

Authorization for Incidental Take and Implementing Agreement

Pursuant to the Illinois Endangered Species Protection Act (520 ILCS 10/5.5) [on behalf of Enbridge Pipelines, LLC (EB), who retained URS Corporation (URS) to prepare a Conservation Plan in application to the Illinois Department of Natural Resources (IDNR) for an Incidental Take Authorization (ITA) for the incidental take of the State listed Species: Yellow-headed blackbird [*Xanthocephalus xanthocephalus*], King rail [*Rallus elegans*], and the Illinois chorus frog [*Pseudacris streckeri illinoensis*)] across central and southwestern Illinois - associated with the Flanagan South Pipeline Project; as described/shown in the conservation plan received by the Department on 14 December 2012] is hereby granted, subject to the terms and conditions described in the attached Authorization and Implementing Agreement. The Illinois Department of Natural Resources has determined that this authorized take is incidental to the construction of the Flanagan South Pipeline Project across central and southwestern Illinois.

Procedural History

URS [on behalf of Enbridge Pipelines, LLC] prepared a conservation plan for the Flanagan South Pipeline Project (FSP) as described by the Illinois Endangered Species Protection Act (520 ILCS 10/5.5). That plan and EB's request for authorization for incidental take of the: Yellow-headed blackbird [*Xanthocephalus xanthocephalus*], King rail [*Rallus elegans*], and the Illinois chorus frog [*Pseudacris streckeri illinoensis*] across central and southwestern Illinois were received by the Illinois Department of Natural Resources (Department) on 14 December 2012. Public notice of EB's request for authorization of incidental take of these State listed species was published in the Breeze Courier (Official State newspaper) and the Mason County Democrat (Mason County) on January 9, 2013, as well as on January 16, and January 23, 2013. Public comments on EB's conservation plan were accepted by the Department until February 23, 2013. During the period of January 9, 2013 through February 23, 2013, no public comments were received for this project.

In March, 2012, Enbridge entered into a data agreement license with the Illinois Natural Heritage Database in order to assess the existence of listed species and/or sensitive parcels (i.e. INAI sites, Nature Preserves, etc.) within the Illinois portion of the pipeline corridor. This project was then submitted to the IDNR's Office of Realty and Environmental Planning (OREP) for official review under the Endangered Species Consultation Process in May, 2012. Upon review within OREP, the project manager, Rick Pietruszka, recommended that the applicant (Enbridge-EB) seek an ITA for the Illinois chorus frog, Yellow-headed blackbird, and King rail in July, 2012. With this recommendation, the Enbridge project was never formally elevated to the IDNR's internal Incidental Take Authorization (ITA) committee as Enbridge made the formal decision to immediately seek an IDNR ITA. Enbridge then prepared a formal Conservation Plan in order to seek an ITA from the IDNR for this pipeline project. This Conservation Plan was officially received by the Department in December, 2012. All formal e-mail correspondences documenting these decisions are maintained in the files of the Endangered Species Program (attn.: Joseph Kath) in Springfield, Illinois. As stated above, URS [on behalf of Enbridge Pipelines, LLC] prepared a conservation plan for the Flanagan South Pipeline Project (FSP) as described by the Illinois Endangered Species Protection Act (520 ILCS 10/5.5). That plan and EB's request for authorization for incidental take of the: Yellow-headed blackbird [*Xanthocephalus xanthocephalus*], King rail [*Rallus elegans*], and the Illinois chorus frog [*Pseudacris streckeri illinoensis*] across central and southwestern Illinois were received by the Illinois Department of Natural Resources (Department) on 14 December 2012. Public notice of EB's request for authorization of incidental take of these State listed species was published in the Breeze Courier (Official State newspaper) and the Mason County Democrat (Mason County) on January 9, 2013, as well as on January 16, and January 23, 2013. Public comments on EB's conservation plan were accepted by the Department until February 23, 2013. During the period of January 9, 2013 through February 23, 2013, no public comments were received for this project.

Enbridge Pipelines (FSP) L.L.C., an indirect U.S. subsidiary of Enbridge Inc., is proposing the construction of a new liquid petroleum pipeline in the States of Illinois, Missouri, Kansas, and Oklahoma. The Flanagan South Project (Project) is approximately 589 miles long. Enbridge's pipeline system transports crude petroleum to serve refineries in Midwestern states and eastern Canada. Enbridge also transports volumes of crude oil from North Dakota and Montana through an interconnection with Enbridge-affiliated pipelines in North Dakota, and from the Gulf of Mexico coast via interconnections with other pipeline systems.

The Project is an independent project that begins at Enbridge's Flanagan Terminal and terminates at Enbridge's Cushing Terminal. The Project route starts at the Flanagan Terminal located north of the City of Pontiac in Livingston County, Illinois, and crosses portions of Illinois, Missouri, Kansas and Oklahoma. Counties crossed in Illinois include Livingston, Woodford, Tazewell, Mason, Fulton, Schuyler, Brown and Adams. The route also crosses Havana, Illinois. The Project terminates at the Enbridge Cushing, Oklahoma, Terminal.

The Project area is mostly rural with agriculture as the primary land use; residential development is limited. Higher density population areas such as Quincy, Illinois have been avoided during strategic route alternatives review. Commercial and industrial land uses are limited to above-ground facilities to support energy infrastructure.

The Project route extends west-southwest across Illinois, from the MP 0 in Livingston County, Illinois to the Mississippi River at approximately MP 167.8. Enbridge has existing ROW along portions of the majority of the Project route because of its ownership of the *Spearhead Pipeline* system and will use that ROW as necessary to build and operate the Project. Although some of the Spearhead ROW lacks a defined width, where defined, it is generally fifty (50) to eighty (80) feet in width.

Target Species

Yellow-headed blackbird [*Xanthocephalus xanthocephalus*] – “(Illinois) State” Endangered

King rail [*Rallus elegans*] – “ Endangered

Illinois chorus frog [*Pseudacris streckeri illinoensis*] – “ Threatened

Compliance with the Endangered Species Protection Act

The Illinois Endangered Species Protection Act includes six (6) criteria which must be met for the authorization of incidental take of an endangered or threatened species. These criteria and the Department's determination for each criterion are listed below.

1. The taking will not be the purpose of, but will only be incidental to, the carrying out of an otherwise lawful activity:

The Project route extends west-southwest across Illinois, from the MP 0 in Livingston County, Illinois to the Mississippi River at approximately MP 167.8. Enbridge has existing ROW along portions of the majority of the Project route because of its ownership of the Spearhead Pipeline system and will use that ROW as necessary to build and operate the Project. Although some of the Spearhead ROW lacks a defined width, where defined it is generally fifty (50) to eighty (80) feet in width.

The new pipe will be generally installed at a 50-foot offset from the center line of the Spearhead Pipeline to ensure adequate space for safe construction and on-going maintenance activities. The permanent easement for the new pipe will be 50 feet. Also, during construction, an additional 85 feet of temporary workspace will be needed (135 feet total construction ROW). In some cases, this construction ROW width may be reduced to minimize impacts on natural resources such as wetlands. Extra temporary workspace

generally rectangular in size and ranging from 100 feet x 200 feet to 200 feet x 200 feet will be required in some locations to accommodate crossings of roads, wetlands, railways, and water-bodies. Co-location of the Project with existing ROW will greatly minimize environmental disturbance necessary for the Project.

2. The parties to the conservation plan will, to the maximum extent practicable, minimize and mitigate the impact caused by the taking.

Target Species

Yellow-headed blackbird [*Xanthocephalus xanthocephalus*] – “(Illinois) State” Endangered

King rail [*Rallus elegans*] – “ Endangered

Illinois chorus frog [*Pseudacris streckeri illinoensis*] – “ Threatened

As part of early endangered and threatened (E&T) species coordination (IDNR OREP-Endangered Species Consultation Process), the Illinois Department of Natural Resources (IDNR) provided Enbridge with electronic E&T species location data for counties through which the Project passes. Enbridge inserted this location data (including species buffer polygons) into Project GIS mapping and noted those locations where the Project construction ROW crossed mapped species buffer polygons. *The only place where Illinois-mapped species buffer polygons are within the construction ROW is in the Mason County Sands area in the vicinity of Sand Lake, southeast of the town of Havana. The construction ROW does not overlap with any other mapped species buffer polygons along its length in Illinois.*

According to Ground-water/Surface Water Interactions at Sand Lake, Mason County, Illinois, by the Illinois State Water Survey (1999), Sand Lake is considered an intermittent lake, existing about half the time during the growing seasons over the last several decades.

