey data from the REX-West Project also was used to quantify potential habitat that would be crossed in Kansas and Missouri (Buchanan County through Randolph County).

Also attached for your review are 1:100,000-scale maps that identify areas along the pipeline route where potential grassland, wetland/riparian, and upland woodland/forests have been identified. Habitat data within these maps were obtained from LULC data and aerial photography. These preliminary habitat locations may be modified following further habitat analysis and consultations with federal and state agencies. In addition, some pipeline routing modifications continue to be developed and evaluated including those denoted by red "reroute" lines on the attached maps. As a result, habitat analysis and consultation will continue for these routing adjustments as needed in the future. Habitat related to powerlines has not been evaluated at this time.

Rick Pietruszka
June 26, 2006
Page 2

If you have any questions or concerns regarding the enclosed materials, or if you think that additional meetings would be appropriate, please contact me at (970) 493-8878 ext. 181 or email cjohnson@ensr.aecom.com.

Sincerely



Charles Johnson
Senior Wildlife Biologist

CJ/sc

Ref: 10623-004

Enc. 1:100,000-scale maps
Tables 1 through 3

**Table 1
Illinois Special Status Species
Habitat by County and Mainline Milepost
Keystone Pipeline Project**

Species	Status	Habitat Association	Primary Habitat	County	Miles (mi) of Associated Habitat Crossed by Keystone Pipeline Project					Mainline Milepost(s)
					Grassland (mi)	Forests and Woodlands (mi)	Riparian (mi)	Nonforested Emergent Wetland (mi) ¹	Open Water (mi) (habitat crossed or within 0.5 mi)	
Gray bat <i>Myotis grisescens</i>	FE; IL-E	This species forages primarily within forested areas along streams and lakes. Winter roosts are in deep vertical caves with domed halls. Large summer colonies utilize caves that trap warm air and provide restricted rooms or domed ceilings. Maternity roosts typically are in caves with stream flow and are separate from summer bachelor roosts.	riparian woodlands, caves	Madison		Madison: 1.0	Madison: 1.7			Madison: 1021.7-1041.8
Indiana bat <i>Myotis sodalis</i>	FE; IL-E	This species forages primarily in riparian forests and flood-plains, as well as in upland forests, low field, and pastures. Maternity roosts are located beneath loose bark of living and dead trees (especially oak and hickory spp.). Young are generally born in June. Winter hibernacula occur in caves and mines with 85% of this species population hibernating in Shannon, Washington, and Iron counties, MO.	riparian woodlands, upland forests, pastures, caves	Bond Fayette Madison Marion		Bond: 1.3 Fayette: 0 Madison: 1.0 Marion: 0	Bond: 0.6 Fayette: 3.4 Madison: 1.7 Marion: 0			Bond: 1048.7-1056.3 Fayette: 1064.7-1068.1 Madison: 1021.7-1033.4, 1036.4-1041.8 Marion: N/A
River otter <i>Lontra Canadensis</i>	IL-E	Key habitats are rivers, streams, lakes, ponds, marshes, estuaries, and beaver flowages, especially near waterbodies with wooded shorelines or nearby wetlands. When inactive, occupies hollow logs, spaces under roots, logs, or overhangs, abandoned beaver lodges, dense thickets near water, or burrows of other animals; such sites also are used for rearing young	rivers, streams, lakes, ponds, marshes, wetlands	Bond Fayette					Bond: 0.1 (Shoal Creek) Fayette: 3.1 (Carlyle WMA)	Bond: 1050.8 (Shoal Creek) Fayette: 1065 - 1068.1 (Carlyle WMA)
Bald eagle <i>Haliaeetus leucocephalus</i>	FT; IL-T	This species typically occurs near large bodies of water that support suitable roosting and foraging habitat. Nest sites typically occur in proximity to open water and generally are found in mature heterogeneous stands of multi-storied trees, but also may nest on cliffs. Winter habitat typically includes areas of open water, adequate food sources, and sufficient diurnal perches and night roosts. Breeding season: January through July. Winter season: November 15 through March 15.	riparian forests, open water	Bond Fayette Madison					Bond: 0 (Lake Lola, waterbody) Fayette: 3.1 (Carlyle Wildlife Management Area) Madison: 1.1 (Mississippi River, Silver Lake)	Bond: 1055.3 - 1055.6 (Lake Lola), 1063 (waterbody) Fayette: 1065 - 1068.1 (Carlyle WMA) Madison: 1016.5 - 1017.6 (Mississippi River), 1041.5 - 1041.7 (Silver Lake)

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Illinois Special Status Species
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Keystone Pipeline Project**

Species	Status	Habitat Association	Primary Habitat	County	Miles (mi) of Associated Habitat Crossed by Keystone Pipeline Project					Mainline Milepost(s)
					Grassland (mi)	Forests and Woodlands (mi)	Riparian (mi)	Nonforested Emergent Wetland (mi) ¹	Open Water (mi) (habitat crossed or within 0.5 mi)	
Barn owl <i>Tyto alba</i>	IL-E	This cavity-nesting species is primarily a bird of open country - residential and agricultural areas, old fields and woodland edges. Nests in buildings, tree cavities, caves, cliff crevices, and cut bank burrows. Breeding season: late winter, spring, and/or early summer.	grasslands, woodlands, agriculture	Fayette Marion	Fayette: 0 Marion: 0	Fayette: 0 Marion: 0				Fayette: N/A Marion: N/A
Henslow's sparrow <i>Ammodramus henslowii</i>	IL-E	This species breeds in a variety of grassland habitats with tall, dense grass and herbaceous vegetation. Meadows, open grasslands and weedy and abandoned fields, all with wet areas, dense grass-forb mosaics and scattered small woody growths appear to be essential. Breeding season: April-July.	grasslands, meadows, shrublands	Marion	Marion: 0	Maion: 0				Marion: N/A
Least bittern <i>Ixobrychus exilis</i>	IL-T	Nest in freshwater wetlands with dense, tall growths of emergent vegetation (particularly <i>Typha</i> spp., <i>Carex</i> spp., <i>Scirpus</i> spp., or <i>Phragmites australis</i>) interspersed with some woody vegetation and open, fresh water. In the north-central U.S., breeding and nesting may occur from May-July. Incubation lasts for 17-20 days; young usually leave nest by the 13th-15th day.	wetlands, lakes, open water	Fayette Madison				data pending data pending		Fayette: data pending Madison: data pending
Loggerhead shrike <i>Lanius ludovicianus</i>	IL-T	This species is found in open areas with mixed shrub/brush hedgerows and scattered thorny trees. Thorny plant species (osage orange, honey locust, multiflora rose, wild crabapple) are important for impaling prey. In MO and IL, nesting peaks in late April, with a second peak in late May in MO.	shrublands, uplands	Bond Fayette Marion	Bond: 0.9 Fayette: 0 Marion: 0	Bond: 1.3 Fayette: 0 Marion: 0				Bond: 1048.7-1059.9 Fayette: N/A Marion: N/A
Peregrine falcon <i>Falco peregrinus</i>	IL-T	This species is found over a wide variety of habitats, but are generally located near open water or marshes that support high concentration of shorebirds or waterfowl. Nest sites occur on tall steep-walled cliffs, bridges, or buildings. Preferred foraging habitat includes lakes, rivers, and wet meadows. Breeding season: April 15 to July 15.	wetlands, lakes, open water	Madison			Madison: 2.0	data pending		Madison: 1017.1-1022.8, 1036.4-1041.8; data pending
Pied-billed grebe <i>Podilymbus podiceps</i>	IL-T	This species breeds on seasonal or permanent ponds with dense stands of emergent vegetation, bays and sloughs. Uses most types of wetlands in winter.	ponds, wetlands, sloughs	Fayette			Fayette: 3.4	data pending	Fayette: 3.1 (Carlyle WMA)	Fayette: 1064.7-1068.1 (Carlyle WMA)

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					Grassland (mi)	Forests and Woodlands (mi)	Riparian (mi)	Nonforested Emergent Wetland (mi) ¹	Open Water (mi) (habitat crossed or within 0.5 mi)	
Yellow-crowned night heron <i>Nyctanassa violacea</i>	IL-E	This species nests on barrier islands, dredge spoil islands, and bay islands that contain forested wetlands or scrub/shrub thickets. Colonies may be located in dense shrubby thickets, forests with an open understory. They use similar habitat types for nesting and roosting, avoiding areas with insufficient cover. They hunt along the shores of tidal creeks and tide pools within salt and brackish marshes dominated by salt marsh cordgrass.	wetlands, scrub/shrub thickets,	Fayette			Fayette: 3.4	data pending		Fayette: 1064.7-1068.1
Lake sturgeon <i>Acipenser fulvescens</i>	IL-E	This species is generally bottom dwelling and occurs in large rivers and shallow areas of large lakes. They are most often associated with silt-free deep run and pool habitats of rivers (i.e., >5 ft deep), and generally avoid aquatic vegetation. Gravelly tributary streams of rivers and lakes serve as spawning habitat, although rocky, wave-swept areas near lake shores and islands serve as spawning habitat when preferred habitats are unavailable. Spawning period: late-spring.	large rivers and lakes, gravelly substrate	Madison					Madison: 0.5 (Mississippi River)	Madison: 1016.6-1017.1 (Mississippi River)
Pallid sturgeon <i>Scaphirhynchus albus</i>	FE; IL-E	This species is distributed from the headwaters of the Missouri River (Fort Benton-Great Falls, Montana) through the Mississippi River to New Orleans, Louisiana. It inhabits bottom areas of large turbid rivers that have strong current and a firm sandy substrate. They also may be found along sandbars and behind wing dikes. Spawning period: April through August.	large, turbid rivers, sand substrate	Madison Fayette					Madison: 0.5 (Mississippi River) Fayette: 0.1 (Kaskaskia River)	Madison: 1016.6-1017.1 (Mississippi River) Fayette: 1067.6-1067.7 (Kaskaskia River)
Western sand darter <i>Ammocrypta clarum</i>	IL-E	This species occurs in medium and large rivers; most commonly in slight to moderate currents over sandy bottoms. It is known to inhabit areas of gravel or silt. The species has also been recorded from quiet margins of drainage canals and shallow backwaters, usually where there is enough current to keep the bottom largely free of silt. Buries in sand.	rivers	Fayette					Fayette: 0.1 (Kaskaskia River)	Fayette: 1067.6-1067.7 (Kaskaskia River)

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					Grassland (mi)	Forests and Woodlands (mi)	Riparian (mi)	Nonforested Emergent Wetland (mi) ¹	Open Water (mi) (habitat crossed or within 0.5 mi)	
Eastern massasauga <i>Sistrurus catenatus catenatus</i>	FC; IL-E	This subspecies prefers marshy and swamp areas dominated by cordgrass, sedges, and bulrushes, as well as lowland areas along river and lakes. The snakes hibernate singly in mammal burrows, crayfish burrows, and in crevices or rock piles close to water. Courtship and mating occurs in spring and young are born in late July through early September.	wetland, riparian	Bond Fayette Madison			Bond: 0.8 Fayette: 3.4 Madison: 2.0	<i>data pending</i> <i>data pending</i> <i>data pending</i>		Bond: 1050.7-1055.1; <i>data pending</i> Fayette: 1064.7-1068.1; <i>data pending</i> Madison: 1017.1-1022.8, 1036.4-1041.8; <i>data pending</i>
Kirtland's snake <i>Clonophis kirtlandi</i>	IL-T	This species inhabits prairie wetlands, wet meadows, and grassy edges of creeks, ditches, and ponds, usually in association with crayfish burrows. It also has been found in damp habitat remnants in vacant lots of urban settings. Secretive and nocturnal, it shelters beneath logs and surface debris, or in crayfish burrows, by day.	wetlands	Fayette				<i>data pending</i>		Fayette: <i>data pending</i>
Illinois chorus frog <i>Pseudacris strecheri illino</i>	IL-T	Sand prairies and remnants such as sandy agricultural fields and waste areas. Burrows in sand and emerges after heavy, early spring rains to breed in nearby flooded fields, ditches, and other vernal ponds	sand prairies	Madison	Madison: 0.6					Madison: 1025.4-1025.5, 1038.3-1038.6, 1044.5-1044.8
Decurrent false aster <i>Boltonia decurrens</i>	FT; IL-T	The species grows in open muddy bottomlands and is dependent upon disturbance from cyclical flooding to maintain the habitat suitable for its survival. Historically, it was found on the shores of lakes and the banks of streams. Currently, it is most common in disturbed lowland areas where human-caused disturbance provides adequate habitat. Flowers: July-October.	riparian floodplains and muddy bottomlands subject to flooding	Madison			Madison: 2.0	<i>data pending</i>		Madison: 1017.1-1022.8, 1036.4-1041.8; <i>data pending</i>
Eastern prairie fringed orchid <i>Platanthera leucophaea</i>	FT; IL-E	Mesic-wet calcareous tallgrass sand or silt loam prairie. May also be found in open graminoid portions of lake margins, sedge, meadows, and marshes, wet prairie or open swamps, or bogs and shores. Flowering begins late June to early July. Flowers do not appear annually.	Mesic-wet tallgrass prairie	Bond Fayette Madison Marion				<i>data pending</i> <i>data pending</i> <i>data pending</i> <i>data pending</i>		Bond: <i>data pending</i> Fayette: <i>data pending</i> Madison: <i>data pending</i> Marion: <i>data pending</i>

