



February 28, 2014

Mr. Ed Wilk  
Ohio Environmental Protection Agency  
2110 East Aurora Road  
Twinsburg, OH 44087

Dear Ed:

Subject: Revised 401 Application  
Wooster Aggregate Site  
Wooster, Wayne County, Ohio  
CEC Project 091-532  
USACE # 0-57347-WAL-UN Trib to Killbuck Creek  
OEPA# 113776/113777

Civil & Environmental Consultants, Inc. (CEC) presents to you the requested revised Ohio Environmental Protection Agency (Ohio EPA) Section 401 Water Quality Certification Application, the revised Application for Department of the Army Permit, and the revised alternatives analysis and drawings for the above referenced site.

If you have any questions or need additional information please call the undersigned at 614-310-0175, or email Jamie VanDusen at [jvandusen@cecinc.com](mailto:jvandusen@cecinc.com).

Respectfully submitted,

**CIVIL & ENVIRONMENTAL CONSULTANTS, INC.**



Jamie VanDusen  
Project Manager



Jonathan C. Demarest  
Project Manager

cc: Mr. Ken Holland, The Olen Corporation (email)  
Ms. Megan Oberst, USACE (email)

Enclosed: Revised Ohio EPA 401 Water Quality Certification Application  
Revised Application for Department of the Army Permit  
Revised Alternatives Analysis  
Alternative Analysis Drawings

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**REVISED OHIO EPA 401 WATER QUALITY CERTIFICATION APPLICATION**

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# APPLICATION FOR OHIO EPA SECTION 401 WATER QUALITY CERTIFICATION

**Effective October 1, 1996  
Revised August, 1998**

This application must be completed whenever a proposed activity requires an individual Clean Water Act Section 401 Water Quality Certification (Section 401 certification) from Ohio EPA. A Section 401 certification from the State is required to obtain a federal Clean Water Act Section 404 permit from the U.S. Army Corps Engineers, or any other federal permits or licenses for projects that will result in a discharge of dredged or fill material to any waters of the State. To determine whether you need to submit this application to Ohio EPA, contact the U.S. Army Corps of Engineers District Office with jurisdiction over your project, or other federal agencies reviewing your application for a federal permit to discharge dredged or fill material to waters of the State, or an Ohio EPA Section 401 Coordinator at (614) 644-2001.

The Ohio EPA Section 401 Water Quality Certification Program is authorized by Section 401 of the Clean Water Act (33 U.S.C. 1251) and the Ohio Revised Code Section 6111.03(P). Ohio Administrative Code (OAC) Chapter 3745-32 outlines the application process and criteria for decision by the Director of Ohio EPA. In order for Ohio EPA to issue a Section 401 certification, the project must comply with Ohio's Water Quality Standards (OAC 3745-1) and not potentially result in an adverse long-term or short-term impact on water quality. Included in the Water Quality Standards is the Antidegradation Rule (OAC Rule 3745-1-05), effective October 1, 1996, revised October, 1997 and May, 1998. The Rule includes additional application requirements and public participation procedures. **Because there is a lowering of water quality associated with every project being reviewed for Section 401 certification, every Section 401 certification applicant must provide the information required in Part 10 (pages 3 and 4) of this application.** In addition, applications for projects that will result in discharges of dredged or fill material to wetlands must include a wetland delineation report approved by the Corps of Engineers, a wetland assessment with a proposed assignment of wetland category (ies), official documentation on evaluation of the wetland for threatened or endangered species, and appropriate avoidance, minimization, and mitigation as prescribed in OAC 3745-1-50 to 3745-1-54. Ohio EPA will evaluate the applicant's proposed wetland category assignment and make the final assignment.

Information provided with the application will be used to evaluate the project for certification and is a matter of public record. If the Director determines that the application lacks information necessary to determine whether the applicant has demonstrated the criteria set forth in OAC Rule 3745-32-05(A) and OAC Chapter 3745-1, Ohio EPA will inform the applicant in writing of the additional information that must be submitted. The application will not be accepted until the application is considered complete by the Section 401 Coordinator. An Ohio EPA Section 401 Coordinator will inform you in writing when your application is determined to be complete.

Please submit the following to "Section 401 Supervisor, Ohio EPA/DSW, P.O. Box 1049, Columbus, Ohio 43216-1049:

- Four (4) sets of the completed application form, including the location of the project (preferably on a USGS quadrangle) and 8-1/2 x 11" scaled plan drawings and sections.
- One (1) set of original scaled plan drawings and cross-sections (or good reproducible copies).

**(See Application Primer for detailed instructions)**

1. The federal permitting agency has determined this project: (check appropriate box and fill in blanks)

a. \_\_\_\_ requires an individual 404 permit/401 certification- Public Notice # (if known)\_\_\_\_\_

b. \_\_\_\_ requires a Section 401 certification to be authorized by Nationwide Permit #\_\_\_\_\_

c. \_\_\_\_ requires a modified 404 permit/401 certification for original Public Notice #\_\_\_\_\_

d. \_\_\_\_ requires a federal permit under \_\_\_\_\_ jurisdiction identified by #\_\_\_\_\_

e. \_\_\_\_ requires a modified federal permit under \_\_\_\_\_ jurisdiction identified by #\_\_\_\_\_

2. Application number (to be assigned by Ohio EPA):

3. Name and address of applicant:

Telephone number during business hours:

( ) \_\_\_\_\_ (Residence)

( ) \_\_\_\_\_ (Office)

3a. Signature of Applicant:

*Kenneth W. Holland*

Date: 2/24/14

4. Name, address and title of authorized agent:

Telephone number during business hours:

( ) \_\_\_\_\_ (Residence)

( ) \_\_\_\_\_ (Office)

4a. Statement of Authorization: I hereby designate and authorize the above-named agent to act in my behalf in the processing of this permit application, and to furnish, upon request, supplemental information in support of the application.

Signature of Applicant:

*Kenneth W. Holland*

Date: 2/24/14

5. Location on land where activity exists or is proposed. Indicate coordinates of a fixed reference point at the impact site (if known) and the coordinate system and datum used.

Address:

\_\_\_\_\_  
Street, Road, Route, and Coordinates, or other descriptive location

\_\_\_\_\_  
Watershed                      County                      Township                      City                      State                      Zip Code

6. Is any portion of the activity for which authorization is sought complete?  Yes  No  
If answer is "yes," give reasons, month and year activity was completed. Indicate the existing work on the drawings.

7. List all approvals or certifications and denials received from other federal, interstate, state or local agencies for any structures, construction, discharge or other activities described in this application.

Issuing Agency      Type of Approval      Identification No.      Date of Application      Date of Approval      Date of Denial

8. **DESCRIPTION OF THE ACTIVITY (fill in information in the following four blocks - 8a, 8b, 8c & 9)**

8a. Activity: Describe the Overall Activity:

8b. Purpose: Describe the purpose, need and intended use of the activity:

8c. Discharge of dredged or fill material: Describe type, quantity of dredged material (in cubic yards), and quantity of fill material (in cubic yards).

9. Waterbody and location of waterbody or upland where activity exists or is proposed, or location in relation to a stream, lake, wetland, wellhead or water intake (if known). Indicate the distance to, and the name of any receiving stream, if appropriate.

