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Cincinnati, OH 45241
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October 13, 2017

Ms. Lee Robinette
U.S. Army Corp of Engineers
502 Eighth Street
Huntington, WV 25701

Subject: Pre-Construction Notification Under Nationwide Permit 38
Hydraulic Canal Remedial Activity – Sediment Capping
Former STM Property
810 First Street, Middletown, OH

Dear Ms. Robinette:

ATC Group Services LLC (ATC) is acting on behalf of the City of Middletown in submitting this Pre-Construction Notification under Nationwide 38 Permit for the above-referenced project. Figures that identify the general site vicinity and the specific affected area of the canal are attached. Background information and project specifics are outlined in the following sections.

BACKGROUND INFORMATION

The City ("Permittee") elected to perform a "voluntary action" remediation of the Former STM Property under Ohio's Voluntary Action Program (VAP) statute, O.R.C. Ch. 3746, pursuant to a Clean Ohio Revitalization Fund (CORF) grant. The on-site voluntary action remedial work was completed and a "No Further Action" (NFA) letter was submitted to the Ohio Environmental Protection Agency (OEPA) by the City's VAP Certified Professional during January, 2016.

On March 31, 2016, OEPA requested that the City conduct an ecological assessment of a hydraulic canal adjacent to the Property. Findings from such assessment were included in a response submitted on May 6, 2016. On October 21, 2016, OEPA requested that the City conduct further evaluation of the canal.

Such work has been performed with findings communicated to OEPA since that time. Based upon this evaluation, OEPA has requested that the City perform capping of a defined area of the hydraulic canal sediment bed as part of its voluntary action. OEPA has indicated that this limited capping remedy for the canal (as discussed below) will be sufficient to facilitate the issuance of a Covenant-Not-To-Sue (CNS) to the City for the Property under the VAP.

The hydraulic canal is a man-made structure that was created in the 1800's to serve the paper mill industry in Middletown. The Great Miami River was dammed approximately two miles upflow of the subject property to divert water into the canal. The dam failed approximately 20 years ago. Water is present in the canal year-round, with its level governed by river stage. Flow in the canal is minimal.

REMEDIAL ACTIVITY

The planned remedy entails capping of sediment over an approximate 250 feet long by 50 feet wide section of the canal (see "Proposed Hydraulic Canal Remedial Area" figure and photographs of the subject area - attached). AquaBlok® will be applied over the subject area (12,500 square feet) in an approximate 6-inch thickness (total of approximately 250 cubic yards).

AquaBlok is a patented, composite-aggregate technology resembling small stones comprised of a dense aggregate core, clay or clay-sized materials and polymers. For typical freshwater product formulations, AquaBlok's clay (sealant) component consists largely of bentonite. The particles congeal upon hydration to form a low permeability barrier. The specific application in this case is to contain impacted sediments, thereby improving ecological conditions over the subject portion of the canal. AquaBlok hardens and sets immediately upon application.

AquaBlok placement would be performed through the use of a trackhoe, using one-ton super sacks of AquaBlok, dispersed over the subject area sequentially using a telebelt and/or slinger unit. AquaBlok thickness will be field-verified upon initial placement, then checked 30 days later to verify that it remains intact.

PERMIT APPLICABILITY

The Great Miami River watershed is a "high quality watershed" as identified by OEPA. It is our understanding that a Qualitative Habitat Evaluation Index (QHEI) would be required for the capping activity, given the canal's location within a high quality watershed. We are prepared to submit a QHEI to OEPA upon confirmation of appropriate permitting requirements.

It is our understanding that the subject project could be conducted under Nationwide Permit 38. NWP 38 applies to specific activities required to effect the containment, stabilization, or removal of hazardous or toxic waste materials. The hydraulic canal capping project requested by Ohio EPA is for the purpose of containing and stabilizing impacted sediments within the canal. The Decision Document for NWP 38 notes that in projects permitted thereunder, the "original substrate will be removed or covered by other material, such as concrete, asphalt, soil, gravel, etc." Sec. 6.2.3(a) at p. 32. Therefore, this project is within the scope of NWP 38.

Accordingly, the City hereby submits this Pre-Construction Notification under NWP 38 for the project and requests the Corps' concurrence that the subject remedial activity may be permitted under NWP 38.



Please do not hesitate to contact us if you have any questions or need additional information about the project. Thanks in advance for your timely response.

Sincerely,

ATC Group Services LLC

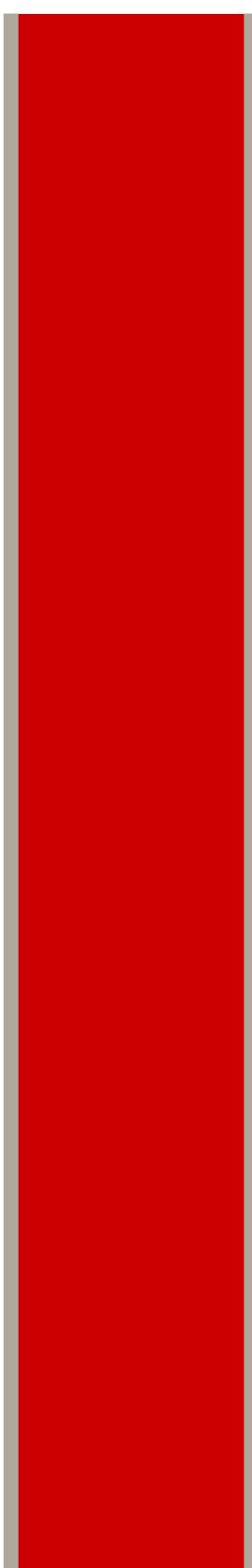
William A. Norris
Project Geologist

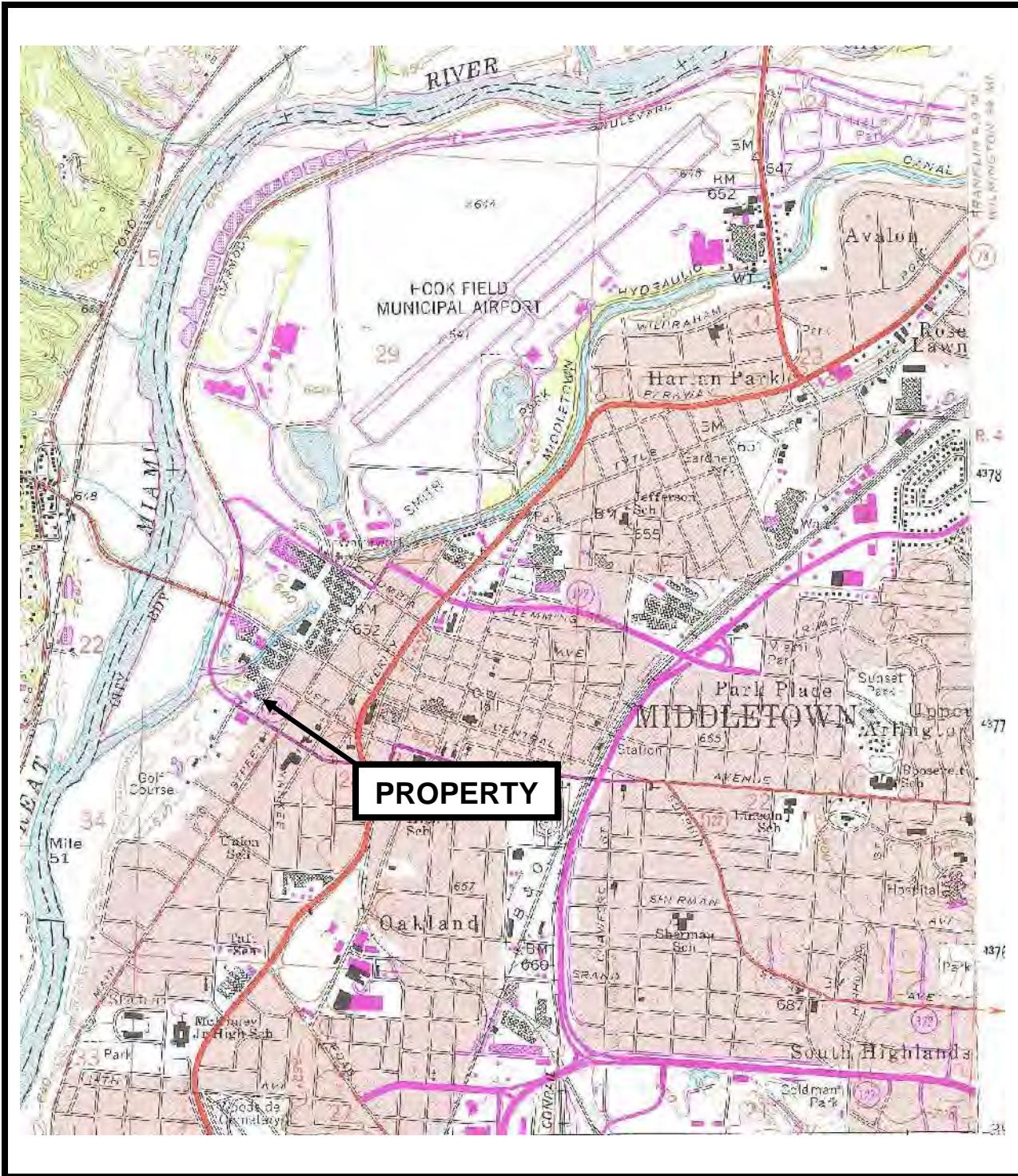
Michael J. Luessen, P.G./C.P.
Principal Geologist

Attachments (2)

C: L. Landen, City of Middletown
H. Kallipolitis, OEPA

Figures





SOURCE: USGS 7.5 Minute Series Topographic Map of Middletown, Ohio Quadrangle, 1959, photorevised 1981.

PROPERTY VICINITY MAP
 VAP No Further Action Letter
 Former STM, Inc. Property
 810 First Avenue
 Middletown, Ohio

PROJECT NO. Z072000145	DATE: 11-23-15	DRAWN BY: WAN	REVIEWED BY: WAN
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SCALE:
1 in. ~ 2000 ft.

FIGURE:
1

ATC

Exhibit C-1

N
↑



11121 Canal Road
Cincinnati, Ohio 45241
(513) 771-2112

**Proposed Hydraulic Canal
Remedial Area**
Former STM Property
810 First Avenue
Middletown, Ohio

Project No: Z072000145

Date: February 2017

Drawn By: WAN

Reviewed By: ML

Scale: 1" = 100'

Photographs of Canal Area

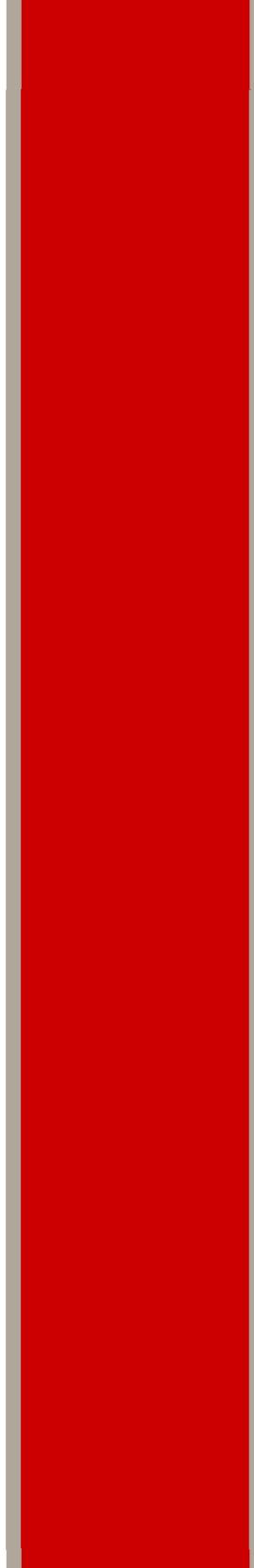


Exhibit C-1
HYDRAULIC CANAL – SEDIMENT CAPPING
Former STM Property
810 First Avenue Middletown, OH



Photo 1: View northeast of proposed remedial area. Area terminates at railroad bridge (second bridge in distance)



Photo 2: View to southwest at northeast terminus of remedial area (downstream of railroad bridge, away from the viewer)



Photo 3: Proposed Remedial Area, looking northeast



Photo 4: View to southwest (downstream) of proposed remedial area in canal



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11121 Canal Road
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Telephone 513-771-2112
Fax 513-782-6908

March 2, 2018

Mr. Andrew Wendt
U.S. Army Corp of Engineers
10557 McKelvey Road
Cincinnati, OH 45240-3929

**Subject: Pre-Construction Notification Under Nationwide Permit 38 – Addendum
Hydraulic Canal Remedial Activity – Sediment Capping
Former STM Property
810 First Street, Middletown, OH**

Dear Mr. Wendt:

ATC Group Services LLC (ATC) is acting on behalf of the City of Middletown in submitting this Pre-Construction Notification addendum under Nationwide 38 Permit for the above-referenced project. The notification is issued in addendum to an original notification submitted on October 13, 2017, in general response to your email issued October 18, 2017.

Your correspondence identified three areas for which additional information was requested: i) demonstration that the remedial actions would not affect endangered species and/or critical habitat areas, ii) demonstration that remedial actions would not affect cultural resources or historic properties and iii) proof that the activity is being performed, ordered or sponsored by a government agency with established legal or regulatory authority. Each area is addressed separately in the following sections.

ENDANGERED SPECIES/CRITICAL HABITAT EVALUATION

ATC contracted with Cardno, Inc. of Cincinnati, Ohio to perform a threatened and endangered species evaluation of the subject project area. Cardno's findings are outlined below.

- The site contains poor habitat for the federally endangered Running buffalo clover and Rayed bean mussel.
 - The entire study area was surveyed and no potential clover habitat was identified within or adjacent to the project area.
 - The hydraulic canal is a manmade waterbody, and appeared stagnant with poor substrate (90% silt) that is not likely to support mussel habitat. No indicators of mussel species were found.
- The site contains moderate quality habitat for the federally-endangered Indiana bat and federally-endangered northern long-eared (NLE) bat. Habitat minimization measures will be taken to avoid disturbing potential Indiana and NLE bat habitat at this site. These minimization efforts include selective tree/shrub removal and seasonal



clearing practices. All trees greater than 4" diameter at breast height (DBH) will be mechanically removed prior to March 31, 2018.

A complete copy of Cardno's report is included as Attachment A.

CULTURAL RESOURCE/HISTORIC PROPERTY EVALUATION

ATC contracted with Cardno, Inc. of Cincinnati, Ohio to perform cultural resource and historic property evaluation of the subject project area. Cardno's findings are outlined below.

- The closest archaeological site identified is 0.4 miles northwest of the project area across the Great Miami River.
- NHRP historic districts, NRHP structures, DOE structures, historic structures, and cemetaries were identified within one-mile of the project area. None are within or adjacent to the project area.
- Cultural resources that may have been present within the canal footprint would have been displaced and/or eroded during canal construction. Thus, the proposed activities are not likely to impact cultural resources.

A complete copy of Cardno's report is provided as Attachment B.

REGULATORY GOVERNANCE

The project is being performed as a supplemental environmental project (SEP) per Section VI and Appendix D of a Consent Decree (CD) signed by both U.S.EPA and Ohio EPA. The proposed CD was lodged with the court on February 9, 2018 and is awaiting entry by the court; a file-stamped copy is attached (Attachment C).

Please do not hesitate to contact us if you have any questions or need additional information about the project. Thanks in advance for your timely response.

Sincerely,

ATC Group Services LLC


William A. Norris
Senior Project Geologist



Michael J. Luessen, P.G./C.P.
Principal Geologist

Attachments (3)

C: S. Fox, City of Middletown
H. Kallipolitis, OEPA

Attachment A:

Threatened and Endangered Species Evaluation



January 4, 2018

Andrew Wendt
U.S. Army Corps of Engineers - Huntington District,
Regulatory Division, North Branch Cincinnati Field Office
10557 McKelvey Road
Cincinnati, OH 45240-3929

Cardno
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USA
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**RE: STM Property Hydraulic Canal Remedial Activities
Threatened and Endangered Species Consultation
City of Middletown, Butler County, Ohio
Corps Project ID: LRH-2017-892-GMR**

Dear Mr. Wendt:

As part of the STM Property Hydraulic Canal Remedial Activities Project (herein "the Project"), the City of Middletown, OH plans to remediate a portion of the Middletown Hydraulic Canal by installing block matting to cap contaminants from surface water flow. The planned remedy entails the capping of sediment over an approximate 250 feet long by 50 feet wide section of the canal (see original PCN prepared by ATC Associates). AquaBlok® will be applied over the subject area (12,500 square feet) in an approximate 6-inch thickness (total of approximately 250 cubic yards).

The project area is located at the former STM Property, 810 First Avenue in Middletown, Ohio. The project consists of 1.28 ha (3.16 ac) of wooded and maintained grassy areas, one perennial stream (canal), and gravel pads. The canal forms the western boundary of the project area, and corresponds to the area that will be remediated as a result of the project. A portion of the project area will also be utilized as a staging area and access for the canal remediation. The location of the proposed Project is depicted on the attached USGS 7.5-minute topographic map excerpt (Figure 1).

In response to a request from ATC Associates, Cardno botanists and wildlife biologists conducted a habitat assessment to identify the presence of regulated waters, potential Indiana bat (*Myotis sodalis*) and Northern long-eared bat (*Myotis septentrionalis*) habitat, and the presence of federally endangered Running buffalo clover (*Trifolium stoloniferum*) and Rayed bean mussel (*Villosa fimbialis*) habitat within the proposed Project area. The fieldwork for this investigation was conducted on December 27, 2017.

In accordance with your request for additional information dated 10/13/2017, and in accordance with the USFWS Section 7 ESA coordination requirements; the Project area and its habitat characteristics has been summarized for you below.

1. Location data including latitude and longitude of the project area, site address, and county.

Former STM Property
810 First Avenue
City of Middletown, Butler County, Ohio
Coordinates: 39.5164, -84.4071

2. A detailed project description, including layout of any new construction.

The proposed remedial activities project will be conducted adjacent to and on the former STM Property located at 810 First Avenue, Middletown, Ohio (39.5164, -84.4071). The City of Middletown, OH plans to remediate a portion of the Middletown Hydraulic Canal and install block matting to cap contaminants from surface water flow.

The planned remedy entails capping of sediment over an approximate 250 feet long by 50 feet wide section of the canal (see original PCN prepared by ATC Associates). AquaBlok® will be applied over the subject area (12,500 square feet) in an approximate 6-inch thickness (total of approximately 250 cubic yards). The Project also involves attendant features including construction access and material storage areas as shown in the attached figure(s).

The total survey area includes 1.28 ha (3.16 ac) of wooded and maintained grassy areas, as well as approximately 415 linear feet of the Middletown Hydraulic Canal, bordering the western portion of the property.

3. A detailed description of onsite habitat, including the size, location, and quality of streams, wetlands, forested areas, and other natural areas, and proposed impacts.

The Middletown Hydraulic Canal is a perennial waterbody, directly connected to the Great Miami River, a traditional navigable water (TNW). Therefore, the Middletown Hydraulic Canal should be considered a jurisdictional 'water of the U.S.' No wetlands or other regulated waters were identified within the Project study area.

The proposed hydraulic canal remedial activities project will occur within the canal itself. Site access will be located within areas comprised of urban/industrial turf and secondary growth forest vegetation assemblages.

The entire project area was surveyed for the presence of Running buffalo clover (RBC), Rayed bean mussel, Indiana and Northern long-eared (NLE) bat habitat during the December 28, 2017 field investigation. RBC requires periodic disturbance and a somewhat open habitat to successfully flourish, but it cannot tolerate full-sun, full-shade, or severe disturbance. The species is found in partially shaded woodlots, mowed areas (lawns, parks, cemeteries), and along streams and trails (USFWS, 2013). No clover species were encountered during the habitat assessment. No RBC habitat, individuals, or populations were identified within or directly adjacent to the project area. The rayed bean mussel generally lives in smaller, headwater streams, but is sometimes found in large rivers and wave-washed areas of glacial lakes. It prefers gravel or sand substrates (USFWS, 2012). No freshwater mussel species or habitat were identified during the habitat assessment. Indiana and NLE bats hibernate during winter in caves or, occasionally, in abandoned mines. Indiana bats migrate to their summer habitat in wooded areas where they usually roost under loose tree bark on dead or dying trees. NLE bats roost underneath bark,

in cavities of both live and dead trees (USFWS, 2015). Moderate quality habitat for both bat species was observed during the field visit. The stream and potential Indiana and NLE bat habitat are shown in relation to the Project area on Figure 2, attached. A brief description of each vegetation assemblage is provided below.

Urban/industrial turf: The urban/industrial turf vegetation assemblage was located along the eastern portion of the project area. The areas appeared to be regularly maintained and received full-sun. Dominant species consisted of Tall Fescue (*Festuca arundinacea*), Queen Anne's Lace (*Daucus carota*), Red Clover (*Trifolium pratense*), English Plantain (*Plantago lanceolata*), White Paniced American-Aster (*Sympyotrichum lanceolatum*), and Johnson Grass (*Sorghum halepense*). No RBC habitat was identified by Cardno.

Secondary growth forest: Secondary growth forest vegetation assemblage was located along northern and western property boundaries. Dominant vegetation included Black Walnut (*Juglans nigra*), Slippery Elm (*Ulmus rubra*), Sugar Maple (*Acer saccharum*), Maple Species (*Acer spp.*), Black Locust (*Robinia pseudoacacia*), American Sycamore (*Platanus occidentalis*), Common Hackberry (*Celtis occidentalis*), Tree-of-Heaven (*Ailanthus altissima*), Catalpa (*Catalpa speciosa*), and Eastern Cottonwood (*Populus deltoides*). Understory vegetation consisted of Amur Honeysuckle (*Lonicera maackii*), Japanese Honeysuckle (*Lonicera japonica*), Bradford Pear (*Pyrus calleryana*), Common Mullein (*Verbascum thapsus*), Smooth Sumac (*Rhus glabra*), Johnson Grass (*Sorghum halepense*), Common Evening Primrose (*Oenothera biennis*), American Pokeweed (*Phytolacca americana*), White Paniced American-Aster (*Sympyotrichum lanceolatum*), and Canadian Goldenrod (*Solidago canadensis*).

Regulated Waters: One perennial stream (Middletown Hydraulic Canal) was identified on the Project site. The stream borders the western portion of the property, with approximately 415 linear feet flowing within the Project area. The stream substrate was predominately silt (approximately 95 percent), with gravel, artificial materials, and vegetative debris constituting the remaining substrate types. The stream had a top of bank (TOB) width of approximately 35 to 40 feet and a TOB depth of 4 feet. The stream had an Ordinary High Water Mark (OHWM) of approximately 20 feet and a depth of 15 feet. The stream flows into the Great Miami River north of State Route 73 (39.5416, -84.6259). Due to the high silt content of the stream substrate, this stream is not suitable freshwater mussel habitat.

4. A description of the forested habitat onsite, including type of forest, and presence of dead trees, split branches or trunks, and exfoliating bark, and proposed impacts.

The Project footprint consists of urban/industrial turf and upland deciduous forest vegetation assemblages. Dominant tree species within the upland deciduous-scrub/shrub portion of the survey area include: Black Walnut, Slippery Elm, Sugar Maple, Maple Species, American Sycamore, Black Locust, Common Hackberry, Tree-of-Heaven, Southern Catalpa, and Eastern Cottonwood.

Potential Indiana and NLE bat habitat was identified within the forested habitat that borders the northern, western, and southern portions of the Project area. Dead tree snags and split branches or trunks were noted throughout the project area within the upland deciduous forest scrub/shrub assemblage. Average diameter at breast height (DBH) was 42.5 inches (14"-73" range). Approximately 0.15 acres of tree clearing may be required along the western boundary of the Project area.



Measures should be taken to avoid disturbing potential Indiana and NLE bat habitat at this site. These minimization efforts include selective tree/shrub removal and seasonal clearing practices. All trees greater than 4" DBH must be mechanically removed prior to March 31, 2018.

5. Photographs representative of all cover types on the site and encompassing views of the entire site.

See the attached photograph log.

6. Conclusion

Based on the physical site characteristics, the site contains poor habitat for the federally endangered Running buffalo clover and Rayed bean mussel. The entire study area was surveyed and no potential clover habitat was identified within or adjacent to the Project area. Further, the Middletown Hydraulic Canal is a manmade waterbody, and appeared stagnant with poor substrate (90% silt) that is not likely to support mussel habitat. No indicators of mussel species were found.

Based on the geographical setting (near the Great Miami River) and woody species composition, the site contains moderate quality habitat for the federally endangered Indiana bat and federally endangered NLE bat. The USFWS is likely to conclude that the project has the potential to affect these species and/or their habitat unless minimization efforts are performed.

Therefore, Cardno recommends that habitat minimization measures be taken to avoid disturbing potential Indiana and NLE bat habitat at this site. These minimization efforts include selective tree/shrub removal and seasonal clearing practices. All trees greater than 4" DBH should be mechanically removed prior to March 31, 2018.

We have prepared this habitat evaluation in accordance with the Corps' October 18, 2017 "request for additional information." This documentation should help the Corps in their coordination process with the USFWS regarding Section 7 ESA requirements. Enclosed for your review are the project location map, aerial map and photograph log.

If you have any questions concerning this request or would like additional information, please do not hesitate to contact me at (513) 309-6550 or Amy.Cameron@cardno.com.

Sincerely,

Amy Cameron
Field Ecologist
for Cardno Inc.

Corrine A. Jansing, PWS
Botanist, Project Scientist
for Cardno, Inc.

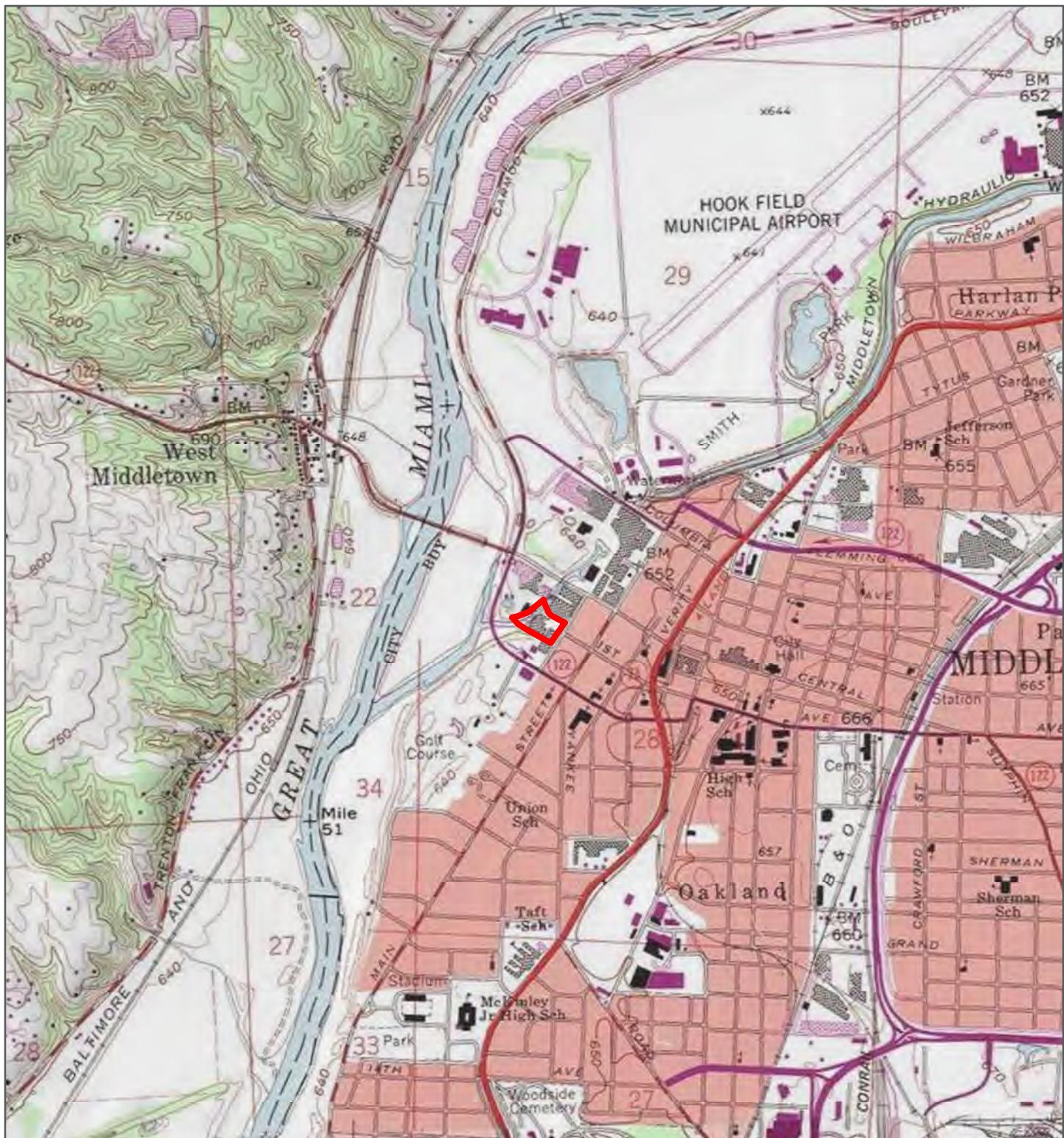
Enc: USGS map, Aerial Map, Photo Log



ATTACHMENTS:

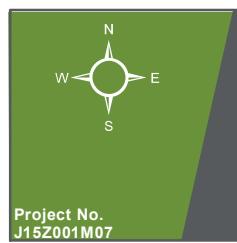
PROJECT LOCATION MAP
PROJECT AERIAL MAP
PHOTOGRAPH LOG

Exhibit C-2



0 2,250
Feet

Project Location



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Figure 1: Project Location Map

Endangered and Threatened Species Review
STM Property Hydraulic Canal Remedial Activities
ATC Group Services
Butler County, Ohio

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Shaping the Future

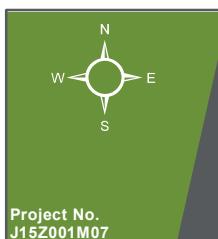
11121 Canal Road, Cincinnati, OH 45241 USA
Phone (+1) 513-489-2402 Fax (+1) 513-489-2404
www.cardno.com

Exhibit C-2



0 180 Feet

— Delineated Stream Potential IB and NLEB Habitat Project Location
— Ditch Areas to be Cleared



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Figure 2: Project Aerial Map

Endangered and Threatened Species Review
STM Property Hydraulic Canal Remedial Activities
ATC Group Services
Butler County, Ohio

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Photo 1: Overview of site from access road, facing west.



Photo 2: Overview of site from access road, facing north.



Photo 3: Overview of site from Northwest corner, facing east.



Photo 4: Overview of site from Northwest corner, facing south.

Project Number:
J15Z001M07

Site Photographs

STM Property Hydraulic Canal Remedial Activities
Butler County, Ohio
Threatened and Endangered Species Survey

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Photo 5: Overview of urban/industrial turf, facing east.



Photo 6: View of upland deciduous forest scrub/shrub, facing west.



Photo 7: View of upland deciduous forest scrub/shrub, facing east.



Photo 8: View of upland deciduous forest scrub/shrub, facing south.



Photo 9: View of Existing Equipment Access Route, facing west.



Photo 10: View of Existing Equipment Access Route, facing north.



Photo 11: View of Middletown Hydraulic Canal, facing downstream.

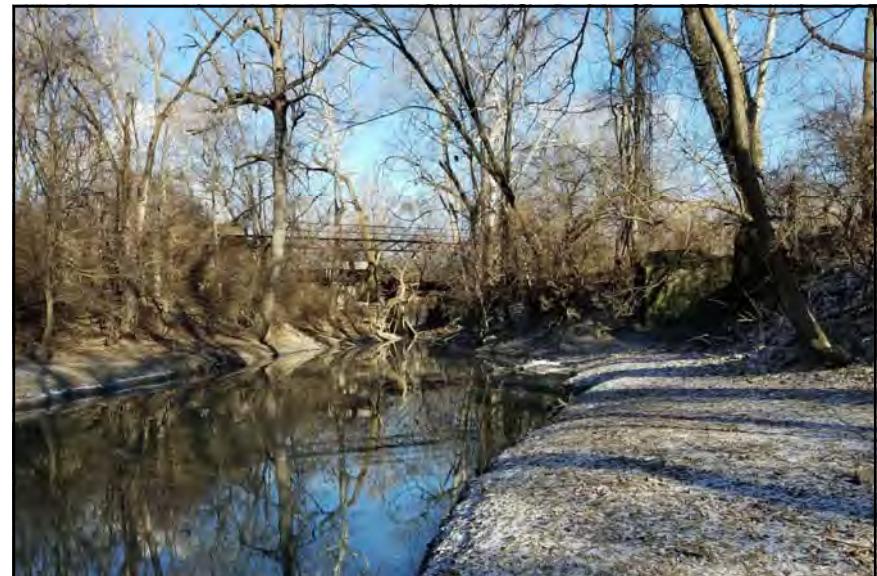


Photo 12: View of Middletown Hydraulic Canal, facing upstream.

Attachment B:
Cultural Resources Literature
Review

Cultural Resources Literature Review

STM Property Canal Remedial Activities

J15Z001M07



Document Information

Prepared for ATC Group Services, LLC
Project Name Cultural Resources Literature Review for the STM Property Canal
Remedial Activities
Project Number J15Z001M07
Project Manager Bill Taylor
Date December 19, 2017

Prepared and Submitted By Kaye Grob and Ryan Peterson

Principal Investigator



Ryan Peterson

Prepared for:

ATC
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Table of Contents

Executive Summary	1
1 Introduction	2
2 Background Research	4
2.1 Literature Review	4
2.1.1 National Historic Landmarks List	4
2.1.2 National Register of Historic Places (NRHP).....	4
2.1.3 Ohio Archaeological Inventory (OAI).....	5
2.1.4 Ohio Historic Inventory (OHI).....	6
2.1.5 OGS Cemetery Registry Files	10
2.1.6 Cultural Resource Management (CRM) Reports.....	10
2.1.7 Historic Maps and Atlases	11
2.1.8 Historic Aerials	12
2.2 Brief Environmental Context.....	15
2.2.1 Project Area Soils.....	15
2.3 Prehistoric Cultural Setting.....	17
2.4 Historic Cultural Setting.....	19
2.5 Summary and Discussion.....	20
3 Summary and Recommendations	21
3.1 Applicable Regulations and Guidelines	21
3.2 Summary of Results and Recommendations	21
4 References Cited	23

Appendices

Appendix A Historic Maps and Aerial Images

Tables

Table 1.NRHP-listed Resources within the 1.6 km (1 mi) Study Area	5
Table 2. Previously Recorded Historic Structures within the 1.6 km (1 mi) Study Area.....	6
Table 3. Soil Units within the Project Area.....	15

Figures

Figure 1. Project Location	3
Figure 2. Previously Identified Cultural Resources	13
Figure 3. Previous CRM Investigations	14
Figure 4. Project Area Soils	16

Images

Image 1. 1875 Engraving of Oglesby, Moore and Company Mill.....	11
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Executive Summary

Cardno, Inc. (Cardno) conducted a cultural resources literature review for the 1.28 hectare (ha) (3.16 acre [ac]) STM Property Hydraulic Canal Remedial Activities Site (the project area) located in Middletown, Butler County, Ohio. The project proposes to lay down a liner mat to cap contaminants in the canal. A portion of the project area will also be utilized as a staging area for the canal remediation. Research focused on documenting known prehistoric and historic resources within a 1.6 kilometer (km) (1 mile [mi]) radius of the project area to ascertain the likelihood for encountering unidentified cultural resources within project boundaries. The literature review focused on the 1.6 km (1 mi) study area but also examined the region on a larger scale when appropriate.

The literature review indicates that multiple previously identified cultural resources are located within the 1.6 km (1 mi) study area. Only one archaeological site has been identified in the study area (33-Bu-0355) which consists of an isolate prehistoric find located approximately 0.6 kilometers (km) (0.4 miles [mi]) northwest of the project area on the opposite side of the Great Miami River.

Three NRHP historic districts, four individually listed NRHP structures, and two NRHP DOE structures have been identified in the study area. One of the individually listed NRHP structures is also listed as a National Historic Landmark (John B. Tytus House). A total of 123 historic structures have been identified within the study area, many of which are located within the NRHP historic districts. Finally, three cemeteries were identified within the study area, two of which are extant and one of which is listed as extinct, indicating it has been moved or destroyed. None of these resources are located within the proposed project area.

The results of the literature review indicate the project area has not been previously surveyed for cultural resources. The cultural context of the region suggests that additional unidentified cultural resources may persist, if proposed project area soils are undisturbed. Areas of ground disturbance have occurred within the project area in association with the demolition of structures associated with the Oglesby Paper Company (later Sorg Paper Company). As a result, cultural resources related to the prehistoric and historic occupation of the region do not likely persist in areas disturbed by the mechanical demolition of the former structures. Intact subsurface remains of the Oglesby Paper Company may persist and, if present, would be considered a cultural resource, but will not be affected by the proposed project.

Subsurface cultural resources that may have been present in the canal footprint would have been displaced and/or eroded by the prior construction of the canal; therefore, the placement of matting in the canal itself will not impact any such cultural resources. The canal is not currently listed as a historic resource and has not been evaluated for the NRHP. The project involves the installation of a liner with no alteration to the canal.

The staging area associated with the project should have no subsurface disturbance beyond tire rutting associated with the remediation equipment. The soils within the staging area have likely been previously disturbed to the level that would be impacted by tire rutting as a result of the demolition of the Oglesby Paper Company previously located in the project area.

1 Introduction

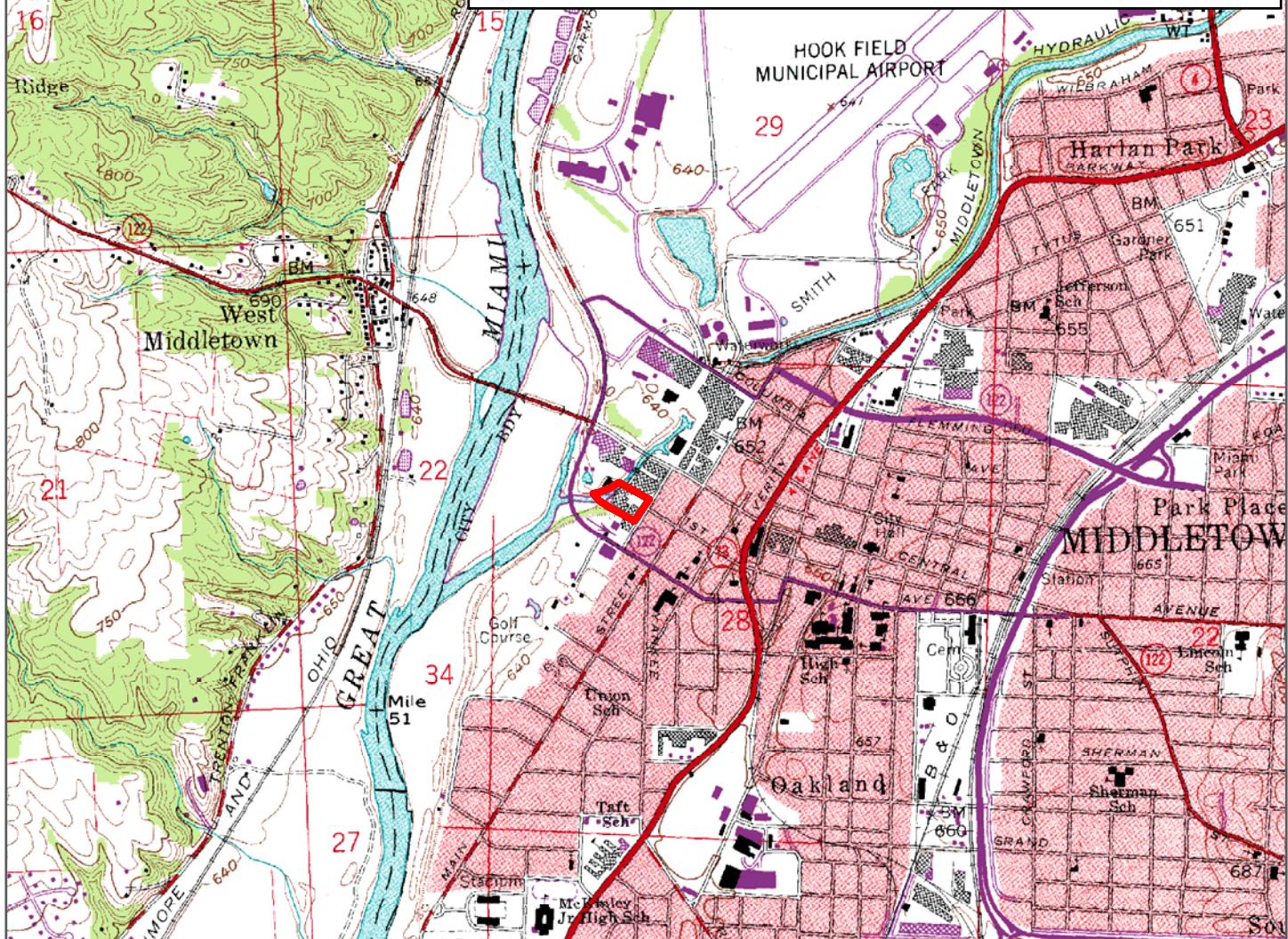
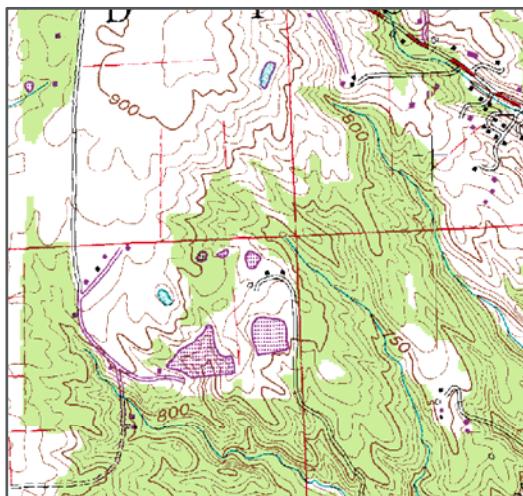
In response to a request from ATC Group Services, LLC (ATC), Cardno conducted a cultural resources records review for the STM Property Hydraulic Canal Remedial Activities project area in Butler County, Ohio. Based on information provided by ATC, the project centerpoint is located in Zone 16S 722758.57 m E, 4377321.02 m N in Butler County, Ohio (Figure 1). The project proposes to lay down a liner mat to cap contaminants in the canal sediments. The project area consists of 1.28 ha (3.16 ac) of wooded and maintained grassy areas, gravel pads, and maintained grasses. The canal forms the western boundary of the project area, and corresponds to the area that will be remediated as a result of the project. A portion of the project area will also be utilized as a staging area for the canal remediation.

