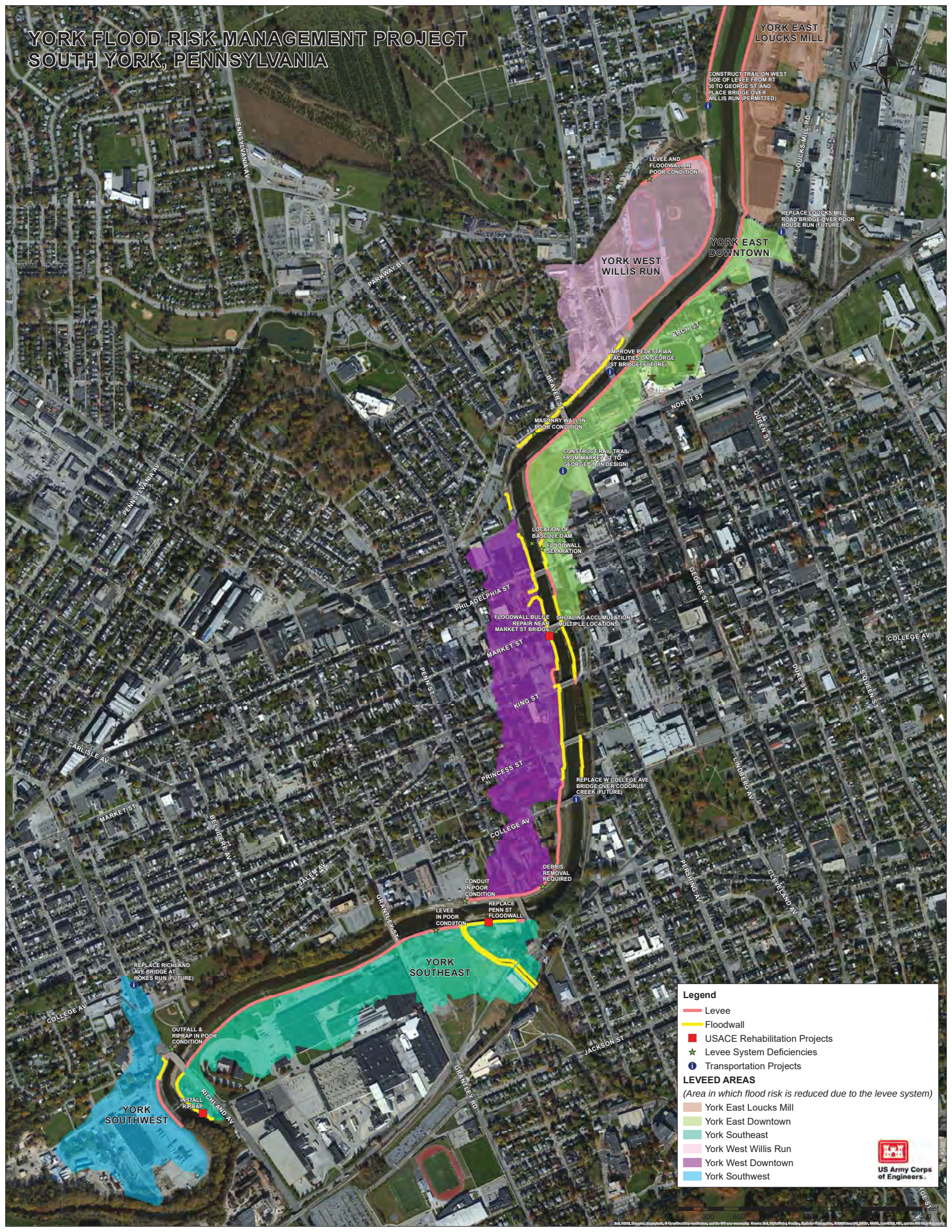
Appendix 1.0 Maps and Resource Sites

Appendix 1.1 Map of York North

YORK FLOOD RISK MANAGEMENT PROJECT
NORTH YORK, PENNSYLVANIA

Appendix 1.2 Map of York South

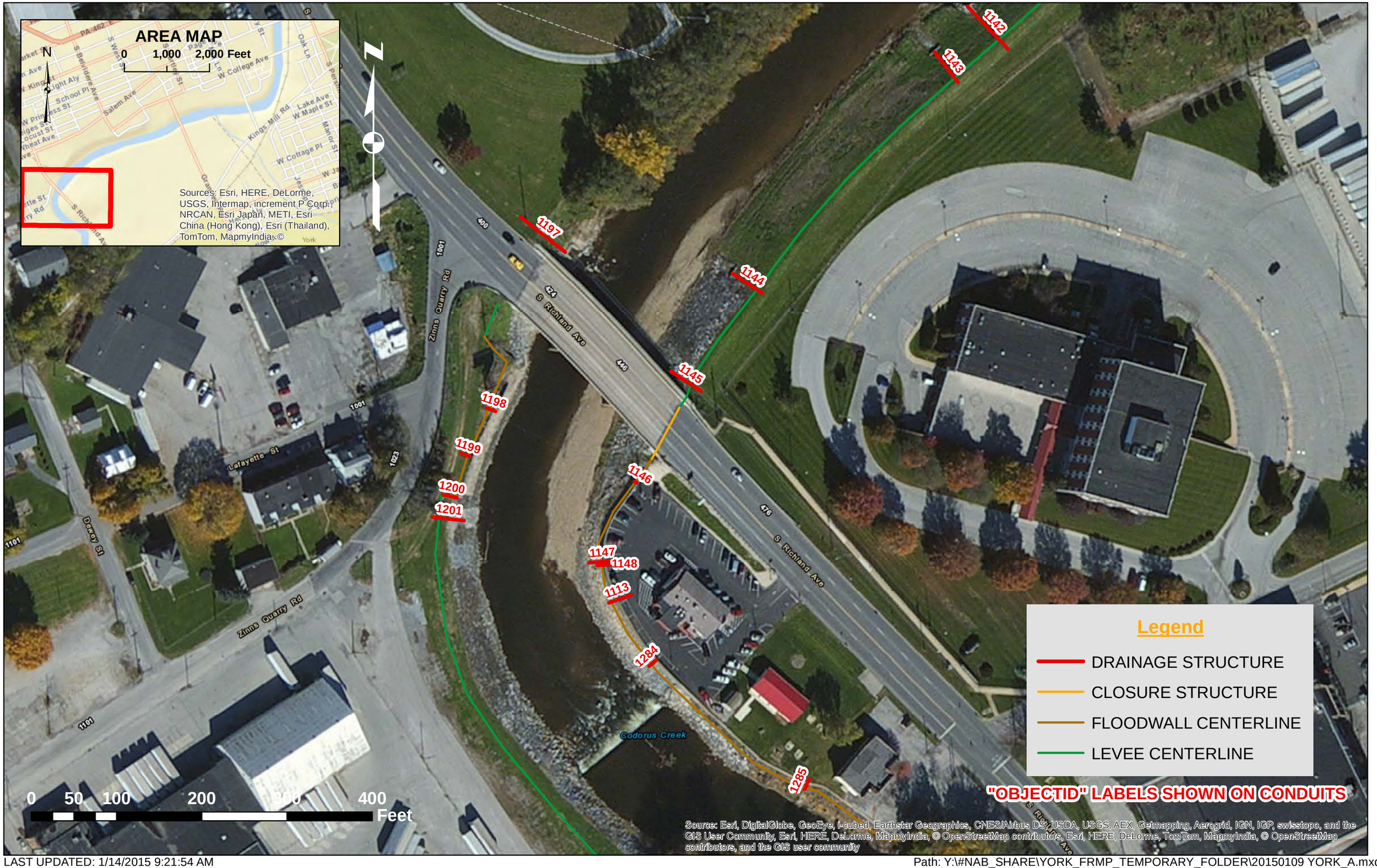

YORK FLOOD RISK MANAGEMENT PROJECT
SOUTH YORK, PENNSYLVANIA
YORK EAST LOUCKS MILL
CONSTRUCT TRAIL ON WEST SIDE OF LEVEE FROM RT 30 TO GEORGE ST AND PLACE BRIDGE OVER WILLIS RUN (PERMITTED)
LOUCKS MILL RD
LEVEE AND FLOODWALL IN POOR CONDITION
REPLACE LOUCKS MILL ROAD BRIDGE OVER POOR HOUSE RUN (FUTURE)
YORK EAST DOWNTOWN
YORK WEST WILLIS RUN
PENNSYLVANIA AV
PARKWAY BL
ARCH ST
IMPROVE PEDESTRIAN FACILITIES ON GEORGE ST BRIDGE (FUTURE)
BEAVER ST
NORTH ST
QUEEN ST
MASONRY WALL IN POOR CONDITION
CONSTRUCT RAIL TRAIL FROM MARKET ST TO GEORGE ST (IN DESIGN)
LOCATION OF BASCULE DAM
FLOODWALL SEPARATION
GEORGE ST
PHILADELPHIA ST
FLOODWALL BULGE REPAIR NEAR MARKET ST BRIDGE
SHOALING ACCUMULATION (MULTIPLE LOCATIONS)
COLLEGE AV
MARKET ST
PENN ST
DUKE ST
S QUEEN ST
KING ST
CARLISLE AV
PRINCESS ST
REPLACE W COLLEGE AVE BRIDGE OVER CODORUS CREEK (FUTURE)
LINDBERG AV
MARKET ST
BELVIDERE AV
COLLEGE AV
DEBRIS REMOVAL REQUIRED
SALEM AV
CONDUIT IN POOR CONDITION
PERSHING AV
CLEVELAND AV
GRANTLEY RD
LEVEE IN POOR CONDITION
REPLACE PENN ST FLOODWALL
YORK SOUTHEAST
REPLACE RICHLAND AVE BRIDGE AT HOKES RUN (FUTURE)
COLLEGE AV
OUTFALL & RIPRAP IN POOR CONDITION
JACKSON ST
GRANTLEY RD
INSTALL RIPRAP
RICHLAND AV
YORK SOUTHWEST
Legend
Levee
Floodwall
USACE Rehabilitation Projects
Levee System Deficiencies
Transportation Projects
LEVEED AREAS
(Area in which flood risk is reduced due to the levee system)
York East Loucks Mill
York East Downtown
York Southeast
York West Willis Run
York West Downtown
York Southwest
US Army Corps of Engineers
0 300 600 1,200 1,800 Feet

Appendix 1.3 Drainage Conduit Location Maps

Enclosure 2

YORK FLOOD RISK MANAGEMENT PROJECT

MAP A



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Enclosure 2

YORK FLOOD RISK MANAGEMENT PROJECT

MAP B

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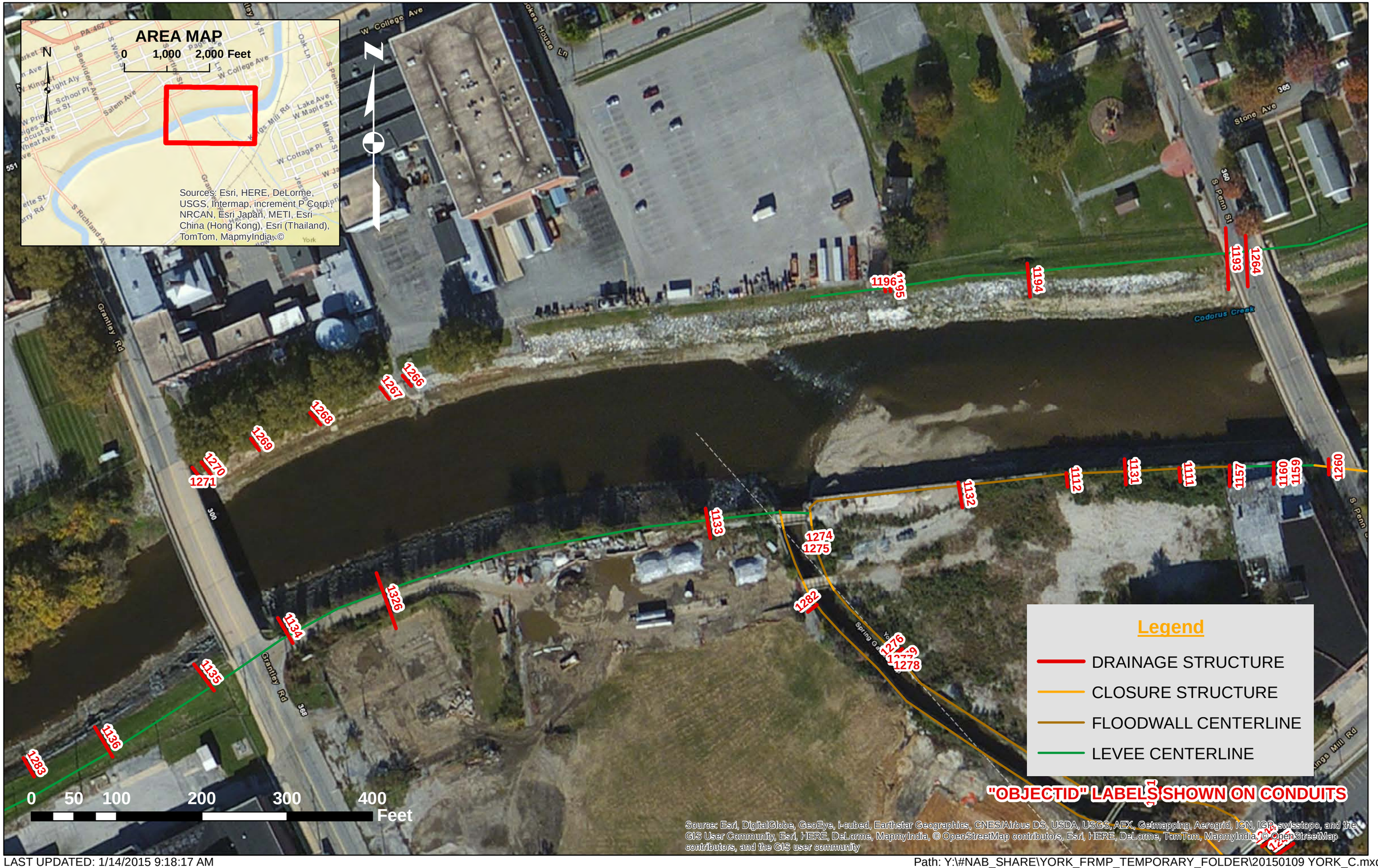
Enclosure 2