As can be seen from ground photos taken on November 2, 2012 (on file in Springfield, IL.), the portion of Sand Lake crossed by the pipeline was used for agricultural production (corn and soybeans) in 2012. The corridor and the surrounding area did not contain any intact wetland vegetation and no areas with standing water were observed on this date. At least in 2012, Sand Lake would not have provided good nesting habitat for the Yellow-headed blackbird, which only nests at sites where the water level is on average deeper than one meter, and which has a mixture of open water and vegetation (usually cattails) that is referred to as a hemi-marsh. Similarly, the Sand Lake of 2012 would have provided relatively poor habitat for King rails, which nest in sites with shallow water (saturated soil to about 7 inches (22 cm) deep) during the nesting season, with high coverage of short emergent vegetation, moderate coverage of tall emergent vegetation, high water-vegetation interspersions, and little or no coverage by woody vegetation.

At the time the Conservation Plan was received by the Department (14 December 2012), the following statement was prepared by URS: “It is unknown if Sand Lake would have provided breeding habitat for the Illinois chorus frog, which is an early spring breeder (March-April), or if any ponded habitats lasted long enough for tadpoles to metamorphose, in about late May to mid-June. However, for the rest of the year, Illinois chorus frogs are highly fossorial (i.e., burrow and live underground). The preferred habitat for this portion of their life cycle is areas of sandy soil with sparse vegetation or absence of vegetation. Thus, the portion of Sand Lake crossed by the pipeline could potentially harbor these fossorial frogs.”

However, a formal survey report on file in Springfield, Illinois [Illinois chorus frog and potential impacts for the Enbridge-Flanagan South Pipeline Project/Mason County] prepared by Vernon LaGesse, Jr., and Audrey Schwing on 29 April 2013, cites the following information:

- a. The new pipe will be generally installed at a 50-foot offset from the center line of the Spearhead Pipeline to ensure adequate space for safe construction and on-going maintenance activities. Also, during construction, an additional 85 feet of temporary workspace will be needed. In some cases, this width may be reduced to minimize impacts on natural resources such as wetlands. Extra temporary workspace ranging from 100 feet x 200 feet to 200 feet x 200 feet will be required in some locations to accommodate crossings of roads, wetlands, railways, and water-bodies. Co-location of the proposed pipeline with existing ROW will greatly minimize environmental disturbance necessary for the Project.
- b. The Project will pass south of Havana, Illinois along a currently existing pipeline (Spearhead) that runs across the north end of the Sand Lake Area east of Route 97 and north of County Road 1500N. Illinois Chorus Frogs are known to use the Sand Lake Area when the Mahomet Aquifer surfaces in wet springs.
- c. Nocturnal audible surveys were conducted in March 2013 to determine the presence/absence of ICF's within the Project boundaries. Surveys started after 8:00 pm on evenings with air temperatures near 50 degrees Fahrenheit, during times ICF's were known to be out calling. A known ICF reference site (Conn Pond) was also monitored to confirm that ICFs were calling within this same region of Illinois. For this study, areas West of Oakford, Illinois were used as the reference site. Surveys were conducted by automobile by driving to each location, turning the automobile off, and listening for breeding frogs calling. Weather, temperature, time, and frog results were recorded from each survey point for this investigation. Survey points were laid out during daylight hours to locate possible ICF habitat and to confirm the ICF Habitat Model (IDNR, 2009 – A. Hulin) locations. The ICF Habitat Model was created by Illinois Department of Natural Resources in 2008 and 2009. It is based on the presence of small ponds and hydric sandy soils and on the occurrence of a wet spring weather pattern.
- d. Surveys were conducted on the evenings of March 22, 23, & 30, 2013. The Sand Lake Area was observed to be dry all spring of 2013. Only three species of amphibians were heard calling during this investigation and they all were found at the reference site, Conn Pond. These included the ICF, the Western Chorus Frog, *Pseudacris triserrata*, and the American Toad, *Bufo americanus*.
- e. While ICF's were present at the reference site, no ICFs were documented in the survey corridor for this Project during this survey, including within the ICF Habitat Model zones near the Project area.
- f. This report is an assessment for potential take of the ICF by the Project for the purposes of a State of Illinois Incidental Take Authorization. No ICFs were documented in the areas of interest for this survey. Illinois Chorus Frogs have been documented for the past 5 years in the Sand Lake Area, but due to a lack of water at the site at the time surveyed, they were not present this spring. Failure to breed in the project area of Sand Lake in Spring 2013

will reduce the likelihood that a new cohort of juvenile frogs will be present during project construction in the Fall of 2013. This reports Principal Investigator recommends proceeding with the construction as planned and use of Best Management Practices should be used within the Sand Lake Area.

3. The parties to the conservation plan will ensure that adequate funding for the conservation plan will be provided:

In an official correspondence to the Department dated 14 December 2012, EB verified that adequate funding exists to support and implement all (mitigation) activities described in the official Conservation Plan. The conservation plan states that during site development, and continuing through routine monitoring EB will provide all of the necessary funding for the implementation of the taking minimization measures. EB has complied with all other federal, state, and local regulations that are pertinent to the proposed action. Federal, state, and local permit requirements, ordinances, and approvals regarding siting, construction, and operation of the proposed Project were reviewed. EB has evaluated the applicability of the environmental local, state, and federal permits and their status for the Project.

4. Based on the best available scientific data, the Department has determined that the taking will *not* reduce the likelihood of the survival or recovery of the endangered species or threatened species in the wild in Illinois, the biotic community of which the species is a part, or the habitat essential to the species' existence in Illinois:

Target Species

Yellow-headed blackbird [*Xanthocephalus xanthocephalus*] – “(Illinois) State” Endangered

King rail [*Rallus elegans*] – “ Endangered

Illinois chorus frog [*Pseudacris streckeri illinoensis*] – “ Threatened

Part A:

Overall, impacts to potential habitat during construction and post construction will be minimized. The Project will be constructed following the construction protocols documented in the Enbridge Environmental Mitigation Plan and provided above. Co-locating the Project with existing facilities avoids and minimizes environmental disturbance to the maximum extent practicable. This directly avoids new fragmentation that may occur with a new route or greenfield construction, and minimizes Project impacts by expanding the existing corridor cut previously through these habitats, rather than introducing a new corridor. The linear nature of the proposed Project, along with its short-term temporal time-frame, combines to limit the Project's impacts on both an area and time basis.

The Action Area for the Enbridge Conservation Plan and this ITA is defined as: The new pipe(line) will be generally installed at a 50-foot offset from the center line of the Spearhead Pipeline to ensure adequate space for safe construction and on-going maintenance activities. The permanent easement for the new pipe will be 50 feet. Also, during construction, an additional 85 feet of temporary workspace will be needed (135 feet total construction ROW). In some cases, this construction ROW width may be reduced to minimize impacts on natural resources such as wetlands (110 feet). The ROW would be further reduced to 85 feet in forested and scrub/shrub wetlands, as well as the habitat of Sand Lake, and in waterways adjacent to these features. Extra temporary workspace, generally rectangular in size and ranging from 100 feet x 200 feet to 200 feet x 200 feet, will be required in some locations to accommodate crossings of roads, wetlands, railways, and water-bodies. Overall, co-location of the Project with existing ROW will greatly minimize environmental disturbance necessary for the Project.

Part B:

-Yellow-headed blackbird (YHBB) [*Xanthocephalus xanthocephalus*]: As of May, 2013, there are 47 EORs (element occurrence records) for this species in the State of Illinois. The EB Flanagan South Pipeline Project (EFSP) encompasses portions of central and southwestern Illinois. As of May, 2013, the number of EORs for this species within the Action Area is 1. The EFSP therefore represents approximately 6% of all Yellow-headed blackbird EORs in the State of Illinois. The most recent EOR for the YHBB in the Action Area is: 1994. The major risk at this site for the YHBB is likely habitat loss. Although the EFSP Project represents approximately 6% of all YHBB EORs in the State of Illinois (less than 1/5 of the YHBB EORs in the State of Illinois), a degree of direct (financial) mitigation will however be sought for this species due to the elevated likelihood of take due to high quality habitat loss at Sand Lake in Mason County. Please see the Authorization section of this document for details.

