

**Illinois Environmental Protection Agency
Bureau of Water, Permit Section
(IEPA)**

1021 North Grand Avenue East, Post Office Box 19276, Springfield, Illinois 62794-9276, 217/782-3362

The IEPA has issued a Public Notice of a request for a Clean Water Act Section 401 water quality certification that would allow the issuance of a federal permit for the discharge of pollutants to waters of the State.

Public Notice Beginning Date:

Monday, August 14, 2023

Public Notice Ending Date:

Monday, September 4, 2023

Agency Log No.: C-0089-23

Federal Permit Information: Federal permit/license no. 2022-1530 is under the jurisdiction of Rock Island District, Regulatory Branch U.S. Army Corps of Engineers

Name and Address of Discharger: CCPS Transportation, LLC, Scott Weyandt - 119 N 25th St. E, Superior, WI 54880

Discharge Location: In Section 30 of Township 2-North and Range 3-West of the West 4th & East 3rd Principal Meridian in Schuyler County. Additional project location information includes the following: Line 55, Milepost (MP) 129.57, Span 3573 is located in Township 2N, Range 3W, Sections 29 and 30, Camden, IL 62319

Name of Receiving Water: Missouri Creek and Unnamed Tributary to Missouri Creek

Project Name/Description: Line 55 Milepost 129.57 and 135.06 Remediation Project - Proposed remediation of stream bank and bed erosion that may affect the integrity of the "Line 55" pipeline at two stream crossing locations.

Construction Schedule: Beginning Dec 2023 and ending Jun 2024

The Public Notice period will begin and end on the dates indicated in the heading of this Public Notice. Interested persons are invited to submit written comments on the project to the IEPA at the above address. Commenters must provide their name and address along with comments on the certification request. The IEPA Log number must appear on each comment page. Commenters may include a request for public hearing. Only hearing requests and comments that pertain to Clean Water Act Section 401 authority will be considered. This authority provides consideration of whether the permit or license would be consistent with Sections 301, 302, 303, 306, or 307 of the CWA, as well as "any other appropriate requirement of State [or tribal] law". Requests for additional comment period must provide a demonstration of need. The final day of comment acceptance will be on the Public Notice Ending date shown above, unless the IEPA grants an extended notice period. The attached Fact Sheet provides a detailed description of the project and the findings of the IEPA's antidegradation assessment.

If written comments or requests indicate a significant degree of public interest in the certification application, the IEPA may, at its discretion, hold a public hearing. Public notice will be given 30 days before any public hearing. If a Section 401 water quality certification is issued, response to relevant comments will be provided at the time of the certification. For further information, please see the contact information below.

Name: Darren Gove

Email: Darren.Gove@illinois.gov

Phone: 217/782-3362

Post Document. No. C-0089-23-08142023-PublicNoticeAndFactSheet.pdf

CCPS Transportation, LLC. (“Applicant”) has applied for a 401 Water Quality Certification for impacts associated with remediation to increase depth of cover over an exposed pipeline at Mileposts 129.57 (MP 129) and 135.06 (MP 135). The project will involve hard armoring, reshaping/channelization, stream bank stabilization, and tree clearing in order to improve depth of cover to the two exposed pipeline segments. The proposed project sites are located in Township 2N, Range 3 W, Sections 29 and 30, 2 miles southwest of Camden in Schuyler County (MP 129), and Township 1N, Range 4W, Section 5, 6.5 miles northeast of Clayton in Brown County, Illinois (MP 135).

MP 129

The project will involve clearing 0.26 acres (Ac) of trees and expanding a 1000-ft long access route by 0.46 AC to 40 feet wide to accommodate two-way traffic to the area. A second access route, measuring 2,826 feet in length and a maximum of 40 feet in width (2.59 Ac) will be located 0.25 miles to the west of the first access road. This road will connect the public road Vaughn Lane, to the construction site. A temporary gravel apron at the entry point of each access road will be installed and removed upon project completion. Temporary workspace for conducting the repair and staging will encompass both sides of the drainage utilizing an irregularly shaped temporary workspace measuring 4.73 Ac that includes the permanent right-of-way for Lines 55 and 59. The project area totals 9.32 Ac, including the excavation area, temporary workspace, staging areas, and access routes. Additional temporary impacts include timber matting across wetlands, and sand or pea gravel bag dams.

Construction will involve excavating/removing approximately 2,600 cubic yards (CY) of material within and around the stream channel and regrading both stream banks, shifting approximately 141 feet of the stream centerline a maximum of 37 feet to the northeast. The new stream channel will be stabilized with 190 CY of stone for the stream bottom, 17,460 square feet (SF) of Flex MSE channel stabilization, 342 CY of riprap, and 6 CY of pea gravel. In addition, approximately 2,000 CY of backfill will be used to backfill the old channel, regrade banks, and serve as topsoil for erosion control. For the exposed pipeline, 4,380 SF of Contech ArmorFlex mats will be installed to cover the pipeline. Within the new channel, a 95-foot-long boulder vane (approximately 200 CY) will be installed across the stream to create a pool and scour system downstream of the pipeline crossing.

The project will result in approximately 0.07 Ac of temporary impacts to wetlands, and 0.37 Ac of permanent impacts within Missouri Creek, with approximately 1439.6 CY of discharge to 354 linear feet (LF). Additionally, the proposed project will result in approximately 1.18 Ac of temporary impacts to three palustrine emergent (PEM) wetlands along the access roads. The discharge material consists of common fill, riprap, pea gravel, ArmorFlex matting, erosion control blanket, and geotextile fabric.

The 1.25 Ac of temporary impacts to the wetlands will consist of placing construction matting which will be removed once the project is complete. No additional mitigation is proposed for the wetland impacts. The applicant will purchase 348.4 stream credits from the Sangamon River Wetland and Stream Mitigation Bank based on the debits (174.2) not offset by the project credits for the stream impacts.