YORK FLOOD RISK MANAGEMENT PROJECT

MAP C



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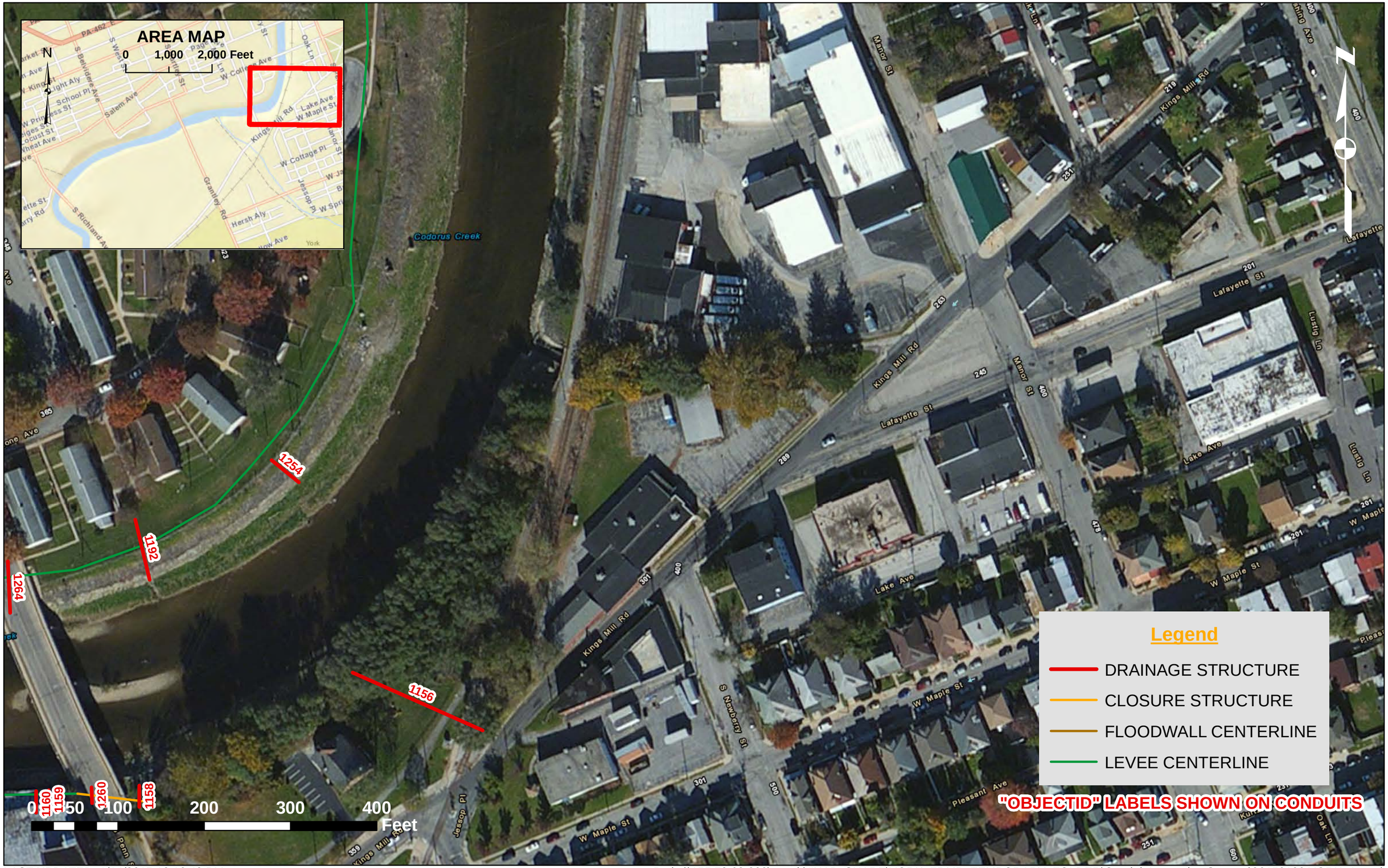
Enclosure 2

YORK FLOOD RISK MANAGEMENT PROJECT

MAP D



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Enclosure 2

YORK FLOOD RISK MANAGEMENT PROJECT

MAP E

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YORK FLOOD RISK MANAGEMENT PROJECT

MAP F

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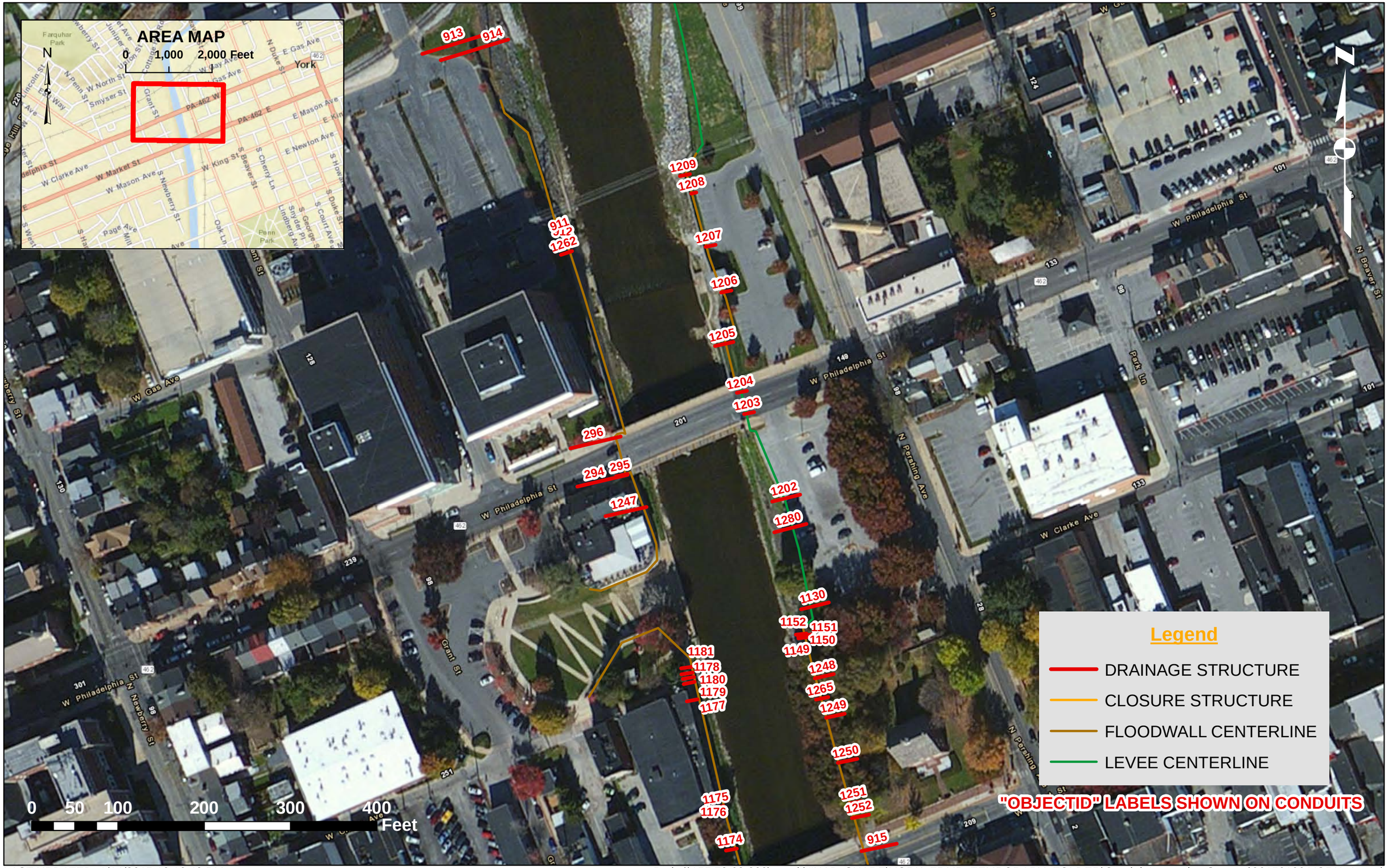
YORK FLOOD RISK MANAGEMENT PROJECT

MAP G



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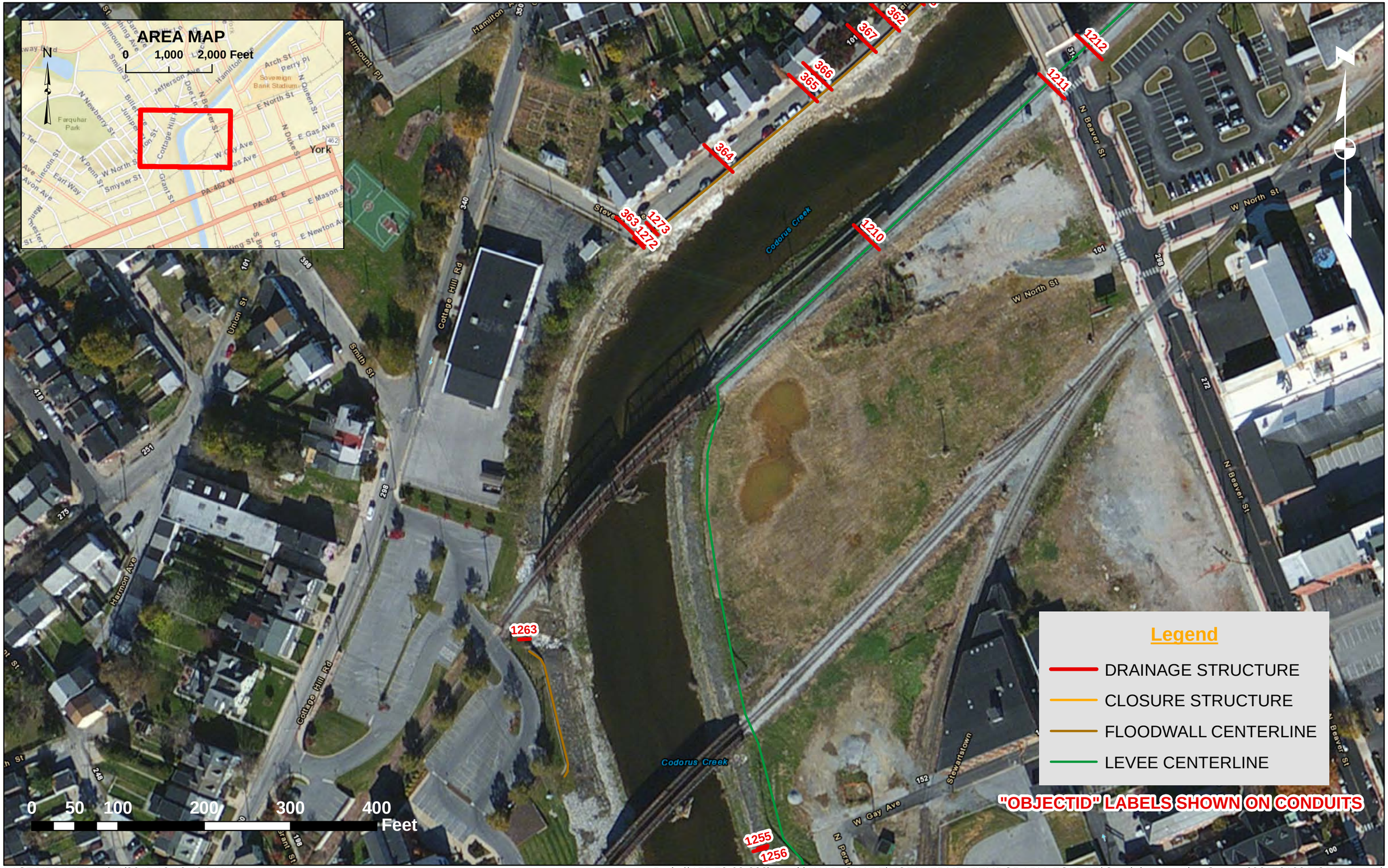
YORK FLOOD RISK MANAGEMENT PROJECT

MAP H



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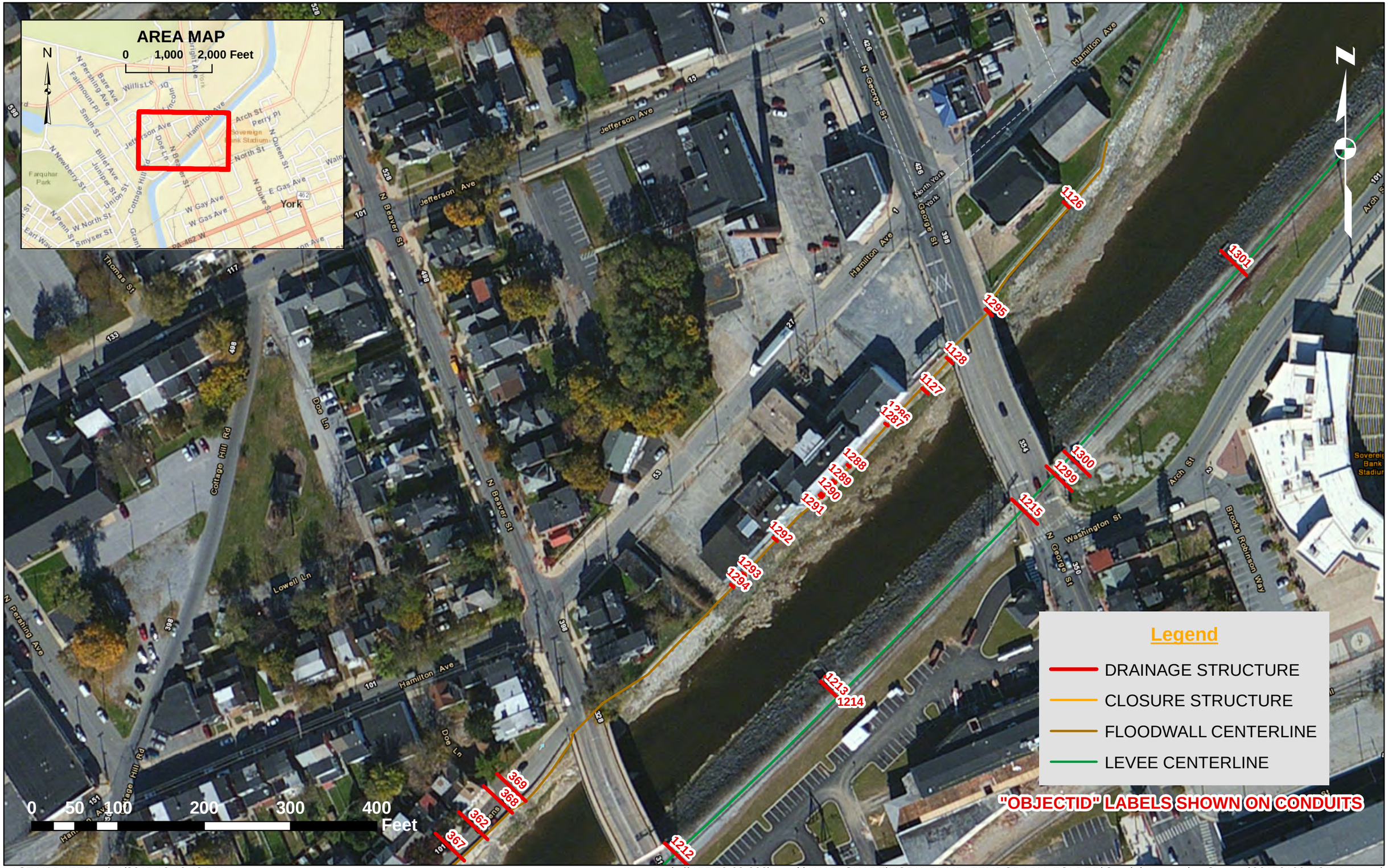
YORK FLOOD RISK MANAGEMENT PROJECT

