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:	**Public Notice Ending Date:**
July 13,2021	August 12, 2021

Agency Log No.:C-0134-21

Federal Permit Information: Federal permit/license no. LRL-2019-0657 is under the jurisdiction of Louisville District, Regulatory Branch U.S. Army Corps of Engineers

Name and Address of Discharger: :Effingham Crossroads Landfill, LLC, Brian Hayes - 1713 S Willow Street, Effingham, IL 62401

Discharge Location: In Section 34 of Township 8-North and Range 6-East of the East 3rd Principal Meridian in Effingham County. Additional project location information includes the following: 15325 E Hwy 33, Teutopolis, IL 62467

Name of Receiving Water: Unnamed tributary to Salt creek

Project Description: Proposed construction of a new landfill and associated facilities

Construction Schedule: Beginning Jan 2024 and ending Dec 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 shall 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 comments that pertain to Clean Water Act Section 401 authority as defined under 40 CFR part 121.3 will be considered. Part 121.3 defines the "scope of a Clean Water Act section 401 certification is limited to assuring that a discharge from a Federally licensed or permitted activity will comply with water quality requirements". Requests for additional comment period must provide a demonstration of need. The last day that comments will be received will be on the Public Notice period ending date 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.

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Post Document. No. To be determined

Antidegradation Assessment Review for a 401 Water Quality Certification for Effingham Crossroads Landfill
IEPA Log No. C-0134-21
Effingham County
Contact: Angie Sutton 217-782-9864

Effingham Crossroads Landfill, LLC., ("Applicant") has applied for a 401 Water Quality Certification for impacts associated with construction of a new landfill. The proposed landfill will be operated by Effingham Crossroads Landfill, LLC., an affiliated company of Landfill 33, Ltd., which has owned and operated the existing Landfill 33 since 1981 on the property adjacent to the proposed landfill. The proposed project location is in Section 34, Township 8 North, Range 6 East, Effingham County, Illinois. Construction includes land disturbance to approximately 78 acres to establish a 37.9 solid waste landfill. Ancillary facilities such as scale house, haul road, two stormwater detention basins, a recycling center, office and other miscellaneous facilities will also be constructed on the 120 acre property located at 15325 East Highway 33 in Teutopolis. The Landfill is being proposed to provide continued and uninterrupted solid waste disposal for Effingham County and the surrounding area following the closure of Landfill 33 that is estimated to occur in 2024. The project will create approximately 3.1 million tons of waste disposal capacity which is estimated to provide for the service areas needs through the end of 2053.

Construction of the Landfill would result in the permanent impacts to 1,035 linear feet (LF) of intermittent stream. The impacted portion of the existing stream will be relocated west of the proposed landfill and straightened. Mitigation will include 1016 LF of intermittent stream restoration, enhancement, and preservation and will result in relocating a downstream channelized portion of the same stream into a constructed channel. The deactivated stream will include a weir just downstream of where the new section (designated Priority 1) departs south from the existing channel. This area will make an open connection with the restored channel. The remaining 19 LF of required mitigation will be provided by 2.9 acres of forested riparian buffer preservation.

Information used in this review was obtained from application materials dated November 22, 2019, March 19, 2020, October 2, 2020.

Identification and Characterization of the Affected Water Body.

Using the Rapid Bioassessment Protocol (RBP), Wetland Services, Inc. identified 15 ephemeral streams, 2 intermittent streams, 4 wetlands, and 1 open water feature within the facility boundary. 1035 LF of intermittent stream will be impacted with the proposed landfill construction. The intermittent stream that will be impacted is identified as an unnamed tributary to Salt Creek.

The unnamed tributary to Salt Creek has 0 cfs of flow during critical 7Q10 low-flow conditions. The unnamed tributary to Salt Creek is classified as General Use Water. The unnamed tributary to Salt 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 Salt Creek, tributary to Waterbody Segment IL_CP-EF-C4, is not listed on the 2018 Illinois Integrated Water Quality Report and Section 303(d) List as it has not been assessed. The unnamed tributary to Salt Creek is not subject to enhanced dissolved oxygen standards.

Wetland Services, Inc., conducted in-stream bio-assessments and performed sampling on unnamed tributaries within the project area at three separate sample points (Bio 1, Bio 2, and Bio 3). Bio 1 and Bio 2 are the sample points within the unnamed tributary to Salt Creek.

On November 7, 2019, surface water samples were obtained from 2 locations, one upstream and one downstream. These samples were analyzed for temperature, conductivity, pH, dissolved oxygen, and turbidity. Overall the data shows the water quality at the two sample locations to be similar with minimal to no variability. Water quality for the sites displayed high conductivity and Total Dissolved Solids values, slightly basic pH levels and Dissolved Oxygen readings adequate to support aquatic life.