Background research conducted in December 2017 focused on a 1.6 km (1 mi) study area around the proposed project footprint. Cardno gathered information about previously conducted cultural resource investigations and documented cultural resources as well as the environmental and cultural context of the region to assess the potential for additional undocumented cultural resources in and around the project area.

Key personnel committed to the project include Mr. Ryan Peterson, Ms. Kaye Grob, and Ms. Amy Cameron. Ms. Grob served as report author and Mr. Peterson served as principal investigator. Ms. Amy Cameron created the report graphics and served as report co-author.

This report presents the research design and results of the background research in Section 2.0. Section 3.0 discusses the conclusions and recommendations. The references cited in this report appear in Section 4.0. Appendix A includes Historic Maps and Aerial Images of the project area.

Exhibit C-2



0 500 1,000 2,000 Feet
0 100 200 300 400 500 600 Meters



Project Location



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Figure 1: Project Location
Cultural Resources Literature Review for the STM
Property Hydraulic Canal Remedial Activities
ATC Group Services, LLC
Butler County, Ohio



3901 Industrial Blvd., Indianapolis, IN 46254 USA
 Phone (+1) 317-388-1982 Fax (+1) 317-388-1982
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2 Background Research

The objective of the current study is to identify and evaluate any archaeological resources present within the proposed project area, as well as to assess the potential for the project area to contain additional cultural resources.

The purpose of this section is to provide a basic context through which to evaluate the results of our investigation. This section will briefly outline the environmental and cultural background of the region in and around Butler County, Ohio.

2.1 Literature Review

The literature review was directed toward identifying previously recorded archaeological sites, historic structures, and other cultural resources. Research was conducted using the Ohio History Connection (OHC) State Historic Preservation Office Online Mapping System (research database) in December 2017 (OHPD 2016). Cardno focused on previously recorded resources within 1.6 km (1 mi) of the project area, but also examined the larger region where appropriate. For the literature review we consulted the following resources:

- National Historic Landmark list;
- National Register of Historic Places (NRHP) list;
- Ohio Archaeological Inventory (OAI) forms;
- Ohio Historic Inventory (OHI) forms;
- Ohio Genealogical Society (OGS) Cemetery Registry;
- Cultural Resource Management reports;
- County Histories and Atlas Maps;
- Archaeological Atlas of Ohio (Mills 1914);
- Historic Aerial imagery.

Records reviewed online through the OHC research database revealed a total of 1 National Historic Landmark, 1 archaeological site, 3 cemeteries, 3 NRHP listed historic districts, 4 individually listed NRHP structures, 2 NRHP Determination of Eligibility (DOE) sites, and 123 historic structures within the 1.6 km (1 mi) study area around the project (Figure 2).

2.1.1 National Historic Landmarks List

Research indicates one National Historic Landmark is located within the 1.6 km (1 mi) study area. The John B. Tytus House was listed as a National Historic Landmark in 1976. The house is located at 300 South Main Street, Middletown and is also listed on the NRHP and OHI (NPS Ref. No. 75001335). John B. Tytus invented a less expensive and more practical hot wide-strip continuous steel-rolling process (Sheire 1976). Mr. Tytus worked at the American Rolling Mill Company and his invention of a way to continuously roll steel revolutionized the industry. Mr. Tytus eventually became the vice president of the American Rolling Mill company. He died in 1944 and is buried in Woodside Cemetery in Middletown (Sheire 1976). The house is a 3-story structure with a combination of Romanesque and Tudor revival styles. It was constructed in two episodes in 1868 and 1890 (Sheire 1976). The house is located approximately 0.29 km (0.18 mi) south of the project area.

2.1.2 National Register of Historic Places (NRHP)

There are 3 NRHP-listed historic districts, 4 individually listed NRHP resources, and 2 NRHP DOE structures within the 1.6 km (1 mi) study area (Table 1; Figure 2).

The John B. Tytus House (NPS Ref. No. 75001335), discussed above, is listed in the NRHP and is also a National Historic Landmark. The John B. Tytus House is located in the South Main Street Historic District (NPS Ref. No. 14000480), which contains 76 Contributing buildings and was listed on the NRHP in 1976 (NPS 2017). The Central Avenue Historic District was listed on the NRHP in 2014 under Criteria A and C (NPS 2017). The Main Street Historic District (NPS Ref. No. 14000027) was also listed on the NRHP in 2014 under Criteria A and C. The district contains 14 Contributing buildings (NPS 2017).

The remaining 3 structures listed on the NRHP include the Hotel Manchester (NPS Ref. No. 14000589) located approximately 0.50 km (0.31 mi) east of the project area, the Dan E. Snider Ford Dealership Building (NPS Ref. No. 14001050) located approximately 0.40 km (0.25 mi) northeast of the project area, and the Big Four Depot (NPS Ref. No. 13000979) located approximately 1.31 km (0.82 mi) east of the project area. In addition, two NRHP DOE structures are located in the study area. The DOE listing indicates that the Department of the Interior has determined that these structures meet the criteria for the NRHP even though they have not been formally listed. The two DOE structures are listed on Table 1 and depicted on Figure 2.

Table 1.NRHP-listed Resources within the 1.6 km (1 mi) Study Area

NRHP Number	Current Name	Building Type	Address	OHI Structure Number
14000027	Main Street Commercial Historic District	Historic District	Main Street, Middletown	
14000480	Central Avenue Historic District	Historic District	Central Avenue, Middletown	
78002015	South Main Street District	Historic District	South Main Street, Middletown	
14000589	Hotel Manchester	Hotel	1027 Manchester Avenue, Middletown	BUT0132308
14001050	Dan E. Snider Ford Dealership Building	Commercial	101 North Main Street, Middletown	
13000979	Big Four Depot	Railroad Depot	25 Charles Street, Middletown	
75001335	John B. Tytus House	Single Dwelling	300 South Main Street, Middletown	BUT0006508
NR DOE	403 Curtis St		403 Curtis Street, Middletown	BUT0116008
NR DOE	530 Garfield		530 Garfield, Middletown	

2.1.3 Ohio Archaeological Inventory (OAI)

The OHC research database indicates a total of one archaeological site within the 1.6 km (1 mi) study area (OHPO 2016). Site 33-Bu-0355 consists of a prehistoric isolate site with unidentified temporal affiliation, located approximately 675 m (2,215 ft) northwest of the project area on the opposite side of the Great Miami River. The site was determined ineligible for inclusion on the NRHP (Riordan 1988).

2.1.4 Ohio Historic Inventory (OHI)

The OHI indicates 123 documented structures in the study area (Figure 2; Table 2) (OHPO 2016). None of these structures are located in the current project area. A total of 105 of these structures are dwellings. Four churches, a hotel, a rail station, two service stations, a theatre, and multiple commercial buildings are also represented. Three of the historic resources are also listed on the NRHP and many are part of NRHP Historic Districts.

Table 2. Previously Recorded Historic Structures within the 1.6 km (1 mi) Study Area

Structure Number	Current Name	Building Type	Style/Period	Date
BUT0004508	US Motel	Single Dwelling	Queen Anne	1831
BUT0004608	Rose Furniture Store	Department Store (General Store)	Greek Revival	1890
BUT0004708	State Ohio Liquor Store #56	Single Dwelling	Italianate	1890
BUT0004808	Pecks Flower Shop	Single Dwelling	Italianate	1879
BUT0004908	Pickwick Bldg	Single Dwelling	Federal	1836
BUT0005008	Middletown Mental Health Centr	Single Dwelling	Greek Revival	1864
BUT0005108	Grandenburg & Switzer Architec	Single Dwelling	Italianate	1870
BUT0005208	Warehouse Desk Div Office	COMMERCIAL	Modern Movements	1960
BUT0005308	Kings Kitchen	Service Station	Modern Movements	1950
BUT0005408	Dr John L Bauer	Single Dwelling	Greek Revival	1850
BUT0005508	American Legion Post #218	Single Dwelling	Modern Movements	1940
BUT0005608	Chapple Leasing Co	Single Dwelling	Greek Revival	1839
BUT0005708	Sohio Station	Road/Vehicle Related	Modern Movements	1969
BUT0005808		Single Dwelling	Greek Revival	1860
BUT0005908	Sorg Mansion	Single Dwelling	Romanesque Revival	1887
BUT0006008	Riggs Funeral Home Inc	Single Dwelling	Italianate	1860
BUT0006108		Single Dwelling	Italianate	1878
BUT0006208	Calvin Verity House	Single Dwelling	Italianate	1875
BUT0006308		Single Dwelling	Italianate	1865
BUT0006408	George M Verity Homesite	Monument/Marker		
BUT0006508	Tytus Mansion	Single Dwelling	Gothic Revival	1885
BUT0006608		Single Dwelling	Italianate	1873
BUT0006708		Single Dwelling	Italianate	1875
BUT0006808		Single Dwelling	Queen Anne	1887

Exhibit C-2

Cultural Resources Literature Review for the
STM Property Canal Remedial Activities, Butler County, Ohio

Structure Number	Current Name	Building Type	Style/Period	Date
BUT0006908		Single Dwelling	Greek Revival	1899
BUT0007008		Single Dwelling		1927
BUT0007108	Lefferson Home	Single Dwelling	Colonial Revival	1827
BUT0007208		Single Dwelling	Tudor/English Revival	1890
BUT0007308	Colonial Manor Nursing Home	Single Dwelling	Italianate	1878
BUT0007408		Single Dwelling	Queen Anne	1890
BUT0007508		Single Dwelling	Queen Anne	1890
BUT0007608		Single Dwelling	Stick	1902
BUT0007708		Single Dwelling	Queen Anne	1890
BUT0007808		Single Dwelling	Queen Anne	1890
BUT0007908		Single Dwelling	Gothic Revival	1890
BUT0008008		Single Dwelling	Tudor/English Revival	1880
BUT0008108		Single Dwelling	Queen Anne	1890
BUT0008208		Single Dwelling	Prairie	1910
BUT0008308		Single Dwelling	Queen Anne	1910
BUT0008408				1840
BUT0008508		Single Dwelling	Queen Anne	1900
BUT0008608		Single Dwelling	Queen Anne	1900
BUT0008708		Single Dwelling	Bungalow	1920
BUT0008808		Single Dwelling	Queen Anne	1890
BUT0008908		Single Dwelling	Georgian Revival	1880
BUT0009008		Single Dwelling	Vernacular	1900
BUT0009108		Single Dwelling	Vernacular	1890
BUT0009208		Single Dwelling	Queen Anne	1890
BUT0009308		Single Dwelling		1890
BUT0009408		Single Dwelling	Georgian Revival	1886
BUT0009508		Single Dwelling	Queen Anne	1891
BUT0009608	Sampson House	Single Dwelling	Queen Anne	1806
BUT0009708		Single Dwelling	Queen Anne	1890
BUT0009808		Single Dwelling	Mission	1900
BUT0009908		Single Dwelling	Queen Anne	1890
BUT0010008		Single Dwelling	Jacobethian	1920
BUT0010108		Single Dwelling	Queen Anne	1900
BUT0010208		Single Dwelling	Queen Anne	1898

Exhibit C-2

Cultural Resources Literature Review for the
STM Property Canal Remedial Activities, Butler County, Ohio

Structure Number	Current Name	Building Type	Style/Period	Date
BUT0010308		Single Dwelling	Vernacular	1870
BUT0124304		Single Dwelling	Vernacular	1845
BUT0124404	Long House	Single Dwelling	Italianate	1870
BUT0124504	Lantis House	Single Dwelling	Vernacular	1860
BUT0124604		Single Dwelling	Eastlake	1875
BUT0124704	Levanges House	Single Dwelling	Stick	1875
BUT0124804		Single Dwelling	Eastlake	1870
BUT0121304		Rail Related	Romanesque Revival	1865
BUT0121404		Single Dwelling	Vernacular	1830
BUT0260108	1203 Woodside Blvd	Single Dwelling	No academic style - Vernacular	1951
BUT0260208	1201 Woodside Blvd	Single Dwelling	No academic style - Vernacular	c. 1899
BUT0260308	1117 Woodside Blvd	Single Dwelling	No academic style - Vernacular	1900
BUT0260408	1115 Woodside Blvd	Single Dwelling	No academic style - Vernacular	1900
BUT0260508	1113 Woodside Blvd	Single Dwelling	No academic style - Vernacular	1900
BUT0260608	1109 Woodside Blvd	Single Dwelling	No academic style - Vernacular	1940
BUT0260708	1105 Woodside Blvd	Single Dwelling	Craftsman/Arts and Crafts	c. 1900
BUT0260808	1041 Woodside Blvd	Single Dwelling	No academic style - Vernacular	1952
BUT0260908	1037 Woodside Blvd	Single Dwelling	No academic style - Vernacular	1900
BUT0261008	1033 Woodside Blvd	Single Dwelling	No academic style - Vernacular	ca. 1900
BUT0010408		Single Dwelling	Greek Revival	1890
BUT0010508		Single Dwelling	Greek Revival	1893
BUT0010608		Single Dwelling	Colonial Revival	1878
BUT0010708		Single Dwelling	Greek Revival	1860
BUT0010808		Single Dwelling	Greek Revival	1860
BUT0010908		Single Dwelling	Georgian Revival	1880
BUT0011008		Single Dwelling	Gothic Revival	1880
BUT0011108		Single Dwelling	Vernacular	1847
BUT0011208		Single Dwelling	Eastlake	1880
BUT0011308		Single Dwelling	Vernacular	1900

Exhibit C-2

Cultural Resources Literature Review for the
STM Property Canal Remedial Activities, Butler County, Ohio

Structure Number	Current Name	Building Type	Style/Period	Date
BUT0011408		Single Dwelling	Vernacular	1900
BUT0011508		Single Dwelling	Greek Revival	1920
BUT0011608	American Red Cross	Single Dwelling	Queen Anne	1899
BUT0011708	Lindeman Home	Single Dwelling	Queen Anne	1831
BUT0011808	Middletown Baptist Temple	Church/Religious Structure	Gothic Revival	1905
BUT0011908	Thompson House	Single Dwelling	Gothic Revival	1867
BUT0012008		Single Dwelling	Greek Revival	1870
BUT0012108	Sol Finkelman Real Estate &ins	Single Dwelling	Italianate	1880
BUT0012208		Single Dwelling	Greek Revival	1840
BUT0132308	Hotel Manchester	Hotel	Second Renaissance Revival	1920
BUT0125504		Single Dwelling	Italianate	1875
BUT0125604		Single Dwelling	Vernacular	1870
BUT0125704	Freewill Baptist Church	Church/Religious Structure	Gothic Revival	1870
BUT0261108	1029 Woodside Blvd	Single Dwelling	No academic style - Vernacular	ca. 1900
BUT0261208	1025 Woodside Blvd	Single Dwelling	Bungalow	ca. 1900
BUT0261308	1021 Woodside Blvd	Single Dwelling	Bungalow	1930
BUT0261408	1019 Woodside Blvd	Single Dwelling	No academic style - Vernacular	1949
BUT0261508	First Church of God	Church/Religious Structure	Modern Movements	1950
BUT0261608	826 and 828 10th Avenue	Double	Craftsman/Arts and Crafts	1914
BUT0261708	829 and 831 10th Avenue	Double	No academic style - Vernacular	1909
BUT0125404		Single Dwelling	Vernacular	1855
BUT0012308		Single Dwelling	Greek Revival	1900
BUT0012408	Sears Automobile Service Cntr	Service Station	Modern Movements	1950
BUT0012508	Colonial Theatre	Theatre/Opera Hall	Richardsonian Romanesque	1890
BUT0020504	Kramer House	Single Dwelling	Greek Revival	1880
BUT0020604	Whisman House	Single Dwelling	Vernacular	1850
BUT0020704	Whisman House	Single Dwelling	Colonial Revival	1892
BUT0020804		Single Dwelling	Vernacular	1866
BUT0027804	Mary Fall House	Single Dwelling	Greek Revival	1875

Structure Number	Current Name	Building Type	Style/Period	Date
BUT0148708	Middletown Fed Saving & Loan	Financial Institution	Art Deco	1823
BUT0152508		Single Dwelling	Vernacular	1850
BUT0116008	Middletown Drug Treatment Center	Single Dwelling	Italianate	1865
BUT0116108	Elks Temple	RELIGIOUS	Greek Revival	1900
BUT0116208	Drenorwood Clark House	Single Dwelling	Mediterranean	1920
BUT0116308		Single Dwelling	Craftsman/Arts and Crafts	1925
BUT0116408	Holy Trinity Catholic Church	Church/Religious Structure	Romanesque Revival	1898

2.1.5 OGS Cemetery Registry Files

The OGS lists three cemeteries within 1.6 km (1 mi) of the project area (Figure 2). None of the cemeteries are located in the project area. The Calvary-Catholic Cemetery was established in 1818 and is located approximately 0.97 km (0.6 mi) northeast of the project area. The Middletown Cemetery was established in 1827 and is located approximately 1.0 km (0.62 mi) southeast of the project area. Both of these cemeteries are well-maintained and have clearly marked boundaries.

The Old Middletown Burying Ground- Riverside was established in 1803 and had its final burial circa 1914. OGS files list this cemetery as extinct. The cemetery is depicted slightly west of the project area; however, the mapped location is listed as "Not Confident". The OHPO GIS mapping depicts the cemetery in the location of an extant structure related to the paper mills (OHPO 2016). It is unknown if this cemetery was moved or destroyed. Historic accounts from 1892 indicate that flooding had ravished the cemetery, exposing and cutting into graves (Middletown USA 2017).

2.1.6 Cultural Resource Management (CRM) Reports

Records on file at OHC indicate that two previous cultural resource investigations have been conducted within 1.6 km (1 mi) of the project area (Genheimer 1991 and Riordan 1988) (Figure 3). Neither of these surveys are within the project area.

In 1988, Robert V. Riordan conducted an archaeological reconnaissance and deep testing related to sedimentation dredging of the Great Miami River. Archaeological site 33-Bu-0355 was identified as a result of the investigation. The prehistoric isolate was determined ineligible for inclusion on the NRHP and the project was recommended to proceed as planned (Riordan 1988).

In 1991, R.G. Archaeological Services conducted an archaeological reconnaissance for the State Route 122 improvement corridor. Approximately 2.8 km (1.8 mi) of 6 meter (m) (20 foot [ft]) wide corridor were examined as a result of the investigation. No archaeological deposits were identified and it was recommended the project proceed as planned (Genheimer 1991).

2.1.7 Historic Maps and Atlases

Three available historic maps were referenced for information pertaining to the historic use of the project area between 1875 and 1914 (L.H. Everts and Company 1875; Rerick Brothers 1885; and RPC 1914) (Appendix A).

The 1875 *Butler County Atlas* depicts the Oglesby, Moore and Company Paper Mill within the project area. The water works are depicted northeast of the project area. The old hydraulic race is located along the western boundary of the project area and the hydraulic race is located along the southern/southeastern boundary of the project area, with a holding pond related to the hydraulic race northeast of the project area. It does not appear that the old hydraulic race corresponds with the canal in the project area. What is now known as First Avenue, adjacent to the northeastern boundary of the project area, is labeled as Front Street in 1875. The Miami-Erie Canal travels through Middletown east of Broad Street. Additional paper mills are located south of the project area between the hydraulic race and the Great Miami River (L.H. Everts and Company 1875) (Appendix A). The below engraving (Image 1) is from the 1875 *Butler County Atlas* and depicts the Ogleby, Moore and Company Paper Mill, likely looking across the hydraulic race to the north (L.H. Everts and Company 1875).



Image 1. 1875 Engraving of Oglesby, Moore and Company Mill

The 1885 map of Middletown depicts additional structures related to the Oglesby Paper Mill (previously Oglesby, Moore and Company Mill). Front Street is now labelled First Avenue. The hydraulic race is depicted in the same location as the 1875 map and the old hydraulic race is shown as an unlabeled waterway. The Miami-Erie Canal continues to travel through Middletown (Rerick Brothers 1885) (Appendix A).

The 1914 map of Middletown depicts Water Works and Paper Mills in the vicinity of the project area. The hydraulic waterway is located along the southern boundary of the project area and the Miami-Erie Canal is located east of the project area, travelling east and parallel to Broad Street. Several churches, the Elk's Temple, a school, and City Hall are depicted southeast of the project area and the Great Miami River is shown west of the project area (RPC 1914) (Appendix A).

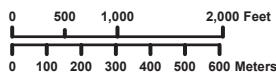
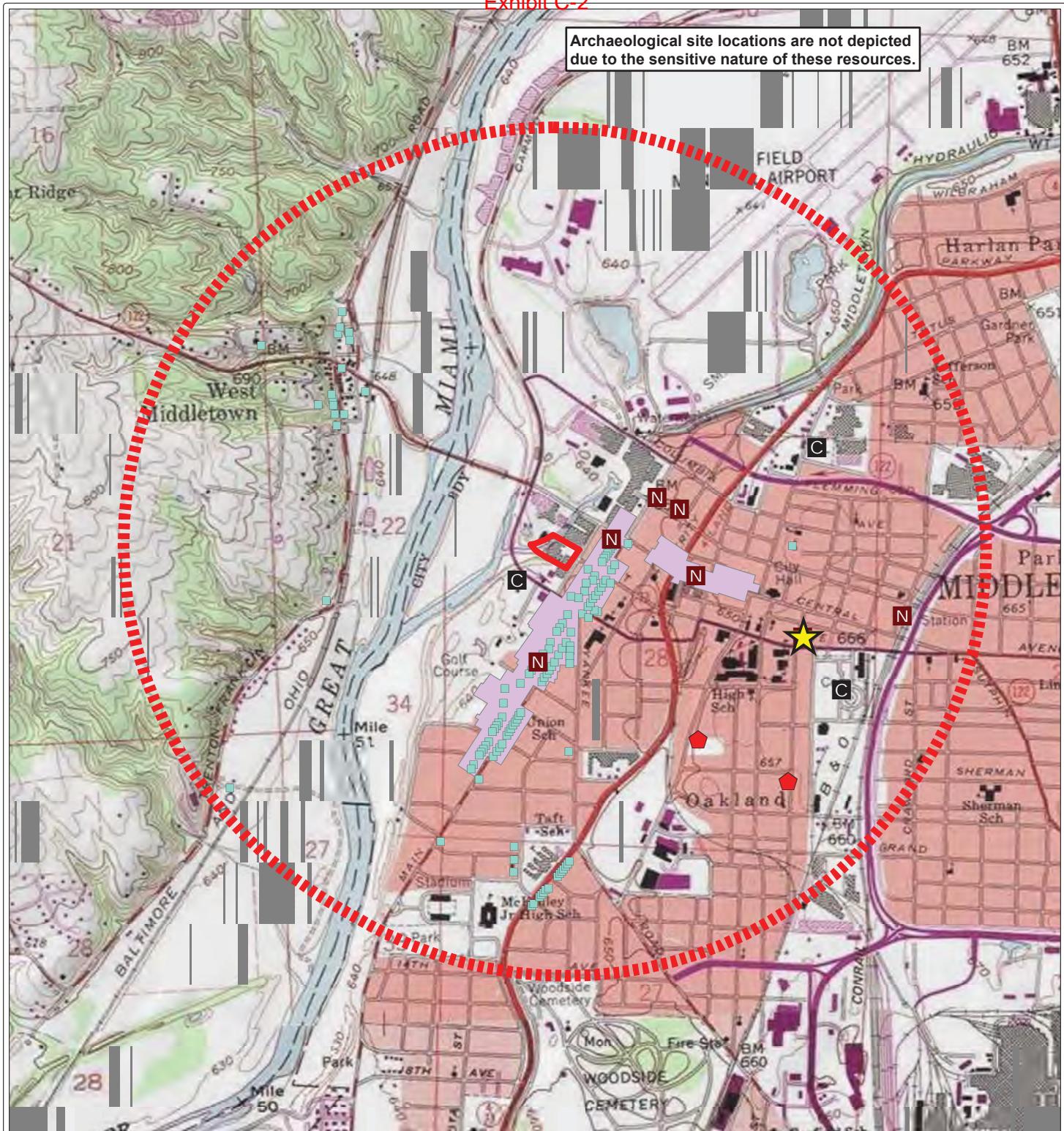
In the *Archaeological Atlas of Ohio, Mills* (1914) lists a total of 251 prehistoric sites in Butler County including mounds, enclosures, villages, burials, and cemeteries. Mills states "Butler is one of the richest

counties, archaeologically speaking, in Ohio, particularly the number of mounds" (Mills 1914: 9). The most notable of these sites is the D.S. Rose Funerary Mound. Despite protests from local preservation advocates and the fact that this mound was listed on the NRHP, it was destroyed by developers in 1991. While this large site lies well outside the project area, it indicates significant prehistoric activity in the local region. No prehistoric sites have been identified within the vicinity of Middletown.

2.1.8 Historic Aerials

Three historic aerials were consulted to reference land use within the project area over time (USGS 1952, 1964, and 1970 (Appendix A). The 1962, 1964, and 1970 aerials depict structures likely related to the Oglesby Paper Company, which later became the Sorg Paper Company (Appendix A). Modern imagery shows these structures are extant until circa 2010, and they were razed by 2011 (Google Earth Pro 2017). Aerial imagery depicts a large amount of disturbance due to the mechanical razing of the structures in 2011.

Exhibit C-2



★ National Historic Landmark and NRHP listed
C Cemeteries

N NR Listings
♦ NR Determinations of Eligibility
■ Historic Structures

■ NR Historic District
■ 1-Mile Radius
■ Project Location

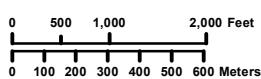
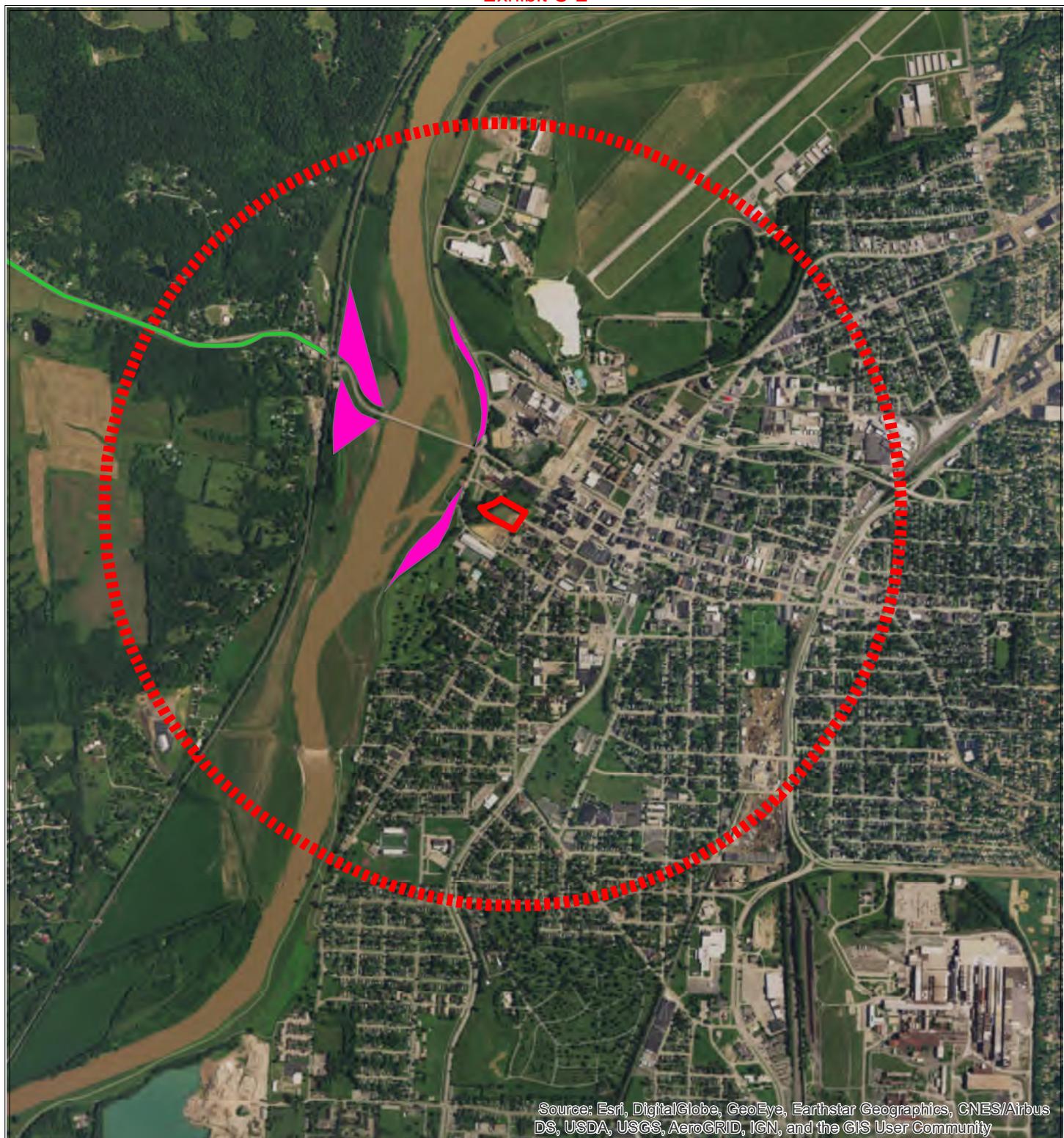


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Figure 2: Previously Identified Cultural Resources within Study Area
Cultural Resources Literature Review for the
STM Property Hydraulic Canal
Remedial Activities
ATC Group Services, LLC
Butler County, Ohio



3901 Industrial Blvd., Indianapolis, IN 46254 USA
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www.cardno.com



Genheimer, Robert A., 1991

Riordan, Robert V. 1988

Project Location



1-Mile Radius



Project No.
J15Z001M07

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Figure 3: Previous Cultural Resource Investigations
Cultural Resources Literature Review for the
STM Property Hydraulic Canal
Remedial Activities
ATC Group Services, LLC
Butler County, Ohio

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2.2 Brief Environmental Context

The proposed project area is located in the Great Miami River watershed. The Great Miami River is located approximately 0.41 km (0.25 mi) west of the project area; the proximity of the river suggests an increased likelihood for prehistoric deposits in undisturbed portions of the project area.

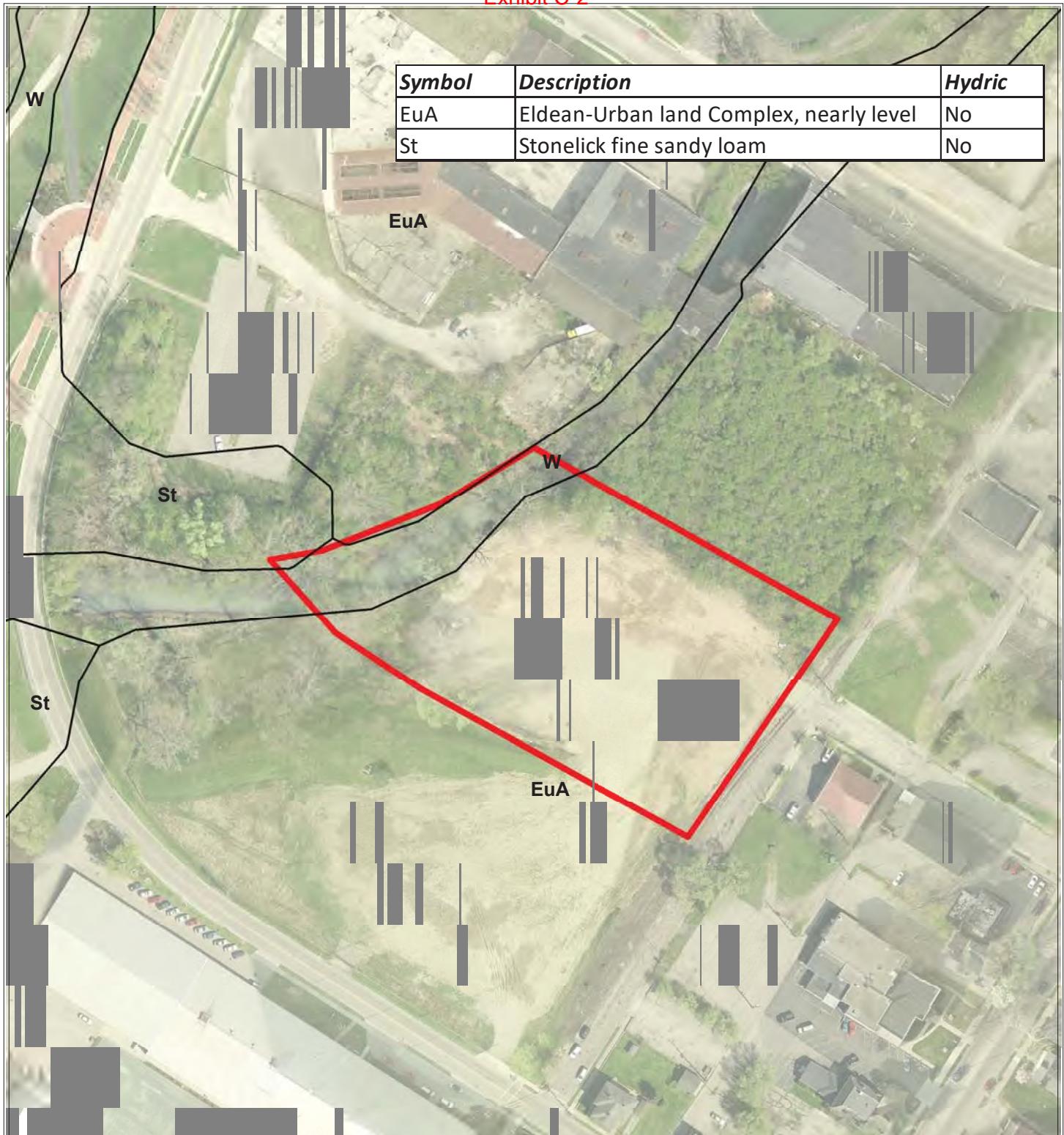
2.2.1 Project Area Soils

The project area is located in the Eldean-Ockley soil association. The Eldean-Ockley association consists of deep, nearly level to moderately sloping, well-drained soils that have a mostly fine to moderately fine subsoil formed mainly in glacial outwash (USDA/SCS 1980). Stonelick fine sandy loam is subjected to occasional flooding, so there is the possibility of buried cultural deposits where these soils persist (Figure 4; Table 4) (USDA/SCS 2016). In addition, recent aerial imagery indicates some level of mechanical grading within the project area, so portions of the project likely exhibit disturbed soils. This mechanical grading and ground disturbance is the result of the demolition of structures related to the Oglesby Paper Company (later Sorg Paper Company) circa 2011.

Table 3. Soil Units within the Project Area

Soil Type	Soil Characteristics	Hydric
EuA	Eldean-Urban land complex, nearly level	No
St	Stonelick fine sandy loam	No

Exhibit C-2



Project Location



Soils Unit



Project No.
J15Z001M07

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Figure 4. Project Area Soils
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2.3 Prehistoric Cultural Setting

Archaeological sites are well-documented in Butler County, Ohio. The county is located in a region with a temperate climate, well-drained soils, subtle topography, and riverine corridors, making it an ideal location for settlement and subsistence throughout history. The prehistoric occupation of Ohio is generally divided into three broad periods: Paleoindian, Archaic, and Woodland. While Butler County contains sites dating to all of these time periods, the majority of recorded prehistoric sites in the county do not contain diagnostic artifacts, and therefore cannot be attributed to specific cultural occupations. Regardless, sites identified in Butler County represent the range of prehistoric occupation in Ohio.

Paleoindians were nomadic groups comprised of small kin-based bands that primarily practiced a foraging subsistence strategy. Research suggests that these Paleoindian bands moved within a circumscribed geographic range to intercept large herd animals during their migratory cycles (Gramly 1988; Stothers 1996). Over time, the focus likely shifted from large-scale hunting expeditions to a more regular procurement of game, accompanied by a decrease in the overall size of territory exploited by these groups. Paleoindian sites are most easily recognized in the archaeological record by the presence of lanceolate spear points. These points may be fluted (a large flake removed from each side of the base) or unfluted. Early Paleoindian projectile points are often made of high quality materials, usually from a widely dispersed area, which suggests a high level of mobility. Later Paleoindian points are more often made from local chert types, which may reflect a reduction in this mobility. Documented archaeological sites dating to this time period are relatively rare in this part of state.

The Early Archaic time period (10,000 – 8,000 B.P.) is often identified in the archaeological record by the transition from large, lanceolate bifaces of Paleoindian assemblages, to smaller, notched and bifurcated bifaces. Groundstone tools and other lithic tools such as gravers, scrapers, and notched knives are also observed in the Early Archaic. Local cherts appear in the archaeological record as a common resource. Early Archaic subsistence strategies continued the focus on large migrating Pleistocene herd animals, but Early Archaic groups also began to exploit more local environmental resources, including smaller game animals. Early Archaic artifacts tend to display more diversity in style and function, which also may reflect diversity in resource exploitation.

There are few observed differences between the Early and Middle Archaic periods. The Middle Archaic period (8,000 – 5,000 B.P.) is reflected by changes in projectile point and blade types, but these variations are more prominent in southern portions of the U.S., and are not evident in southern Ohio (Vickery and Litfin 1992).

Archaeologists characterize the Late Archaic (5,000 – 2,500 B.P.) as having an increased focus on regional mobility patterns, as well as an increase in resource diversity. Late Archaic groups incorporated plants into a larger part of their subsistence strategy. Late Archaic sites often represent repeated occupation over a long period of time, which suggests a regular, more localized pattern of movement across the landscape. Projectile points and other lithic tools also show an increase in variation. Small side-notched and corner-notched points and side and end scrapers appear frequently in Late Archaic assemblages. Groundstone tools are also increasingly evident. Pottery begins to appear in the transition between the Late Archaic and Early Woodland periods.

Populations in the Woodland period (2,500 – 500 B.P.) tended to be broad spectrum hunter-gatherers, living in semi-sedentary occupations made up of small groups, likely based on kinship. These occupations were typically located around riverine environments and organized around communal burials. Innovations such as a more intensive reliance on pottery, horticulture, and the bow and arrow also occur during the Woodland time period.

The Early Woodland period (2,500 – 1,900 B.P.) marks the transition from the more nomadic Archaic subsistence strategy to a more localized, semi-sedentary subsistence strategy. The Adena culture is

representative of the Early Woodland period in southern Ohio. Cultural material associated with the Adena are stemmed projectile points with weak shoulders, ceramic vessels with flat bottoms and lug handles, drills, scrapers, and a variety of ornamental and ceremonial materials (Tuck 1978). The earliest earthworks and burial mounds in southern Ohio are attributed to the Adena. These earthworks were often constructed over another structure, indicated by the presence of post-hole features. Burials are often associated with a variety of exotic materials, such as cut mica, copper, beads, gorgets, and shell. It is important to note, however, that "Adena", like "Hopewell" in the Middle Woodland, refers more to a pattern of mortuary practices and exchange of goods, rather than to a discrete group of peoples.

Archaeologists generally describe the Middle Woodland period (1,900 – 1,400 B.P.) in Ohio as the period associated with the development of the Hopewell culture. The subsistence strategy was organized around a seasonal pattern of resource procurement and an increasing reliance on horticulture. The Middle Woodland period saw a continued increase in population and social organization, reflected in the numerous earthworks constructed in this period. These earthworks, often constructed in geometric figures, may have been ceremonial centers, suggesting that populations may have been organized at some larger scale. The prehistoric trade of exotic materials also reached a high during the Middle Woodland as populations within the "Hopewell Interaction Sphere" traded materials from as far away as the Upper Peninsula of Michigan (copper), the Gulf Coast (shell and shark teeth), and the Carolinas (mica). It is likely that the Hopewell Interaction Sphere represents a broad but loosely organized pattern of exchange rather than a well-defined system of trade (Pacheco 1996). While pottery tends to be more utilitarian in nature, vessels with an engraved duck motif appear in funerary contexts. In general, Middle Woodland vessels have thinner walls than earlier ceramics.

A significant reduction in the extensive, extra-regional trade of exotic goods and materials marks the Late Woodland period (1,400 – 1,000 B.P.). The construction of large ceremonial earthworks also ends in the Late Woodland, as there is a shift in mortuary practices to interring burials into existing, older mounds or small stone mounds. Isolated, individual burials are also observed. This period also is characterized by an increasingly sedentary residential pattern of large nucleated villages supported by a growing reliance on maize and other cultigens as a substantial part of the Late Woodland diet. Palisades or ditches were sometimes constructed around these villages. This need for defensive structures suggests an increasing instability at times. Resource diversity also continued to increase, although reliance on aquatic resources was less pronounced in southern Ohio than in other areas of the Midwest. The deeply dissected drainages of southern Ohio do not produce the oxbow pond or lake features as seen in the Mississippi, Missouri, or Illinois River valleys (Seeman and Dancey 2000). The Late Woodland artifacts include small triangular points, scrapers, mortars and pestles, celts, and hoes. A distinct technological innovation of the period was the use of earthen ovens for steaming or baking food (Seeman and Dancey 2000). Pottery in the early portion of the Late Woodland exhibits thick angular shoulders (Newtown shoulder) and contrasts with Middle Woodland containers (Seeman and Dancey 2000). The bow and arrow became prevalent, though likely in the later portion of the Late Woodland.

