BMP & WETLAND RESTORATION PLAN SUMMARY AND MANAGEMENT & MONITORING PLAN

PROJECT SITE:

Cheney Run Stormwater Treatment Area
Michigan City, Indiana

PREPARED FOR:

Sanitary District of Michigan City
1100 E. 8th Avenue
Michigan City, Indiana 46360

PREPARED BY:

V3 Companies, Ltd.
619 North Pennsylvania Street
Indianapolis, Indiana 46204

MAY 30, 2019
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INTRODUCTION

This BMP & Wetland Restoration Plan Summary and Management & Monitoring Plan (MMP) has been prepared on behalf of Sanitary District of Michigan City for the Cheney Run Stormwater Treatment Area. The purpose of the project is to reduce stormwater related impairments to Trail Creek water quality by constructing stormwater treatment areas within the existing wetlands along Cheney Run and Trail Creek. The existing emergent and forested wetland and floodplain forest will be enhanced through the control of invasive species and establishment of higher quality vegetation. Project features also include a constructed low-flow channel, micro-pools which will provide both additional water quality and habitat benefits. The Planting Plan, Invasive Species Control Plan, and Seed and Plant Mixes are provided in the 70% Engineering Plans.

CONSTRUCTION AND REVEGETATION

This section of the plan details construction and revegetation of the project.

CONSTRUCTION, SOILS AND TOPDRESSING SPECIFICATIONS

Grading and excavation of the proposed site improvements (channel, micro-pools, berm) will be completed in accordance with the engineering plans in order to achieve the goals of the project.

The following specifications will be followed to minimize impacts to the ground surface during the excavation and grading activities to provide a suitable medium for the vegetation establishment.

1. All areas to be planted or seeded with native vegetation will be over-excavated a minimum of 1-foot below final grade to allow for the placement of topdress material, unless a one foot thick topsoil layer is present following excavation to proposed final grade.

2. On-site topsoil can be used for topdress material. If additional topsoil is required from an off-site location, these soils shall contain an organic matter content of 3% or more and a clay content of 27% or less.

3. Wheel-based vehicles (scrapers, end loaders, etc.) shall not be used for topdressing work. Only low ground pressure wide-track equipment (quadtrack tractor, wide track dozer, backhoe, or approved by Engineer) shall haul, move and spread topdress material.

4. Following the 1-foot of topdress placement, the surface shall be thoroughly disked using a small farm type disc (not a large construction disc). Topdress material shall not be handled or the surface disked when wet.

5. No wheeled traffic shall occur in the area after the final diskning is complete, with the exception of a small farm type tractor if used for seeding.

6. All construction activities must be done under dry conditions.
**REVEGETATION**

The proposed micro-pools, channel and berm will be restored with native vegetation after grading. In addition, the existing wetland northwest of the channel and the existing forested floodplain southeast of the channel will be enhanced through additional seeding and installation of native plant plugs.

The proposed native plant and seed mixes for the project are discussed below and are provided in Appendix II.

**Micro-Pool and Channel Plant Mix.** Installation of native plant plugs are proposed around the perimeter of each micro-pool and along both sides of the channel. These plantings are proposed to occur around the 595.0 ground elevation, which is anticipated to have around 3 to 6 inches of inundation throughout much of the growing season. As such, the proposed plant plugs include emergent species typical of these hydrologic conditions. In addition, these species are rhizomatous so they will likely expand into the deeper sections of the pools and channel over time.

The plant plugs in the micro-pools and channel shall be installed 2-foot on center around the perimeter of each pool and on both sides of the channel. One row of plant plugs shall be installed on each side of the channel and along the perimeter of each micro-pool. The plant plugs shall be installed under suitable hydrologic conditions during spring to early summer (May 15 – June 30).

**Berm Seed and Plant Mix.** Following construction, the proposed berm will be seeded with a grass-heavy native seed mix followed by installation of an erosion control blanket. To provide additional berm stabilization, installation of plant plugs are also proposed. The majority of the plant plugs (1,500/acre) consists of hardy grass and sedges that can quickly colonize an area providing good vegetative coverage. These hardy species shall be installed mainly along the slope of the berm where erosion is of most concern. In addition, blue flag iris (*Iris virginica*) at 500/acre shall be installed at the base of the berm where standing water is anticipated.