MAP I



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Enclosure 2

YORK FLOOD RISK MANAGEMENT PROJECT

MAP J

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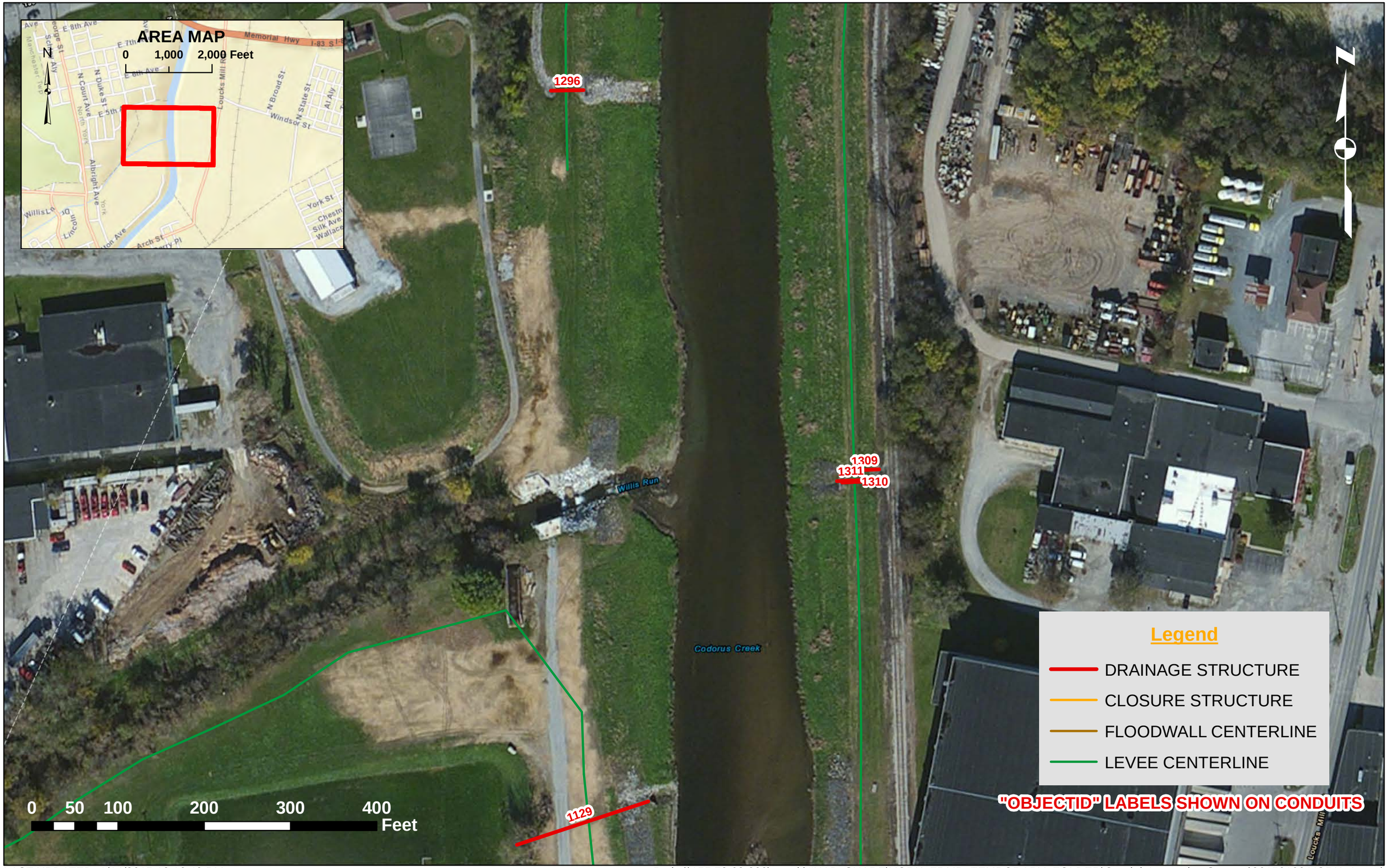
Enclosure 2

YORK FLOOD RISK MANAGEMENT PROJECT

MAP K



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YORK FLOOD RISK MANAGEMENT PROJECT

MAP L

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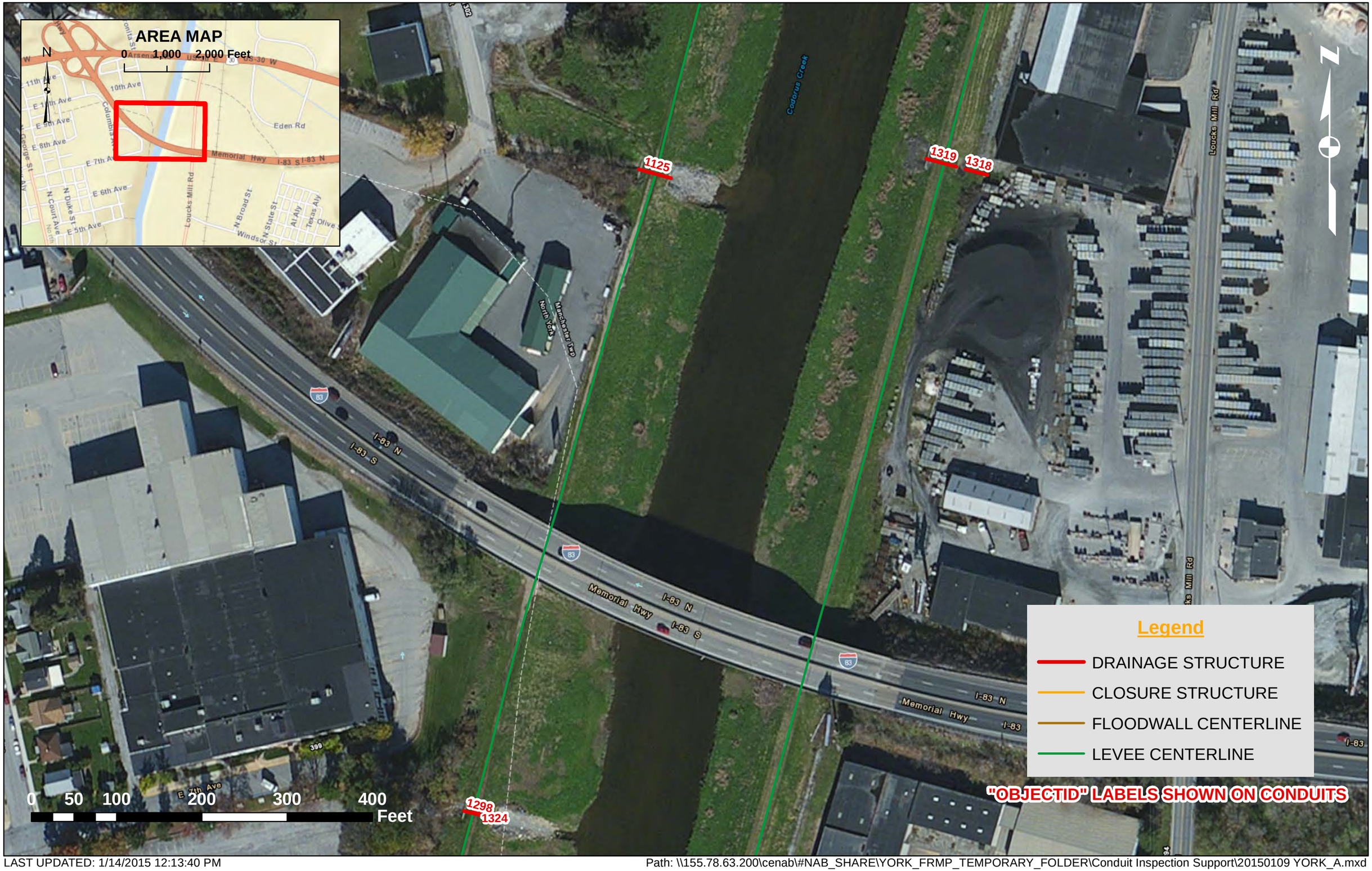
YORK FLOOD RISK MANAGEMENT PROJECT

MAP M



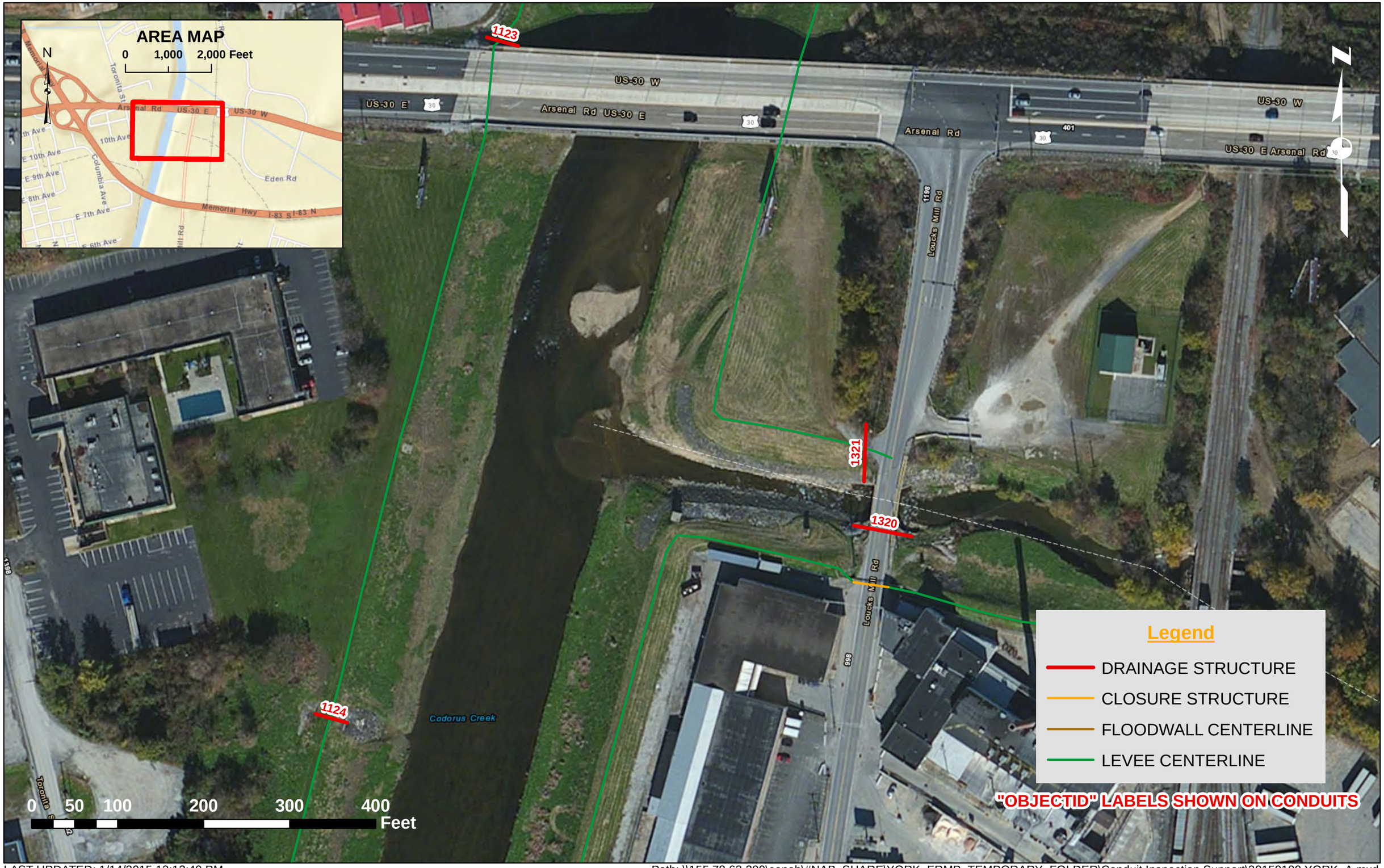
Legend

- DRAINAGE STRUCTURE
- CLOSURE STRUCTURE
- FLOODWALL CENTERLINE
- LEVEE CENTERLINE

Enclosure 2

YORK FLOOD RISK MANAGEMENT PROJECT

MAP N



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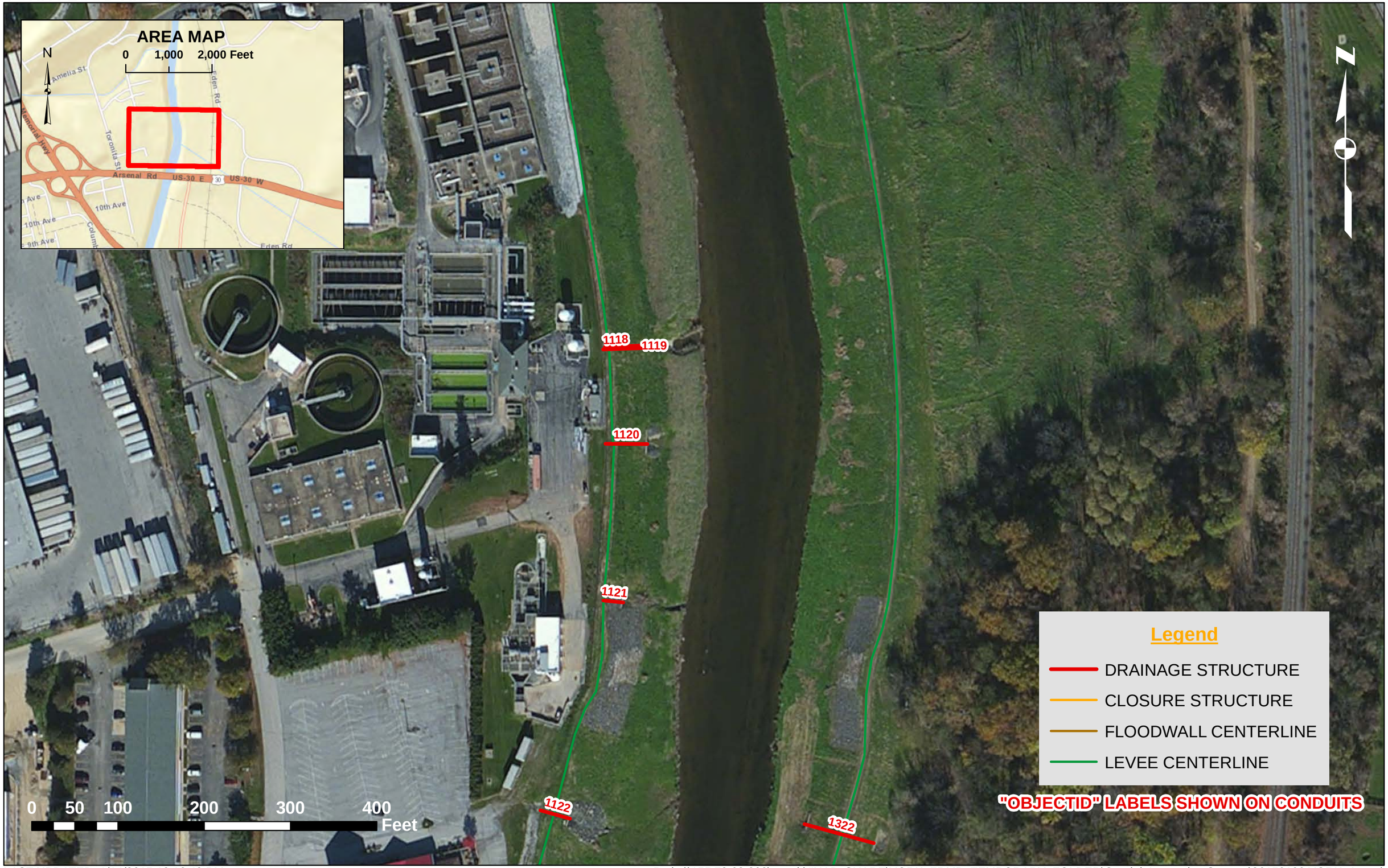
YORK FLOOD RISK MANAGEMENT PROJECT