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					Grassland (mi)	Forests and Woodlands (mi)	Riparian (mi)	Nonforested Emergent Wetland (mi) ¹	Open Water (mi) (habitat crossed or within 0.5 mi)	
Prairie bush-clover <i>Lespedeza leptostachya</i>	FT; IL-E	In Illinois, this species is generally found on dry gravel prairies and dry-mesic prairies. It is often found on north-facing prairie slopes. On these slopes, it typically occurs either in thin soil at the margins of rocks or in gravelly loamy soil. Flowers in July, August.	prairie	Bond Fayette Madison Marion	0.9 0 0.6 0					Bond: 1059.0-1059.9 Fayette: N/A Madison: 1025.4-1025.5, 1038.3-1038.6, 1044.5-1044.8 Marion: N/A
Prairie Spiderwort <i>Tradescantia bracteata</i>	IL-T	Common spiderwort likes sandy soils and seems to be most abundant where grazing is light to moderate. Dry typical prairie and dry sand prairies	grazed prairies, sandy soils	Madison	Madison: 0.6					Madison: 1025.4-1025.5, 1038.3-1038.6, 1044.5-1044.8
Royal Catchfly <i>Silene regia</i>	IL-E	This species is found in habitats that include mesic black soil prairies, openings in upland forests, savannas, scrubby barrens, and open areas along roadsides and railroads	prairies, upland forests, savannas, open roadsides	Madison	Madison: 0.6	Madison: 1.0				Madison: 1025.4-1033.4, 1038.3-1044.8
Spring Ladies' Tresses <i>Spiranthes vernalis</i>	IL-E	This species is typically found in upland dry to mesic forests, dry to mesic prairies, and successional cultured fields.	upland/mesic forests	Madison			Madison: 2.0	data pending		Madison: 1017.1-1022.8, 1036.4-1041.8; data pending

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**Table 2
Keystone Special Status Species
Total Habitat Crossed by State**

Species	Status	Habitat Association	Primary Habitat	Habitat by County and State, and Total Distance (mi) Crossed									
				ND		SD	NE	KS	MO		IL		
Mammals													
Gray bat <i>Myotis grisescens</i>	FE; MO-E; IL-E	This species forages primarily within forested areas along streams and lakes. Winter roosts are in deep vertical caves with domed halls. Large summer colonies utilize caves that trap warm air and provide restricted rooms or domed ceilings. Maternity roosts typically are in caves with stream flow and are separate from summer bachelor roosts.	Riparian woodlands, caves							Madison	6.7		
Indiana bat <i>Myotis sodalis</i>	FE; MO-E; IL-E	This species forages primarily in riparian forests and flood-plains, as well as in upland forests, low field, and pastures. Maternity roosts are located beneath loose bark of living and dead trees (especially oak and hickory spp.). Young are generally born in June. Winter hibernacula occur in caves and mines with 85% of this species population hibernating in Shannon, Washington, and Iron counties, MO.	Riparian woodlands, upland forests, pastures, caves							Audrain Buchanan Caldwell Carroll Chariton Clinton Lincoln Montgomery Randolph St. Charles	3.7 4.5 3.1 3.4 4.1 1.4 10.1 4.6 3.6 0.6	Bond Fayette Madison Marion	1.9 3.4 6.7 0.0
Gray wolf <i>Canis lupus</i>	FT; ND-SC	No particular habitat preference. Habitats may include: alpine, desert, conifer forest, hardwood forest, mixed forest, grasslands, savannas, shrubland/ chaparral, tundra, and woodlands.	Any	Cavalier Grnd Fks Nelson Pembina Sargent Walsh	0.0 0.0 0.2 2.9 8.4 1.7								
Fisher <i>Martes pennanti</i>	FC; ND-SC	This species inhabits upland and lowland forests, including coniferous, mixed, and deciduous forests. Fishers generally avoid areas with little forest cover or significant human disturbance and conversely prefer large areas of contiguous interior forest.	Forests and woodlands	Pembina	2.9								
Plains spotted skunk <i>Spilogale putorius interrupta</i>	SD-SC; MO-E	This species inhabits upland grassland prairie, brushy areas, cultivated land, and forests. Their dens are located below ground in grassy banks, rocky crevices or along fence rows, as well as above ground in hay stacks, woodpiles, hollow logs, trees, or on brushy heaps. Young are born from April to July.	Grasslands, shrublands, upland forests, agriculture edge							Chariton	17.0		
Eastern spotted skunk <i>Spilogale putorius</i>	KS-T; MO-E; SD-SC	This species prefers forest edge, prairie, brushy areas, and cultivated land, especially if rock outcrops and shrubs are present. Their dens are located below ground in grassy banks, rocky crevices or along fence rows, as well as above ground in hay stacks, woodpiles, brushy heaps, hollow logs, and abandoned buildings or outbuildings. Young are born in May or June.	Grasslands, shrublands, upland forests, agriculture edge							Brown Doniphan Marshall Nemaha	7.9 4.2 6.9 5.3	St. Charles	1.1

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Species	Status	Habitat Association	Primary Habitat	Habitat by County and State, and Total Distance (mi) Crossed											
				ND		SD		NE		KS		MO		IL	
River otter <i>Lontra Canadensis</i>	IL-E	Key habitats are rivers, streams, lakes, ponds, marshes, estuaries, and beaver flowages, especially near waterbodies with wooded shorelines or nearby wetlands. When inactive, occupies hollow logs, spaces under roots, logs, or overhangs, abandoned beaver lodges, dense thickets near water, or burrows of other animals; such sites also are used for rearing young	rivers, streams, lakes, ponds, marshes, wetlands					Colfax Stanton	0.5 0.2					Bond Fayette	0.1 3.1
Birds															
Least bittern <i>Ixobrychus exilis</i>	MO-SC; IL-T	Nest in freshwater wetlands with dense, tall growths of emergent vegetation (particularly <i>Typha</i> spp, <i>Carex</i> spp., <i>Scirpus</i> spp., or <i>Phragmites australis</i>) interspersed with some woody vegetation and open, fresh water. In the north-central U.S., breeding and nesting may occur from May-July. Incubation lasts for 17-20 days; young usually leave nest by the 13 th -15th day.	Wetlands, lakes, open water											Fayette Madison	0.0 ¹ 0.0 ¹
Bald eagle <i>Haliaeetus</i> <i>cocephalus</i>	FT; ND-SC; SD-T; NE-T; KS-T; MO-E; IL-T; OK-T	This species typically occurs near large bodies of water that support suitable roosting and foraging habitat. Nest sites are located in proximity to open water and generally are found in mature heterogeneous stands of multi-storied trees, but also may nest on cliffs. Winter habitat typically includes areas of open water, adequate food sources, and sufficient diurnal perches and night roosts. Breeding season: January through July. Winter season: November 15 through March 15.	Riparian forests, open water	Barnes Cavalier Grnd Fks Nelson Pembina Ransom Sargent Steele Walsh	0.0 0.0 0.0 0.0 0.1 0.2 0.0 0.0 0.3	Beadle Clark Day Hanson Hutchinson Kingsbury Marshall McCook Yankton	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.1	Butler Cedar Colfax Gage Jefferson Platte Saline Seward Stanton Wayne	0.0 0.2 0.5 0.0 0.0 0.0 0.2 0.1 0.2 0.0	Brown Doniphan Marshall Nemaha	0.0 0.2 0.1 0.0	Buchanan Carroll Chariton Clinton Lincoln Montgomery St. Charles	0.2 0.0 0.7 0.0 0.2 0.0 0.3	Bond Fayette Madison	0.1 3.1 1.1
Peregrine falcon <i>Falco peregrinus</i>	IL-T; NE-SC; KS-E	This species is found over a wide variety of habitats, but are generally located near open water or marshes that support high concentration of shorebirds or waterfowl. Nest sites occur on tall steep-walled cliffs, bridges, or buildings. Preferred foraging habitat includes lakes, rivers, and wet meadows. Breeding season: April 15 to July 15.	Wetlands, lakes, open water							Brown Doniphan Marshall Nemaha	0.0 ¹ 0.0 ¹ 0.0 ¹ 0.0 ¹			Madison	2.1 ¹
Greater Prairie-chicken <i>Tympanuchus</i> <i>cupido</i>	MO-E; ND-SC	Prime habitat for this species includes mid-grass and tall-grass prairies bordered by open oak woodlands, oak forests, and cropland. In western Kansas, they nest in sand-sage prairie and forage in corn and wheat fields. In Missouri, nesting habitat is limited to cropland and nearby prairies mainly on the Osage Plains. Breeding season: March through July.	Shortgrass, tallgrass, upland forest, agriculture									Audrain Carroll	5.9 13		
King rail <i>Rallus elegans</i>	MO-E; NE-SC	This species inhabits fresh and brackish wetlands. King rails prefer wetlands with abundant grasses, sedges, rushes and cattails. Nest sites occur in herbaceous cover over shallow water in river floodplains. The adult King Rail molts completely after nesting and is flightless for nearly a month. Breeding season: April-June	Wetlands									Carroll Lincoln St. Charles	0.0 ¹ 0.0 ¹ 0.0 ¹		

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Table 2
Keystone Special Status Species
Total Habitat Crossed by State