MP 135

The project will involve clearing 1.05 Ac of trees and installing temporary gravel aprons at two entry points. The aprons, which will be removed upon project completion, will utilize the Line 55 ROW, and a

field road southeast of the Line 55 ROW measuring 385 feet in length and a maximum of 20 feet in width (0.18 acres). Temporary workspace for conducting the repair and staging will encompass both sides of the drainage, utilizing an irregularly shaped temporary workspace measuring 4.25 acres that includes the permanent ROW for Lines 55 and 59. The Project area totals 4.45 acres, including the excavation area, temporary workspace, staging areas, and access route. Additional temporary impacts include timber matting across wetlands, and sand or pea gravel bag dams.

Construction will involve excavating/removing approximately 1238 CY of material within and around the stream channel and regrading both stream banks, shifting approximately 188 feet of the stream centerline a maximum of 68 feet to the northeast. The new stream channel will be stabilized with 2289 CY engineered fill, 709 CY of riprap, and 110 CY of pea gravel and 2756 SF of concrete articulated mat will be installed over the pipeline crossing in the new channel.

A second channel on the right descending bank will be regraded to create a gentle swale and extended an additional 64 LF to discharge to the new channel. Approximately 7.5 CY of engineered fill and 2.6 CY of riprap will be used to reshape the channel and armor the new channel mouth.

A third side channel on the left descending bank will be regraded to a 1:3 (V:H) slope and the channel realigned to modify the overland flow entering the main channel, shifting approximately 125 feet of the stream centerline a maximum of 10 feet to the east. Approximately 9.4 CY of engineered fill and 4.2 CY of riprap will be used to reshape the channel and armor the new channel mouth.

The project will result in approximately 0.018 Ac of temporary impacts to wetlands, and 0.163 Ac of temporary impacts within 3 channels of an unnamed tributary to Missouri Creek. Permanent impacts will occur in 0.115 Ac of stream and 0.07 Ac of wetland. The wetland will be impacted with 273.276 CY of fill and stream fill will total approximately 699 CY to discharge to 551 LF. The discharge material consists of common fill, riprap, pea gravel, erosion control blankets, and geotextile fabric.

The 0.07 Ac of permanent impacts to the wetland will occur adjacent to the main channel. Given the size of this wetland and the mitigation measures proposed for impacts to the main channel and tributaries, no additional mitigation is proposed for the wetland impacts. The applicant will purchase 1203 stream credits from the Sangamon River Wetland and Stream Mitigation Bank based on the debits (601.5) not offset by the project credits for the stream impacts.

Information used in this review was obtained from the application documents dated February 2023, July 18, 2023, June 16, 2023, June 25, 2023, and July 20, 2023.

Identification and Characterization of the Affected Water Body.

MP 129

Missouri Creek (s19) has 0 cfs of flow during critical 7Q10 low-flow conditions. Missouri Creek is classified as General Use Water. Missouri Creek is not listed as a biologically significant stream in the 2008 Illinois Department of Natural Resources Publication *Integrating Multiple Taxa in a Biological Stream Rating System*, however, approximately 5 miles downstream, it is given an integrity rating of “D”, and 0.4 miles upstream, it is given an integrity rating of “C” in that document. Missouri Creek, Waterbody Segment IL_DGD-01, is not listed on the 2020/2022 Illinois Integrated Water Quality Report and Section 303(d) List as impaired as it has not been assessed. Aesthetic quality and aquatic life uses are fully supported. Missouri Creek is not subject to enhanced dissolved oxygen standards.

Of the 4 streams identified in the May 11, 2022 survey, only Missouri Creek (Stream s19) is proposed to be impacted by the project. Missouri Creek is a perennial waterway with a sand substrate. The OHWM was observed to be approximately 70 feet wide and approximately 3 feet deep. The stream was flowing at the time of the survey.

MP 135

The unnamed tributary to Missouri Creek (s02) has 0 cfs of flow during critical 7Q10 low-flow conditions. The unnamed tributary to Missouri Creek is classified as General Use Water. The unnamed tributary to Missouri Creek is not listed as a biologically significant stream in the 2008 Illinois Department of Natural Resources Publication *Integrating Multiple Taxa in a Biological Stream Rating System*, nor is it given an integrity rating in that document. The unnamed tributary to Missouri Creek, tributary to Waterbody Segment IL_DGD-01, is not listed on the 2020/2022 Illinois Integrated Water Quality Report and Section 303(d) List as it has not been assessed. This segment of the unnamed tributary to Missouri Creek is not subject to enhanced dissolved oxygen standards.

Stream s02 is an intermittent waterway with a substrate of bedrock. The OHWM was observed to be approximately 2.5 feet wide with a depth of approximately 3 inches. The stream was not flowing at the time of observation, but standing water was observed. The stream is located within the workspace adjacent to the ROW.

The unnamed tributary to Missouri Creek (s03)) has 0 cfs of flow during critical 7Q10 low-flow conditions. The unnamed tributary to Missouri Creek is classified as General Use Water. The unnamed tributary to Missouri Creek is not listed as a biologically significant stream in the 2008 Illinois Department of Natural Resources Publication *Integrating Multiple Taxa in a Biological Stream Rating System*, nor is it given an integrity rating in that document. The unnamed tributary to Missouri Creek, tributary to Waterbody Segment IL_DGD-01, is not listed on the 2020/2022 Illinois Integrated Water Quality Report and Section 303(d) List as it has not been assessed. This segment of the unnamed tributary to Missouri Creek is not subject to enhanced dissolved oxygen standards.

Stream s03 is a perennial waterway with a substrate of silt, clay, mud, and bedrock. The OHWM was observed to be approximately 30 feet wide with a depth of approximately 5 feet. The stream was flowing at the time of observation. The stream is located within the ROW and is crossed by the pipeline.