MAP O



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Enclosure 2

YORK FLOOD RISK MANAGEMENT PROJECT

MAP P

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Enclosure 2

YORK FLOOD RISK MANAGEMENT PROJECT

MAP Q

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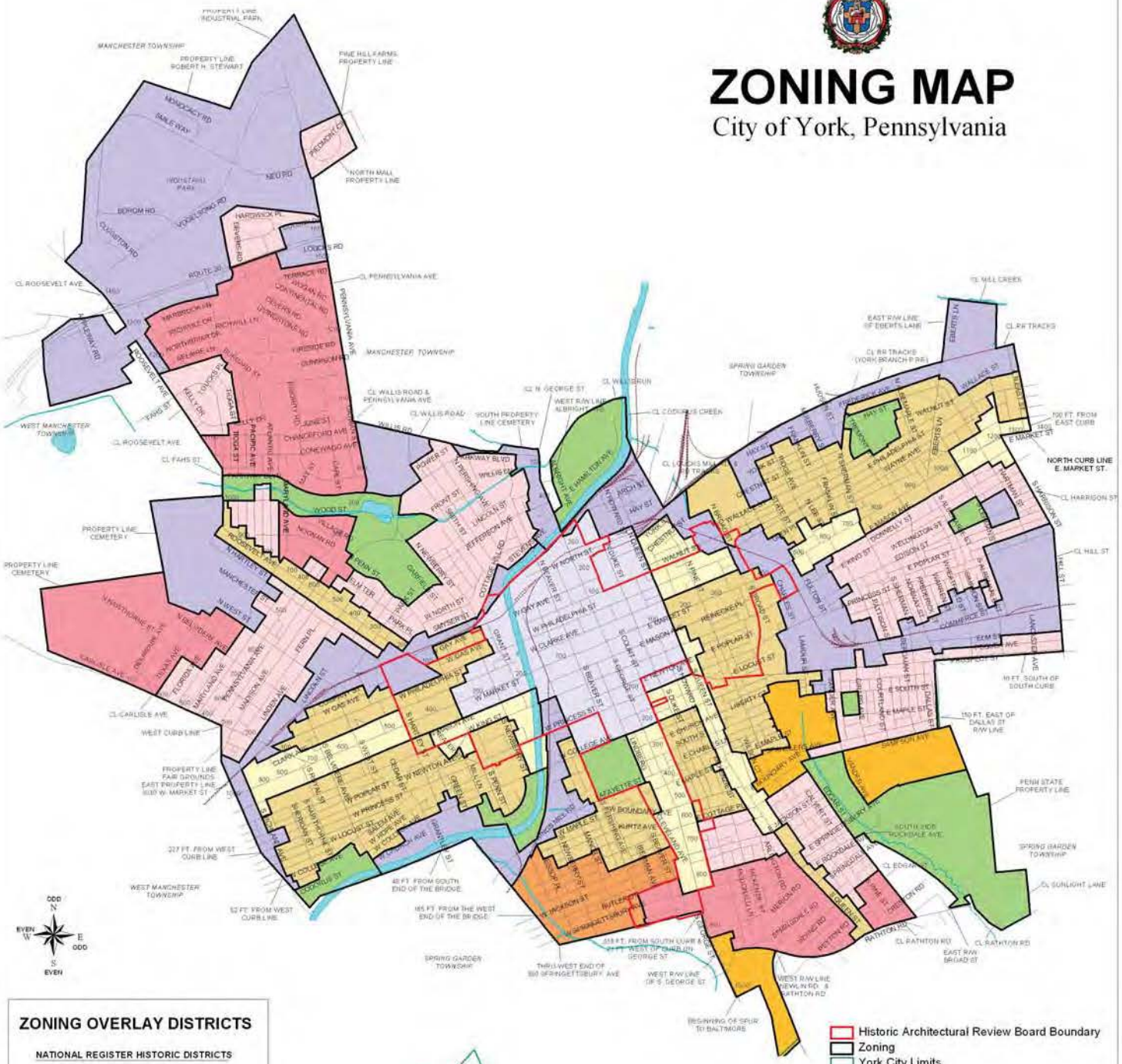
Appendix 1.4 York City Zoning Map

ZONING MAP

City of York, Pennsylvania



ZONING OVERLAY DISTRICTS

NATIONAL REGISTER HISTORIC DISTRICTS

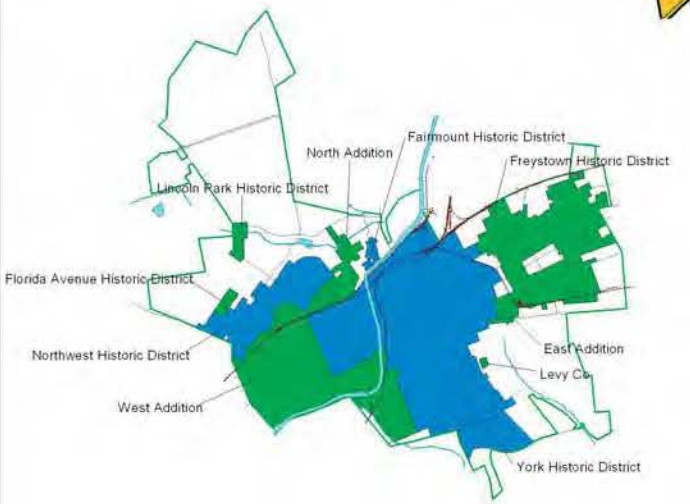
These sections of York have been listed as Historic Districts. York has one of the largest urban districts in the Country and affords public recognition of the architectural and historic value of the City's buildings. Any Federally funded project in this area must be evaluated in respect to it's impact on the historic and architectural character of this district before this project is approved. This area is indicated by the following boundary line.

LISTED DISTRICT

ELIGIBLE DISTRICT

HISTORIC ARCHITECTURAL REVIEW BOARD DISTRICT

This area of the City is designated "Historic York". Applications for building permits here are additionally subject to review and approval by City Council through issuance of a certification of appropriateness. Reference: City of York Ordinance No. 31, passed September 15, 1970, as ammended as indicated by the following pattern on the map.



Historic Architectural Review Board Boundary
Zoning
York City Limits
Roadway
Railline
Water Feature
Road

Zoning
- CBD - Central Business District
- EC - Employment Center District
- MUI1 - Mixed-Use Residential Institutional
- MUI2 - Urban Residential Neighborhood
- RS1 - Single-Family Detached Residential
- RS2 - Single Family Attached
- UN1 - Urban Mixed Residential Commercial
- UN2 - Urban Residential Neighborhood
- OS - Open Space

This map is not a legal document. It has been prepared as part of the summary of the City of York 1995 Zoning Ordinance and should be used for reference purposes only. Detailed district boundary lines are specified on a series of property maps included within the Zoning Ordinance as enacted.

Disclaimer: This map is for reference purposes only. The City makes no gaurentee as to the accuracy or completeness of the features shown on this map.

Prepared By: Office of Emergency Planning
Department of Fire/Rescue Services
01/2014

Appendix 1.5 Codorus Tributaries

LEGEND

- Federal Dams
- National Inventory of Dams
- Levees and Floodwalls
- Stream Centerline
- Codorus HUC 10 Watersheds

YORK FLOOD RISK MANAGEMENT SYSTEM

0205030607

0205030606

Miles

0 1 2 4 6 8

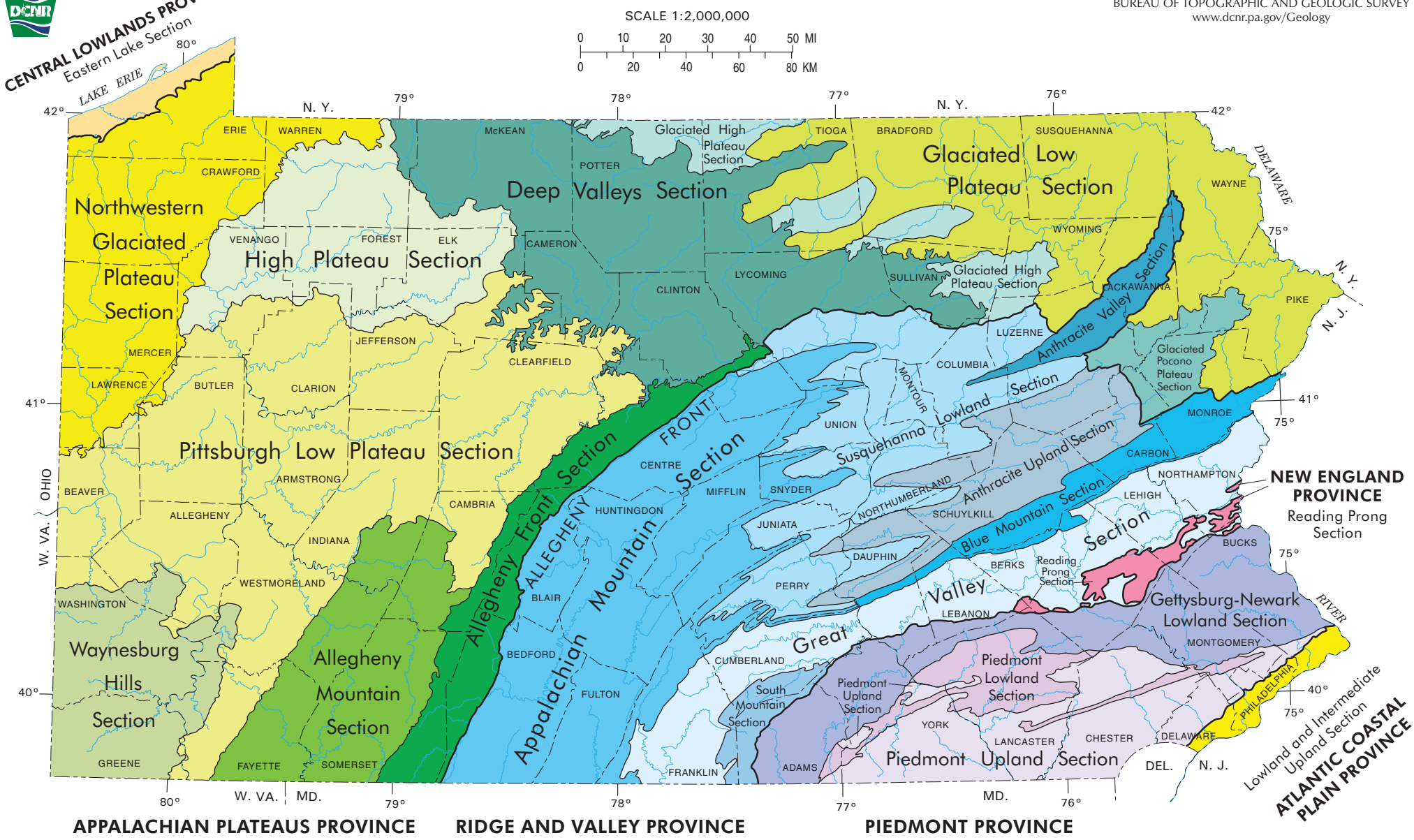
Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, © OpenStreetMap contributors, and the GIS User Community

Appendix 1.6 Piedmont Province

MAP 13

PHYSIOGRAPHIC PROVINCES OF PENNSYLVANIA

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF
CONSERVATION AND NATURAL RESOURCES
BUREAU OF TOPOGRAPHIC AND GEOLOGIC SURVEY
www.dcnr.pa.gov/Geology



EXPLANATION

CENTRAL LOWLANDS PROVINCE
- Eastern Lake Section

APPALACHIAN PLATEAUS PROVINCE
- Northwestern Glaciated Plateau Section
- High Plateau Section
- Pittsburgh Low Plateau Section
- Waynesburg Hills Section
- Allegheny Mountain Section
- Allegheny Front Section
- Deep Valleys Section
- Glaciated High Plateau Section
- Glaciated Low Plateau Section
- Glaciated Pocono Plateau Section

RIDGE AND VALLEY PROVINCE
- Appalachian Mountain Section
- Susquehanna Lowland Section
- Anthracite Valley Section
- Anthracite Upland Section
- Blue Mountain Section
- Great Valley Section
- South Mountain Section

NEW ENGLAND PROVINCE
- Reading Prong Section

PIEDMONT PROVINCE
- Gettysburg-Newark Lowland Section
- Piedmont Lowland Section
- Piedmont Upland Section

ATLANTIC COASTAL PLAIN PROVINCE
- Lowland and Intermediate Upland Section

SYMBOLS
- Approximate boundary between physiographic provinces
- Approximate boundary between physiographic sections

Compiled by W. D. Sevon. Fourth Edition, 2000; Second Printing, 2018.