**10. To address the requirements of the Antidegradation Rule, your application must include a report evaluating the:**

- Preferred Design (your project) and Mitigative Techniques
- Minimal Degradation Alternative(s) (scaled-down version(s) of your project) and Mitigative Techniques
- Non-Degradation Alternative(s) (project resulting in avoidance of all waters of the state)

At a minimum, item a) below must be completed for the Preferred Design, the Minimal Degradation Alternative(s), and the Non-Degradation Alternative(s), followed by completion of item b) for each alternative, and so on, until all items have been discussed for each alternative (see Primer for specific instructions).

- 10a) Provide a detailed description of any construction work, fill or other structures to occur or to be placed in or near the surface water. Identify all substances to be discharged, including the cubic yardage of dredged or fill material to be discharged to the surface water.
- 10b) Describe the magnitude of the proposed lowering of water quality. Include the anticipated impact of the proposed lowering of water quality on aquatic life and wildlife, including threatened and endangered species (include written comments from Ohio Department of Natural Resources and U.S. Fish and Wildlife Service), important commercial or recreational sport fish species, other individual species, and the overall aquatic community structure and function. Include a Corps of Engineers approved wetland delineation.

- 10c) Include a discussion of the technical feasibility, cost effectiveness, and availability. In addition, the reliability of each alternative shall be addressed (including potential recurring operational and maintenance difficulties that could lead to increased surface water degradation.)
- 10d) For regional sewage collection and treatment facilities, include a discussion of the technical feasibility, cost effectiveness and availability, and long-range plans outlined in state or local water quality management planning documents and applicable facility planning documents.
- 10e) To the extent that information is available, list and describe any government and/or privately sponsored conservation projects that exist or may have been formed to specifically target improvement of water quality or enhancement of recreational opportunities on the affected water resource.
- 10f) Provide an outline of the costs of water pollution controls associated with the proposed activity. This may include the cost of best management practices to be used during construction and operation of the project.
- 10g) Describe any impacts on human health and the overall quality and value of the water resource.
- 10h) Describe and provide an estimate of the important social and economic benefits to be realized through this project. Include the number and types of jobs created and tax revenues generated and a brief discussion on the condition of the local economy.
- 10i) Describe and provide an estimate of the important social and economic benefits that may be lost as a result of this project. Include the effect on commercial and recreational use of the water resource, including effects of lower water quality on recreation, tourism, aesthetics, or other use and enjoyment by humans.
- 10j) Describe environmental benefits, including water quality, lost and gained as a result of this project. Include the effects on the aquatic life, wildlife, threatened or endangered species.
- 10k) Describe mitigation techniques proposed (except for the Non-Degradation Alternative):
  - Describe proposed Wetland Mitigation (see **OAC 3745-1-54** and Primer)
  - Describe proposed Stream, Lake, Pond Mitigation (see Primer)

11. Application is hereby made for a Section 401 Water Quality Certification. I certify that I am familiar with the information contained in this application and, to the best of my knowledge and belief, such information is true, complete and accurate. I further certify that I possess the authority to undertake the proposed activities or I am acting as the duly authorized agent of the applicant.

*Kenneth W. Holland*

2/24/14

\_\_\_\_\_  
Signature of Applicant

\_\_\_\_\_  
Date

\_\_\_\_\_  
Signature of Agent

*The application must be signed by the person who desires to undertake the proposed activity (applicant) or it may be signed by a duly authorized agent if the statement in Block 3 has been filled out and signed.*

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**REVISED APPLICATION FOR DEPARTMENT OF THE ARMY PERMIT**

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18. Nature of Activity (Description of project, include all features)

The proposed activity is to expand an aggregate mining operation within the boundaries of the active quarry. The wetlands will be impacted during excavation to facilitate the mining operation. Alternative site development plans that were evaluated are included in the application package displaying proposed site layout, proposed impacts, and proposed avoidance and minimization.

19. Project Purpose (Describe the reason or purpose of the project, see instructions)

The purpose of this project is to expand an aggregate mining quarry in order to meet local aggregate market demands. The proposed activity will involve mining open water features and the placement of overburden throughout the site.

**USE BLOCKS 20-23 IF DREDGED AND/OR FILL MATERIAL IS TO BE DISCHARGED**

20. Reason(s) for Discharge

No dredged or fill will be placed in the wetlands. Under the Preferred Degradation Alternative 4.53 acres of wetlands will be impacted by excavation.  
Under the Minimum Degradation Alternative 1.90 acres of wetlands will be impacted by excavation.

21. Type(s) of Material Being Discharged and the Amount of Each Type in Cubic Yards:

Type Amount in Cubic Yards	Type Amount in Cubic Yards	Type Amount in Cubic Yards
N/A		

22. Surface Area in Acres of Wetlands or Other Waters Filled (see instructions)

Acres 1.9 acres will be impacted by excavation  
Or  
Liner Feet

23. Description of Avoidance, Minimization, and Compensation (see instructions)

see attached

24. Is Any Portion of the Work Already Complete? Yes  No  IF YES, DESCRIBE THE COMPLETED WORK

25. Addresses of Adjoining Property Owners, Lessees, Etc., Whose Property Adjoins the Waterbody (If more than can be entered here, please attach a supplemental list).

Address – see attached  
City – State – Zip –

26. List of Other Certifications or Approvals/Denials Received from other Federal, State, or Local Agencies for Work Described in This Application.

AGENCY	TYPE APPROVAL*	IDENTIFICATION NUMBER	DATE APPLIED	DATE APPROVED	DATE DENIED

\* Would include but is not restricted to zoning, building, and flood plain permits

27. Application is hereby made for a permit or permits to authorize the work described in this application. I certify that the information in this application is complete and accurate. I further certify that I possess the authority to undertake the work described herein or am acting as the duly authorized agent of the applicant.


2/28/2014
\_\_\_\_\_
\_\_\_\_\_

SIGNATURE OF APPLICANT      DATE      SIGNATURE OF AGENT      DATE

The application must be signed by the person who desires to undertake the proposed activity (applicant) or it may be signed by a duly authorized agent if the statement in block 11 has been filled out and signed.

18 U.S.C. Section 1001 provides that: Whoever, in any manner within the jurisdiction of any department or agency of the United States knowingly and willfully falsifies, conceals, or covers up any trick, scheme, or disguises a material fact or makes any false, fictitious or fraudulent statements or representations or makes or uses any false writing or document knowing same to contain any false, fictitious or fraudulent statements or entry, shall be fined not more than \$10,000 or imprisoned not more than five years or both.

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**REVISED ALTERNATIVES ANALYSIS**

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## **1.0 ALTERNATIVES ANALYSIS**

In accordance with Section 404(b) (1) guidelines, a Section 404 permit can only be issued for a “least environmentally damaging practicable alternative” for the project. Therefore, an alternative analysis is required for the Section 404 permit request to demonstrate that impacts to regulated aquatic resources have been avoided and minimized to the maximum extent practicable.

Ohio EPA also requires an alternatives analysis as part of the Section 401 certification request. According to OAC 3745-1-05, known as the "Antidegradation Rule", an analysis of the following three alternatives must be completed to fulfill the requirements of section 10 of the Section 401 certification application:

- 1) preferred design alternative, including mitigative techniques;
- 2) minimal degradation alternative, including mitigative techniques; and,
- 3) non-degradation alternative.

The following sections present an analysis of the viability of each alternative, a series of drawings that illustrate each alternative, and a resource impact summary for each alternative.