The unnamed tributary to Missouri Creek (s04) has 0 cfs of flow during critical 7Q10 low-flow conditions. The unnamed tributary to Missouri Creek is classified as General Use Water. The unnamed tributary to Missouri Creek is not listed as a biologically significant stream in the 2008 Illinois Department of Natural Resources Publication *Integrating Multiple Taxa in a Biological Stream Rating System*, nor is it given an integrity rating in that document. The unnamed tributary to Missouri Creek, tributary to Waterbody Segment IL_DGD-01, is not listed on the 2020/2022 Illinois Integrated Water Quality Report and Section 303(d) List as it has not been assessed. This segment of the unnamed tributary to Missouri Creek is not subject to enhanced dissolved oxygen standards.

Stream s04 is an ephemeral waterway with a substrate of silt, clay, and mud. The OHWM was observed to be approximately one foot wide with a depth of approximately one foot. The stream was not flowing at the time of observation, but a moist bed was observed. The stream is located within the workspace and is crossed by the pipeline.

Impacted wetlands in project area are outlined in the table below :

Milepost	Wetland ID	Cowardin Classification	Area Impacted (Ac)	Impact Type (Temp/Perm)
129	w01	PEM	1.01	T
	w05	PEM	0.12	T
	w06	PEM	0.05	T
Total			1.25	
135	w01	PSS	0.018 / 0.07	T / P
Total			0.088	

Note: PEM=palustrine emergent; PSS=palustrine scrub-shrub

MP 129

A wetland delineation was completed by Merjent in June 2022. Field surveys were completed on May 11, 2022 within the 14.8 Ac survey area. Based on the field survey, it was determined that 4 wetlands totaling 0.37 Ac, and 4 streams exist within the survey area. The survey area consists primarily of agricultural hayfields, upland utility ROW, forested hillslopes, four streams and four wetlands. Upland areas within the survey area are comprised of agricultural hayfields, utility ROW, and scattered forest.

Upland species within the survey area include tall false rye grass (*Schedonorus arundinaceus*), wand panic grass (*Panicum virgatum*), red clover (*Trifolium pratense*), common dandelion (*Taraxacum officinale*), orchard grass (*Dactylis glomerate*), and garden yellow rocket (*Barbarea vulgaris*).

Of the 4 wetlands identified in the May 11, 2022 survey, Wetlands w05 and w06 are the only wetlands proposed to be impacted by the MP 129 project. Wetland w05 is a PEM wetland in a concave low lying depressional area along the access route to the project workspace. The herbaceous stratum is dominated by reed canary grass (*Phalaris arundinacea*). No other strata are present within the wetland sample point. Hydric soil and hydrology indicators were observed. Wetland w06 is a PEM wetland in a concave low lying depressional area along the access route to the project workspace. The herbaceous stratum is dominated by reed canary grass. No other strata are present within the wetland sample point. Hydric soil and hydrology indicators were observed.

Additional field surveys were conducted on June 27, 2023, to add a 2.36 Ac survey area to include an additional access route option in the proposed project. Land use within the survey area consists primarily agricultural row crops, existing farm access roads, and fallow fields. Upland plant communities within the survey area consist primarily of existing farm access road, agricultural row crops, and fallow field communities. Upland woody plant communities are largely absent from the survey area but are located adjacent to the existing access road. The forested community is dominated by white oak (*Quercus alba*), red oak (*Quercus rubra*), black cherry (*Prunus serotina*), eastern red cedar (*Juniperus virginiana*), and common pawpaw (*Asimina triloba*), with a dense understory of Tartarian honeysuckle (*Lonicera tatarica*). The predominant upland vegetation within the survey area is agricultural row crops. The existing access route consisted of gravel and herbaceous vegetation. Fallow field habitat and plant communities are scattered throughout the survey area. They are generally associated with the agricultural field edges and other areas adjacent to existing private gravel drives and public roadways. Dominant species include Kentucky bluegrass (*Poa pratensis*), fox sedge (*Carex vulpinoidea*), and yellow bristle grass (*Setaria pumila*).

Wetland w01 is a palustrine emergent (PEM) wetland located within a valley adjacent to Missouri Creek outside the survey area. The herbaceous stratum is dense and dominated by reed canary grass (*Phalaris arundinacea*) and dark-green bulrush (*Scirpus atrovirens*). Hydric soil and hydrology indicators were observed. The wetland extends outside the survey area to the northeast and southwest.

MP 135

A wetland delineation was completed by Merjent in June 2022. Field surveys were completed on May 10, 2022 within the 5.91 Ac survey area. Based on the field survey, it was determined that 1 wetland totaling 0.07 Ac, and 3 streams exist within the survey area. The survey area consists primarily of agricultural hayfields, upland utility ROW, forested valleys, three streams and one wetland.

A majority of the upland areas within the survey area are in agricultural hayfield on either side of the waterway/wetland complex. The herbaceous stratum is mostly established with Kentucky bluegrass (*Poa pratensis*), orchard grass (*Dactylis glomerata*), bedstraw species (*Galium* sp.), Pennsylvania sedge (*Carex pennsylvanica*), and white goosefoot (*Chenopodium album*) throughout the site. The forested areas in the project were dominated by white ash (*Fraxinus americana*), hackberry (*Celtis occidentalis*), silver maple (*Acer saccharinum*), river grape (*Vitis riparia*), box elder (*Acer negundo*) on the western side of the stream. The eastern bank was dominated by slippery elm (*Ulmus rubra*), ironwood (*Ostrya virginiana*), hackberry, Osage orange (*Maclura pomifera*), locust species (*Robinia* species), with a think understory of buckbrush (*Ceanothis cuneatus*), and multiflora rose (*Rosa multiflora*).

The wetland identified in the May 11, 2022 survey, Wetland w01, is proposed to be impacted by the MP 135 project. Wetland w01 is a Palustrine scrub-shrub (PSS) wetland abutting an unnamed tributary to Missouri Creek (s03) located within the workspace of the project in the utility ROW. The sapling/shrub stratum is dominated by sandbar willow (*Salix interior*). No other strata are present within the wetland sample point. Hydric soil and hydrology indicators were observed.