In southwest Ohio, archaeologists have described a settlement system marked by sedentary villages located along floodplains, with smaller resource-specific occupations in the uplands and lowlands (Pollack and Henderson 2000). The Fort Ancient period (1,000 B.P. – contact) has been described as an in situ development from Late Woodland groups in the Ohio Valley, extending into southeastern Indiana, northern Kentucky, southern Ohio, and eastern West Virginia (Drooker 1997). A Mississippian influence is evident in designs and forms in locally available materials, such as spatula shaped celts, triangular projectile points, and the falcon motif. Fort Ancient villages are typically located along the Ohio River and its major tributaries. In the late pre-contact period, the majority of settlements were located within 12.4 mi (20 km) of the Ohio River (Drooker 1997). Many of these villages are organized around a central plaza and some were surrounded by palisades. Structures varied in size from as small as 10 square meters (107 square feet) to as large as 180 square meters (1,930 square feet) (Drooker 1997). Semi-subterranean pit houses provided cooler temperatures in the summer and warmer temperatures in the

winter. Storage pits also became more extensive, with some measuring 1 meter (m) (3.4 feet [ft]) in diameter and 2 m (6.5 ft) in depth, capable of storing over 45 bushels of shelled corn (Cowan 1987).

Use of burial mounds declines after approximately 700 B.P. as people began interring their deceased in the villages around plazas as well as in and around houses. Funerary items include pots and pipes, but more exotic materials such as marine shell also are seen. The presence of marine shell and other engraved Mississippian goods along with the location of Fort Ancient groups along the Ohio River suggest some level of regional interaction. The late pre-contact period, however, is characterized by more concentrated settlement locations and more intraregional similarities in goods such as ceramics.

By the later part of the Fort Ancient period (post 1400 A.D.), most settlements were located within 20 km (12 mi) of the Ohio River and appear to represent a collection of formerly dispersed groups (Drooker and Cowan 2001). This period also includes increased intra- and extra-regional interaction among eastern and western populations (Drooker and Cowan 2001). The mid-sixteenth century marks the beginning of the protohistoric period, when European goods begin to arrive in the region, but prior to substantial European records.

One of the most prominent sites in the area dating to the Fort Ancient period is the Fort Ancient Enclosure site located in Warren County, to the east of Butler County.

2.4 Historic Cultural Setting

Butler County was founded in 1803 and is named after revolutionary war hero Richard Butler, who died during St. Clair's defeat in 1791 (WBPC 1882). It was one of the first 12 counties formed in the new State of Ohio from a portion of what had been Hamilton County. Settlement in Butler County began in the 1790s, with the construction of Fort Hamilton on the Miami River at the site of present-day Hamilton, Ohio (Bauer and McNutt 2006). Hamilton is the county seat, and is also the largest city in the county.

Settlement of the Madison Township region began at the beginning of the nineteenth century, in what is today the town of Trenton.

Middletown was originally platted in 1802 and incorporated in 1833. Some of the earliest settlers included Ezekiel Ball, Daniel Doty, David Enoch, Moses Potter, Stephen Vail, and Garrett Van Vost (WBPC 1882). The Miami Canal travelled through Middletown and was in operation from Middletown to Cincinnati in 1828. By 1830, 17 miles were added north to connect with Dayton (Touring Ohio 2017). In 1833, the Ohio and Erie Canal was completed. By 1845, the Miami-Erie canal system was complete from the Ohio River to Lake Erie (Touring Ohio 2017). Early plans for the canal included a system of waterworks and hydraulic dams and locks to assist in water flow in the canal (WBPC 1882). As a result of the available hydraulic power and transportation, Middletown became a town of paper mills, boasting seven mills in 1882.

The first mill along the hydraulic race was the Oglesby, Moore and Company, located within the project area. The mill manufactured multiple types of paper including blotting, sized, wrapping, and roofing papers. The mill was originally constructed in 1852 by J. W. Erwin and a brother. Two years later, the mill changed hands and was named the Oglesby, Barnitz and Tytus mill for 7-8 years (WBPC 1882). In 1852, Middletown entered into an agreement to build a hydraulic power canal to supply water power for shops and mills. The two mile long hydraulic race travelled along the Miami-Erie Canal and got its water from the Great Miami River north of town. Before it was completed, John W. Erwin and two brothers, Samuel and Edwin, had constructed the town's first paper mill (HCL 2005). This mill was sold to W.B. Oglesby in 1854. By 1885, it was known as the Oglesby Paper Company, employing up to 100 hands and having annual sales of up to \$150,000 (WBPC 1882). The mill was run by water and steam, and its productions ranked with the best made in the country (WBPC 1882). This Oglesby Paper Company provided the majority of paper on which Cincinnati dailies were printed. The company later became the Sorg Paper Company in 1947 (HCL 2005). The mill was eventually closed in 2000 (HCL 2005). The mill was a series of structures along the northern hydraulic race and portions of these mill structures were located within the current project area.

Today Butler County holds approximately 333,807 residents, of which approximately 49,000 of them live in Middletown. Butler County has recently seen a population increase, and many residents commute to Cincinnati, though the county is also home to multiple manufacturing industries (Ohio History Central 2005).

2.5 Summary and Discussion

This section presented the results of the cultural resources records review. The records check indicates that multiple cultural resources have been recorded within 1.6 km (1 mi) of the project area, representing archaeological sites, cemeteries, NRHP listed historic district, individually listed NRHP resources, NRHP DOE structures, a National Historic Landmark, and historic structures. None of these resources are located within the proposed project area.

The results of the literature review indicate the project area has not been previously surveyed for cultural resources. Based on the past development of the property and subsurface disturbances, the presence of intact, unidentified cultural resources within the area to be impacted by the proposed project is not likely.

Unidentified archaeological resources may represent a variety of time periods ranging from prehistoric Paleoindian period sites through protohistoric Native American sites. These sites may represent a variety of site types, from isolated artifacts to larger occupational sites and mounds. Terrace remnants and hill features, particularly in association with drainages or other water sources, are local landforms likely to contain prehistoric archaeological deposits. The Great Miami River is located approximately 0.41 km (0.25 mi) west of the project area.

The historic context of the region suggests that unidentified historic archaeological sites may represent a variety of activities; however, based on the historic setting of the project area, any identified historic sites will likely be related to the growth of the Oglesby Paper Company, previously located within the project area. Although the structures related to the Oglesby Paper Company were razed circa 2011, subsurface remains of these structures may remain extant. It is also unclear whether or not the canal remediation area of the project may be related to the historically mapped hydraulic race.

3 Summary and Recommendations

In response to a request from ATC, Cardno conducted a cultural resources records review for the STM Property Hydraulic Canal Remedial Activities Project Area in Butler County, Ohio. Based on information provided by ATC, the project centerpoint is located in Zone 16S 722758.57 m E, 4377321.02 m N in Butler County, Ohio. The project proposes to lay down a liner mat to cap contaminants in the canal sediments. A portion of the project area will also be utilized for a staging area for the canal remediation. The project area consists of 1.28 ha (3.16 ac) of wooded areas, gravel pads, and maintained grassy areas. A significant portion of the project area has been disturbed by the razing of structures related to the prior paper mill at the project location.

Background research conducted in December 2017 focused on a 1.6 km (1 mi) study area around the proposed project footprint. Cardno gathered information about previously conducted cultural resource investigations and documented cultural resources as well as the environmental and cultural context of the region to assess the potential for additional undocumented cultural resources in and around the project area.

3.1 Applicable Regulations and Guidelines

Section 106 of the NHPA requires that federal agencies assess the effect(s) of their projects on cultural resources eligible for listing in the NRHP. Section 106 of the NHPA applies to any federal agency undertaking that has the potential to affect cultural resources eligible for listing in the NRHP, should they be present. This federal agency action may include permitting, funding, or other approval of project activities.

Under Section 106 of the NHPA, the federal agency must assess effects of their undertakings in areas where the effects are likely to occur, known as the Area of Potential Effects (APE). The size of the APE varies by project, but the APE is always large enough to encompass both direct and indirect effects. Direct effects are generally limited to the areas of likely ground disturbance in the planned area of improvements and in associated easements. Direct effects in these areas may affect archaeological or architectural resources if present. Indirect effects include areas where visual, noise, or other effects caused by the project occur outside the footprint of construction. Indirect effects may affect architectural resources, certain types of archaeological resources, or other cultural resources if present. Ohio Revised Code §2927.11 protects cemeteries against intentional damage; therefore, consultation with the OHC is advisable prior to construction activities within 30.5 m (100 ft) of cemetery boundaries.

3.2 Summary of Results and Recommendations

The literature review indicates that multiple previously identified cultural resources are located within the 1.6 km (1 mi) study area. Only one archaeological site has been identified in the study area (33-Bu-0355) which consists of an isolate prehistoric find. This site will not be impacted by the proposed project.

Three NRHP historic districts, four individually listed NRHP structures, and two NRHP DOE structures have been identified in the study area. One of the individually listed NRHP structures is also listed as a National Historic Landmark (John B. Tytus House). A total of 123 historic structures have been identified within the study area, many of which are located within the NRHP historic districts. Finally, three cemeteries were identified within the study area, two of which are extant and one of which is listed as extinct, indicating it has been moved or destroyed. None of these resources are located within the proposed project area.

The results of the literature review indicate the project area has not been previously surveyed for cultural resources. Areas of ground disturbance have occurred in association with the demolition of structures

related to the Oglesby Paper Company (later Sorg Paper Company). As a result, any such cultural resources related to the prehistoric and historic occupation of the region are not likely to persist in the project area due to the mechanical demolition of the former structures. Intact subsurface remains of the Oglesby Paper Company may still persist, and would be considered cultural resources, but will not be impacted by the project.

Subsurface cultural resources that may have been present in the canal footprint would have been displaced and/or eroded by the prior construction of the canal. The placement of matting in the canal itself is not likely to impact any such cultural resources.

The staging area associated with the project should have no subsurface disturbance beyond tire rutting associated with the remediation equipment. The soils within the staging area have likely been previously disturbed to the level that would be impacted by tire rutting as a result of the demolition of the Oglesby Paper Company previously located in the project area.

4 References Cited

Bauer, Cheryl and Randy McNutt

2006 *Postcard History Series: Butler County*. Mount Pleasant: Arcadia Publishing.

Cowan, C. Wesley

1987 *First Farmers of the Middle Ohio Valley*. Cincinnati Museum of Natural History, Cincinnati, Ohio.

Drooker, P.B.

1997 *The View from Madisonville: Protohistoric Western Fort Ancient Interaction Patterns*. Memoirs of the Museum of Anthropology No. 21. The University of Michigan, Ann Arbor.

Drooker, P.B. and C.W. Cowan

2001 Transformation of the Fort Ancient cultures of the central Ohio Valley. In *Societies in Eclipse: Archaeology of the Eastern Woodlands Indians, A.D. 1400-1700*, ed. D.S. Brose, C.W. Cowan, and R.C. Manifort, Jr. Smithsonian Institution Press, Washington, D.C., 83-106.

Genheimer, Robert A.

1991 An Archaeological Assessment of the Proposed State Route 122 Improvement Corridor (BUT-122.3.93) in Madison Township, Butler County, Ohio. R.G. Archaeological Services. Copy on file at the Ohio Historic Preservation Office, Columbus.

Google Earth Pro

2017 Image: Middletown, Ohio. Zone 16S 722758.57 m E, 4377321.02 m N. USDA Farm Service Agency. November 2011, accessed December 2017.

Gramly, R. M.

1988 Paleo-Indian Sites South of Lake Ontario, Western and Central New York State. In *Late Pleistocene and Early Holocene Paleoecology and Archaeology of the Eastern Great Lakes Region*, edited by R.S. Laub, N. Miller and D. Steadman, pp. 265-280. Bulletin of the Buffalo Society of Natural Sciences 33.

Historical Collection at the Lane (HCL)

2005 Sorg Paper Company. Electronic document, <https://sites.google.com/a/lanepi.org/butler/home/s/sorg-paper-company>, accessed December 2017.

L.H. Everts and Company

1875a Butler County 1875: Middletown, Somerville, Port Union, West Chester. L.H. Everts and Company. Online document, <http://www.historicmapworks.com/Map/US/58255/Middletown++Somerville++Port+Union++West+Chester/>, accessed December 2017. Used with permission.

1875b Butler County 1875: Middletown Mills, Oglesby, Moore and Co., Tytus Paper Co. L.H. Everts and Company. Online document, <http://www.historicmapworks.com/Map/US/58310/Middletown+Mills++Oglesby++Moore+and+co++Tytus+Paper+Co/>, accessed December 2017. Used with permission.

Middletown USA

2017 Old Middletown Graveyard 1892. Electronic document, http://www.middletownusa.com/forum/old-middletown-graveyard-1892_topic5113.html, accessed December 2017.

Mills, William C.

1914 Archaeological Atlas of Ohio. Ohio State Archaeological and Historical Society, Columbus.

National Park Service

2017 National Register of Historic Places. Electronic database, <https://www.nps.gov/nr/index.htm>, accessed December 2017.

Ohio History Central

2005 "Butler County". *Ohio History Central*. Electronic document, <http://www.ohiohistorycentral.org/entry.php?rec=1903>, accessed November 2015.

Ohio Historic Preservation Office (OHPO)

2016 Ohio History Connection Online Mapping System, <https://www.ohiohistory.org/preserve/state-historic-preservation-office/mapping>, accessed December 2017.

Pacheco, P. J.

1996 Ohio Hopewell Regional Settlement Patterns. In *A View From the Core: A Synthesis of Ohio Hopewell Archaeology*, edited by P. J. Pacheco, pp. 18-35. Ohio Archaeological Council, Columbus.

Pollack, David and A. Gwyn Henderson

2000 "Insights Into Fort Ancient Cultural Change: A View from South of the River." In *Cultures Before Contact: the Late Prehistory of Ohio and Surrounding Regions*, ed. R.A. Genheimer. Columbus: Ohio Archaeological Council, 194-227.

Republican Publishing Company (RPC)

1914 Butler County 1914: Middletown Ward Map. Republican Publishing Company. Electronic document, <http://www.historicmapworks.com/Map/US/46694/Middletown+++Ward+Map/>, accessed December 2017.

Rerick Brothers

1885 Butler County 1885: Middletown Ward Map. Rerick Brothers. 2017 facsimile ed. Historic Mapworks. <http://www.historicmapworks.com/Map/US/170875/Middletown+Ward+Map/>, accessed December 2017. Used with permission.

Riordan, Robert V.

1988 An Archaeological Survey of the Middletown River Corridor Deposition Areas, Butler County, Ohio. Copy on file at the Ohio Historic Preservation Office, Columbus.

Seeman, M.F., and W.S. Dancey

2000 The Late Woodland period in southern Ohio: basic issues and prospects. In *Late Woodland Societies: Traditions and Transformations Across The Midcontinent*, T. Emerson, D. McElrath, and A. Fortier, eds., pp. 545-573. University of Nebraska Press, Lincoln.

Sheire, James

1976 National Register of Historic Places Nomination Inventory Form- John B. Tytus House. Electronic document, <https://npgallery.nps.gov/GetAsset/353b42ed-34f7-42b5-87b5-119e72f0d5fa>, accessed December 2017.

Stothers, D. M.

1996 Resource Procurement and Band Territories: A Model for Lower Great Lakes PaleoIndian and Early Archaic Settlement Systems. *Archaeology of Eastern North America* 24:173-216.

Touring Ohio

2017 Miami and Erie Canal System. Electronic document, <http://touringohio.com/day-trips/miami-erie-canal.html>, accessed December 2017.

Tuck, J. A.

1978 Regional Cultural Development, 3,000-300 B.C. *Handbook of North American Indians* (15). Smithsonian Institution Press, Washington, D.C.

USDA/SCS

1980 Soil Survey of Butler County, Ohio. United States Department of Agriculture/Soil Conservation Service.

2016 Web Soil Survey. Electronic document,
<http://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm>, accessed December 2017.

United States Geological Survey (USGS)

1952 Aerial Photo Single Frames. Electronic document, <http://earthexplorer.usgs.gov/>, accessed December 2017.

1964 Aerial Photo Single Frames. Electronic document, <http://earthexplorer.usgs.gov/>, accessed December 2017.

1970 Aerial Photo Single Frames. Electronic document, <http://earthexplorer.usgs.gov/>, accessed December 2017.

Vickery, K. D. and J. Litfin

1992 A Proposed Revision of the Classification of Midwestern Paleo-Indian, Early Archaic, and Middle Archaic Projectile Points. Department of Anthropology, University of Cincinnati, Cincinnati.

Western Biographical Publishing Company (WBPC)

1882 *A History and Biographical Encyclopedia of Butler County, Ohio*. Western Biographical Publishing Company. Cincinnati.

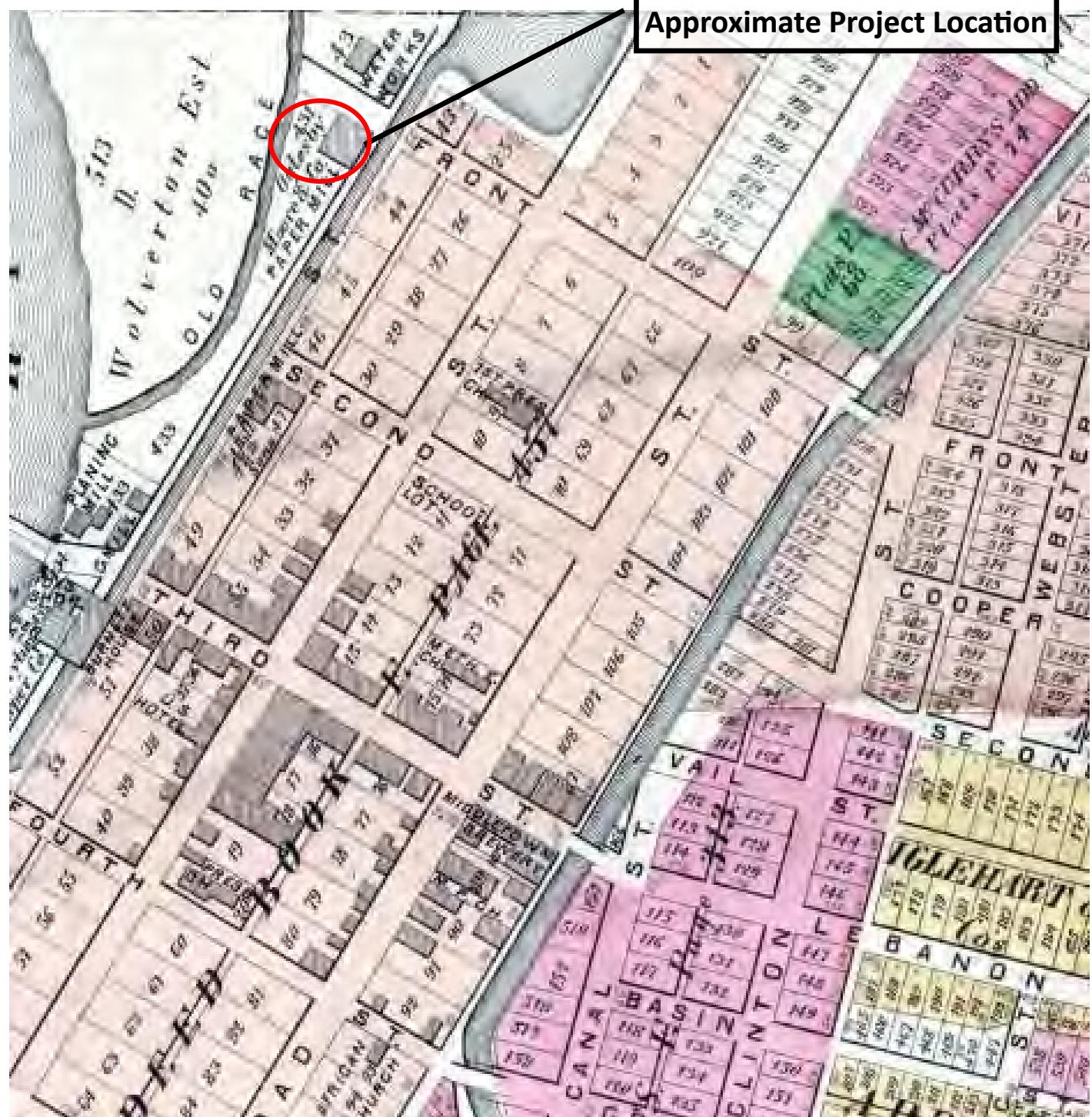
Cultural Resources Literature
Review for the STM Property
Hydraulic Canal Remedial Activities,
Butler County, Ohio

APPENDIX

A

HISTORIC MAPS AND AERIAL
IMAGES

Approximate Project Location



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Project Number:
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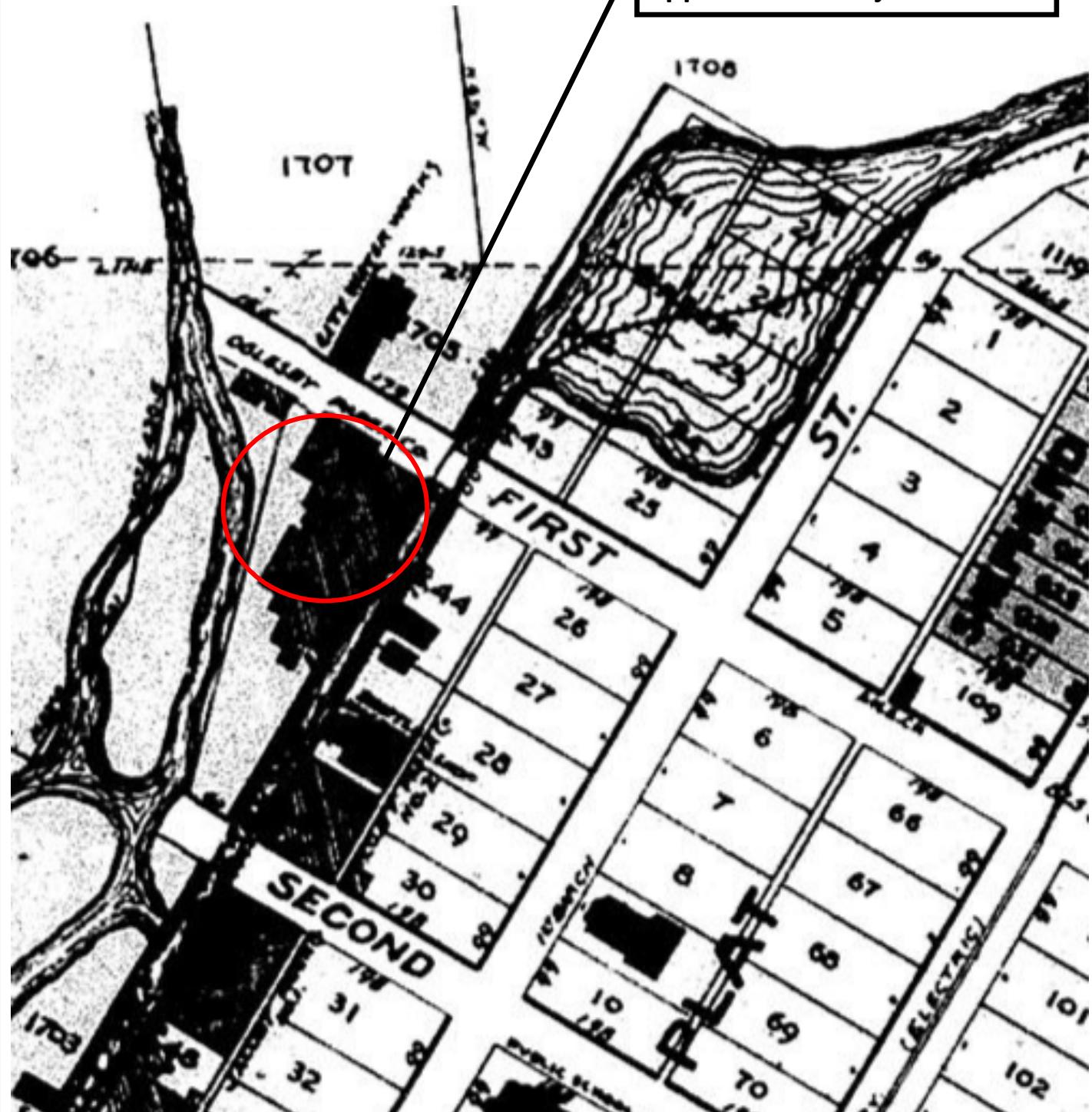
Appendix A: 1875 Map
Cultural Resources Literature Review for the STM Property
Hydraulic Canal Remedial Activities County Village
Development, Inc.

ATC Group Services, LLC
Butler County, Ohio



11121 Canal Road, Cincinnati, OH 45241 USA
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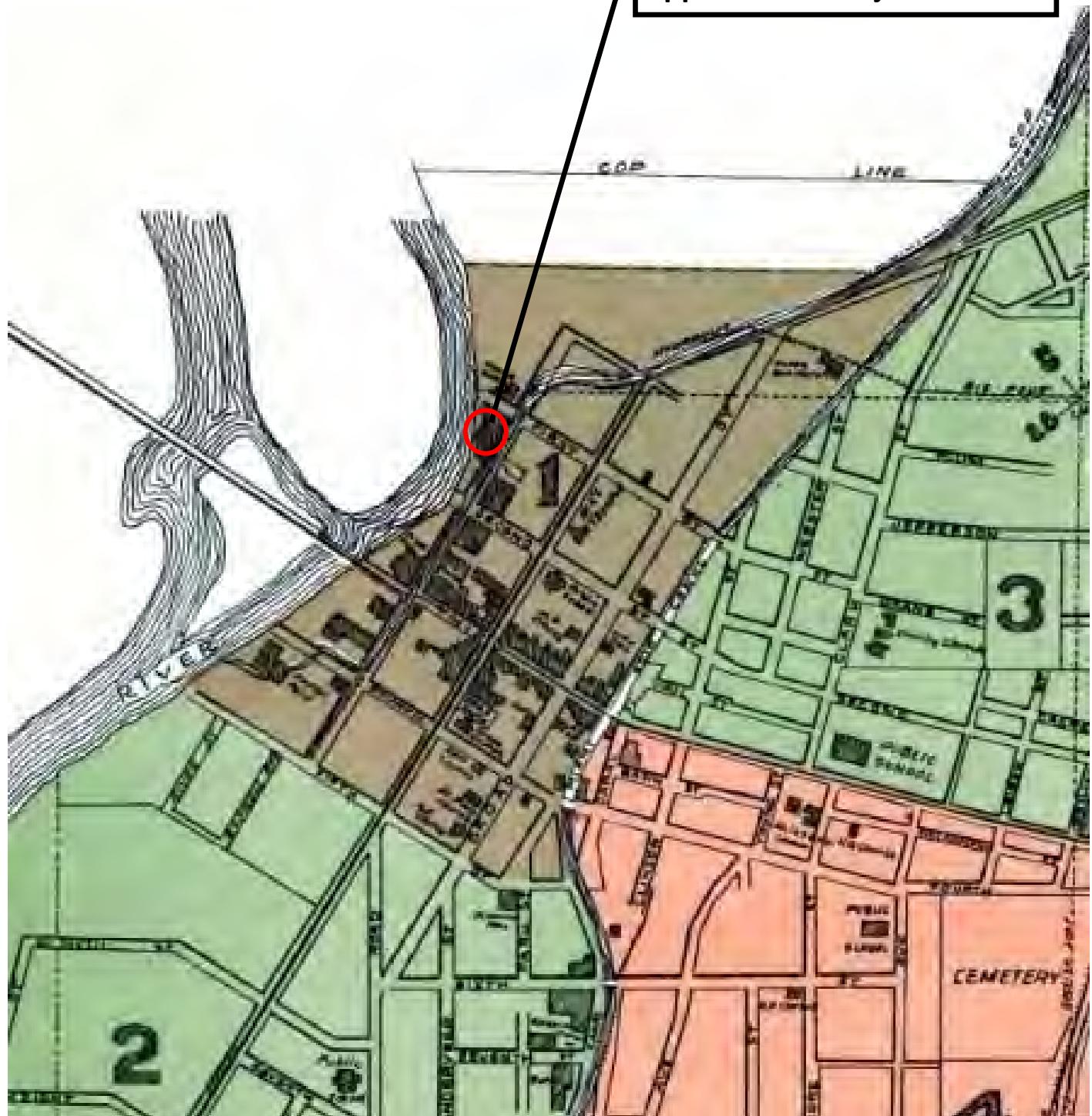
Appendix A: 1885 Map
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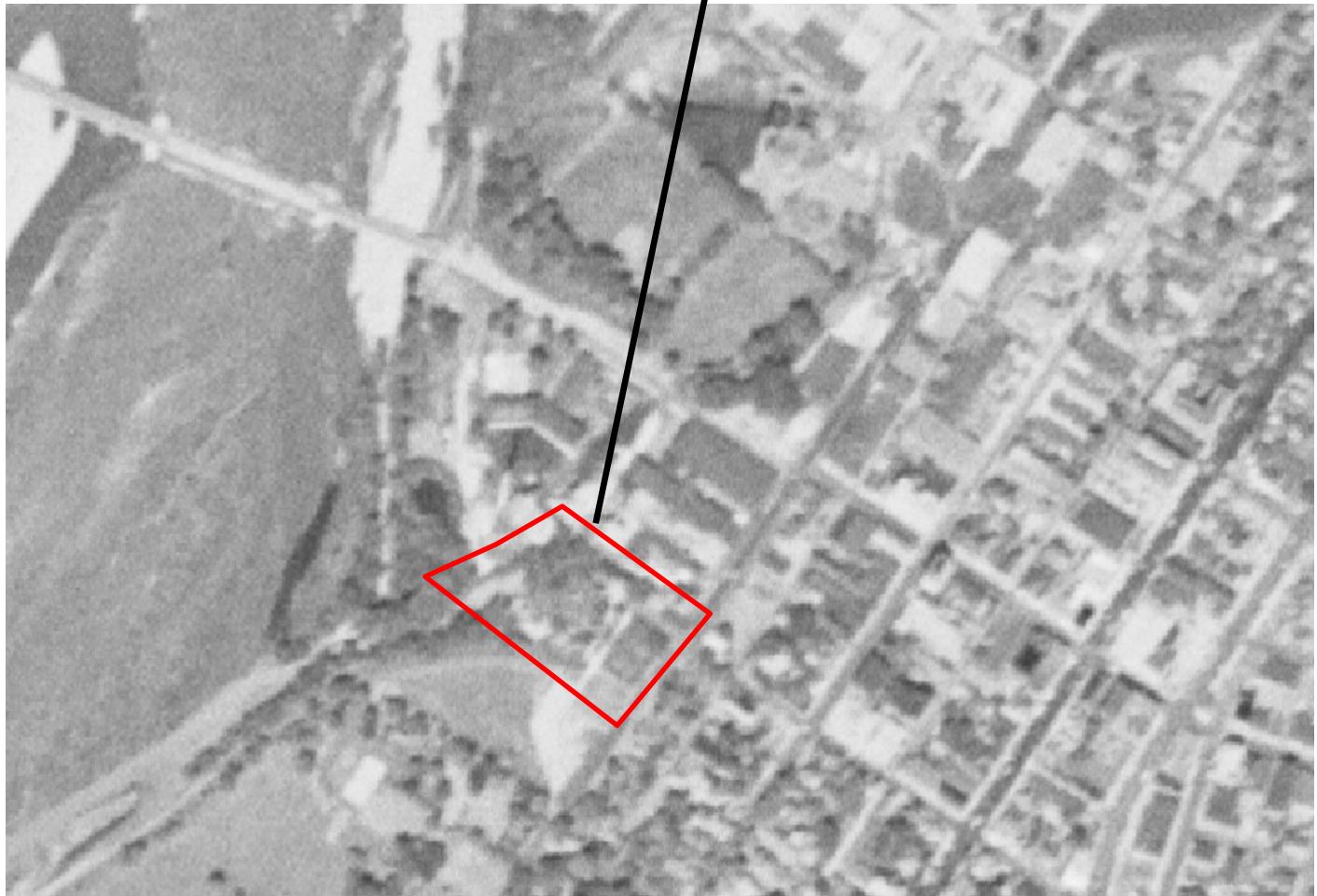
Appendix A: 1914 Map
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United States Geological Survey (USGS) 1952 Aerial



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Appendix A: 1952 Aerial

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United States Geological Survey (USGS) 1964 Aerial



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Appendix A: 1964 Aerial

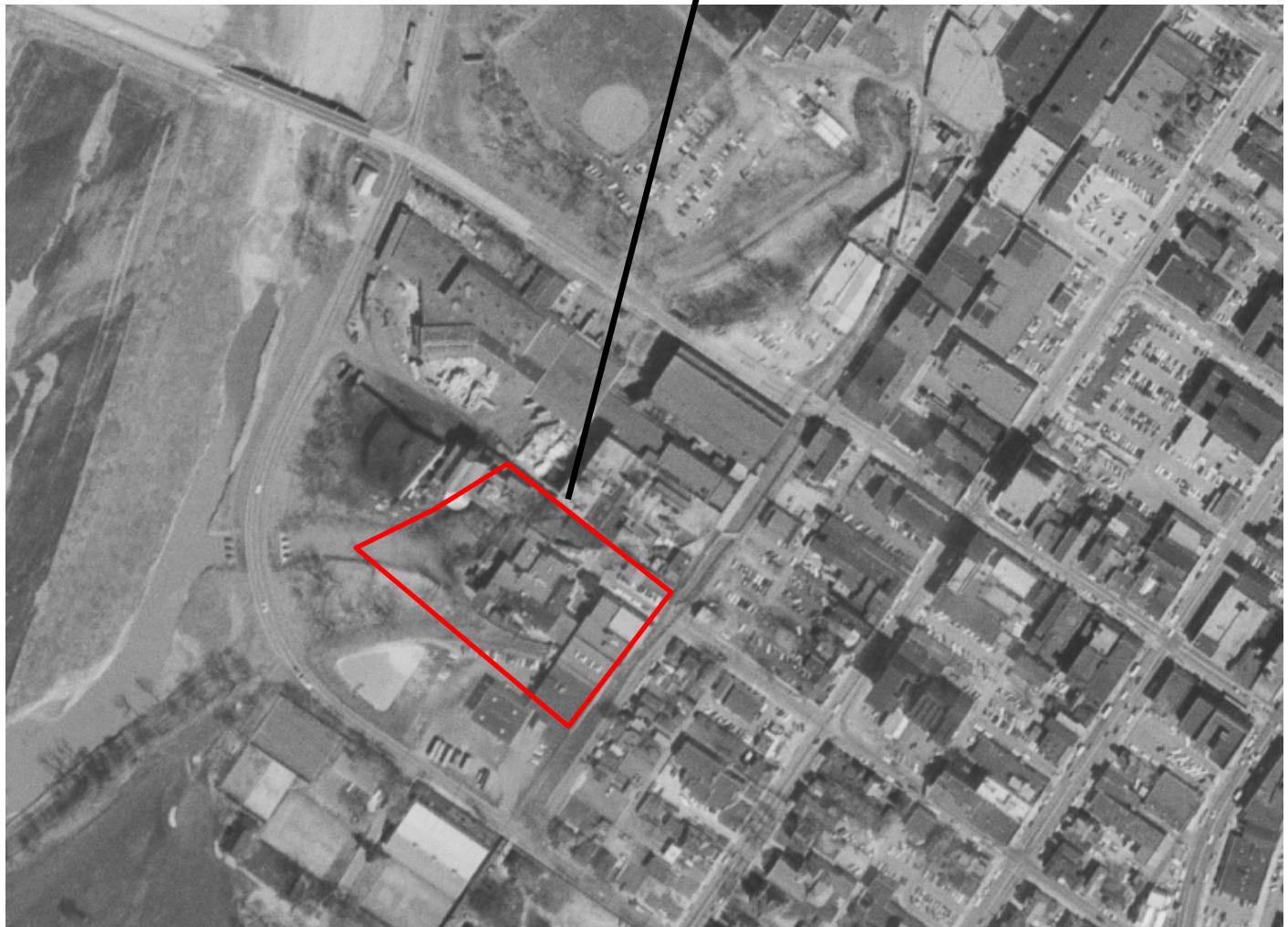
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United States Geological Survey (USGS) 1970 Aerial



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Appendix A: 1970 Aerial

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Approximate Project Location



Google Earth Pro 2017, USDA Farm Services Agency Map



Project Number:
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Appendix A: 2011 Aerial

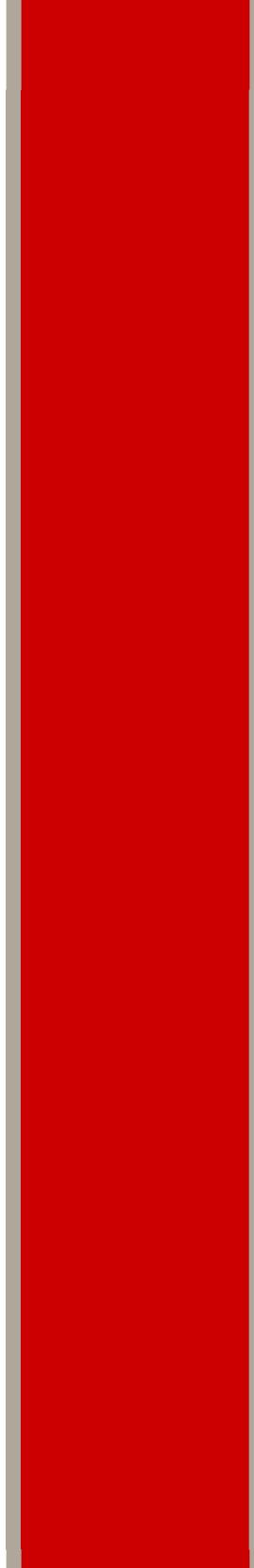
Cultural Resources Literature Review for the STM Property
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Attachment C:
Regulatory Governance
Documentation



**IN THE UNITED STATES DISTRICT COURT
FOR THE SOUTHERN DISTRICT OF OHIO**

UNITED STATES OF AMERICA,)
and)
THE STATE OF OHIO,)
Plaintiffs,)
v.)
THE CITY OF MIDDLETOWN, OHIO,)
Defendant.)
Civil Action No. 18-cv-90

CONSENT DECREE

TABLE OF CONTENTS

I.	JURISDICTION AND VENUE	4
II.	APPLICABILITY	4
III.	DEFINITIONS	5
IV.	COMPLIANCE REQUIREMENTS	8
V.	CIVIL PENALTY	11
VI.	SUPPLEMENTAL ENVIRONMENTAL PROJECTS	12
VII.	REPORTING REQUIREMENTS	14
VIII.	STIPULATED PENALTIES.....	16
IX.	FORCE MAJEURE	19
X.	POTENTIAL FORCE MAJEURE BETWEEN OHIO AND MIDDLETOWN	20
XI.	DISPUTE RESOLUTION	21
XII.	RIGHT OF ENTRY AND INFORMATION COLLECTION AND RETENTION	22
XIII.	EFFECT OF SETTLEMENT/RESERVATION OF RIGHTS	24
XIV.	COSTS.....	25
XV.	NOTICES	25
XVI.	EFFECTIVE DATE	26
XVII.	RETENTION OF JURISDICTION	27
XVIII.	MODIFICATION.....	27
XIX.	TERMINATION	27
XX.	PUBLIC PARTICIPATION.....	28
XXI.	SIGNATORIES/SERVICE	28

XXII. INTEGRATION.....	29
XXIII. FINAL JUDGMENT	29

TABLE OF APPENDICES

Appendix A	LTCP
Appendix B	Post-Construction Monitoring Program Parameters and Schedule
Appendix C	Construction Schedule
Appendix D	Supplemental Environmental Project

CONSENT DECREE

WHEREAS, Plaintiff United States of America (“United States”), on behalf of the United States Environmental Protection Agency (“U.S. EPA”), and Plaintiff the State of Ohio (“State”), on behalf of the Ohio Environmental Protection Agency (“Ohio EPA”), have filed a complaint in this action (“Complaint”) concurrently with this Consent Decree alleging that the Defendant, the City of Middletown, Ohio, (“Middletown”) violated Section 301(a) of the Clean Water Act (“CWA”), 33 U.S.C. § 1251 *et seq.*, and regulations promulgated thereunder; Chapter 6111 of the Ohio Revised Code and rules promulgated thereunder; and certain terms and conditions of the National Pollutant Discharge Elimination System (“NPDES”) permits issued to Middletown pursuant to the CWA relating to the municipal wastewater treatment plant (“WWTP”) and Sewer System owned and operated by Middletown;

WHEREAS, in their Complaint, the United States and the State allege that: (1) various discharges from Middletown’s wastewater treatment plant have violated the CWA by exceeding the effluent limitations in Middletown’s NPDES permits for chlorine, ammonia as nitrogen, fecal coliform, total suspended solids, and pH; (2) Middletown’s wet weather combined sewer overflow (“CSO”) discharges violate the CWA and conditions in Middletown’s NPDES permits because the discharges impair downstream uses; (3) Middletown has discharged untreated sewage from its CSO outfalls during dry weather in violation of the CWA; and (4) Middletown has violated the CWA and conditions of its NPDES permits by failing to monitor and/or report the results for its CSO outfalls in the manner required by the permits;

WHEREAS, Middletown does not admit these allegations nor any liability to the United States or the State arising out of the transactions or occurrences alleged in the Complaint;

WHEREAS, the United States and the State have not alleged violations related to sanitary sewer overflows, however, this Consent Decree, nonetheless, includes requirements that Middletown replace or rehabilitate substantial portions of its Sewer System pipes during the life of this Consent Decree;

WHEREAS, the pipe rehabilitation and replacement measures are being implemented by Middletown in a proactive effort to prevent problems from arising in the future;

WHEREAS, Middletown represents that the Middletown Sewer System currently serves an area of approximately 19,325 acres and approximately 18,000 households;

WHEREAS, Middletown represents that it has undertaken numerous Sewer System and WWTP replacement and rehabilitation projects intended to reduce CSO discharges; and

WHEREAS, the United States, the State, and Middletown (the “Parties”) recognize, and the Court by entering this Consent Decree finds, that this Consent Decree has been negotiated by the Parties in good faith and will avoid protracted and expensive litigation among the Parties and that this Consent Decree is fair, reasonable, and in the public interest;

NOW, THEREFORE, before the taking of any testimony, without the adjudication or admission of any issue of fact or law except as provided in Section I (Jurisdiction and Venue), and with the consent of the Parties, IT IS HEREBY ADJUDGED, ORDERED, AND DECREED as follows:

I. JURISDICTION AND VENUE

1. This Court has jurisdiction over the subject matter of this action, pursuant to 28 U.S.C. §§ 1331, 1345, 1355, and 1367, and Section 309(b) of the CWA, 33 U.S.C. § 1319(b), and over the Parties. Venue lies in this District pursuant to Section 309(b) of the CWA, 33 U.S.C. § 1319(b), and 28 U.S.C. § 1331(b), because Middletown is located in this judicial district and the alleged violations occurred in this District. Authority for Ohio to bring its action is vested in the Ohio Attorney General pursuant to Ohio Revised Code (“O.R.C.”) § 6111.07. This Court has supplemental jurisdiction over the state law claims asserted by Ohio pursuant to 28 U.S.C. § 1337.