Species	Status	Habitat Association	Primary Habitat	Habitat by County and State, and Total Distance (mi) Crossed											
				ND		SD		NE		KS		MO		IL	
Whooping crane <i>Grus americana</i>	FE; ND-SC; SD-E; NE-E; OK-E; KS-E	During migration, this species feeds and roosts in a variety of habitats including croplands, large and small freshwater marshes, the margins of lakes and reservoirs, and submerged sandbars in rivers. Spring and Fall migration through the project regions generally occurs from February through April and from October through November, respectively.	Wetlands, riparian, agriculture	Barnes Cavalier Nelson	0.0 ¹ 0.0 ¹ 0.2 ¹	Beadle Clark Kingsbury Yankton	0.0 ¹ 0.0 ¹ 0.0 ¹ 0.1 ¹	Colfax Saline Seward Stanton	0.5 ¹ 0.2 ¹ 0.1 ¹ 0.2 ¹	Brown Doniphan Marshall Nemaha	0.0 ¹ 0.2 ¹ 0.1 ¹ 0.0 ¹				
Snowy plover <i>Charadrius alexandrinus</i>	KS-T	This species inhabits open alkaline flats, mudflats, sandy shorelines, sandbars with little vegetation along rivers, lakes, ponds, and marshlands. Nesting often occurs on white saline flats. Breeding season: May 1 through August 15.	Shorelines, sandbars, wetlands, rivers, lakes, ponds							Brown Doniphan Marshall Nemaha	0.0 ¹ 0.2 ¹ 0.0 ¹ 0.0 ¹				
Piping plover <i>Charadrius melodus</i>	FT; ND-SC; SD-T; NE-T; KS-T	This species inhabits open sandy areas and saline flats with little vegetation along rivers, lakes, ponds, and marshlands. It nests on sandbars and sand and gravel beaches with short, sparse vegetation along inland lakes, on natural and dredge islands in rivers, on gravel pits along rivers, and on salt-encrusted bare areas on interior alkali ponds and lakes. Sparse clumps of grass or herbaceous vegetation are important habitat components. Breeding season: May 1 through August 15.	Shorelines, sandbars, wetlands, rivers, lakes, ponds	Sargent		Clark Day Kingsbury Yankton	0.0 ¹ 0.0 ¹ 0.4 ¹ 0.1 ¹	Butler Cedar Colfax Gage Jefferson Platte Saline Seward Stanton	0.0 ¹ 0.2 ¹ 0.5 ¹ 0.0 ¹ 0.0 ¹ 0.0 ¹ 0.2 ¹ 0.1 ¹ 0.2 ¹	Brown Doniphan Marshall Nemaha	0.0 ¹ 0.2 ¹ 0.1 ¹ 0.0 ¹				
Eskimo curlew <i>Numenius borealis</i>	FE; SD-E; KS-E	This species is a nearly extinct spring migrant that feeds and rests in burned-over prairies, agricultural areas, wetlands, and marshes.	Prairies, wetlands, agriculture			Clark	4.5 ¹			Brown Doniphan Marshall Nemaha	4.9 ¹ 1.8 ¹ 5.6 ¹ 4.7 ¹				
Interior least tern <i>Sterna antillarum athalassos</i>	FE; SD-E; NE-E; MO-E; OK-E; KS-E	Nesting habitat consists of sparsely vegetated sandy, gravelly, or silty beaches and sandbars within wide, unobstructed river channels or salt flats along lake shorelines and irrigation reservoirs. Nest locations are generally away from the water's edge since nesting typically begins while river flows are high and relatively small amounts of sandy habitat is exposed. Breeding season: May 1 through August 15.	Shorelines and sandbars or rivers, lakes, reservoirs			Clark Yankton	0.0 ¹ 0.1 ¹	Butler Cedar Colfax Gage Jefferson Platte Saline Seward Stanton	0.0 ¹ 0.2 ¹ 0.5 ¹ 0.0 ¹ 0.0 ¹ 0.0 ¹ 0.2 ¹ 0.1 ¹ 0.2 ¹	Brown Doniphan Marshall Nemaha	0.0 ¹ 0.2 ¹ 0.1 ¹ 0.0 ¹	Chariton St. Charles	0.7 ¹ 0.3 ¹		
Barn owl <i>Tyto alba</i>	MO-E; IL-E	This cavity-nesting species is primarily a bird of open country - residential and agricultural areas, old fields and woodland edges. Nests in buildings, tree cavities, caves, cliff crevices, and cut bank burrows Breeding season: late winter, spring, and/or early summer.	Grasslands, woodlands, agriculture									St. Charles	1.7	Fayette Marion	0.0 0.0
Loggerhead shrike <i>Lanius ludovicianus</i>	MO-SC; IL-T	This species is found in open areas with mixed shrub/brush hedgerows and scattered thorny trees. Thorny plant species (osage orange, honey locus, multiflora rose, wild crabapple) are important for impaling prey. In MO and IL, nesting peaks in late April, with a second peak in late May in MO.	Shrublands, uplands											Bond Fayette Marion	2.1 0.0 0.0

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Total Habitat Crossed by State**

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				ND	SD	NE	KS	MO	IL		
Henslow's sparrow <i>Ammodramus henslowii</i>	KS-SC; MO-SC; IL-E	This species breeds in a variety of grassland habitats with tall, dense grass and herbaceous vegetation. Meadows, open grasslands and weedy and abandoned fields, all with wet areas, dense grass-forb mosaics and scattered small woody growths appear to be essential. Breeding season: April-July.	Grasslands, meadows, shrublands							Madison	1.6
Yellow-crowned night heron <i>Nyctanassa violacea</i>	IL-E	This species nests on barrier islands, dredge spoil islands, and bay islands that contain forested wetlands or scrub/shrub thickets. Colonies may be located in dense shrubby thickets, forests with an open understory. They use similar habitat types for nesting and roosting, avoiding areas with insufficient cover. They hunt along the shores of tidal creeks and tide pools within salt and brackish marshes dominated by salt marsh cordgrass.	wetlands, scrub-shrub thickets,							Fayette	3.4 ¹
Pied-billed grebe <i>Podilymbus podiceps</i>	IL-T	This species breeds on seasonal or permanent ponds with dense stands of emergent vegetation, bays and sloughs. Uses most types of wetlands in winter.	ponds, wetlands, sloughs							Fayette	6.5 ¹
Northern Harrier <i>Circus cyaneus</i>	MO-E	This species breeds in marshes, meadows, grasslands, and cultivated fields. Perches on ground or on stumps or posts. Nests on the ground, commonly near low shrubs, in tall weeds or reeds, sometimes in bog; or on top of low bush above water, or on knoll of dry ground, or on higher shrubby ground near water, or on dry marsh vegetation.	marshes, meadows, grasslands, cultivated fields					Carroll	13.0 ¹		
Fish											
Chestnut lamprey <i>Ichthyomyzon castaneus</i>	KS-T	This species is found in moderate-sized rivers and large creeks. Spawning occurs in smaller tributary streams in swift shallow riffles where the gravel is clean. Eggs are laid in a nest in the river bottom. Spawning period: spring or summer.	Rivers and creeks					Doniphan: Missouri River			
Pallid sturgeon <i>Scaphirhynchus albus</i>	FE; SD-E; NE-E; KS-E; MO-E; IL-E	This species is distributed from the headwaters of the Missouri River (Fort Benton-Great Falls, Montana) through the Mississippi River to New Orleans, Louisiana. It inhabits bottom areas of large turbid rivers that have strong current and a firm sandy substrate. They also may be found along sandbars and behind wing dikes. Spawning period: April through August.	Large, turbid rivers, sand substrate		Yankton: James River Missouri River	Cedar: Missouri River Colfax: Platte River	Doniphan: Missouri River	Buchanan: Missouri River St. Charles: Mississippi River	Madison: Mississippi River Fayette: Kaskaskia River		
Lake sturgeon <i>Acipenser fulvescens</i>	NE-T; MO-E; IL-E	This species is generally bottom dwelling and occurs in large rivers and shallow areas of large lakes. They are most often associated with silt-free deep run and pool habitats of rivers (i.e., >5 ft deep), and generally avoid aquatic vegetation. Gravelly tributary streams of rivers and lakes serve as spawning habitat, although rocky, wave-swept areas near lake shores and islands serve as spawning habitat when preferred habitats are unavailable. Spawning period: late-spring.	Large rivers and lakes, gravelly substrate		Yankton: Missouri River	Cedar: Missouri River		St. Charles: Mississippi River			

¹ Data pending; waiting on completion of wetland/waterbody surveys to determine total habitat crossed (mi); totals likely to change.

**Table 2
Keystone Special Status Species
Total Habitat Crossed by State**

Species	Status	Habitat Association	Primary Habitat	Habitat by County and State, and Total Distance (mi) Crossed					
				ND	SD	NE	KS	MO	IL
Flathead chub <i>Platygobio gracilis</i>	KS-T	This species occurs from the Rio Grande to the Arctic Circle in small creeks and the largest rivers that have turbid fluctuating water levels and unstable sand bottoms. This species relies on flood flows to spawn successfully. Spawning occurs after water levels have subsided after peak flows, when water temperatures are warmer and substrate is more stable. Relies on flood flows to spawn successfully. Spawns after rivers have subsided following peak flow.	Creeks and rivers with turbid, fluctuating flow and sandy substrates				Nemaha: S.F. Nemaha River Doniphan: Missouri River		
Sturgeon chub <i>Macrhybopsis gelida</i>	NE-E; KS-T MO-SC SD-T	This species prefers large turbid sandy rivers over substrate of small gravel and coarse sand. It is often found in areas swept by currents especially at heads of islands or exposed sandbars. Spawning period: late spring to midsummer.	Large sandy rivers, sand/gravel substrate		Yankton: Missouri River	Cedar: Missouri River Colfax County: Platte River	Doniphan: Missouri River	Buchanan: Missouri River	
Sicklefin chub <i>Macrhybopsis meeki</i>	NE-SC; KS-E MO-SC SD-E	This species requires continuously and heavily turbid waters of large rivers where it frequents areas of strong current flowing over sand or gravel substrate. Spawning period: spring (likely from late March and May).	Large turbid rivers, sand/gravel substrate		Yankton: Missouri River	Colfax: Platte River	Doniphan: Rock Creek Missouri River	Buchanan: Missouri River	
Western silvery minnow <i>Notropis argyritis</i>	KS-T; MO-SC	This species prefers protected areas in large, turbid rivers and prairie streams. In streams they are typically found in water less than one foot deep and shallow shore water heavily vegetated with emergent grasses and reeds. In protected areas of larger rivers, they move in large schools of 50 to 100 individuals along the bottom in deep, quiet water. While little is known about spawning, this species probably scatters eggs on silt substrate in quiet water.	Protected areas of rivers and streams				Nemaha: S.F. Nemaha River Doniphan: Missouri River	Buchanan: Missouri River	
Blacknose shiner <i>Notropis heterolepsis</i>	ND-SC; NE-E; MO-SC	This species prefers clean weedy lakes and streams.	Lakes, streams			Cedar: Missouri River Stanton: Elkhorn River	Doniphan: Missouri River		
Topeka shiner <i>Notropis topeka</i>	FE; SD-SC; KS-T; MO-E	This species inhabits pool and run areas in the headwaters of small prairie streams with high water quality and cool temperatures. These streams generally exhibit intermittent flow during summer; however pools are maintained by spring or groundwater percolation. The substrate of these occupied streams consist mainly of clean gravel, however bedrock and clay hardpan overlain by a thin silt layer are not uncommon. Spawning period: late spring and summer.	Small, cool (often intermittent) prairie streams		Miner: Wolf Creek Hanson: Wolf Creek Hutchinson: Wolf Creek Yankton: James River Missouri River	Cedar: Missouri River Saline: W.F. Big Blue River	Marshall: N. Elm Creek Doniphan: Missouri River	Clinton: Castile Creek Little Platte River Shoal Creek Caldwell: Log Creek Crush Creek Crabapple Creek	
Northern redbelly dace <i>Chrosomus eos</i>	NE-T	This species occurs in a variety of habitats ranging from streams to bog lakes.	Streams to bog lakes			Cedar: Missouri River			
Finescale dace <i>Phoxinus neogaeus</i>	NE-T	This species occurs a variety of habitats ranging from streams to bog lakes.	Streams to bog lakes			Cedar: Missouri River			

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Keystone Special Status Species
Total Habitat Crossed by State**