Identification of Proposed Pollutant Load Increases or Potential Impacts on Uses.

Fill discharged as a result of the project is outlined in the table below:

Type of Fill	Stream Fill (CY) MP129 / MP135	Wetland Fill (CY) MP135 only
Contech Armorflex 40 Mats (4" Thick)	27.0 / 6.1	0.3
Flex MSE Stabilization	25.6 / 3.9	2.3
RR-7 Armoring	251.9 / 143.6	59.1
CA-6 Backfill	1134.8 / 544.9	211.6
Total:	1439.6 / 699	273.3

There should be no loading increases above current levels for existing land use. There are a number of specific construction activities that could cause or contribute to increased suspended solid loading to impacted waterbodies. Construction of the project via the flume, or dam-and-pump crossing method, could result in impacts on waterbodies by causing disturbance in stream channels and adjacent slopes and banks. Clearing and grading of stream banks, equipment crossing, in stream trenching, trench dewatering, and backfilling could all result in temporary, local modifications of habitat. The clearing of the construction right-of-way (ROW) adjacent to and within a wetland, and grading in adjacent upland areas, can cause erosion of soil and the deposition of sediment into the wetland. Compaction of soil by construction equipment can affect runoff and may contribute to more erosion and sedimentation.

However, these impacts are short-term and once the Project is completed, suspended solid levels should return to preconstruction conditions.

Fate and Effect of Parameters Proposed for Increased Loading.

The increase in suspended solids from proposed activities would be short-term and temporary. The proposed measures to minimize the potential effect to the receiving waters include minimizing ground disturbing activities, staging materials away from wetlands and waterbodies, and implementing Enbridge's Environmental Protection Plan (EPP), the Construction Typical Drawings, and the SWPPP. Controls and best management practices (BMPs) will be inspected on a routine basis and maintained to provide the maximum practical benefit to water quality. Due to the location of natural and man-made features in the Project Area, complete wetland avoidance is not feasible, however most impacts will be temporary. The only permanent impacts to wetlands anticipated is one 0.07 palustrine scrub-shrub wetland located at the MP 135 site that will be filled as a part of the channel realignment and bank resloping needed to remediate the exposed pipeline. All temporary material discharge will consist of the placement of construction matting for access to the Project sites. Throughout the construction process, Enbridge will follow the EPP, Construction Typical Drawings, and Project SWPPP to avoid or minimize impacts on water quality.

Work within waterbodies will be completed in accordance with the measures described in the construction plans and in accordance with federal, state, and local permits. Crossing specific plans were developed for both Missouri Creek and the unnamed Tributary to Missouri Creek, which are both perennial streams, and are provided in the application documents. The applicant will use the dam and pump, and flume methods for perennial waterbody crossings. Appropriate BMPs will be employed. On the intermittent and ephemeral unnamed streams at the MP 135 site, work will be timed to be completed, as practical, under dry conditions. In order to cross waterbodies, temporary equipment crossings will be used for construction equipment, except for clearing and trenching equipment. Equipment crossings may consist of prefabricated construction mats, or other temporary bridges (prefabricated bridges). At equipment bridge locations, care will be taken to minimize disturbance of the bank and bottom. Typically, equipment crossings are installed during clearing and grading operations, and removed after final clean up and restoration activities.

Sediment barriers (silt fences and/or straw bales) will be placed and maintained at the exposure work sites to minimize the introduction of soil into the waterbody from disturbed upland areas. To minimize the potential for an inadvertent release of fuel, lubricants, or other substances to a waterbody during construction, equipment refueling, overnight parking, and coating activities will not be performed within 100 feet of a waterbody, unless the Environmental Inspector determines there is no reasonable alternative and appropriate steps (including secondary containment structures) are taken to prevent spills and provide for prompt cleanup in the event of a spill. Where construction equipment must be refueled within 100 feet of a waterbody, the applicant will follow the procedures outlined in its Spill Prevention, Control, and Countermeasure Plan (SPCC Plan), as referenced in the EPP. The SPCC Plan specifies measures the applicant will take to train workers on the safe storage and handling of fuels, hazardous materials, and other controlled substances and the remedial actions that must be taken in the event of an unexpected release.

Disturbance of streamside vegetation will also be kept to a minimum during construction to prevent erosion and sedimentation, and all disturbed floodway areas, including the stream banks, shall be restored to their original contours, and seeded or otherwise stabilized upon completion of construction.

MP 129

The boulder vane will divert sediment movements by creating a pool and scour system downstream of the pipeline crossing that would ensure open channel flows, and moderate water flow velocities downstream. If applicable, CCPS will install rock shield material on the exposed pipe to protect the pipeline coating from rocky backfill and inhibit geologic movements from damaging the pipeline prior to reburial. Silt fence will be utilized for temporary sediment and erosion control during construction and erosion control blanket and seeding will be installed over all remaining disturbed bank slopes to reduce potential erosion during restoration.

MP 135

2,756 square feet of concrete articulated mat will be installed over the pipeline crossing in the new channel. If applicable, CCPS will install rock shield material on the exposed pipe to protect the pipeline coating from rocky backfill and inhibit geologic movements from damaging the pipeline prior to reburial. In addition, approximately 173,086 square feet of the project site will be will permanently stabilized with seeding and 24,619 square feet of erosion control blanket. During construction and upon restoration, silt fence will be utilized for temporary sediment and erosion control during construction and erosion control blanket and seeding will be installed over all remaining disturbed bank slopes to reduce potential erosion during restoration.

The applicant proposes to purchase stream credits from the Sangamon River Wetland and Stream Mitigation Bank at a mitigation ratio of 2:1 in order to mitigate for the 775.7 debits not offset by project generated credits. The total stream credits needed would total 1551.4 for both MP sites.