2. For purposes of this Consent Decree or any action to enforce this Consent Decree, the Parties consent to the Court’s jurisdiction over this Consent Decree, over any action to enforce this Consent Decree, and over the Parties. The Parties also consent to venue in this judicial district.

II. APPLICABILITY

3. The obligations of this Consent Decree apply to and are binding upon the United States, the State of Ohio, and upon Middletown, its successors and assigns, its officers, directors, employees, and agents in their capacities as such, and all other persons and entities as provided for in Fed. R. Civ. P. 65(d).

4. No transfer of ownership or operation of the WWTP, the Sewer System, or any portion of the WWTP or Sewer System shall relieve Middletown of its obligation to ensure that the terms of the Decree are implemented, unless (1) the transferee agrees to undertake the obligations required by Section IV (Compliance Requirements) of this Decree and to be substituted for Middletown as a Party under the Decree and thus be bound by the terms thereof, (2) the United States consents to relieve Middletown of its obligations, and (3) the Court agrees to the substitution. The United States’ discretion to refuse to approve the substitution of the transferee for Middletown is not subject to judicial review. At least 30 days prior to such transfer, Middletown shall provide a copy of this Consent Decree to the proposed transferee and shall simultaneously provide written notice of the prospective transfer, together with a copy of the proposed written agreement, to U.S. EPA, the United States Attorney for the Southern District of Ohio, and the United States Department of Justice, in accordance with Section XV (Notices). Any attempt to transfer ownership or operation of the WWTP, the Sewer System, or any portion of the WWTP or Sewer System without complying with this Paragraph constitutes a violation of this Decree.

5. Middletown shall provide a copy of this Consent Decree to all officers, employees, and agents whose duties might reasonably include compliance with any provision of this Consent Decree, as well as to any contractor retained to perform work required under this Consent Decree. Such copy may be provided in paper form, electronic form, or by on-line access. Middletown shall condition any such contract upon performance of the work in conformity with the terms of this Consent Decree.

6. In any action to enforce this Consent Decree, Middletown will not raise as a defense to liability the failure of its officers, directors, agents, servants, contractors, or employees to take any actions necessary to comply with the provisions hereof.

III. DEFINITIONS

7. Terms used in this Consent Decree that are defined in the CWA, 33 U.S.C. § 1251, *et seq.*, or in federal regulations promulgated pursuant to the CWA at 40 C.F.R. Part 122 shall have the meanings assigned to them in the CWA or such regulations, unless otherwise provided in this Consent Decree. Terms used in this Consent Decree that are not defined in the CWA or in federal regulations promulgated pursuant to the CWA at 40 C.F.R. Part 122 but that are defined in Chapter 6111 of the Ohio Revised Code or in state regulations promulgated pursuant to Chapter 6111 of the Ohio Revised Code shall have the meanings assigned to them in Chapter 6111 of the Ohio Revised Code or such regulations, unless otherwise provided in this Consent Decree. Whenever the terms set forth below are used in this Consent Decree, the following definitions shall apply:

a. “Combined Sewer Overflow” or “CSO” shall mean any discharge from Middletown’s Combined Sewer System at a CSO Outfall designated in the NPDES Permit.

b. “Combined Sewer Overflow Policy” or “CSO Policy” shall mean the policy issued by U.S. EPA regarding combined sewer overflows, entitled “Combined Sewer Overflow Control (CSO) Policy,” 59 Fed. Reg. 18,688 (April 19, 1994).

c. “Combined Sewer System” shall mean the portion of Middletown’s Sewer System designed to convey municipal sewage (domestic, commercial, and industrial wastewaters) and stormwater to Middletown’s WWTP or to a CSO Outfall.

d. “Complaint” shall mean the complaint filed by the United States and the State in this action.

e. “Consent Decree” or “Decree” shall mean this Consent Decree and all appendices hereto.

f. “Construction Schedule” shall mean the schedule agreed to by the Parties, which is attached to this Consent Decree as Appendix C.

g. “CSO Event” shall mean one or more CSOs from the City’s collection system as the result of a precipitation event following a period of at least 24 hours during which no CSO has discharged. A single precipitation event that causes multiple CSO discharges shall constitute one CSO Event.

h. “CSO Outfall” shall mean an outfall in the Combined Sewer System from which CSOs are permitted to be discharged. Middletown’s CSO Outfalls in its NPDES Permit are labeled as follows:

- i. Lafayette CSO (Outfall 003)
- ii. 15th Avenue CSO (Outfall 004)
- iii. 14th Avenue CSO (Outfall 005)
- iv. Verity Parkway CSO (Outfall 006)
- v. 9th Avenue CSO (Outfall 007)
- vi. 2nd Avenue CSO (Outfall 008)
- vii. Lakeside CSO (Outfall 009)
- viii. Bulls Run CSO (Outfall 010)

i. “Date of Lodging of this Consent Decree” or “Date of Lodging” shall mean the date that this Consent Decree, in proposed form, is filed for lodging, pending solicitation of public comment and entry by the Court, with the Clerk of the Court for the United States District Court for the Southern District of Ohio.

j. “Day” shall mean a calendar day unless expressly stated to be a business day. In computing any period of time under this Consent Decree, where the last day would fall on a Saturday, Sunday, federal holiday, or legal holiday for Middletown, the period shall run until the close of business of the next business day.

k. “Descriptions and Design Criteria” shall mean numeric and/or narrative specifications included in the Long Term Control Plan that must be met in designing and constructing CSO control measures required by this Consent Decree.

l. “Dry Weather Flow” means the combination of domestic sewage, groundwater infiltration, commercial and industrial wastewaters, and any other non-precipitation related flows.

m. “Dry Weather Overflow” shall mean any CSO that consists only of Dry Weather Flow.

- n. "Effective Date" shall have the definition provided in Section XVI (Effective Date).
- o. "Long Term Control Plan" or "LTCP" shall mean the plan attached to this Consent Decree as Appendix A.
- p. "MGD" or "mgd" shall mean million gallons per day.
- q. "Middletown" shall mean the Defendant City of Middletown, Ohio.
- r. "NPDES Permit" shall mean NPDES Permit No. 1PE00003*OD (OH0026522) issued to Middletown by Ohio EPA, effective on May 1, 2016, and all revisions, modifications, renewals, and successors to this NPDES Permit.
- s. "Ohio EPA" shall mean the Ohio Environmental Protection Agency and any successor departments or agencies of the State of Ohio.
- t. "Paragraph" shall mean a portion of this Consent Decree identified by an Arabic numeral.
- u. "Parties" shall mean the United States, the State, and Middletown.
- v. "Performance Criteria" shall mean no more than six CSO Events Systemwide during the Typical Year of 1970, based on rainfall data from the Covington (Northern Kentucky) Airport Station.
- w. "Plaintiffs" shall mean the United States and the State of Ohio.
- x. "Section" shall mean a portion of this Consent Decree that has a heading identified by an upper case Roman numeral.
- y. "SEP" shall mean the Supplemental Environmental Project described in Appendix D of this Consent Decree.
- z. "Sewer System" shall mean the wastewater collection and transmission system owned or operated by Middletown designed to collect and convey municipal sewage (domestic, commercial, and industrial) to Middletown's WWTP or to a CSO Outfall.
- aa. "State" shall mean the State of Ohio, acting on the referral of Ohio EPA. State and Ohio are interchangeable for the purposes of this Consent Decree.
- bb. "Unauthorized Release" shall mean any overflow, spill, diversion, or release of wastewater from the Sewer System at a location other than a CSO Outfall. This term shall include any release of wastewater from the Sewer System to public or private property, including basement backups.

cc. "United States" shall mean the United States of America, acting on behalf of U.S. EPA.

dd. "Unpermitted Discharge" shall mean any discharge from any portion of the Sewer System that is not a permitted discharge under the CWA or Middletown's NPDES Permit.

ee. "U.S. EPA" shall mean the United States Environmental Protection Agency and any successor departments or agencies of the United States.

ff. "Wastewater Treatment Plant" or "WWTP" shall mean the wastewater treatment plant owned and operated by Middletown and located at 300 Oxford State Road, Middletown, Ohio, 45044, and any future wastewater treatment facilities connected to the Sewer System.

IV. COMPLIANCE REQUIREMENTS

8. Injunction. Middletown shall comply with the effluent limitations in its NPDES Permit pertaining to discharges from the outfall identified as "Outfall 001" in the NPDES Permit issued to Middletown by Ohio EPA, effective on May 1, 2016, and with the compliance measures and the schedules set forth below. This includes complying with effluent limitations for that outfall (or for any outfall from the WWTP) in any subsequent NPDES permit.

9. No Dry Weather Overflows. Middletown is prohibited from any and all Dry Weather Overflows.

10. No Unpermitted Discharges. Middletown is prohibited from any and all Unpermitted Discharges.

11. Compliance with Operation and Maintenance Requirements. Middletown shall comply with all operation and maintenance requirements of the NPDES Permit in Parts II.G, II.I and III.3 of the NPDES Permit issued to Middletown by Ohio EPA, effective on May 1, 2016, as well as all comparable operation and maintenance requirements in any revisions, modifications, renewals and successors to that NPDES Permit.

12. CSO Control Measures Implementation. Middletown shall perform the activities and construct the CSO control measures in accordance with the Descriptions and Design Criteria specified in the LTCP attached as Appendix A and the Construction Schedule attached as Appendix C. The State concurs that the CSO control measures in Appendix A are adequate and appropriate.

13. Achievement of Performance Criteria. By January 1, 2043, Middletown shall:

a. achieve full operation of all CSO control measures, as set forth in the LTCP;

- b. achieve the Performance Criteria; and
- c. comply with any numeric and/or narrative effluent limitations of Middletown's NPDES Permit applicable to Middletown's CSOs.

14. Post-Construction Monitoring Program. By January 1, 2041, Middletown shall submit a Post-Construction Monitoring Program to U.S. EPA for review and approval in accordance with Paragraph 18. The Post-Construction Monitoring Program shall be developed in accordance with the terms and schedule specified in Appendix B. Upon approval by U.S. EPA, Middletown shall implement the Post-Construction Monitoring Program in accordance with the terms and schedule specified in the approved Program.

15. No Unpermitted Discharges from Outfall 002. Beginning January 1, 2018, all discharges from the outfall identified as "Outfall 002" in the NPDES Permit issued to Middletown by Ohio EPA, effective on May 1, 2016, are prohibited, except as permitted by the Clean Water Act or the NPDES Permit.

16. Monitoring of CSOs. Middletown shall comply with all CSO monitoring requirements of the NPDES Permit, including the requirements in Part I.A.

17. Sewer Pipe Rehabilitation and Replacement.

a. Middletown shall replace (including complete pipe removal and replacement, pipe bursting, or similar replacement activities) and/or rehabilitate (using slip lining, cured-in-place repairs, or similar rehabilitation activities) 40 miles of sewer pipe in the Sewer System in accordance with the following schedule:

Dates for Achievement of Cumulative Length in Miles Replaced/Rehabilitated	Cumulative Length in Miles of Sewers Replaced/Rehabilitated
January 1, 2023	Completion of Sewer System Condition Assessment
January 1, 2028	8 miles
July 1, 2034	16 miles
January 1, 2043	40 miles

b. At least 12 miles of the total sewer pipe replaced and/or rehabilitated pursuant to Paragraph 17.a shall be 36 inch diameter or larger. At least 4 miles of the total sewer pipe replaced and/or rehabilitated pursuant to Paragraph 17.a shall be 72 inch diameter or larger.

c. Middletown shall prioritize replacement and rehabilitation of sewer pipe based upon the severity of defects identified, likelihood of pipe failure and consequence of pipe

failure, contribution of inflow and infiltration, maintenance history, and any history of discharges or releases from the sanitary portion of Middletown's Sewer System.

d. **Pipe Rehabilitation and Replacement Report.** By no later than five years following the Date of Entry of the Consent Decree, and every five years thereafter, Middletown shall submit a Pipe Rehabilitation and Replacement Report to U.S. EPA for U.S. EPA review. Each Report shall include:

- i. Identification of the pipes that Middletown plans to replace and/or rehabilitate within the five years following the date of the Report;
- ii. The basis for Middletown's selection of the specific pipes that Middletown plans to replace and/or rehabilitate over the next five years, including an explanation as to how Middletown prioritized replacement and rehabilitation of sewer pipe based upon the severity of defects identified, likelihood of pipe failure and consequence of pipe failure, contribution of inflow and infiltration, maintenance history, and/or any history of discharges or releases from the sanitary portion of Middletown's Sewer System; and
- iii. For all subsequent Reports following the initial Report:
 1. The locations and number of miles of sewer pipes that were replaced or rehabilitated each year during the prior five years;
 2. An estimate of the amount of money spent by Middletown on replacing and rehabilitating sewer pipes (including costs related to planning, design, and any necessary utility relocation) during the prior five years;
 3. The cumulative amount of sewer pipes that have been replaced or rehabilitated since the Date of Entry of the Consent Decree and whether Middletown achieved the cumulative mileage of sewer pipe replacement/rehabilitation by the dates specified in Paragraph 17.a; and
 4. If Middletown has not achieved the required cumulative mileage of sewer pipe replacement/rehabilitation by the dates specified in Paragraph 17.a, a discussion of the reasons why the mileage requirement was not achieved.

18. **U.S. EPA Review and Approval.**

a. After review of any plan, report, schedule, or other item that is required to be submitted for U.S. EPA review and approval, U.S. EPA, after consultation with the State,

shall in writing: (i) approve the submission; (ii) approve part of the submission and disapprove the remainder; or (iii) disapprove the submission.

b. If the submission is approved pursuant to Paragraph 18.a, Middletown shall take all actions required by the plan, report, or other document, in accordance with the schedules and requirements of the plan, report, or other document, as approved. If the submission is approved only in part pursuant to Paragraph 18.a.ii, Middletown shall, upon written direction from U.S. EPA, after consultation with the State, take all actions required by the approved plan, report, or other item that U.S. EPA, after consultation with the State, determines are technically severable from any disapproved portions, subject to Middletown's right to dispute only the specified conditions or the disapproved portions, under Section XI(Dispute Resolution).

c. If the submission is disapproved in whole or in part pursuant to Paragraph 18.a.ii or 18.a.iii, Middletown shall, within 60 days or such other time as the Parties agree to in writing, correct all deficiencies and resubmit the plan, report, or other item, or disapproved portion thereof, for approval, in accordance with this Paragraph. If the resubmission is approved in whole or in part, Middletown shall proceed in accordance with Paragraph 18.b.

d. If a resubmitted plan, report, or other item, or portion thereof, is disapproved in whole or in part, U.S. EPA, after consultation with the State, may again require Middletown to correct any deficiencies, subject to Middletown's right to invoke Dispute Resolution and the right of U.S. EPA to seek stipulated penalties.

19. Middletown shall provide Ohio EPA with a copy of each plan, report, schedule, or other document submitted by Middletown for U.S. EPA approval.

20. Permits. Where any compliance obligation under this Section requires Middletown to obtain a federal, state, or local permit or approval, Middletown shall submit timely and complete applications to obtain all such permits or approvals. The inability of Middletown to obtain a permit in adequate time to allow compliance with the deadlines stated in this Consent Decree shall be considered a Force Majeure event if Middletown demonstrates that it exercised best efforts to timely fulfill its permitting obligations.

V. CIVIL PENALTY

21. By no later than 30 days after the Effective Date of this Consent Decree, Middletown shall pay to the United States a civil penalty in the amount of \$27,500, together with interest accruing from the Effective Date, at the rate specified in 28 U.S.C. § 1961 as of the Effective Date. Middletown shall pay the civil penalty by FedWire Electronic Funds Transfer ("EFT") to the U.S. Department of Justice in accordance with written instructions to be provided to Middletown, following the entry of the Decree, by the Financial Litigation Unit ("FLU") of the U.S. Attorney's Office for the Southern District of Ohio. The costs of such EFT shall be Middletown's responsibility. The payment instructions provided by the FLU will include a Consolidated Debt Collection System ("CDCS") number, which Middletown shall use to identify

all payments required to be made in accordance with this Consent Decree. The FLU will provide the payment instructions to:

Vincent Atriano
Squire Patton Boggs LLP
2000 Huntington Center
41 South High Street
Columbus, Ohio 43215

on behalf of Middletown. Middletown may change the individual to receive payment instructions on its behalf by providing written notice of such change to the United States and U.S. EPA in accordance with Section XV (Notices). At the time of payment, Middletown shall send a copy of the EFT authorization form, the EFT transaction record, and a transmittal letter: (i) to U.S. EPA via email at cinwd_acctsreceivable@epa.gov or via regular mail at EPA Cincinnati Finance Office, 26 W. Martin Luther King Drive, Cincinnati, Ohio 45268 and (ii) to the United States via email or regular mail in accordance with Section XV (Notices). The transmittal letter shall state that the payment is for the civil penalty owed pursuant to the Consent Decree in United States, et al. v. City of Middletown, Ohio, and shall reference the civil action number, CDCS number, and DOJ case number 90-5-1-1-08978.

22. By no later than 30 days after the Effective Date of this Consent Decree, Middletown shall pay a civil penalty to the State in the amount of \$27,500. Payment to the State of Ohio shall be made by certified check or checks payable to "Treasurer, State of Ohio," and shall be delivered to Martha Sexton, Paralegal, or her successor, at the Ohio Attorney General's Office, Environmental Enforcement Section, Public Protection Division, 30 East Broad Street, 25th Floor, Columbus, Ohio 43215. Payment may also be made by electronic funds transfer to the designated accounts pursuant to instructions sent by Ohio upon request by Middletown. At the time of payment, Middletown shall simultaneously send written notice of payment and a copy of any transmittal documentation (which should reference the above-captioned case name and civil action number) to Plaintiffs in accordance with Section XV (Notices) of this Consent Decree.

VI. SUPPLEMENTAL ENVIRONMENTAL PROJECT

23. Middletown shall implement a Supplemental Environmental Project ("SEP") providing for capping of a specified area of sediments within the Hydraulic Canal.

24. The SEP shall be completed in accordance with the schedule and requirements set forth in Appendix D.

25. Middletown is responsible for the satisfactory completion of the SEP in accordance with the requirements of this Decree. Middletown may use contractors or consultants in planning and implementing the SEP.

26. With regard to the SEP, Middletown certifies the truth and accuracy of each of the following:

- a. that all cost information provided to U.S. EPA in connection with U.S. EPA's approval of the SEP is complete and accurate and that Middletown in good faith estimates that the cost to implement the SEP is \$200,000.00;
- b. that, as of the date of executing this Decree, Middletown is not required to perform or develop the SEP by any federal, state, or local law or regulation and is not required to perform or develop the SEP by agreement, grant, or as injunctive relief awarded in any other action in any forum;
- c. that the SEP is not a project that Middletown was planning or intending to construct, perform, or implement other than in settlement of the claims resolved in this Decree;
- d. that Middletown has not received and will not receive credit for the SEP in any other enforcement action;
- e. that Middletown will not receive any reimbursement for any portion of the SEP from any other person; and
- f. that Middletown is not a party to any open federal financial assistance transaction that is funding or could fund the same activity as the SEP described in this Section.

27. SEP Completion Report

a. Within 30 days after the date set for completion of the SEP as specified in Appendix D, Middletown shall submit a SEP Completion Report to the United States and Ohio, in accordance with Section XV of this Consent Decree (Notices). The SEP Completion Report shall contain the following information:

- (1) a detailed description of the SEP as implemented;
- (2) a description of any problems encountered in completing the SEP and the solutions thereto;
- (3) an itemized list of all SEP costs expended; and
- (4) certification that the SEP has been fully implemented pursuant to the provisions of this Decree.

28. Within 30 days after receiving the SEP Completion Report, U.S. EPA shall notify Middletown whether or not Middletown has satisfactorily completed the SEP. If Middletown fails to satisfactorily complete the SEP in accordance with Appendix D, Middletown shall pay stipulated penalties as provided in Paragraph 45 below.

29. Disputes concerning the satisfactory performance of the SEP shall be resolved under Section XI (Dispute Resolution) of this Decree.

30. Each submission by Middletown required under this Section shall be signed by an official and shall bear the certification language set forth in Paragraph 36 below.

VII. REPORTING REQUIREMENTS

31. Progress Reports. On July 31 after the Effective Date and continuing on July 31 of each year until termination of this Consent Decree, Middletown shall submit to U.S. EPA and the State a progress report regarding the implementation of the requirements of this Decree in the preceding 12 months (“Progress Report”). The Progress Report shall include:

a. A statement setting forth the deadlines and other terms that Middletown is or was required to meet by the Consent Decree since the date of the last Progress Report, whether and to what extent Middletown has met these requirements, and the reasons for any failure to meet such requirements;

b. A general description of the projects and activities conducted during the reporting period pursuant to this Consent Decree, and a projection of work to be performed pursuant to this Consent Decree during the next reporting period. Notification to U.S. EPA and Ohio EPA of any anticipated delay shall not, by itself, excuse the delay;

c. A summary of all material problems or potential problems encountered during the reporting period, and the actions taken to rectify the problems;

d. A statement of any exceedance of NPDES Permit limitations within the reporting period;

e. A summary of all known CSOs, Dry Weather Overflows, Discharges from Outfall 002, and Unpermitted Discharges occurring within the reporting period, including the actual or estimated frequency, location, duration, and volume of each known CSO, Dry Weather Discharge, Discharge from Outfall 002 and Unpermitted Discharge; and

f. A summary of all known Unauthorized Releases occurring within the reporting period and any corrective action taken to address such Unauthorized Releases.

32. Public Notification.

a. Middletown shall have a discoverable website dedicated to posting Progress Reports submitted pursuant to Section VII (Reporting Requirements) of this Consent Decree upon submission of the Progress Reports to EPA. The posted Progress Reports shall be readily accessible, searchable, clearly labeled, and clearly presented to the public. Each submission of the Progress Reports shall remain available on the online website for two years. The website shall describe the purpose of the Progress Reports and shall include the following language: “The Progress Reports have been posted in accordance with the Consent Decree in

United States v. City of Middletown. The Progress Reports have not been reviewed or verified by EPA prior to posting. If you have any questions about the information in the Progress Reports, how it was collected, or what it means, please contact **[MIDDLETOWN'S POINT OF CONTACT]** at **[email address and/or telephone number]**.”

b. Middletown shall also post on the website an electronic copy of the entered Consent Decree, which shall be readily accessible, searchable, clearly labeled, and clearly presented to the public.

c. Middletown shall also implement a program designed to provide electronic notification to members of the general public who wish to receive notice of known CSOs, Dry Weather Overflows, and Unauthorized Releases that expose the general public to contact with raw sewage. Electronic notification shall be provided by either text messaging, email, or by posting a notice on Middletown’s public access website. Middletown shall announce the availability of such electronic notification service by a press release and shall maintain availability of the electronic notification service on Middletown’s public access website: <http://www.cityofmiddletown.org/>.

33. In addition to the reports required pursuant to this Section, if Middletown fails to comply with any provision of this Consent Decree or its NPDES Permit, Middletown shall notify U.S. EPA and the State of such failure in writing within 10 working days after Middletown knew of the failure. Middletown shall explain the likely cause of the failure and the remedial steps taken, and/or to be taken, to prevent or minimize such failure. If the cause of a failure cannot be fully explained at the time the report is due, Middletown shall so state in the report. Middletown shall investigate the cause of the failure and shall then submit an amendment to the report, including a full explanation of the cause of the failure, within 30 days of the day Middletown becomes aware of the cause of the failure. Nothing in this Paragraph or the following Paragraph relieves Middletown of its obligation to provide the notice required by Section IX (Force Majeure). Such notification shall not relieve Plaintiffs of any applicable burden of proof or waive any defenses available to Middletown under this Consent Decree or applicable law.

34. Whenever any failure to comply with this Consent Decree or any other event affecting Middletown’s performance under this Decree may pose an immediate threat to the public health or welfare or the environment, Middletown shall notify U.S. EPA by email sent to r5weca@epa.gov and the State orally or by electronic or facsimile transmission as soon as possible following its knowledge of such potential threat, but no later than 24 hours after Middletown first knew of the potential threat. This procedure is in addition to the requirements set forth in the preceding Paragraph. Such notification shall not relieve Plaintiffs of any applicable burden of proof or waive any defenses available to Middletown under this Consent Decree or applicable law.

35. All reports shall be submitted to the persons designated in Section XV (Notices) with a courtesy copy to each email addressee.

36. Each report submitted by Middletown under this Section shall be signed by a Middletown official and include the following certification:

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I have no personal knowledge that the information submitted is other than true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

This certification requirement does not apply to emergency or similar notifications where compliance would be impractical.

37. The reporting requirements of this Consent Decree do not relieve Middletown of any reporting obligations required by its NPDES Permit, the CWA and the rules promulgated thereunder, Ohio Revised Code Chapter 6111 and the rules promulgated thereunder, and any other federal, state, or local law, regulation, permit, or other requirement.

38. Any information provided pursuant to this Consent Decree may be used by the United States in any proceeding to enforce the provisions of this Consent Decree and as otherwise permitted by law.

VIII. STIPULATED PENALTIES

39. Middletown shall be liable for stipulated penalties to the United States and the State for violations of this Consent Decree as specified below, unless excused under Section IX (Force Majeure). A violation includes failing to perform any obligation required by the terms of this Decree, including any work plan or schedule approved under this Decree, according to all applicable requirements of this Decree and within the specified time schedules established by or approved under this Decree.

40. Late Payment of Civil Penalty. If Middletown fails to pay the civil penalty required to be paid under Section V of this Decree (Civil Penalty) when due, Middletown shall pay a stipulated penalty of \$2,000 per Day for each Day that the payment is late.

41. Reporting Requirements. For each failure to submit a timely and adequate plan, report, schedule, written notice, or other deliverable required by this Decree, Middletown shall pay the following stipulated penalties to Plaintiffs:

<u>Period of Noncompliance</u>	<u>Penalty per Day per Violation</u>
--------------------------------	--------------------------------------

Days 1-30	\$750
Days 31-60	\$1000
Days 61 and over	\$1,500

42. Compliance Milestones. For each failure to comply with a requirement or meet a deadline specified in Paragraphs 12, 13, 14, or 17, Middletown shall pay the following stipulated penalties to Plaintiffs:

<u>Period of Noncompliance</u>	<u>Penalty per Day per Violation</u>
Days 1-30	\$750
Days 31-60	\$1,250
Days 61 and over	\$2,500

43. General Compliance.

a. For each discharge in violation of Paragraph 9 (Dry Weather Overflows) and for each discharge from Outfall 002 in violation of Paragraph 15 (Unpermitted Discharges from Outfall 002), Middletown shall pay the following stipulated penalties to Plaintiffs:

<u>Period of Noncompliance</u>	<u>Penalty per Day per Violation</u>
1st to 3rd day of discharge	\$750 per day per discharge
4th to 10th day of discharge	\$1,250 per day per discharge
After 10 days of discharge	\$2,500 per day per discharge

b. For each failure to comply with the effluent limitations in Paragraph 8, Middletown shall pay the following stipulated penalties to Plaintiffs:

<u>Period of Noncompliance</u>	<u>Penalty</u>
Violation of daily effluent limitation	\$750 per daily effluent limit violation
Violation of 7-day or weekly effluent limitation	\$1000 per 7-day or weekly effluent limit violation
Violation of 30-day or monthly effluent limitation	\$1,500 per monthly or 30-day average violation

c. For each failure to comply with Middletown's NPDES permit that is not otherwise addressed by any other stipulated penalty provision in this Consent Decree, including the requirements of Paragraph 11 (Compliance with Operation and Maintenance Requirements) and Paragraph 16 (Monitoring of CSOs), Middletown shall pay stipulated penalties of \$250 per day per violation.

44. Access Requirements. For each failure to allow access to the WWTP and Sewer System in accordance with Section XII (Right of Entry), below, Middletown shall pay stipulated penalties of \$1,000 to Plaintiffs per day.

45. SEP Compliance. If Middletown fails to satisfactorily complete the SEP by the deadline set forth in Appendix D, Middletown shall pay stipulated penalties for each day for which it fails to satisfactorily complete the SEP, as follows:

<u>Period of Noncompliance</u>	<u>Penalty per Day per Violation</u>
Days 1-30	\$750
Days 31-60	\$1,250
Days 61 and over	\$2,500

46. Stipulated penalties under this Section shall begin to accrue on the Day after performance is due or on the Day a violation occurs, whichever is applicable, and shall continue to accrue until performance is satisfactorily completed or until the violation ceases. Stipulated penalties shall accrue simultaneously for separate violations of this Consent Decree.

47. Middletown shall pay stipulated penalties to the United States and the State within 60 Days after receipt of a written demand by either Plaintiff. Middletown shall pay 50 percent of the total stipulated penalty amount due to the United States and 50 percent to the State. The Plaintiff making a demand for payment of a stipulated penalty shall simultaneously send a copy of the demand to the other Plaintiff.

48. Either Plaintiff may in the unreviewable exercise of its discretion, reduce or waive stipulated penalties otherwise due it under this Consent Decree.

49. Stipulated penalties shall continue to accrue as provided in Paragraph 46, during any Dispute Resolution, but need not be paid until the following:

a. If the dispute is resolved by agreement or by a decision of U.S. EPA or the State that is not appealed to the Court, Middletown shall pay accrued penalties determined to be owing, together with interest, to the United States or the State within 60 Days of the effective date of the agreement or the receipt of EPA's or the State's decision or order.

b. If the dispute is appealed to the Court and the United States or the State prevails in whole or in part, Middletown shall pay all accrued penalties determined by the Court to be owing, together with interest, within 60 Days of receiving the Court's decision or order, except as provided in subparagraph c, below.

c. If any Party appeals the District Court's decision, Middletown shall pay all accrued penalties determined to be owing, together with interest, within 30 Days of receiving the final appellate court decision.

50. Middletown shall pay stipulated penalties owing to the United States and/or the State in the manner set forth and with the confirmation notices required by Paragraphs 21 and 22, except that the transmittal letter shall state that the payment is for stipulated penalties and shall state for which violation(s) the penalties are being paid.

51. If Middletown fails to pay stipulated penalties when due according to the terms of this Consent Decree, Middletown shall be liable for interest on such penalties, as provided for in 28 U.S.C. § 1961, accruing as of the date payment became due. Nothing in this Paragraph shall be construed to limit the United States or the State from seeking any remedy otherwise provided by law for Middletown's failure to pay any stipulated penalties.

52. Subject to the provisions of Section XIII (Effect of Settlement/Reservation of Rights), the stipulated penalties provided for in this Consent Decree shall be in addition to any other rights, remedies, or sanctions available to the United States (including, but not limited to, statutory penalties, additional injunctive relief, mitigation or offset measures, and/or contempt) for Middletown's violation of this Consent Decree or applicable law; provided, however, that with respect to monetary relief, the United States and Ohio must elect between filing a new action for such monetary relief or seeking stipulated penalties under this Consent Decree, if stipulated penalties are also available for the alleged violation(s).

IX. FORCE MAJEURE

53. "Force majeure," for purposes of this Consent Decree, is defined as any event arising from causes beyond the control of Middletown, of any entity controlled by Middletown, or of Middletown's contractors, that delays or prevents the performance of any obligation under this Consent Decree despite Middletown's best efforts to fulfill the obligation. The requirement that Middletown exercise "best efforts to fulfill the obligation" includes using best efforts to anticipate any potential force majeure event and best efforts to address the effects of any potential force majeure event (a) as it is occurring and (b) following the potential force majeure, such that the delay and any adverse effects of the delay are minimized. "Force Majeure" does not include Middletown's financial inability to perform any obligation under this Consent Decree, although Middletown's financial capability may be grounds for a modification under Section XVIII.

54. If any event occurs or has occurred that may delay the performance of any obligation under this Consent Decree, whether or not caused by a force majeure event, Middletown shall notify U.S. EPA in writing within 7 days after Middletown first knew, or in the exercise of reasonable diligence under the circumstances should have known, of such event. Middletown shall include in such notice: (a) an explanation and description of the reasons for the delay; (b) the anticipated duration of the delay; (c) all actions taken or to be taken to prevent or minimize the delay; (d) a schedule for implementation of any measures to be taken to prevent or mitigate the delay or the effect of the delay; (e) Middletown's rationale for attributing such delay to a force majeure event if it intends to assert such a claim; and (f) a statement as to whether, in the opinion of Middletown, such event may cause or contribute to an endangerment to public health, welfare, or the environment. Middletown shall include with any notice all available

documentation supporting the claim that the delay was attributable to a force majeure. Failure to comply with the above requirements shall be grounds for denial of any claim of force majeure for that event for the period of time of such failure to comply, and for any additional delay caused by such failure.

55. If U.S. EPA, after a reasonable opportunity for review and comment by the State, agrees that the delay or anticipated delay is attributable to a force majeure event, the time for performance of the obligations under this Consent Decree that are affected by the force majeure event will be extended by U.S. EPA for such time as is necessary to complete those obligations. An extension of the time for performance of the obligations affected by the force majeure event shall not, of itself, extend the time for performance of any other obligation. U.S. EPA will notify Middletown in writing of the length of the extension, if any, for performance of the obligations affected by the force majeure event.

56. If U.S. EPA, after a reasonable opportunity for review and comment by the State, does not agree that the delay or anticipated delay has been or will be caused by a force majeure event, U.S. EPA will notify Middletown in writing of its decision.

57. If Middletown elects to invoke the dispute resolution procedures set forth in Section XI (Dispute Resolution), it shall do so no later than 15 days after receipt of U.S. EPA's notice. In any such proceeding, Middletown shall have the burden of demonstrating by a preponderance of the evidence that the delay or anticipated delay has been or will be caused by a force majeure event, that the duration of the delay or the extension sought was or will be warranted under the circumstances, that best efforts were exercised to avoid and mitigate the effects of the delay, and that Middletown complied with the requirements of Paragraphs 53 and 54. If Middletown carries this burden, the delay at issue shall be deemed not to be a violation by Middletown of the affected obligation of this Consent Decree identified to U.S. EPA and the Court.

X. POTENTIAL FORCE MAJEURE BETWEEN OHIO AND MIDDLETON

58. If any event occurs that causes or may cause Middletown to violate any requirement of this Consent Decree, whether or not due to a force majeure event, Middletown will so notify Ohio EPA, in writing, within 14 days after Middletown knew, or in the exercise of due diligence should have known of the event. The notice will describe in detail the bases for Middletown's contention that it experienced a force majeure event, the precise cause or causes of the event, the measures taken or to be taken to prevent or minimize the noncompliance or event, and the timetable by which those measures will be implemented. Middletown shall adopt all reasonable measures to avoid or minimize any such violation.

59. In any action by Ohio to enforce any of the provisions of this Consent Decree, Middletown may raise at that time the question of whether it is entitled to a defense that its conduct was caused by circumstances beyond its control such as, by way of example and not limitation, acts of God, strikes, acts of war, or civil disturbances. While Ohio does not agree that such a defense exists, it is, however, hereby agreed by Middletown and the State that it is

premature at this time to raise and adjudicate the existence of such a defense and that the appropriate point at which to adjudicate the existence of such a defense is at the time, if ever, that a proceeding to enforce this Consent Decree or collect stipulated penalties is commenced by the State. At that time, Middletown will bear the burden of proving that any delay was or will be caused by circumstances beyond the control of Middletown. Failure by Middletown to timely comply with the notice requirements of the preceding Paragraph may constitute, at Ohio EPA's discretion, a waiver by Middletown of any right it may have to raise such a defense. Changed financial circumstances or increased costs associated with the implementation of any action required by this Consent Decree will not in any event constitute circumstances beyond the control of Middletown. An extension of one date based on a particular incident does not mean that Defendant qualifies for an extension of a subsequent date or dates. Defendant must make an individual showing of proof regarding each incremental step or other requirement for which an extension is sought.

XI. DISPUTE RESOLUTION

60. Unless otherwise expressly provided for in this Consent Decree, the dispute resolution procedures of this Section shall be the exclusive mechanism to resolve disputes arising under or with respect to this Consent Decree.

61. Informal Dispute Resolution. Any dispute subject to Dispute Resolution under this Consent Decree shall first be the subject of informal negotiations. The dispute shall be considered to have arisen when Middletown sends the United States and the State a written Notice of Dispute. Such Notice of Dispute shall state clearly the matter in dispute. The period of informal negotiations shall not exceed 30 days from the date the dispute arises, unless the Parties otherwise agree in writing. If the Parties cannot resolve a dispute by informal negotiations, then the position advanced by the United States shall be considered binding unless, within 30 days after the conclusion of the informal negotiation period, Middletown invokes formal dispute resolution procedures as set forth below.

62. Formal Dispute Resolution.

a. Middletown shall invoke formal dispute resolution procedures, within the time period provided in the preceding Paragraph, by serving on the United States and the State a written Statement of Position regarding the matter in dispute. The Statement of Position shall include, but need not be limited to, any factual data, analysis, or opinion supporting Middletown's position and any supporting documentation relied upon by Middletown.

b. The United States shall serve its Statement of Position within 45 days of receipt of Middletown's Statement of Position. The United States' Statement of Position shall include, but need not be limited to, any then-available factual data, analysis, or opinion supporting that position and any supporting documentation relied upon by the United States. The United States' Statement of Position shall be binding on Middletown, unless Middletown files a motion for judicial review of the dispute in accordance with the following Paragraph.

63. Middletown may seek judicial review of the dispute by filing with the Court and serving on the United States and the State, in accordance with Section XV (Notices), a motion requesting judicial resolution of the dispute. The motion must be filed within 30 days of receipt of the United States' Statement of Position pursuant to the preceding Paragraph. The motion shall contain a written statement of Middletown's position on the matter in dispute, including any then-available supporting factual data, analysis, opinion, or documentation, and shall set forth the relief requested and any schedule within which the dispute must be resolved for orderly implementation of the Consent Decree.

64. The United States shall respond to Middletown's motion within the time period allowed by the Local Rules of this Court. Middletown may file a reply memorandum, to the extent permitted by the Local Rules or the Court.

65. The issuance, renewal, modification, denial, or revocation of a permit, certification, or other authorization, and the issuance of orders or other action of the Director of Environmental Protection (Ohio EPA) are not subject to dispute resolution under this Decree but, rather, shall be subject to challenge under Ohio Revised Code Chapter 3745. The term "actions of the Director of Environmental Protection" shall consist of those actions by the Director or Ohio EPA over which the Environmental Review Appeals Commission determines it has jurisdiction.

66. Standard of Review. Except as otherwise provided in this Consent Decree, in any dispute brought under this Section, Middletown shall bear the burden of demonstrating that its position complies with this Consent Decree and the CWA, and that Middletown is entitled to relief under applicable principles of law.

67. The invocation of dispute resolution procedures under this Section shall not, by itself, extend, postpone, or affect in any way any obligation of Middletown under this Consent Decree, unless and until final resolution of the dispute so provides. Stipulated penalties with respect to the disputed matter shall continue to accrue from the first day of noncompliance, but payment shall not be due until resolution of the dispute as provided in this Section XI. If Middletown does not prevail on the disputed issue, stipulated penalties shall be assessed and paid as provided in Section VIII (Stipulated Penalties).

XII. RIGHT OF ENTRY AND INFORMATION COLLECTION AND RETENTION

68. The United States, the State, and their representatives, including attorneys, contractors, and consultants, shall have the right of entry into and upon Middletown's WWTP and Sewer System, at all reasonable times, upon presentation of credentials, to:

- a. monitor the progress of activities required under this Consent Decree;
- b. verify any data or information submitted to the United States or the State in accordance with the terms of this Consent Decree;

- c. obtain samples and, upon request, splits of any samples taken by Middletown or its representatives, contractors, or consultants;
- d. obtain documentary evidence, including photographs and similar data; and
- e. assess Middletown's compliance with this Consent Decree.

69. Upon request, Middletown shall provide U.S. EPA and the State or their authorized representatives splits of any samples taken by Middletown. Upon request, U.S. EPA and the State shall provide Middletown splits of any samples taken by U.S. EPA or the State.

70. Until five years after the termination of this Consent Decree, Middletown shall retain, and shall instruct its contractors and agents to preserve, all non-identical copies of all documents, records, or other information (including documents, records, or other information in electronic form) in its or its contractors' or agents' possession or control, or that come into its or its contractors' or agents' possession or control, and that relate in any manner to Middletown's performance of its obligations under this Consent Decree. This information-retention requirement shall apply regardless of any contrary corporate or institutional policies or procedures. At any time during this information-retention period, upon request by the United States or the State, and except for any documents, records, or other information subject to the attorney-client privilege, the work-product doctrine or any other privilege recognized by federal or state law, Middletown shall provide copies of any documents, records, or other information required to be maintained under this Paragraph.

71. If Middletown asserts the attorney-client privilege or any other privilege recognized by federal law, it shall provide the following: (a) the title of the document, record, or information; (b) the date of the document, record, or information; (c) the name and title of each author of the document, record, or information; (d) the name and title of each addressee and recipient; (e) a description of the subject of the document, record, or information; and (f) the privilege asserted by Middletown. However, no documents, records, or other information created or generated pursuant to the requirements of this Consent Decree shall be withheld on grounds of privilege.

72. Middletown may also assert that information required to be provided under this Section is protected as Confidential Business Information ("CBI") under 40 C.F.R. Part 2. As to any information that Middletown seeks to protect as CBI, Middletown shall follow the procedures set forth in 40 C.F.R. Part 2.