Biological sampling took place on November 7, 2019. The streams were classified as intermittent and were flowing at the time of assessment. Macroinvertebrate sampling resulted in stream mIBI ratings for Bio 1 at the lowest score of 29.47, a rating of "Fair". At this location, the stream has been channelized. The stream bed was dominated by fine, easily movable substrates with little vegetation or exposed root mat on the stream banks. Bio 2 displayed increased abundance and diversity resulting in an mIBI score of 38.38 (Good). This portion of the stream has a natural stream profile with increased pool variability and increased epifaunal available habitat. Fish sampling resulted in scores of 22 in Bio 1 and 26 in Bio 3, both rankings of "Poor". The streams have intermittent flows and the ability to seasonally support fish communities with deep pools providing refuge areas during dry periods. Bio 2 showed a greater score than Bio 1 due to more optimal habitat conditions. Fish abundance was greater at Bio 2 and supported a healthy population of orangethroat darters. Overall, the streams in the project area were of fair quality and likely support aquatic communities typical of the region's headwater streams.

Physical habitat results are based on the EPA RBP physical habitat assessment for low-gradient streams and is based on 10 parameters and an overall score of 200. The higher score indicates more optimal habitat. The majority of stream habitat parameters scored marginal to sub-optimal due to poor bank stability, low vegetation protection, and increased sediment deposition. Bio 1 was channelized and dominated by easily moveable sand substrates, leading to poor substrate stability and decreased biotic integrity, resulting in an RBP Score of 90. Bio 2 displayed natural stream sinuosity and was dominated by larger coarse substrates such as cobble and gravel and have increased pool variability. Aquatic fauna was more diverse and abundant. The RBP for Bio 2 was 116.

The watershed (Brush Creek-Salt Creek Watershed) has been extensively impacted by logging, agriculture, and development. Development includes industrial, commercial, residential, and transportation. The majority of the soils in the watershed have moderate to high erosion potential and vegetative cover is mostly row crops and pasture or hay.

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

Pollutant load increases from the proposed project would likely include increases in suspended solids during land grading and stream straightening activities. The proposed stream straightening activity would include filling of the stream for construction of the landfill. Soil erosion control and stabilization measures will be put in place during all stream construction and enhancement activities.

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 water include the placement of rock riffles, toe wood structures, seeding and fertilizing, and other erosion control methods including delayed activation of the Priority 1 section and development of Newbury riffles and riparian buffers.

There are 7.36 acres of wetlands within the project area that will be avoided and therefore result in no impacts. There are 4711 LF of intermittent streams in the project area of which impacts to 1744 LF will

be avoided and impacts to 1932 LF will be minimized. This leaves 1035 LF of intermittent stream impacts which require mitigation. The proposed mitigation plan will occur as follows:

- Priority 1 Intermittent Stream Restoration Section - Priority 1 is described as the 787 LF restored (to be constructed) section of stream at the lower end of the mitigation reach. The design parameters are based on optimum reference conditions studied throughout the season and includes a stable section of this restoration channel. Riffle sections will be constructed in order to serve the main function of grade control with design and installation varying with slope. Pools will occur in the curved sections in order to provide energy dissipation. Glides and runs will make the transition between riffles and pools to gradually change the shape of the channel into a deeper triangular pool. Erosion control, seeding and fertilizing, and rock placement on the riffle structures will be implemented as well. Full activation of this section will be delayed in order for stable vegetation development to occur prior to subjecting it to the full force of the watershed. Upon completion of the channel, a weir will be constructed to an elevation that will cause the base flow of the stream to flow down this section. A temporary pipe will be installed on the top of the first riffle and covered to allow the baseflow to enter without the full watershed. This will facilitate deep-rooted vegetation to develop in and along the stream. Full stability is expected late the following spring at which the pipe and plug will be removed, and the final lift of the weir will be completed in order to fully activate the section. This section of the proposed mitigation work provides 787 LF of mitigation at a 1:1 ratio.

- Intermittent Stream Preservation Section– Upstream of Priority 1 is a stable 291 LF section of channel that was historically entrenched until a channel debris blockage formed that raised the invert. Riffle/pool morphology and flood plain access was redeveloped. The blockage serves as Newbury riffle but as the blockage rots, failure is eminent. This section will be preserved and become permanently stable when the invert elevation of the Priority 1 section is set to match the same grade as the blockage. This section of the proposed mitigation work provides 29.1 LF of mitigation at a 0.1:1 ratio.

- Intermittent Stream Enhancement Section – Upstream of the Preservation section is a 121 LF reach that is relative stable but lacks distinct riffle/pool morphology. A bluff exists to the west of the section and there is a single row of trees on the east bank that are rooted into the banks. A riparian buffer will be established on the east side that is currently agricultural land. This section of the proposed mitigation work provides 61 LF of mitigation at a 0.5:1 ratio.