Purpose and Social & Economic Benefits of the Proposed Activity.

The purpose of the project is to protect the exposed sections of pipeline in a manner that maximizes the efficacy and lifespan of the protection measures, mitigate in-channel issues that caused or contributed to the exposure, and minimize adverse impacts to the affected channels, bed and banks, and riparian corridor. The project is critical to the continued safe transport of petroleum product thru the Line 55 Pipeline.

This Project is needed to reduce the risk of exposure and further damage to the pipeline. Exposed sections of pipeline are a safety hazard to the safe operation of the transfer of liquid products. Based on annual inspections completed by Enbridge's Pipeline Integrity staff, the pipeline has been exposed at both locations for a number of years. The creek bed and banks at the exposure sites appear to be experiencing degradation and erosion resulting from high flow events. Continued erosion and bank loss has the potential to increase the span length and adversely affect the integrity of the pipeline. Additionally, physical damage to the exposed pipe segment may occur due to impact from debris carried in high-flow conditions, weathering, corrosion, weakening of the span length from lack of mechanical support, or human intervention.

Assessments of Alternatives for Less Increase in Loading or Minimal Environmental Degradation.

The applicant evaluated alternatives to determine whether or not they meet the project purpose and need, design criteria, and design goals. The following alternatives were analyzed for this project and pertain to both MP 129 and MP 135 unless otherwise noted:

No Action (Alternative 1) – The applicant would not complete any work and operation of the existing pipeline would continue without any maintenance activities at the Project location. Routine inspections have documented continued stream erosion around the pipeline. Given the sandy composition of soils at the exposure, further bank erosion will continue to occur. This alternative fails to protect the exposed section of pipe and fails to mitigate in-channel issues that caused or contributed to the exposure, as well as fails to reduce the risk of exposure and further damage to the pipeline.

This alternative fails to provide mechanical protection for the pipe to prevent further exposure and spanning and fails to stabilize adjacent streambanks to minimize impacts to environmental resources to the greatest extent practical. A no action alternative partially meets the project design goals, but this alternative specifically fails to provide a long-term solution and fails to minimize upstream and downstream impacts, including aggradation or scour, resulting from streambed and channel alteration. Alternative 1 is not considered a reasonable alternative and therefore, was not considered further.

Stream Armoring Only (Alternative 2) – This alternative would involve armoring the stream bank and bed to prevent additional sections of the pipeline from becoming exposed. Additionally, new rock shield wrapping could be installed around the pipe to minimize rock damage. For this to occur, the pipeline must be uncovered into the existing stream banks to install the new rock shield wrap around the pipe. This alternative would leave the portion of the pipeline currently exposed as-is in the stream channel. No changes to the channel section location would be implemented with this alternative. Disturbed upland areas would be stabilized using erosion control blankets and seeding.

This alternative partially meets the project purpose in that it mitigates in-channel issues that caused or contributed to the exposure and minimizes adverse impacts to the stream channel, bed and banks, and riparian corridor but fails to fully protect the exposed section of pipeline. This alternative prevents further exposure and spanning and stabilizes adjacent streambanks to minimize impacts to environmental resources to the greatest extent practical but fails to provide mechanical protection for the pipe. This alternative would have the least impact to the stream channel. However, while no changes to the section or alignment to the channels would be required with this alternative, the exposed pipeline section would still be vulnerable to physical damage from debris strikes, anthropogenic interventions, and corrosion. Since the pipe is still exposed, coating inspection and maintenance work would still be needed therefore failing to provide a long-term solution. Alternative 2 is not considered a reasonable alternative and therefore, was not considered further.

Stream Armoring and Increasing Depth of Cover (Alternative 3) – This alternative would armor the stream bank and bed at the exposure site only, increase depth of cover over the exposed pipeline, and add protective rock shield to the pipe exterior. For this to occur, the pipeline must be uncovered into the existing stream banks to install the rock shield wrap. After the pipeline has been coated properly, bank slopes would be graded back from the existing vertical slopes to a 2:1 (H:V) or flatter slope. Heavy stone armoring would be placed around and on top of the existing exposed pipeline. The stone armoring would be within and extend to the top of the adjacent stream banks, creating an in-stream dam, and resulting in an extreme elevation change to the stream bottom and blockage with the existing channel. A toe trench would be required at the base of the stream bank to prevent failure due to scour. Disturbed stream bank and upland areas could then be stabilized using erosion control blankets and seeding.

This alternative partially meets the project purpose in that it protects the exposed section of pipeline and mitigates in-channel issues that caused or contributed to the exposure but fails to minimize adverse impacts to the stream channel, bed and banks, and riparian corridor. This alternative would reduce risks of exposure and further damage but may be undermined by high-flow events. This alternative would also provide mechanical protection for the pipe to prevent further exposure and spanning and would stabilize adjacent streambanks but may be undermined by high-flow events. Finally, the project design goals

would not be met as this alternative would dam the streams. This alternative would not be the least environmentally damaging practicable alternative (LEDPA), would fail to protect environmental resources, is unlikely a long-term solution, and fails to minimize upstream and downstream impacts. Although this solution is simple, less costly, and efficient in its approach, high intensity and erosive flows could undermine the mounded armoring stone, causing this design to fail by stone being dislodged from the bermed area over the pipe, resulting in re-exposure of the pipeline and possible further pipeline exposure. The H&H Report shows that a 2-year rainfall event will cause the stream flow to exceed the channel limits, making relatively regular rainfall events a likely cause for failure if this option was implemented. Additionally, the armoring stone within the waterway will lead to an in-stream dam situation, causing upstream and surrounding flooding, impede aquatic species passage, and degrade in-stream habitat both up- and downstream of the exposure site. While this alternative does meet the Project Need of supporting and protecting the exposed portion of the pipeline, it does not address the design goal of a long-term solution or the design goal of minimizing environmental impacts. Alternative 3 is found to be not practicable as the in-stream dam formed with this alternative creates a significant upstream flooding issue during base flow conditions and will result in additional erosion issues during storm events. Alternative 3 would also result in stream loss and would affect aquatic species passage, upstream and downstream flows, and would not be the LEDPA. This alternative was not considered further.