Species	Status	Habitat Association	Primary Habitat	Habitat by County and State, and Total Distance (mi) Crossed						
				ND	SD	NE	KS	MO	IL	
Western sand darter <i>Ammocrypta clarum</i>	IL-E	This species occurs in medium and large rivers; most commonly in slight to moderate currents over sandy bottoms. It is known to inhabit areas of gravel or silt. The species has also been recorded from quiet margins of drainage canals and shallow backwaters, usually where there is enough current to keep the bottom largely free of silt. Buries in sand.	Medium to large rivers, sandy substrate							Fayette: Kaskaskia River
Reptiles										
Western fox snake <i>Elaphe vulpina vulpina</i>	MO-E	This species inhabits cultivated fields, along wooded stream valleys and in natural prairies that adjoin marshes. It is active between late April and October. Small mammal burrows and brush piles are used as den sites during winter hibernation. Mating begins in April and females lay eggs under logs or leaf litter in May or June. Young hatch in August or September.	Agriculture, riparian woodlands, prairies, wetlands						St. Charles	1.7 ¹
Smooth earth snake <i>Virginia valeriae</i>	KS-T	This species inhabits rocky hillsides in moist woodlands and woodland edges in river and stream valleys where they may be found on the slopes under leaf litter, rocks, or logs. During winter, it utilizes deep crevices on rocky hillsides. Mating begins in the spring after emergence from hibernation. Mating may also occur in the fall. Young hatch in August or September.	Riparian woodland, upland forest				Doniphan	2.4		
Eastern massasauga <i>Sistrurus catenatus catenatus</i>	FC; MO-E; IL-E	This subspecies prefers marshy and swamp areas dominated by cordgrass, sedges, and bulrushes, as well as lowland areas along river and lakes. The snakes hibernate singly in mammal burrows, crayfish burrows, and in crevices or rock piles close to water. Courtship and mating occurs in spring and young are born in late July through early September.	Wetland, riparian						Chariton	0.7 ¹
Western massasauga <i>Sistrurus catenatus tergeminus</i>	NE-T; MO-E	This subspecies is found in open sagebrush prairie, rocky prairie hillsides, and prairie marsh habitats, usually near a water source. The snakes hibernate singly in rodent burrows. Courtship and breeding occur both in the Spring and Fall. Young are born during July or August.	Sagebrush, shrubland, wetland			Gage Jefferson	0.0 ¹ 3.4 ¹		Chariton	12.9 ¹
False map turtle <i>Graptemys pseudogeo-graphica</i>	SD-T	This species inhabits slow to swift current rivers and streams, river sloughs, oxbow lakes, ponds, impoundments, and backwaters. They are devoted baskers, often resting just below the surface on submerged branches from fallen trees and projecting logs.	Rivers, streams, sloughs, ponds, backwaters, impoundments		Yankton	0.1				
Kirtland's snake <i>Clonophis kirtlandi</i>	IL-T	This species inhabits prairie wetlands, wet meadows, and grassy edges of creeks, ditches, and ponds, usually in association with crayfish burrows. It also has been found in damp habitat remnants in vacant lots of urban settings. Secretive and nocturnal, it shelters beneath logs and surface debris, or in crayfish burrows, by day.	Wetlands						Fayette	0.0 ¹

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Species	Status	Habitat Association	Primary Habitat	Habitat by County and State, and Total Distance (mi) Crossed											
				ND		SD		NE		KS		MO		IL	
Amphibians															
Illinois chorus frog <i>Pseudacris strecheri illino</i>	IL-T	Sand prairies and remnants such as sandy agricultural fields and waste areas. Burrows in sand and emerges after heavy, early spring rains to breed in nearby flooded fields, ditches, and other vernal ponds	Sand prairies										Madison	0.6	
Invertebrates															
Dakota skipper <i>Hesperia dacotae</i>	FC; SD-SC, ND-SC	This species is considered an obligate of undisturbed native prairie. The butterfly inhabits wet lowland prairie dominated by bluestem grasses and dry upland prairie dominated by mixed bluestem and needle stem grasses. Both habitat types contain an abundance of flowering plants and have alkaline soils. Adults emerge in mid-June to early July, and mate during a flight period that lasts for about three weeks.	Lowland and upland prairie	Barnes Ransom Sargent	0.0 0.0 8.4	Clark Day Marshall Yankton	4.5 6.7 5.1 2.1								
American burying beetle <i>Nicrophorus americanus</i>	FE; KS-E	This species inhabits upland grasslands or near the edge of grassland/forest. Sandy/clay loam soils and food (carrion) availability are also important. The species appears to prefer loose soil in which to bury carrion. Reproduction occurs from late April through mid August. Reproductive activity includes the burial of a carcass, building of a chamber, and laying eggs.	Grasslands, upland forests					Brown Doniphan Marshall Nemaha	7.9 4.2 6.9 5.3						
Scaleshell mussel <i>Leptodea leptodon</i>	FE; SD-SC; NE-E	Occurs in riffles with moderate to high gradients in creeks to large rivers. Typically associated with riffles, relatively strong currents, and substrate of mud, sand, or assemblages of gravel, cobble, and boulder. Restricted to rivers with relatively good water quality in stretches with stable channels. Little is known concerning the reproduction of this species.	Creeks and rivers with good water quality and stable channels			Yankton	0.2	Cedar	0.2						
Higgins' eye pearl mussel <i>Lampsilis higginsii</i>	FE; SD-SC	Found in substrates of mud with a mixture of gravel and stones. Prefers rapidly flowing water. The exact breeding season is unknown.	Fast flowing creeks and rivers, mud substrate			Yankton	0.2	Cedar	0.2						
Winged mapleleaf <i>Quadrula gragosa</i>	FE; SD-SC	The species is found in riffles with clean gravel, sand, or rubble bottoms.	Rivers, streams			Yankton	0.1								
Plants															
Decurrent false aster <i>Boltonia decurrens</i>	FT; MO-E; IL-T	The species grows in open muddy bottomlands and is dependent upon disturbance from cyclical flooding to maintain the habitat suitable for its survival. Historically, it was found on the shores of lakes and the banks of streams. Currently, it is most common in disturbed lowland areas where human-caused disturbance provides adequate habitat. Flowers: July-October.	Riparian floodplains and muddy bottomlands subject to flooding									St. Charles	0.0 ¹	Madison	2.0 ¹
Small white lady's-slipper <i>Cypripedium candidum</i>	NE-T	This species is found in wetland prairie habitats: mesic blacksoil prairie, wet blacksoil prairie, glacial till hill prairie, sedge meadow, calcareous fen, glade. Found on calcareous soils. Flowering occurs May-June.	Wetland prairie					Butler Cedar Colfax Stanton Wayne	0.0 ¹ 4.3 ¹ 0.8 ¹ 1.5 ¹ 1.3 ¹						

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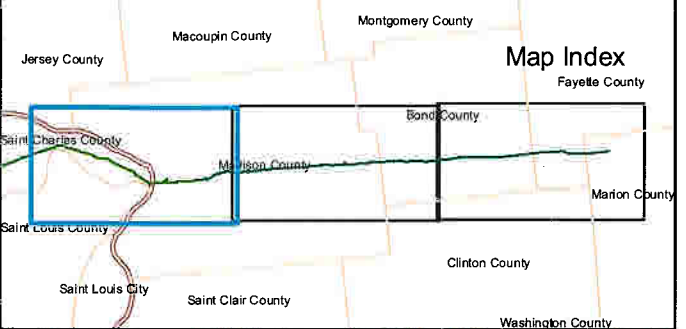
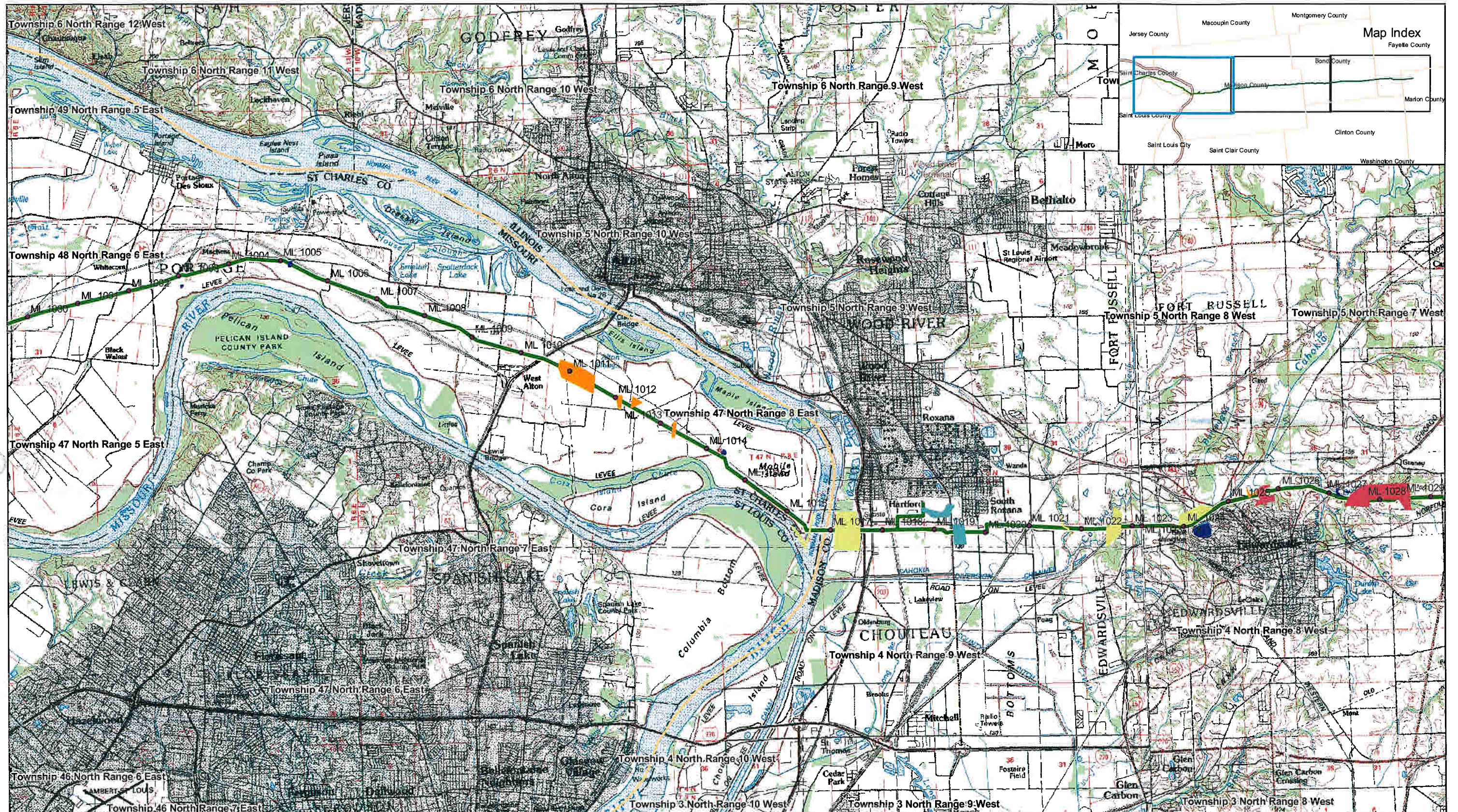
**Table 2
Keystone Special Status Species
Total Habitat Crossed by State**

Species	Status	Habitat Association	Primary Habitat	Habitat by County and State, and Total Distance (mi) Crossed													
				ND		SD		NE		KS		MO		IL			
Eastern prairie fringed orchid <i>Platanthera leucophaea</i>	FT; IL-E	Mesic-wet calcareous tallgrass sand or silt loam prairie. May also be found in open graminoid portions of lake margins, sedge, meadows, and marshes, wet prairie or open swamps, or bogs and shores. Flowering begins late June to early July. Flowers do not appear annually.	Mesic-wet tallgrass prairie													Bond Fayette Madison Marion	0.0 ¹ 0.0 ¹ 0.0 ¹ 0.0 ¹
Western prairie fringed orchid <i>Platanthera praeclara</i>	FT; ND-SC; SD-SC; NE- T	Occurs in mesic upland tallgrass prairie in the southern part of its range, often in swales, and wet-mesic tallgrass prairie and sedge meadows in the northern part of its range. Also known from prairies and swales in sand dune complexes that are fed by shallow underground water. Flowers June-July.	Tallgrass prairie, dune complexes	Ransom	0.0	Clark Day Yankton	4.5 ¹ 6.7 ¹ 2.1 ¹	Butler Cedar Colfax Gage Jefferson Platte Saline Seward Stanton Wayne	0.0 ¹ 4.3 ¹ 0.8 ¹ 0.0 ¹ 3.4 ¹ 0.0 ¹ 0.3 ¹ 0.0 ¹ 1.5 ¹ 1.3 ¹								
Prairie bush-clover <i>Lespedeza leptostachya</i>	FT; IL-E	In Illinois, this species is generally found on dry gravel prairies and dry-mesic prairies. It is often found on north-facing prairie slopes. On these slopes, it typically occurs either in thin soil at the margins of rocks or in gravelly loamy soil. Flowers in July, August.	Prairie													Bond Fayette Madison Marion	0.8 0.0 0.6 0.0
Timing buffalo clover <i>Trifolium stoloniferum</i>	FE; MO-E	This species is commonly found in areas of rich soils in the ecotone between open forest and prairie; and moist, partially shaded woodlands- sometimes along stream or river terraces. Also found in areas disturbed by grazing or mowing. This species historically grew along bison trails. Flowers: April-June.	Riparian areas, woodland/prairie ecotones									Lincoln	11.7 ¹				
Royal Catchfly <i>Silene regia</i>	IL-E	This species is found in habitats that include mesic black soil prairies, openings in upland forests, savannas, scrubby barrens, and open areas along roadsides and railroads	Prairies, upland forests, savannas, open roadsides												Madison	1.6	
Prairie Spiderwort <i>Tradescantia bracteata</i>	IL-T	Common spiderwort likes sandy soils and seems to be most abundant where grazing is light to moderate. Dry typical prairie and dry sand prairies	Grazed prairies, sandy soils												Madison	0.6	
Spring Ladies' Tresses <i>Spiranthes vernalis</i>	IL-E	This species is typically found in upland dry to mesic forests, dry to mesic prairies, and successional cultured fields.	Upland/mesic forests												Madison	2.0 ¹	