73. This Consent Decree in no way limits or affects any right of entry and inspection, or any right to obtain information, held by the United States or the State pursuant to applicable federal or state laws, regulations, or permits, nor does it limit or affect any duty or obligation of Middletown to maintain documents, records, or other information imposed by applicable federal or state laws, regulations, or permits.

XIII. EFFECT OF SETTLEMENT/RESERVATION OF RIGHTS

74. This Consent Decree resolves the civil claims of the United States and the State for the violations alleged in the Complaint filed in this action through the Date of Lodging.

75. The United States and the State reserve all legal and equitable remedies available to enforce the provisions of this Consent Decree. This Consent Decree shall not be construed to limit the rights of the United States or the State to obtain penalties or injunctive relief under the CWA and the rules promulgated thereunder, Ohio Revised Code Chapter 6111 and the rules promulgated thereunder, or under other federal or state laws, regulations, or permit conditions, except as expressly stated in Paragraph 74. The United States and the State further reserve all legal and equitable remedies to address any imminent and substantial endangerment to the public health or welfare or the environment arising at, or posed by, Middletown's WWTP and Sewer System, whether related to the violations addressed in this Consent Decree or otherwise.

76. In any subsequent administrative or judicial proceeding initiated by the United States or the State for injunctive relief, civil penalties, other appropriate relief relating to Middletown's WWTP or Sewer System, Middletown shall not assert, and may not maintain, any defense or claim based upon the principles of waiver, res judicata, collateral estoppel, issue preclusion, claim preclusion, claim-splitting, or other defenses based upon any contention that the claims raised by the United States or the State in the subsequent proceeding were or should have been brought in the instant case, except with respect to claims that have been specifically resolved pursuant to Paragraph 74.

77. This Consent Decree is not a permit, or a modification of any permit, under any federal, state, or local laws or regulations. Middletown is responsible for achieving and maintaining complete compliance with all applicable federal, state, and local laws, regulations, and permits. Middletown's compliance with this Consent Decree shall be no defense to any action commenced pursuant to any such laws, regulations, or permits, except as set forth herein. The United States and the State do not, by their consent to the entry of this Consent Decree, warrant or aver in any manner that Middletown's compliance with any aspect of this Consent Decree will result in compliance with provisions of Middletown's NPDES Permit, the CWA and the rules promulgated thereunder, Ohio Revised Code Chapter 6111 and the rules promulgated thereunder, or any other federal, state, or local law, regulation, permit, or other requirement.

78. Ohio will have no financial liability under this Consent Decree, except as required by Section 309(e) of the CWA in the event that the laws of Ohio prevent Middletown from raising revenues needed to comply with this Consent Decree. The Attorney General of the State of Ohio hereby certifies that the present laws of Ohio do not prevent Middletown from raising revenues needed to comply with this Consent Decree.

79. This Consent Decree does not limit or affect the rights of Middletown or of the United States or the State against any third parties, not party to this Consent Decree, nor does it limit the rights of third parties, not party to this Consent Decree, against Middletown, except as otherwise provided by law.

80. This Consent Decree shall not be construed to create rights in, or grant any cause of action to, any third party not party to this Consent Decree.

XIV. COSTS

81. The Parties shall bear their own costs of this action, including attorneys' fees, except that the United States and the State shall be entitled to collect the costs (including attorneys' fees) against Middletown incurred in any action necessary to enforce this Consent Decree or to collect any portion of the civil penalty or any stipulated penalties due but not paid by Middletown.

XV. NOTICES

82. Unless otherwise specified in this Consent Decree, whenever notifications, submissions, or communications are required by this Decree, they shall be made in writing in both hard copy (for mailing to those that are to receive mail copies as specified below) and in text searchable electronic format (for those who are to receive email copies as specified below) and addressed as follows. Any notification, submission, or communication required to be made to the United States shall be made to both the United States Department of Justice and the U.S. EPA. Any notification, submission, or communication required to be made to U.S. EPA shall be made to U.S. EPA.

As to the United States

Department of Justice by email:

eescdcopy.enrd@usdoj.gov

Re: DJ # 90-5-1-1-08978

As to the United States

Department of Justice by mail:

EES Case Management Unit
Environment and Natural Resources Division
U.S. Department of Justice
P.O. Box 7611
Ben Franklin Station
Washington, D.C. 20044-7611
Re: DJ # 90-5-1-1-08978

As to U.S. EPA by email only: r5weca@epa.gov

As to the State of Ohio: L. Scott Helkowski
Environmental Enforcement Section
30 E. Broad Street, 25th Floor
Columbus, OH 43215-3400
lawrence.helkowski@ohioattorneygeneral.gov

As to Ohio EPA: Erin Sherer
Manager, NPDES and Pretreatment
Ohio EPA - DSW
Lazarus Government Center
50 W. Town St., Suite 700
P.O. Box 1049
Columbus, Ohio 43216-1049

As to Middletown: Law Director
City of Middletown
1 Donham Plaza
Middletown, OH 45042-1932

with a copy to:

Vincent Atriano
Squire Patton Boggs LLP
2000 Huntington Center
41 S. High Street
Columbus, OH 43215

83. Any Party may, by written notice to the other Parties, change its designated notice recipient or notice address provided above.

84. Notices submitted pursuant to this Section shall be deemed submitted on the date that they are submitted electronically or upon mailing, as applicable, unless otherwise provided in this Consent Decree or by mutual agreement of the Parties in writing.

XVI. EFFECTIVE DATE

85. The Effective Date of this Consent Decree shall be the date upon which this Consent Decree is entered by the Court or a motion to enter the Consent Decree is granted, whichever occurs first, as recorded on the Court's docket.

XVII. RETENTION OF JURISDICTION

86. The Court shall retain jurisdiction over this case until termination of this Consent Decree, for the purpose of resolving disputes arising under this Decree, entering orders modifying this Decree, or effectuating or enforcing compliance with the terms of this Decree.

XVIII. MODIFICATION

87. The terms of this Consent Decree may be modified only by a subsequent written agreement signed by all the Parties or by an order of the Court. Defendant's request for modification may be based, among other things, on: (a) integrated planning elements developed in accordance with U.S. EPA's Integrated Municipal Stormwater and Wastewater Planning Approach Framework, issued on June 5, 2012; or (b) a current Financial Capability Assessment, which may include additional financial information (per U.S. EPA's Financial Capability Assessment Framework, issued on November 24, 2014). If either the Integrated Municipal Stormwater and Wastewater Planning Approach Framework or the Financial Capability Assessment Framework is modified after the Effective Date, the Defendant's request for modification shall be based on the version of the Framework(s) that is in effect on the day that the request for modification is submitted to the Plaintiffs.

88. Any modification of this Consent Decree or any documents that are developed pursuant to the requirements of this Decree and that become a part of the Decree, that effect a material change to the terms of the Decree or materially affects the ability to meet the objectives of the Decree shall become effective upon a subsequent written agreement signed by all parties and approved by the Court as a modification to this Decree. Any schedule that is included in this Decree or in any document developed pursuant to the Decree may be extended, modified, or revised upon written agreement of the Parties, without Court approval, unless any such modification effects a material change to the terms of this Decree or materially affects the ability to meet the objectives of this Decree.

89. Any disputes concerning modification of this Decree shall be resolved pursuant to Section XI (Dispute Resolution), provided, however, that, instead of the burden of proof provided by Paragraph 66, the Party seeking the modification bears the burden of demonstrating that it is entitled to the requested modification in accordance with Federal Rule of Civil Procedure 60(b).

XIX. TERMINATION

90. One year after Middletown has completed all construction and post-construction monitoring required by its LTCP and the requirements of Section IV (Compliance Requirements), Middletown may submit to the United States for review and approval in accordance with Paragraph 18 a Request for Termination of this Consent Decree. Such Request for Termination shall be approved if: (a) Middletown is and has been in compliance with the requirements of Section IV (Compliance Requirements) for at least the prior 12 months; (b) all

civil penalties due and all stipulated penalties due under this Decree (and any interest thereon) have been paid; and (c) Middletown has complied with all other requirements of this Decree.

91. Following receipt by the United States of Middletown's Request for Termination, the Parties shall confer informally concerning the Request and any disagreement that the Parties may have as to whether Middletown satisfactorily has complied with the requirements for termination. If the United States, after consultation with the State, agrees that the Decree may be terminated and approves the Request, the Parties shall submit, for the Court's approval, a joint motion seeking termination of the Decree. If the United States fails to respond in writing to the Request in accordance with Paragraph 18 within 90 days after receipt of Middletown's Request for Termination, Middletown may deem the Request to have been denied, and Middletown may proceed to invoke the dispute resolution procedures set forth in Section XI (Dispute Resolution).

92. If the United States, after consultation with the State, does not agree that the Decree may be terminated, Middletown may invoke dispute resolution under Section XI of this Decree (Dispute Resolution). However, Middletown shall not invoke dispute resolution of any dispute regarding termination until 90 days after service of its Request for Termination.

XX. PUBLIC PARTICIPATION

93. This Consent Decree shall be lodged with the Court for a period of not less than 30 days for public notice and comment in accordance with 28 C.F.R. § 50.7. The United States reserves the right to withdraw or withhold its consent if the comments regarding the Consent Decree disclose facts or considerations indicating that the Consent Decree is inappropriate, improper, or inadequate. Middletown consents to entry of this Consent Decree without further notice and agrees not to withdraw from or oppose entry of this Consent Decree by the Court or to challenge any provision of this Decree, unless the United States has notified Middletown in writing that it no longer supports entry of this Decree.

XXI. SIGNATORIES/SERVICE

94. Each undersigned representative of the State, the United States Department of Justice, and Middletown certifies that he or she is fully authorized to enter into the terms and conditions of this Consent Decree and to execute and legally bind the Party he or she represents to this document.

95. This Consent Decree may be signed in counterparts, and its validity shall not be challenged on that basis. Middletown agrees to accept service of process by mail with respect to all matters arising under or relating to this Consent Decree and to waive the formal service requirements set forth in Rules 4 and 5 of the Federal Rules of Civil Procedure and any applicable Local Rules of this Court including, but not limited to, service of a summons.

XXII. INTEGRATION

96. This Consent Decree and its appendices constitute the final, complete, and exclusive agreement and understanding among the Parties with respect to the settlement embodied in the Decree and supersede all prior agreements and understandings, whether oral or written, concerning the settlement embodied herein. Other than deliverables that are subsequently submitted and approved pursuant to this Decree, the Parties acknowledge that there are no representations, agreements, or understandings relating to the settlement other than those expressly contained in this Consent Decree and its appendices.

XXIII. FINAL JUDGMENT

97. Upon approval and entry of this Consent Decree by the Court, this Consent Decree shall constitute a final judgment of the Court as to the United States, the State, and Middletown. The Court finds that there is no just reason for delay and therefore enters this judgment as a final judgment under Fed. R. Civ. P. 54 and 58.

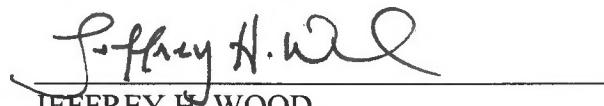
SO ORDERED this _____ day of _____, 2018.

United States District Judge

Signature Page for *United States and State of Ohio v. City of Middletown* Consent Decree

FOR PLAINTIFF UNITED STATES OF AMERICA:

Date: 2/8/18



JEFFREY H. WOOD
Acting Assistant Attorney General
Environment & Natural Resources Division
United States Department of Justice

Date: 2/9/18



NICHOLAS A. McDANIEL
ROBERT DARNELL
Trial Attorneys
Environmental Enforcement Section
Environment & Natural Resources Division
United States Department of Justice
P.O. Box 7611, Ben Franklin Station
Washington, D.C. 20044-7611
Telephone: 202-514-0096

Signature Page for *United States and State of Ohio v. City of Middletown* Consent Decree

FOR THE U.S. ENVIRONMENTAL PROTECTION AGENCY, REGION 5:

Date: 2/9/2018



T. LEVERETT NELSON
Regional Counsel
U.S. Environmental Protection Agency, Region 5
77 W. Jackson Blvd.
Chicago IL 60604

Date: 2/8/2018



GARY PRICHARD
Associate Regional Counsel
U.S. Environmental Protection Agency, Region 5
77 W. Jackson Blvd.
Chicago IL 60604

Signature Page for *United States and State of Ohio v. City of Middletown* Consent Decree

FOR THE U.S. ENVIRONMENTAL PROTECTION AGENCY
OFFICE OF ENFORCEMENT AND COMPLIANCE ASSURANCE:

Date: 1/23/2018



MARK POLLINS
Director, Water Enforcement Division
Office of Civil Enforcement
Office of Enforcement and Compliance Assurance
U.S. Environmental Protection Agency

Date: 1/21/2018



SARAH GONZALEZ
Attorney-Adviser, Water Enforcement Division
Office of Civil Enforcement
Office of Enforcement and Compliance Assurance
U.S. Environmental Protection Agency

Signature Page for *United States and State of Ohio v. City of Middletown* Consent Decree

FOR PLAINTIFF STATE OF OHIO:

Date: 1/26/18

MIKE DeWINE
Ohio Attorney General

By: L. Scott Helkowski
L. SCOTT HELKOWSKI (0068622)
Assistant Attorney General
Environmental Enforcement Section
30 E. Broad Street, 25th Floor
Columbus, Ohio 43215-3400

Signature Page for *United States and State of Ohio v. City of Middletown* Consent Decree

FOR DEFENDANT CITY OF MIDDLETOWN:

Date: 12/29/17

Name: Peter J. Lanau

Title: Law Director

Appendix A

LTCP

APPENDIX A: Long Term Control Plan

City of Middletown

Control Measures, Design Criteria, Performance Criterion and Critical Milestones

ROW #	CONTROL MEASURE LOCATION	DESCRIPTION	DESIGN CRITERIA ¹	PERFORMANCE CRITERION ² (TYPICAL YEAR)	CRITICAL MILESTONES
CSO Control Measures					
<i>Storage Basins</i>					
1	Downtown Storage Facility	Storage Basin	Minimum storage volume of 5,100,000 gallons	6 CSO Events Systemwide	See Appendix C
2	Barnitz Field Storage Facility	Storage Basin	Minimum storage volume of 6,600,000 gallons	6 CSO Events Systemwide	See Appendix C

¹ The criteria for storage volumes are effective storage volumes and as such shall account for hydraulic and/or operational limitations and any other factors of consideration that are necessary to ensure that the basin(s) will be able to store the specified volume identified in this column during the largest typical year storm event

² The Performance Criterion of “6 CSOs Events Systemwide” is a systemwide criterion, with the number of overflows based on a 24-hour inter-event period. Achievement of Performance Criterion shall be assessed in accordance with Section 1.4 of Appendix B to the Consent Decree, based on rainfall data from the Covington (Northern Kentucky) Airport Station for 1970, which is the “Typical Year” that Middletown used in developing its LTCP. The Performance Criterion shall be achieved if, using the rainfall data from the Covington (Northern Kentucky) Airport Station for 1970, the model projects that there would have been no more than 6 occasions (using a 24-hour inter-event period to differentiate between occasions) that a discharge would have occurred from any CSO outfall in Middletown’s sewer system.

<i>Collection System Measures and Green Infrastructure</i>					
3	Lakeside Redirection	Redirection of approximately 291 acres of sewershed to the Hydraulic Canal	At least 15 CFS storm water pump station, 3,900 feet of 18" force main, and 3,000 feet of 36" gravity sewer	6 CSO Events Systemwide	See Appendix C
4	Bulls Run to Sunset Park Green Infrastructure Project	Storage Basin(s)	At least 1,860 feet of 18" sewer and 1-acre green infrastructure basin	6 CSO Events Systemwide	See Appendix C

ROW #	CONTROL MEASURE LOCATION	DESCRIPTION	EQUIPMENT ³	PERFORMANCE CRITERIA	CRITICAL MILESTONES
-------	--------------------------	-------------	------------------------	----------------------	---------------------

<i>WWTP Major Rehabilitation and Replacement</i>					
5	WWTP, Headworks	Headworks (Pump Station, Screens, and Grit)	New influent structure, screen channel, wet well, influent pumps and grit system.	N/A	See Appendix C
6	WWTP, Secondary	Secondary Settling, Sludge Pumping, Disinfection, and Effluent Pumping	New secondary clarifier center well mechanisms, New RAS pumps, New WAS pumps, New Sodium Hypochlorite Tanks, New Effluent Pumps, New Instrumentation Equipment. Secondary building renovation and structural repair.	N/A	See Appendix C

³ A Design Criterion for all of the WWTP Rehabilitation and Replacement Measures is that they shall be designed so that the WWTP has equipment reliability and firm capacity to treat a peak flow of 45 MGD.

7	WWTP	Plant Main Electrical Feed and Generator	Replacement of 4.16 kV plant switchgear, 69 kV switchyard and primary service transformer, replacement of 4 480V motor control centers and addition of a standby generator.	N/A	See Appendix C
8	WWTP	Plant SCADA	Installation of a Plant-Wide SCADA	N/A	See Appendix C
9	WWTP, Secondary	Aeration Improvement	New Blowers, New Diffusers, New automatic control valves. Renovation and structural repairs to the Blower Building.	N/A	See Appendix C
10	WWTP, Primary	Primary Clarification System	New settling tank mechanisms, troughs and weirs. Structural rehabilitation, New sludge pumps, new scum pump. Renovation and structural repairs to the Primary Sludge Pump Building.	N/A	See Appendix C
11	WWTP, Solids	Residual Dewatering and Disposal	New Gravity Belt Thickeners, New Centrifuges, New ATAD Equipment	N/A	See Appendix C

Appendix B

Post-Construction Monitoring Program Parameters and Schedule

1.0 POST-CONSTRUCTION MONITORING PROGRAM

1.1 Purpose and Deadline for Completion

The purpose of the Middletown Post-Construction Monitoring Program (PCMP) is to determine whether the projects constructed as part of Middletown's Long Term Control Plan (LTCP) meet the "6 CSO Events Systemwide" Performance Criteria as defined in the Consent Decree and assess the effect of discharges from Middletown's sewer system on River water quality. The PCMP shall include provisions consistent with this Appendix B, including the requirement in Section 1.6 to submit to the United States and Ohio a Final Post-Construction Monitoring Report on or before December 31, 2047.

1.2 Post Construction Monitoring

After fully constructing and implementing the CSO Control Measures described in Appendix A, the City of Middletown shall carry out post-construction rainfall, flow, and CSO activation monitoring for a 12-month post-construction monitoring period. If, following at least six months of monitoring, Middletown has collected sufficient rainfall, flow, and CSO activation data to allow the successful completion of the model validation and recalibration activities described below, Middletown may cease additional monitoring if Middletown submits and EPA approves a written request from Middletown to cease additional monitoring. Middletown shall use such data to validate or if necessary recalibrate its model of the combined sewer system. The rainfall and CSO activation monitoring plan is described below:

The City will monitor rainfall at the four locations utilized in its 2005 model calibration monitoring program, using automatic rain gauges, consistent with then-current industry practice.

The City shall monitor water surface elevation and flow using area/velocity flowmeters at sufficient locations to allow validation and if necessary recalibration of its collection system model, consistent with the guidelines described in Paragraph 1.3, below. At a minimum, the City shall monitor at 12 of the 25 monitoring locations used in Middletown's 2005 model calibration monitoring program. The City shall monitor the time, duration, and volume of discharge from each permitted CSO point that remains active following implementation of the LTCP. Flow meters utilized for this monitoring shall be consistent with then-current industry practices.

Middletown shall carry out the above monitoring in accordance with then-current industry practices, including industry practice meter maintenance and data review/QA procedures.

1.3 CSO Collection System Model Calibration and Validation

The City's collection system model will be used, together with best engineering judgment, to determine whether the City has achieved the Performance Criteria as defined in the Consent Decree that Middletown reduce CSO discharges down to no more than 6 CSO Events Systemwide during the Typical Year of 1970, based on rainfall data from the Covington (Northern Kentucky) Airport Station. A "CSO Event" is one or more overflows from the City's collection system that are the result of a precipitation event following a period of at least 24 hours during which no CSO has discharged. A single precipitation event that causes multiple CSO discharges shall constitute one CSO Event. In order to ensure that the model is an appropriate tool for making this determination, a validation and, if necessary, recalibration will be undertaken. Upon completion of the CSO control measures listed in Appendix A, the following steps will be taken to validate and, if necessary, recalibrate the collection system model:

- Flow, rainfall, and CSO discharge data will be collected for a Post-Construction Monitoring Period as described in Section 1.2 above.
- The data collected shall initially be used to validate the then-current version of the model that includes representations of all the CSO control measures. The model shall be considered validated based upon application of the Chartered Institution of Water and Environmental Management (CIWEM) Urban Drainage Group's Wastewater Planning User Group Code of Practice for the Hydraulic Modelling of Sewer Systems, as amended December 2002. In addition to application of the criteria in Section 6.5 of the Code of Practice, Middletown shall specifically consider as a primary validation criterion the degree to which the number of CSO events and number of individual discharges by each CSO simulated for the monitoring period match those detected during that same period by Middletown's monitoring methods. If the number of CSO events and number of individual discharges by each CSO simulated for the monitoring period fail to adequately correlate with those detected during that same period by Middletown's monitoring methods, the model shall be deemed to not be validated.
- A report shall be provided to EPA describing in detail this initial validation effort and its results before Middletown undertakes recalibration as described below.
- If the model is not successfully validated as described above, the City shall select two or more appropriate wet weather events to recalibrate the model, such that the model can be determined to be validated as described above.
- Upon achieving an acceptable model validation, a report will be submitted to EPA documenting the recalibration effort.

1.4 COMBINED SEWER SYSTEM PERFORMANCE CRITERIA ANALYSIS

A measure of successful completion of all CSO Control Measures will be controlling the number of annual CSO Events in a Typical Year to meet the Performance Criteria as defined in the Consent Decree. Once the model recalibration effort and corresponding report have been accepted by EPA, the validated or recalibrated hydraulic model's results from a continuous simulation of the Typical Year of 1970, using rainfall data for that year from the Covington (Northern Kentucky) Airport Station, will be used to assess whether the Performance Criterion of 6 or fewer CSO Events system-wide for the Typical Year is met. The Performance Criteria of "6 CSO Events Systemwide" is a systemwide criterion, with the number of CSO Events based on a 24-hour inter-event period. The "6 CSO Events Systemwide" Performance Criteria shall be achieved if, using the rainfall data from the Covington (Northern Kentucky) Airport Station for 1970, the model projects that there would have been no more than 6 CSO Events (using a 24-hour inter-event period to differentiate between Events) that a discharge would have occurred from any CSO outfall in Middletown's Sewer System.

If the validated/recalibrated model simulates more than 6 CSO Events for the Typical Year of 1970, using rainfall data for that year from the Covington (Northern Kentucky) Airport Station, the City will first evaluate operating practices before considering further infrastructure improvements. Alternate operating procedures and any additional facilities needed to achieve the "6 CSO Events Systemwide" Performance Criteria will be documented in the Final Post Construction Compliance Monitoring Report. This report will include details on any needed additional operational improvements as well as a proposed implementation schedule.

1.5 WATER QUALITY MONITORING

An additional component of the PCMP will be a Water Quality Monitoring Plan (WQMP) that will be consistent with the following:

Two years before the final operation of all CSO control measures listed in Appendix A, is expected to be achieved (June 1, 2042), Middletown will submit a draft WQMP that Middletown believes would meet the requirements and schedule set forth below. EPA will provide comment on the draft WQMP within sixty days of receiving the draft plan.

Middletown shall include in the PCMP that it submits to EPA for formal review in accordance with Paragraph 18 of the Consent Decree a WQMP that will be consistent with the following:

The WQMP will include quality assurance project plans (QAPPs), field sampling plans, and standard operating procedures (SOPs). The WQMP shall be designed

to provide information on decreases in the density of E. coli (or other appropriate parameter that is in effect for the State of Ohio's recreational water quality standards and criteria that replaces E. coli) in the Great Miami River resulting from the CSO controls and to provide data to compare to Table 7-13 of OAC 3745-1-07 (or other portions of the State of Ohio's water quality standards that replace this Table).

The WQMP will include collection of samples at three locations in the Great Miami River under different conditions during the recreation season (currently defined as May 1 to October 31):

- a) SR 122 Bridge, at a mid-stream point.
- b) SR 73 Bridge, at a mid-stream point.
- c) Boat Sampling: Middletown shall collect one sample at a center point in the Great Miami River that is downstream of all CSO discharges and upstream of Elk Creek.

The WQMP will incorporate the safety protocols and procedures for River sampling established in U.S. EPA's May 7, 2015 Amended Section 308(a) Request to the City, Docket No. V-W-15-308-18.

Middletown shall take sufficient samples from the above locations under varying conditions to provide sufficient data to allow an assessment of decreases in the counts of E. coli in the Great Miami River resulting from the CSO controls and to provide data to compare to Table 7-13 of OAC 3745-1-07. At a minimum, Middletown's sampling at the above locations will include samples taken: (1) during dry weather, when E. coli levels in the Great Miami River likely have been minimally impacted, if at all, by E. coli from CSOs and other wet weather sources (to enable an assessment of E. coli levels that are not the result of wet weather events); (2) during wet weather events that occur on days when Middletown's CSOs are not discharging; and (3) during wet weather events that occur on days when Middletown's CSOs are discharging, in which case samples from the SR 73 Bridge and Boat Sampling will be taken at a time when discharge from any of Middletown's CSOs upstream of the sampling location would be expected to have reached the downstream sample location, and sampling from the SR 122 Bridge will be done at a correspondingly appropriate time relative to the other sampling events to enable for an assessment of how E. coli levels in the Great Miami River are impacted by Middletown's CSOs. If the State of Ohio's water quality standards have been revised to replace E. coli with another parameter as a recreational use criterion, then Middletown shall sample for such additional parameter, in lieu of sampling for E. coli.

1.6 FINAL POST CONSTRUCTION MONITORING REPORT

On or before December 31, 2047, Middletown shall submit to the United States and Ohio a final Post-Construction Monitoring Report, which shall:

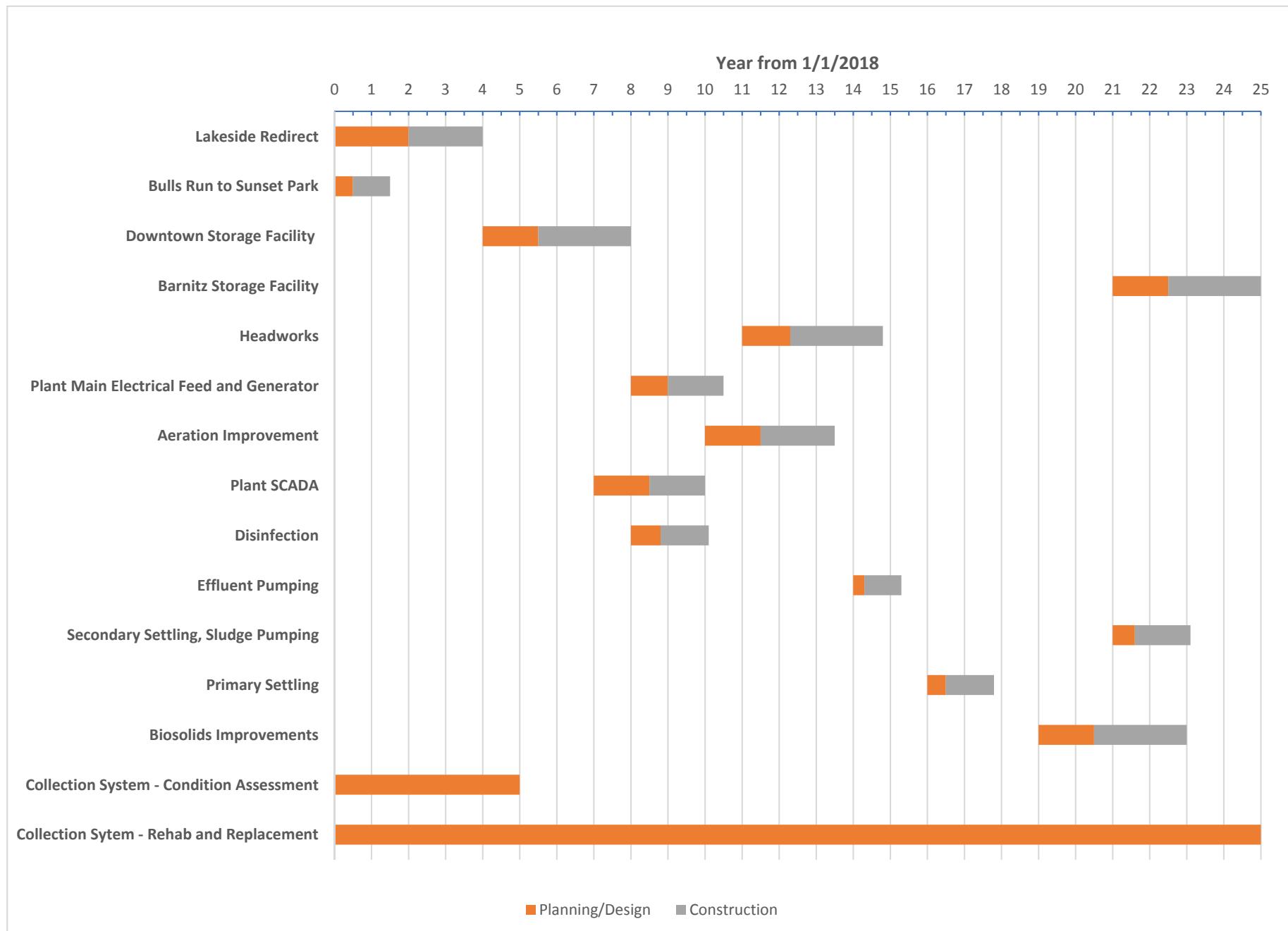
- a) demonstrate that Middletown completed all of the requirements of the PCMP;
- b) evaluate whether the CSO Control Measures implemented pursuant to Appendix A collectively meet the Performance Criteria of no more than 6 CSO Events Systemwide as defined in the Consent Decree;
- c) evaluate how well Middletown's system is performing as a whole, following completion of all CSO Control Measures, and shall include an assessment of whether the CSO Control Measures implemented pursuant to Appendix A, as constructed, operated, or otherwise implemented, have achieved the "6 CSO Events Systemwide" Performance Criteria;
- d) summarize the data collected during the entirety of the post-construction monitoring period and include any new data relevant to the evaluation that Middletown did not previously submit to EPA or OEPA;
- e) if model or monitoring results show that Middletown's CSO Control Measures did not meet the "6 CSO Events Systemwide" Performance Criteria, Middletown shall identify and describe in detail deficiencies or performance-limiting factors in system design, process, operations, and maintenance that may have limited the ability of the CSO Control Measures to achieve their intended performance. Thereafter, Middletown shall identify and describe in detail all necessary and feasible corrective measures, alternative operating strategies and additional facilities and processes necessary to meet the "6 CSO Events Systemwide" Performance Criteria.

Appendix C

Construction Schedule

Appendix C - LTCP Implementation Schedule

Project	Duration	Start	End
Lakeside Redirect	48 months	1/1/18	1/1/22
Planning/Design	24 months	1/1/18	1/1/20
Construction	24 months	1/1/20	1/1/22
Bulls Run to Sunset Park	18 months	1/1/18	7/1/19
Planning/Design	6 months	1/1/18	7/1/18
Construction	12 months	7/1/18	7/1/19
Downtown Storage Facility	48 months	1/1/22	1/1/26
Planning/Design	18 months	1/1/22	7/1/23
Construction	30 months	7/1/23	1/1/26
Barnitz Storage Facility	48 months	1/1/39	1/1/43
Planning/Design	18 months	1/1/39	7/1/40
Construction	30 months	7/1/40	1/1/43
Headworks	45 months	1/1/29	10/1/32
Planning/Design	15 months	1/1/29	4/1/30
Construction	30 months	4/1/30	10/1/32
Plant Main Electrical Feed and Generator	30 months	1/1/26	7/1/28
Planning/Design	12 months	1/1/26	1/1/27
Construction	18 months	1/1/27	7/1/28
Aeration Improvement	42 months	1/1/28	7/1/31
Planning/Design	18 months	1/1/28	7/1/29
Construction	24 months	7/1/29	7/1/31
Plant SCADA	36 months	1/1/25	1/1/28
Planning/Design	18 months	1/1/25	7/1/26
Construction	18 months	7/1/26	1/1/28
Disinfection	24 months	1/1/26	1/1/28
Planning/Design	9 months	1/1/26	10/1/26
Construction	15 months	10/1/26	1/1/28
Effluent Pumping	16 months	1/1/32	5/1/33
Planning/Design	4 months	1/1/32	5/1/32
Construction	12 months	5/1/32	5/1/33
Secondary Settling, Sludge Pumping	25 months	1/1/39	2/1/41
Planning/Design	7 months	1/1/39	8/1/39
Construction	18 months	8/1/39	2/1/41
Primary Settling	21 months	1/1/34	10/1/35
Planning/Design	6 months	1/1/34	7/1/34
Construction	15 months	7/1/34	10/1/35
Biosolids Improvements	48 months	1/1/37	1/1/41
Planning/Design	18 months	1/1/37	7/1/38
Construction	30 months	7/1/38	1/1/41
Collection System	300 months	1/1/18	1/1/43
Condition Assessment	60 months	1/1/18	1/1/23
Rehab and Replacement	300 months	1/1/23	1/1/43



Appendix D

Supplemental Environmental Project

APPENDIX D

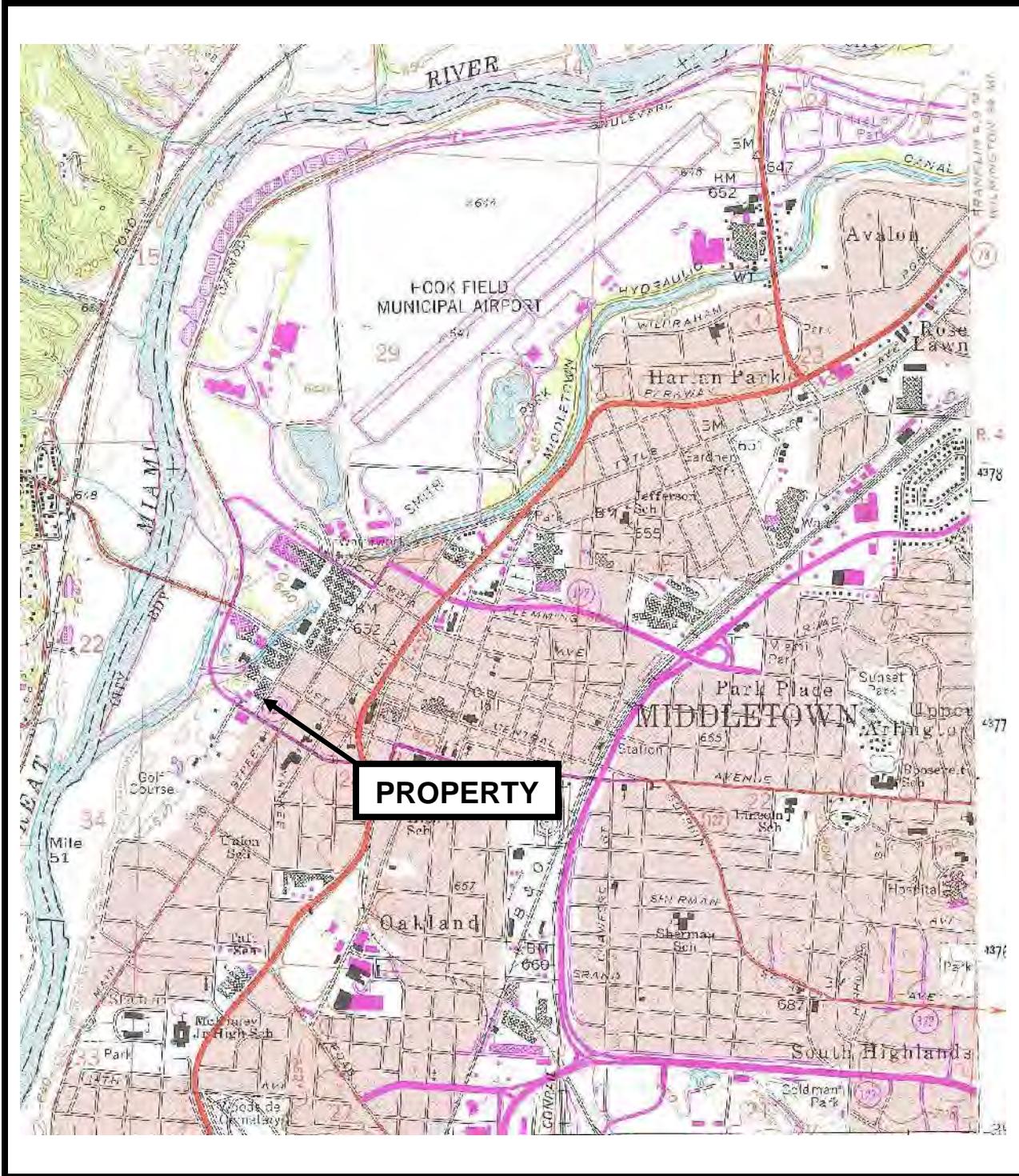
SUPPLEMENTAL ENVIRONMENTAL PROJECT

1. Middletown shall perform a Supplemental Environmental Project (SEP) consisting of capping of a designated portion of the sediment bed in the Hydraulic Canal adjacent to the former STM Property (the “Property”) located at 810 Front Street, Middletown, Ohio.
2. The Hydraulic Canal is a man-made structure created in the 1800’s to serve the paper mill industry in Middletown. The Great Miami River was dammed at the head of the Hydraulic Canal (approximately two miles upstream from the Property) in order to divert water into the canal, but the dam failed approximately 20 years ago. Although some water is present in the Hydraulic Canal year-round, flow in the canal is minimal.
3. Middletown elected to performed a “voluntary action” remediation of the Property under Ohio’s Voluntary Action Program (VAP) statute, O.R.C. Ch. 3746, financed by a Clean Ohio Revitalization Fund grant. The on-site voluntary action remedial work was completed and a “No Further Action” letter was submitted to the Ohio Environmental Protection Agency (Ohio EPA) by the City’s VAP Certified Professional in January, 2016.
4. In connection with this voluntary action, Middletown conducted sampling of sediments in the Hydraulic Canal adjacent to the Property. Based upon this sampling, Ohio EPA determined that sediments in a designated section of the sediment bed exhibit impacts from historic industrial use of the Hydraulic Canal. This impacted area of sediment is approximately 250 feet long by 50 feet wide (see attached figures), comprising an area of approximately 12,500 square feet.

5. Middletown will engage a contractor to cap this designated area with a material known as AquaBlok®. AquaBlok is a patented, composite-aggregate technology resembling small stones comprised of a dense aggregate core, clay or clay-sized materials and polymers. For typical freshwater product formulations, AquaBlok's clay (sealant) component consists largely of bentonite. The particles congeal upon hydration to form a low permeability barrier. AquaBlok hardens and sets immediately upon application.
6. The AquaBlok will be placed over the designated area to a thickness of approximately 6 inches using a trackhoe, and will be dispersed over the designated area sequentially using a telebelt and/or slinger unit. The total volume of AquaBlok to be applied will be approximately 250 cubic yards.
7. Before placing the material, Middletown's contractor will perform limited clearing of the adjacent bank of the Hydraulic Canal in order to allow access to the sediment bed. The thickness and proper placement of AquaBlok will be field-verified upon initial placement. The initial field work is expected to require 14 days to complete.
8. Within 30-60 days after initial placement, the AquaBlok cap will be re-inspected to verify that it has properly set and remains intact.
9. Prior to the start of the project, Middletown must obtain authorization from the U.S. Army Corps of Engineers. Middletown will seek authorization of the Project under Nationwide Permit (NWP) 38. In addition, Middletown understands that a Qualitative Habitat Evaluation Index (QHEI) will need to be prepared and submitted to Ohio EPA. The project schedule below assumes that the Corps will concur that the project may be authorized under NWP 38, and that all required permits and approvals will be obtained by the date set forth in the project schedule below.
10. The general tasks and schedule are summarized below:

Task	Description	Anticipated Completion Date
1. Submittal of Pre-Construction Notification to Corps	Required to obtain authorization under NWP 38	February 1, 2018
2. Preparation and submittal of QHEI to Ohio EPA	Required for project approval	February 1, 2018
3. Confirmation of NWP 38 authorization by Corps and receipt of all other necessary approvals from Ohio EPA	Required for project start	June 1, 2018
4. Finalization of all necessary contract and purchase orders with contractors and suppliers	Required for project authorization	July 1, 2018
5. Initial Field Work (on-site mobilization and bank clearing through completion of initial field work)	Conduct of capping and associated initial field work	September 1, 2018
6. Re-inspection of AquaBlok cap to verify proper setting and placement	Post-implementation confirmation	November 1, 2018
7. Middletown submittal of SEP Completion Report	Required under Consent Decree	December 15, 2018

11. Any agreed modification of this Appendix D shall be considered a minor modification of the Consent Decree that does not require Court approval.



SOURCE: USGS 7.5 Minute Series Topographic Map of Middletown, Ohio Quadrangle, 1959, photorevised 1981.

PROPERTY VICINITY MAP
 VAP No Further Action Letter
 Former STM, Inc. Property
 810 First Avenue
 Middletown, Ohio

PROJECT NO. Z072000145	DATE: 11-23-15	DRAWN BY: WAN	REVIEWED BY: WAN
---------------------------	-------------------	------------------	---------------------

SCALE:
1 in. ~ 2000 ft.

FIGURE:
1

ATC



11121 Canal Road
Cincinnati, Ohio 45241
(513) 771-2112

**Proposed Hydraulic Canal
Remedial Area**
Former STM Property
810 First Avenue
Middletown, Ohio

Project No: Z072000145

Date: February 2017

Drawn By: WAN

Reviewed By: ML

Scale: 1" = 100'



Qualitative Habitat Evaluation Index and Use Assessment Field Sheet

QHEI Score:

32

Stream & Location: Middletown Hydraulic Canal

RM:

Date: 12/27/06

Corr./Ins./ng / Amy Cameron

Scorers Full Name & Affiliation: Cardno Inc.