Waterway Realignment and Channel Armoring (Alternative 4) – Preferred Alternative – This alternative is a more consistent approach to mitigating the pipeline exposure. Due to erosive velocity and high-volume storm events, erosion has caused stream migration away from the deepest parts of the original pipeline installation. To mitigate for this issue, Alternative 4 would realign the existing channel to a deeper location along the pipeline, restore the existing stream where possible, and stabilize the proposed alignment to prevent future exposures. Articulated concrete mats would be placed on the stream bed, over the pipeline crossing, to provide hard armoring and will be anchored into the stream bed to prevent future shifting or uplift. Bioengineering best management practices would be utilized to reduce potential negative impacts to the environment. This may include increasing the sinuosity of the creek by creating stream bends and installing three boulder vanes to slow stream velocity. Reestablishment of a natural stream bed using native fill material would promote stream habitat and function, and the banks would be graded to promote floodplain expansion while also providing adequate long-term stabilization using bioengineering techniques such as vegetated geogrids.

This alternative would protect the exposed section of pipe, mitigate in-channel issues, and would minimize overall impacts to the stream, reduce the risk of exposure and further damage to the pipeline, and provide mechanical protection for the pipe to prevent further exposure, spanning, and to stabilize adjacent streambanks to minimize impacts to environmental resources to the greatest extent practical. All of the design goals would be achieved, and environmental impacts would be minimized through execution of the proposed project.

Alternative 4 is the most practicable of the solutions considered as it moves the stream channel to the west, over the top of the deepest portion of the Line 55 pipeline crossing. This alternative meets the project need by providing adequate cover over the pipeline and meets the project purpose by providing a long-term solution. The required design criteria can be met using this alternative for both the pipeline and the stream channel. In addition, the design goals are met with only a minor increase of the stream channel's overall length due to the realignment, while providing for long term stabilization of the channel. As detailed in the H&H Report, modeling of streamflow shows velocity decreases with the proposed designs and grading, flattening of stream gradient and bank slopes, vegetative cover and bioengineering even with a small portion of concrete matting used over the existing pipeline.

Open Cut/Line Replacement (Alternative 5) – This alternative involves installation of a new pipe segment by way of open cut trenching across the stream channel parallel or inline to the existing pipeline. The

stream would be open cut using a sandbag dam and pump around method. Pipeline buoyancy control using concrete anchors would be installed on the new pipeline beneath the creek bed. The new pipe would tie into the existing pipeline on either side utilizing side, sag, and over bends. The existing exposure would then be removed within the stream banks both upstream and downstream of the exposure location. The streambank and stream bed at the crossing location would be stabilized using heavy riprap armoring.

This alternative partially meets the project purpose in that it protects the exposed section of pipeline and mitigates in-channel issues but fails to minimize impacts to the stream. This alternative would reduce risks of exposure and further damage to the pipeline. This alternative would also provide mechanical protection for the pipe to prevent further exposure and spanning but does not stabilize the adjacent streambanks outside of the immediate crossing location. Finally, the project design goals would be partially met as this alternative would fail to minimize upstream and downstream impacts, including aggradation or scour, resulting from stream bed and channel alteration. This overall design goal is not met as it fails to provide a practicable alternative. This alternative could only be accomplished when the pipeline is shut down and the oil pumped out. This alternative does not provide any overall stream stabilization; therefore, there is a risk that the stream could continue to erode, move laterally, and undermine any armoring placed over the trench backfill. A long-term stream bank stabilization, through bed and bank grading and armoring stabilization like Alternative 3 would be required to ensure that the new installation does not become exposed in the future. As the channel has been shown to be subject to heavy erosion and channel migration, the line lowering and vertical bend tie-ins should occur as far back from the stream banks as is practical to ensure the turn-down sections do not become exposed in the future, as is the current condition. Although direct impacts to the waterway or channel may be avoided for the installation, they cannot be for existing pipeline removal. The exposed portion of the pipeline must be cut, capped, and removed. While construction costs are not a primary consideration in the alternative analysis reviews, the open cut replacement line lowering option does present a highly significant additional cost versus the other alternatives reviewed. Based on previous projects, Enbridge estimates that this alternative would cost more than \$10,000,000. This alternative was not considered further.

Auger Bore/Line Replacement (Alternative 6) - Alternative 6 would install a new pipe segment by way of auger bore beneath the stream bed parallel to the existing pipeline. The new pipe would tie into the existing pipeline on either side of the stream channel utilizing side, sag, and over bends. A larger construction workspace will be required to accommodate the equipment, staging area, pipeline stringing, etc. The existing exposure would then be removed within the stream banks both upstream and downstream of the exposure location. The streambank and stream bed at the crossing location would be stabilized using heavy riprap armoring. Upstream and downstream of the crossing, the streambanks and streambed would be left in their current condition.