**Broad-Spectrum Wooded/Emergent Seed and Plant Mix.** As an enhancement activity, installation of native seed and plant plugs is proposed within the existing, onsite wetland. The existing wetland is a mosaic of high quality forested, emergent and sedge-grass dominated plant communities. As such, the proposed enhancement seed and plant mix created is broad-spectrum in order to appropriately encompass the existing wetland plant community mosaic.

A total of 2,500 plant plugs per acre are proposed for the existing wetland. The plug mix consists of emergent species for the inundated portions and sedge/grass species for the transitional saturated portions. A broad-spectrum seed mix is also proposed for the area.

The plant plugs in the existing wetland shall be installed in same species groupings scattered throughout the wetland in locations suitable for the particular species. The plant plugs shall be installed under suitable hydrologic conditions during spring to early summer (May 15 – June 30). The seed mix shall be installed during fall-winter as a dormant installation when conditions are deemed suitable to maximize seed-soil contact.

**Forested Floodplain Seed and Plant Mix.** The existing forested floodplain plant community consists of a well-developed tree canopy with a relatively open understory. The ground layer vegetation is low quality and contains weedy species typical of floodplains. As an enhancement activity, installation of an
appropriate seed and plant mix is proposed. This mix contains species that can tolerate short-term inundation following rain events and semi-permanent saturated soils.

A total of 2,000 plant plugs per acre are proposed for the floodplain, which consists mainly of sedges and grasses. These plant plugs shall be installed under suitable hydrologic conditions during spring to early summer (May 15 – June 30). The seed mix shall be installed during fall-winter as a dormant installation when conditions are deemed suitable to maximize seed-soil contact.

**MANAGEMENT & MONITORING PLAN**

This BMP and Wetland Restoration Management and Monitoring Plan (MMP) for Cheney Run Stormwater Treatment Area establishes a means by which the native areas may be evaluated relative to pre-established goals and performance standards.

The duration of the monitoring program is five years, beginning with the completion of grading and planting. The five-year management and monitoring program will be the responsibility of the Sanitary District of Michigan City.

**VEGETATION MANAGEMENT**

Proper management is critical for successful establishment of the proposed improvements and the enhancement seeding/planting activities. Periodic mowing/weed whipping, invasive shrub removal, selective herbicide application and prescribed burning are commonly used as management techniques for natural plant communities.

An existing condition Invasive Species Control exhibit is provided in Appendix III. This exhibit shows the approximate locations of some of the invasive species within the project limits. The species shown on the Invasive Species Control exhibit as well as any other invasive species present within the project limits require control in order to achieve the performance standards. The invasive species that require control include, but are not limited to, the following species provided in Table 1.