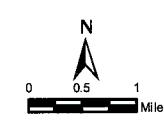
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Table 3
Illinois Special Status Species Listed by County and Habitat Type

County	Grassland	Forests And Woodlands	Riparian	Emergent Wetland	Open Water
Bond	Loggerhead Shrike	Indiana Bat, Loggerhead Shrike	Indiana Bat, Eastern Massasauga	Eastern Massasauga	River Otter, Bald Eagle
Fayette	Barn Owl, Loggerhead Shrike	Indiana Bat, Barn Owl, Loggerhead Shrike	Indiana Bat, Pied-billed Grebe, Yellow Crowned Night Heron, Eastern Massasauga	Least Bittern, Pied-billed Greb, Yellow Crowned Night Heron, Eastern Massasauga, Kirkland's Snake	River Otter, Bald Eagle, Pied-billed Grebe, Pallid Sturgeon, Western Sand Darter
Madison	Illinois Chorus Frog, Prairie Spidenwort, Royal Catchfly	Indiana Bat, Royal Catchfly	Indiana Bat, Peregrine Falcon, Eastern Massasauga, Decurrent False Aster, Spring Ladies' Tresses	Least Bittern, Peregrine Falcon, Eastern Massasauga, Decurrent False Aster, Spring Ladies' Tresses	Bald Eagle, Lake Sturgeon, Pallid Sturgeon
Marion	Barn Owl, Henslow's Sparrow, Loggerhead Shrike	Gray Bat, Indiana Bat, Barn Owl, Henslow's Sparrow, Loggerhead Shrike	Gray Bat, Indiana Bat		

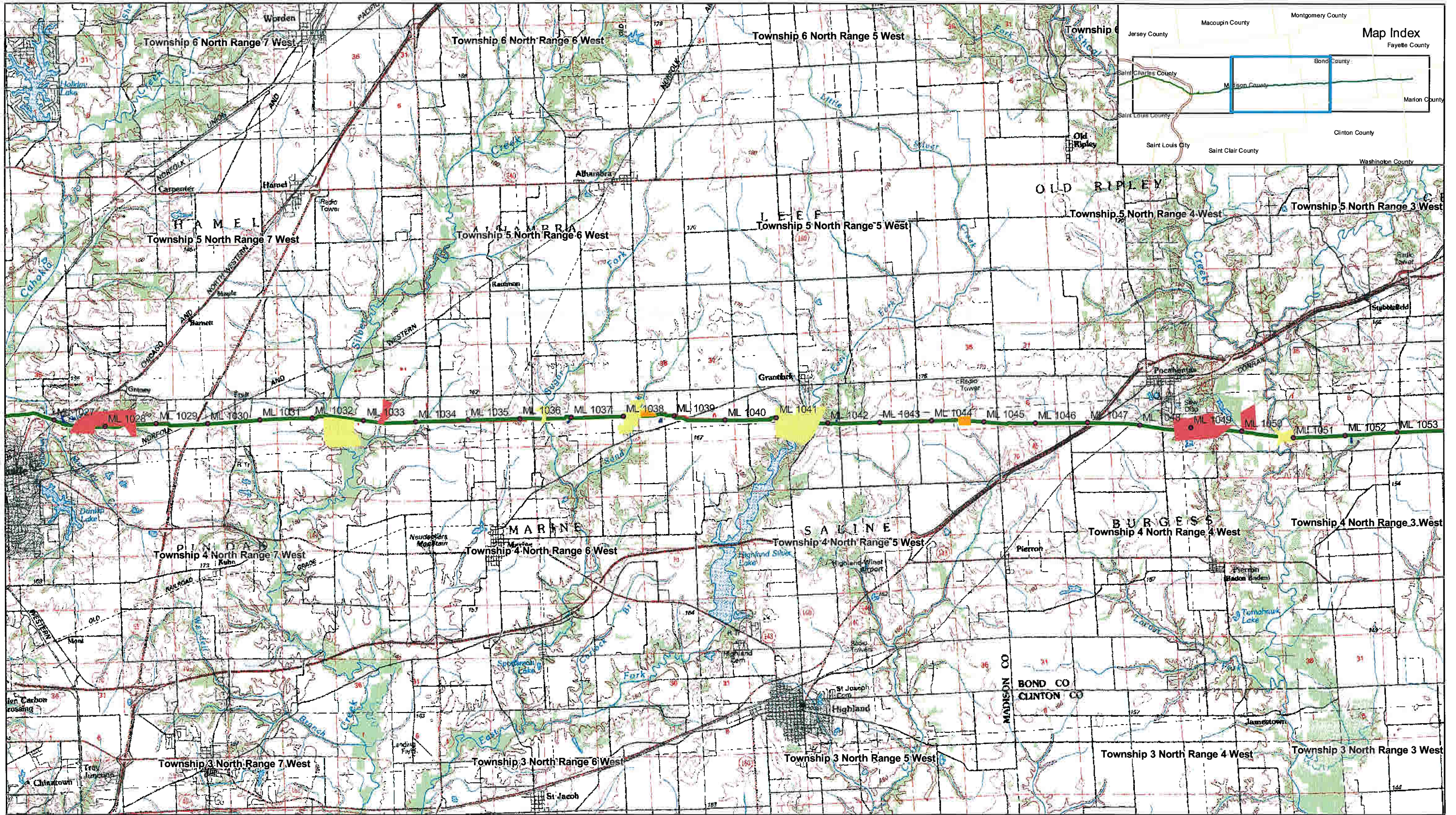


- DOS Filing Route
- Modified pipeline route
- ▲ Valve
- Pump station
- Powerline preferred route
- Powerline alternative route
- Mainline milepost
- Riparian
- Forests and Woodland
- Grassland
- Open Water
- Non-forested Emergent Wetland

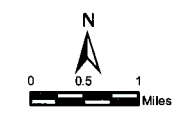


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Map of 1 of 3
 Non-agricultural
 Habitat
 (Illinois)

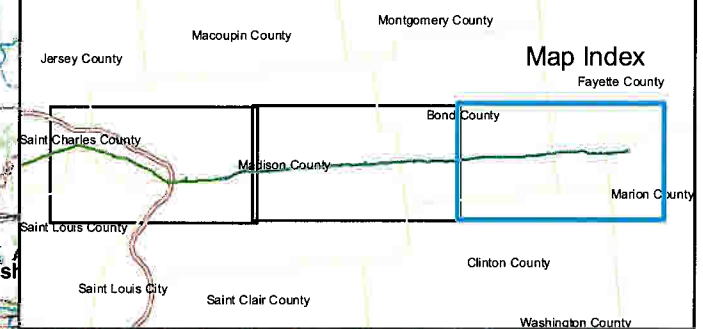
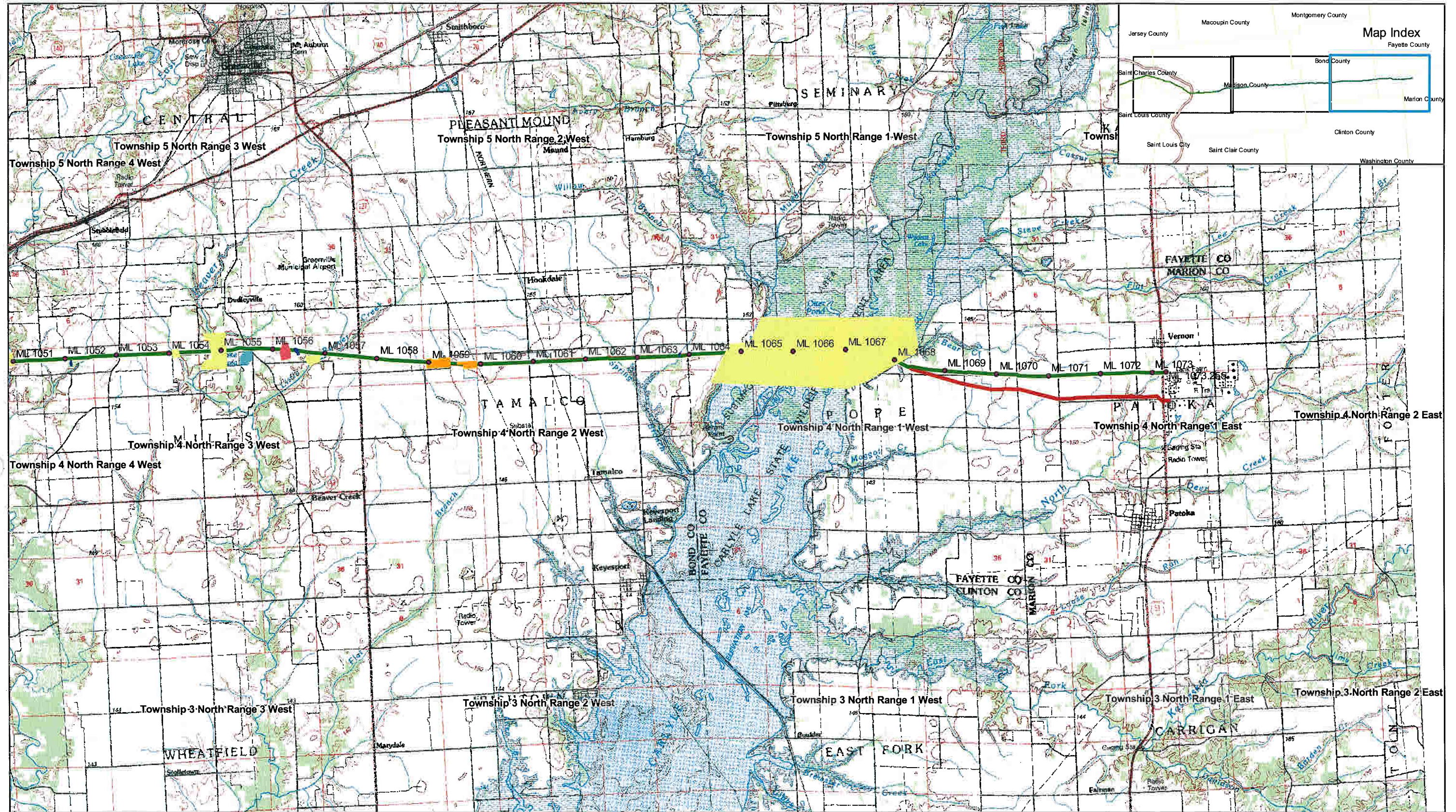


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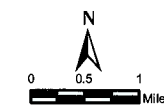


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Map of 2 of 3
Non-agricultural
Habitat
(Illinois)



- DOS Filing Route
- Modified pipeline route
- ▲ Valve
- Pump station
- Powerline preferred route
- Powerline alternative route
- Riparian
- Forests and Woodland
- Grassland
- Open Water
- Non-forested Emergent Wetland



Keystone Pipeline Project
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Map of 3 of 3
 Non-agricultural
 Habitat
 (Illinois)

Draft Keystone Project Carlyle Lake Meeting: USACE Visitor Center at Carlyle Lake, IL

June 14, 2006 (10:00 AM-12:00 PM)

Attendees:

Keystone Team:

TransCanada – Michael Schmaltz
ENSR - Scott Ellis, Molly Giere, Karen Caddis, Kim Munson
SCI – Laurie Farmer
Trow Engineering – Mike Koski, Steve Skoropat
Universal – Johnny B. Sellers
Ellis & Associates – Phil Phillips
TransCanada Public Consultation – Tom Madsen, Jim Prescott

Federal Agencies:

USACE - Chuck Frerker, Joe Smothers, Dick Conner, Lynn Neher
USFWS – Joyce Collins, Nate Caswell

IL State Agencies:

IDNR – Bob Hammel, Rick Pietruszka, Jeff Torricelli, Lou Hannig
IEPA – James Allison, Alyson Grady
IHPA – David Halpin

Meeting Objectives: (Ellis - ENSR)

The primary objective of the meeting was to address any questions the agency representatives have regarding the crossing of Carlyle Lake and to obtain feedback/input on issues such as (but not limited to):

- additional environmental survey needs (e.g., threatened and endangered species),
- construction window (e.g., to time construction to coincide with lowest water level in WMA, to have the least impact on the use of the WMA by wildlife as well as outdoor enthusiasts, and to have minimal impact on threatened and endangered species and species of concern), and
- lessons learned from previous pipeline construction through the area (i.e., 2Rivers).