- In-Stream Intermittent Restoration Section – Above the Enhancement section is a 139 LF reach that is unstable. Because this reach has an intact riparian zone, in-stream restoration is the preferred approach. The mature trees that exist in this section warrant preservation and incorporation into the project. Geomorphology is degraded as a result of human impacts that have caused effects such as down-cutting, widening, unstable eroded banks, poor bank vegetation and unstable substrate. This in-stream work will restore stable habitat by implementing Newbury Riffles and Toe Wood Structures. Newbury Riffles are keyed into the bed and banks and raise the channel invert to a higher elevation. This will allow the channel to reach maximum natural channel height and relieve pressure by flooding over the bank. Toe Wood Structures are used to repair unstable banks for the same reasons outlined above. The pool is over dug and the eroded bank is removed to form a box cut. Within the box cut a series of live saplings or cut root wads are placed in a curve and backfilled. The structures provide stability by deflecting angular currents in order to maintain deep scour pool habitat. The roots also provide refuge areas and serve as a stable substrate. Desirable trees will not be impacted, and the riparian buffer will be

widened in this section. This section of the proposed mitigation work provides 139 LF of mitigation at a 1:1 ratio.

A connector riffle will be used to make a stable transition between the relocated channel and the mitigation channel. The impact channel upstream of the instream restoration channel will be relocated to the west side valley and the connector riffle will be installed at the time of relocation. This riffle is not part of the planned mitigation.

The above-listed mitigation types provide a total of 1016 LF of stream mitigation. The remaining 19 LF of mitigation is proposed to be offset by the 2.9 acres of forested buffer preservation. Any disturbed portions of the forested riparian area will be seeded and mulched, and tree planting will occur after the stream and floodplain are stabilized into the first growing season. Riparian buffer will be planted at an average of 100-ft on each side of the intermittent stream mitigation channel. The buffer area will be distributed to utilize the entirety of the offsite location. 3.23 acres of riparian buffer restoration will be provided offsite at a 1:1 mitigation ratio.

Additionally, Best Management Practices (BMPs) will be employed in order to aid in sediment control. The BMPs would include but not be limited to the use of basins, diversion ditches, filter strips, grading and shaping, minimization of surface disturbance, mulching, riprap, rapid re-vegetation, rock check dams, silt fence, straw bale barriers, stream bank stabilization, sumps and working during periods of no flow/low flow or dry weather.

Purpose and Social & Economic Benefits of the Proposed Activity.

The purpose of the project is to provide continued and uninterrupted solid waste services to Effingham County and the surrounding area**.** The project is in anticipation of the closure of the adjacent Landfill 33 in 2024.

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

On behalf of the Applicant, Aptim Environmental & Infrastructure, LLC., has analyzed alternatives that will be able to handle the waste capacity historically handled by Landfill 33. Impacts to Waters of the U.S. have been determined to be unavoidable. Alternatives considered are as follows:

1. Onsite Alternatives: This option involves tying into or expanding the existing Landfill 33. Landfill 33 is bound by Salt Creek to the west and south, and by a railroad track to the north. This makes expansion to the east a logical choice but would involve moving onto a new tract of land. This option was eliminated as Landfill 33 has been designed to adhere to state requirements and specific final grade elevations.

2. Offsite Alternative: Relocation of the proposed landfill would not address the needs of the counties in the service area. This would require transfer stations to deliver larger waste quantities to distant landfills, thus raising waste disposal prices. The two transfer stations in the area do not have the capacity to accommodate the service area without additional disposal capacity and the existing capacity within the service area is insufficient to handle the projected quantity of waste without additional waste disposal capacity. Offsite alternatives were eliminated from consideration due to the clear need for the capacity that would be provided by the proposed project.

3. No Action Alternative: A no action alternative is not a reasonable option as the waste disposal service require a location where its future needs will be sufficiently satisfied. To maintain current and practicable sanitary standards, a suitable landfill must be developed.

4. Proposed action: A new landfill is proposed for development directly adjacent to Landfill 33. Construction includes land disturbance to approximately 78 acres to construct a 37.9 acre waste disposal facility. Ancillary facilities are also proposed to be constructed and include a scale house, haul road, two stormwater detention basins, a recycling center, office and other miscellaneous facilities. This location is in the center of the service area and minimizes the distance that waste must be transported for disposal. The proposed action conserves fuel and enables communities to appropriately address the cost of managing waste. The proposed landfill design demonstrates the facility's ability to accommodate the waste needs of the area that it is intended to serve. The proposed construction will permanently impact 1035 LF of intermittent stream (Western Creek) with fill and grading activities. This impact will be offset with relocating/straightening of the stream, restoration, enhancement and preservation activities. The applicant has considered all impacts to WOUS and were able to develop the project to avoid 1744 LF intermittent stream (Eastern Creek) and 7.36 acres of wetland (Wetland 3) and minimize impacts to 1932 LF of intermittent stream (Western Creek).

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

On March 19, 2020 an IDNR EcoCAT consultation (Project # 2007744) was initiated for the proposed project site. The Illinois Natural Heritage Database reported containing 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. Consultation was terminated on March 19, 2020.

On November 22, 2019, the Illinois Historic Preservation Office (IHPO) reviewed the proposed site and determined that based on the available information, no significant historic, architectural or archaeological resources are located within the proposed project area.

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 will 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 will benefit the community and surrounding areas by providing adequate waste services for an extended period. Comments received during the 401 Water Quality Certification public notice period will be evaluated before a final decision is made by the Agency.