<table>
<thead>
<tr>
<th>Table 1: Non-Native and Invasive Species</th>
</tr>
</thead>
<tbody>
<tr>
<td>American Silver-Berry ( \text{(Elaeagnus commutata)} )</td>
</tr>
<tr>
<td>Asian Bittersweet ( \text{(Celastrus orbiculatus)} )</td>
</tr>
<tr>
<td>Garden Bird’s-Foot-Trefoil ( \text{(Lotus corniculatus)} )</td>
</tr>
<tr>
<td>Black Locust ( \text{(Robinia pseudoacacia)} )</td>
</tr>
<tr>
<td>Bull Thistle ( \text{(Cirsium vulgar)} )</td>
</tr>
<tr>
<td>Lesser Burdock ( \text{(Arctium minus)} )</td>
</tr>
<tr>
<td>Canadian Goldenrod ( \text{(Solidago canadensis)} )</td>
</tr>
<tr>
<td>Canadian Thistle ( \text{(Cirsium arvense)} )</td>
</tr>
<tr>
<td>Cat-Tail ( \text{(Typha spp.)} )</td>
</tr>
<tr>
<td>Chinese Yam ( \text{(Discorea oppositifolia)} )</td>
</tr>
<tr>
<td>Common Reed ( \text{(Phragmites australis)} )</td>
</tr>
<tr>
<td>Crack Willow ( \text{(Salix fragilis)} )</td>
</tr>
<tr>
<td>Creeping-Jenny ( \text{(Lysimachia nummularia)} )</td>
</tr>
<tr>
<td>Plant Name</td>
</tr>
<tr>
<td>--------------------------------</td>
</tr>
<tr>
<td>Crownvetch</td>
</tr>
<tr>
<td>Curly Pondweed</td>
</tr>
<tr>
<td>Dames Rocket</td>
</tr>
<tr>
<td>Eurasian-Buttercup</td>
</tr>
<tr>
<td>Eurasian Water-Milfoil</td>
</tr>
<tr>
<td>European Barberry</td>
</tr>
<tr>
<td>European Buckthorn</td>
</tr>
<tr>
<td>Garlic-Mustard</td>
</tr>
<tr>
<td>Giant Hogweed</td>
</tr>
<tr>
<td>Glossy False Buckthorn</td>
</tr>
<tr>
<td>Greater Flowering-Rush</td>
</tr>
<tr>
<td>Japanese Barberry</td>
</tr>
<tr>
<td>Japanese Bristle Grass</td>
</tr>
<tr>
<td>Japanese Honeysuckle</td>
</tr>
<tr>
<td>Japanese Hop</td>
</tr>
<tr>
<td>Japanese-Knotweed</td>
</tr>
<tr>
<td>Japanese Stilt Grass</td>
</tr>
<tr>
<td>Jetbead</td>
</tr>
<tr>
<td>Leafy Spurge</td>
</tr>
<tr>
<td>Littleleaf Linden</td>
</tr>
<tr>
<td>Morrow’s Honeysuckle</td>
</tr>
<tr>
<td>Nodding Plumeless-Thistle</td>
</tr>
<tr>
<td>Privet</td>
</tr>
<tr>
<td>Purple Loosestrife</td>
</tr>
<tr>
<td>Ragweed</td>
</tr>
<tr>
<td>Rambler Rose</td>
</tr>
<tr>
<td>Red/White Clover</td>
</tr>
<tr>
<td>Reed Canary Grass</td>
</tr>
<tr>
<td>Russian Olive</td>
</tr>
<tr>
<td>Sandbar Willow</td>
</tr>
<tr>
<td>Seaside Goldenrod</td>
</tr>
<tr>
<td>Showy Fly-Honeysuckle</td>
</tr>
<tr>
<td>Spotted knapweed</td>
</tr>
<tr>
<td>Tall Goldenrod</td>
</tr>
<tr>
<td>Teasel</td>
</tr>
<tr>
<td>Twinsisters</td>
</tr>
<tr>
<td>Watercress</td>
</tr>
<tr>
<td>Wild Parsnip</td>
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<tr>
<td>Yellow Sweet-Clover</td>
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</tbody>
</table>
Invasive Shrub Removal/Clearing. Removal of the invasive shrubs to open up the understory will be conducted throughout the project limits. Table 2 summarizes the invasive shrub species present within the project limits.

<table>
<thead>
<tr>
<th>Table 2: Invasive Shrub Species (100% Removal)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Honeysuckle (Lonicera spp.)</td>
</tr>
<tr>
<td>Multi-flora rose (Rosa multiflora)</td>
</tr>
<tr>
<td>Buckthorn (Rhamnus spp.)</td>
</tr>
<tr>
<td>Privet (Ligustrum spp.)</td>
</tr>
</tbody>
</table>

The invasive shrub species will be removed by cutting the trunk/stem no higher than 1-inch above the ground surface followed by application of herbicide to the cut stump to prevent resprouting. Herbicide applicators will follow closely behind the shrub cutting crew to ensure that all cut stumps receive the herbicide application within 2 hours of the cut. This procedure will maximize effectiveness of the herbicide application and as a result reduce the intensity of resprouting.

All cut material will be placed in brush piles and burned immediately after clearing or chipped and disposed at an off-site location. Brush piles will be strategically placed to minimize the potential negative effects to the preserved trees and roots that can occur from the heat emitted from the brush pile burning.

The woody vegetation clearing will be conducted during the winter under frozen ground conditions. Conducting the work according to these specifications will minimize soil disturbance and avoid detrimental effects to desirable vegetation, which will promote regeneration of the seedbank.

Follow-up resprout control of these shrub species shall be conducted as needed following the initial clearing throughout the management period to maintain control of these shrub species. To control resprouting shrubs, applications of herbicide shall be applied to actively growing foliage in May/June.

Herbicide Application. Management of the vegetation in all areas will include selective application of herbicide to control the invasive and non-native plant species included in Table 1. These species, including others, can displace desirable species, thereby reducing floristic diversity in the naturalized areas. Controlling these species will be required to achieve the performance standards for the project.