-King rail (KR) [*Rallus elegans*]: As of May, 2013, there are 17 EORs (element occurrence records) for this species in the State of Illinois. The EB Flanagan South Pipeline Project (EFSP) encompasses portions of central and southwestern Illinois. As of May, 2013, the number of EORs for this species within the Action Area is 1. The EFSP therefore represents approximately 6% of all KR EORs in the State of Illinois. The most recent EOR for the KR in the Action Area is: 1994. The major risk at this site for the KR is likely habitat loss. Although the EFSP Project represents approximately 6% of all KR EORs in the State of Illinois (less than 1/5 of the KR EORs in the State of Illinois), a degree of direct (financial) mitigation will however be sought for this species due to the elevated likelihood of take due to high quality habitat loss at Sand Lake in Mason County. Please see the Authorization section of this document for details.

-Illinois chorus frog (ICF) [*Pseudacris streckeri illinoensis*]: As of May, 2013, there are 29 EORs (element occurrence records) for this species in the State of Illinois. The EB Flanagan South Pipeline Project (EFSP) encompasses portions of central and southwestern Illinois. As of May, 2013, the number of EORs for this species within the Action Area is 1. The EFSP therefore represents approximately 3% of all Illinois chorus frog EORs in the State of Illinois. The most recent EOR for the ICF in the Action Area is: 2002. The major risk at this site for the ICF is likely habitat loss. Although the EFSP Project represents approximately 3% of all ICF EORs in the State of Illinois (less than 1/5 of the ICF EORs in the State of Illinois), a degree of direct (financial) mitigation will however be sought for this species due to the elevated likelihood of take due to high quality habitat loss at Sand Lake in Mason County. Please see the Authorization section of this document for details.

Part C:

Yellow-headed blackbird

Below are the following commitments/measures that EB will make to minimize and/or mitigate potential effects to the YHBB:

The Yellow-headed blackbird is included within the construction ROW for the current Project alignment. This 0.48-acre overlap of mapped species buffer polygon for the Yellow-headed blackbird within the construction ROW occurs on the following parcel:

Owner Name: S & D FARMS, INC.
Legal Description: PT NW1/4 SW1/4 8 21 8 126
Parcel size: 41.49 acres
Township No.: 5; Township Name: Havana

I.

- The Yellow-headed blackbird has probably always been restricted to the prairie regions in the northern part of the state, where it was once a locally abundant breeding bird. The Illinois population is separated from the core of the Yellow-headed blackbird population in western Iowa by about 420 miles (680 km). The Illinois population is small, declining, and isolated from the main North American breeding range for this species. It is an Illinois endangered species known from one (1) 1994 occurrence in Mason County (Nyboer, R.W., J.R. Herkert and J.E. Ebinger. 2006. Endangered and Threatened Species of Illinois: Status and Distribution, Volume 2 – Animals).

- The number of Yellow-headed blackbirds currently utilizing the Project construction ROW portion of Sand Lake is unknown. However, the overlap of mapped species buffer polygon for the Yellow-headed blackbird with construction ROW covers approximately 0.48 acres. Enbridge does not expect to have any direct take of Yellow-headed blackbirds because constructing outside of the breeding season completely avoids take. Any potential modification to habitat will be temporary as construction procedures typically result in return to the original contours in wetlands and full restoration within one to two years of construction.

- Description of the activities that may result in taking: Activities that may potentially result in taking all involve either direct ground disturbance, or indirect disturbance by trafficking. The main features of pipeline construction along these lines include the following:

- Clearing (indirect construction traffic);
- ROW preparation (grading, topsoil stripping);
- Pipeline fabrication (stringing, welding, grinding, coating, and x-ray);
- Trenching and spoil storage;
- Backfill; and,
- Post construction grading and restoration.

- Specific activities that may affect habitat for the Yellow-headed blackbird are described along with minimization procedures below.

Clearing:

Low ground pressure equipment will be used, as practical to limit disturbance to the wetland. When clearing in *wetlands*, the following restrictions will apply:

-Staging areas, additional spoil storage areas, and other additional work areas (outside of the temporary workspace (TWS) adjacent to the pipeline easement) will be located in upland areas at least 50 feet away from wetland boundaries. If topographic conditions do not permit a 50-foot setback, then these areas will be located as far away from the wetland as is practicable. Vegetation will not be cleared between these areas and the wetland. This requirement will not apply where a wetland occurs within the extra workspace for a stream crossing;

-The size of the additional workspace areas will be limited to the minimum needed to construct the wetland or waterbody crossing; and,

-Vegetation and trees within wetlands will be cut off at ground level, leaving existing root systems intact; clearing debris will generally be chipped/mulched, burned or removed from the wetland for disposal. Chips, hydro-axe debris, or similar material may be left in the wetland if spread evenly on the ROW, in a manner which will allow for normal revegetation as allowed by permits.

Sedimentation Control Practices:

Silt fence and other erosion control methods will be installed and maintained in proper working order to prevent the flow of sediment into wetlands and water-bodies from spoil piles or sloped approaches that are adjacent to wetlands and water-bodies. When the depth of sediment reaches one-third of the height of a sediment barrier, the barrier will be replaced and/or the sediment removed. Non-functional sediment-control measures will be repaired, replaced, or supplemented with functional features as soon as possible.

Right-of-Way Stabilization:

Tree stumps, brush riprap, imported dirt, and rock fill will not be brought in to stabilize the ROW in wetlands. Where a wetland cannot support construction equipment, and low ground-weight equipment is not used, construction activities will be accomplished from timber construction mats. Subsoil from the pipeline trench within the immediate wetland may be placed on top of equipment mats for additional stabilization. Timber mats are preferred materials that can be brought into a wetland and placed on the working side of the construction ROW. Timber mats may be placed over the ditch line to facilitate trench excavation. All timber mats will be removed during cleanup of wetlands.

Trenching:

Excavation of the pipeline trench in wetlands typically will be accomplished using backhoe excavators. The duration of open trench will be minimized to the extent possible.

Topsoil Segregation:

Where feasible (normally in wetland areas without standing water or saturated soils), up to one foot of native topsoil will be stripped from the trench line and stockpiled separate from trench spoil.

Trench Breakers:

Where the pipeline trench has the potential to partially drain a wetland, trench breakers will be installed as necessary to maintain the original wetland hydrology.

Backfilling:

During backfilling of wetland areas, subsoil material removed from the trench during construction will be placed back into the trench. Segregated topsoil will not be used as padding and will be returned to its original horizon over the backfilled trench.

Rough Grading, Cleanup, and Temporary Restoration:

Cleanup typically will involve removing construction debris and replacing fences removed during construction. Rough grading will include restoring contours and installing or repairing temporary erosion control measures. Temporary slope breakers will be installed near the boundary between the wetland and adjacent sloped approaches, to prevent sediment flow into the wetland. Every effort will be made to begin cleanup and rough grading (including installation of temporary erosion control measures) as soon as practical after the trench is backfilled, weather permitting.

II.

Where required, disturbed wetland areas will be revegetated naturally or in an agreed upon manner. No fertilizer, lime, or mulch will be applied in wetlands.

-To the maximum extent practicable, Enbridge has set the timing of clearing and pipeline construction activities to avoid disturbing nesting activities of all bird species, including the Yellow-headed blackbird.

-Cleanup and restoration activities associated with construction will be done during the non-breeding season. However, some clean-up and restoration activities post-construction may extend into the nesting season. Construction activities will be minimized in Yellow-headed blackbird habitat to the extent practicable. The Contractor will also use special construction techniques (including timber mats) to minimize the disturbance to plants and soils and to protect wetland hydrology in this habitat. The intent of these techniques is to minimize construction-related disturbance and sedimentation of the habitat and to restore the habitat as nearly as possible to pre-existing conditions.

-Clearing of the Project construction ROW and associated construction activities are anticipated to begin in August of 2013. These activities would be outside of the Yellow-headed blackbird's normal nesting period.

III.

Saturated wetlands have water to the ground surface or contain standing water. Unsaturated wetlands have the free water surface at some depth below the soil surface. Since Sand Lake is considered an intermittent lake, existing about half the time during the growing seasons over the last several decades, the saturation status of the wetland during Project construction is unknown at this time; however, unsaturated conditions are expected to be more prevalent late fall and winter during planned clearing and construction activity.

As indicated by Enbridge, up to one foot of topsoil in unsaturated wetlands will be stripped, stored separately on the ROW, and subsequently restored to the locations from which it was removed. Similarly, topsoil stripping separate segregation, and restoration to the soil surface will be attempted, as practicable, in saturated wetlands. The stripping, separate segregation, and replacement of topsoil in wetlands will facilitate the rapid, natural regeneration of wetland vegetation from the seed bank.