This alternative partially meets the project purpose in that it protects the exposed section of pipeline and mitigates in-channel issues but fails to minimize impacts to the stream. This alternative would reduce risks of exposure and further damage to the pipeline. This alternative would also provide mechanical protection for the pipe to prevent further exposure and spanning but does not stabilize the adjacent streambanks outside of the immediate crossing location. Finally, the project design goals would be partially met as this alternative would fail to minimize upstream and downstream impacts, including aggradation or scour, resulting from stream bed and channel alteration. This overall design goal is not met as it fails to provide a practicable alternative. This alternative could only be accomplished when the pipeline is shut down and the oil pumped out. This alternative does not provide any overall stream stabilization; therefore, there is a risk that the stream could continue to erode and move laterally. Although direct impacts to the waterway or channel may be avoided for the installation, they cannot be for existing pipeline removal. The exposed portion of the pipeline must be cut, capped, and removed. environmental impacts will likely be increased to accommodate the larger construction workspace; however at MP 129, there may be insufficient available workspace on the east side of the creek as it

would be constricted by additional wetlands/waterbodies. A long-term stream bank stabilization, through bed and bank grading and armoring stabilization would be required to ensure that the new installation does not become exposed in the future. As the channel has been shown to be subject to heavy erosion and channel migration, the line lowering and vertical bend tie-ins should occur as far back from the stream banks as is practical to ensure the turn-down sections do not become exposed in the future, as is the current condition. While construction costs are not a primary consideration in the alternative analysis reviews, the auger bore line replacement option does present a highly significant additional cost versus the other alternatives reviewed. Based on previous projects, the applicant estimates that this alternative would cost more than \$10,000,000. This alternative was not considered further.

HDD (Alternative 7) - Alternative 7 would install a long segment of new pipeline using the HDD method beneath the stream bed parallel to the existing pipeline. The new pipe would tie-in to the existing pipeline on either side of the stream channel utilizing side, sag, and over bends. A larger construction workspace will be required to accommodate the equipment, staging area, pipeline stringing, etc. The existing exposure would then be removed within the stream banks both upstream and downstream of the exposure location. The streambank and stream bed at the crossing location would be stabilized using heavy riprap armoring. Upstream and downstream of the crossing, the streambanks and streambed would be left in their current condition.

This alternative partially meets the project purpose in that it protects the exposed section of pipeline and mitigates in-channel issues but fails to minimize impacts to the stream. This alternative would reduce risks of exposure and further damage to the pipeline. This alternative would also provide mechanical protection for the pipe to prevent further exposure and spanning but does not stabilize the adjacent streambanks outside of the immediate crossing location. Finally, the project design goals would be partially met as this alternative would fail to minimize upstream and downstream impacts, including aggradation or scour, resulting from stream bed and channel alteration. This overall design goal is not met as it fails to provide a practicable alternative. Although direct impacts to the waterway or channel may be avoided for the installation, they cannot be for existing pipeline removal. The exposed portion of the pipeline must be cut, capped, and removed. If no channel bank stabilization or regrading is required as a result of the HDD and no fill is proposed below the OHWM, extensive permitting may be avoided. Installation operations required for an HDD operation with a 24-inch pipeline would require significant workspace, potentially creating additional environmental impacts due to land disturbance, tree clearing, truck access routes, and an extended construction schedule. Although this option would meet the project purpose and need, in depth engineering would be required, limits of work would be greatly expanded to obtain adequate bend dimensions, a chance for an inadvertent release of drilling fluid would arise, and project costs would rise substantially. Based on previous projects, the applicant estimates that this alternative would cost more than \$15,000,000. This alternative was not considered further.

Summary Comments of the Illinois Department of Natural Resources, Regional Planning Commissions, Zoning Boards or Other Entities.

An EcoCAT endangered species consultation was submitted on June 25, 2023 (Project #2317417) to the Illinois Department of Natural Resources for MP 129. The Illinois Natural Heritage Database contains no record of State-listed threatened or endangered species, Illinois Natural Area Inventory sites, dedicated Illinois Nature Preserves, or registered Land and Water Reserves in the vicinity of the project location and as such, an automatic consultation termination was generated.

An EcoCAT endangered species consultations was submitted on June 25, 2023 (Project #2317418) to the Illinois Department of Natural Resources for MP 135. The Illinois Natural Heritage Database shows the following protected resources may be in the vicinity of the project locations: Indiana Bat (*Myotis sodalis*). On July 18, 2023, the Department issued a consultation termination. However, the assessment is based

upon winter seasonality of the tree and brush clearing. The Department recommended the project proponent adhere to the November 1st – March 31st time period for tree removal to ensure there are no impacts to the Indiana bat.

A USFWS Section 7 Consultation was initiated on June 25, 2023, for an official list of species that may be present within the project area. There is no critical habitat present within the project area. According to the USFWS, the following species are known or expected to be within or near the Project area:

Indiana Bat (*Myotis sodalis*)

Indiana bats are found over most of the eastern half of the United States. Indiana bats hibernate during winter in caves or, occasionally, in abandoned mines. For hibernation, they require cool, humid caves with stable temperatures, under 50 degrees Fahrenheit (F) but above freezing. Very few caves within the range of the species have these conditions. After hibernation, Indiana bats migrate to their summer habitat in wooded areas where they usually roost under loose tree bark on dead or dying trees.

The Project will result in approximately 1.31 acres of tree and brush clearing, which is proposed to occur in Winter of 2023/2024. Merjent on behalf of Enbridge conducted a habitat assessment for potential summer roosting habitat within the Project area in May of 2022. One potentially suitable roost tree was found within the survey area, a 28-inch diameter at breast height (dbh) oak tree standing approximately 70 feet high and exhibiting exfoliating bark and crevices. Enbridge will conduct the proposed tree clearing activities during the inactive season (i.e., between November 1 and March 31) to avoid adverse impacts to federally listed bat species; therefore, we believe the project activities are not likely to adversely affect the endangered Indiana bat.

Northern Long Eared Bat (*Myotis septentrionalis*)

The northern long-eared bat ranges across much of the eastern United States. During summer, northern long-eared bats roost singly or in colonies underneath bark, in cavities, or in crevices of both live and dead trees. Males and non-reproductive females may also roost in cooler places, such as caves and mines. This bat seems opportunistic in selecting roosts, using tree species based on suitability to retain bark or provide cavities or crevices. It has also been found, rarely, roosting in structures like barns and sheds. Northern long-eared bats spend winter hibernating in caves and mines.