For each of the three alternatives above, a series of eleven items (10a through 10k) must be discussed. According to the COE, it is understood that the alternatives analysis required for the Section 401 certification should satisfy the Section 404(b) (1) alternative analysis requirements.

### **1.1 PREFERRED ALTERNATIVE**

#### **10a) Construction Details**

The Preferred Alternative was designed to meet aggregate mining needs, economic constraints, and regulatory requirements, while optimizing land use within the site boundaries. The mining operation has proposed to advance to the north allowing approximately 17 million tons of aggregate reserves to be mined. Mining operations will continue in the area designated as Open Water 4. First the topsoil will be removed from the upland area around Open Water 4 by bulldozers and placed in designated upland areas. Then a clamshell excavator will use a drop bucket method to excavate the sand and gravel from the bottom of Open Water 4. The excavated material is placed on a screen with a conveyor belt system and transferred to the plant.

Overburden from the mining operations will be placed in designated areas throughout the site in order to reduce costs associated with hauling the material offsite. Effluent from the mining operations will continue to be pumped into the existing sediment basin. The USACE determined that the sediment basin met the definition of a temporary sediment basin as defined in the Clean Water Act exemptions (33 CFR 323.4 (a)).

Approximately 4.53 acres of jurisdictional wetlands will be impacted by excavation to facilitate the mining operation. It is not proposed to use bulldozers to remove the topsoil from the wetland areas; rather a clamshell excavator will be used.

#### 10b) **Biological and Physical Impacts on Water Quality**

Implementation of the preferred alternative would result in a lowering of water quality of the onsite wetlands, however, the lowering of water quality is justified by the social and economic benefits of this project (refer to Section 10 h). Best construction management practices will be implemented to minimize the preserved wetlands on site.

#### **Impacts on Rare, Threatened, or Endangered Species**

##### Ohio Department of Natural Resources Natural Heritage Database

According to Natural Heritage Database (NHD) records maintained by the Ohio Department of Natural Resources (ODNR) Division of Natural Areas and Preserves, there were no known occurrences of the following on the site:

- significant breeding/nonbreeding bird concentration areas;
- threatened or endangered species; and/or;
- high quality wetlands.

NDH indicated that The Schaefer Woods Wilderness Center and the Killbuck Marsh Wildlife Area are located within a one-mile radius of the site.

##### Coordination with United States Fish & Wildlife Service (USFWS)

CEC received a letter from the USFWS on January 26, 2010 indicating that the proposed project lies within the range of the Indiana bat, the eastern prairie fringed orchid, the eastern

massasagua, and the bald eagle. The following recommendations were made by the USFWS on each species as follows:

- Indiana bat – if the proposed project contains suitable habitat for the Indiana bat and trees are proposed to be cut, further coordination will be necessary to determine if surveys are necessary.
- Eastern prairie fringed orchid – if project site contains moist roadside ditches, sedge meadows, and wet prairies, the site needs to be examined to determine if suitable habitat is present. If suitable habitat is present, surveys will need to be conducted in July.
- Eastern massasagua - if the site contains wetlands, wet prairie, woodland or shrub edge habitat, the site will need to be examined to determine if suitable habitat is present.
- Bald eagle - the USFWS has determined that due to present onsite habitat, impacts to this species are not anticipated. Therefore, no further coordination is needed.

CEC submitted a habitat assessment report to the USFWS on March 16, 2010 based on our observations made during our delineation and review of additional available information. Our findings concluded that no occurrences of the federally-listed endangered Indiana bat, federal-candidate eastern massasagua, or the federally listed threatened eastern prairie fringed orchid were known within the site boundary. The proposed Olen Corporation mining expansion activities may affect, but is not likely to adversely affect, the Indiana bat, eastern massasagua, or the eastern prairie fringed orchid. In order to reduce the potential for take of Indiana bats, potentially suitable Indiana bat roost trees within the site will be removed between September 30 to April 1.

CEC received a response from the USFWS on April 6, 2010 indicating that they concurred with our findings and they do not anticipate impacts to the eastern massasagua, the eastern prairie fringed orchid or the bald eagle. They stated that seasonal tree cutting between September 30 and April 1 would reduce the potential effects to the Indiana bat.

#### 10c) **Cost Effectiveness**

The Preferred Alternative design is both technically feasible and cost effective. The alternative is reliable and no activities resulting in an increase in water quality impacts because of recurring operation or maintenance difficulties are anticipated.

#### 10 d) **Sewage Facility**

This Site is not part of a regional sewer line project.

#### 10 e) **Local Watershed Group**

The Muskingum Watershed Conservancy District is the largest watershed group in Ohio and covers the Killbuck Creek Watershed. Projects within the district include Brewster levee sanitary sewer improvements, flood mitigation projects and the Pleasant Hill slope stabilization project. There does not appear to projects in the immediate vicinity of the site.

### **Proposed Projects for the Local Region**

The Ohio EPA conducted a study in 2008 (Ohio EPA Integrated Report) and categorized Killbuck Creek as a Category 5. Streams designated Category 5 are impaired and in need of a TMDL. In 2009, the Ohio EPA completed the Final Study Plan for the Biological and Water Quality Survey of the Killbuck Creek Basin. The purpose of this study was to determine a TMDL model. Study sites were established at nine different locations to obtain a baseline of water chemistry values.

#### 10 f) **Water Pollution Controls**

The Olen Corporation received authorization to discharge by the Ohio EPA under the National Pollutant Discharge Elimination System (NPDES) on September 16, 2010. The permittee is authorized to discharge in accordance with limitations and monitoring requirements from outfall 3IJ00069001 until the expiration date of October 31, 2015. Part I, C- Schedule of compliance indicates that the permittee shall submit a complete 401/404 water quality application to the Ohio EPA Northeast District Office as soon as possible. Additionally, best management practices would be implemented throughout the duration of mining activities. The BMP's will consist of erosion controls such as silt fencing, temporary seeding, or mulching.

10 g) **Human Health Impacts**

Impacts to human health or significant water resources are not anticipated because of this project.

10 h, i, and j) **Jobs and Revenues Lost and Gained**

The purpose of this project is to expand an aggregate mining quarry in order to meet local aggregate market demands and provide jobs to the local economy. The social, economic, and environmental benefits are outlined in table below.

<b>SUMMARY OF SOCIAL, ECONOMIC, AND ENVIRONMENTAL BENEFITS</b>			
	<b>PREFERRED DESIGN</b>	<b>MINIMAL DEGRADATION DESIGN</b>	<b>NON-DEGRADATION DESIGN</b>
No. of tons of mining reserves	17 million	14-17 million	7 million
New Permanent Jobs	10	8	3
Est. Payroll \$\$/yr	\$500,000	\$400,000	\$150,000
Est Payroll Taxes/yr*	\$20,545	\$16,436	\$6,163
New Temporary Jobs	100	80	30
Est. Temporary Payroll	\$5m	\$4m	\$1.5m
Est. Temporary Taxes	\$205,450	\$164,360	\$61,635
Other Tax \$\$	N/A	N/A	N/A
Revenue Generated	\$170m over a 30-40 year period	\$140m over a 30-40 year period	\$100m over a 30-40 year period
Local Taxes Generated*	\$8,300/year	\$8,300/year	\$8,300/year
State Taxes Generated*	\$425,000/year	\$350,000/year	\$250,000/year
Land Donated to Community (acres)	*see environmental benefit for wetland mitigation alternatives	*see environmental benefit for wetland mitigation alternatives	*see environmental benefit for wetland mitigation alternatives
Royalties to ODNR for oil and coal projects	N/A	N/A	N/A