River Code:

STORET #:

Lat./Long.:

(NAD 83 - decimal)

39.5110 84.4081

Office verified
location1] **SUBSTRATE** Check ONLY Two substrate TYPE BOXES;
estimate % or note every type present

Check ONE (Or 2 & average)

BEST TYPES**POOL RIFFLE****OTHER TYPES****POOL RIFFLE****ORIGIN****QUALITY**

BLDR / SLABS [10]
 BOULDER [9]
 COBBLE [8]
 GRAVEL [7]
 SAND [6]
 BEDROCK [5]

HARDPAN [4]
 DETRITUS [3]
 MUCK [2]
 SILT [2]
 ARTIFICIAL [0]

LIMESTONE [1]
 TILLS [1]
 WETLANDS [0]
 HARDPAN [0]
 SANDSTONE [0]
 RIP/RAP [0]
 LACUSTURINE [0]
 SHALE [-1]
 COAL FINES [-2]

HEAVY [-2]
 MODERATE [-1]
 NORMAL [0]
 FREE [1]
 EXTENSIVE [-2]
 MODERATE [-1]
 NORMAL [0]
 NONE [1]

NUMBER OF BEST TYPES: 4 or more [2] sludge from point-sources 3 or less [0]

Comments

Substrate
-1
Maximum 20

channelized canal, no visible pool/riffle

2] **INSTREAM COVER** Indicate presence 0 to 3: 0-Absent; 1-Very small amounts or if more common of marginal quality; 2-Moderate amounts, but not of highest quality or in small amounts of highest quality; 3-Highest quality in moderate or greater amounts (e.g., very large boulders in deep or fast water, large diameter log that is stable, well developed rootwad in deep / fast water, or deep, well-defined, functional pools).

AMOUNT
Check ONE (Or 2 & average)

EXTENSIVE >75% [11]
 MODERATE 25-75% [7]
 SPARSE 5-25% [3]
 NEARLY ABSENT <5% [1]

UNDERCUT BANKS [1]
 OVERHANGING VEGETATION [1]
 SHALLOWS (IN SLOW WATER) [1]
 ROOTMATS [1]

POOLS > 70cm [2]
 ROOTWADS [1]
 BOULDERS [1]

OXBOWS, BACKWATERS [1]
 AQUATIC MACROPHYTES [1]
 LOGS OR WOODY DEBRIS [1]

Comments

Cover
Maximum 20
2

3] **CHANNEL MORPHOLOGY** Check ONE in each category (Or 2 & average)

SINUOSITY
 HIGH [4]
 MODERATE [3]
 LOW [2]
 NONE [1]

DEVELOPMENT
 EXCELLENT [7]
 GOOD [5]
 FAIR [3]
 POOR [1]

CHANNELIZATION
 NONE [6]
 RECOVERED [4]
 RECOVERING [3]
 RECENT OR NO RECOVERY [1]

STABILITY
 HIGH [3]
 MODERATE [2]
 LOW [1]

Comments

3

Channel
Maximum 20
7

4] **BANK EROSION AND RIPARIAN ZONE** Check ONE in each category for EACH BANK (Or 2 per bank & average)

River right looking downstream

EROSION
 NONE / LITTLE [3]
 MODERATE [2]
 HEAVY / SEVERE [1]

RIPARIAN WIDTH
 WIDE > 50m [4]
 MODERATE 10-50m [3]
 NARROW 5-10m [2]
 VERY NARROW < 5m [1]
 NONE [0]

FLOOD PLAN QUALITY
 FOREST, SWAMP [3]
 SHRUB OR OLD FIELD [2]
 RESIDENTIAL, PARK, NEW FIELD [1]
 FENCED PASTURE [1]
 OPEN PASTURE, ROWCROP [0]

Indicate predominant land use(s)
past 100m riparian.

Riparian
Maximum 10
5

Comments

5] **POOL / GLIDE AND RIFFLE / RUN QUALITY****MAXIMUM DEPTH**

Check ONE (ONLY!)
 > 1m [6]
 0.7-1m [4]
 0.4-0.7m [2]
 0.2-0.4m [1]
 < 0.2m [0]

CHANNEL WIDTH

Check ONE (Or 2 & average)
 POOL WIDTH > RIFFLE WIDTH [2]
 POOL WIDTH = RIFFLE WIDTH [1]
 POOL WIDTH > RIFFLE WIDTH [0]

CURRENT VELOCITY

Check ALL that apply
 TORRENTIAL [-1]
 VERY FAST [1]
 FAST [1]
 MODERATE [1]

SLOW [1]
 INTERSTITIAL [-1]
 INTERMITTENT [-2]
 EDDIES [1]

Recreation Potential

Primary Contact
 Secondary Contact
 (circle one and comment on back)

Pool /
Current
Maximum 12
8

Comments

Indicate for reach - pools and riffles.

Indicate for functional riffles; Best areas must be large enough to support a population of riffle-obligate species:

Check ONE (Or 2 & average).

 NO RIFFLE [metric=0]**RIFFLE DEPTH**

BEST AREAS > 10cm [2]
 BEST AREAS 5-10cm [1]
 BEST AREAS < 5cm [metric=0]

RUN DEPTH

MAXIMUM > 50cm [2]
 MAXIMUM < 50cm [1]

RIFFLE / RUN SUBSTRATE

STABLE (e.g., Cobble, Boulder) [2]
 MOD. STABLE (e.g., Large Gravel) [1]
 UNSTABLE (e.g., Fine Gravel, Sand) [0]

RIFFLE / RUN EMBEDDEDNESS

NONE [2]
 LOW [1]
 MODERATE [0]
 EXTENSIVE [-1]

Riffle /
Run
Maximum 8
1

Comments

no riffles present.

6] **GRADIENT**

ft/mi)

 VERY LOW - LOW [2-4]%POOL: %GLIDE: Gradient
Maximum 10

DRAINAGE AREA

mi²) MODERATE [6-10]%RUN: %RIFFLE:

Maximum 10

10



REPLY TO
ATTENTION OF

DEPARTMENT OF THE ARMY
HUNTINGTON DISTRICT, CORPS OF ENGINEERS
502 EIGHTH STREET
HUNTINGTON, WEST VIRGINIA 25701-2070

RECEIVED
APR 09 2018
LAW DEPARTMENT
CITY OF MIDDLETOWN

April 4, 2018

Regulatory Division
North Branch
LRH-2017-892-GMR-Middletown Hydraulic Canal

NATIONWIDE PERMIT 38 VERIFICATION

Les Landen
City of Middletown
1 Donham Plaza
Middletown, Ohio 45042

Dear Mr. Landen:

I refer to the pre-construction notification (PCN), submitted on your behalf by ATC Group Services, LLC, and received in this office on October 18, 2017, with supplemental information provided on March 2, 2018, concerning a Voluntary Action Program (VAP) for the clean-up of hazardous waste at the former STM Property. You have requested a Department of the Army (DA) authorization to discharge dredged or fill material into approximately 250 linear feet of the Middletown Hydraulic Canal. The project site is located 810 First Avenue in the City of Middletown, Butler County, Ohio. The Middletown Hydraulic Canal is a direct tributary to the Great Miami River, a traditional navigable water of the United States. We have assigned the following file number to your PCN: LRH-2017-892-GMR-Middletown Hydraulic Canal. Please reference this file number on all future correspondence related to this subject proposal.

The United States Army Corps of Engineers' (Corps) authority to regulate waters of the United States is based on the definitions and limits of jurisdiction contained in 33 CFR 328 and 33 CFR 329. Section 404 of the Clean Water Act (Section 404) requires a DA permit be obtained prior to discharging dredged or fill material into waters of the United States, including wetlands. Section 10 of the Rivers and Harbors Act of 1899 (Section 10) requires a DA permit be obtained for any work in, on, over or under a navigable water.

The proposed project, as described in the submitted information, has been reviewed in accordance with Section 404 and Section 10. Based on your description of the proposed work, and other information available to us, it has been determined that this project will not involve activities subject to the requirements of Section 10. However, this project will include the discharge of dredged or fill material into waters of the United States subject to the requirements of Section 404.

In the submitted PCN materials received in this office on October 18, 2017, with supplemental information provided on March 2, 2018, you have requested a DA authorization to discharge dredged and/or fill material into approximately 250 linear feet of the Middletown

Hydraulic Canal in association with the on-site voluntary action remedial work to be completed as part of a the Ohio's VAP. The proposal will involve the capping of contaminated sediment over an approximate 250 feet long by 50 feet wide section of the canal. The capping will be done with 250 cubic yards of AquaBlok in an approximate 6-inch thickness. All work will be conducted in accordance with the project design description provided and submitted with the PCN materials.

Based on the provided information, it has been determined the proposed discharge of dredged and/or fill material into waters of the United States in conjunction with the construction of the proposed project meets the criteria for Nationwide Permit (NWP) No. 38 (enclosed) under the January 6, 2017 Federal Register, Issuance and Reissuance of NWPs (82 FR 1860) provided you comply with all terms and conditions of the enclosed material, the enclosed special conditions, and the 401 Water Quality Certification issued by the Ohio Environmental Protection Agency (Ohio EPA) on March 17, 2017.

This verification is valid until the expiration date of the NWPs, unless the NWP authorization is modified, suspended, or revoked. The verification will remain valid if the NWP authorization is reissued without modification or the activity complies with any subsequent modification of the NWP authorization. All of the existing NWPs are scheduled to be modified, reissued, or revoked on March 18, 2022. Prior to this date, it is not necessary to contact this office for re-verification of your project unless the plans for the proposed activity are modified. Furthermore, if you commence or under contract to commence this activity before March 18, 2022, you will have twelve (12) months from the date of the modification or revocation of the NWP to complete the activity under the present terms and conditions of this NWP.

A copy of the NWP and this verification letter must be kept at the site during construction. Upon completion of the activities authorized by this NWP verification, the enclosed certification must be signed and returned to this office. If you have any questions concerning the above, please contact Andrew Wendt at 513-825-4518, by mail at the above address, or by email at andrew.j.wendt@usace.army.mil.

Sincerely,

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Teresa D. Spagna
Chief, North Branch

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Enclosures

**SPECIAL CONDITIONS FOR THE
NATIONWIDE PERMIT NO. 38 VERIFICATION
VOLUNTARY ACTION PROGRAM AT THE FORMER STM PROPERTY
MIDDLETOWN, BUTLER COUNTY, OHIO
LRH-2017-892-GMR-MIDDLETOWN HYDRAULIC CANAL**

PAGE 1 OF 2

1. All work would be conducted in accordance with the project design description provided and submitted with the PCN materials.
2. Enclosed is a copy of Nationwide Permit 38, which will be kept at the site during construction. A copy of the nationwide permit verification, special conditions, and the submitted construction plans must be kept at the site during construction. The permittee will supply a copy of these documents to their project engineer responsible for construction activities.
3. Upon completion of the activity authorized by this nationwide permit verification, the enclosed certification must be signed and returned to this office along with as-built drawings showing the location and configuration, as well as all pertinent dimensions and elevations of the activity authorized under this nationwide permit verification.
4. Should new information regarding the scope and/or impacts of the project become available that was not submitted to this office during our review of the proposal, the permittee must submit written information concerning proposed modification(s) to this office for review and evaluation, as soon as practicable.
5. Construction activities will be performed during low flow conditions to the greatest extent practicable. Additionally, appropriate site specific best management practices for sediment and erosion control will be fully implemented during construction activities at the site.
6. The project site lies within the range of the Indiana bat (*Myotis sodalis*), a federally-listed endangered species and the northern long-eared bat (*Myotis septentrionalis*), a federally-listed threatened species. Several factors have contributed to the two species decline, including habitat loss, fragmentation of habitat and the disease White Nose Syndrome. During winter, the two bat species hibernate in caves and abandoned mines. Suitable summer habitat for the Indiana bats and the northern long-eared bats consists of a wide variety of forested/wooded habitats where they roost, forage, and travel and may also include some adjacent and interspersed non-forested habitats such as emergent wetlands and adjacent edges of agricultural fields, old fields and pastures. This includes forests and woodlots containing potential roosts (i.e., live trees and/or snags ≥ 3 inches diameter at breast height (dbh) that have any exfoliating bark, cracks, crevices, hollows and/or cavities), as well as linear features such as fencerows, riparian forests, and other wooded corridors. These wooded areas may be dense or loose aggregates of trees with variable amounts of canopy closure. Individual trees may be considered suitable habitat when they exhibit the characteristics of a potential roost tree and are located within 1,000 feet (305

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PAGE 2 OF 2

meters) of other forested/wooded habitat. The permittee will preserve wooded/forested habitats exhibiting any of the characteristics listed above wherever possible. Should suitable habitat be present that cannot be saved during construction activities, any trees ≥ 3 inches dbh will only be cut between October 1 – March 31.

7. In the event any previously unknown historic or archaeological sites or human remains are uncovered while accomplishing the activity authorized by this nationwide permit authorization, the permittee must cease all work in waters of the U.S. immediately and contact local, state and county law enforcement offices (only contact law enforcement on findings of human remains), the Corps at 304-399-5210 and the Ohio State Historic Preservation Office at 614-298-2000. The Corps will initiate the Federal, state and tribal coordination required to comply with the National Historic Preservation Act and applicable state and local laws and regulations. Federally recognized tribes are afforded a government-to-government status as sovereign nations and consultation is required under Executive Order 13175 and 36 CFR Part 800.
8. No area for which grading has been completed will be unseeded or unmulched for longer than 14 days. All disturbed areas will be seeded and/or revegetated with native species and approved seed mixes (where practicable) after completion of construction activities for stabilization and to help preclude the establishment of non-native invasive species.

CELRH-RD-N-CIN

Permit Number: LRH-2017-892-GMR-Middletown Hydraulic Canal

Name of Permittee: Mr. Les Landen

Date of Issuance: April 4, 2018

Upon completion of the activity authorized by this permit and any mitigation required by the permit, sign this certification and return it to the following address:

**Huntington District
U.S. Army Corps of Engineers
502 Eighth Street
Huntington, West Virginia 25701
Attn: RD**

Please note that your permitted activity is subject to a compliance inspection by an U.S. Army Corps of Engineers representative. If you fail to comply with this permit you are subject to permit suspension, modification, or revocation.

I hereby certify that the work authorized by the above referenced permit has been completed in accordance with the terms and conditions of the said permit, and required mitigation was completed in accordance with the permit conditions.

Signature of Permittee

Date

Exhibit C-4

NATIONWIDE PERMITS FOR THE STATE OF OHIO

U.S. ARMY CORPS OF ENGINEERS (CORPS) REGULATORY PROGRAM REISSUANCE AND ISSUANCE OF NATIONWIDE PERMITS WITH OHIO EPA 401 WATER QUALITY CERTIFICATION AND OHIO DEPARTMENT OF NATURAL RESOURCES CONSISTENCY DETERMINATION UNDER THE COASTAL ZONE MANAGEMENT ACT

NWP 38

38. Cleanup of Hazardous and Toxic Waste. Specific activities required to effect the containment, stabilization, or removal of hazardous or toxic waste materials that are performed, ordered, or sponsored by a government agency with established legal or regulatory authority. Court ordered remedial action plans or related settlements are also authorized by this NWP. This NWP does not authorize the establishment of new disposal sites or the expansion of existing sites used for the disposal of hazardous or toxic waste.

Notification: The permittee must submit a pre-construction notification to the district engineer prior to commencing the activity. (See general condition 32.) (Authorities: Sections 10 and 404)

Note: Activities undertaken entirely on a Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) site by authority of CERCLA as approved or required by EPA, are not required to obtain permits under Section 404 of the Clean Water Act or Section 10 of the Rivers and Harbors Act.

Ohio 401 Certification Special Limitations and Conditions:

1. Ohio state certification general limitations and conditions apply to this nationwide permit.
2. Except for emergency response actions required to address immediate threats to public health or the environment, an individual 401 WQC is required for use of this nationwide permit when temporary or permanent impacts are proposed on or in any of the following waters:
 - a. category 3 wetlands;
 - b. category 1 and category 2 wetlands when impacts exceed 0.50 acres;
 - c. streams located in ineligible areas as depicted in the GIS NWP Stream Eligibility Map, Appendix C;
 - d. streams located in possibly eligible areas as depicted in the GIS NWPs Stream Eligibility Map determined to be high quality through one of the NWP eligibility flowcharts, Appendix C;

- e. state wild and scenic rivers;
- f. national wild and scenic rivers; and
- g. general high quality water bodies which harbor federally and state listed threatened or endangered aquatic species.

3. This certification shall only authorize projects that are performed, ordered or sponsored by state or federal government agency with established legal or regulatory authority.

Nationwide Permit General Conditions

Note: To qualify for NWP authorization, the prospective permittee must comply with the following general conditions, as applicable, in addition to any regional or case-specific conditions imposed by the division engineer or district engineer. Prospective permittees should contact the appropriate Corps district office to determine if regional conditions have been imposed on an NWP. Prospective permittees should also contact the appropriate Corps district office to determine the status of Clean Water Act Section 401 water quality certification and/or Coastal Zone Management Act consistency for a NWP. Every person who may wish to obtain permit authorization under one or more NWPs, or who is currently relying on an existing or prior permit authorization under one or more NWPs, has been and is on notice that all of the provisions of 33 CFR §§ 330.1 through 330.6 apply to every NWP authorization. Note especially 33 CFR § 330.5 relating to the modification, suspension, or revocation of any NWP authorization.

- 1. Navigation.** (a) No activity may cause more than a minimal adverse effect on navigation.
(b) Any safety lights and signals prescribed by the U.S. Coast Guard, through regulations or otherwise, must be installed and maintained at the permittee's expense on authorized facilities in navigable waters of the United States.
(c) The permittee understands and agrees that, if future operations by the United States require the removal, relocation, or other alteration, of the structure or work herein authorized, or if, in the opinion of the Secretary of the Army or his authorized representative, said structure or work shall cause unreasonable obstruction to the free navigation of the navigable waters, the permittee will be required, upon due notice from the Corps of Engineers, to remove, relocate, or alter the structural work or obstructions caused thereby, without expense to the United States. No claim shall be made against the United States on account of any such removal or alteration.
- 2. Aquatic Life Movements.** No activity may substantially disrupt the necessary life cycle movements of those species of aquatic life indigenous to the waterbody, including those species that normally migrate through the area, unless the activity's primary purpose is to impound water. All permanent and temporary crossings of waterbodies shall be suitably culverted, bridged, or otherwise designed and constructed to maintain low flows to sustain the movement of those aquatic species. If a bottomless culvert cannot be used, then the crossing should be designed and constructed to minimize adverse effects to aquatic life movements.

3. **Spawning Areas.** Activities in spawning areas during spawning seasons must be avoided to the maximum extent practicable. Activities that result in the physical destruction (e.g., through excavation, fill, or downstream smothering by substantial turbidity) of an important spawning area are not authorized.
4. **Migratory Bird Breeding Areas.** Activities in waters of the United States that serve as breeding areas for migratory birds must be avoided to the maximum extent practicable.
5. **Shellfish Beds.** No activity may occur in areas of concentrated shellfish populations, unless the activity is directly related to a shellfish harvesting activity authorized by NWP 4 and 48, or is a shellfish seeding or habitat restoration activity authorized by NWP 27.
6. **Suitable Material.** No activity may use unsuitable material (e.g., trash, debris, car bodies, asphalt, etc.). Material used for construction or discharged must be free from toxic pollutants in toxic amounts (see section 307 of the Clean Water Act).
7. **Water Supply Intakes.** No activity may occur in the proximity of a public water supply intake, except where the activity is for the repair or improvement of public water supply intake structures or adjacent bank stabilization.
8. **Adverse Effects From Impoundments.** If the activity creates an impoundment of water, adverse effects to the aquatic system due to accelerating the passage of water, and/or restricting its flow must be minimized to the maximum extent practicable.
9. **Management of Water Flows.** To the maximum extent practicable, the pre-construction course, condition, capacity, and location of open waters must be maintained for each activity, including stream channelization, storm water management activities, and temporary and permanent road crossings, except as provided below. The activity must be constructed to withstand expected high flows. The activity must not restrict or impede the passage of normal or high flows, unless the primary purpose of the activity is to impound water or manage high flows. The activity may alter the pre-construction course, condition, capacity, and location of open waters if it benefits the aquatic environment (e.g., stream restoration or relocation activities).
10. **Fills Within 100-Year Floodplains.** The activity must comply with applicable FEMA-approved state or local floodplain management requirements.
11. **Equipment.** Heavy equipment working in wetlands or mudflats must be placed on mats, or other measures must be taken to minimize soil disturbance.
12. **Soil Erosion and Sediment Controls.** Appropriate soil erosion and sediment controls must be used and maintained in effective operating condition during construction, and all exposed soil and other fills, as well as any work below the ordinary high water mark or high tide line, must be permanently stabilized at the earliest practicable date. Permittees are encouraged to perform work within waters of the United States during periods of low-flow or no-flow, or during low tides.

13. Removal of Temporary Fills. Temporary fills must be removed in their entirety and the affected areas returned to pre-construction elevations. The affected areas must be revegetated, as appropriate.

14. Proper Maintenance. Any authorized structure or fill shall be properly maintained, including maintenance to ensure public safety and compliance with applicable NWP general conditions, as well as any activity-specific conditions added by the district engineer to an NWP authorization.

15. Single and Complete Project. The activity must be a single and complete project. The same NWP cannot be used more than once for the same single and complete project.

16. Wild and Scenic Rivers. (a) No NWP activity may occur in a component of the National Wild and Scenic River System, or in a river officially designated by Congress as a “study river” for possible inclusion in the system while the river is in an official study status, unless the appropriate Federal agency with direct management responsibility for such river, has determined in writing that the proposed activity will not adversely affect the Wild and Scenic River designation or study status.

(b) If a proposed NWP activity will occur in a component of the National Wild and Scenic River System, or in a river officially designated by Congress as a “study river” for possible inclusion in the system while the river is in an official study status, the permittee must submit a pre-construction notification (see general condition 32). The district engineer will coordinate the PCN with the Federal agency with direct management responsibility for that river. The permittee shall not begin the NWP activity until notified by the district engineer that the Federal agency with direct management responsibility for that river has determined in writing that the proposed NWP activity will not adversely affect the Wild and Scenic River designation or study status.

(c) Information on Wild and Scenic Rivers may be obtained from the appropriate Federal land management agency responsible for the designated Wild and Scenic River or study river (e.g., National Park Service, U.S. Forest Service, Bureau of Land Management, U.S. Fish and Wildlife Service). Information on these rivers is also available at: <http://www.rivers.gov/>.

17. Tribal Rights. No NWP activity may cause more than minimal adverse effects on tribal rights (including treaty rights), protected tribal resources, or tribal lands.

18. Endangered Species. (a) No activity is authorized under any NWP which is likely to directly or indirectly jeopardize the continued existence of a threatened or endangered species or a species proposed for such designation, as identified under the Federal Endangered Species Act (ESA), or which will directly or indirectly destroy or adversely modify the critical habitat of such species. No activity is authorized under any NWP which “may affect” a listed species or critical habitat, unless ESA section 7 consultation addressing the effects of the proposed activity has been completed. Direct effects are the immediate effects on listed species and critical habitat

caused by the NWP activity. Indirect effects are those effects on listed species and critical habitat that are caused by the NWP activity and are later in time, but still are reasonably certain to occur.

(b) Federal agencies should follow their own procedures for complying with the requirements of the ESA. If pre-construction notification is required for the proposed activity, the Federal permittee must provide the district engineer with the appropriate documentation to demonstrate compliance with those requirements. The district engineer will verify that the appropriate documentation has been submitted. If the appropriate documentation has not been submitted, additional ESA section 7 consultation may be necessary for the activity and the respective federal agency would be responsible for fulfilling its obligation under section 7 of the ESA.

(c) Non-federal permittees must submit a pre-construction notification to the district engineer if any listed species or designated critical habitat might be affected or is in the vicinity of the activity, or if the activity is located in designated critical habitat, and shall not begin work on the activity until notified by the district engineer that the requirements of the ESA have been satisfied and that the activity is authorized. For activities that might affect Federally-listed endangered or threatened species or designated critical habitat, the pre-construction notification must include the name(s) of the endangered or threatened species that might be affected by the proposed activity or that utilize the designated critical habitat that might be affected by the proposed activity. The district engineer will determine whether the proposed activity "may affect" or will have "no effect" to listed species and designated critical habitat and will notify the non-Federal applicant of the Corps' determination within 45 days of receipt of a complete pre-construction notification. In cases where the non-Federal applicant has identified listed species or critical habitat that might be affected or is in the vicinity of the activity, and has so notified the Corps, the applicant shall not begin work until the Corps has provided notification that the proposed activity will have "no effect" on listed species or critical habitat, or until ESA section 7 consultation has been completed. If the non-Federal applicant has not heard back from the Corps within 45 days, the applicant must still wait for notification from the Corps.

(d) As a result of formal or informal consultation with the FWS or NMFS the district engineer may add species-specific permit conditions to the NWPs.

(e) Authorization of an activity by an NWP does not authorize the "take" of a threatened or endangered species as defined under the ESA. In the absence of separate authorization (e.g., an ESA Section 10 Permit, a Biological Opinion with "incidental take" provisions, etc.) from the FWS or the NMFS, the Endangered Species Act prohibits any person subject to the jurisdiction of the United States to take a listed species, where "take" means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct. The word "harm" in the definition of "take" means an act which actually kills or injures wildlife. Such an act may include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding or sheltering.

(f) If the non-federal permittee has a valid ESA section 10(a)(1)(B) incidental take permit with an approved Habitat Conservation Plan for a project or a group of projects that includes the proposed NWP activity, the non-federal applicant should provide a copy of that ESA section

10(a)(1)(B) permit with the PCN required by paragraph (c) of this general condition. The district engineer will coordinate with the agency that issued the ESA section 10(a)(1)(B) permit to determine whether the proposed NWP activity and the associated incidental take were considered in the internal ESA section 7 consultation conducted for the ESA section 10(a)(1)(B) permit. If that coordination results in concurrence from the agency that the proposed NWP activity and the associated incidental take were considered in the internal ESA section 7 consultation for the ESA section 10(a)(1)(B) permit, the district engineer does not need to conduct a separate ESA section 7 consultation for the proposed NWP activity. The district engineer will notify the non-federal applicant within 45 days of receipt of a complete pre-construction notification whether the ESA section 10(a)(1)(B) permit covers the proposed NWP activity or whether additional ESA section 7 consultation is required.

(g) Information on the location of threatened and endangered species and their critical habitat can be obtained directly from the offices of the FWS and NMFS or their world wide web pages at <http://www.fws.gov/> or <http://www.fws.gov/ipac> and <http://www.nmfs.noaa.gov/pr/species/esa/> respectively.

19. Migratory Birds and Bald and Golden Eagles. The permittee is responsible for ensuring their action complies with the Migratory Bird Treaty Act and the Bald and Golden Eagle Protection Act. The permittee is responsible for contacting appropriate local office of the U.S. Fish and Wildlife Service to determine applicable measures to reduce impacts to migratory birds or eagles, including whether “incidental take” permits are necessary and available under the Migratory Bird Treaty Act or Bald and Golden Eagle Protection Act for a particular activity.

20. Historic Properties. (a) In cases where the district engineer determines that the activity may have the potential to cause effects to properties listed, or eligible for listing, in the National Register of Historic Places, the activity is not authorized, until the requirements of Section 106 of the National Historic Preservation Act (NHPA) have been satisfied.

(b) Federal permittees should follow their own procedures for complying with the requirements of section 106 of the National Historic Preservation Act. If pre-construction notification is required for the proposed NWP activity, the Federal permittee must provide the district engineer with the appropriate documentation to demonstrate compliance with those requirements. The district engineer will verify that the appropriate documentation has been submitted. If the appropriate documentation is not submitted, then additional consultation under section 106 may be necessary. The respective federal agency is responsible for fulfilling its obligation to comply with section 106.

(c) Non-federal permittees must submit a pre-construction notification to the district engineer if the NWP activity might have the potential to cause effects to any historic properties listed on, determined to be eligible for listing on, or potentially eligible for listing on the National Register of Historic Places, including previously unidentified properties. For such activities, the pre-construction notification must state which historic properties might have the potential to be affected by the proposed NWP activity or include a vicinity map indicating the location of the historic properties or the potential for the presence of historic properties. Assistance regarding information on the location of, or potential for, the presence of historic properties can be sought

from the State Historic Preservation Officer, Tribal Historic Preservation Officer, or designated tribal representative, as appropriate, and the National Register of Historic Places (see 33 CFR 330.4(g)). When reviewing pre-construction notifications, district engineers will comply with the current procedures for addressing the requirements of section 106 of the National Historic Preservation Act. The district engineer shall make a reasonable and good faith effort to carry out appropriate identification efforts, which may include background research, consultation, oral history interviews, sample field investigation, and field survey. Based on the information submitted in the PCN and these identification efforts, the district engineer shall determine whether the proposed NWP activity has the potential to cause effects on the historic properties. Section 106 consultation is not required when the district engineer determines that the activity does not have the potential to cause effects on historic properties (see 36 CFR 800.3(a)). Section 106 consultation is required when the district engineer determines that the activity has the potential to cause effects on historic properties. The district engineer will conduct consultation with consulting parties identified under 36 CFR 800.2(c) when he or she makes any of the following effect determinations for the purposes of section 106 of the NHPA: no historic properties affected, no adverse effect, or adverse effect. Where the non-Federal applicant has identified historic properties on which the activity might have the potential to cause effects and so notified the Corps, the non-Federal applicant shall not begin the activity until notified by the district engineer either that the activity has no potential to cause effects to historic properties or that NHPA section 106 consultation has been completed.

(d) For non-federal permittees, the district engineer will notify the prospective permittee within 45 days of receipt of a complete pre-construction notification whether NHPA section 106 consultation is required. If NHPA section 106 consultation is required, the district engineer will notify the non-Federal applicant that he or she cannot begin the activity until section 106 consultation is completed. If the non-Federal applicant has not heard back from the Corps within 45 days, the applicant must still wait for notification from the Corps.

(e) Prospective permittees should be aware that section 110k of the NHPA (54 U.S.C. 306113) prevents the Corps from granting a permit or other assistance to an applicant who, with intent to avoid the requirements of section 106 of the NHPA, has intentionally significantly adversely affected a historic property to which the permit would relate, or having legal power to prevent it, allowed such significant adverse effect to occur, unless the Corps, after consultation with the Advisory Council on Historic Preservation (AChP), determines that circumstances justify granting such assistance despite the adverse effect created or permitted by the applicant. If circumstances justify granting the assistance, the Corps is required to notify the AChP and provide documentation specifying the circumstances, the degree of damage to the integrity of any historic properties affected, and proposed mitigation. This documentation must include any views obtained from the applicant, SHPO/THPO, appropriate Indian tribes if the undertaking occurs on or affects historic properties on tribal lands or affects properties of interest to those tribes, and other parties known to have a legitimate interest in the impacts to the permitted activity on historic properties.

21. Discovery of Previously Unknown Remains and Artifacts. If you discover any previously unknown historic, cultural or archeological remains and artifacts while accomplishing the activity authorized by this permit, you must immediately notify the district engineer of what

you have found, and to the maximum extent practicable, avoid construction activities that may affect the remains and artifacts until the required coordination has been completed. The district engineer will initiate the Federal, Tribal, and state coordination required to determine if the items or remains warrant a recovery effort or if the site is eligible for listing in the National Register of Historic Places.

22. Designated Critical Resource Waters. Critical resource waters include, NOAA-managed marine sanctuaries and marine monuments, and National Estuarine Research Reserves. The district engineer may designate, after notice and opportunity for public comment, additional waters officially designated by a state as having particular environmental or ecological significance, such as outstanding national resource waters or state natural heritage sites. The district engineer may also designate additional critical resource waters after notice and opportunity for public comment.

(a) Discharges of dredged or fill material into waters of the United States are not authorized by NWPs 7, 12, 14, 16, 17, 21, 29, 31, 35, 39, 40, 42, 43, 44, 49, 50, 51, and 52 for any activity within, or directly affecting, critical resource waters, including wetlands adjacent to such waters.

(b) For NWPs 3, 8, 10, 13, 15, 18, 19, 22, 23, 25, 27, 28, 30, 33, 34, 36, 37, 38, and 54, notification is required in accordance with general condition 32, for any activity proposed in the designated critical resource waters including wetlands adjacent to those waters. The district engineer may authorize activities under these NWPs only after it is determined that the impacts to the critical resource waters will be no more than minimal.

23. Mitigation. The district engineer will consider the following factors when determining appropriate and practicable mitigation necessary to ensure that the individual and cumulative adverse environmental effects are no more than minimal:

(a) The activity must be designed and constructed to avoid and minimize adverse effects, both temporary and permanent, to waters of the United States to the maximum extent practicable at the project site (i.e., on site).

(b) Mitigation in all its forms (avoiding, minimizing, rectifying, reducing, or compensating for resource losses) will be required to the extent necessary to ensure that the individual and cumulative adverse environmental effects are no more than minimal.

(c) Compensatory mitigation at a minimum one-for-one ratio will be required for all wetland losses that exceed 1/10-acre and require pre-construction notification, unless the district engineer determines in writing that either some other form of mitigation would be more environmentally appropriate or the adverse environmental effects of the proposed activity are no more than minimal, and provides an activity-specific waiver of this requirement. For wetland losses of 1/10-acre or less that require pre-construction notification, the district engineer may determine on a case-by-case basis that compensatory mitigation is required to ensure that the activity results in only minimal adverse environmental effects.

(d) For losses of streams or other open waters that require pre-construction notification, the district engineer may require compensatory mitigation to ensure that the activity results in no more than minimal adverse environmental effects. Compensatory mitigation for losses of streams should be provided, if practicable, through stream rehabilitation, enhancement, or preservation, since streams are difficult-to-replace resources (see 33 CFR 332.3(e)(3)).

(e) Compensatory mitigation plans for NWP activities in or near streams or other open waters will normally include a requirement for the restoration or enhancement, maintenance, and legal protection (e.g., conservation easements) of riparian areas next to open waters. In some cases, the restoration or maintenance/protection of riparian areas may be the only compensatory mitigation required. Restored riparian areas should consist of native species. The width of the required riparian area will address documented water quality or aquatic habitat loss concerns. Normally, the riparian area will be 25 to 50 feet wide on each side of the stream, but the district engineer may require slightly wider riparian areas to address documented water quality or habitat loss concerns. If it is not possible to restore or maintain/protect a riparian area on both sides of a stream, or if the waterbody is a lake or coastal waters, then restoring or maintaining/protecting a riparian area along a single bank or shoreline may be sufficient. Where both wetlands and open waters exist on the project site, the district engineer will determine the appropriate compensatory mitigation (e.g., riparian areas and/or wetlands compensation) based on what is best for the aquatic environment on a watershed basis. In cases where riparian areas are determined to be the most appropriate form of minimization or compensatory mitigation, the district engineer may waive or reduce the requirement to provide wetland compensatory mitigation for wetland losses.

(f) Compensatory mitigation projects provided to offset losses of aquatic resources must comply with the applicable provisions of 33 CFR part 332.

(1) The prospective permittee is responsible for proposing an appropriate compensatory mitigation option if compensatory mitigation is necessary to ensure that the activity results in no more than minimal adverse environmental effects. For the NWPs, the preferred mechanism for providing compensatory mitigation is mitigation bank credits or in-lieu fee program credits (see 33 CFR 332.3(b)(2) and (3)). However, if an appropriate number and type of mitigation bank or in-lieu credits are not available at the time the PCN is submitted to the district engineer, the district engineer may approve the use of permittee-responsible mitigation.

(2) The amount of compensatory mitigation required by the district engineer must be sufficient to ensure that the authorized activity results in no more than minimal individual and cumulative adverse environmental effects (see 33 CFR 330.1(e)(3)). (See also 33 CFR 332.3(f)).

(3) Since the likelihood of success is greater and the impacts to potentially valuable uplands are reduced, aquatic resource restoration should be the first compensatory mitigation option considered for permittee-responsible mitigation.

(4) If permittee-responsible mitigation is the proposed option, the prospective permittee is responsible for submitting a mitigation plan. A conceptual or detailed mitigation plan may be used by the district engineer to make the decision on the NWP verification request, but a final mitigation plan that addresses the applicable requirements of 33 CFR 332.4(c)(2) through (14)

must be approved by the district engineer before the permittee begins work in waters of the United States, unless the district engineer determines that prior approval of the final mitigation plan is not practicable or not necessary to ensure timely completion of the required compensatory mitigation (see 33 CFR 332.3(k)(3)).

(5) If mitigation bank or in-lieu fee program credits are the proposed option, the mitigation plan only needs to address the baseline conditions at the impact site and the number of credits to be provided.

(6) Compensatory mitigation requirements (e.g., resource type and amount to be provided as compensatory mitigation, site protection, ecological performance standards, monitoring requirements) may be addressed through conditions added to the NWP authorization, instead of components of a compensatory mitigation plan (see 33 CFR 332.4(c)(1)(ii)).

(g) Compensatory mitigation will not be used to increase the acreage losses allowed by the acreage limits of the NWPs. For example, if an NWP has an acreage limit of 1/2-acre, it cannot be used to authorize any NWP activity resulting in the loss of greater than 1/2-acre of waters of the United States, even if compensatory mitigation is provided that replaces or restores some of the lost waters. However, compensatory mitigation can and should be used, as necessary, to ensure that an NWP activity already meeting the established acreage limits also satisfies the no more than minimal impact requirement for the NWPs.

(h) Permittees may propose the use of mitigation banks, in-lieu fee programs, or permittee-responsible mitigation. When developing a compensatory mitigation proposal, the permittee must consider appropriate and practicable options consistent with the framework at 33 CFR 332.3(b). For activities resulting in the loss of marine or estuarine resources, permittee-responsible mitigation may be environmentally preferable if there are no mitigation banks or in-lieu fee programs in the area that have marine or estuarine credits available for sale or transfer to the permittee. For permittee-responsible mitigation, the special conditions of the NWP verification must clearly indicate the party or parties responsible for the implementation and performance of the compensatory mitigation project, and, if required, its long-term management.

(i) Where certain functions and services of waters of the United States are permanently adversely affected by a regulated activity, such as discharges of dredged or fill material into waters of the United States that will convert a forested or scrub-shrub wetland to a herbaceous wetland in a permanently maintained utility line right-of-way, mitigation may be required to reduce the adverse environmental effects of the activity to the no more than minimal level.

24. Safety of Impoundment Structures. To ensure that all impoundment structures are safely designed, the district engineer may require non-Federal applicants to demonstrate that the structures comply with established state dam safety criteria or have been designed by qualified persons. The district engineer may also require documentation that the design has been independently reviewed by similarly qualified persons, and appropriate modifications made to ensure safety.

25. Water Quality. Where States and authorized Tribes, or EPA where applicable, have not previously certified compliance of an NWP with CWA section 401, individual 401 Water Quality Certification must be obtained or waived (see 33 CFR 330.4(c)). The district engineer or State or Tribe may require additional water quality management measures to ensure that the authorized activity does not result in more than minimal degradation of water quality.

26. Coastal Zone Management. In coastal states where an NWP has not previously received a state coastal zone management consistency concurrence, an individual state coastal zone management consistency concurrence must be obtained, or a presumption of concurrence must occur (see 33 CFR 330.4(d)). The district engineer or a State may require additional measures to ensure that the authorized activity is consistent with state coastal zone management requirements.

27. Regional and Case-By-Case Conditions. The activity must comply with any regional conditions that may have been added by the Division Engineer (see 33 CFR 330.4(e)) and with any case specific conditions added by the Corps or by the state, Indian Tribe, or U.S. EPA in its section 401 Water Quality Certification, or by the state in its Coastal Zone Management Act consistency determination.

28. Use of Multiple Nationwide Permits. The use of more than one NWP for a single and complete project is prohibited, except when the acreage loss of waters of the United States authorized by the NWPs does not exceed the acreage limit of the NWP with the highest specified acreage limit. For example, if a road crossing over tidal waters is constructed under NWP 14, with associated bank stabilization authorized by NWP 13, the maximum acreage loss of waters of the United States for the total project cannot exceed 1/3-acre.

29. Transfer of Nationwide Permit Verifications. If the permittee sells the property associated with a nationwide permit verification, the permittee may transfer the nationwide permit verification to the new owner by submitting a letter to the appropriate Corps district office to validate the transfer. A copy of the nationwide permit verification must be attached to the letter, and the letter must contain the following statement and signature:

“When the structures or work authorized by this nationwide permit are still in existence at the time the property is transferred, the terms and conditions of this nationwide permit, including any special conditions, will continue to be binding on the new owner(s) of the property. To validate the transfer of this nationwide permit and the associated liabilities associated with compliance with its terms and conditions, have the transferee sign and date below.”

(Transferee)

(Date)

30. Compliance Certification. Each permittee who receives an NWP verification letter from the Corps must provide a signed certification documenting completion of the authorized activity and implementation of any required compensatory mitigation. The success of any required permittee-responsible mitigation, including the achievement of ecological performance standards, will be addressed separately by the district engineer. The Corps will provide the permittee the certification document with the NWP verification letter. The certification document will include:

- (a) A statement that the authorized activity was done in accordance with the NWP authorization, including any general, regional, or activity-specific conditions;
- (b) A statement that the implementation of any required compensatory mitigation was completed in accordance with the permit conditions. If credits from a mitigation bank or in-lieu fee program are used to satisfy the compensatory mitigation requirements, the certification must include the documentation required by 33 CFR 332.3(l)(3) to confirm that the permittee secured the appropriate number and resource type of credits; and
- (c) The signature of the permittee certifying the completion of the activity and mitigation.

The completed certification document must be submitted to the district engineer within 30 days of completion of the authorized activity or the implementation of any required compensatory mitigation, whichever occurs later.

31. Activities Affecting Structures or Works Built by the United States. If an NWP activity also requires permission from the Corps pursuant to 33 U.S.C. 408 because it will alter or temporarily or permanently occupy or use a U.S. Army Corps of Engineers (USACE) federally authorized Civil Works project (a “USACE project”), the prospective permittee must submit a pre-construction notification. See paragraph (b)(10) of general condition 32. An activity that requires section 408 permission is not authorized by NWP until the appropriate Corps office issues the section 408 permission to alter, occupy, or use the USACE project, and the district engineer issues a written NWP verification.