Should an unsaturated condition be found, the wetland habitat will be seeded with a mix first approved by the IDNR (attn.: Joseph Kath), to provide temporary cover while the wetlands revegetate naturally. The natural revegetation process will be encouraged by the seeds and rhizomes in the topsoil spread back over the ROW after pipe installation. No fertilizer, lime, or mulch shall be applied in wetlands.

This Unsaturated Wetland Seed Mix must be approved by the IDNR PRIOR to any planting in or around the Action Area.

Should a standing water condition be found at Sand Lake during construction, Enbridge does not propose to seed standing water wetland areas. It has been Enbridge's experience that the reestablishment of vegetation within standing water wetlands occurs best through natural process without supplemental seeding.

IV.

Topsoil management will be employed to the extent practicable to ensure that, subsequent to backfill, wetland topsoil is available during restoration to provide a seed bank that results in rapid establishment of the native vegetation.

Timber mats are supplemental equipment supports which will be used in wetlands to provide temporary portable support for heavy construction equipment to reduce ground pressure and minimize soil compaction and/or soil mixing. Timber mats are placed on the working side of the construction ROW. Timber mats may be placed over ditch lines to facilitate trench excavation. All timber mats will be removed during cleanup of wetlands.

Cleanup and rough grading (including installation of temporary erosion control measures) will begin as soon as practical after the trench is backfilled, weather permitting. Following completion of all construction during the non-breeding season, the Project ROW will be restored to its pre-construction conditions as practical.

While some restoration activities may occur during the nesting season for the Yellow-headed blackbird, restoration activities will be confined to the construction right-of-way that will have been cleared and will not have suitable breeding habitat (e.g. cattails and emergent vegetation) until after restoration is complete and revegetation has been initiated by natural regrowth from the seed bank or reseeding with the approved wetland vegetation seed mix.

V.

The habitat left after Project post-construction reclamation activities (emergent marsh with or without standing water depending on precipitation cycles) will be the same as that which is taken. Following the procedure established by Ward, M.P, 2004, Habitat Selection by Yellow-headed blackbirds, Enbridge will conduct a preconstruction survey during the breeding season (late spring-early summer of 2013) by locating Yellow-headed blackbird nests by searching appropriate habitat within the Project corridor in the Sand Lake vicinity. Once located, these nests will be recorded using a hand-held GPS and photographs will be taken. This survey procedure will be repeated during the first, fifth, and tenth (1st, 5th, 10th) nesting seasons following final construction – final construction shall be defined as: pipeline completely buried and all cleanup, grading, and surface restoration efforts have been completed. A brief report of ALL survey results (pre and post construction) will be submitted to IDNR by December 31st of each survey year.

Copies of these reports shall be sent to the following:

Illinois Department of Natural Resources
Division of Natural Heritage
Attn: Joseph Kath
One Natural Resources Way
Springfield, Illinois 62702-1271

Illinois Endangered Species Protection Board
Attn: Anne Mankowski
One Natural Resources Way
Springfield, Illinois 62702-1271

Illinois Department of Natural Resources
Natural Heritage Database
Attn: Tara Kieninger
One Natural Resources Way
Springfield, Illinois 62702-1271

It should be noted that the Yellow-headed blackbird is known from one (1) 1994 occurrence in Mason County (Nyboer, R.W., J.R. Herkert and J.E. Ebinger. 2006. Endangered and Threatened Species of Illinois: Status and Distribution, Volume 2 – Animals).

VI.

Enbridge will either seed or not seed habitat after construction activities, depending on the presence or absence of standing water. Enbridge will document the restoration of the wetland within the ROW to adjacent wetland conditions. If similar habitat conditions do not return to the construction ROW, Enbridge will rehabilitate the ROW to match adjacent habitat conditions.

VII.

Co-locating the Project with existing facilities avoids and minimizes environmental disturbance to the maximum extent practicable. This directly avoids new fragmentation that may occur with a new route or greenfield construction, and minimizes Project impacts by expanding the existing corridor cut previously

through these habitats, rather than introducing a new corridor. The linear nature of the proposed Project, along with its short-term temporal time-frame, combines to limit the Project's impacts on both an area and time basis.

Project construction and restoration in the Sand Lake area is not expected to reduce the likelihood of the survival of the Yellow-headed blackbird in Illinois. It is anticipated that no birds would be taken by the Project because clearing and construction will occur well outside of the breeding season of the Yellow-headed blackbird, and any restoration that will be planned during spring 2014 will occur within the ROW where no suitable habitat will be present on the ROW as a result of the previous winters clearing and construction. Following construction, suitable habitat for the Yellow-headed blackbird will continue to exist in the impacted area because it is Enbridge's intention to restore the habitat within the ROW affected by construction to match the immediately adjacent habitat.

King rail

Below are the following commitments/measures that EB will make to minimize and/or mitigate potential effects to the KR:

The King rail is included within the construction ROW for the current Project alignment. This 2.72-acre overlap of mapped species buffer polygon for the King rail with construction ROW occurs on the following parcels:

Owner Name: S & D FARMS, INC.
Legal Description: PT NW1/4 SW1/4 8 21 8 126
Parcel size: 41.49 acres
Township No.: 5; Township Name: Havana

Owner Name: S & D FARMS, INC.
Legal Description: NE1/4 SW1/4 8 21 8 126
Parcel size: 40.94 acres
Township No.: 5; Township Name: Havana

I.

- The King rail was formerly considered to be a common summer resident in suitable localities throughout the state. Now the King rail is an Illinois endangered species known from Brown, Fulton and Mason Counties. One 2007 occurrence is known from Brown County, one 1988 occurrence is known from Fulton County and one 1994 occurrence is known from Mason County.

- Description of the activities that may result in taking: Activities that may potentially result in taking all involve either direct ground disturbance, or indirect disturbance by trafficking. The main features of pipeline construction along these lines include the following:

- Clearing (indirect construction traffic);
- ROW preparation (grading, topsoil stripping);
- Pipeline fabrication (stringing, welding, grinding, coating, and x-ray);
- Trenching and spoil storage;
- Backfill; and,
- Post construction grading and restoration.

- Specific activities that may affect habitat for the King rail are described along with minimization procedures below.

Clearing:

Low ground pressure equipment will be used, as practical to limit disturbance to the wetland. When clearing in wetlands, the following restrictions will apply:

-Staging areas, additional spoil storage areas, and other additional work areas (outside of the temporary workspace (TWS) adjacent to the pipeline easement) will be located in upland areas at least 50 feet away from wetland boundaries. If topographic conditions do not permit a 50-foot setback, then these areas will be located as far away from the wetland as is practicable. Vegetation will not be cleared between these areas and the wetland. This requirement will not apply where a wetland occurs within the extra workspace for a stream crossing;

-The size of the additional workspace areas will be limited to the minimum needed to construct the wetland or waterbody crossing; and,

-Vegetation and trees within wetlands will be cut off at ground level, leaving existing root systems intact; clearing debris will generally be chipped/mulched, burned or removed from the wetland for disposal. Chips, hydro-axe debris, or similar material may be left in the wetland if spread evenly on the ROW, in a manner which will allow for normal revegetation as allowed by permits.

Sedimentation Control Practices:

Silt fence and other erosion control methods will be installed and maintained in proper working order to prevent the flow of sediment into wetlands and waterbodies from spoil piles or sloped approaches that are adjacent to wetlands and waterbodies. When the depth of sediment reaches one-third of the height of a sediment barrier, the barrier will be replaced and/or the sediment removed. Non-functional sediment-control measures will be repaired, replaced, or supplemented with functional features as soon as possible.

Right-of-Way Stabilization:

Tree stumps, brush riprap, imported dirt, and rock fill will not be brought in to stabilize the ROW in wetlands. Where a wetland cannot support construction equipment, and low ground-weight equipment is not used, construction activities will be accomplished from timber construction mats. Subsoil from the pipeline trench within the immediate wetland may be placed on top of equipment mats for additional stabilization. Timber mats are preferred materials that can be brought into a wetland and placed on the working side of the construction ROW. Timber mats may be placed over the ditch line to facilitate trench excavation. All timber mats will be removed during cleanup of wetlands.

Trenching:

Excavation of the pipeline trench in wetlands typically will be accomplished using backhoe excavators. The duration of open trench will be minimized to the extent possible.