Additionally, Keystone would like to discuss any related issues of concern along the remainder of the proposed pipeline route through Illinois.

Project Overview: (Koski – TransCanada)

Some key points made included:

- 1,830 miles total (US and Canada) with 1,070 miles in the US
- Mostly 30” diameter pipe (to Wood River terminal)
 - 24” through most of Illinois (from Wood River to Patoka)
- Construction from mid 2008 through 2009
- In-service by end of 2009
- US Dept. of State (USDOS) is the lead agency through issuance of a Presidential Permit

- Filed Permit Application April 19, 2006
- Following the NEPA process (will require an EIS)
- Proposed line through Illinois is to be offset from the existing 2Rivers pipeline by 40 feet (generally south of existing ROW)
 - Temporary workspace needed for construction will overlap with existing 2Rivers ROW

Overview of Carlyle Lake Management: (Hammel - IDNR-Manager of Carlyle Lake WMA)

- A 40-foot offset (either north or south) from existing pipelines through Carlyle Lake would be directly on a levee.
- Levees are licensed to the state; owned by federal government in fee.
- Will also need to cross the Kaskaskia River and Hurricane Creek
 - 2Rivers bored the Kaskaskia.
- 35 acres of sub-impoundment is flooded in the fall for waterfowl management
 - Impoundment area is pedestrian only – public access is very limited
 - There are interior and exterior levees – all managed by IDNR
 - 1 of 4 impoundments are typically wet year-round
 - IDNR/USACE would be willing to work with us to adjust water depth for the year that construction is to take place.
 - The best window would be to build in summer (late June – August/September)
 - Start flooding for waterfowl mgt. in October
 - Waterfowl seasons end:
 - Ducks – Jan. 1
 - Canada geese – Jan. 31
 - Snow geese – March 31
 - Dewatering starts in April – typically takes a few months due to spring rains.
 - Waterfowl nesting is in late spring/early summer

Ellis (ENSR): Is there a land use management plan for the WMA we need to follow? If so, can we get a copy of it?

- Conner (USACE) – the management plan changes seasonally, not a formal management plan.
 - June to August would present the least amount of obstacles.
 - This would be the growing season.
 - They try to maintain a steady pool level, so release rates are limited during this time. This could create concerns downstream depending on the weather.

Two Rivers Project Permit Requirements/Mitigation/Lessons Learned:

Hammel (USACE):

- 2Rivers had 2 major issues that delayed construction:
 - Unusual flood year - started construction in August and were typically in 3 feet of water
 - Labor issues with construction crew – had a strike on site

- 2Rivers was able to complete construction through the WMA in about 2 months
 - There were no problems after they left
- 2Rivers bored under the levees.
 - Phillips (Ellis & Assoc.) wanted to know if they bored or drilled (HDD).
 - Hammel is not clear on the difference and does not know.
- Despite the fact that the impoundments are typically wet year-round, 2Rivers were able to find dry areas before each levee to set-up/stage drill. (wettest season is March and April)
 - They welded on the west and pushed the pipe through
- Ellis (ENSR): There is a parking area west of the lake – did 2 Rivers use this for staging?
 - No - Staging area was in Greenville

Neher (USACE): Cultural Resources

- There was 1 cultural resource site found in Carlyle Lake area that was of concern during 2Rivers
 - See FOIA for action required

Frerker (USACE): Post construction management and mitigation

- 2Rivers was required to insert block valves on either side of crossing to allow for flow to be shut-off in case of leaks.
 - This would likely be asked for at other waterbody crossings (e.g., any public waterbodies in the state as listed in Appendix A of IL Rule 3704).
- Mitigation will be required for replacement of forested wetlands
 - See FOIA for what was required for 2Rivers
- Ellis (ENSR): The ownership transfer took some time and delayed 2Rivers. How can we avoid that?
 - Once our delineations are complete, USACE will also assess the area
 - USACE will then (based on their assessment) determine how much and what type of wetlands will need to be mitigated
 - Amount is based on ratios established by USACE St. Louis District Office
 - Locations will be suggested by USACE (i.e., they will assist in finding site)
- Caddis (ENSR): As part of mitigation process, should wetland delineation be turned in before or in conjunction with 404 Certification application process?
 - Frerker: It would be to our advantage to get the delineation report in as early as possible (i.e., before the 404 process begins).
 - USACE will cooperate on this to help initiate the mitigation process early.
 - Grady (IEPA): Delineations will also need to go through the Anti-degradation Review with IEPA. (SEE details/needs under Section 404/401 and Section 10 Application below)

Agency Issues, Concerns, and Questions:

Section 106 Consultation (Halprin - IHPA)

- The lead agency (USDOS) has to initiate Section 106 consultation.
- In further conversations (post-meeting), Munson (ENSR) explained that the USDOS has not yet identified a contact person for the consultation.

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- A contact person at USDOS will need to be identified for review of the Cultural Resource survey reports generated from the surveys currently being conducted and prior to review by any of the State Historic Preservation Offices (SHPO).

Section 404/401 and Section 10 application process (*Frerker* – USACE):

- If a wetland or waterbody is changed or converted by construction (i.e.; wooded wetlands converted to palustrine emergent wetlands), mitigation would likely be required.
 - Generally mitigation would involve purchasing land and developing wooded wetlands on it.
 - Land ownership would be transferred to the USACE.
 - USACE can give recommendations on lands to purchase.
 - Mitigation process will be triggered after receipt of the wetland delineation report.
 - USACE will do a field check following receipt of the report and mitigation will likely involve 3:1 to 5:1 replacement depending on the quality of the wetlands affected.
 - Mitigation acreage identified in the 2Rivers report was for the entire state of Illinois.
 - Section 404 and Section 10 process should be combined.
- *Grady* (IEPA): The state will need to do an anti-degradation review.
 - It would also be advantageous to provide IEPA with the delineation reports early to allow time for this process.
 - Agency develops a fact sheet
 - Agency provides for a public comment period
 - Typically concurrent with USACE public comment period.
 - If not concurrent with USACE, than 30 days
 - IEPA needs all concurrent communications that occur with the USACE
 - Send delineation reports to Bruce Yurdin at IEPA

Indiana Bat (*Collins* - USFWS):

- Roosting time is April 1 – Sept. 30 (no construction during this time).
 - This is during suggested WMA construction window.
- *Frerker* suggested that 2Rivers cleared necessary trees prior to April 1 even though construction was not to start until summer. This kept the bats from roosting in the trees to begin with.
 - *Collins* said this would be acceptable.
- *Collins*: In terms of bat surveys, should probably do habitat surveys first to see if area to be cleared has any trees that would potentially be roosting habitat for bats (e.g., shagbark hickory). Bats are known to be in the woods to west of WMA (staging area for bore), but impact trying to avoid would be to potential nurseries in such trees.

Backup plan in the event that construction is delayed (*Hammel* – IDNR)

- What would be the plan if construction were delayed?
 - There needs to be a fallback plan so that construction will not impact waterfowl season.

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Active Environmental Groups in the Area (*Frerker* - USACE):

- Suggest bringing them into process early.
- Example includes Webster Grove Nature Society, Audubon Society, Ducks Unlimited (see 2Rivers FOIA letters).
- *Koski* (TransCanada) - asked about active Ducks Unlimited chapters.
 - *Hammel* is quite active with this group. Yes, there are several chapters active in the area.
- *Frerker* will work with ENSR to get a more complete list.

Permanent ROW and Temporary Easement (*Neher* - USACE)

- The project team needs to contact the USACE land agents in St. Louis as soon as possible to arrange for easements across USACE land (Carlyle Lake and the Mississippi River)
- *Torricelli / Hammel* - IDNR
 - State land managers will initiate Comprehensive Environmental Review Process (CERP) within IDNR for any State Lands that are crossed
 - This needs to be done for ROW plus any lands being purchased for mitigation.
 - Process will be initiated once land manager has obtained all information needed from Keystone team
 - Should include a mini-report with cultural and sensitive species information.
 - *Hammel* will send *Giere* (ENSR) a list of what information is needed to initiate CERP

Initiating a CERP (*Torricelli* - IDNR)

- Conduct a Title search to identify all State Lands crossed by the project.
- Land Managers:
 - Carlyle Lake - *Hammel*
 - Other state lands in Illinois - contact *Torricelli* to determine who needs the information to initiate CERP
- *Torricelli* will provide *Giere* with a blank CERP for review

Special Environmental Surveys Needed (*Collins* - USFWS):

- Indiana bat - Habitat quality assessment for roosting trees. Be sure to use approved USFWS survey methodology.
- Decurrent false aster - on the Mississippi River floodplain.
- Massasauga rattlesnake
- Raptors - just prior to construction
- Bald Eagle - known active bald eagle nest ~1.5 south of proposed route through Carlyle Lake.
 - No bald eagle winter roosts are located in the area.
- Migratory birds - Not needed if construction is avoiding migration period
 - avoidance of migration period is considered minimizing impacts
 - Best time is in August and September to minimize impacts.
 - General waterfowl season ends in January. Snow goose hunting ends March 31

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- *Neher* (USACE) – can provide shape files for Carlyle Lake area
 - Will send files to *Skoropat* (Trow) who will forward them on to ENSR GIS department

ACTION ITEMS:

- Follow-up with USDOS regarding their assigned contact within the Department for Section 106 consultation. (Trow)
- Check FOIA for cultural resource site found at Carlyle Lake during 2Rivers and required action. (ENSR)
- Look into construction method used by 2Rivers to go under levees in WMA (boring or HDD). (Trow/Universal)
- Develop a backup plan for construction through the WMA in case construction is delayed so that waterfowl season is not impacted. (Trow/Universal)
- Obtain list of active environmental groups in the area from *Frerker*. (ENSR)
- Contact USACE land agents regarding easements across USACE land (Carlyle Lake and Mississippi River). USACE needs a letter requesting the easement. (Trow/Ellis and Associates)
- Conduct Title search for State Lands crossed by the project. (Ellis and Associates)
 - Obtain list from *Hammel* of required information for IDNR land managers to initiate CERP. (ENSR)
 - Obtain blank CERP from *Torricelli*. (ENSR)
- Check with *Hammel* to clarify if there is a written land management plan and obtain a copy if possible. (ENSR)
- Obtain shape files for T&E species in Carlyle Lake area from *Neher* at USACE. (Trow)
 - Also forward these files to Todd White at ENSR GIS department. (Trow)
- Arrange for surveys for potential Indiana Bat roosting habitat. (ENSR)
- Provide USACE (*Frerker*) and IEPA (*Yurdin*) with delineation reports when complete (prior to initiating Section 404 and Section 10 application process). (ENSR)

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FOR INTERNAL KEYSTONE PROJECT USE ONLY

TransCanada – Keystone Pipeline Contact Summary Form

Location of Meeting ENSR
Date/Time of Meeting 5/03/06
Keystone Team Member(s) Sara Stribley

Contact Information:

Name	Rick Pietruska
Title	District Biologist
Organization	Illinois Department of Natural Resources, Office of Realty and Environmental Planning
Address	One Natural Resources Way, Springfield, IL 62702
County	
Phone	217-785-4992
E-mail address	

Meeting Information:

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

Issue: Follow-up with Request to Schedule Meeting with ENSR and TransCanada

Concern Level: High Moderate Low

Description:

I called Rick Pietruska to follow up again with the request he had made when I spoke to him on April 18, 2006. He had requested to set up a meeting with ENSR staff biologists / TransCanada about special resource issues in Illinois once the route had been pinned down. He said that he was still unsure of the alignment and that the only maps he had showing the route were from Oct/Nov 2005. He declined my offer to set up a conference call, saying that the call would be unproductive because he was still unsure of the route. He said that he would prefer to meet in person, along with their district biologist, to discuss resource issues, specifically those near Carlyle Lake. I offered to speak to our regional/state coordinator to see when someone would be in Illinois next. Rick mentioned that they could meet in Springfield or Alton.