32. Pre-Construction Notification. (a) Timing. Where required by the terms of the NWP, the prospective permittee must notify the district engineer by submitting a pre-construction notification (PCN) as early as possible. The district engineer must determine if the PCN is complete within 30 calendar days of the date of receipt and, if the PCN is determined to be incomplete, notify the prospective permittee within that 30 day period to request the additional information necessary to make the PCN complete. The request must specify the information needed to make the PCN complete. As a general rule, district engineers will request additional information necessary to make the PCN complete only once. However, if the prospective permittee does not provide all of the requested information, then the district engineer will notify the prospective permittee that the PCN is still incomplete and the PCN review process will not commence until all of the requested information has been received by the district engineer. The prospective permittee shall not begin the activity until either:

(1) He or she is notified in writing by the district engineer that the activity may proceed under the NWP with any special conditions imposed by the district or division engineer; or

(2) 45 calendar days have passed from the district engineer's receipt of the complete PCN and the prospective permittee has not received written notice from the district or division engineer. However, if the permittee was required to notify the Corps pursuant to general condition 18 that listed species or critical habitat might be affected or are in the vicinity of the activity, or to notify the Corps pursuant to general condition 20 that the activity might have the potential to cause effects to historic properties, the permittee cannot begin the activity until receiving written notification from the Corps that there is "no effect" on listed species or "no potential to cause effects" on historic properties, or that any consultation required under Section 7 of the Endangered Species Act (see 33 CFR 330.4(f)) and/or section 106 of the National Historic Preservation Act (see 33 CFR 330.4(g)) has been completed. Also, work cannot begin under NWPs 21, 49, or 50 until the permittee has received written approval from the Corps. If the proposed activity requires a written waiver to exceed specified limits of an NWP, the permittee may not begin the activity until the district engineer issues the waiver. If the district or division engineer notifies the permittee in writing that an individual permit is required within 45 calendar days of receipt of a complete PCN, the permittee cannot begin the activity until an individual permit has been obtained. Subsequently, the permittee's right to proceed under the NWP may be modified, suspended, or revoked only in accordance with the procedure set forth in 33 CFR 330.5(d)(2).

(b) Contents of Pre-Construction Notification: The PCN must be in writing and include the following information:

(1) Name, address and telephone numbers of the prospective permittee;

(2) Location of the proposed activity;

(3) Identify the specific NWP or NWP(s) the prospective permittee wants to use to authorize the proposed activity;

(4) A description of the proposed activity; the activity's purpose; direct and indirect adverse environmental effects the activity would cause, including the anticipated amount of loss of wetlands, other special aquatic sites, and other waters expected to result from the NWP activity, in acres, linear feet, or other appropriate unit of measure; a description of any proposed mitigation measures intended to reduce the adverse environmental effects caused by the proposed activity; and any other NWP(s), regional general permit(s), or individual permit(s) used or intended to be used to authorize any part of the proposed project or any related activity, including other separate and distant crossings for linear projects that require Department of the Army authorization but do not require pre-construction notification. The description of the proposed activity and any proposed mitigation measures should be sufficiently detailed to allow the district engineer to determine that the adverse environmental effects of the activity will be no more than minimal and to determine the need for compensatory mitigation or other mitigation measures. For single and complete linear projects, the PCN must include the quantity of anticipated losses of wetlands, other special aquatic sites, and other waters for each single and

complete crossing of those wetlands, other special aquatic sites, and other waters. Sketches should be provided when necessary to show that the activity complies with the terms of the NWP. (Sketches usually clarify the activity and when provided results in a quicker decision. Sketches should contain sufficient detail to provide an illustrative description of the proposed activity (e.g., a conceptual plan), but do not need to be detailed engineering plans);

(5) The PCN must include a delineation of wetlands, other special aquatic sites, and other waters, such as lakes and ponds, and perennial, intermittent, and ephemeral streams, on the project site. Wetland delineations must be prepared in accordance with the current method required by the Corps. The permittee may ask the Corps to delineate the special aquatic sites and other waters on the project site, but there may be a delay if the Corps does the delineation, especially if the project site is large or contains many wetlands, other special aquatic sites, and other waters. Furthermore, the 45 day period will not start until the delineation has been submitted to or completed by the Corps, as appropriate;

(6) If the proposed activity will result in the loss of greater than 1/10-acre of wetlands and a PCN is required, the prospective permittee must submit a statement describing how the mitigation requirement will be satisfied, or explaining why the adverse environmental effects are no more than minimal and why compensatory mitigation should not be required. As an alternative, the prospective permittee may submit a conceptual or detailed mitigation plan.

(7) For non-Federal permittees, if any listed species or designated critical habitat might be affected or is in the vicinity of the activity, or if the activity is located in designated critical habitat, the PCN must include the name(s) of those endangered or threatened species that might be affected by the proposed activity or utilize the designated critical habitat that might be affected by the proposed activity. For NWP activities that require pre-construction notification, Federal permittees must provide documentation demonstrating compliance with the Endangered Species Act;

(8) For non-Federal permittees, if the NWP activity might have the potential to cause effects to a historic property listed on, determined to be eligible for listing on, or potentially eligible for listing on, the National Register of Historic Places, the PCN must state which historic property might have the potential to be affected by the proposed activity or include a vicinity map indicating the location of the historic property. For NWP activities that require pre-construction notification, Federal permittees must provide documentation demonstrating compliance with section 106 of the National Historic Preservation Act;

(9) For an activity that will occur in a component of the National Wild and Scenic River System, or in a river officially designated by Congress as a “study river” for possible inclusion in the system while the river is in an official study status, the PCN must identify the Wild and Scenic River or the “study river” (see general condition 16); and

(10) For an activity that requires permission from the Corps pursuant to 33 U.S.C. 408 because it will alter or temporarily or permanently occupy or use a U.S. Army Corps of Engineers federally authorized civil works project, the pre-construction notification must include a statement

confirming that the project proponent has submitted a written request for section 408 permission from the Corps office having jurisdiction over that USACE project.

(c) Form of Pre-Construction Notification: The standard individual permit application form (Form ENG 4345) may be used, but the completed application form must clearly indicate that it is an NWP PCN and must include all of the applicable information required in paragraphs (b)(1) through (10) of this general condition. A letter containing the required information may also be used. Applicants may provide electronic files of PCNs and supporting materials if the district engineer has established tools and procedures for electronic submittals.

(d) Agency Coordination: (1) The district engineer will consider any comments from Federal and state agencies concerning the proposed activity's compliance with the terms and conditions of the NWPs and the need for mitigation to reduce the activity's adverse environmental effects so that they are no more than minimal.

(2) Agency coordination is required for: (i) all NWP activities that require pre-construction notification and result in the loss of greater than 1/2-acre of waters of the United States; (ii) NWP 21, 29, 39, 40, 42, 43, 44, 50, 51, and 52 activities that require pre-construction notification and will result in the loss of greater than 300 linear feet of stream bed; (iii) NWP 13 activities in excess of 500 linear feet, fills greater than one cubic yard per running foot, or involve discharges of dredged or fill material into special aquatic sites; and (iv) NWP 54 activities in excess of 500 linear feet, or that extend into the waterbody more than 30 feet from the mean low water line in tidal waters or the ordinary high water mark in the Great Lakes.

(3) When agency coordination is required, the district engineer will immediately provide (e.g., via e-mail, facsimile transmission, overnight mail, or other expeditious manner) a copy of the complete PCN to the appropriate Federal or state offices (FWS, state natural resource or water quality agency, EPA, and, if appropriate, the NMFS). With the exception of NWP 37, these agencies will have 10 calendar days from the date the material is transmitted to notify the district engineer via telephone, facsimile transmission, or e-mail that they intend to provide substantive, site-specific comments. The comments must explain why the agency believes the adverse environmental effects will be more than minimal. If so contacted by an agency, the district engineer will wait an additional 15 calendar days before making a decision on the pre-construction notification. The district engineer will fully consider agency comments received within the specified time frame concerning the proposed activity's compliance with the terms and conditions of the NWPs, including the need for mitigation to ensure the net adverse environmental effects of the proposed activity are no more than minimal. The district engineer will provide no response to the resource agency, except as provided below. The district engineer will indicate in the administrative record associated with each pre-construction notification that the resource agencies' concerns were considered. For NWP 37, the emergency watershed protection and rehabilitation activity may proceed immediately in cases where there is an unacceptable hazard to life or a significant loss of property or economic hardship will occur. The district engineer will consider any comments received to decide whether the NWP 37 authorization should be modified, suspended, or revoked in accordance with the procedures at 33 CFR 330.5.

(4) In cases of where the prospective permittee is not a Federal agency, the district engineer will provide a response to NMFS within 30 calendar days of receipt of any Essential Fish Habitat conservation recommendations, as required by section 305(b)(4)(B) of the Magnuson-Stevens Fishery Conservation and Management Act.

(5) Applicants are encouraged to provide the Corps with either electronic files or multiple copies of pre-construction notifications to expedite agency coordination.

District Engineer's Decision

1. In reviewing the PCN for the proposed activity, the district engineer will determine whether the activity authorized by the NWP will result in more than minimal individual or cumulative adverse environmental effects or may be contrary to the public interest. If a project proponent requests authorization by a specific NWP, the district engineer should issue the NWP verification for that activity if it meets the terms and conditions of that NWP, unless he or she determines, after considering mitigation, that the proposed activity will result in more than minimal individual and cumulative adverse effects on the aquatic environment and other aspects of the public interest and exercises discretionary authority to require an individual permit for the proposed activity. For a linear project, this determination will include an evaluation of the individual crossings of waters of the United States to determine whether they individually satisfy the terms and conditions of the NWP(s), as well as the cumulative effects caused by all of the crossings authorized by NWP. If an applicant requests a waiver of the 300 linear foot limit on impacts to streams or of an otherwise applicable limit, as provided for in NWPs 13, 21, 29, 36, 39, 40, 42, 43, 44, 50, 51, 52, or 54, the district engineer will only grant the waiver upon a written determination that the NWP activity will result in only minimal individual and cumulative adverse environmental effects. For those NWPs that have a waivable 300 linear foot limit for losses of intermittent and ephemeral stream bed and a 1/2-acre limit (i.e., NWPs 21, 29, 39, 40, 42, 43, 44, 50, 51, and 52), the loss of intermittent and ephemeral stream bed, plus any other losses of jurisdictional waters and wetlands, cannot exceed 1/2-acre.

2. When making minimal adverse environmental effects determinations the district engineer will consider the direct and indirect effects caused by the NWP activity. He or she will also consider the cumulative adverse environmental effects caused by activities authorized by NWP and whether those cumulative adverse environmental effects are no more than minimal. The district engineer will also consider site specific factors, such as the environmental setting in the vicinity of the NWP activity, the type of resource that will be affected by the NWP activity, the functions provided by the aquatic resources that will be affected by the NWP activity, the degree or magnitude to which the aquatic resources perform those functions, the extent that aquatic resource functions will be lost as a result of the NWP activity (e.g., partial or complete loss), the duration of the adverse effects (temporary or permanent), the importance of the aquatic resource functions to the region (e.g., watershed or ecoregion), and mitigation required by the district engineer. If an appropriate functional or condition assessment method is available and practicable to use, that assessment method may be used by the district engineer to assist in the minimal adverse environmental effects determination. The district engineer may add case-specific special conditions to the NWP authorization to address site-specific environmental concerns.

3. If the proposed activity requires a PCN and will result in a loss of greater than 1/10-acre of wetlands, the prospective permittee should submit a mitigation proposal with the PCN. Applicants may also propose compensatory mitigation for NWP activities with smaller impacts, or for impacts to other types of waters (e.g., streams). The district engineer will consider any proposed compensatory mitigation or other mitigation measures the applicant has included in the proposal in determining whether the net adverse environmental effects of the proposed activity are no more than minimal. The compensatory mitigation proposal may be either conceptual or detailed. If the district engineer determines that the activity complies with the terms and conditions of the NWP and that the adverse environmental effects are no more than minimal, after considering mitigation, the district engineer will notify the permittee and include any activity-specific conditions in the NWP verification the district engineer deems necessary. Conditions for compensatory mitigation requirements must comply with the appropriate provisions at 33 CFR 332.3(k). The district engineer must approve the final mitigation plan before the permittee commences work in waters of the United States, unless the district engineer determines that prior approval of the final mitigation plan is not practicable or not necessary to ensure timely completion of the required compensatory mitigation. If the prospective permittee elects to submit a compensatory mitigation plan with the PCN, the district engineer will expeditiously review the proposed compensatory mitigation plan. The district engineer must review the proposed compensatory mitigation plan within 45 calendar days of receiving a complete PCN and determine whether the proposed mitigation would ensure the NWP activity results in no more than minimal adverse environmental effects. If the net adverse environmental effects of the NWP activity (after consideration of the mitigation proposal) are determined by the district engineer to be no more than minimal, the district engineer will provide a timely written response to the applicant. The response will state that the NWP activity can proceed under the terms and conditions of the NWP, including any activity-specific conditions added to the NWP authorization by the district engineer.
4. If the district engineer determines that the adverse environmental effects of the proposed activity are more than minimal, then the district engineer will notify the applicant either: (a) that the activity does not qualify for authorization under the NWP and instruct the applicant on the procedures to seek authorization under an individual permit; (b) that the activity is authorized under the NWP subject to the applicant's submission of a mitigation plan that would reduce the adverse environmental effects so that they are no more than minimal; or (c) that the activity is authorized under the NWP with specific modifications or conditions. Where the district engineer determines that mitigation is required to ensure no more than minimal adverse environmental effects, the activity will be authorized within the 45-day PCN period (unless additional time is required to comply with general conditions 18, 20, and/or 31, or to evaluate PCNs for activities authorized by NWPs 21, 49, and 50), with activity-specific conditions that state the mitigation requirements. The authorization will include the necessary conceptual or detailed mitigation plan or a requirement that the applicant submit a mitigation plan that would reduce the adverse environmental effects so that they are no more than minimal. When compensatory mitigation is required, no work in waters of the United States may occur until the district engineer has approved a specific mitigation plan or has determined that prior approval of a final mitigation plan is not practicable or not necessary to ensure timely completion of the required compensatory mitigation.

Further Information

1. District Engineers have authority to determine if an activity complies with the terms and conditions of an NWP.
2. NWPs do not obviate the need to obtain other federal, state, or local permits, approvals, or authorizations required by law.
3. NWPs do not grant any property rights or exclusive privileges.
4. NWPs do not authorize any injury to the property or rights of others.
5. NWPs do not authorize interference with any existing or proposed Federal project (see general condition 31).

Nationwide Permits Regional General Conditions

1. Nationwide Permits shall not authorize any activity which negatively impacts bogs and/or fens.
2. No nationwide permit may be used in Lake Erie for purposes of diverting water from the Great Lakes.
3. Nationwide Permits shall not authorize any activity which has an adverse impact on littoral transport within Lake Erie.
4. **In-Water Work Exclusion Dates:** Any regulated work associated with a nationwide permit cannot take place during the restricted period of the following Ohio Department of Natural Resources (ODNR) In-Water Work Restrictions, unless the applicant receives advanced written approval from the ODNR and notifies the district engineer in accordance with Nationwide Permit General Condition 32 and Regional General Condition 6 and receives written approval from the Corps:

Location	Restricted Period
Percid streams a	3/15 - 6/30
Salmonid streams b	9/15 - 6/30
Other streams c	4/15 - 6/30

- a. **Great Miami River** (dam south of New Baltimore to mouth), **Hocking River** (falls at White's Mill to mouth), **Little Miami River** (dam at Waynesville to mouth), **Maumee River** (split dam at Grand Rapids to mouth), **Maumee Bay**, **Muskingum River** (Devola Dam No.2 north of Marietta to mouth), **Ohio Brush Creek** (S.R. 32 bridge to mouth), **Ohio River** (entire reach), **Portage River** (entire reach), **Sandusky River** (first dam to mouth), **Sandusky Bay**, **Scioto River** (S.R. 207 bridge north of Chillicothe to mouth), **Toussaint River** (entire reach).

b. **Arcola Creek** (entire reach), **Ashtabula River** (Hadlock Rd. to mouth), **Ashtabula Harbor, Aurora Branch** (Chagrin River (RM 0.38 to mouth)), **Big Creek** (Grand River (Girdled Road to mouth)), **Black River** (entire reach), **Chagrin River** (Chagrin Falls to mouth), **Cold Creek** (entire reach), **Conneaut Creek** (entire reach), **Conneaut Harbor, Corporation Creek** (Chagrin River (entire reach)), **Cowles Creek** (entire reach), **Ellison Creek** (Grand River (entire reach)), **Euclid Creek** (entire reach), **Grand River** (dam at Harpersfield Covered Bridge Park to mouth), **Airport Harbor, Gully Brook** (Chagrin River (entire reach)), **Huron River** (East Branch-West Branch confluence to mouth) **Indian Creek** (entire reach), **Kellogg Creek** (Grand River (entire reach)), **Mill Creek** (Grand River (entire reach)), **Paine Creek** (Grand River (Paine Falls to mouth)), **Rocky River** (East Branch-West Branch confluence to mouth), **Smokey Run** (Conneaut Creek (entire reach)), **Turkey Creek** (entire reach), **Vermilion River** (dam at Wakeman upstream of the US 20 & SR 60 bridge to mouth), **Ward Creek** (Chagrin River (entire reach)), **Wheeler Creek** (entire reach), **Whitman Creek** (entire reach).

c. **Exceptional Warmwater Habitat, Cold Water Habitat, Warmwater Habitat**, or streams with known occurrences of threatened and/or endangered (T&E) species. Includes **Lake Erie & bays** not listed above. Special conditions (such as occurrence of T &E species) may mandate local variation of restrictions.

Note 1: To determine the defined Aquatic Life Habitat designation for a stream and project segment, refer to: www.epa.ohio.gov/dsw/rules/3745_1.aspx

Note 2: This condition does not apply to Ohio Department of Transportation projects that are covered under the “Memorandum of Agreement Between The Ohio Department of Transportation, The Ohio Department of Natural Resources, and The United States Fish and Wildlife Service For Interagency Coordination For Projects Which Require Consultation Under the Endangered Species Act, Impact State Listed Species, and/or Modify Jurisdictional Waters 2016 Agreement Number: 19394”.

5. Waters of Special Concern: PCN in accordance with Nationwide Permit General Condition 32 and Regional General Condition 6 is required for regulated activities in the following resources:

a. **Endangered Species and Threatened Species:** Due to the potential presence of federally threatened or endangered species or their habitats, Notification in accordance with Nationwide Permit General Condition 32, Regional General Condition 6 and General Condition 18 is required for any regulated activity in jurisdictional waters of the United States in Ohio that includes:

- the removal of trees providing suitable roosting, foraging, or traveling habitat for the federally-listed endangered Indiana bat and the federally-listed threatened northern long-eared bat. Suitable roosting, foraging, and traveling habitat is defined as forests, woodlots, fencerows comprised of trees, riparian forests, or other wooded corridors containing live trees and/or snags ≥ 3 inches diameter at breast height (dbh). Individual trees may be considered suitable habitat when they are ≥ 3 inches diameter at breast height (dbh) and have any exfoliating bark, cracks, crevices, hollows and/or cavities and

are located within 1,000 feet (305 meters) of other forested/wooded habitat; or

- regulated work in the waterway or township of the corresponding counties listed in Appendix 1.

***Note 1:** Applicants must ensure they are referencing the latest version of Appendix 1 by contacting their nearest Corps district office and visiting the online resources identified in General Condition 18(f) of these NWPs, since federally-listed species are continuously listed, proposed for listing, and/or de-listed.

***Note 2:** As mentioned in General Condition 18-Endangered Species, Federal Agencies should follow their own procedures for complying with the requirements of the ESA. Federal applicants, including applicants that have received federal funding, must provide the district engineer with the appropriate documentation to demonstrate compliance with those requirements.

***Note 3:** Suitable summer habitat for the federally-listed endangered Indiana bat and the federally-listed threatened northern long-eared bat consists of a wide variety of forested/wooded habitats where they roost, forage, and travel and may also include some adjacent and interspersed non-forested habitats such as emergent wetlands and adjacent edges of agricultural fields, old fields and pastures. This includes forests and woodlots containing potential roosts (i.e., live trees and/or snags ≥ 3 inches diameter at breast height (dbh) that have any exfoliating bark, cracks, crevices, hollows and/or cavities), as well as linear features such as fencerows, riparian forests, and other wooded corridors. These wooded areas may be dense or loose aggregates of trees with variable amounts of canopy closure. Individual trees may be considered suitable habitat when they exhibit the characteristics of a potential roost tree and are located within 1,000 feet (305 meters) of other forested/wooded habitat.

***Note 4:** Appendix 1 is not applicable to the federally-listed endangered Indiana bat and the federally-listed threatened northern long-eared bat as both of these mammal species are known to occur throughout the State of Ohio. Appendix 1 column 1 is specific to federally-listed endangered, threatened, or proposed federally-listed endangered or threatened aquatic species (i.e. mussels and fish). Appendix 1 column 2 is specific to federally-listed endangered, threatened, or proposed federally-listed endangered or threatened semi-aquatic and terrestrial species (i.e. insects, birds, reptiles, amphibians).

b. Critical Resource Waters:

- In Ohio, two areas have been designated critical habitat for the piping plover (*Charadrius melanotos*) and are defined as lands 0.62 mile inland from normal high water line. Unit OH-1 extends from the mouth of Sawmill Creek to the western property boundary of Sheldon Marsh State Natural Area, Erie County, encompassing approximately 2.0 miles. Unit OH-2 extends from the eastern boundary line of Headland Dunes Nature Preserve to the western boundary of the Nature Preserve and Headland Dunes State Park, Lake County, encompassing approximately 0.5 mile.
- In Ohio, three areas have been designated critical habitat for the rabbitsfoot mussel

(Quadrula cylindrica cylindrica). Unit RF26 includes 17.5 rkm (10.9 rmi) of the Walhonding River from the convergence of the Kokosing and Mohican Rivers downstream to Ohio Highway 60 near Warsaw, Coshocton County, Ohio. Unit RF27 includes 33.3 rkm (20.7 rmi) of Little Darby Creek from Ohio Highway 161 near Chuckery, Union County, Ohio, downstream to U.S. Highway 40 near West Jefferson, Madison County, Ohio. Unit RF29 includes 7.7 rkm (4.8 rmi) of Fish Creek from the Indiana and Ohio State line northwest of Edgerton, Ohio, downstream to its confluence with the St. Joseph's River north of Edgerton, Williams County, Ohio.

- Old Woman Creek National Estuarine Research Preserve.
- c. **Oak Openings:** Wetland activities conducted in the Oak Openings Region of Northwest Ohio located in Lucas, Henry, and Fulton counties. For a map of the Oak Openings Region, visit <http://metroparkstoledo.com/media/2340/oak-openings-metropark.pdf>

6. PCN Submittals: In addition to the information required under Nationwide Permit General Condition 32, the following information must be provided with the PCN:

- a. **Illustrations/Drawings:** The illustrations/drawings must clearly depict the project boundaries and include all elements and phases of the proposed work, latitude and longitude of the project site, and the county where the proposed work would occur. Three types of illustrations or drawings are required to properly depict the work proposed to be undertaken. These illustrations or drawings are identified as a Vicinity Map (i.e. a location map such as a USGS topographical map), a Plan View and a Typical Cross-Section. Each illustration or drawing should identify the project, the applicant, and the type of illustration (vicinity map, plan view or cross-section). In addition, each illustration or drawing should be identified with a figure or attachment number.
- b. **United States Fish & Wildlife Service (USFWS):** Sufficient information must be provided in the PCN to determine the proposed activity's compliance with NWP General Condition 18. Prior to submitting PCN, it is recommended that the applicant contact the USFWS, Ohio Ecological Services Field Office by phone at (614) 416-8993, by e-mail at ohio@fws.gov, or by writing to 4625 Morse Road, Suite 104, Columbus, Ohio 43230. The USFWS can provide information to assist in complying with Nationwide Permit General Condition 18 pertaining to endangered species and Nationwide Permit General Condition 19 pertaining to migratory birds and bald and golden eagles. The USFWS can also provide project recommendations specific to Federal Candidate species. Federal Candidate species are those for which the USFWS has sufficient information to propose them as endangered or threatened under the Endangered Species Act, but for which a listing proposal is precluded by other higher priority listing activities. All relevant information obtained from the USFWS should be submitted with the Notification.
- c. **Cultural Resources:** Sufficient information must be provided in the PCN to determine the proposed activity's compliance with NWP General Condition 20. The PCN should provide justified conclusions concerning whether or not the proposed activity could affect any historic properties listed, determined to be eligible, or which you have reason to believe

may be eligible, for listing on the National Register of Historic Places (NRHP). This data will be used by the Corps to determine if the proposed activity has the potential to affect historic properties. Be advised that further effort may be required to take into account the effects the proposed activity may have on historic properties, as required by the National Historic Preservation Act of 1966. To ensure compliance with Nationwide Permit General Condition 20, the following basic project information is needed:

- A detailed description of the project site in its current condition (i.e. prior to construction activities) including information on the terrain and topography of the project site, the acreage of the project site, the proximity of the project site to major waterways, and any known disturbances within the project site. Photographs, keyed to mapping, are also needed which show the site conditions and all buildings or structures both within the project site and on adjacent parcels;
- A detailed description of past land uses in the project site. Particular attention should be given to past activities pertinent to the potential for historic properties to exist in the project area. Photographs and maps supporting past land uses should be provided as available;
- A detailed description of the construction activities proposed to take place on the project site and a comparison of how the site will look after completion of the project compared to how it looked before the project;
- Information regarding any past cultural resource studies or coordination pertinent to the project area, if available; and
- Any other data the applicant deems pertinent.

The applicant is encouraged to consult with the Ohio State Historic Preservation Office (OSHPO) staff and professionals meeting the Professional Qualification Standards as set forth in the Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation (48 FR 44716) during this data gathering process. These professionals can assist with compiling the basic project information discussed above and should provide recommendations as to whether or not the proposed project has the potential to affect historic properties and if further effort is required or not required to identify historic properties or assess potential effects to historic properties. These professionals can also compile basic preliminary review information to submit to the district engineer. A preliminary resource review encompasses a search radius of two (2) miles, centered on the project area, and consists of the following resources:

- OSHPO United States Geological Survey (USGS) 7.5' series topographic maps;
- Ohio Archaeological Inventory (OAI) files;
- Ohio Historic Inventory files (OHI);

- OSHPO Cultural Resources Management (CRM)/contract archaeology files;
- NRHP files including Historic Districts; and
- County atlases, histories and historic USGS 15' series topographic map(s).

As an alternative to submitting the information described above, the applicant may choose to complete the OSHPO Section 106 Review Project Summary Form or request comments from the OSHPO and the District Engineer on specific requirements appropriate to the particular circumstances of the project. Similarly, the applicant may choose to hire someone meeting the Professional Qualification Standards as set forth in the Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation (48 FR 44716) to conduct what they recommend to be appropriate historic property identification efforts (e.g. archaeological survey and/or historic structure inventories) to expedite the review process. Be advised, undertaking identification efforts prior to consideration of the potential of the proposed activity to affect historic properties by the Corps in not without risk. It is possible that previous efforts could be determined insufficient or even potentially unnecessary once reviewed by the Corps and other consulting parties.

Upon receipt and review of the information listed above, the Corps will evaluate the submittal. If Corps determines the proposed activity has the potential to cause effects to a historic property, the Corps will seek consulting parties. In consultation with those parties, the Corps will scope appropriate historic property identification efforts and take into account the effect of the proposed activity on historic properties.

d. **National Wild and Scenic Rivers:** Prior to submitting a PCN for work in a National Wild and Scenic River System, it is recommended that the applicant contact the National Park Service Regional Wild and Scenic Rivers Specialist, at the Midwest Regional Office, 601 Riverfront Drive, Omaha, Nebraska 68102, for assistance in complying with Nationwide Permit General Condition 17. Any determination provided by the National Park Service should be submitted with the PCN. The following are components of the National Wild and Scenic River System and require PCN to the Corps:

Big and Little Darby Creeks (National Wild and Scenic River System):

- Big Darby Creek from Champaign-Union County line downstream to the Conrail railroad trestle and from the confluence with the Little Darby Creek downstream to the Scioto River.
- Little Darby Creek from the Lafayette-Plain City Road bridge downstream to within 0.8 mile from the confluence with Big Darby Creek.
- Total designation is approximately 82 miles.

Little Beaver Creek (National Wild and Scenic River System):

- Little Beaver Creek main stem, from the confluence of West Fork with Middle Fork near Williamsport to mouth.
- North Fork from confluence of Brush Run and North Fork to confluence of North Fork with main stem at Fredericktown.

- Middle Fork from vicinity of Co. Rd. 901 (Elkton Road) bridge crossing to confluence of Middle Fork with West Fork near Williamsport.
- West Fork from vicinity of Co. Rd. 914 (Y-Camp Road) bridge crossing east to confluence of West Fork with Middle Fork near Williamsport.
- Total designation is 33 miles.

Little Miami (National Wild and Scenic River System)

- Little Miami River - St. Rt. 72 at Clifton to the Ohio River
- Caesar Creek: lower two miles of Caesars Creek.
- Total designation is 94 miles.

e. **Agency Coordination:** To assist in agency coordination, a complete compact disc (CD) copy shall be submitted for any PCN Package greater than 15 pages and/or includes maps, drawings, spreadsheets or other similar materials which are larger than 8.5 inches by 11 inches. All files saved on the CD shall be in .pdf format. A hard copy of any oversized maps, drawings, spreadsheets etc. in the PCN package shall be submitted and accompany the complete CD. An index or table of contents shall be provided and correspond with each file saved on the CD and/or within the PCN hard copy.

APPENDIX 1 TO REGIONAL GENERAL CONDITION 5 (a)

County	Waterway (aquatic species)	Township (semi-aquatic and terrestrial species)
Adams	Ohio River, Scioto Brush Creek, South Fork Scioto Brush Creek	Sprigg
Ashtabula	Grand River, Pymatuning Creek	All townships
Athens	Ohio River	Alexander, Ames, Athens, Bern, Dover, Lee, Trimble, Waterloo, York
Brown	East Fork Little Miami River, Ohio River	Huntington
Butler	Great Miami River	
Champaign		Mad River, Salem, Urbana
Clark	Little Miami River	All townships
Clermont	East Fork Little Miami River, Little Miami River, Ohio	Miami, Pierce, Union
Clinton		Chester
Columbiana		Butler, Hanover
Coshocton	Killbuck Creek, Muskingum River, Walhonding River	
Crawford		Auburn, Bucyrus, Cranberry
Cuyahoga		Within 3 miles of the shore of Lake Erie in Brooklyn, Cleveland, Dover, East Cleveland, Euclid, Newburgh, Rockport, West Park

APPENDIX 1 TO REGIONAL GENERAL CONDITION 5 (a)		
Darke	Stillwater River	
Defiance	St. Joseph River	Milford
Delaware	Mill Creek, Olentangy River	
Erie		Margaretta; within 3 miles of the shore of Lake Erie in Berlin, Huron, Perkins, Sandusky, and Vermillion
Fairfield		Walnut
Fayette		Concord, Green, Jasper, Jefferson
Franklin	Big Darby Creek, Little Darby Creek, Scioto River	
Fulton	Swan Creek	
Gallia	Ohio River	
Greene	Little Miami River	Bath, Spring Valley
Hamilton	Great Miami River, Little Miami River, Ohio River	Colerain, Columbia, Crosby, Miami, Spencer, Sycamore, Symmes, Whitewater
Hancock	Blanchard River	
Hardin	Blanchard River	Blanchard, Hale, Jackson, Roundhead
Hocking		Benton, Green, Laurel, Marion, Starr, Ward, Washington
Holmes		All townships
Huron		New Haven, Richmond
Jackson		Liberty
Lake	Grand River	Within 3 miles of the shore of Lake Erie in Madison, Mentor, Painesville, Willoughby
Lawrence	Ohio River	Decatur, Rome, Union
Licking		Union
Logan	Great Miami River	Perry, Stokes, Zane
Lorain		Within 3 miles of the shore of Lake Erie in Amherst, Avon, Black River, Brownhelm, and Sheffield
Lucas	Swan Creek	All townships
Madison	Big Darby Creek, Little Darby Creek	
Mahoning		All townships
Marion	Tymochtee Creek	Big Island, Bowling Green, Grand, Montgomery, Salt Rock
Meigs	Ohio River	
Miami	Great Miami River, Stillwater River	

APPENDIX 1 TO REGIONAL GENERAL CONDITION 5 (a)

Montgomery	Great Miami River, Stillwater River	Mad River
Morgan	Muskingum River	Deerfield, Homer, Malta, Marion, Penn, Union
Muskingum	Muskingum River	
Ottawa		All townships
Perry		Bearfield, Coal, Monroe, Pike, Pleasant, Salt Lick
Pickaway	Big Darby Creek, Scioto River	
Pike	Scioto River	
Portage		All townships
Preble		Gasper, Somers
Richland		Plymouth
Ross	Salt Creek, Scioto River	Colerain
Sandusky		All townships
Scioto	Ohio River, Scioto Brush Creek, Scioto River, South Fork Scioto Brush Creek	Nile, Rush, Union
Shelby	Great Miami River	
Summit		Tallmadge
Trumbull	Pymatuning Creek	All townships
Union	Big Darby Creek, Little Darby Creek, Mill Creek, Treacle Creek	
Vinton		Brown, Elk, Knox, Madison, Swan
Warren	Great Miami River, Little Miami River	Salem, Turtle Creek, Wayne
Washington	Muskingum River, Ohio River	
Wayne		All townships
Williams	Fish Creek, St. Joseph River	Bridgewater, Center, Florence, Jefferson, Madison, Northwest, St. Joseph, Superior
Wyandot	Tymochtee Creek	Marseilles, Mifflin, Pitt

General Limitations and Conditions for all Ohio EPA 401 Certified Nationwide Permits**A. CULVERTS**

For intermittent and perennial streams:

1. When practicable, bottomless or buried culverts are required when culvert size is greater than 36" in diameter. This condition does not apply if the culverts have a gradient of greater than 1% grade or installed on bedrock. A buried culvert means that the bottom 10% by dimension shall be buried below the existing stream bed elevation.

2. The culvert shall be designed and sized to accommodate bankfull discharge and match the existing depth of flow to facilitate the passage of aquatic organisms.

3. When practicable, culverts shall be installed at the existing streambed slope, to allow for the natural movement of bedload and aquatic organisms.

B. BEST MANAGEMENT PRACTICES

1. Unless subject to a more specific storm water National Pollutant Discharge Elimination System (NPDES) permit, all best management practices for storm water management shall be designed and implemented in accordance with the most current edition of the NPDES construction general permit available at: <http://www.epa.ohio.gov/dsw/storm/index.aspx>, or any watershed specific construction general permit.

2. Sediment and erosion control measures and best management practices must be designed, installed, and maintained in effective operating condition at all times during construction activities as required by applicable NPDES permits. Proper maintenance ensures corrective measures will be implemented for failed controls within 48 hours of discovery.

3. For perennial and intermittent streams, in-stream sediment control measures shall not be utilized, with the exception of turbidity curtains parallel to the stream bank, for the purpose of sediment collection. All sediment and erosion control measures shall be entirely removed and the natural grade of the site restored once construction is completed.

4. All avoided water resources and associated buffers/riparian areas shall be demarcated in the field and protected with suitable materials (e.g., silt fencing, snow fencing, signage, etc.) prior to site disturbance. These materials shall remain in place and be maintained throughout the construction process and shall be entirely removed once construction is completed.

5. Disturbance and removal of vegetation from the project construction area is to be avoided where possible and minimized to the maximum extent practicable. Entry to surface waters shall be through a single point of access to the maximum extent practicable to minimize disturbance to riparian habitat. Unavoidable temporary impacts to forested riparian habitat shall be restored as soon as practicable after in-water work is complete using tree and shrub species native to the specific ecoregion where the project is located.

6. All dredged material placed at an upland site shall be controlled so that sediment runoff to adjacent surface waters is minimized to the maximum extent practicable.

7. Straw bales shall not be used as a form of sediment control unless used in conjunction with another structural control such as silt fencing. Straw bales may be utilized for purposes of erosion control such as ditch checks.

8. Heavy equipment shall not be placed below the ordinary high water mark of any surface water, except when no other alternative is practicable.

9. Temporary fill for purposes of access or staging shall consist of suitable non-erodible material and shall be maintained to minimize erosion.

10. Chromated copper arsenate (CCA) and creosote treated lumber shall not be used in structures that come into contact with waters of the state.

11. All dewatering activities must be conducted in such a manner that does NOT result in a violation of water quality standards.

12. All areas of final grade must be protected from erosion within seven days.

13. All disturbed areas which remain dormant in excess of fourteen days must be protected from erosion within seven days from the last earth disturbing activity.

14. In the event of authorized in-stream activities, provisions must be established to redirect the stream flow around or through active areas of construction in a stabilized, non-erodic manner to the maximum extent possible.

C. MITIGATION

1. Compensatory mitigation is required for the discharge of dredged or fill material into wetlands for permanent impacts exceeding 0.10 acres.

2. When required, compensatory mitigation shall be provided in accordance with chapters 3745-1 and 3745-32 of the Ohio Administrative Code.

3. When compensatory mitigation will be provided wholly or in part at a mitigation bank or through an in-lieu fee program, credit purchase shall only be authorized at those banks or in-lieu fee programs approved by the Interagency Review Team (IRT) and have an active instrument signed by the director of Ohio EPA.

4. Compensatory mitigation for stream impacts, if required, shall be conducted in accordance with the requirements in the applicable Nationwide Permit.

D. DIRECTOR'S AUTHORIZATION

1. In accordance with the procedures outlined in Appendix A, Ohio EPA may grant coverage under this certification for any project that does not meet one or more of the terms and

conditions for eligibility of this certification or where the district engineer has been granted authority to waive certain requirements. Coverage may be granted when Ohio EPA determines, consistent with the special limitations and conditions for each certification, and after considering comments received on the requested director's authorization, that a project will have such a minimal impact on water quality that an individual 401 WQC is not necessary provided all other terms and conditions of this certification have been met. If a director's authorization is not granted, an individual 401 WQC must be obtained. In no case may a director's authorization issued under this certification exceed an impact threshold authorized by the Corps' Nationwide Permit.

E. NOTIFICATION TO OHIO EPA

1. For any activity proposed to be authorized under NWP 3, 4, 5, 6, 7, 12, 13, 14, 15, 16, 18, 22, 23, 25, 27, 29, 30, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 45, 49, 51, 53, and 54, when a PCN is not required by the Corps, notification to Ohio EPA is required for impacts to the following resources:

- a. category 3 wetlands;
- b. ≥ 0.10 acres of wetland.

2. Notifications required by E.1 should contain all information required by Nationwide Permit General Condition 32(b) and (c), Regional General Condition 6, and Appendix B.

3. For any activity proposed to be authorized under NWP 4, 6, 7, 12, 13, 14, 15, 16, 18, 22, 23, 25, 29, 30, 33, 34, 36, 37, 38, 39, 40, 41, 42, 43, 45, 51, 53, and 54, when a PCN is not required by the Corps, notification to Ohio EPA is required for impacts to streams located in possibly eligible areas as depicted in the GIS NWP Stream Eligibility Map.

4. Notifications required by E.3 should contain all information required by Nationwide Permit General Condition 32(b) and (c), Regional General Condition 6, and Appendix C.

5. When notification to Ohio EPA is required by conditions E.1 and E.3 above, the applicant shall not begin the activity until either:

- a. He or she is notified in writing by Ohio EPA that the activity may proceed under the 401 WQC for the NWP; or
- b. 45 calendar days have passed from Ohio EPA's receipt of the notification and the applicant has not received written notice from Ohio EPA that additional information is necessary or that an individual 401 WQC is required.

F. MISCELLANEOUS

1. Authorization under this certification does not relieve the certification holder from the responsibility of obtaining any other federal, state or local permits, approvals or authorizations.

2. For purposes of this certification the Corps' definition of single and complete linear and non-linear projects shall be applied to all conditions regarding impacts, mitigation, and director's authorizations. If a project includes impacts that are ineligible under this certification, an applicant must apply for an individual 401 WQC or a director's authorization for those impacts to resources that do not meet one or more of the terms and conditions within this certification.

3. For purposes of this certification temporary impact means temporary activities which facilitate the nature of the activity or aid in the access, staging, or development of construction that are short term in nature and which are expected, upon removal of the temporary impact, to result in the surface water returning to conditions which support pre-impact biological function with minimal or no human intervention within 12 months following the completion of the temporary impact. Examples of temporary impacts include, but are not limited to access roads, work pads, staging areas, and stream crossings, including utility corridors. Activities that result in a wetland conversion (e.g. forested to non-forested) are not considered temporary impacts.

4. In the event that the issuance of a nationwide permit by the Corps requires individual 401 WQC for an activity that constitutes an emergency as defined in 33 CFR 325.2(e)(4), the limitation and/or condition requiring the individual 401 WQC is not applicable and the project may proceed upon approval by the Corps provided all other terms of this certification, including mitigation, are met.

5. Representatives from Ohio EPA, Division of Surface Water will be allowed to inspect the authorized activity at any time deemed necessary to ensure that it is being or has been accomplished in accordance with the terms and conditions of this certification. This includes, but is not limited to, access to and copies of any records that must be kept under the conditions of this certification; and, authorization to sample and/or monitor any discharge activity or mitigation site. Ohio EPA will make a reasonable attempt to notify the applicant of its intention to inspect the site in advance of that inspection.

6. Impacts as referenced in this certification consist of waters of the state directly impacted by the placement of fill or dredged material.

7. In accordance with the procedures outlined in Appendix B, and where specifically required in the special limitations and conditions of this certification, an applicant proposing to impact a wetland shall perform a wetland characterization analysis consistent with the Ohio Rapid Assessment Method (ORAM) to demonstrate wetland category for all projects requiring a PCN to the Corps or notification to Ohio EPA.