PHYSIOGRAPHIC PROVINCES OF PENNSYLVANIA

PHYSIOGRAPHIC PROVINCE	PHYSIOGRAPHIC SECTION	DOMINANT TOPOGRAPHIC FORM	LOCAL RELIEF[1]	UNDERLYING ROCK TYPE	GEOLOGIC STRUCTURE	APPROXIMATE ELEVATION[2] Min.	Max.	DRAINAGE PATTERN	BOUNDARIES	ORIGIN
CENTRAL LOWLANDS	Eastern Lake	Northwest-sloping, lake-parallel, low-relief ridges.	Very low to low.	Shale and siltstone.	Beds either horizontal or having low south dip.	570	1,000	Parallel.	*Northwest:* Lake Erie. *Southeast:* Base of escarpment.	Glacial, lake, and fluvial deposition and erosion.
APPALACHIAN PLATEAUS	Northwestern Glaciated Plateau	Broad, rounded upland and deep, steep-sided, linear valleys partly filled with glacial deposits.	Very low to moderate.	Shale, siltstone, and sandstone.	Subhorizontal beds.	900	2,200	Dendritic.	*Northwest:* Base of escarpment. *Southeast:* Glacial border.	Fluvial and glacial erosion; glacial deposition.
	High Plateau	Broad, rounded to flat uplands having deep, angular valleys.	Moderate to high.	Sandstone, siltstone, shale, and conglomerate; some coal.	Low-amplitude, open folds.	980	2,360	Dendritic.	*Northwest:* Glacial border. *Northeast:* Margins of deep valleys. *South:* Arbitrary along drainage divides between coal and noncoal areas.	Fluvial erosion; periglacial mass wasting.
	Pittsburgh Low Plateau	Smooth to irregular, undulating surface; narrow, relatively shallow valleys; strip mines and reclaimed land.	Low to moderate.	Shale, siltstone, sandstone, limestone, and coal.	Moderate- to low-amplitude, open folds, decreasing in occurrence northwestward.	660	2,340	Dendritic.	*Northwest:* Glacial border. *Elsewhere:* Arbitrary at topographic changes with adjacent sections.	Fluvial erosion; periglacial mass wasting; strip mining.
	Waynesburg Hills	Very hilly with narrow hilltops and steep-sloped, narrow valleys.	Moderate.	Sandstone, shale, red beds, and limestone.	Horizontal beds.	848	1,638	Dendritic.	Arbitrary at change of topography.	Fluvial erosion and landslides.
	Allegheny Mountain	Wide ridges separated by broad valleys; ridge elevations decrease to north.	Moderate to high.	Sandstone, siltstone, shale, and conglomerate; some limestone and coal.	Large-amplitude, open folds.	775	3,210	Dendritic.	*East:* Arbitrary between coal and noncoal areas. *West:* Base of west flank of Chestnut Ridge. *North:* Approximates northeast terminus of large-amplitude, open folds.	Fluvial erosion; some periglacial mass wasting.
	Allegheny Front	*East:* Rounded to linear hills rising by steps to an escarpment; hills cut by narrow valleys. *West:* Undulating hills sloping away from escarpment.	Moderate to high.	Shale, siltstone, and sandstone.	*South:* Broad fold. *Elsewhere:* Beds having low northwest dip; some faults.	540	2,980	Parallel and trellis.	*East:* Stream at base of hills below escarpment. *West:* Arbitrary between coal and noncoal areas.	Fluvial erosion; periglacial mass wasting.
	Deep Valleys	Very deep, angular valleys; some broad to narrow uplands.	Moderate to very high.	Sandstone, siltstone, shale, and conglomerate.	Moderate-amplitude, open folds that control valley orientations.	560	2,560	Angulate and rectangular.	Arbitrary at margins of deep valleys, either at top of valley slope or along drainage divide.	Fluvial erosion; periglacial mass wasting.
	Glaciated High Plateau	Broad to narrow, rounded to flat, elongate uplands and shallow valleys.	Low to high.	Sandstone, siltstone, shale, and conglomerate; some coal.	Moderate-amplitude, open folds.	620	2,560	Angulate and dendritic.	*East:* Base of escarpment. *Elsewhere:* Arbitrary with margins of deep valleys.	Fluvial and glacial erosion; glacial deposition.
	Glaciated Low Plateau	Rounded hills and valleys.	Low to moderate.	Sandstone, siltstone, and shale.	Low-amplitude folds.	440	2,690	Dendritic.	Base of escarpments of adjacent uplands; base of Pocono escarpment. *Elsewhere:* Arbitrary.	Fluvial and glacial erosion; glacial deposition.
	Glaciated Pocono Plateau	Broad, undulatory upland surface having dissected margins.	Low to moderate.	Sandstone, siltstone, and shale; some conglomerate.	Beds having low north dip; some small folds.	1,200	2.320	Deranged.	*South and east:* Base of Pocono escarpment. *North:* Crest of drainage divide. *West:* Arbitrary.	Fluvial and glacial erosion; glacial deposition.
RIDGE AND VALLEY	Appalachian Mountain	Long, narrow ridges and broad to narrow valleys; some karst.	Moderate to very high.	Sandstone, siltstone, shale, conglomerate, limestone, and dolomite.	Open and closed plunging folds having narrow hinges and planar limbs; variety of faults.	440	2,775	Trellis, angulate, and some karst.	*Southeast:* Base of slope change on southeast side of Blue Mountain. *West and northwest:* Center of valley bottom west of westernmost linear ridge. *Elsewhere:* Base of slope change of eastern ridges; arbitrary between ridges.	Fluvial erosion; solution of carbonate rocks; periglacial mass wasting.
	Susquehanna Lowland	Low to moderately high, linear ridges; linear valleys; Susquehanna River valley.	Low to moderate.	Sandstone, siltstone, shale, conglomerate, limestone, and dolomite.	Open and closed plunging folds having narrow hinges and planar limbs.	260	1,715	Trellis and angulate.	Base of slope change to higher ridges of all surrounding areas; arbitrary in valley areas.	Fluvial erosion; some glacial erosion and deposition in northeast.
	Anthracite Valley	Narrow to wide, canoe-shaped valley having irregular to linear hills; valley enclosed by steep-sloped mountain rim.	Low to moderate.	Sandstone, siltstone, conglomerate, and anthracite.	Broad, doubly-plunging syncline; faults and smaller folds.	500	2,368	Trellis and parallel.	Outer base of surrounding mountain.	Fluvial and glacial erosion; some glacial deposition.
	Anthracite Upland	Upland surface having low, linear to rounded hills, strip mines, and waste piles; upland surrounded by an escarpment, a valley, and a mountain rim.	Low to high.	Sandstone, shale, conglomerate, and anthracite.	Many narrow folds having steep limbs; many faults.	320	2,094	Trellis.	*Northeast:* Arbitrary between coal and noncoal areas. *Elsewhere:* Outer base of surrounding mountain.	Fluvial erosion; some glacial erosion and periglacial mass wasting.
	Blue Mountain	Linear ridge to south and valley to north; valley widens eastward and includes low linear ridges and shallow valleys.	Moderate to high.	Sandstone, siltstone, and shale; some limestone and conglomerate.	*Southwest:* South limb of broad fold. *Northeast:* Small folds north of Blue Mountain.	300	1,680	Trellis.	*Southeast:* Base of slope change on southeast side of Blue Mountain. *Northwest:* Base of mountain; base of Pocono escarpment. *Northeast:* Arbitrary.	Fluvial erosion; some glacial erosion and deposition in northeast.
	Great Valley	Very broad valley. *Northwest half:* Dissected upland. *Southeast half:* Low karst terrain.	Low to moderate.	*Northwest:* Shale and sandstone; slate at east end. *Southeast:* Limestone and dolomite.	Thrust sheets, nappes, overturned folds, and steep faults; many third- and fourth-order folds.	140	1,100	Dendritic and karst.	*North:* Base of slope change on southeast side of Blue Mountain. *South:* Base of slope change to adjacent uplands.	Fluvial erosion; solution of carbonate rocks; some periglacial mass wasting.
	South Mountain	Linear ridges, deep valleys, and flat uplands.	Moderate to high.	Metavolcanic rocks, quartzite, and some dolomite.	Major anticlinorium having many second- and third-order folds.	450	2,080	Dendritic.	Base of slope change to adjacent lowlands.	Fluvial erosion of highly variable rocks; some periglacial mass wasting.
NEW ENGLAND	Reading Prong	Circular to linear, rounded hills and ridges.	Moderate.	Granitic gneiss, granodiorite, and quartzite.	Multiple nappes.	140	1,364	Dendritic.	Base of slope change to adjacent lowlands.	Fluvial erosion; some periglacial mass wasting.
PIEDMONT	Gettysburg-Newark Lowland	Rolling lowlands, shallow valleys, and isolated hills.	Low to moderate.	Mainly red shale, siltstone, and sandstone; some conglomerate and diabase.	Half-graben having low, monoclinal, northwest-dipping beds.	20	1,355	Dendritic and trellis.	Base of slope changes with adjacent uplands and lowlands. *Elsewhere:* Arbitrary.	Fluvial erosion of rocks of variable resistance.
	Piedmont Lowland	Broad, moderately dissected, karst valleys separated by broad, low hills.	Low.	Dominantly limestone and dolomite; some phyllitic shale and sandstone.	Complexly folded and faulted.	60	700	Dendritic and karst.	*South:* Base of slope change to adjacent upland. *North:* Mesozoic red rocks.	Fluvial erosion; some periglacial mass wasting.
	Piedmont Upland	Broad, rounded to flat-topped hills and shallow valleys.	Low to moderate.	Mainly schist, gneiss, and quartzite; some saprolite.	Extremely complexly folded and faulted.	100	1,220	Dendritic.	*East:* Base of low to vague Fall Line escarpment. *North:* Base of slope change to adjacent lowlands.	Fluvial erosion; some periglacial mass wasting.
ATLANTIC COASTAL PLAIN	Lowland and Intermediate Upland	Flat upper terrace surface cut by shallow valleys; Delaware River floodplain.	Very low.	Unconsolidated to poorly consolidated sand and gravel; underlain by schist, gneiss, and other metamorphic rocks.	Unconsolidated deposits underlain by complexly folded and faulted rocks.	0	200	Dendritic.	*Northwest:* Base of low to vague Fall Line escarpment. *East:* Arbitrary.	Fluvial erosion and deposition.

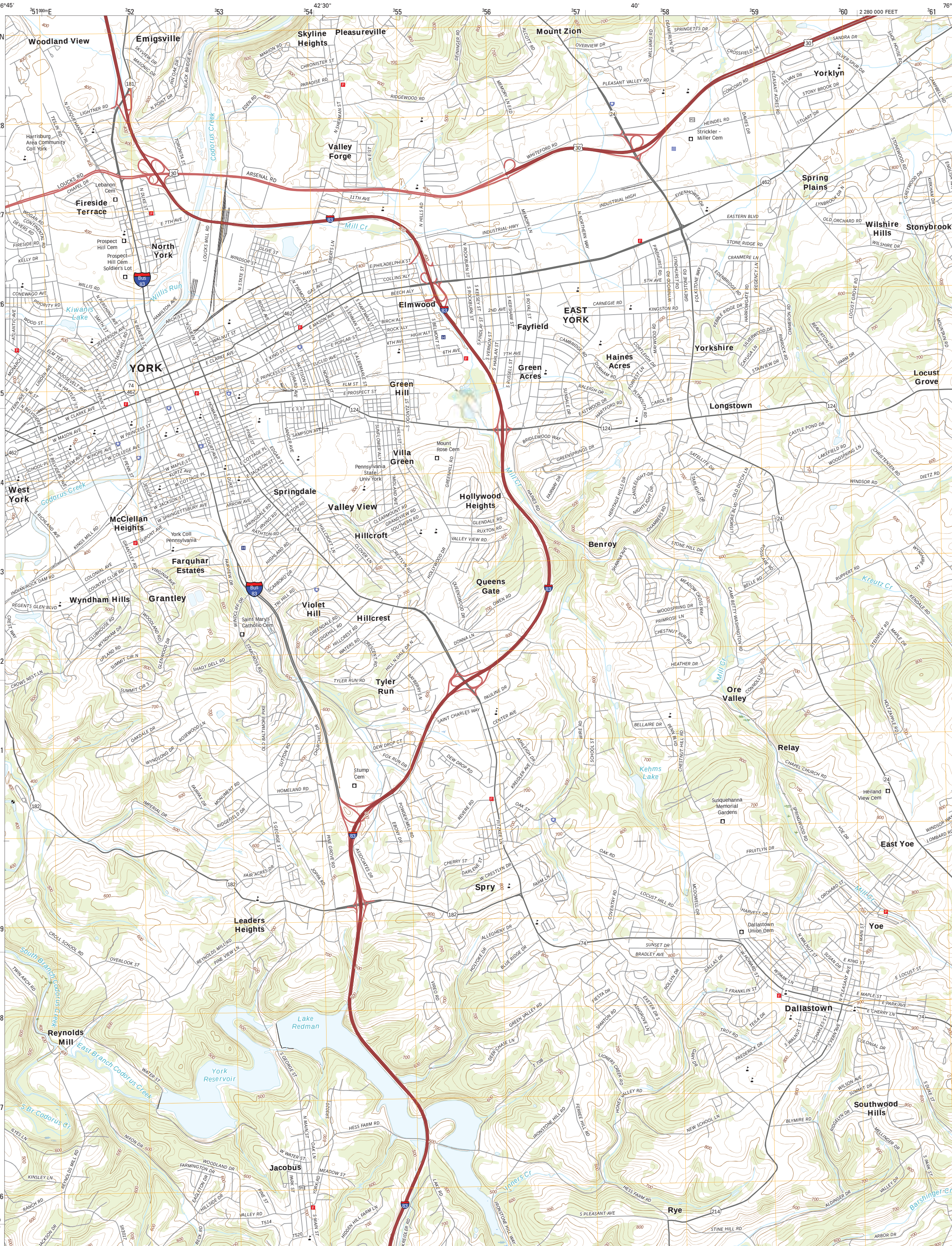
[1]Local relief: 0 to 100 feet, very low; 101 to 300 feet, low; 301 to 600 feet, moderate; 601 to 1,000 feet, high; >1,000 feet, very high.
(Relief categories listed here for Pennsylvania do not necessarily apply to other states or countries.)
[2]Elevations are in feet.

Appendix 1.7 Topographic Map

U.S. DEPARTMENT OF THE INTERIOR
U.S. GEOLOGICAL SURVEY

The National Map
US Topo

YORK QUADRANGLE
PENNSYLVANIA-YORK CO.
7.5-MINUTE SERIES



76°45' 40°00' 76°37'30" 39°52'30" 57'30" 55' 42'30" 40'
2 280 000 FEET
240 000 FEET
200 000 FEET
2 250 000 FEET

Produced by the United States Geological Survey
North American Datum of 1983 (NAD83)
World Geodetic System of 1984 (WGS84). Projection and
1 000-meter grid: Universal Transverse Mercator, Zone 18S
10 000-foot ticks: Pennsylvania Coordinate System of 1983 (south zone)

This map is not a legal document. Boundaries may be generalized for this map scale. Private lands within government reservations may not be shown. Obtain permission before entering private lands.

Imagery....................NAIP, June 2013
Roads.................... U.S. Census Bureau, 2015 - 2016
Names....................GNIS, 2016
Hydrography..........National Hydrography Dataset, 2013
Contours..........National Elevation Dataset, 2015
Boundaries..........Multiple sources; see metadata file 1972 - 2016

Wetlands.........FWS National Wetlands Inventory 1977 - 2014

MN
GN
11° 16´ 200 MILS
1° 5´ 19 MILS

UTM GRID AND 2016 MAGNETIC NORTH DECLINATION AT CENTER OF SHEET

U.S. National Grid
100,000-m Square ID
UK
Grid Zone Designation
18S

SCALE 1:24 000

KILOMETERS 1 0.5 0 1 2
METERS 1000 500 0 1000 2000
MILES 1 0.5 0 1
FEET 1000 0 1000 2000 3000 4000 5000 6000 7000 8000 9000 10000

CONTOUR INTERVAL 20 FEET
NORTH AMERICAN VERTICAL DATUM OF 1988

This map was produced to conform with the National Geospatial Program US Topo Product Standard, 2011.
A metadata file associated with this product is draft version 0.6.19

PENNSYLVANIA
QUADRANGLE LOCATION

1	2	3
4		5
6	7	8

ADJOINING QUADRANGLES

1 Dover
2 York Haven
3 Columbia West
4 West York
5 Red Lion
6 Seven Valleys
7 Glen Rock
8 Stewartstown

ROAD CLASSIFICATION
Expressway
Secondary Hwy
Ramp
Local Connector
Local Road
4WD
Interstate Route
US Route
State Route

YORK, PA
2016

NSN. 7643016391962
NGA REF NO. USGSX24K72121

Appendix 1.8 Soils Map

Custom Soil Resource Report
Soil Map

Map Scale: 1:35,400 if printed on A portrait (8.5" x 11") sheet.

N

Meters: 0 500 1000 2000 3000

Feet: 0 1500 3000 6000 9000

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 18N WGS84

MAP LEGEND

Area of Interest (AOI)

- Area of Interest (AOI)

Soils

- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features

- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features

- Streams and Canals

Transportation

- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background

- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: York County, Pennsylvania
Survey Area Data: Version 13, Sep 19, 2018

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Mar 26, 2011—Mar 2, 2012

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Cd	Chagrin silt loam	0.0	0.0%
CeB	Chester silt loam, 3 to 8 percent slopes	17.7	0.5%
CeC	Chester silt loam, 8 to 15 percent slopes	38.1	1.0%
CkA	Clarksburg silt loam, 0 to 3 percent slopes	7.8	0.2%
CkB	Clarksburg silt loam, 3 to 8 percent slopes	3.5	0.1%
Cm	Codorus silt loam	2.4	0.1%
CnB	Conestoga silt loam, 3 to 8 percent slopes	13.9	0.4%
DuA	Duffield silt loam, 0 to 3 percent slopes	45.7	1.2%
DuB	Duffield silt loam, 3 to 8 percent slopes	90.1	2.3%
DuC	Duffield silt loam, 8 to 15 percent slopes	44.0	1.1%
DWD	Duffield and Hagerstown silt loams, 15 to 25 percent slopes	3.2	0.1%
EdC	Edgemont channery loam, 8 to 15 percent slopes	12.5	0.3%
EeF	Edgemont channery loam, 25 to 70 percent slopes, very stony	33.5	0.9%
EkB	Elk silt loam, 3 to 8 percent slopes	3.6	0.1%
GbD	Glenelg channery silt loam, 15 to 25 percent slopes	68.5	1.8%
HaA	Hagerstown silt loam, 0 to 3 percent slopes	51.2	1.3%
HaB	Hagerstown silt loam, 3 to 8 percent slopes	116.8	3.0%
HaC	Hagerstown silt loam, 8 to 15 percent slopes	8.4	0.2%
Lw	Lindside silt loam	110.4	2.8%
MOB	Mt. Airy and Manor soils, 3 to 8 percent slopes	12.0	0.3%
MOC	Mt. Airy and Manor soils, 8 to 15 percent slopes	132.2	3.4%
MOD	Mt. Airy and Manor soils, 15 to 25 percent slopes	26.0	0.7%
MOE	Mt. Airy and Manor soils, 25 to 35 percent slopes	23.2	0.6%

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
Pt	Pits, quarry	19.9	0.5%
Uc	Urban land	2,633.5	67.3%
UdB	Urban land-Chester complex, 0 to 8 percent slopes	109.3	2.8%
UeB	Urban land-Conestoga complex, 0 to 8 percent slopes	194.0	5.0%
UfC	Urban land-Mt. Airy complex, 8 to 15 percent slopes	19.1	0.5%
W	Water	72.8	1.9%
Totals for Area of Interest		**3,913.3**	**100.0%**

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The

delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Appendix 1.9 National Wetland Inventory Map