Issue: _____

Concern Level: High Moderate Low

Description:

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FOR INTERNAL KEYSTONE PROJECT USE ONLY

TransCanada – Keystone Pipeline Contact Summary Form

Location of Meeting ENSR
Date/Time of Meeting 4/25/06
Keystone Team Member(s) Sara Stribley

Contact Information:

Name	Rick Pietruska
Title	District Biologist
Organization	Illinois Department of Natural Resources, Office of Realty and Environmental Planning
Address	One Natural Resources Way, Springfield, IL 62702
County	
Phone	217-785-4992
E-mail address	

Meeting Information:

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

Issue: Follow-up with Request to Schedule Meeting with ENSR and TransCanada

Concern Level: High Moderate Low

Description:

I called Rick Pietruska to follow up with the request he had made when I spoke to him on April 18, 2006. He had requested to set up a meeting with ENSR staff biologists and TransCanada about special resource issues in Illinois. He was not in his office, so I left a message requesting that he call me back. I also informed him that we would like to set up a conference call on the 11th or 12th of May.

Issue: _____

Concern Level: High Moderate Low

Description:

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FOR INTERNAL KEYSTONE PROJECT USE ONLY

TransCanada – Keystone Pipeline Contact Summary Form

Location of Meeting ENSR
Date/Time of Meeting 4/18/06
Keystone Team Member(s) Sara Stribley

Contact Information:

Name	Rick Pietruska
Title	District Biologist
Organization	Illinois Department of Natural Resources, Office of Realty and Environmental Planning
Address	One Natural Resources Way, Springfield, IL 62702
County	
Phone	217-785-4992
E-mail address	

Meeting Information:

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

Issue: Sensitive Species Consultation Letter Follow-up

Concern Level: High Moderate Low

Description:

I spoke with Rick Pietruska with the IL DNR. He stated that we would not be receiving a separate letter from the IL DNR, but that everything we received from the IL NHP would reflect what information they would have. Rick also requested to set up a meeting with ENSR staff biologists and TransCanada about special resource issues in Illinois, especially in the Carlyle Lake Area. I told him I would talk with one of the state coordinators and try to find out when a good time to schedule a meeting would be.

Issue: _____

Concern Level: High Moderate Low

Description:

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FOR INTERNAL KEYSTONE PROJECT USE ONLY

TransCanada – Keystone Pipeline Contact Summary Form

Location of Meeting ENSR
Date/Time of Meeting 4/12/06
Keystone Team Member(s) Sara Stribley

Contact Information:

Name	Todd Rettig
Title	Division Manager of Resource Review and Coordination
Organization	Illinois Department of Natural Resources, Office of Realty and Environmental Planning
Address	One Natural Resources Way, Springfield, IL 62702
County	
Phone	217-785-5500
E-mail address	

Meeting Information:

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

Issue: Sensitive Species Consultation Letter Follow-up

Concern Level: High Moderate Low

Description:

I called Todd Rettig to follow up with the sensitive species consultation letters we sent to the IL DNR, dated January 24, 2006, and February 24, 2006. Todd was not in his office, so I left a message asking if he had received our letters, and double checking that we were not missing any information that they may have sent to us.

Issue: _____

Concern Level: High Moderate Low

Description:



TransCanada

In business to deliver

ENSR

1601 Prospect Parkway
Fort Collins, CO 80525

tel 970.493.8878

fax 970.493.0213

email kcaddis@ensr.aecom.com

web www.transcanada.com

February 24, 2006

Todd Rettig
Division Manager
Division of Resource Review and Coordination
Office of Realty and Environmental Planning
Illinois Dept. of Natural Resources
One Natural Resources Way
Springfield, IL 62702-1271

Dear Mr. Rettig:

ENSR Corporation (ENSR) had previously contacted you via letter requesting information regarding TransCanada's Keystone Pipeline project. Included with that letter (dated February 23, 2006) was a completed Illinois Department of Natural Resources Consultation Agency Action Report. Inadvertently, the Township/Range/Section list for the project was not included. As such, I am resending the completed consultation form with legal descriptions of the Keystone Pipeline project area attached.

Sincerely,

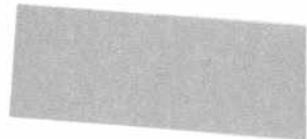
A handwritten signature in cursive script that reads "Karen Caddis".

Karen Caddis
Senior Project Specialist/Coordinator

KC/

Ref: 10623-004

Enc. Consultation Agency Action Report
Township/Range/Section list





Illinois Department of Natural Resources

One Natural Resources Way · Springfield, Illinois 62702-1271
http://dnr.state.il.us

Rod R. Blagojevich, Governor
Joel Brunsvold, Director

CONSULTATION AGENCY ACTION REPORT

(Illinois Administrative Code Title 17 Part 1075)
Division of Resource Review and Coordination
Todd Rettig, Division Manager

Date Submitted: _____
If this is a resubmittal, include previous IDNR response if available.

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PROJCODE: _____ DUE DATE: _____

Applicant: TransCanada Phone: 970-493-8878
Contact Person: Karen Caddis Fax: 970-493-0213
Applicant Address: ENSR (agent for TransCanada) Email: kcaddis@ensr.aecom.com
1601 Prospect Parkway
Fort Collins, CO 80525

LOCATION OF PROPOSED ACTION
A MAP SHOWING LOCATION OF PROPOSED ACTION IS REQUIRED

Project Name: Keystone Pipeline Project County: Madison, Bond, Fayette, Marion
Project Address (if available): N/A
City, State, Zip: N/A
Township/Range/Section (e.g. T45N, R9E, S2): See attached list.
Brief Description of Proposed Action: Interstate Crude Oil Pipeline; please see project description in attached letter for additional information.

Projected Start Date and End Date of Proposed Action: Construct. to begin spring '08; in service by 12/09
Will state funds or technical assistance support this action? [Yes |] If Yes, the Interagency Wetland Policy Act may apply. Contact funding agency or this Division for details.

Local/State Agency with Project Jurisdiction: Department of State
Contact: Charles Esser Phone: 202-647-1291
Address: Room 3535, U.S. Department of State Fax: 202-647-4037
Washington, DC 20520

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Are endangered/threatened species or Natural Areas present in the vicinity of the action? [Yes | No]
Could the proposed action adversely affect the endangered/threatened species or Natural Area? [Yes | No]
Is consultation terminated? [Yes | No]
Comments: _____

Evaluated by: _____

Division of Resource Review & Coordination (217)785-5500 Date _____

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Attachment to Illinois Department of Natural Resources Consultation Agency Action Report

Location of Proposed Action for the Keystone Pipeline Project:

Township/Range/Section

<u>Township</u>	<u>Range</u>	<u>Section</u>
T4N	R9W	9-12, 35-36
T4N	R8W	1-12,
T4N	R7W	1-12,
T4N	R6W	1-12,
T4N	R5W	1-12,
T4N	R4W	1-12,
T4N	R3W	1-18,
T4N	R2W	1-18,
T4N	R1W	1-18,
T4N	R1E	7-10, 15-18
T5N	R8W	34-36
T5N	R7W	31-36
T5N	R6W	31-36
T5N	R5W	31-36
T5N	R4W	31-36

Caddis, Karen

From: Johnson, Charlie
Sent: Friday, February 03, 2006 2:01 PM
To: White, Todd; Paulson, Merlyn
Cc: Caddis, Karen; Walsh, James; Mike Phelan; Tillquist, Heidi; Ellis, Scott
Subject: FW: GIS coverages
Attachments: inpc_illinois_transcanada_final.shx; et_illinois_transcanada_final.dbf; et_illinois_transcanada_final.sbn; et_illinois_transcanada_final.sbx; et_illinois_transcanada_final.shp; et_illinois_transcanada_final.shx; inai_illinois_transcanada_final.dbf; inai_illinois_transcanada_final.sbn; inai_illinois_transcanada_final.sbx; inai_illinois_transcanada_final.shp; inai_illinois_transcanada_final.shx; inpc_illinois_transcanada_final.dbf; inpc_illinois_transcanada_final.sbn; inpc_illinois_transcanada_final.sbx; inpc_illinois_transcanada_final.shp

Attached are Illinois NHP shape-files for the Keystone Project

From: TARA KIENINGER [mailto:TKIENINGER@dnrmail.state.il.us]
Sent: Friday, February 03, 2006 1:52 PM
To: Johnson, Charlie
Subject: RE: GIS coverages

Dear Charlie,

I have received your signed Data License Agreement. I have attached the 3 sets of shapefiles. All are in Lambert Conformal Conic custom projection. The parameters for reprojecting are:

Datum: NAD 27
Spheroid: Clarke 1866
Central Meridian: -89.5
Reference Latitude: 33
Standard Parallel 1: 33
Standard Parallel 2: 45
False Easting: 2999994.0
False Northing: 0
Units: Feet

et_illinois_transcanada_final.shp contains locations of state and federal endangered and threatened species, rookeries, high quality natural communities within 5 miles of the pipeline corridor.

Fields in the associated attribute table are defined as:

eo_num = tracking number for a particular species (i.e. bald eagle 1, bald eagle 2, bald eagle 3, etc.)
sname = scientific name or community name
scomname = common name or community type
name_category_desc = general category

inai_illinois_transcanada_final.shp contains locations of Illinois Natural Areas Inventory (INAI) sites within 5 miles of the pipeline corridor.

Fields in the associated attribute table are defined as:

site_name = INAI name
primary_area_acres = acreage
nai_number = INAI number
categories = categories under which a site qualifies for inclusion on the INAI (see below)

INAI Category Descriptions:

2/14/2006

Cat. I = High quality natural community
Cat. II = Specific suitable habitat for state-listed species
Cat. III = State dedicated Nature Preserve
Cat. IV = Outstanding geological feature
Cat. V = Species reintroduction and/or translocation
Cat. VI = Unusual concentration of flora or fauna
Cat. VII = High quality stream

inpc illinois transcanada final.shp contains locations of lands enrolled in Illinois Nature Preserves Commission (INPC) land protection programs including Nature Preserves, Land and Water Reserves, and Natural Heritage Landmarks within 5 miles of the pipeline corridor.

Fields in the associated attribute table are defined as:

managed_area_name = INPC name
area_in_state_acres = acreage
inpc_number = INPC number

Please be aware that the Natural Heritage Database cannot provide a conclusive statement on the presence, absence, or condition of significant natural features in Illinois. The Department of Natural Resources can only summarize the existing information known to us at the time of the request. This report should not be regarded as a final statement on the area being considered, nor should it substitute for field surveys required for environmental assessments.

This letter is separate from the Illinois Department of Natural Resources consultation requirement under the Illinois Endangered Species Act (530 ILCS 10/11) and the Illinois Natural Areas Preservation Act (525 ILCS 30/17). For more information on this process, please contact the Illinois Department of Natural Resources, Division of Resource Review and Coordination, at One Natural Resources Way, Springfield, Illinois 62702-1271 or by telephone at (217)785-5500.

Please let me know if you have any questions or have trouble reprojecting the data.

Tara Gibbs Kieninger, Database Administrator
ORC - Illinois Natural Heritage Database
Illinois Department of Natural Resources
One Natural Resources Way
Springfield, IL 62702-1271
tkieninger@dnrmail.state.il.us
217.782.2685
217.785.2438 (fax)

>>> "Johnson, Charlie" <CJohnson@ensr.aecom.com> 02/03/06 2:24 PM >>>

Tara, attached is a PDF of a signed License Agreement as you requested. The original will be mailed to you.