Topsoil Segregation:

Where feasible (normally in wetland areas without standing water or saturated soils), up to one foot of native topsoil will be stripped from the trench line and stockpiled separate from trench spoil.

Trench Breakers:

Where the pipeline trench has the potential to partially drain a wetland, trench breakers will be installed as necessary to maintain the original wetland hydrology.

Backfilling:

During backfilling of wetland areas, subsoil material removed from the trench during construction will be placed back into the trench. Segregated topsoil will not be used as padding and will be returned to its original horizon over the backfilled trench.

Rough Grading, Cleanup, and Temporary Restoration:

Cleanup typically will involve removing construction debris and replacing fences removed during construction. Rough grading will include restoring contours and installing or repairing temporary erosion control measures. Temporary slope breakers will be installed near the boundary between the wetland and adjacent sloped approaches, to prevent sediment flow into the wetland. Every effort will be made to begin cleanup and rough grading (including installation of temporary erosion control measures) as soon as practical after the trench is backfilled, weather permitting.

II.

Where required, disturbed wetland areas will be revegetated naturally or in an agreed upon manner. No fertilizer, lime, or mulch will be applied in wetlands.

-To the maximum extent practicable, Enbridge has set the timing of clearing and pipeline construction activities to avoid disturbing nesting activities of all bird species, including the King rail.

-Cleanup and restoration activities associated with construction will be done during non-breeding season. However, some clean-up and restoration activities post-construction may extend into the nesting season. Construction activities will be minimized in King rail habitat to the extent practicable. The Contractor will also use special construction techniques (including timber mats) to minimize the disturbance to plants and soils and to protect wetland hydrology in this habitat. The intent of these techniques is to minimize construction-related disturbance and sedimentation of the habitat and to restore the habitat as nearly as possible to pre-existing conditions.

-Clearing of the Project construction ROW and associated construction activities are anticipated to begin in August of 2013. Both of these activities would be outside of the King rail's normal nesting period.

III.

Saturated wetlands have water to the ground surface or contain standing water. Unsaturated wetlands have the free water surface at some depth below the soil surface. Since Sand Lake is considered an intermittent lake, existing about half the time during the growing seasons over the last several decades, the saturation status of the wetland during Project construction is unknown at this time; however, unsaturated conditions are expected to be more prevalent late fall and winter during planned clearing and construction activity.

As indicated in Enbridge's EMP, up to one foot of topsoil in unsaturated wetlands will be stripped, stored separately on the ROW, and subsequently restored to the locations from which it was removed. Similarly, topsoil stripping separate segregation, and restoration to the soil surface will be attempted, as practicable, in saturated wetlands. The stripping, separate segregation, and replacement of topsoil in wetlands will facilitate the rapid, natural regeneration of wetland vegetation from the seed bank.

Should an unsaturated condition be found, the wetland habitat will be seeded with a mix first approved by the IDNR (attn.: Joseph Kath), to provide temporary cover while the wetlands revegetate naturally. The natural revegetation process will be encouraged by the seeds and rhizomes in the topsoil spread back over the ROW after pipe installation. No fertilizer, lime, or mulch shall be applied in wetlands.

This Unsaturated Wetland Seed Mix must be approved by the IDNR PRIOR to any planting in or around the Action Area.

IV.

Topsoil management will be employed to the extent practicable to ensure that, subsequent to backfill, wetland topsoil is available during restoration to provide a seed bank that results in rapid establishment of the native vegetation. Timber mats are supplemental equipment supports which will be used in wetlands to provide temporary portable support for heavy construction equipment to reduce ground pressure and minimize soil compaction and/or soil mixing. Timber mats are placed on the working side of the construction ROW. Timber mats may be placed over ditch lines to facilitate trench excavation. All timber mats will be removed during cleanup of wetlands.

Cleanup and rough grading (including installation of temporary erosion control measures) will begin as soon as practical after the trench is backfilled, weather permitting. Following completion of all construction during the non-breeding season, the Project ROW will be restored to its pre-construction conditions as practical.

While some restoration activities may occur during the nesting season for the King rail, restoration activities will be confined to the construction right-of-way that will have been cleared and will not have suitable breeding habitat (e.g. cattails and emergent vegetation) until after restoration is complete and revegetation has been initiated by natural regrowth from the seed bank or reseeding with the approved wetland vegetation seed mix.

V.

The habitat left after Project post-construction reclamation activities (emergent marsh with or without standing water depending on precipitation cycles) will be the same as that which is taken. Enbridge will conduct one (1) preconstruction survey during the King rail breeding season (between May 1 and May 14) within the Project corridor in the Sand Lake vicinity using a version of the protocol established in Conway, C.J., 2011. Standardized North American Marsh Bird Monitoring Protocol. The survey route will be the Project centerline and survey points will be spaced at 200-meter intervals along this route within Sand Lake. Because many marsh birds (including King rails) are secretive, seldom observed and vocalize infrequently, the Standardized North American Marsh Bird Monitoring Protocol instructs surveyors to broadcast calls to elicit vocalizations during surveys. In the version to be used at Sand Lake, only King rail calls will be broadcast. To prevent the call-broadcast at one point from affecting the distribution of birds at adjacent points, broadcast speakers will be directed in alternating directions perpendicular to the survey route (e.g., first NNW, then SSE) at successive survey points. Surveyors will estimate and record the distance and direction from the survey point to each individual King rail that responds with vocalizations. The estimated locations of responding King rails will be recorded on Project mapping. This survey procedure will be repeated during the first, fifth, and tenth (1st, 5th, 10th) nesting seasons following final construction. Final construction shall be defined as: pipeline completely buried and all cleanup, grading, and surface restoration efforts have been completed. A brief report of ALL survey results (pre and post construction) will be submitted to IDNR by December 31st of each survey year.

It should be noted that the King rail is known in Mason County from one (1) 1994 occurrence (Nyboer, R.W., J.R. Herkert and J.E. Ebinger. 2006. Endangered and Threatened Species of Illinois: Status and Distribution, Volume 2 – Animals). Surveys should document presence/absence of both species and habitat, and would be discontinued once habitat within the construction ROW is similar to the immediately adjacent habitat.

Copies of these reports shall be sent to the following:

Illinois Department of Natural Resources
Division of Natural Heritage
Attn: Joseph Kath
One Natural Resources Way
Springfield, Illinois 62702-1271

Illinois Endangered Species Protection Board
Attn: Anne Mankowski
One Natural Resources Way
Springfield, Illinois 62702-1271

Illinois Department of Natural Resources
Natural Heritage Database
Attn: Tara Kieninger
One Natural Resources Way
Springfield, Illinois 62702-1271

VI.

Enbridge will either seed or not seed habitat after construction activities, depending on the presence or absence of standing water. Enbridge will document the restoration of the wetland within the ROW to adjacent wetland conditions. If similar habitat conditions do not return to the construction ROW, Enbridge will rehabilitate the ROW to match adjacent habitat conditions.

VII.

Co-locating the Project with existing facilities avoids and minimizes environmental disturbance to the maximum extent practicable. This directly avoids new fragmentation that may occur with a new route or greenfield construction, and minimizes Project impacts by expanding the existing corridor cut previously through these habitats, rather than introducing a new corridor. The linear nature of the proposed Project, along with its short-term temporal time-frame, combines to limit the Project's impacts on both an area and time basis.

Project construction and restoration in the Sand Lake area is not expected to reduce the likelihood of the survival of the King rail in Illinois. It is anticipated that no birds would be taken by the Project because clearing and construction will occur well outside of the breeding season of the King rail, and any restoration that will be planned during spring 2014 will occur within the ROW where no suitable habitat will be present on the ROW as a result of the previous winters clearing and construction. Following construction, suitable habitat for the King rail will continue to exist in the impacted area because it is Enbridge's intention to restore the habitat within the ROW affected by construction to match the immediately adjacent habitat.

Illinois chorus frog

Below are the following commitments that EB will make to minimize and/or mitigate potential effects to the ICF:

The Illinois chorus frog is included within the construction ROW for the current Project alignment. This 5.45-acre overlap of mapped species buffer polygon for the Illinois chorus frog with construction ROW occurs on the following parcels:

Owner Name: S & D FARMS, INC.
Legal Description: PT NW1/4 SW1/4 8 21 8 126
Parcel size: 41.49 acres
Township No.: 5; Township Name: Havana

Owner Name: S & D FARMS, INC.
Legal Description: NE1/4 SW1/4 8 21 8 126
Parcel size: 40.94 acres
Township No.: 5; Township Name: Havana

I.