8. In accordance with the procedures outlined in Appendix C, and where specifically required in the special limitations and conditions of this certification, an applicant proposing to

impact a stream shall determine the eligibility of the stream proposed for impact for all projects requiring a PCN to the Corps or notification to Ohio EPA.

Appendix A
Director's Authorization Process

1. To apply for a director's authorization for coverage under this certification, the applicant must provide to Ohio EPA the following:
 - a. A completed Director's Authorization Request Form available on the "Director's Authorization" tab located at: <http://www.epa.ohio.gov/dsw/401/permitting.aspx>;
 - b. A copy of the pre-construction notification submitted to the Corps including all attachments;
 - c. A copy of the provisional nationwide permit authorization letter issued by the Corps including all attachments and special conditions, if any;
 - d. A copy of the mitigation plan as approved by the Corps, if applicable;
 - e. A detailed description of the conditions within this certification that are not being met;
 - f. A detailed description of any NWP terms and conditions, including impact limits that the Corps district engineer has waived for the project, if applicable;
 - g. A rationale of how the applicant believes the project will minimally impact water quality for those impacts to resources that do not meet one or more of the terms and conditions within this certification, including reason(s) why the resources are unable to be avoided;
 - h. Comments received from the Ohio Department of Natural Resources and United States Fish and Wildlife Service regarding threatened and endangered species or comments from an applicant that has been authorized by these entities to make threatened and endangered species determinations;
 - i. A one-time review fee of \$2000 for the project;
 - j. A detailed description of how the project meets public need, as defined in OAC 3745-1-50, for impacts to category 3 wetlands;
 - k. Documentation as required under Appendix B and C;
 - l. Any other documentation as may be required under this certification.
2. Upon receipt of the director's authorization request containing items a. through o. outlined above, excluding item c., the director will post the materials on the Ohio EPA, DSW webpage and invite public comment on the request for 15 days. The director will review and

consider the comments received during the public comment period before making a decision on the director's authorization.

Appendix B ORAM Verification Process

The ORAM results shall be included with the pre-construction notification (PCN) or notification to Ohio EPA if a PCN is not required by the Corps.

For each wetland proposed for impact the applicant must provide the following information for review in accordance with the ORAM verification procedure:

- a. Complete ORAM forms prepared in accordance with the current ORAM manual;
- b. Wetland delineation prepared in accordance with the current method required by the Corps;
- c. A minimum of four high resolution color photographs taken while facing each of the four cardinal directions of each wetland proposed for impact. Photographs must accurately depict the quality of the wetland and may not include a majority of dying or dead vegetation or excessive cover due to seasonal conditions that vegetation and substrates cannot be observed, such as leaf litter, snow, or ice. Photographs deemed to be insufficient of representing the wetland will be required to be retaken once seasonal conditions are appropriate. Photographs shall be clearly labeled with the wetland name, direction, and date;
- d. USGS topographical map, National Wetlands Inventory map, Soil Survey map and aerial images (both historical and current) which clearly outline the entire wetland boundary; and
- e. Coordination letter from the Ohio Department of Natural Resources (ODNR), Natural Heritage Database indicating the presence or absence of state listed threatened or endangered species or comments from an applicant that has been authorized by ODNR to make threatened and endangered species determinations.

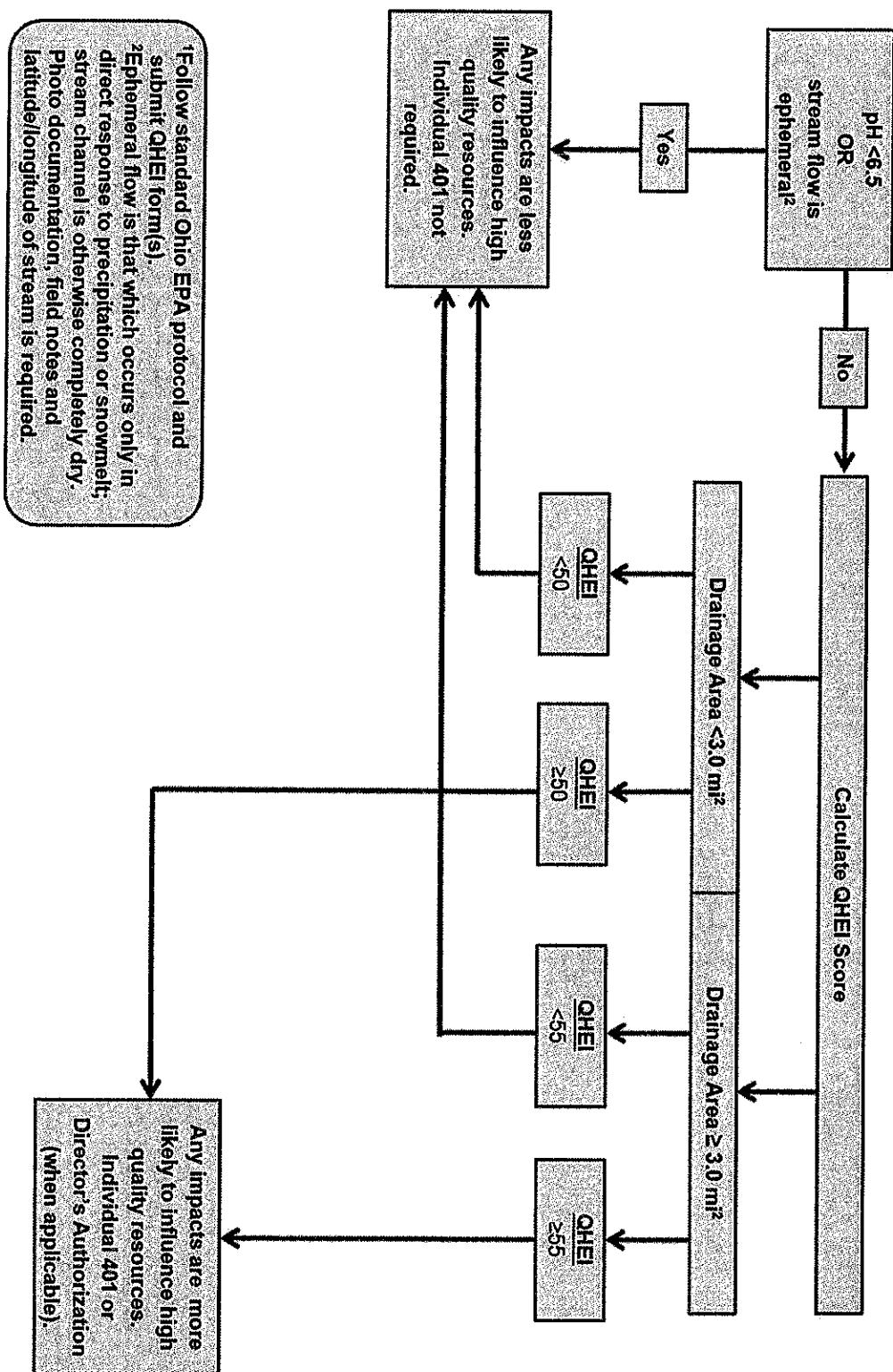
Appendix C Stream Eligibility Determination Process

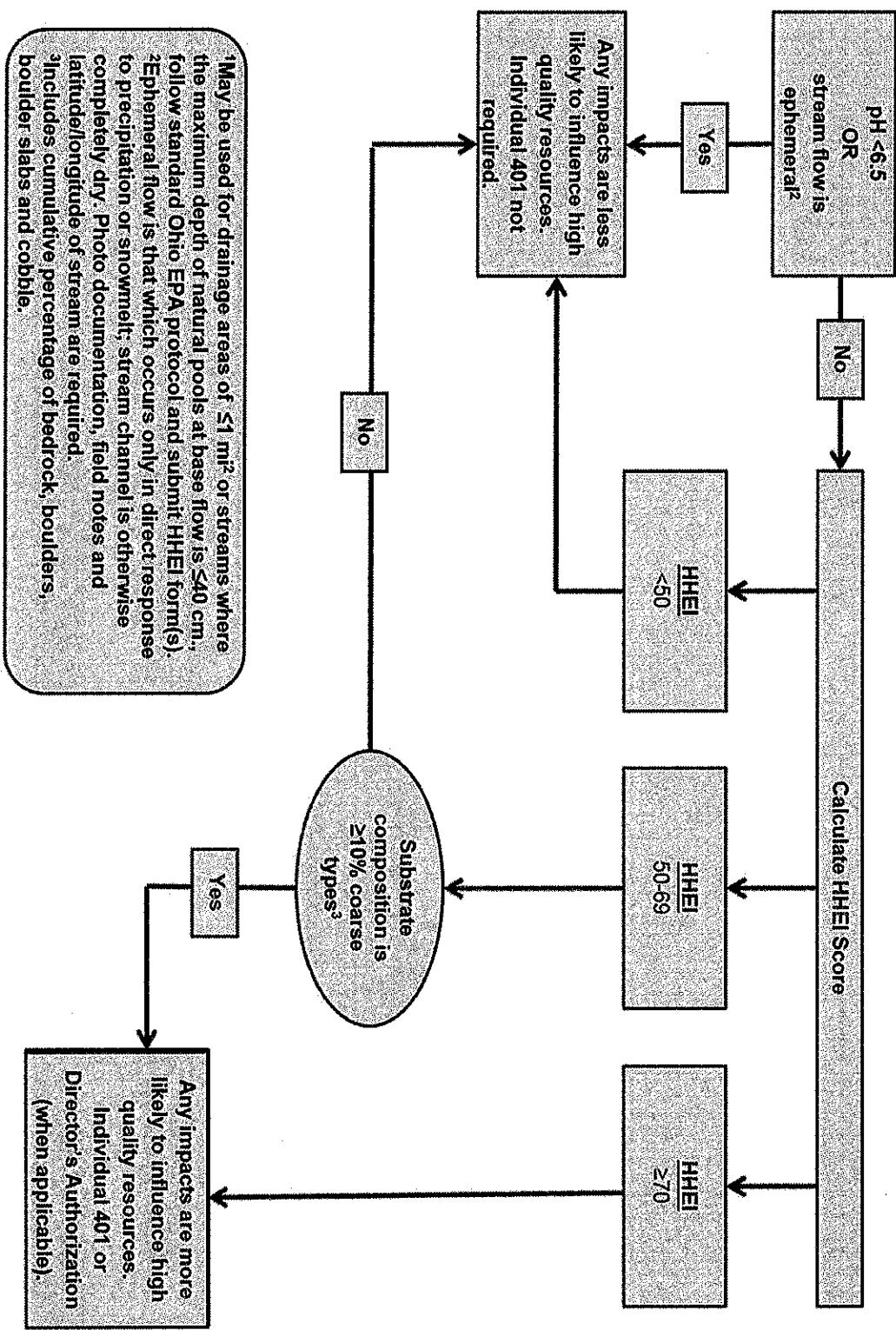
1. The stream eligibility results shall be included with the PCN or notification to Ohio EPA if a PCN is not required by the Corps. For each single and complete project with potential impacts to streams, where it is specifically required in the special limitations and conditions of this certification, the applicant shall determine if the streams proposed for impact are eligible for coverage under the 401 WQC for the Nationwide Permits using the following procedure:

- a. Navigate to the Ohio EPA 401 website at: <http://www.epa.ohio.gov/dsw/401/permitting.aspx>
- b. Click on the “Nationwide Permits” tab and then click on the “Stream Eligibility Web Map” link. To download the shapefile from the web map, click on the  in the upper right hand corner of the webpage and select download. To draw project boundaries directly on the web map click on the  in the upper left hand corner of the webpage.
- c. Using a GIS program, overlay the project boundary, streams proposed for impact, current aerial imagery, and the stream eligibility layer. If the applicant does not have access to a GIS program, the project boundary should be drawn on the web map and a copy of the map can be printed from the webpage;
 - i. If any stream proposed for impact within the project area falls within an ineligible area, impacts to that stream are not eligible for coverage under the 401 WQC for the Nationwide Permits, and the applicant shall apply for an individual 401 WQC or a director’s authorization.
 - ii. If any stream proposed for impact within the project area falls within a possibly eligible area, the applicant shall take pH values, when applicable, and perform a Qualitative Assessment Habitat Evaluation Index (QHEI) or Headwater Habitat Evaluation Index (HHEI) assessment for the stream. Using the flow charts provided below, the applicant shall determine if impacts to that stream are eligible for coverage under the 401 WQC for the Nationwide Permits or if an individual 401 WQC is required.
 - iii. If all streams proposed for impact within the project area are located within the eligible area, impacts to that stream are eligible for coverage under the 401 WQC for the Nationwide Permits and no further assessment is necessary.
- d. The applicant shall submit the following information with the PCN or notification to Ohio EPA:
 - i. Color map(s), no smaller than 8”x10”, which clearly shows the project boundary, streams proposed for impact, current aerial imagery, and the stream eligibility GIS layer;
 - ii. For each stream located in possibly eligible areas;
 - (1) A minimum of three high resolution color photographs taken of the proposed impact area, including one facing upstream, one facing downstream, and a close up which clearly depicts the substrate composition and size for each stream proposed for impact. Photographs must accurately depict the quality of the stream and may not include excessive cover due to seasonal conditions that substrates cannot be observed such as snow or ice. Photographs deemed to be insufficient of representing the stream will be required to be retaken

once seasonal conditions are appropriate. Photographs shall be clearly labeled with the stream name, direction, and date;

- (2) pH values for each stream proposed for impact taken within the proposed project area, where applicable;
- (3) Complete QHEI or HHEI sheets prepared in accordance with the current manuals; and
- (4) Statement of whether the streams proposed for impact within the project area are eligible for coverage under the 401 WQC for the Nationwide Permits or if an individual 401 WQC or a director's authorization is required.

NWP Eligibility Flow Chart Using the QHEI¹

NWP Eligibility Flow Chart Using the HHEI¹

H. Definitions

Best management practices (BMPs): Policies, practices, procedures, or structures implemented to mitigate the adverse environmental effects on surface water quality resulting from development. BMPs are categorized as structural or non-structural.

Compensatory mitigation: The restoration (re-establishment or rehabilitation), establishment (creation), enhancement, and/or in certain circumstances preservation of aquatic resources for the purposes of offsetting unavoidable adverse impacts which remain after all appropriate and practicable avoidance and minimization has been achieved.

Currently serviceable: Useable as is or with some maintenance, but not so degraded as to essentially require reconstruction.

Direct effects: Effects that are caused by the activity and occur at the same time and place.

Discharge: The term “discharge” means any discharge of dredged or fill material into waters of the United States.

Ecological reference: A model used to plan and design an aquatic habitat and riparian area restoration, enhancement, or establishment activity under NWP 27. An ecological reference may be based on the structure, functions, and dynamics of an aquatic habitat type or a riparian area type that currently exists in the region where the proposed NWP 27 activity is located. Alternatively, an ecological reference may be based on a conceptual model for the aquatic habitat type or riparian area type to be restored, enhanced, or established as a result of the proposed NWP 27 activity. An ecological reference takes into account the range of variation of the aquatic habitat type or riparian area type in the region.

Enhancement: The manipulation of the physical, chemical, or biological characteristics of an aquatic resource to heighten, intensify, or improve a specific aquatic resource function(s). Enhancement results in the gain of selected aquatic resource function(s), but may also lead to a decline in other aquatic resource function(s). Enhancement does not result in a gain in aquatic resource area.

Ephemeral stream: An ephemeral stream has flowing water only during, and for a short duration after, precipitation events in a typical year. Ephemeral stream beds are located above the water table year-round. Groundwater is not a source of water for the stream. Runoff from rainfall is the primary source of water for stream flow.

Establishment (creation): The manipulation of the physical, chemical, or biological characteristics present to develop an aquatic resource that did not previously exist at an upland site. Establishment results in a gain in aquatic resource area.

High Tide Line: The line of intersection of the land with the water’s surface at the maximum height reached by a rising tide. The high tide line may be determined, in the absence of actual data, by a line of oil or scum along shore objects, a more or less continuous deposit of fine shell

or debris on the foreshore or berm, other physical markings or characteristics, vegetation lines, tidal gages, or other suitable means that delineate the general height reached by a rising tide. The line encompasses spring high tides and other high tides that occur with periodic frequency but does not include storm surges in which there is a departure from the normal or predicted reach of the tide due to the piling up of water against a coast by strong winds such as those accompanying a hurricane or other intense storm.

Historic Property: Any prehistoric or historic district, site (including archaeological site), building, structure, or other object included in, or eligible for inclusion in, the National Register of Historic Places maintained by the Secretary of the Interior. This term includes artifacts, records, and remains that are related to and located within such properties. The term includes properties of traditional religious and cultural importance to an Indian tribe or Native Hawaiian organization and that meet the National Register criteria (36 CFR part 60).

Independent utility: A test to determine what constitutes a single and complete non-linear project in the Corps Regulatory Program. A project is considered to have independent utility if it would be constructed absent the construction of other projects in the project area. Portions of a multi-phase project that depend upon other phases of the project do not have independent utility. Phases of a project that would be constructed even if the other phases were not built can be considered as separate single and complete projects with independent utility.

Indirect effects: Effects that are caused by the activity and are later in time or farther removed in distance, but are still reasonably foreseeable.

Intermittent stream: An intermittent stream has flowing water during certain times of the year, when groundwater provides water for stream flow. During dry periods, intermittent streams may not have flowing water. Runoff from rainfall is a supplemental source of water for stream flow.

Loss of waters of the United States: Waters of the United States that are permanently adversely affected by filling, flooding, excavation, or drainage because of the regulated activity. Permanent adverse effects include permanent discharges of dredged or fill material that change an aquatic area to dry land, increase the bottom elevation of a waterbody, or change the use of a waterbody. The acreage of loss of waters of the United States is a threshold measurement of the impact to jurisdictional waters for determining whether a project may qualify for an NWP; it is not a net threshold that is calculated after considering compensatory mitigation that may be used to offset losses of aquatic functions and services. The loss of stream bed includes the acres or linear feet of stream bed that are filled or excavated as a result of the regulated activity. Waters of the United States temporarily filled, flooded, excavated, or drained, but restored to pre-construction contours and elevations after construction, are not included in the measurement of loss of waters of the United States. Impacts resulting from activities that do not require Department of the Army authorization, such as activities eligible for exemptions under section 404(f) of the Clean Water Act, are not considered when calculating the loss of waters of the United States.

Navigable waters: Waters subject to section 10 of the Rivers and Harbors Act of 1899. These waters are defined at 33 CFR part 329.

Non-tidal wetland: A non-tidal wetland is a wetland that is not subject to the ebb and flow of tidal waters. Non-tidal wetlands contiguous to tidal waters are located landward of the high tide line (i.e., spring high tide line).

Open water: For purposes of the NWPs, an open water is any area that in a year with normal patterns of precipitation has water flowing or standing above ground to the extent that an ordinary high water mark can be determined. Aquatic vegetation within the area of flowing or standing water is either non-emergent, sparse, or absent. Vegetated shallows are considered to be open waters. Examples of “open waters” include rivers, streams, lakes, and ponds.

Ordinary High Water Mark: An ordinary high water mark is a line on the shore established by the fluctuations of water and indicated by physical characteristics, or by other appropriate means that consider the characteristics of the surrounding areas.

Perennial stream: A perennial stream has flowing water year-round during a typical year. The water table is located above the stream bed for most of the year. Groundwater is the primary source of water for stream flow. Runoff from rainfall is a supplemental source of water for stream flow.

Practicable: Available and capable of being done after taking into consideration cost, existing technology, and logistics in light of overall project purposes.

Pre-construction notification: A request submitted by the project proponent to the Corps for confirmation that a particular activity is authorized by nationwide permit. The request may be a permit application, letter, or similar document that includes information about the proposed work and its anticipated environmental effects. Pre-construction notification may be required by the terms and conditions of a nationwide permit, or by regional conditions. A pre-construction notification may be voluntarily submitted in cases where pre-construction notification is not required and the project proponent wants confirmation that the activity is authorized by nationwide permit.

Preservation: The removal of a threat to, or preventing the decline of, aquatic resources by an action in or near those aquatic resources. This term includes activities commonly associated with the protection and maintenance of aquatic resources through the implementation of appropriate legal and physical mechanisms. Preservation does not result in a gain of aquatic resource area or functions.

Protected tribal resources: Those natural resources and properties of traditional or customary religious or cultural importance, either on or off Indian lands, retained by, or reserved by or for, Indian tribes through treaties, statutes, judicial decisions, or executive orders, including tribal trust resources.

Re-establishment: The manipulation of the physical, chemical, or biological characteristics of a site with the goal of returning natural/historic functions to a former aquatic resource. Re-establishment results in rebuilding a former aquatic resource and results in a gain in aquatic resource area and functions.

Rehabilitation: The manipulation of the physical, chemical, or biological characteristics of a site with the goal of repairing natural/historic functions to a degraded aquatic resource. Rehabilitation results in a gain in aquatic resource function, but does not result in a gain in aquatic resource area.

Restoration: The manipulation of the physical, chemical, or biological characteristics of a site with the goal of returning natural/historic functions to a former or degraded aquatic resource. For the purpose of tracking net gains in aquatic resource area, restoration is divided into two categories: re-establishment and rehabilitation.

Riffle and pool complex: Riffle and pool complexes are special aquatic sites under the 404(b)(1) Guidelines. Riffle and pool complexes sometimes characterize steep gradient sections of streams. Such stream sections are recognizable by their hydraulic characteristics. The rapid movement of water over a coarse substrate in riffles results in a rough flow, a turbulent surface, and high dissolved oxygen levels in the water. Pools are deeper areas associated with riffles. A slower stream velocity, a streaming flow, a smooth surface, and a finer substrate characterize pools.

Riparian areas: Riparian areas are lands next to streams, lakes, and estuarine-marine shorelines. Riparian areas are transitional between terrestrial and aquatic ecosystems, through which surface and subsurface hydrology connects riverine, lacustrine, estuarine, and marine waters with their adjacent wetlands, non-wetland waters, or uplands. Riparian areas provide a variety of ecological functions and services and help improve or maintain local water quality. (See general condition 23.)

Shellfish seeding: The placement of shellfish seed and/or suitable substrate to increase shellfish production. Shellfish seed consists of immature individual shellfish or individual shellfish attached to shells or shell fragments (i.e., spat on shell). Suitable substrate may consist of shellfish shells, shell fragments, or other appropriate materials placed into waters for shellfish habitat.

Single and complete linear project: A linear project is a project constructed for the purpose of getting people, goods, or services from a point of origin to a terminal point, which often involves multiple crossings of one or more waterbodies at separate and distant locations. The term “single and complete project” is defined as that portion of the total linear project proposed or accomplished by one owner/developer or partnership or other association of owners/developers that includes all crossings of a single water of the United States (i.e., a single waterbody) at a specific location. For linear projects crossing a single or multiple waterbodies several times at separate and distant locations, each crossing is considered a single and complete project for purposes of NWP authorization. However, individual channels in a braided stream or river, or individual arms of a large, irregularly shaped wetland or lake, etc., are not separate waterbodies, and crossings of such features cannot be considered separately.

Single and complete non-linear project: For non-linear projects, the term “single and complete project” is defined at 33 CFR 330.2(i) as the total project proposed or accomplished by one

owner/developer or partnership or other association of owners/developers. A single and complete non-linear project must have independent utility (see definition of “independent utility”). Single and complete non-linear projects may not be “piecemealed” to avoid the limits in an NWP authorization.

Stormwater management: Stormwater management is the mechanism for controlling stormwater runoff for the purposes of reducing downstream erosion, water quality degradation, and flooding and mitigating the adverse effects of changes in land use on the aquatic environment.

Stormwater management facilities: Stormwater management facilities are those facilities, including but not limited to, stormwater retention and detention ponds and best management practices, which retain water for a period of time to control runoff and/or improve the quality (i.e., by reducing the concentration of nutrients, sediments, hazardous substances and other pollutants) of stormwater runoff.

Stream bed: The substrate of the stream channel between the ordinary high water marks. The substrate may be bedrock or inorganic particles that range in size from clay to boulders. Wetlands contiguous to the stream bed, but outside of the ordinary high water marks, are not considered part of the stream bed.

Stream channelization: The manipulation of a stream’s course, condition, capacity, or location that causes more than minimal interruption of normal stream processes. A channelized stream remains a water of the United States.

Structure: An object that is arranged in a definite pattern of organization. Examples of structures include, without limitation, any pier, boat dock, boat ramp, wharf, dolphin, weir, boom, breakwater, bulkhead, revetment, riprap, jetty, artificial island, artificial reef, permanent mooring structure, power transmission line, permanently moored floating vessel, piling, aid to navigation, or any other manmade obstacle or obstruction.

Tidal wetland: A tidal wetland is a jurisdictional wetland that is inundated by tidal waters. Tidal waters rise and fall in a predictable and measurable rhythm or cycle due to the gravitational pulls of the moon and sun. Tidal waters end where the rise and fall of the water surface can no longer be practically measured in a predictable rhythm due to masking by other waters, wind, or other effects. Tidal wetlands are located channelward of the high tide line.

Tribal lands: Any lands title to which is either: 1) held in trust by the United States for the benefit of any Indian tribe or individual; or 2) held by any Indian tribe or individual subject to restrictions by the United States against alienation.

Tribal rights: Those rights legally accruing to a tribe or tribes by virtue of inherent sovereign authority, unextinguished aboriginal title, treaty, statute, judicial decisions, executive order or agreement, and that give rise to legally enforceable remedies.

Vegetated shallows: Vegetated shallows are special aquatic sites under the 404(b)(1) Guidelines. They are areas that are permanently inundated and under normal circumstances have rooted aquatic vegetation, such as seagrasses in marine and estuarine systems and a variety of vascular rooted plants in freshwater systems.

Waterbody: For purposes of the NWPs, a waterbody is a jurisdictional water of the United States. If a wetland is adjacent to a waterbody determined to be a water of the United States, that waterbody and any adjacent wetlands are considered together as a single aquatic unit (see 33 CFR 328.4(c)(2)). Examples of “waterbodies” include streams, rivers, lakes, ponds, and wetlands.



Exhibit C-5

John R. Kasich, Governor
Mary Taylor, Lt. Governor
Craig W. Butler, Director

**RE: Former STM Property
Permit - Intermediate
Correspondence
401 Wetlands
Butler
DSW401185786**

April 19, 2018

Sarah Fox
City of Middletown
1 Donham Plaza
Middletown, Ohio 45042

Subject: Request for coverage under the 401 WQC for the Nationwide Permits
Former STM Property
Ohio EPA ID No. 185786

Dear Ms. Fox:

On April 10, 2018, the Ohio Environmental Protection Agency (Ohio EPA) received a notification for coverage under the 401 Water Quality Certification (WQC) for the 2017 Nationwide Permits (NWPs) issued on March 17, 2017. You are requesting coverage under the 401 WQC for NWP 38 for your project to cap sediment within a portion of a hydraulic canal, to facilitate the issuance of a Covenant-Not-To-Sue to the City of Middletown for the property, under the VAP. The project is located in Middletown, Butler County (39.5170/-84.4081).

Ohio EPA has reviewed the notification materials submitted in accordance with Part One(E) of the 401 WQC for the NWPs and has determined that the project meets all the terms and conditions of the 401 WQC for the NWPs. You may proceed with your project as proposed in the notification materials. **Please familiarize yourself with the 401 WQC for the NWPs (see link below). It contains requirements and prohibitions with which you must comply.**

A copy of the 401 WQC for the 2017 Nationwide Permits is available online at:
<http://www.epa.ohio.gov/Portals/35/401/Final%20Signed%20401%20WQC%20NWP%202017.pdf>.

A copy of the 2017 Nationwide Permits for the State of Ohio, including the regional conditions and 401 WQC conditions, is available online at:
<http://epa.ohio.gov/Portals/35/401/2017%20Nationwide%20Permits%20for%20Ohio.pdf>

If you have any questions, please contact me at 614-644-2143 or via email at cara.hardesty@epa.ohio.gov.

Sincerely,



Cara Hardesty
Application Coordinator
401/Wetlands Section

ec: Mike Luessen, ATC Group Services LLC

ORDINANCE NO. 02018-11

AN ORDINANCE ESTABLISHING A PROCEDURE FOR AND AUTHORIZING A CONTRACT WITH ENVIRONMENTAL MANAGEMENT SPECIALIST, INC. FOR THE INSTALLATION OF A SEDIMENT CAP IN A PORTION OF THE HYDRAULIC CANAL, AND DECLARING AN EMERGENCY.

WHEREAS, the City has elected to perform a voluntary action remediation of a portion of the Hydraulic Canal, under Ohio's Voluntary Action Program (VAP); and

WHEREAS, after much consideration, the City has determined that the best option for remediation would be to use a product called Aquablok, which is a patented granular material that forms a barrier; and

WHEREAS, Environmental Management Specialist, Inc., is the preferred installer of Aquablok;

NOW, THEREFORE, BE IT ORDAINED, by the City Council of the City of Middletown, Butler/Warren Counties, Ohio that:

Section 1

The City Manager without complying with the procedures of Chapter 735 of the Ohio Revised Code is hereby authorized to enter into a contract with Environmental Management Specialist, Inc. for the installation of a sediment Cap in the Hydraulic Canal. The contract shall be in a form consistent with the quote from the vendor on file with the Director of Public Works.

Section 2

For said purpose the Director of Finance is hereby authorized and directed to pay a sum not to exceed \$190,811.50 from the Sewer Capital Reserve Fund (Fund #495).

Section 3

This Council hereby determines that the procedure to be followed in the award and execution of the aforesaid contract shall consist solely of the procedure set forth in this Ordinance and the provisions of Chapter 735, Ohio Revised Code, shall not be applicable to the award and execution of the aforesaid contract.

Section 4

This ordinance is declared to be an emergency measure necessary for the immediate preservation of the public health, safety and general welfare, to wit: to permit the deadlines as required by VAP, and shall take effect and be in force from and after its adoption.

/s/ Lawrence P. Mulligan, Jr.
Lawrence P. Mulligan, Jr., Mayor

Adopted: April 17, 2018

Attest: /s/ Amy Schenck
Clerk of the City Council

H:/Law/leg/2018 Leg/O Hydraulic Canal - Aquablok.doc

Exhibit C-7



Chicago • Cincinnati • Cleveland • Columbus
Indianapolis • Toledo • Wheeling/Pittsburgh • Zanesville

Customer: City of Middletown	Contact: Scott Tadych
Address: One Donham Plaza Middletown, OH 45042	Phone: (513) 425-7845 Email: scottt@cityofmiddletown.org
Project Name: Great Miami Canal Sediment Capping	Bid Date: 3/15/2018; revised 3/20/2018
Project Address: Miami River, Ohio	Bid Type: Remediation

Scope of Work

- Furnish and install a 6" layer of AquaBlok over a 250' X 50' area.
- Slinger or Pump Truck with operator to disperse the AquaBlok

Item #	Description	Estimated Quantity	Estimated		
			Units	Unit Cost	Line Item Cost
1.0	Mobilization & General Conditions	1	Each	\$ 11,500.00	\$ 11,500.00
2.0	Installation of AquaBlok Cap Including Site Prep and Water Management	1	Lump Sum	\$ 78,700.00	\$ 78,700.00
3.0	AquaBlok Supply	260	Ton	\$ 265.00	\$ 68,900.00
4.0	AquaBlok Freight	260	Ton	\$ 55.25	\$ 14,365.00
		Estimated Total		\$	173,465.00

Conditions

- EMS assumes that all work will be completed in one mobilization unless otherwise noted above.
- Above noted costs do not include any permit costs unless specifically noted above.
- Above noted costs do not include any surgical excavation around utilities, surface structures or subsurface structures.
- Customer will provide any required sampling/analysis, technical reports, surveying, compaction testing and/or private utility locating services.
- For any additional work beyond the original scope of work, Time & Material (T&M) rates will apply according to the EMS Preferred Rate Sheet.
- Above noted quantities are speculative. With the exception of minimums, all billing will be based on actual quantities at the above noted Unit Costs.
- A four (4) hour minimum will apply to all Unit Costs quoted by the hour.
- Unit Costs quoted by the day will be billed at the full day rate for any work on site. There will be no partial billing for partial work days.
- Unit Costs quoted by the day apply up to eight (8) hours per day. After eight (8) hours per day, the day rate will be pro-rated for additional hours.
- Above Unit Costs are based on a non-union work force, no overtime work and no performance bond. Prevailing Wages are included.
- This proposal is valid for thirty (30) days.

Additional costs related to unexpected or concealed conditions or any delays at the project site shall be incurred by Customer. In the event that underground or above ground structures, cables, conduit or other materials or equipment are destroyed or damaged during the project, EMS will not be held responsible. By signing below Customer acknowledges that they have received, reviewed and agreed to the EMS Standard Terms and Conditions (or the master service agreement between Customer and EMS if applicable). The terms of this agreement are effective and binding on Customer and EMS upon written execution or initiation of performance of this Agreement. Thank you for the opportunity to assist with your environmental service needs. If you require any additional information, please contact us at the below.

Payment Terms

Unless otherwise agreed to in writing, payment terms are net thirty (30) days from the invoice date. Interest will accrue on any unpaid balances at the rate of one and one half percent (1.5%) per month or the maximum amount allowed by law, whichever is greater.

Authorization To Proceed

The above prices, specifications and conditions are satisfactory and hereby accepted and EMS is authorized to proceed.

Buyer:

City of Middletown

Print Name

Signature:

Mayh Bell

Buyer Signature

Date of Acceptance:

April 23, 2018

RETURN ACCEPTANCE TO:

Environmental Management Specialists
6909 Engle Road, C-31
Cleveland, Ohio 44130

Estimator: [Bruce Markey](#)

Phone: 614 610-4559

Email: bmarkey@emsonsite.com

Approved as to form:

Sarah N. Fox, General Counsel

EMS Standard Terms and Conditions

The parties hereby agree to enter into the Agreement, subject to the following terms and conditions:

1. Environmental Management Specialists. Environmental Management Specialists is an Ohio corporation with an address at 6909 Engle Road, Suite C-31, Cleveland, Ohio 44130 ("EMS"). Unless specifically stated otherwise, all notices and communications shall be made to EMS at the foregoing address. All references to the "other party" herein shall mean the other party to the Agreement.
2. Authorized Representative. All written agreements, contracts, amendments, modifications and other similar documents shall be executed by the President of EMS. If said documents are not so executed, they shall not be binding on EMS.
3. Payments. All payments due to EMS shall be payable in cash without any setoff or deductions in cash when due. EMS's delay in presenting an invoice or demand for payment shall not constitute a waiver of payment. Any unpaid balance of any EMS invoice (including during insurance review) that is past due shall incur interest at the per annum rate of 18%. In the event that legal or other action is required to collect the unpaid balance of any invoice due EMS, the debtor party agrees to pay all costs of collection, litigation or settlement incurred by EMS, including reasonable attorneys fees, expert fees and costs..

In the event that any EMS invoice is submitted for insurance coverage, the other party hereby agrees to pay any and all balances not covered by the insurer unless EMS has specifically waived such balance in writing.

If required by EMS, the other party shall demonstrate (including entering into an unconditional and absolute guarantee agreement at EMS's request) to EMS's satisfaction prior to the commencement of any work to be performed by EMS, and at such other times as EMS may require, that sufficient funds are available and committed for payment of the entire cost of such work. Unless such financial assurances are provided, EMS shall not be required to commence or continue any work and may immediately stop work. The failure of EMS to insist upon the provisions of this paragraph any one time shall not constitute a waiver of the other party to make payments pursuant to this Agreement nor shall it constitute a waiver of EMS's right to request that evidence of sufficient funds be provided at a later date.

4. Disclaimer of Representations and Warranties. The representations and warranties set forth in the attached Agreement are the only representations and warranties provided by EMS. EMS HEREBY DISCLAIMS ALL PRIOR REPRESENTATIONS AND WARRANTIES OF ANY KIND. EMS HEREBY SPECIFICALLY DISCLAIMS ANY AND ALL WARRANTIES, WHETHER KNOWN OR UNKNOWN, WRITTEN OR ORAL, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.
5. Indemnification. In addition to and not limiting the generality of any indemnification in the Agreement, the other party shall, to the extent the funds are subsequently available and are properly appropriated and certified for that purpose, indemnify, defend and hold harmless EMS, its shareholders, directors, officers, managers, employees, agents and affiliates from any and all liability, claims (including personal injury claims), actions, damages, costs and expenses of any kind (including attorneys' fees) arising from or relating to (i) any misconduct or negligence of the other party or its employees, agents or affiliates, (ii) any misrepresentation by the other party; or (iii) any violation or alleged violation of any federal, state, local laws or regulations by the other party or its

employees, agents or affiliates (collectively the “Losses”).

6. **Limited Liability.** Except as otherwise expressly provided for in the Agreement, in no event shall EMS be liable to the other party or the other party’s insurers for any Losses resulting from lost, diminished or delayed profits, opportunities, sales or use; or for incidental, special, indirect, consequential, exemplary or punitive damages of any kind whatsoever.
7. **Mutual Confidentiality.** The parties acknowledge and agree that all information provided by each party, whether written or oral, are confidential and proprietary to the disclosing party to the extent allowable by law (the “Confidential Information”), and as such shall be kept strictly confidential and shall not be disclosed to any third parties without the prior written consent of the disclosing party unless required by law. Confidential Information shall not include any information (i) that is available in the public domain, (ii) that is disclosed to the receiving party by a third party with the right to disclose such information, and (iii) that is derived by the receiving party independent from the disclosing party. The parties hereto acknowledge that a breach of any of the provisions of this Section would cause irreparable damage to the disclosing party, the extent of which may be difficult to ascertain, and that the award of damages for such a breach may not be adequate relief. Consequently, the parties hereby agree that the disclosing party shall be entitled to injunctive relief to compel the specific performance of the covenants set forth in this Section. Such a remedy shall be cumulative, not exclusive, and shall be in addition to any other remedy available to the disclosing party at law or equity including, but not limited to the right of the disclosing party to obtain its attorneys’ fees and other costs in enforcing this Section.
8. **Compliance.** The parties represent and warrant to each other that each will comply with all federal, state and local laws and regulations.
9. **Force Majeure.** Except for a party’s obligation to make payments hereunder, if a party is rendered unable (wholly or in part) to carry out any of its obligations under the Agreement as a result of an act of God, nature, fire, war, labor dispute, borders closing or any other matter reasonably out of the control of said party, then the obligations of such party (to the extent affected by such event and to the extent that reasonable business efforts are being used to resume performance at the earliest practicable time) shall be suspended during the continuance of such event, but for no longer period. If there is such a suspension in performance, the time for the party’s performance shall be extended for a period not to exceed the time lost by reason thereof. Upon the occurrence of such an event, the affected party shall notify the other party as soon as reasonably practicable, describing in detail the circumstances of the event and the expected delay.
10. **Notices.** All notices, requests, consents and other communications hereunder shall be in writing and shall be deemed to have been duly given immediately if personally delivered or upon receipt if delivered by certified mail or by an overnight express service such as Federal Express.
11. **No Waiver.** The failure of EMS to seek redress for violation, or to insist upon the strict performance of any covenant, agreement, provision or condition of the Agreement shall not constitute a waiver of such strict performance and EMS shall have all remedies provided in the Agreement and by applicable law with respect to any subsequent act which would be originally constituted a violation.
12. **Entire Agreement.** The Agreement (including these terms and conditions and any schedules or exhibits) constitutes the entire agreement between the parties and supersedes all prior and contemporaneous representations, negotiations and verbal or written communications relating to the subject matter hereof.

13. Assignment. The Agreement is personal in nature and the rights and obligations hereunder may not be assigned, conveyed or transferred to any third party without the prior written consent of EMS; except that EMS shall have the right to assign the obligations under the Agreement to an affiliate at its sole discretion. The rights and obligations of the parties under this Agreement shall inure to the benefit of and shall be binding upon the legal representatives, heirs, and assigns of the parties.
14. Modifications and Amendments. Unless otherwise provided, the Agreement may be modified or amended only by a writing signed by all of the parties hereto.
15. Interpretation. Within the Agreement, words of any gender shall be held and construed to include any other gender, and words in the singular number shall be held and construed to include the plural, unless the context otherwise requires. The paragraph headings used in the Agreement are intended for reference purposes only and shall not be considered in the interpretation of the terms and conditions of the Agreement.
16. Governing Law. The agreement and the rights of the parties hereunder shall be interpreted in accordance with and governed by the laws of the State of Ohio without giving effect to the choice of law rules thereof. The parties hereby agree to be subject to the sole and exclusive jurisdiction of the state and federal courts located in Butler County, Ohio.
17. Invalidity. If any one or more of the terms, conditions or provisions contained in the Agreement shall be held to be illegal, invalid, unenforceable or void in any respect by a court of competent jurisdiction, the Agreement shall not be rendered null and void thereby. Such terms, conditions or provisions shall be deemed to be severed from the Agreement and to the fullest extent possible, the validity, legality and enforceability of the remaining terms, conditions or provision contained herein shall not be affected or impaired thereby.
18. Counterpart Signatures. The Agreement may be executed in a number of counterparts and by facsimile, each of which shall be considered an original, all of which taken together shall constitute one and the same instrument.
19. Conflict of Terms. In the event any terms in this EMS Standard Terms and Conditions directly conflicts with the terms of the Agreement, the terms specifically stated in the Agreement shall supersede only those conflicting terms in this EMS Standard Terms and Conditions.

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CELRH-RD-N-CIN

Permit Number: LRH-2017-892-GMR-Middletown Hydraulic Canal

Name of Permittee: Mr. Les Landen

Date of Issuance: April 4, 2018

Upon completion of the activity authorized by this permit and any mitigation required by the permit, sign this certification and return it to the following address:

Huntington District
U.S. Army Corps of Engineers
502 Eighth Street
Huntington, West Virginia 25701
Attn: RD

Please note that your permitted activity is subject to a compliance inspection by an U.S. Army Corps of Engineers representative. If you fail to comply with this permit you are subject to permit suspension, modification, or revocation.

I hereby certify that the work authorized by the above referenced permit has been completed in accordance with the terms and conditions of the said permit, and required mitigation was completed in accordance with the permit conditions.

Samuel H. Wendt

Signature of Permittee

General Counsel

6/4/18

Date