Wetlands in the National Wetlands Inventory

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

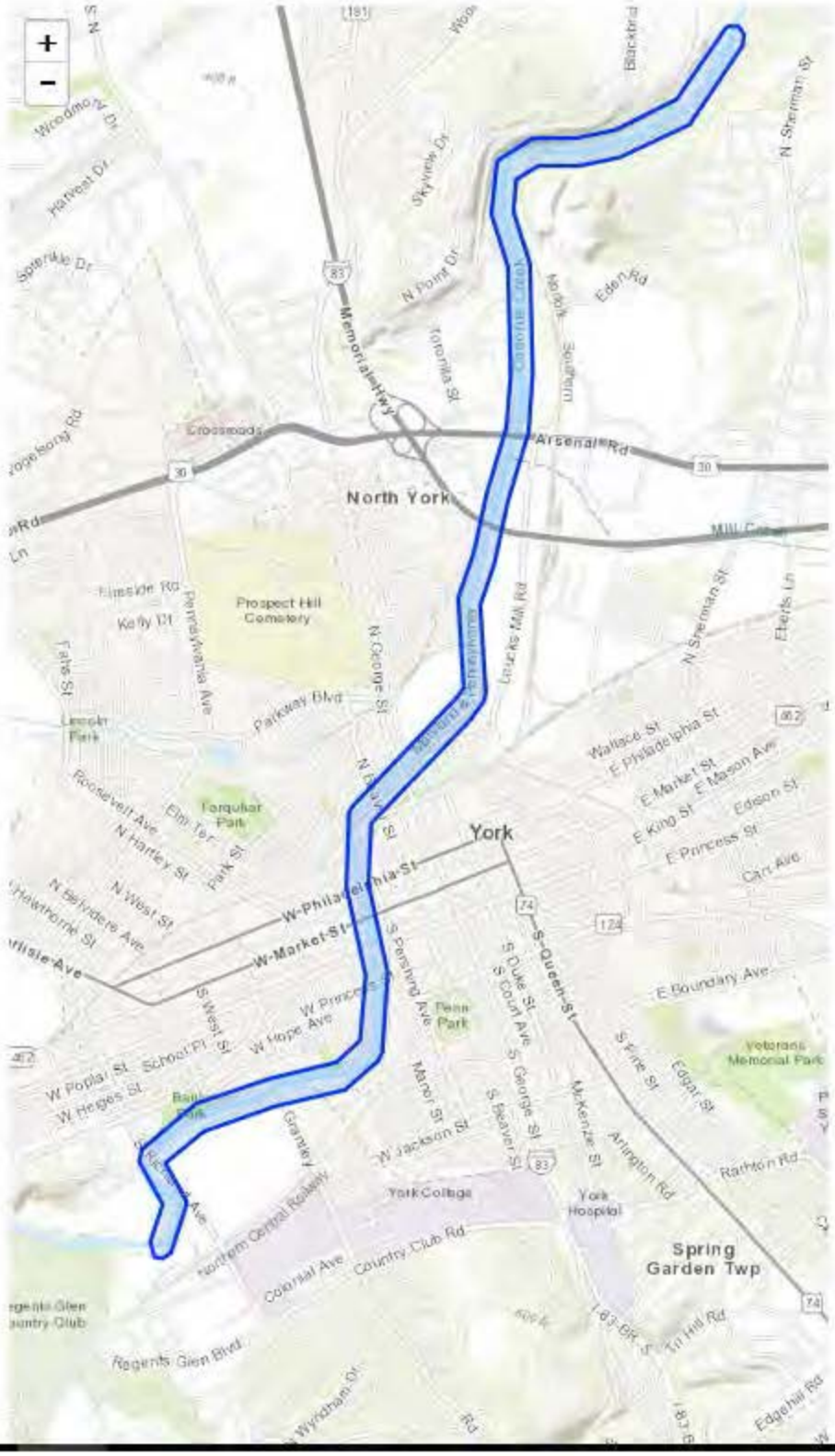
For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site. Other limitations, exclusions, and precautions are listed below.

This location overlaps the following wetlands:

RIVERINE

R2UBH



Appendix 1.10 PNDI Map

1. PROJECT INFORMATION

Project Name: **Indian Rock Dam/ Codorus Creek Flood Risk Management**
Date of Review: **3/22/2018 09:18:19 AM**
Project Category: **In-stream / Riverine Activities and Projects, Levees and similar flood control structures (construction, modification, maintenance)**
Project Area: **198.31 acres**
County(s): **York**
Township/Municipality(s): **MANCHESTER; NORTH YORK; SPRING GARDEN; SPRINGETTSBURY; WEST MANCHESTER; YORK**
ZIP Code: **17401; 17402; 17403; 17404**
Quadrangle Name(s): **YORK; YORK HAVEN**
Watersheds HUC 8: **Lower Susquehanna**
Watersheds HUC 12: **Codorus Creek-Susquehanna River; Mill Creek; Willis Run-Codorus Creek**
Decimal Degrees: **39.952754, -76.738055**
Degrees Minutes Seconds: **39° 57' 9.9128" N, 76° 44' 16.9979" W**

2. SEARCH RESULTS

Agency	Results	Response
PA Game Commission	**Potential Impact**	**FURTHER REVIEW IS REQUIRED, See Agency Response**
PA Department of Conservation and Natural Resources	No Known Impact	No Further Review Required
PA Fish and Boat Commission	**Potential Impact**	**FURTHER REVIEW IS REQUIRED, See Agency Response**
U.S. Fish and Wildlife Service	**Avoidance Measure**	**See Agency Response**

As summarized above, Pennsylvania Natural Diversity Inventory (PNDI) records indicate there may be potential impacts to threatened and endangered and/or special concern species and resources within the project area. If the response above indicates "No Further Review Required" no additional communication with the respective agency is required. If the response is "Further Review Required" or "See Agency Response," refer to the appropriate agency comments below. Please see the DEP Information Section of this receipt if a PA Department of Environmental Protection Permit is required.

Note that regardless of PNDI search results, projects requiring a Chapter 105 DEP individual permit or GP 5, 6, 7, 8, 9 or 11 must comply with the bog turtle habitat screening requirements of the PASPGP.

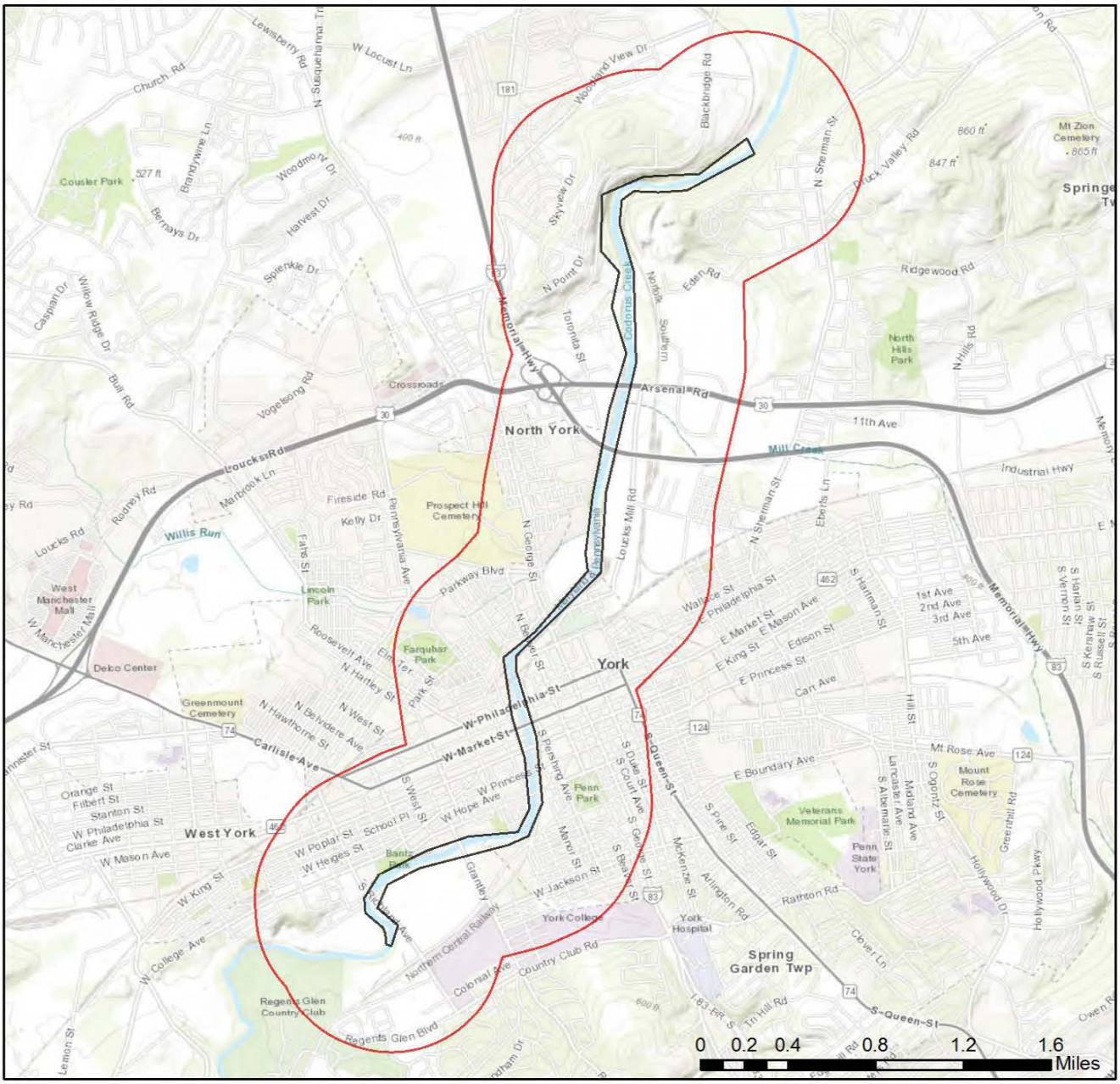
Indian Rock Dam/ Codorus Creek Flood Risk Management

Project Boundary

Buffered Project Boundary

Service Layer Credits: Sources: Esri, HERE, DeLorme, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, MapmyIndia, © OpenStreetMap contributors, and the GIS User Community
Esri, HERE, Garmin, © OpenStreetMap contributors, and the GIS user community

Indian Rock Dam/ Codorus Creek Flood Risk Management



Project Boundary

Buffered Project Boundary

Service Layer Credits: Sources: Esri, HERE, DeLorme, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, MapmyIndia, © OpenStreetMap contributors, and the GIS User Community
Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS,

3. AGENCY COMMENTS

Regardless of whether a DEP permit is necessary for this proposed project, any potential impacts to threatened and endangered species and/or special concern species and resources must be resolved with the appropriate jurisdictional agency. In some cases, a permit or authorization from the jurisdictional agency may be needed if adverse impacts to these species and habitats cannot be avoided.

These agency determinations and responses are **valid for two years** (from the date of the review), and are based on the project information that was provided, including the exact project location; the project type, description, and features; and any responses to questions that were generated during this search. If any of the following change: 1) project location, 2) project size or configuration, 3) project type, or 4) responses to the questions that were asked during the online review, the results of this review are not valid, and the review must be searched again via the PNDI Environmental Review Tool and resubmitted to the jurisdictional agencies. The PNDI tool is a primary screening tool, and a desktop review may reveal more or fewer impacts than what is listed on this PNDI receipt. The jursidictional agencies **strongly advise against** conducting surveys for the species listed on the receipt prior to consultation with the agencies.

PA Game Commission

RESPONSE:

Further review of this project is necessary to resolve the potential impact(s). Please send project information to this agency for review (see WHAT TO SEND).

PGC Species: (Note: The Pennsylvania Conservation Explorer tool is a primary screening tool, and a desktop review may reveal more or fewer species than what is listed below.)

Scientific Name	Common Name	Current Status
Ardea alba	Great Egret	Endangered
Ardea herodias	Great Blue Heron	Special Concern Species*
Nyctanassa violacea	Yellow-crowned Night-heron	Endangered
Nycticorax nycticorax	Black-crowned Night-heron	Endangered

PA Department of Conservation and Natural Resources

RESPONSE:

No Impact is anticipated to threatened and endangered species and/or special concern species and resources.

PA Fish and Boat Commission

RESPONSE:

Further review of this project is necessary to resolve the potential impact(s). Please send project information to this agency for review (see WHAT TO SEND).

PFBC Species: (Note: The Pennsylvania Conservation Explorer tool is a primary screening tool, and a desktop review may reveal more or fewer species than what is listed below.)

Scientific Name	Common Name	Current Status
Sensitive Species**		Special Concern Species*
Sensitive Species**		Special Concern Species*

U.S. Fish and Wildlife Service

RESPONSE:

Information Request: Due to the proximity of this project to a bald eagle nest, it is possible that project activities may disturb bald eagles, which is a form of "take" under the Bald and Golden Eagle Protection Act and may require a permit. The Service has prepared a project screening form to help you determine which specific measures may be necessary to avoid disturbing bald eagles and their nests, based on the type and scope of your proposed project or activity, and its distance from a bald eagle nest. Complete the "Bald Eagle Project Screening Form" (see https://www.fws.gov/northeast/pafo/pdf/Bald_Eagle_Project_Screening_Form_102716.pdf) and implement the measures identified on that form. Submit a copy of the completed Screening Form to the appropriate federal or state permitting agencies (e.g., PA DEP).

As the project proponent or applicant, I certify that I will implement the above Avoidance Measure:
_____(Signature)

SPECIAL NOTE: **If you agree to implement the above Avoidance Measure, no further coordination with this agency regarding threatened and endangered species and/or special concern species and resources is required.** If you are not able to comply with the Avoidance Measures, you are required to coordinate with this agency - please send project information to this agency for review (see "What to Send" section).

* Special Concern Species or Resource - Plant or animal species classified as rare, tentatively undetermined or candidate as well as other taxa of conservation concern, significant natural communities, special concern populations (plants or animals) and unique geologic features.
** Sensitive Species - Species identified by the jurisdictional agency as collectible, having economic value, or being susceptible to decline as a result of visitation.

WHAT TO SEND TO JURISDICTIONAL AGENCIES

If project information was requested by one or more of the agencies above, upload* or email* the following information to the agency(s). Instructions for uploading project materials can be found here. This option provides the applicant with the convenience of sending project materials to a single location accessible to all three state agencies. Alternatively, applicants may email or mail their project materials (see AGENCY CONTACT INFORMATION).
***Note:** U.S.Fish and Wildlife Service requires applicants to mail project materials to the USFWS PA field office (see AGENCY CONTACT INFORMATION). USFWS will not accept project materials submitted electronically (by upload or email).

Check-list of Minimum Materials to be submitted:
____Project narrative with a description of the overall project, the work to be performed, current physical characteristics of the site and acreage to be impacted.
____A map with the project boundary and/or a basic site plan(particularly showing the relationship of the project to the physical features such as wetlands, streams, ponds, rock outcrops, etc.)
In addition to the materials listed above, USFWS REQUIRES the following
____**SIGNED** copy of a Final Project Environmental Review Receipt

The inclusion of the following information may expedite the review process.
____Color photos keyed to the basic site plan (i.e. showing on the site plan where and in what direction each photo was taken and the date of the photos)
____Information about the presence and location of wetlands in the project area, and how this was determined (e.g., by a qualified wetlands biologist), if wetlands are present in the project area, provide project plans showing the location of all project features, as well as wetlands and streams.