• The Illinois chorus frog is restricted to areas of sandy substrates found in the floodplains of the Mississippi and Illinois rivers in Arkansas, Illinois, and Missouri. Because these habitats have been converted to agriculture or developed for other human activities, *P. s. illinoensis* is now uncommon. It is listed as a threatened species in Illinois and is known to occur in nine counties in Illinois.

• Description of the activities that may result in taking: Activities that may potentially result in taking all involve either direct ground disturbance, or indirect disturbance by trafficking. The main features of pipeline construction along these lines include the following:

- Clearing (indirect construction traffic);
- ROW preparation (grading, topsoil stripping);
- Pipeline fabrication (stringing, welding, grinding, coating, and x-ray);
- Trenching and spoil storage;
- Backfill; and,
- Post construction grading and restoration.

• Specific activities that may affect habitat for the Illinois chorus frog are described along with minimization procedures below.

Clearing:

Low ground pressure equipment will be used, as practical to limit disturbance to the wetland. When clearing in wetlands, the following restrictions will apply:

-Staging areas, additional spoil storage areas, and other additional work areas (outside of the temporary workspace (TWS) adjacent to the pipeline easement) will be located in upland areas at least 50 feet away from wetland boundaries. If topographic conditions do not permit a 50-foot setback, then these areas will be located as far away from the wetland as is practicable. Vegetation will not be cleared between these areas and the wetland. This requirement will not apply where a wetland occurs within the extra workspace for a stream crossing;

-The size of the additional workspace areas will be limited to the minimum needed to construct the wetland or waterbody crossing; and,

-Vegetation and trees within wetlands will be cut off at ground level, leaving existing root systems intact; clearing debris will generally be chipped/mulched, burned or removed from the wetland for disposal. Chips, hydro-axe debris, or similar material may be left in the wetland if spread evenly on the ROW, in a manner which will allow for normal revegetation as allowed by permits.

Sedimentation Control Practices:

Silt fence and other erosion control methods will be installed and maintained in proper working order to prevent the flow of sediment into wetlands and waterbodies from spoil piles or sloped approaches that are adjacent to wetlands and waterbodies. When the depth of sediment reaches one-third of the height of a sediment barrier, the barrier will be replaced and/or the sediment removed. Non-functional sediment-control measures will be repaired, replaced, or supplemented with functional features as soon as possible.

Right-of-Way Stabilization:

Tree stumps, brush riprap, imported dirt, and rock fill will not be brought in to stabilize the ROW in wetlands. Where a wetland cannot support construction equipment, and low ground-weight equipment is not used, construction activities will be accomplished from timber construction mats. Subsoil from the pipeline trench within the immediate wetland may be placed on top of equipment mats for additional stabilization. Timber mats are preferred materials that can be brought into a wetland and placed on the working side of the construction ROW. Timber mats may be placed over the ditch line to facilitate trench excavation. All timber mats will be removed during cleanup of wetlands.

Trenching:

Excavation of the pipeline trench in wetlands typically will be accomplished using backhoe excavators. The duration of open trench will be minimized to the extent possible.

Topsoil Segregation:

Where feasible (normally in wetland areas without standing water or saturated soils), up to one foot of native topsoil will be stripped from the trench line and stockpiled separate from trench spoil.

Trench Breakers:

Where the pipeline trench has the potential to partially drain a wetland, trench breakers will be installed as necessary to maintain the original wetland hydrology.

Backfilling:

During backfilling of wetland areas, subsoil material removed from the trench during construction will be placed back into the trench. Segregated topsoil will not be used as padding and will be returned to its original horizon over the backfilled trench.

Rough Grading, Cleanup, and Temporary Restoration:

Cleanup typically will involve removing construction debris and replacing fences removed during construction. Rough grading will include restoring contours and installing or repairing temporary erosion control measures. Temporary slope breakers will be installed near the boundary between the wetland and adjacent sloped approaches, to prevent sediment flow into the wetland. Every effort will be made to begin cleanup and rough grading (including installation of temporary erosion control measures) as soon as practical after the trench is backfilled, weather permitting.

II.

Where required, disturbed wetland areas will be revegetated naturally or in an agreed upon manner. No fertilizer, lime, or mulch will be applied in wetlands.

-To the maximum extent practicable, Enbridge has set the timing of clearing and pipeline construction activities to avoid disturbing nesting activities of all bird and amphibian species, including the Illinois chorus frog.

-Cleanup and restoration activities associated with construction will be done during non-breeding season. However, some clean-up and restoration activities post-construction may extend into the nesting season. Construction activities will be minimized in Illinois chorus frog habitat to the extent practicable. The Contractor will also use special construction techniques (including timber mats) to minimize the

disturbance to plants and soils and to protect wetland hydrology in this habitat. The intent of these techniques is to minimize construction-related disturbance and sedimentation of the habitat and to restore the habitat as nearly as possible to pre-existing conditions.

Clearing of the Project construction ROW and associated construction activities are anticipated to begin in August of 2013. Construction in the Sand Lake area will be completed well before the Illinois chorus frog's normal breeding and metamorphosis period.

III.

Saturated wetlands have water to the ground surface or contain standing water. Unsaturated wetlands have the free water surface at some depth below the soil surface. Since Sand Lake is considered an intermittent lake, existing about half the time during the growing seasons over the last several decades, the saturation status of the wetland during Project construction is unknown at this time; however, unsaturated conditions are expected to be more prevalent late fall and winter during planned clearing and construction activity.

As indicated in Enbridge's EMP, up to one foot of topsoil in unsaturated wetlands will be stripped, stored separately on the ROW, and subsequently restored to the locations from which it was removed. Similarly, topsoil stripping separate segregation, and restoration to the soil surface will be attempted, as practicable, in saturated wetlands. The stripping, separate segregation, and replacement of topsoil in wetlands will facilitate the rapid, natural regeneration of wetland vegetation from the seed bank.

Should an unsaturated condition be found, the wetland habitat will be seeded with a mix first approved by the IDNR (attn.: Joseph Kath), to provide temporary cover while the wetlands revegetate naturally. The natural revegetation process will be encouraged by the seeds and rhizomes in the topsoil spread back over the ROW after pipe installation. No fertilizer, lime, or mulch shall be applied in wetlands.

This Unsaturated Wetland Seed Mix must be approved by the IDNR PRIOR to any planting in or around the Action Area.

IV.

Topsoil management will be employed to the extent practicable to ensure that, subsequent to backfill, wetland topsoil is available during restoration to provide a seed bank that results in rapid establishment of the native vegetation. Timber mats are supplemental equipment supports which will be used in wetlands to provide temporary portable support for heavy construction equipment to reduce ground pressure and minimize soil compaction and/or soil mixing. Timber mats are placed on the working side of the construction ROW. Timber mats may be placed over ditch lines to facilitate trench excavation. All timber mats will be removed during cleanup of wetlands.

Cleanup and rough grading (including installation of temporary erosion control measures) will begin as soon as practical after the trench is backfilled, weather permitting. Following completion of all construction during the non-breeding season, the Project ROW will be restored to its pre-construction conditions as practical.

Some restoration activities may occur during the breeding season for the Illinois chorus frog, which could potentially cause direct take by grading and crushing by heavy equipment. Subsided areas along the trench may be very attractive frog breeding locations that would be disturbed during restoration of the original contours through grading. Monitoring of such locations will occur to ensure that Illinois chorus frog breeding locations are not restored while the frogs/tadpoles are still present.

V.

The habitat left after Project post-construction reclamation activities (emergent marsh with or without standing water depending on precipitation cycles) will be the same as that which is disturbed. Enbridge will conduct a preconstruction survey of the Project corridor within Sand Lake for Illinois chorus frog breeding activity using a nighttime calling survey to document the presence/absence of the species. The monitoring protocol used will be a modification of that described in Tucker, J.K and J.H. Chick, 2007, State Wildlife Grant Proposal #T45-D-1. The Project corridor within Sand Lake will be visited at night to conduct a calling survey. This frog characteristically calls after spring rainfall of at least 3 cm once temperatures have reached 15°C. Enbridge will monitor local conditions in the Sand Lake area to establish the time for this one-night survey. Night calling surveys will take place over three nights once temperatures have reached 15°C. This survey procedure will be repeated during the first, fifth, and tenth (1st, 5th, 10th) breeding seasons following final construction – final construction shall be defined as: pipeline completely buried and all cleanup, grading, and surface restoration efforts have been completed. A brief report of ALL survey results (pre and post construction) will be submitted to IDNR by December 31st of each survey year.