<b>SUMMARY OF SOCIAL, ECONOMIC, AND ENVIRONMENTAL BENEFITS</b>			
	<b>PREFERRED DESIGN</b>	<b>MINIMAL DEGRADATION DESIGN</b>	<b>NON-DEGRADATION DESIGN</b>
<b>Environmental Benefit's Lost or Gained</b>	Implementation of the preferred design alternative or minimal degradation alternative would result in lowering water quality of some wetlands onsite. However, the purchase of wetland mitigation credit would provide an ecologically beneficial opportunity to compensate for onsite impacts.		
<b>Social Benefit</b>	The community will benefit from the applicants continued mining operations of the site. The site is located just south of Wooster and the mining operations provide job opportunities and provide the local region with aggregates for all types of applications.		
<b>Recreational Benefit</b>	N/A		

\*Payroll taxes are based off the state of Ohio income tax rate of 4.109 %

\*Local taxes are based on property taxes paid in 2009

\*Sales tax based on 0.0675 % over a 27-year period

#### 10 k) **Mitigation Techniques**

##### Preferred Alternative Mitigation Ratios

CEC proposes to compensate for impacts to 4.53 acres of jurisdictional wetlands by the purchase of 7.7 acres wetland mitigation credit from an approved wetland mitigation bank.

<b>ID</b>	<b>Delineated Size (Acreage)</b>	<b>Proposed Impact (Acreage)</b>	<b>Avoidance (Acreage)</b>	<b>Wetland Category</b>	<b>Proposed Mitigation</b>	<b>Proposed Mitigation Requirement</b>
Wetland 1	4.1	0	4.1	1	N/A	N/A
Wetland 2	0.1	0	0.1	1	N/A	N/A
Wetland 3	0.2	0.2	0	1	1.5:1	0.3
Wetland 4	4.7	1.0	3.7	1	1.5:1	1.5
Wetland 5	1.4	1.4	0	1/ 2 grey zone	2:1	2.8
Wetland 6	3.3	0	3.3	1	N/A	N/A
Wetland 7	0.6	0.6	0	1	1.5:1	0.9
Wetland 8	0.8	0	0.8	1/ 2 grey zone	N/A	N/A
Wetland 9	0.8	0	0.8	1/ 2 grey zone	N/A	N/A
Wetland 10	3.0	0	3.0	1/ 2 grey zone	N/A	N/A

<b>ID</b>	<b>Delineated Size (Acreage)</b>	<b>Proposed Impact (Acreage)</b>	<b>Avoidance (Acreage)</b>	<b>Wetland Category</b>	<b>Proposed Mitigation</b>	<b>Proposed Mitigation Requirement</b>
Wetland 11	15.0	0	15.0	1	N/A	N/A
Wetland 12	0.3	0.3	0	1/2 grey zone	2:1	0.6
Wetland 13	2.1	0	2.1	1	N/A	N/A
Wetland 14	0.06	0.06	0	1	1.5:1	0.09
Wetland 15	0.07	0.07	0	1	1.5:1	0.11
Open Water 2 Wetland	0.9	0.9	0	1	1.5:1	1.35
<b>Total Jurisdictional</b>	<b>36.53</b>	<b>4.53</b>	<b>32.0</b>			<b>7.65</b>
<b>Total Isolated</b>	<b>0.9</b>	<b>0</b>	<b>0.9</b>			<b>0</b>
<b>Total Wetlands</b>	<b>37.43</b>	<b>4.53</b>	<b>32.9</b>			<b>7.7*</b>

\*Mitigation requirement rounded to the nearest tenth

#### Proposed Deed Restriction

Wetland areas onsite that are not proposed to be impacted will be protected through a combination of avoidance measures. Wetlands 8, 9, 10, and 11 will be protected in perpetuity through a deed restriction. The deed restriction will consist of the wetland acreage and an additional 25 foot buffer around the perimeter of the wetlands. The purpose of the deed restriction is to protect the chemical, biological, and physical characteristics of the wetlands before, during, and after mining activities. Activities prohibited in the deed restricted areas will be land surface alterations; including removal of soil, sand, gravel and minerals, construction activities; including buildings, structures, roads, parking lots, etc., and cutting vegetation; including cutting of trees, using herbicides, and mowing. The deed restriction will be recorded in the official records of Wayne County, Ohio.

Wetlands 1, 2, 4, 6, and 13 are not proposed to be impacted by mining activities under the Olen Corporation. The land will remain in ownership by the Prairie Lane Corporation once the Olen Corporation has completed the mining activities over the next 40 years. Prairie Lane Corporation does not wish to preserve the remaining portion of Wetland 4 as well as Wetlands 1, 2, 6, and 13 in perpetuity due to future land use planning. They would like the option to submit a permit modification or seek an additional Individual Section 401/404 permits if current market demands are present. The wetland area GIS shape files will be placed on the existing mining

map and they will be adequately flagged and staked in the field to ensure the areas are not inadvertently impacted by mining activities.

## **1.2 MINIMUM DEGRADATION ALTERNATIVE**

### **10a) Construction Details**

The minimum Degradation Alternative is a modification of the preferred alternative that avoids greater impacts to wetlands and provides a more ecologically beneficial mitigation opportunity while optimizing the site for future mining expansion. The mining operation has proposed to advance to the north allowing approximately 14 to 17 million tons of aggregate reserves to be mined. Mining operations will continue in the area designated as Open Water 4. First the topsoil will be removed from the upland area around Open Water 4 by bulldozers and placed in designated upland areas. Then a clamshell excavator will use a drop bucket method to excavate the sand and gravel from the bottom of Open Water 4. The excavated material is placed on a screen with a conveyor belt system and transferred to the plant. Overburden from the mining operations will be placed in designated areas throughout the site in order to reduce costs associated with hauling the material offsite. Effluent from the mining operations will continue to be pumped into the existing sediment basin. The USACE determined that the sediment basin met the definition of a temporary sediment basin as defined in the Clean Water Act exemptions (33 CFR 323.4 (a)).

Approximately 1.9 acres of jurisdictional wetlands will be impacted by excavation to facilitate the mining operation. It is not proposed to use bulldozers to remove the topsoil from the wetland areas; rather a clamshell excavator will be used.

### **10b) Biological and Physical Impacts on Water Quality**

Implementation of the minimum degradation alternative would result in a lowering of water quality of the onsite wetlands, however, the lowering of water quality is justified by the social and economic benefits of this project (refer to Section 10 h). Moreover, impacts to Wetlands 3, 5, 7, 12, 14, and 15 will be avoided. Best construction management practices will be implemented to minimize the preserved wetlands on site.

## **Impacts on Rare, Threatened, or Endangered Species**

### Ohio Department of Natural Resources Natural Heritage Database

According to NHD records maintained by the ODNR Division of Natural Areas and Preserves, there were no known occurrences of the following on the site:

- significant breeding/nonbreeding bird concentration areas;
- threatened or endangered species; and/or,
- high quality wetlands.

NDH indicated that The Schaefer Woods Wilderness Center and the Killbuck Marsh Wildlife Area are located within a one-mile radius of the site.