A determination regarding the type of herbicide to be used should be made when it is known which nuisance species are present on the site. Depending on the target weed species, a selective herbicide may be available. The choice of herbicide and timing of herbicide application will be made by a trained, experienced professional based on the target weed species and conditions.

It is recommended that a minimum of four annual weed control application periods are conducted throughout the five-year period. Below is a general guideline on the suggested schedule and target species for the application periods:
- **Application Period One (early spring – April/May):** problematic species such as, but not limited to, reed canary grass, garlic mustard, Dame’s rocket, red/white clover, cool season adventive grasses.

- **Application Period Two (late spring to early summer – May/June):** problematic species such as, but not limited to, teasel, white/yellow sweet clover, thistle, common reed, cattail, and resprout control and new seedling growth of buckthorn, honeysuckle, multi-flora rose, privet.

- **Application Period Three (mid to late summer – July/August):** problematic species such as, but not limited to, ragweed, cattails, purple loosestrife, common reed.

- **Application Period Four (late summer and fall – September/October):** problematic species such as, but not limited to, reed canary grass, thistle, common reed, red/white clover, adventive cool season grasses.

Table 3 contains a list of “Critical Target” invasive and non-native species that require 100% control per each herbicide management event. All other invasive and non-native species (Table 1) require a minimum 90% control per each herbicide event for that particular species.

<table>
<thead>
<tr>
<th>Target Species</th>
<th>Required Control</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teasel (<em>Dipsacus spp.</em>)</td>
<td>100%</td>
</tr>
<tr>
<td>Field Thistle (<em>Cirsium arvense</em>)</td>
<td>100%</td>
</tr>
<tr>
<td>Reed Canary Grass (<em>Phalaris arundinacea</em>)</td>
<td>100%</td>
</tr>
<tr>
<td>Purple Loosestrife (<em>Lythrum salicaria</em>)</td>
<td>100%</td>
</tr>
<tr>
<td>Common Reed (<em>Phragmites australis</em>)</td>
<td>100%</td>
</tr>
</tbody>
</table>

**First and Second Year High-Mowing/Weed Whipping.** During the first two growing seasons after installing the Berm Seed Mix, mowing or selective weed whipping the berm vegetation should occur as needed to maintain a plant height of no greater than 18 to 20 inches. To accomplish this, cutting the vegetation to a height of 6 to 9 inches several times during the growing season will be needed. Cutting the vegetation will aid new plant growth as to allow more sunlight to reach young prairie seedlings. Cutting the vegetation will also aid in the control of annual weeds, which can undermine seeding efforts. Selective weed whipping can be used instead of a mower if conditions are unfit (i.e., too wet or no access) for a tractor or if only small, isolated areas of undesirable vegetation require cutting. In addition, cutting the inflorescence prior to seed set of many biennial species including teasel and sweet clover is an effective control method that can be utilized.

**Prescribed Burning.** Prescribed burning may be conducted in the naturalized areas during the management period. If deemed safe by the contractor, the prescribed burn should be scheduled in the spring or fall of the third and fifth full growing season. Prescribed burning can reduce exotic weed species that may establish from seeds or rootstock material in the topsoil that is in situ or placed in these areas. Additionally, burning encourages the growth of native plant species from the established plant mix, and existing seedbank, and inhibits the growth of non-indigenous vegetation.
**PERFORMANCE STANDARDS**

Performance standards are established for all proposed projects involving native areas so that the relative success of creation and enhancement efforts may be evaluated. If the performance standards are not achieved by the end of the five-year management and monitoring program, the permittee is responsible for correction of any deficiencies through further management activities, which may include replanting. The transect data results will be used to evaluate standards 1 through 7 and the plot data results will be used to evaluate standard 8.

1. Within 3 months of seed installation on the berm, at least 90% of the Berm Seed Mix area, as measured by aerial coverage, shall be vegetated. A minimum 90% vegetative coverage shall be maintained throughout, and at the end of, the five-year period on the berm.

2. At the end of the five-year management period, no area on the berm greater than 1.0 square meters shall be devoid of vegetation.

3. Absolute coverage of the herbaceous stratum in the floodplain forest shall achieve 75% by the end of the five-year period.

4. Absolute coverage of herbaceous stratum in the wooded-emergent area (existing wetland) shall achieve 50% by the end of the five-year period.