Copies of these reports shall be sent to the following:

Illinois Department of Natural Resources
Division of Natural Heritage
Attn: Joseph Kath
One Natural Resources Way
Springfield, Illinois 62702-1271

Illinois Endangered Species Protection Board
Attn: Anne Mankowski
One Natural Resources Way
Springfield, Illinois 62702-1271

Illinois Department of Natural Resources
Natural Heritage Database
Attn: Tara Kieninger
One Natural Resources Way
Springfield, Illinois 62702-1271

VI.

Enbridge will either seed or not seed habitat after construction activities, depending on the presence or absence of standing water. Enbridge will document the restoration of the wetland within the ROW to adjacent wetland conditions. If similar habitat conditions do not return to the construction ROW, Enbridge will rehabilitate the ROW to match adjacent habitat conditions. Enbridge will conduct pre-restoration monitoring to ensure that Illinois chorus frog breeding locations are not restored while the frogs/tadpoles are still present.

VII.

Co-locating the Project with existing facilities avoids and minimizes environmental disturbance to the maximum extent practicable. This directly avoids new fragmentation that may occur with a new route or greenfield construction, and minimizes Project impacts by expanding the existing corridor cut previously through these habitats, rather than introducing a new corridor. The linear nature of the proposed Project, along with its short-term temporal time-frame, combines to limit the Project's impacts on both an area and time basis.

Project construction and restoration in the Sand Lake area is not expected to reduce the likelihood of the survival of the Illinois chorus frog in Illinois. It is anticipated that no breeding/metamorphosing frogs would be taken by the Project because clearing and construction will occur well outside of the breeding/metamorphosing season of the Illinois chorus frog. However, an unknown number of burrowing/hibernating Illinois chorus frogs could be taken as a result of trenching or soil compaction during construction. Habitat restoration activities, planned during spring 2014 would be preceded by monitoring activities to ensure that restoration activities did not impact breeding/metamorphosing ponds.

Therefore, a minor amount of restoration may need to take place following this period. Following all construction and restoration activities, suitable habitat for the Illinois chorus frog will continue to exist in the impacted area because it is Enbridge's intention to restore the habitat within the ROW affected by construction to match the immediately adjacent habitat.

5. Any measures required under Section 5.5 of the Illinois Endangered Species Protection Act [520 ILCS 10/5.5 - 17 IL. Adm. Code Part 1080.40(b)], will be performed:

Additional measures are listed below under "Authorization." This authorization is, by definition, subject to those terms and conditions and official EB signature(s) on this authorization indicates their commitment to performing those measures.

The proposed Project has the potential to affect three listed species and/or their habitat beyond the currently existing conditions. These species could be potentially harassed, injured or killed during the construction, operation, and/or maintenance of the Project; and there could be a potential for lost habitat as a result of the construction, operation, and/or maintenance of the Enbridge Flanagan South Pipeline Project.

NOTE: For projects that will result in the taking of endangered or threatened species of plants, copies of expressed written permission of the landowner: Copies of expressed written permission of the landowner of tracts from which endangered or threatened species of plants will be taken (if any) will be provided to the Illinois Department of Natural Resources (attn.: Joseph Kath) prior to the commencement of construction. This is limited to a few landowners in the Sand Lake area. Enbridge is currently working on securing this permission and will provide documentation once it is obtained. This documentation will be provided to IDNR/Joseph Kath prior to Project construction in the Sand Lake area.

6. The public has received notice of the application and has had the opportunity to comment before the Department made any decision regarding the application:

URS [on behalf of Enbridge Pipelines, LLC] prepared a conservation plan for the Flanagan South Pipeline Project (FSP) as described by the Illinois Endangered Species Protection Act (520 ILCS 10/5.5). That plan and EB's request for authorization for incidental take of the: Yellow-headed blackbird [*Xanthocephalus xanthocephalus*], King rail [*Rallus elegans*], and the Illinois chorus frog [*Pseudacris streckeri illinoensis*] across central and southwestern Illinois were received by the Illinois Department of Natural Resources

(Department) on 14 December 2012. Public notice of EB's request for authorization of incidental take of these State listed species was published in the Breeze Courier (Official State newspaper) and the Mason County Democrat (Mason County) on January 9, 2013, as well as on January 16, and January 23, 2013. Public comments on EB's conservation plan were accepted by the Department until February 23, 2013. During the period of January 9, 2013 through February 23, 2013, no public comments were received for this project.

Authorization

It is the determination of the Department that the measures to be implemented by of Enbridge Pipelines, LLC (EB), who retained URS Corporation (URS) to prepare a Conservation Plan, will adequately minimize and mitigate for the anticipated taking (disturbance/harassment) of a small number of: Yellow-headed blackbird [*Xanthocephalus xanthocephalus*], King rail [*Rallus elegans*], and the Illinois chorus frog [*Pseudacris streckeri illinoensis*] across central and southwestern Illinois - associated with the Flanagan South Pipeline. Further, it is our opinion that the take (disturbance/harassment) authorized herein would not diminish the likelihood of the survival of either these aforementioned species in the wild within the State of Illinois, the biotic community of which the species is a part, or the habitat essential to the species' existence in Illinois. Pursuant to Section 5.5 of the Illinois Endangered Species Protection Act [520 ILCS 10/5.5 - 17 IL. Adm. Code Part 1080.40(b)], this authorization is issued subject to the following additional terms and conditions:

1. This authorization is effective upon signature of the Department and shall remain in effect for a period of 10 (ten) years from the date of final signature on this Authorization document, unless terminated pursuant to Section 5.5. of the Illinois Endangered Species Protection Act [520 ILCS 10/5.5 - 17 IL. Adm. Code Part 1080.80]. EB shall recognize that any future construction and/or maintenance activities related to this pipeline project may require the submittal of new Conservation Plans and the issuance of separate ITAs by the Department.

2. The following Daily Monitoring Measures shall be implemented with regards to the Enbridge Flanagan South Pipeline Project (EFSP):

Daily monitoring shall consist of routine observations of species and reporting of road kills, vehicle collisions, mortalities related to construction activities, etc. by EB and/or construction staff in conjunction with their normal duties. The IDNR shall be notified of any Yellow-headed blackbird, King rail, and/or Illinois chorus frog observations and/or road kills, etc. in the project area within 72 hours of detection. EB will report any endangered species road kills, construction mortalities, etc. found within the Project area to the IDNR within 72 hours of the initial sighting. Sightings shall be reported to:

Illinois Department of Natural Resources
Division of Natural Heritage
Attn: Joseph Kath
One Natural Resources Way
Springfield, Illinois 62702-1271
Phone: (217)785-8764; Email: Joe.Kath@illinois.gov

3. a) Enbridge will conduct a preconstruction survey during the breeding season (late spring-early summer of 2013) by locating Yellow-headed blackbird nests by searching appropriate habitat within the Project corridor in the Sand Lake vicinity. Once located, these nests will be recorded using a hand-held GPS and photographs will be taken. This survey procedure will be repeated during the first, fifth, and tenth (1st, 5th, 10th) nesting seasons following final construction – final construction shall be defined as: pipeline completely buried and all cleanup, grading, and surface restoration efforts have been completed. A brief report of ALL survey results (pre and post construction) will be submitted to IDNR by December 31st of each survey year.

b) Enbridge will conduct one (1) preconstruction survey during the King rail breeding season (between May 1 and May 14) within the Project corridor in the Sand Lake vicinity using a version of the protocol established in Conway, C.J., 2011. This survey procedure will be repeated during the first, fifth, and tenth (1st, 5th, 10th) nesting seasons following final construction – final construction shall be defined as: pipeline completely buried and all cleanup, grading, and surface restoration efforts have been completed. A brief report of ALL survey results (pre and post construction) will be submitted to IDNR by December 31st of each survey year.

c) Enbridge will conduct a preconstruction survey of the Project corridor within Sand Lake for Illinois chorus frog breeding activity using a nighttime calling survey to document the presence/absence of the species. The monitoring protocol used will be a modification of that described in Tucker, J.K and J.H. Chick, 2007, State Wildlife Grant Proposal #T45-D-1. This survey procedure will be repeated during the first, fifth, and tenth (1st, 5th, 10th) breeding seasons following final construction – final construction shall be defined as: pipeline completely buried and all cleanup, grading, and surface restoration efforts have been completed. A brief report of ALL survey results (pre and post construction) will be submitted to IDNR by December 31st of each survey year.