### Coordination with United States Fish & Wildlife Service (USFWS)

CEC received a letter from the USFWS on January 26, 2010 indicating that the proposed project lies within the range of the Indiana bat, the eastern prairie fringed orchid, the eastern massasagua, and the bald eagle. The following recommendations were made by the USFWS on each species as follows:

- Indiana bat – if the proposed project contains suitable habitat for the Indiana bat and trees are proposed to be cut, further coordination will be necessary to determine if surveys are necessary.
- Eastern prairie fringed orchid – if project site contains moist roadside ditches, sedge meadows, and wet prairies, the site needs to be examined to determine if suitable habitat is present. If suitable habitat is present, surveys will need to be conducted in July.
- Eastern massasagua- if the site contains wetlands, wet prairie, woodland or shrub edge habitat, the site will need to be examined to determine if suitable habitat is present.
- Bald eagle- the USFWS has determined that due to present onsite habitat, impacts to this species are not anticipated. Therefore, no further coordination is needed.

CEC submitted a habitat assessment report to the USFWS on March 16, 2010 based on our observations made during our delineation and review of additional available information. Our findings concluded that no occurrences of the federally-listed endangered Indiana bat, federal-candidate eastern massasagua, or the federally listed threatened eastern prairie fringed orchid were known within the site boundary. The proposed Olen Corporation mining expansion activities may affect, but is not likely to adversely affect, the Indiana bat, eastern massasagua, or the eastern prairie fringed orchid. In order to reduce the potential for take of Indiana bats, potentially suitable Indiana bat roost trees within the site will be removed between September 30 to April 1.

CEC received a response from the USFWS on April 6, 2010 indicating that they concurred with our findings and they do not anticipate impacts to the eastern massasagua, the eastern prairie fringed orchid or the bald eagle. They stated that seasonal tree cutting between September 30 and April 1 would reduce the potential effects of the Indiana bat.

#### 10c) **Cost Effectiveness**

The Minimum Degradation design is both technically feasible and cost effective. The alternative is reliable and no activities resulting in an increase in water quality impacts because of recurring operation or maintenance difficulties are anticipated.

#### 10 d) **Sewage Facility**

This Site is not part of a regional sewer line project.

#### 10 e) **Local Watershed Group**

The Muskingum Watershed Conservancy District is the largest watershed group in Ohio and covers the Killbuck Creek Watershed. Projects within the district include Brewster levee sanitary sewer improvements, flood mitigation projects and the Pleasant Hill slope stabilization project. There does not appear to projects in the immediate vicinity of the site.

#### **Proposed Projects for the Local Region**

The Ohio EPA conducted a study in 2008 (Ohio EPA Integrated Report) and categorized Killbuck Creek as a Category 5. Streams designated Category 5 are impaired and in need of a

TMDL. In 2009, the Ohio EPA completed the Final Study Plan for the Biological and Water Quality Survey of the Killbuck Creek Basin. The purpose of this study was to determine a TMDL model. Study sites were established at nine different locations to obtain a baseline of water chemistry values.

10 f) **Water Pollution Controls**

The Olen Corporation received authorization to discharge by the Ohio EPA under the NPDES on September 16, 2010. The permittee is authorized to discharge in accordance with limitations and monitoring requirements from outfall 3IJ00069001 until the expiration date of October 31, 2015. Part I, C- Schedule of compliance indicates that the permittee shall submit a complete 401/404 water quality application to the Ohio EPA Northeast District Office as soon as possible. Additionally, best management practices would be implemented throughout the duration of mining activities. The BMP's will consist of erosion controls such as silt fencing, temporary seeding, or mulching.

10 g) **Human Health Impacts**

Impacts to human health or significant water resources are not anticipated because of this project.

10 h, i, and j) **Jobs and Revenues Lost and Gained**

The purpose of this project is to expand an aggregate mining quarry in order to meet local aggregate market demands and provide jobs to the local economy. The social, economic, and environmental benefits are outlined in Section 1.1.

10 k) **Mitigation Techniques**

Minimum Degradation Alternative Mitigation Ratios

CEC proposes to compensate for impacts to 1.9 acres of jurisdictional wetlands by the purchase of 2.9 acres wetland mitigation credit from an approved wetland mitigation bank.

<b>ID</b>	<b>Delineated Size (Acreage)</b>	<b>Proposed Impact (Acreage)</b>	<b>Avoidance (Acreage)</b>	<b>Wetland Category</b>	<b>Proposed Mitigation</b>	<b>Proposed Mitigation Requirement</b>
Wetland 1	4.1	0	4.1	1	N/A	N/A
Wetland 2	0.1	0	0.1	1	N/A	N/A
Wetland 3	0.2	0	0.2	1	N/A	N/A
Wetland 4	4.7	1.0	3.7	1	1.5:1	1.5
Wetland 5	1.4	0	1.4	1/ 2 grey zone	N/A	N/A
Wetland 6	3.3	0	3.3	1	N/A	N/A
Wetland 7	0.6	0	0.6	1	N/A	N/A
Wetland 8	0.8	0	0.8	1/ 2 grey zone	N/A	N/A
Wetland 9*	0.8	0	0.8	1/ 2 grey zone	N/A	N/A
Wetland 10	3.0	0	3.0	1/ 2 grey zone	N/A	N/A
Wetland 11	15.0	0	15.0	1	N/A	N/A
Wetland 12	0.3	0	0.3	1/ 2 grey zone	N/A	N/A
Wetland 13	2.1	0	2.1	1	N/A	N/A
Wetland 14	0.06	0	0.06	1	N/A	N/A
Wetland 15	0.07	0	0.07	1	N/A	N/A
Open Water 2 Wetland	0.9	0.9	0	1	1.5:1	1.35
<b>Total Jurisdictional</b>	<b>36.53</b>	<b>1.90</b>	<b>34.63</b>			<b>2.85</b>
<b>Total Isolated</b>	<b>0.9</b>	<b>0</b>	<b>0.9</b>			<b>0</b>
<b>Total Wetlands</b>	<b>37.43</b>	<b>1.90</b>	<b>35.53</b>			<b>2.9*</b>

\*Mitigation requirement rounded to the nearest tenth

### Proposed Deed Restriction

Wetland areas onsite that are not proposed to be impacted will be protected through a combination of avoidance measures. Wetlands 8, 9, 10, and 11 will be protected in perpetuity through a deed restriction. The deed restriction will consist of the wetland acreage and an additional 25 foot buffer around the perimeter of the wetlands. The purpose of the deed restriction is to protect the chemical, biological, and physical characteristics of the wetlands before, during, and after mining activities. Activities prohibited in the deed restricted areas will be land surface alterations; including removal of soil, sand, gravel and minerals, construction

activities; including buildings, structures, roads, parking lots, etc., and cutting vegetation; including cutting of trees, using herbicides, and mowing. The deed restriction will be recorded in the official records of Wayne County, Ohio.

Wetlands 1-3, the remaining portion of Wetland 4, Wetland 7 and 13-15 are not proposed to be impacted by mining activities under the Olen Corporation. The land will remain in ownership by the Prairie Lane Corporation once the Olen Corporation has completed the mining activities over the next 40 years. Prairie Lane Corporation does not wish to preserve Wetlands 1-3, the remaining portion of Wetland 4, Wetland 7 and 13-15 in perpetuity due to future land use planning. They would like the option to submit a permit modification or seek an additional Individual Section 401/404 permits if current market demands are present. The wetland area GIS shape files will be placed on the existing mining map and they will be adequately flagged and staked in the field to ensure the areas are not inadvertently impacted by mining activities.