5. At the end of the five-year management period, the top three most dominant species in the herbaceous stratum based on aerial coverage shall not be invasive and non-native species (see Table 1). Species dominance will be based on Relative Importance Values (RIV).

6. At the end of the five-year management period, relative coverage of invasive and non-native species (Table 1) in the herbaceous stratum shall not exceed 10%.

7. Relative coverage of common reed, reed canary grass and purple loosestrife in aggregate shall be less than 5% throughout, and at the end of, the five-year period.

8. At the end of the five-year management period, relative coverage of invasive and non-native shrubs shall not exceed 10%.

**VEGETATION MONITORING**

Vegetative monitoring will begin the first full growing season follow planting/seeding. Although vegetation monitoring will not be conducted during Year One, a monitoring report will still be required and will document general site conditions and activities conducted during Year One.

Vegetation monitoring will be performed semi-annually beginning in Year Two, to ensure both early and late season species are accounted for. The first monitoring event will occur during June/July, and the second during August/September. During both monitoring events a floristic inventory will be recorded. During the second monitoring event, quantitative data will be collected along with the qualitative data. Permanent sampling transects (see Planting Plan for transect locations) will be established within the project limits and marked permanently on the ground with metal pipes or some other appropriate method. A series of sample quadrats (1.0 m²) will be placed along all transects at 5 meter intervals to...
collect data that will adequately represent the vegetation. Transects will be established in a minimum of 50 meter lengths. Data collected in each quadrat will include an inventory of all plants and the estimated coverage of each species. These data will be used to derive absolute cover, relative cover and relative importance value (RIV) data for each species encountered in the transect. All data collected from the monitoring sessions will be inventoried and evaluated using the Floristic Quality Assessment (FQA) Computer Program. This data will then be used to evaluate the site’s progress in regards to the performance standards.

To sample the shrub stratum, 10 meter by 10 meter plots will also be established. The locations of the plots are shown on the planting plans. Absolute coverage of the shrubs will be recorded in each plot. The data collected from the plots will be used to evaluate Performance Standard #8.

**ANNUAL MONITORING REPORT**

On an annual basis for the duration of the five-year management and monitoring period, a monitoring report will be submitted to the USACE and IDEM (five reports required). The monitoring report will document conditions at the site, management activities undertaken for the year, data from both monitoring events, and the progress of the site towards achieving the predetermined performance standards. Photographs will be included in the report to provide further documentation of the vegetation conditions and the implemented management activities. The reports shall be submitted by the end of February of the following year (i.e., 2019 report will be submitted by February 29, 2020).

More specifically, the monitoring report (except for the first year as discussed above) must contain the following information, which will be based on transect and qualitative data collected during the annual monitoring inspections.

1. A summary of management activities conducted during the year.
2. Representative photographs depicting general site conditions.
3. Calculate native mean C and native FQI values, and the native mean wetness coefficient for each plant community zone.
4. Using the Floristic Quality Assessment (FQA) Computer Program, calculate the relative frequency of native species \( RF_n \) and the relative frequency of adventive species \( RF_a \). Calculate the relative native cover \( RC_n \) and the relative adventive cover \( RC_a \). Calculate the RIV\(_n\) of total native species and the RIV\(_a\) of total adventive species. The sum of the RIV\(_n\) and RIV\(_a\) must equal 100.
5. Evaluate the status of the areas relative to the performance standards.
6. Recommend management activities for the following year to address any issues related to site success.
THREATENED AND ENDANGERED SPECIES
COORDINATION
April 25, 2019

Ms. Elizabeth McCloskey  
U.S. Fish & Wildlife Service  
Northern Indiana Ecological Services Office  
P.O. Box 2616  
Chesterton, Indiana 46304-9753

RE: Cheney Run Stormwater Treatment Area | T & E Species Consultation

Dear Ms. McCloskey:

This is a Natural Heritage Data Center Request for the Cheney Run Stormwater Treatment Area located:

- North of the Indiana High Railroad; South of the Chicago South Shore and South Bend Railroad; East of Roeske Avenue and West of Karwick Road in Michigan City, LaPorte County, Indiana
- Township, Range, & Section: Section 27, T38N, R4W
- Latitude & Longitude: 41.710908°N, -86.858754°W

We are requesting any U.S. Fish and Wildlife Service or related records for any listed threatened or endangered species or natural areas that may occur on or within a half mile of the subject property. The proposed activity for the subject property is to construct a stormwater treatment area to reduce stormwater related impairments to Trail Creek water quality.