Copies of all of these reports shall be sent to the following:

Illinois Department of Natural Resources
Division of Natural Heritage
Attn: Joseph Kath
One Natural Resources Way
Springfield, Illinois 62702-1271

Illinois Endangered Species Protection Board
Attn: Anne Mankowski
One Natural Resources Way
Springfield, Illinois 62702-1271

Illinois Department of Natural Resources
Natural Heritage Database
Attn: Tara Kieninger
One Natural Resources Way
Springfield, Illinois 62702-1271

4. With regards to the Enbridge Flanagan South Pipeline across central and southwestern Illinois: Enbridge Pipelines, LLC (EB) will be responsible for overseeing all minimization, monitoring, and mitigation efforts identified within the 14 December 2012 Conservation Plan and this Final Authorization document.

The Project route extends west-southwest across Illinois, from the MP 0 in Livingston County, Illinois to the Mississippi River at approximately MP 167.8. Enbridge has existing ROW along portions of the majority of the Project route because of its ownership of the Spearhead Pipeline system and will use that ROW as necessary to build and operate the Project. Although some of the Spearhead ROW lacks a defined width, where defined it is generally fifty (50) to eighty (80) feet in width.

NOTE: The *Action Area* for the Enbridge Conservation Plan and this ITA is defined as: The new pipe will be generally installed at a 50-foot offset from the center line of the Spearhead Pipeline to ensure adequate space for safe construction and on-going maintenance activities. The permanent easement for the new pipe will be 50 feet. Also, during construction, an additional 85 feet of temporary workspace will be needed (135 feet total construction ROW). In some cases, this construction ROW width may be reduced to minimize impacts on natural resources such as wetlands (110 feet). The ROW would be further reduced to 85 feet in forested and scrub/shrub wetlands, as well as the habitat of Sand Lake, and in waterways adjacent to these features. Extra temporary workspace, generally rectangular in size and ranging from 100 feet x 200 feet to 200 feet x 200 feet, will be required in some locations to accommodate crossings of roads, wetlands, railways, and water-bodies.

5. Direct financial mitigation responsibilities of EB for this Project:

-For the Yellow-headed blackbird: Based upon the information that EB/URS received from the Illinois Natural Heritage Database in 2012 and the corresponding pipeline route traversing the Sand Lake Area in Mason County, Illinois, it has been determined that 0.48 acres of suitable habitat will likely be impacted.

-For the King rail: Based upon the information that EB/URS received from the Illinois Natural Heritage Database in 2012 and the corresponding pipeline route traversing the Sand Lake Area in Mason County, Illinois, it has been determined that 2.72 acres of suitable habitat will likely be impacted.

-For the Illinois chorus frog: Based upon the information that EB/URS received from the Illinois Natural Heritage Database in 2012 and the corresponding pipeline route traversing the Sand Lake Area in Mason County, Illinois, it has been determined that 5.45 acres of suitable habitat will likely be impacted.

Accordingly, the number of acres that will likely be impacted [for the above listed species] totals 8.65 acres. As derived from the State of Illinois' Interagency Wetlands Policy Act of 1989, a mitigation ratio of 5.5:1 is employed when endangered/threatened species are at risk.

Accordingly, it is the responsibility of the applicant (EB) to provide the Department with a mitigation-compensation cost equal to the value of approximately: 48 acres (8.65 x 5.5) of land in the local project area. According to May 2013 calculations from IDNR's Office of Realty and Environmental Planning, land values in Mason County range from a low of \$1,100.00/acre to a high of \$11,250.00/acre. The average value per acre for soils similar to the Sand Lake Area in Mason County is: \$4,550.00. Given the condition and proximity of the impact zone, as well as described minimization responsibilities of EB for this project, a value of \$4,550.00/acre will be employed in this Incidental Take Authorization for mitigation purposes.

Accordingly, this yields a total mitigation amount of:

-The number of mitigation acres due for this project: 48 acres

-Of the 8.65 acres identified as suitable habitat for the species above, we will assume an average wildlife occupancy rate of: 0.70 or 70% of this habitat actually being utilized by the subject species, especially the Illinois Chorus Frog (Tucker, 2002; Tucker, 2008; Gould et. al., 2011; Schowalter, 2011).

-48 mitigation acres x 0.70 occupancy rate = 33.6 assigned mitigation acres

-33.6 assigned mitigation acres x \$4,550.00/acre = \$152,880.00 due to the Department from EB.

Therefore, the applicant (EB) shall provide the Department with a check made out to the Illinois Wildlife Preservation Fund in the amount of: \$152,880.00. This check shall be received within 12 months after formal implementation of the ITA (after this document is signed by both EB and the IDNR). These funds will be used solely for management and recovery actions of the Yellow-headed blackbird, King rail, and Illinois chorus frog in Illinois.

6. Please note that this Incidental Take Authorization issued by the Illinois Department of Natural Resources (Department) may be officially revised, and that additional minimization and mitigation measures specific to the Federally endangered Indiana bat (*Myotis sodalis*) may be required by the Department based upon any and all decisions made by the U.S. Fish and Wildlife Service (Service) relevant to this species. The Department is aware that Enbridge Pipelines, LLC has entered into formal consultation with the Service regarding potential impacts to the Indiana bat from pipeline construction activities. Enbridge shall be responsible for implementing any and all Conservation Measures developed by the Service which appear in a Service approved (official) Biological Assessment and/or Biological Opinion.

The Department recognizes that this (Indiana bat) consultation effort may take many months. As a courtesy to Enbridge, the Department has issued this ITA specific to the Yellow-headed blackbird, King rail, and Illinois chorus frog. The Department retains the right to rescind this ITA and require additional minimization/mitigation measures specific to the Indiana bat based upon the outcome of official consultation with the Service. This ITA does not absolve Enbridge from any Indiana bat minimization/mitigation measures imposed by the Service.

7. Please note that the conditions of this agreement do not apply to any lands protected under the Illinois Natural Areas Preservation Act (525 ILCS 30/) (INAPA). Any adverse impacts to said protected lands and the species therein is considered a violation of the INAPA and grounds for referral to the Office of the Attorney General or State's Attorney.

8. The effective period of this authorization may be altered by mutual agreement between Enbridge Pipelines, LLC and the Department.

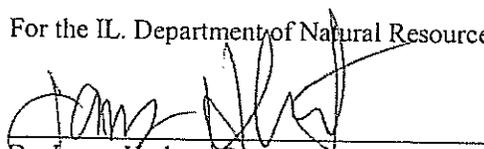
9. This authorization may be revoked pursuant to Section 5.5 of the Act if the Department finds that Enbridge Pipelines, LLC has failed to comply with any of these terms and conditions or has been responsible for the take of any State Listed Species beyond that which is incidental to the construction of the Flanagan South Pipeline Project across central and southwestern Illinois.

10. The Enbridge Pipelines, LLC official(s) identified below is/are authorized to execute this agreement. Execution by an official from any one of these organizations indicates acceptance of all terms and conditions described in this document.

Authorization for Incidental Take and Implementing Agreement

Pursuant to the Illinois Endangered Species Protection Act (520 ILCS 10/5.5) [on behalf of Enbridge Pipelines, LLC (EB), who retained URS Corporation (URS) to prepare a Conservation Plan in application to the Illinois Department of Natural Resources (IDNR) for an Incidental Take Authorization (ITA) for the incidental take of the State listed Species: Yellow-headed blackbird [*Xanthocephalus xanthocephalus*], King rail [*Rallus elegans*], and the Illinois chorus frog [*Pseudacris streckeri illinoensis*)] across central and southwestern Illinois - associated with the Flanagan South Pipeline Project; as described/shown in the conservation plan received by the Department on 14 December 2012] is hereby granted, subject to the terms and conditions described in the attached Authorization and Implementing Agreement. The Illinois Department of Natural Resources has determined that this authorized take is incidental to the construction of the Flanagan South Pipeline Project across central and southwestern Illinois.

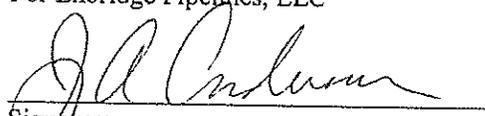
For the IL. Department of Natural Resources



Dr. James Herkert, Director
IDNR Office of Resource Conservation

7-29-13
Date Signed

For Enbridge Pipelines, LLC



Signature

Jennid A. Anderson, Sr. Project Director
Please print name and official title

June 20, 2013
Date Signed