### **1.3 NON DEGRADATION ALTERNATIVE**

#### **10a) Construction Details**

The Non-Degradation Alternative would greatly reduce the acreage available to mine several million tons of aggregate reserves throughout the site. This reduction in available aggregate reserves would result in less environmental impacts however; it does not provide an economically viable alternative that would sustain costs associated with the mining operation. No impacts to the waters onsite will occur.

#### **Impacts on Rare, Threatened, or Endangered Species**

##### Ohio Department of Natural Resources Natural Heritage Database

According to NHD records maintained by ODNR Division of Natural Areas and Preserves, there were no known occurrences of the following on the site:

- significant breeding/nonbreeding bird concentration areas;
- threatened or endangered species; and/or,
- high quality wetlands.

NDH indicated that The Schaefer Woods Wilderness Center and the Killbuck Marsh Wildlife Area are located within a one-mile radius of the site.

#### Coordination with United States Fish & Wildlife Service (USFWS)

CEC received a letter from the USFWS on January 26, 2010 indicating that the proposed project lies within the range of the Indiana bat, the eastern prairie fringed orchid, the eastern massasagua, and the bald eagle. The following recommendations were made by the USFWS on each species as follows:

- Indiana bat – if the proposed project contains suitable habitat for the Indiana bat and trees are proposed to be cut, further coordination will be necessary to determine if surveys are necessary.
- Eastern prairie fringed orchid – if project site contains moist roadside ditches, sedge meadows, and wet prairies, the site needs to be examined to determine if suitable habitat is present. If suitable habitat is present, surveys will need to be conducted in July.
- Eastern massasagua- if the site contains wetlands, wet prairie, woodland or shrub edge habitat, the site will need to be examined to determine if suitable habitat is present.
- Bald eagle- the USFWS has determined that due to present onsite habitat, impacts to this species are not anticipated. Therefore, no further coordination is needed.

CEC submitted a habitat assessment report to the USFWS on March 16, 2010 based on our observations made during our delineation and review of additional available information. Our findings concluded that no occurrences of the federally-listed endangered Indiana bat, federal-candidate eastern massasagua, or the federally listed threatened eastern prairie fringed orchid were known within the site boundary. The proposed Olen Corporation mining expansion activities may affect, but is not likely to adversely affect, the Indiana bat, eastern massasagua, or the eastern prairie fringed orchid. In order to reduce the potential for take of Indiana bats, potentially suitable Indiana bat roost trees within the site will be removed between September 30 to April 1.

CEC received a response from the USFWS on April 6, 2010 indicating that they concurred with our findings and they do not anticipate impacts to the eastern massasagua, the eastern prairie fringed orchid or the bald eagle. They stated that seasonal tree cutting between September 30 and April 1 would reduce the potential effects to the Indiana bat.

#### 10c) **Cost Effectiveness**

The Non-degradation Alternative does not provide an economically viable alternative to the preferred alternative and falls short of satisfying the basic project purpose for the following reasons;

- (1) Available acreage would be greatly reduced and would prevent mining 7 to 10 million tons of aggregate reserves throughout the site.
- (2) The loss of 7 to 10 million tons of mining reserves would equate to a loss of 40 to 70 million dollars' worth of revenue.

#### 10 d) **Sewage Facility**

This Site is not part of a regional sewer line project.

#### 10 e) **Local Watershed Group**

The Muskingum Watershed Conservancy District is the largest watershed group in Ohio and covers the Killbuck Creek Watershed. Projects within the district include Brewster levee sanitary sewer improvements, flood mitigation projects and the Pleasant Hill slope stabilization project. There does not appear to projects in the immediate vicinity of the site.

#### **Proposed Projects for the Local Region**

The Ohio EPA conducted a study in 2008 (Ohio EPA Integrated Report) and categorized Killbuck Creek as a Category 5. Streams designated Category 5 are impaired and in need of a TMDL. In 2009, the Ohio EPA completed the Final Study Plan for the Biological and Water Quality Survey of the Killbuck Creek Basin. The purpose of this study was to determine a TMDL model. Study sites were established at nine different locations to obtain a baseline of water chemistry values.

10 f) **Water Pollution Controls**

The Olen Corporation received authorization to discharge by the Ohio EPA under the NPDES on September 16, 2010. The permittee is authorized to discharge in accordance with limitations and monitoring requirements from outfall 3IJ00069001 until the expiration date of October 31, 2015. Part I, C- Schedule of compliance indicates that the permittee shall submit a complete 401/404 water quality application to the Ohio EPA Northeast District Office as soon as possible. Additionally, best management practices would be implemented throughout the duration of mining activities. The BMP's will consist of erosion controls such as silt fencing, temporary seeding, or mulching.

10 g) **Human Health Impacts**

Impacts to human health or significant water resources are not anticipated because of this project.

10 h & i) **Jobs and Revenues Lost and Gained**

See the Social Economic Justification Table in the preferred alternative Section 1.1 subsection 10 h & i.

10 j) **Environmental Benefits Lost or Gained**

Although this alternative would not create permanent impacts to on-site wetlands and open ditches, it would prevent the environmental beneficial opportunity to create additional wetland within the Killbuck Marsh Wildlife Area.

10 k) **Mitigation Techniques**

No impacts will take place under this alternative; therefore, a mitigation plan will not be developed.

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**ALTERNATIVES ANALYSIS DRAWINGS**