4. DEP INFORMATION

The Pa Department of Environmental Protection (DEP) requires that a signed copy of this receipt, along with any required documentation from jurisdictional agencies concerning resolution of potential impacts, be submitted with applications for permits requiring PNDI review. Two review options are available to permit applicants for handling PNDI coordination in conjunction with DEP's permit review process involving either T&E Species or species of special concern. Under sequential review, the permit applicant performs a PNDI screening and completes all coordination with the appropriate jurisdictional agencies prior to submitting the permit application. The applicant will include with its application, both a PNDI receipt and/or a clearance letter from the jurisdictional agency if the PNDI Receipt shows a Potential Impact to a species or the applicant chooses to obtain letters directly from the jurisdictional agencies. Under concurrent review, DEP, where feasible, will allow technical review of the permit to occur concurrently with the T&E species consultation with the jurisdictional agency. The applicant must still supply a copy of the PNDI Receipt with its permit application. The PNDI Receipt should also be submitted to the appropriate agency according to directions on the PNDI Receipt. The applicant and the jurisdictional agency will work together to resolve the potential impact(s). See the DEP PNDI policy at https://conservationexplorer.dcnr.pa.gov/content/resources.

5. ADDITIONAL INFORMATION

The PNDI environmental review website is a preliminary screening tool. There are often delays in updating species status classifications. Because the proposed status represents the best available information regarding the conservation status of the species, state jurisdictional agency staff give the proposed statuses at least the same consideration as the current legal status. If surveys or further information reveal that a threatened and endangered and/or special concern species and resources exist in your project area, contact the appropriate jurisdictional agency/agencies immediately to identify and resolve any impacts.

For a list of species known to occur in the county where your project is located, please see the species lists by county found on the PA Natural Heritage Program (PNHP) home page (www.naturalheritage.state.pa.us). Also note that the PNDI Environmental Review Tool only contains information about species occurrences that have actually been reported to the PNHP.

6. AGENCY CONTACT INFORMATION

PA Department of Conservation and Natural Resources
Bureau of Forestry, Ecological Services Section
400 Market Street, PO Box 8552
Harrisburg, PA 17105-8552
Email: RA-HeritageReview@pa.gov

U.S. Fish and Wildlife Service
Pennsylvania Field Office
Endangered Species Section
110 Radnor Rd; Suite 101
State College, PA 16801
NO Faxes Please

PA Fish and Boat Commission
Division of Environmental Services
595 E. Rolling Ridge Dr., Bellefonte, PA 16823
Email: RA-FBPACENOTIFY@pa.gov

PA Game Commission
Bureau of Wildlife Habitat Management
Division of Environmental Planning and Habitat Protection
2001 Elmerton Avenue, Harrisburg, PA 17110-9797
Email: RA-PGC_PNDI@pa.gov
NO Faxes Please

7. PROJECT CONTACT INFORMATION

Name:_____
Company/Business Name:_____
Address:_____
City, State, Zip:_____
Phone:(_____)_____Fax:(_____)_____
Email:_____

8. CERTIFICATION

I certify that ALL of the project information contained in this receipt (including project location, project size/configuration, project type, answers to questions) is true, accurate and complete. In addition, if the project type, location, size or configuration changes, or if the answers to any questions that were asked during this online review change, I agree to re-do the online environmental review.

_____ _____
applicant/project proponent signature date

1. PROJECT INFORMATION

Project Name: **Indian Rock Dam/Codorus Creek Flood Risk Management Project Repairs**
Date of Review: **4/27/2018 07:38:18 AM**
Project Category: **In-stream / Riverine Activities and Projects, Levees and similar flood control structures (construction, modification, maintenance)**
Project Area: **265.42 acres**
County(s): **York**
Township/Municipality(s): **MANCHESTER; NORTH YORK; SPRING GARDEN; SPRINGETTSBURY; WEST MANCHESTER; YORK**
ZIP Code: **17401; 17402; 17403; 17404**
Quadrangle Name(s): **YORK; YORK HAVEN**
Watersheds HUC 8: **Lower Susquehanna**
Watersheds HUC 12: **Codorus Creek-Susquehanna River; Mill Creek; Willis Run-Codorus Creek**
Decimal Degrees: **39.969845, -76.728084**
Degrees Minutes Seconds: **39° 58' 11.4411" N, 76° 43' 41.1017" W**

2. SEARCH RESULTS

Agency	Results	Response
PA Game Commission	**Potential Impact**	**FURTHER REVIEW IS REQUIRED, See Agency Response**
PA Department of Conservation and Natural Resources	No Known Impact	No Further Review Required
PA Fish and Boat Commission	**Potential Impact**	**FURTHER REVIEW IS REQUIRED, See Agency Response**
U.S. Fish and Wildlife Service	**Avoidance Measure**	**See Agency Response**

As summarized above, Pennsylvania Natural Diversity Inventory (PNDI) records indicate there may be potential impacts to threatened and endangered and/or special concern species and resources within the project area. If the response above indicates "No Further Review Required" no additional communication with the respective agency is required. If the response is "Further Review Required" or "See Agency Response," refer to the appropriate agency comments below. Please see the DEP Information Section of this receipt if a PA Department of Environmental Protection Permit is required.

Note that regardless of PNDI search results, projects requiring a Chapter 105 DEP individual permit or GP 5, 6, 7, 8, 9 or 11 must comply with the bog turtle habitat screening requirements of the PASPGP.

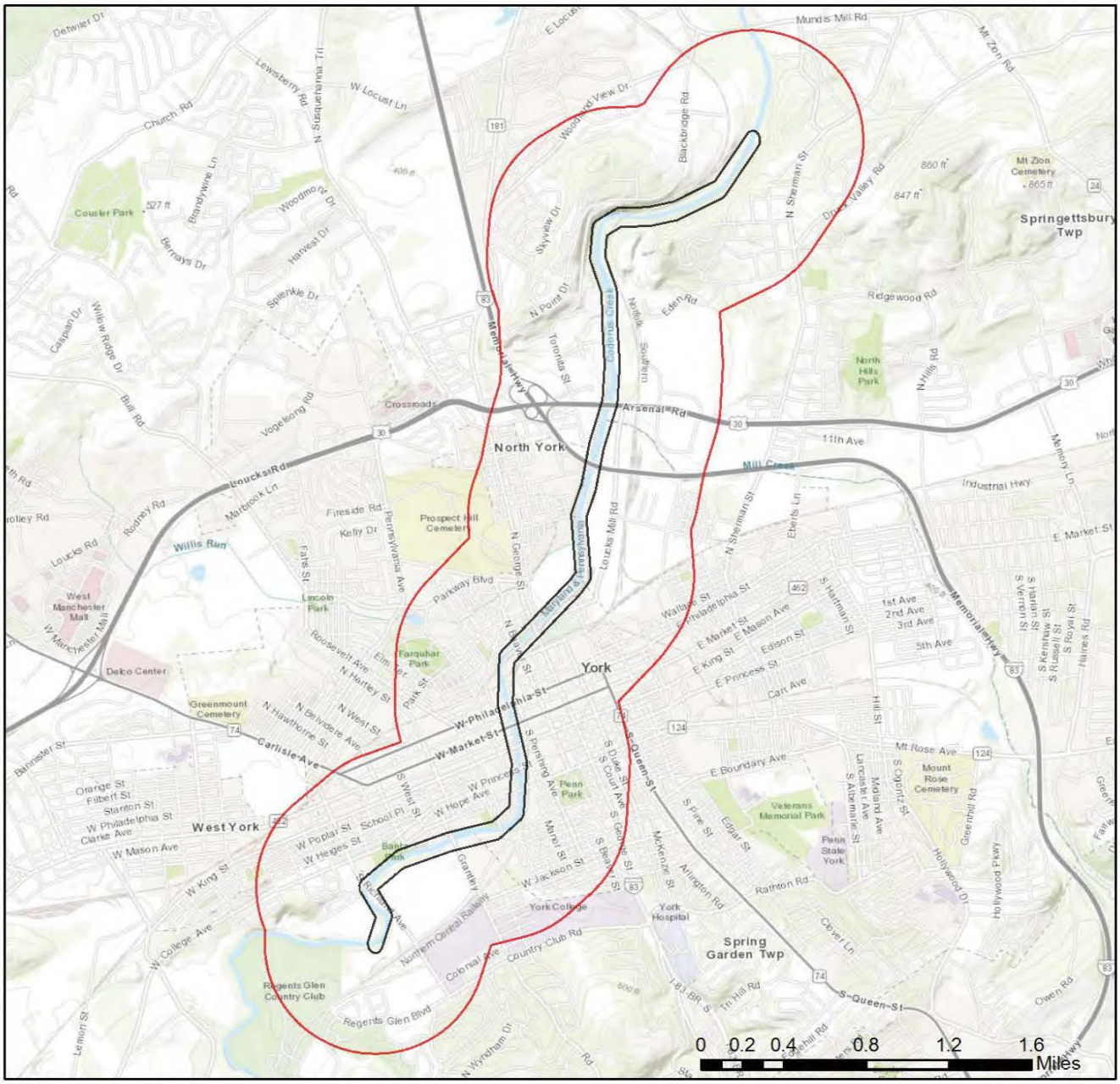
Indian Rock Dam/Codorus Creek Flood Risk Management Project Repairs

Project Boundary

Buffered Project Boundary

Service Layer Credits: Sources: Esri, HERE, DeLorme, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, MapmyIndia, © OpenStreetMap contributors, and the GIS User Community
Esri, HERE, Garmin, © OpenStreetMap contributors, and the GIS user community

Indian Rock Dam/Codorus Creek Flood Risk Management Project Repairs



Project Boundary

Buffered Project Boundary

Service Layer Credits: Sources: Esri, HERE, DeLorme, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, MapmyIndia, © OpenStreetMap contributors, and the GIS User Community
Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS,

3. AGENCY COMMENTS

Regardless of whether a DEP permit is necessary for this proposed project, any potential impacts to threatened and endangered species and/or special concern species and resources must be resolved with the appropriate jurisdictional agency. In some cases, a permit or authorization from the jurisdictional agency may be needed if adverse impacts to these species and habitats cannot be avoided.

These agency determinations and responses are **valid for two years** (from the date of the review), and are based on the project information that was provided, including the exact project location; the project type, description, and features; and any responses to questions that were generated during this search. If any of the following change: 1) project location, 2) project size or configuration, 3) project type, or 4) responses to the questions that were asked during the online review, the results of this review are not valid, and the review must be searched again via the PNDI Environmental Review Tool and resubmitted to the jurisdictional agencies. The PNDI tool is a primary screening tool, and a desktop review may reveal more or fewer impacts than what is listed on this PNDI receipt. The jursidictional agencies **strongly advise against** conducting surveys for the species listed on the receipt prior to consultation with the agencies.

PA Game Commission

RESPONSE:

Further review of this project is necessary to resolve the potential impact(s). Please send project information to this agency for review (see WHAT TO SEND).

PGC Species: (Note: The Pennsylvania Conservation Explorer tool is a primary screening tool, and a desktop review may reveal more or fewer species than what is listed below.)

Scientific Name	Common Name	Current Status
Ardea alba	Great Egret	Endangered
Ardea herodias	Great Blue Heron	Special Concern Species*
Nyctanassa violacea	Yellow-crowned Night-heron	Endangered
Nycticorax nycticorax	Black-crowned Night-heron	Endangered

PA Department of Conservation and Natural Resources

RESPONSE:

No Impact is anticipated to threatened and endangered species and/or special concern species and resources.

PA Fish and Boat Commission

RESPONSE:

Further review of this project is necessary to resolve the potential impact(s). Please send project information to this agency for review (see WHAT TO SEND).

PFBC Species: (Note: The Pennsylvania Conservation Explorer tool is a primary screening tool, and a desktop review may reveal more or fewer species than what is listed below.)

Scientific Name	Common Name	Current Status
Sensitive Species**		Special Concern Species*
Sensitive Species**		Special Concern Species*

U.S. Fish and Wildlife Service

RESPONSE:

Information Request: Due to the proximity of this project to a bald eagle nest, it is possible that project activities may disturb bald eagles, which is a form of "take" under the Bald and Golden Eagle Protection Act and may require a permit. The Service has prepared a project screening form to help you determine which specific measures may be necessary to avoid disturbing bald eagles and their nests, based on the type and scope of your proposed project or activity, and its distance from a bald eagle nest. Complete the "Bald Eagle Project Screening Form" (see https://www.fws.gov/northeast/pafo/pdf/Bald_Eagle_Project_Screening_Form_102716.pdf) and implement the measures identified on that form. Submit a copy of the completed Screening Form to the appropriate federal or state permitting agencies (e.g., PA DEP).

As the project proponent or applicant, I certify that I will implement the above Avoidance Measure:
_____(Signature)

SPECIAL NOTE: **If you agree to implement the above Avoidance Measure, no further coordination with this agency regarding threatened and endangered species and/or special concern species and resources is required.** If you are not able to comply with the Avoidance Measures, you are required to coordinate with this agency - please send project information to this agency for review (see "What to Send" section).

* Special Concern Species or Resource - Plant or animal species classified as rare, tentatively undetermined or candidate as well as other taxa of conservation concern, significant natural communities, special concern populations (plants or animals) and unique geologic features.
** Sensitive Species - Species identified by the jurisdictional agency as collectible, having economic value, or being susceptible to decline as a result of visitation.

WHAT TO SEND TO JURISDICTIONAL AGENCIES

If project information was requested by one or more of the agencies above, upload* or email* the following information to the agency(s). Instructions for uploading project materials can be found here. This option provides the applicant with the convenience of sending project materials to a single location accessible to all three state agencies. Alternatively, applicants may email or mail their project materials (see AGENCY CONTACT INFORMATION).
***Note:** U.S.Fish and Wildlife Service requires applicants to mail project materials to the USFWS PA field office (see AGENCY CONTACT INFORMATION). USFWS will not accept project materials submitted electronically (by upload or email).

Check-list of Minimum Materials to be submitted:
____Project narrative with a description of the overall project, the work to be performed, current physical characteristics of the site and acreage to be impacted.
____A map with the project boundary and/or a basic site plan(particularly showing the relationship of the project to the physical features such as wetlands, streams, ponds, rock outcrops, etc.)
In addition to the materials listed above, USFWS REQUIRES the following
____**SIGNED** copy of a Final Project Environmental Review Receipt

The inclusion of the following information may expedite the review process.
____Color photos keyed to the basic site plan (i.e. showing on the site plan where and in what direction each photo was taken and the date of the photos)
____Information about the presence and location of wetlands in the project area, and how this was determined (e.g., by a qualified wetlands biologist), if wetlands are present in the project area, provide project plans showing the location of all project features, as well as wetlands and streams.

4. DEP INFORMATION

The Pa Department of Environmental Protection (DEP) requires that a signed copy of this receipt, along with any required documentation from jurisdictional agencies concerning resolution of potential impacts, be submitted with applications for permits requiring PNDI review. Two review options are available to permit applicants for handling PNDI coordination in conjunction with DEP's permit review process involving either T&E Species or species of special concern. Under sequential review, the permit applicant performs a PNDI screening and completes all coordination with the appropriate jurisdictional agencies prior to submitting the permit application. The applicant will include with its application, both a PNDI receipt and/or a clearance letter from the jurisdictional agency if the PNDI Receipt shows a Potential Impact to a species or the applicant chooses to obtain letters directly from the jurisdictional agencies. Under concurrent review, DEP, where feasible, will allow technical review of the permit to occur concurrently with the T&E species consultation with the jurisdictional agency. The applicant must still supply a copy of the PNDI Receipt with its permit application. The PNDI Receipt should also be submitted to the appropriate agency according to directions on the PNDI Receipt. The applicant and the jurisdictional agency will work together to resolve the potential impact(s). See the DEP PNDI policy at https://conservationexplorer.dcnr.pa.gov/content/resources.

5. ADDITIONAL INFORMATION

The PNDI environmental review website is a preliminary screening tool. There are often delays in updating species status classifications. Because the proposed status represents the best available information regarding the conservation status of the species, state jurisdictional agency staff give the proposed statuses at least the same consideration as the current legal status. If surveys or further information reveal that a threatened and endangered and/or special concern species and resources exist in your project area, contact the appropriate jurisdictional agency/agencies immediately to identify and resolve any impacts.