From: TARA KIENINGER [mailto:TKIENINGER@dnrmail.state.il.us]
Sent: Friday, February 03, 2006 12:54 PM
To: Johnson, Charlie; White, Todd
Subject: Re: GIS coverages

Dear Gentlemen,

I recently received requests from both of you for information on sensitive resources in Illinois. I am assuming that it is for the same project (a proposed crude oil transmission system by TransCanada). Due to the sensitive nature of the data you are requesting, I will need to have both of you sign the attached a Data License Agreement before I can send the data. I will be sending GIS shapefiles of sensitive resources within 3-5 miles of the pipeline corridor (Illinois portion). Please let me know if you have any questions.

2/14/2006

Gibbs Kieninger, Database Administrator
ORC - Illinois Natural Heritage Database
Illinois Department of Natural Resources
One Natural Resources Way
Springfield, IL 62702-1271
tkieninger@dnrmail.state.il.us
217.782.2685
217.785.2438 (fax)

>>> "White, Todd" <twhite@ensr.aecom.com> 02/01/06 6:10 PM >>>
Hello,

I would like to obtain GIS coverages for Nature Preserves and Natural Areas as soon as possible for use in a liquids pipeline EA/EIS. The email given for Natural Areas is apparently no longer functioning.

Thanks,

Todd White, AICP
GIS Coordinator
ENSR International
1601 Prospect Parkway
Fort Collins, CO 80525
(970) 493-8878 x160

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T+E				
Fmilepost	Tmilepost	Difference between Mileposts	Distance from Centerline (miles)	Species
1013.3	1013.4	0.1	1.13	Lake Sturgeon
1013.3	1013.4	0.1	1.13	Pallid Sturgeon
1018.5	1018.6	0.1	2.2	Royal Catchfly
1019.3	1019.5	0.2	2.62	Prairie Spiderwort
1019.3	1019.5	0.2	3.62	Tall Grass Prairie
1019.3	1019.5	0.2	4.62	Moist Sand Prairie, Midwest Type
1019.8	1021.1	1.3	1.63-2.52	Spring Ladies' Tresses
1021.9	1022	0.1	2.4	Illinois Chorus Frog
1022.5	1022.6	0.1	0.75	Rich Forest
1046.7	1046.8	0.1	4.93	Loggerhead Shrike
1050.8	1050.9	0.1	4.65	Rookery
1054.5	1054.6	0.1	1.87	River Otter
1060.4	1060.5	0.1	4.25	Eastern Masassauga
1061.9	1062	0.1	5.65	Eastern Masassauga
1062.2	1062.3	0.1	4.6	Eastern Masassauga
1062.5	1062.6	0.1	4.75	Eastern Masassauga
1062.6	1062.7	0.1	3.88	Eastern Masassauga
1062.9	1063	0.1	4.75	River Otter
1064	1064.2	0.2	1.93	Bald Eagle
1064.4	1064.5	0.1	1.25	Bald Eagle
1064.9	1065	0.1	1.72	Bald Eagle
1065.11	1066.52	1.41	crossed	Kirtland's Snake
1065.22	1067.65	2.43	crossed	Yellow-crowned Night Heron
1066.4	1066.5	0.10	0.2	Pied-billed Grebe
1066.4	1066.5	0.10	0.2	Least Bittern
1066.5	1066.6	0.10	0.47	Bald Eagle
1066.53	1066.64	0.11	crossed	River Otter
1066.8	1066.9	0.10	0.27	Bald Eagle
1067.3	1067.4	0.10	5.63	Eastern Masassauga
1067.9	1068	0.10	2.5	Western Sand Darter
1068.1	1068.2	0.10	0.77	Bald Eagle
1068.5	1068.6	0.10	1.5	Rookery
1068.6	1068.7	0.10	5.58	River Otter
INAI				
Fmilepost	Tmilepost	Difference between Mileposts	Distance from Centerline (miles)	Natural Area
1018.4	1018.6	0.20	1.98	Chouteau Botanical Area
1019.4	1021.1	1.70	1.6 - 2.7	Poag Railroad Prairie
1022.1	1022.9	0.80	0.45	Bohm Woods
1050.8	1051	0.20	0.23	Shoal Creek - Doll's Orchard Segment
INPC				
Fmilepost	Tmilepost	Difference between Mileposts	Distance from Centerline (miles)	Natural Area
1019.9	1020.5	0.60	2.17	Poag Railroad Prairie Natural Heritage Park
1020.8	1021.1	0.30	1.6	Poag Railroad Prairie Natural Heritage Park
1022.1	1022.4	0.30	0.45	William and Emma Bohm Memorial Nature Preserve
1022.5	1022.8	0.30	0.45	William and Emma Bohm Memorial Nature Preserve

CONFIDENTIAL

January 24, 2006

ENSR
1601 Prospect Parkway
Fort Collins, CO 80525
tel 970.493.8878
fax 970.493.0213
email cjohnson@ensr.aecom.com
web www.transcanada.com

Glen Kruse
Illinois Natural Heritage Program
IL Dept. of Natural Resources
One Natural Resources Way
Springfield, IL 62702-1271

Dear Mr. Kruse:

TransCanada is planning to construct and operate a 1,830-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.). ENSR Corporation (ENSR) has been retained by TransCanada to prepare an Environmental Assessment (EA) in accordance with the National Environmental Policy Act (NEPA) for the proposed Keystone Pipeline Project (Project) within the U.S. In the U.S., the proposed Project would consist of approximately 1,070 miles of new pipeline constructed from the U.S.-Canada border in Pembina County, North Dakota to terminals and refineries in Salisbury (Chariton County), Missouri, Wood River (Madison County), and Patoka (Marion County), Illinois. TransCanada would construct the new pipeline within a temporary 110-foot-wide construction right-of-way (ROW). After construction and reclamation, the ROW would revert to a 60-foot-wide permanent ROW. TransCanada proposes to begin construction in the spring of 2008, with the system in-service by the end of 2009.

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. The Project will meet all federal, state and local regulatory requirements and will implement an Integrity Management Program to help ensure public safety and to protect the environment. Flow meters and delivery metering stations will measure the amount of product transported and delivered to terminals. Electrical powerlines and facility upgrades will be required in some locations to provide power for the new pump stations and motor operated valves (MOVs) located along the pipeline route. Local power providers will be responsible for obtaining the necessary approvals and authorizations for any such construction.

National Environmental Policy Act Process

The Department of State governs the issuance of Presidential Permits for crude oil pipelines across U.S. borders and will be the federal lead for the NEPA process. In evaluating the Presidential Permit application (including an EA), the Department of State will solicit the views of other federal agencies, including the Department of Interior. Based on public and agency input, the Department of State will review the EA to determine whether a Finding of No Significant Impact (FONSI) is appropriate or whether an Environmental Impact Statement must be prepared with respect to potential significant environmental impacts within the U.S. In addition to the NEPA



Glen Kruse
January 24, 2006
Page 2

process, the Department of State must comply with other requirements and regulations, including the Endangered Species Act.

Information Request

Enclosed is an overview map of the entire proposed route that traverses parts of North Dakota, South Dakota, Nebraska, Kansas, Missouri, and Illinois. In Illinois, the Project will cross portions of Madison, Bond, Fayette, and Marion counties (see attached Overview Map and CD with the Electronic Centerline).

In order to address potential impacts to aquatic and terrestrial plant and animal species, we are requesting occurrence data for:

- Federally listed, proposed, and candidate species;
- Designated critical habitat of federally listed species;
- State listed or state sensitive species; and
- Unique ecosystems or sensitive communities.

Because of the mobility of wildlife species, ENSR would like to request sensitive wildlife information 5 miles beyond the Project boundary. We also would like to request sensitive plant data 3 miles beyond the Project boundary. If applicable, please send electronic files for our environmental analysis to: cjohnson@ensr.aecom.com.

ENSR also is contacting the U.S. Fish and Wildlife Service and Illinois Department of Natural Resources to request sensitive species information and to obtain input regarding the proposed Project route in Illinois. If you have any questions regarding this request, please call me at (970) 493-8878. You also may direct project-related questions to the ENSR project manager, Scott Ellis, at the same number. Thank you in advance for your prompt response to this request.

Sincerely,

Charles Johnson
Senior Wildlife Biologist

CJ/

Ref: 10623-004

Enc. Overview Project Map
CD

CONFIDENTIAL

January 24, 2006

ENSR
1601 Prospect Parkway
Fort Collins, CO 80525
tel 970.493.8878
fax 970.493.0213
email cjohnson@ensr.aecom.com
web www.transcanada.com

John Buhnerkempe
Division of Wildlife Resources
Illinois Dept. of Natural Resources
One Natural Resources Way
Springfield, IL 62702-1271

Dear Mr. Buhnerkempe:

TransCanada is planning to construct and operate a 1,830-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.). ENSR Corporation (ENSR) has been retained by TransCanada to prepare an Environmental Assessment (EA) in accordance with the National Environmental Policy Act (NEPA) for the proposed Keystone Pipeline Project (Project) within the U.S. In the U.S., the proposed Project would consist of approximately 1,070 miles of new pipeline constructed from the U.S.-Canada border in Pembina County, North Dakota to terminals and refineries in Salisbury (Chariton County), Missouri, Wood River (Madison County), and Patoka (Marion County), Illinois. TransCanada would construct the new pipeline within a temporary 110-foot-wide construction right-of-way (ROW). After construction and reclamation, the ROW would revert to a 60-foot-wide permanent ROW. TransCanada proposes to begin construction in the spring of 2008, with the system in-service by the end of 2009.

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. The Project will meet all federal, state and local regulatory requirements and will implement an Integrity Management Program to help ensure public safety and to protect the environment. Flow meters and delivery metering stations will measure the amount of product transported and delivered to terminals. Electrical powerlines and facility upgrades will be required in some locations to provide power for the new pump stations and motor operated valves (MOVs) located along the pipeline route. Local power providers will be responsible for obtaining the necessary approvals and authorizations for any such construction.

National Environmental Policy Act Process

The Department of State governs the issuance of Presidential Permits for crude oil pipelines across U.S. borders and will be the federal lead for the NEPA process. In evaluating the Presidential Permit application (including an EA), the Department of State will solicit the views of other federal agencies, including the Department of Interior. Based on public and agency input, the Department of State will review the EA to determine whether a Finding of No Significant Impact (FONSI) is appropriate or whether an Environmental Impact Statement must be prepared with respect to potential significant environmental impacts within the U.S. In addition to the NEPA



John Buhnerkempe
January 24, 2006
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process, the Department of State must comply with other requirements and regulations, including the Endangered Species Act.

Information Request

Enclosed is an overview map of the entire proposed route that traverses parts of North Dakota, South Dakota, Nebraska, Kansas, Missouri, and Illinois. In Illinois, the Project will cross portions of Madison, Bond, Fayette, and Marion counties (see attached Overview Map and CD with the Electronic Centerline).

On behalf of TransCanada, ENSR would like to provide an opportunity for Illinois Department of natural Resources (IDNR) biologists and botanists to identify prominent terrestrial and aquatic resource issues or concerns that may occur within or adjacent to the project area, focusing on species that are either sensitive (e.g., state-listed), have high economic value (e.g., big game, waterfowl), or are considered important by the state (e.g., raptors, bats). Please forward this request to the applicable specialists (e.g., fisheries and/or wildlife biologists, habitat biologists, botanists, etc.) so they may provide information and input. Resource information provided by the IDNR will be reflected in the environmental baseline description pertaining to the project. If applicable, please send electronic files for our environmental analysis to: cjohnson@ensr.aecom.com.

Where it appears that possible or probable concerns relative to sensitive species or habitats may occur, please indicate whether surveys might be required, as well as the preferred methodology and level of effort you would consider acceptable for the surveys.

ENSR also is contacting the U.S. Fish and Wildlife Service and State Natural Heritage Program to request sensitive species information and to obtain input regarding the proposed Project route in Illinois. If you have any questions regarding this request, please call me at (970) 493-8878. You also may direct project-related questions to the ENSR project manager, Scott Ellis, at the same number. Thank you in advance for your prompt response to this request.

Sincerely,

Charles Johnson
Senior Wildlife Biologist

CJ/

Ref: 10623-004

Enc. Overview Project Map
CD