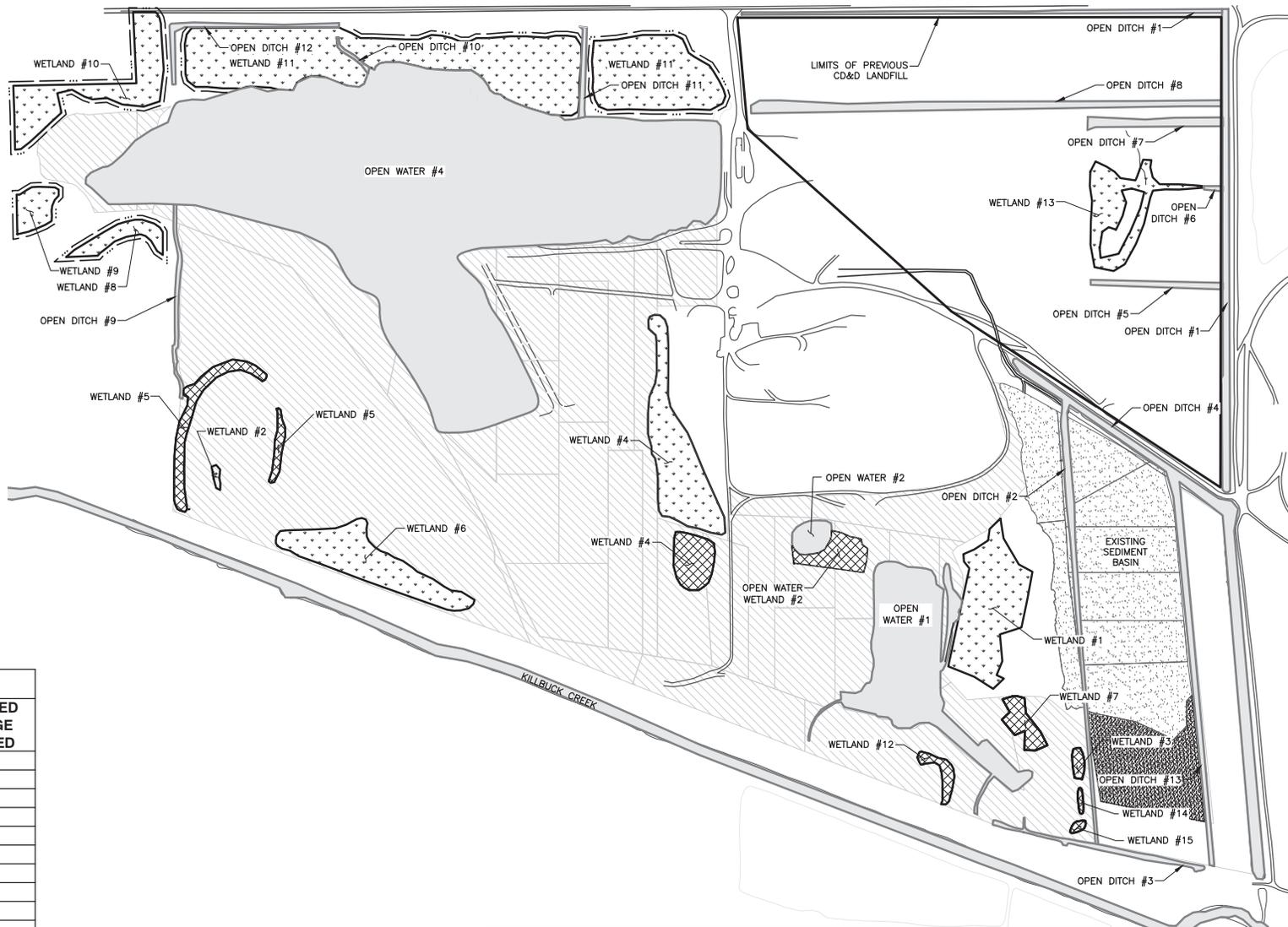
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NORTH

**LEGEND**

- EXISTING WETLANDS
- EXISTING SEDIMENT BASIN
- OPEN WATERS
- PROPOSED SEDIMENT BASIN EXPANSION
- PROPOSED MINING ACTIVITY
- PROPOSED IMPACTS BY EXCAVATION
- WETLANDS TO BE PRESERVED
- LIMITS OF PREVIOUSLY PERMITTED CD&D LANDFILL



**WETLAND TABLE**

WETLAND ID	TOTAL ACREAGE ON SITE	PROPOSED ACREAGE IMPACTED
WETLAND 1	4.1	0
WETLAND 2	0.1	0
WETLAND 3	0.2	0.2
WETLAND 4	4.7	1.0
WETLAND 5	1.4	1.4
WETLAND 6	3.3	0
WETLAND 7	0.6	0.6
WETLAND 8	0.8	0
WETLAND 9	0.8	0
WETLAND 10	3.0	0
WETLAND 11	15.0	0
WETLAND 12	0.3	0.3
WETLAND 13	2.1	0
WETLAND 14	0.06	0.06
WETLAND 15	0.07	0.07
OPEN WATER 2 WETLAND	0.9	0.9
<b>TOTALS</b>	<b>37.43</b>	<b>4.53</b>

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 www.cecinc.com

THE OLEN CORPORATION  
 AGGREGATE MINING EXPANSION  
 PREFERRED DEGRADATION  
 ALTERNATIVE  
 WOOSTER, WAYNE COUNTY, OHIO

DRAWN BY: TJH	CHECKED BY: JMV	APPROVED BY: JCD*	FIGURE NO.: 1
DATE: 2/27/2014	DWG SCALE: N.T.S.	PROJECT NO: 091-532	

\* HAND SIGNATURE ON FILE

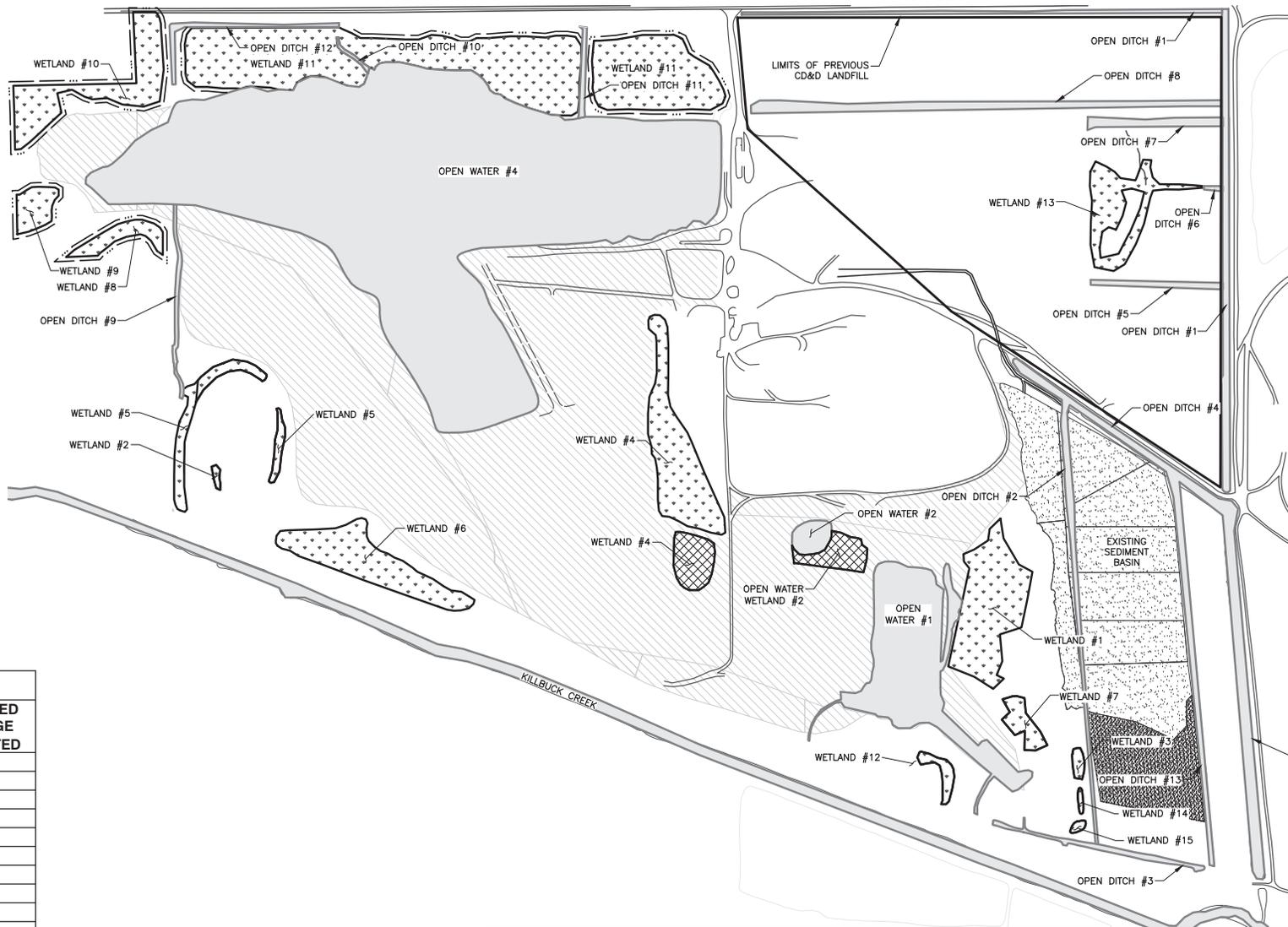
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NORTH