On April 1, 2015, the USFWS listed the northern long-eared bat as threatened under the ESA and simultaneously published an interim 4(d) rule; the final listing and interim 4(d) rule took effect as of May 4, 2015. On January 14, 2016, the USFWS published the final 4(d) rule identifying prohibitions that focus on protecting the bat's sensitive life stages in areas affected by white-nose syndrome. On March 22, 2022, the FWS announced a proposal to reclassify the northern long-eared bat as endangered under the ESA. The FWS issued a final rule reclassifying the northern long-eared bat from threatened to endangered on November 30, 2022, with an effective date of March 31, 2023. All take occurring on or after March 31, 2023, is now prohibited under the Endangered Species Act (ESA). As discussed above for the Indiana bat, the Project will result in approximately 1.31 acres of tree and brush clearing, which is proposed to occur in Winter of 2023/2024. Merjent on behalf of Enbridge conducted a habitat assessment for potential summer roosting habitat within the Project area in May of 2022. One potentially suitable roost tree was found within the survey area, a 28-inch diameter at breast height (dbh) oak tree standing approximately 70 feet high and exhibiting exfoliating bark and crevices. Enbridge will conduct the proposed tree clearing activities during the inactive season (i.e., between November 1 and March 31) to avoid adverse impacts to federally listed bat species; therefore, we believe the project activities are not likely to adversely affect the northern long-eared bat.

Eastern Prairie Fringed Orchid (*Platanthera leucophaea*)

The eastern prairie fringed orchid occurs in a wide variety of habitats, from mesic prairie to wetlands such as sedge meadows, marsh edges, even bogs. It requires full sun for optimum growth and flowering and a grassy habitat with little or no woody encroachment. The Project area does not support wet to mesic prairie and is lacking sedge meadow and marsh type-wetland habitat. The majority of the project areas consist of agricultural hayfields and utility ROW, with a small, forested area present along the waterway. In addition, one wetland (ID w01) was dominated by sandbar willow (*Salix nigra*), which is not indicative of a high-quality wetland. This wetland also lacks the quality and species diversity typically found in suitable habitat for the eastern prairie fringed orchid and has been previously disturbed. Therefore, suitable habitat for the eastern prairie fringed orchid is not present in the Project area; as such, we believe the Project will have no effect on the eastern prairie fringed orchid.

Decurrent False Aster (*Boltonia decurrens*)

Decurrent false aster prefers moist, sandy floodplains and prairie wetlands along the Illinois River. This species relies on periodic flooding to scour away other plants that compete for the same habitat. The proposed Project is not located within the floodplain of the Illinois River. In addition, correspondence with the Illinois - Iowa Field Office of the USFWS confirmed this species is found directly associated with the Illinois River and noted there are no records of the species occurring in tributaries located such a distance (i.e., 19 miles) from the Illinois River floodplain. Therefore, we believe the Project will have no effect on the decurrent false aster.

Tricolored Bat (*Perimyotis subflavus*)

On September 14, 2022, the U.S. Fish and Wildlife Service (USFWS), under the U.S. Department of the Interior (DOI), published a proposed rule to the Federal Register proposing to list the tricolored bat as an endangered species under the Endangered Species Act (ESA). The USFWS is proposing the species for listing due to substantial declines in tricolored bat abundance across its range. The main threats to the species are the impacts of white nose syndrome (WNS), wind energy- related mortality, the effects of climate change, and habitat loss and disturbance. WNS has caused estimated tricolored bat population declines of 90-100% across 59% of its range, and nearly one third of the species' known hibernacula have been extirpated. Under current conditions (i.e., no increase in threats to the species), the USFWS believes by 2030, range-wide abundance would decline by 89% and the number of known winter colonies would decline by 91%.

Overall, the species requires similar habitat to other listed bat species - they utilize both live trees and snags in deciduous hardwood forested areas. In spring, summer, and fall, the species may be found roosting among leaf clusters of live or recently dead deciduous hardwood trees. The species will also roost in Spanish moss and "bony beard" lichen (*Usnea trichodea*) in the southern and northern portions of the range, respectively. In winter, tricolored bats utilize caves and mines for hibernation; however, in the southern portions of its range where caves are not as abundant, the species will often hibernate in "road-associated" culverts.

As noted above, the tricolored bat is proposed to be listed as endangered, with a final listing decision expected by fall of 2023. Proposed species do not receive federal protection through the Endangered Species Act; however, should this species become listed prior to or during construction, Enbridge will conduct tree clearing during the inactive season (November 1 - March 31). Based on this commitment, we believe the Project will not jeopardize the continued existence of the tricolored bat.

Monarch Butterfly (*Danaus plexippus*)

On December 17, 2020, the USFWS published the result of their 12-month review of the monarch butterfly and determined that listing the species under the ESA was warranted but precluded. The species meets the criteria for listing as an endangered or threatened species, but the USFWS cannot currently

implement the listing due to limited staff and/or funding and because there are other listing actions with a higher priority. The species is now a candidate for listing; however, candidate species are not protected under the ESA.

Adult monarch butterflies feed on nectar from a wide variety of flowers. Reproduction is dependent on the presence of milkweed, the sole food source for larvae. It is possible that the Project will have minor, temporary impacts to native vegetation serving as a food source to monarch butterflies; however, no long-term significant impacts to the species are anticipated. Enbridge will revegetate disturbed upland areas using a native seed mix, where appropriate and in consultation with the landowner.

Agency Conclusion.

This preliminary assessment was conducted pursuant to the Illinois Pollution Control Board regulation for Antidegradation found at 35 Ill. Adm. Code 302.105 (antidegradation standard) and was based on the information available to the Agency at the time this assessment was written. We tentatively find that the proposed activity would result in the attainment of water quality standards; that all technically and economically reasonable measures to avoid or minimize the extent of the proposed increase in pollutant loading have been incorporated into the proposed activity; and that this activity would benefit the community by continuing to provide safe transport of petroleum product through the pipeline. Comments received during the 401 Water Quality Certification public notice period will be evaluated before a final decision is made by the Agency.

cc: Springfield Regional Office – Surface Water Manager