Copies of the property location map, National Wetland Inventory (NWI) map and an aerial photograph showing the project boundaries are provided.

Please call me with any questions or if additional information is needed at 630-729-6120.

Sincerely,

V3 Companies

Alicia Metzger, CPSC, PWS  
Wetland Soil Scientist, Natural Resources
Cheney Run Stormwater Treatment Area
Michigan City, Indiana

The Vision To Transform with Excellence
Visio, Vertere, Virtute...
AERIAL MAP

Cheney Run Stormwater Treatment Area
Michigan City, Indiana

BASE LAYER: Indiana Aerial Imagery (2018)

DATE: 04/25/2019

See Scale Bar

Title: "The Vision To Transform with Excellence"
Ms. Alicia Metzger  
V3 Companies  
7325 Janes Avenue  
Woodridge, Illinois 60517  

Project: Cheney Run Storm Water Treatment Area  
Location: Michigan City, LaPorte County, Indiana  

Dear Ms. Metzger:  

This responds to your letter dated April 25, 2019, requesting our comments on the aforementioned project.  

These comments have been prepared under the authority of the Fish and Wildlife Coordination Act (16 U.S.C. 661 et. seq.) and are consistent with the intent of the National Environmental Policy Act of 1969, the Endangered Species Act of 1973, and the U. S. Fish and Wildlife Service's Mitigation Policy.  

The proposed project involves stream and wetland modification/restoration where Cheney Run enters Trail Creek on the east side of Michigan City. Most of the formerly open-channel Cheney Run is now an underground storm sewer that becomes an open channel where it discharges from a culvert under the Indiana High Railroad. Both Cheney Run and Trail Creek flow through a mostly forested floodplain within the proposed project area, although there are old, weedy spoil piles along portions of the banks of both waterways. Wetlands are also present.  

ENDANGERED SPECIES  

The proposed project is within the range of the Federally endangered Indiana bat (Myotis sodalis), piping plover (Charadrius melodus), and Mitchell's satyr butterfly (Neonympha mitchelli) and the threatened northern long-eared bat (Myotis septembrinalis) and eastern massasauga rattlesnake (Sistrurus catenatus). There is no habitat available at the site for the piping plover, Mitchell’s satyr, and eastern massasauga. The woodlands at the site potentially
provide summer nursery habitat for the 2 bat species, although we do not have information on their presence or absence. Since we do not know what project activities are proposed at the site, we cannot at this time determine whether or not the project may adversely affect the Indiana bat and northern long-eared bat.

These endangered species comments constitute informal consultation only. They do not fulfill the requirements of Section 7 of the Endangered Species Act of 1973, as amended.

We appreciate the opportunity to comment on this proposed project. For further discussion, please contact Elizabeth McCloskey at (219) 983-9753 or elizabeth_mccloskey@fws.gov.

Sincerely yours,

/s/ Elizabeth S. McCloskey

for Scott E. Pruitt
Supervisor

Sent via email May 8, 2019; no hard copy to follow.

cc: Christie Stanifer, Environmental Coordinator, Division of Fish and Wildlife, Indianapolis, IN
April 25, 2019

Mr. Ronald Hellmich  
Indiana Department of Natural Resources  
Division of Nature Preserves  
402 W. Washington Street, RM W267  
Indianapolis, Indiana 46204

RE: Cheney Run Stormwater Treatment Area | T & E Species Consultation

Dear Mr. Hellmich:

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Copies of the property location map, National Wetland Inventory (NWI) map and an aerial photograph showing the project boundaries are provided.

This request is being submitted on behalf of Michigan City Sanitary District; as such, we are requesting that the fee be sent to us.

Please call me with any questions or if additional information is needed at 630-729-6120.

Sincerely,

V3 Companies

Alicia Metzger, CPSC, PWS
Wetland Soil Scientist, Natural Resources
Project Location

7325 Janes Avenue
Woodridge, IL 60517
630.724.9200 phone
www.v3co.com

BASE LAYER:
Indiana Aerial Imagery
(2018)

DATE:
04/25/2019

SITE:
Cheney Run Stormwater Treatment Area
Michigan City, Indiana

SCALE:
See Scale Bar

TITLE:
"The Vision To Transform with Excellence"