**LEGEND**

- EXISTING WETLANDS
- EXISTING SEDIMENT BASIN
- OPEN WATERS
- PROPOSED SEDIMENT BASIN EXPANSION
- PROPOSED MINING ACTIVITY
- PROPOSED IMPACTS BY EXCAVATION
- WETLANDS TO BE PRESERVED
- LIMITS OF PREVIOUSLY PERMITTED CD&D LANDFILL



**WETLAND TABLE**

WETLAND ID	TOTAL ACREAGE ON SITE	PROPOSED ACREAGE EXCAVATED
WETLAND 1	4.1	0
WETLAND 2	0.1	0
WETLAND 3	0.2	0
WETLAND 4	4.7	1.0
WETLAND 5	1.4	0
WETLAND 6	3.3	0
WETLAND 7	0.6	0
WETLAND 8	0.8	0
WETLAND 9	0.8	0
WETLAND 10	3.0	0
WETLAND 11	15.0	0
WETLAND 12	0.3	0
WETLAND 13	2.1	0
WETLAND 14	0.06	0
WETLAND 15	0.07	0
OPEN WATER 2 WETLAND	0.9	0.9
<b>TOTALS</b>	<b>37.43</b>	<b>1.90</b>

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**THE OLEN CORPORATION**  
AGGREGATE MINING EXPANSION  
MINIMAL DEGRADATION ALTERNATIVE  
WOOSTER, WAYNE COUNTY, OHIO

DRAWN BY: TJH	CHECKED BY: JMV	APPROVED BY: JCD*	FIGURE NO.: 2
DATE: 02/27/2014	DWG SCALE: N.T.S.	PROJECT NO: 091-532	

\* HAND SIGNATURE ON FILE

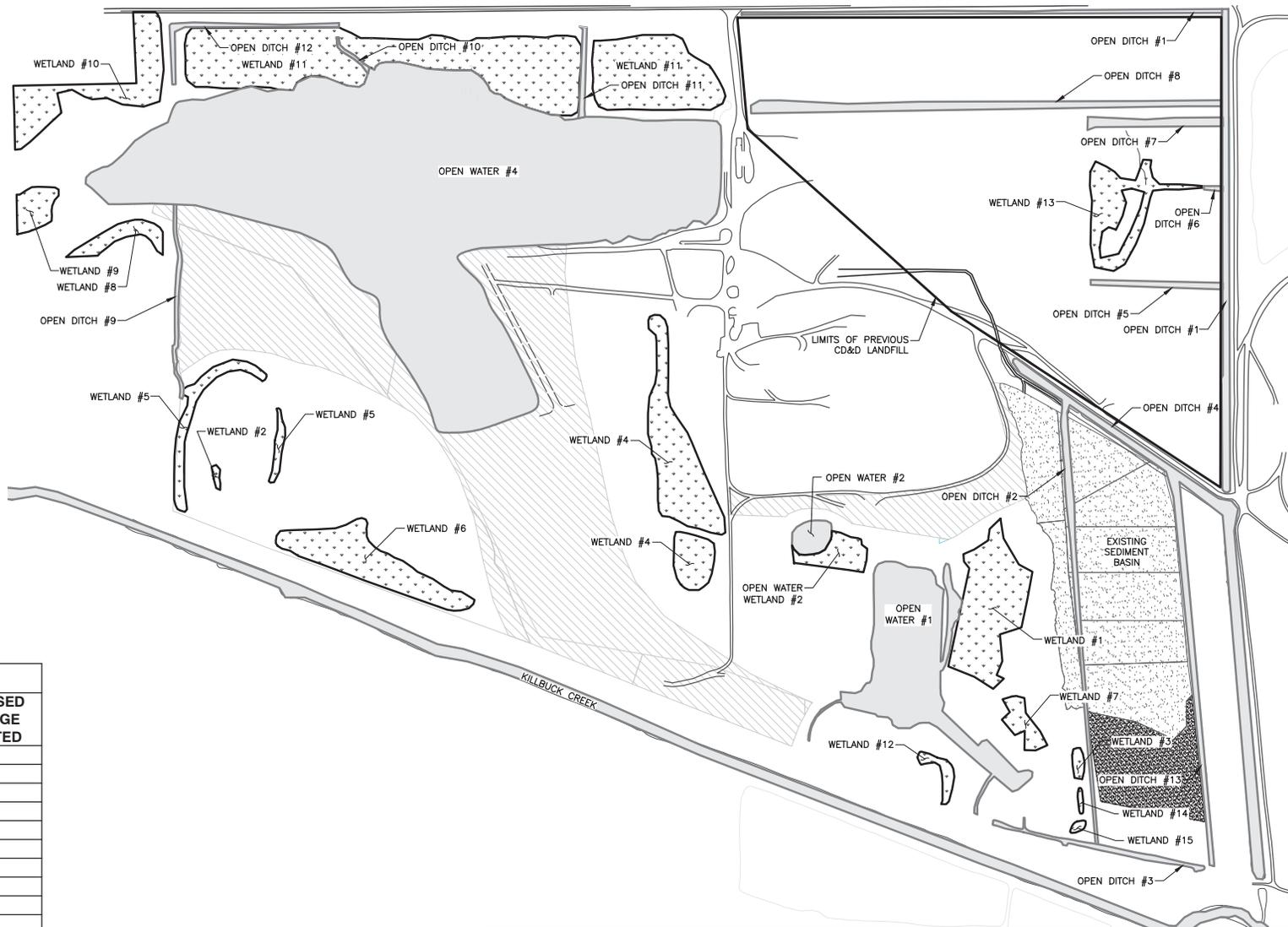
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NORTH

**LEGEND**

- LIMITS OF PREVIOUSLY PERMITTED CD&D LANDFILL
- EXISTING WETLANDS
- EXISTING SEDIMENT BASIN
- OPEN WATERS
- PROPOSED SEDIMENT BASIN EXPANSION
- PROPOSED MINING ACTIVITY



**WETLAND TABLE**

WETLAND ID	TOTAL ACREAGE ON SITE	PROPOSED ACREAGE IMPACTED
WETLAND 1	4.1	0
WETLAND 2	0.1	0
WETLAND 3	0.2	0
WETLAND 4	4.7	0
WETLAND 5	1.4	0
WETLAND 6	3.3	0
WETLAND 7	0.6	0
WETLAND 8	0.8	0
WETLAND 9	0.8	0
WETLAND 10	3.0	0
WETLAND 11	15.0	0
WETLAND 12	0.3	0
WETLAND 13	2.1	0
WETLAND 14	0.06	0
WETLAND 15	0.07	0
OPEN WATER 2 WETLAND	0.9	0
<b>TOTALS</b>	<b>37.43</b>	<b>0.0</b>

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 NON DEGRADATION ALTERNATIVE  
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DRAWN BY: TJH | CHECKED BY: JMV | APPROVED BY: JCD\* | FIGURE NO.: **3**  
 DATE: 02/28/2014 | DWG SCALE: N.T.S. | PROJECT NO: 091-532

\* HAND SIGNATURE ON FILE

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