For a list of species known to occur in the county where your project is located, please see the species lists by county found on the PA Natural Heritage Program (PNHP) home page (www.naturalheritage.state.pa.us). Also note that the PNDI Environmental Review Tool only contains information about species occurrences that have actually been reported to the PNHP.

6. AGENCY CONTACT INFORMATION

PA Department of Conservation and Natural Resources
Bureau of Forestry, Ecological Services Section
400 Market Street, PO Box 8552
Harrisburg, PA 17105-8552
Email: RA-HeritageReview@pa.gov

U.S. Fish and Wildlife Service
Pennsylvania Field Office
Endangered Species Section
110 Radnor Rd; Suite 101
State College, PA 16801
NO Faxes Please

PA Fish and Boat Commission
Division of Environmental Services
595 E. Rolling Ridge Dr., Bellefonte, PA 16823
Email: RA-FBPACENOTIFY@pa.gov

PA Game Commission
Bureau of Wildlife Habitat Management
Division of Environmental Planning and Habitat Protection
2001 Elmerton Avenue, Harrisburg, PA 17110-9797
Email: RA-PGC_PNDI@pa.gov
NO Faxes Please

7. PROJECT CONTACT INFORMATION

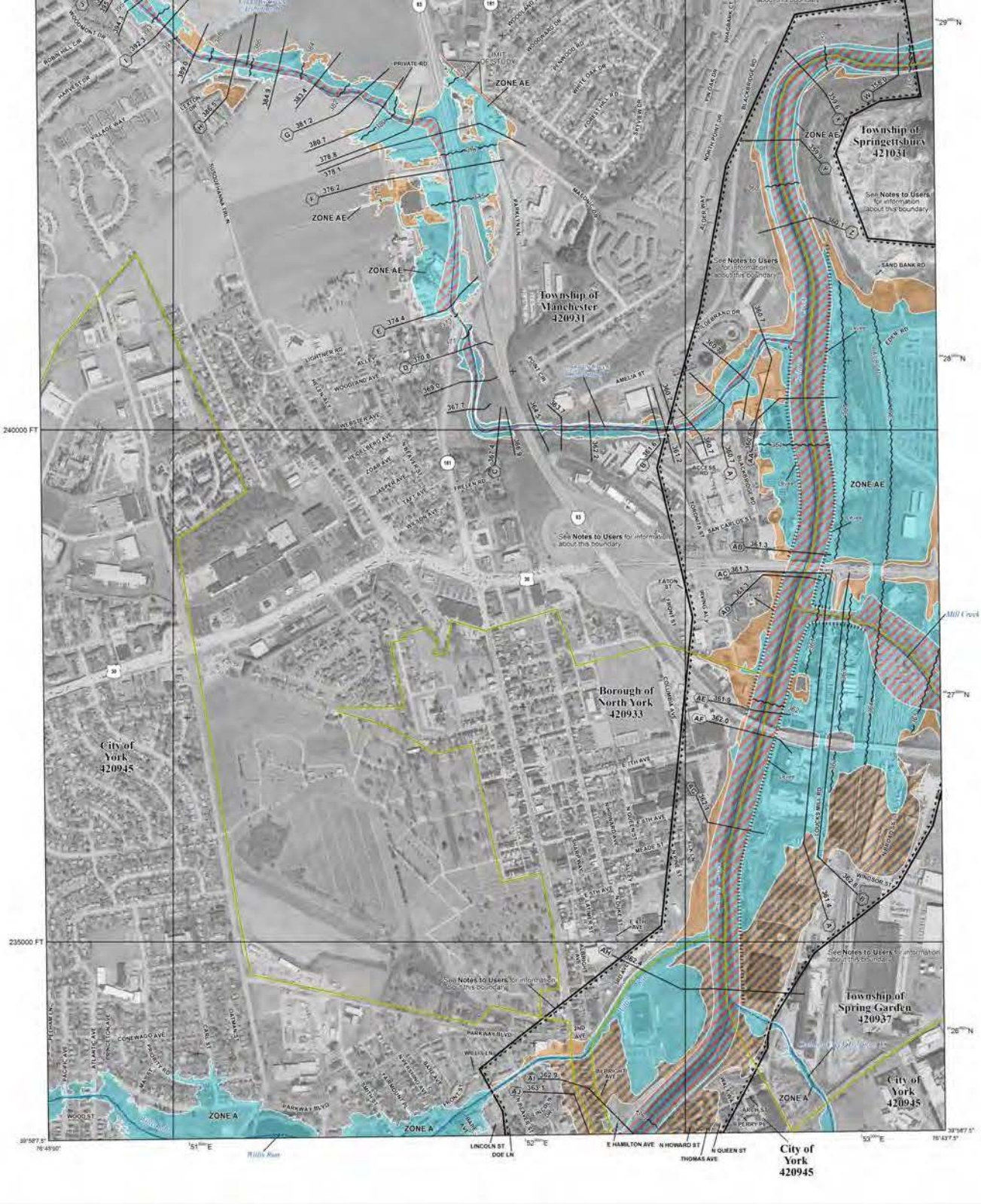
Name:_____
Company/Business Name:_____
Address:_____
City, State, Zip:_____
Phone:(_____)_____Fax:(_____)_____
Email:_____

8. CERTIFICATION

I certify that ALL of the project information contained in this receipt (including project location, project size/configuration, project type, answers to questions) is true, accurate and complete. In addition, if the project type, location, size or configuration changes, or if the answers to any questions that were asked during this online review change, I agree to re-do the online environmental review.

_____ _____
applicant/project proponent signature date

Appendix 1.11 FEMA Maps



FLOOD HAZARD INFORMATION

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

THE INFORMATION DEPICTED ON THIS MAP AND SUPOPRTING DOCUMENTATION ARE ALSO AVAILABLE IN DIGITAL FORMAT AT

HTTP://MSC.FEMA.GOV

SPECIAL FLOOD HAZARD AREAS

- Without Base Flood Elevation (BFE) Zone A, V, A99
- With BFE or Depth Zone AE, AO, AH, VE, AR
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD

- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile Zone X
- Future Conditions 1% Annual Chance Flood Hazard Zone X
- Area with Reduced Flood Risk due to Levee See Notes. Zone X

OTHER AREAS

- NO SCREEN Areas of Minimal Flood Hazard Zone X
- Area of Undetermined Flood Hazard Zone D

GENERAL STRUCTURES

- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

- 18.2 / 17.5 Cross Sections with 1% Annual Chance Water Surface Elevation (BFE)

NOTES TO USERS

For information and questions about this map, available products associated with this FIRM including historic versions of this FIRM, how to order products or the National Flood Insurance Program in general, please call the FEMA Map Information eXchange at 1-877-FEMA-MAP (1-877-336-2627) or visit the FEMA Map Service Center website at http://msc.fema.gov. Available products may include previously issued Letters of Map Change, a Flood Insurance Study Report, and/or digital versions of this map. Many of these products can be ordered or obtained directly from the website. Users may determine the current map date for each FIRM panel by visiting the FEMA Map Service Center website or by calling the FEMA Map Information eXchange.

Communities annexing land on adjacent FIRM panels must obtain a current copy of the adjacent panel as well as the current FIRM index. These may be ordered directly from the Map Service Center at the number listed above.

For community and countywide map dates refer to the Flood Insurance Study report for this jurisdiction.

To determine if flood insurance is available in this community, contact your insurance agent or call the National Flood Insurance Program at 1-800-638-6620.

Base map information shown on this FIRM was provided in digital format by multiple agencies. York County Planning Commission provided digital format of base transportation and political boundaries, dated 2011. The United States Geological Survey (USGS) provided 7.5- Minute Series Topographic Maps, Dated 1989. Pennsylvania Department of Conservation and Natural Resources, PAMAP provided the ortho imagery for York County, dated 2008.

ATTENTION: The levee, dike, or other structure that impacts flood hazards inside this boundary has not been shown to comply with Section 65.10 of the NFIP Regulations. As such, this FIRM panel will be revised at a later date to update the flood hazard information associated with this structure.

The flood hazard data inside this boundary on the FIRM panel has been republished from the previous effective (historic) FIRM for this area, after being converted from NGVD 29 to NAVD 88.

SCALE

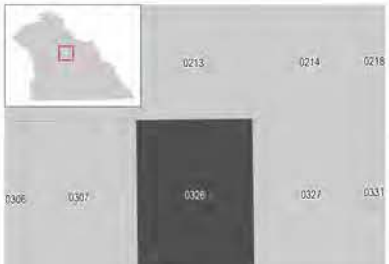
Map Projection:
Pennsylvania State Plane, Zone 3702; North American Datum 1983; GRS_1980 Spheroid; North American Vertical Datum of 1988

1 inch = 500 feet 1:6,000

0 500 1,000 2,000 Feet

0 130 260 520 Meters

PANEL LOCATOR



FEMA

National Flood Insurance Program

NATIONAL FLOOD INSURANCE PROGRAM

FLOOD INSURANCE RATE MAP

YORK COUNTY, PENNSYLVANIA

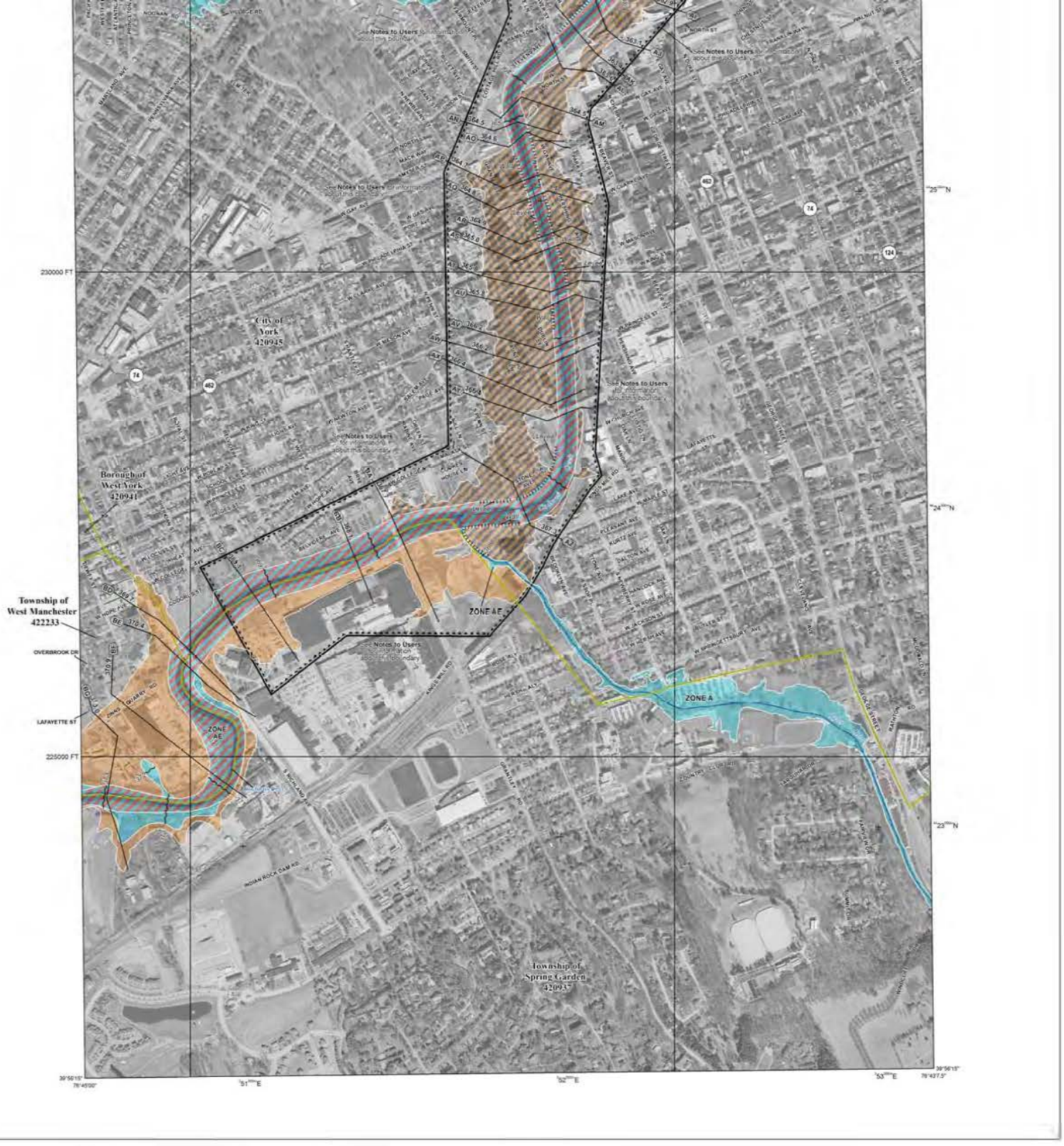
(All Jurisdictions)

PANEL 326 OF 701

FEMA

Panel Contains:

COMMUNITY	NUMBER	PANEL	SUFFIX
MANCHESTER, TOWNSHIP OF	420931	0326	F
NORTH YORK, BOROUGH OF	420933	0326	F
SPRING GARDEN, TOWNSHIP OF	420937	0326	F
SPRINGETTSBURY, TOWNSHIP OF	421031	0326	F
YORK, CITY OF	420945	0326	F



FLOOD HAZARD INFORMATION

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

THE INFORMATION DEPICTED ON THIS MAP AND SUPPORTING DOCUMENTATION ARE ALSO AVAILABLE IN DIGITAL FORMAT AT

HTTP://MSC.FEMA.GOV

SPECIAL FLOOD HAZARD AREAS

- Without Base Flood Elevation (BFE) Zone A, V, A99
- With BFE or Depth Zone AE, AH, AO, VE, AR
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD

- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile Zone X
- Future Conditions 1% Annual Chance Flood Hazard Zone X
- Area with Reduced Flood Risk due to Levee See Notes. Zone X

OTHER AREAS

- NO SCREEN — Areas of Minimal Flood Hazard Zone X
- Area of Undetermined Flood Hazard Zone D

GENERAL STRUCTURES

- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

E 18.2 / 17.5 — Cross Sections with 1% Annual Chance Water Surface Elevation (BFE)

NOTES TO USERS

For information and questions about this map, available products associated with the FIRM, including historic versions of the FIRM, how to order products or the National Flood Insurance Program in general, please call the FEMA Map Information eXchange at 1-877-FEMA-MAP (1-877-336-2627) or visit the FEMA Map Service Center website at http://msc.fema.gov. Available products may include previously issued Letters of Map Change, a Flood Insurance Study Report, and/or digital versions of this map. Many of these products can be ordered or obtained directly from the website. Users may determine the current map date for each FIRM panel by visiting the FEMA Map Service Center website or by calling the FEMA Map Information eXchange.

Communities annexing land on adjacent FIRM panels must obtain a current copy of the adjacent panel as well as the current FIRM Index. These may be ordered directly from the Map Service Center at the number listed above.

For community and countywide map dates refer to the Flood Insurance Study report for this jurisdiction.

To determine if flood insurance is available in this community, contact your insurance agent or call the National Flood Insurance Program at 1-800-638-6620.

Base map information shown on this FIRM was provided in digital format by multiple agencies. York County Planning Commission provided digital format of base transportation and political boundaries, dated 2011. The United States Geological Survey (USGS) provided 7.5' Minute Series Topographic Maps, Dated 1985. Pennsylvania Department of Conservation and Natural Resources (PASDA) provided 3rd meter imagery for York County, dated 2008.

ATTENTION: The levee, dike, or other structure that impacts flood hazards inside this boundary has not been shown to comply with Section 65.10 of the NFIP Regulations. As such, this FIRM panel will be revised at a later date to update the flood hazard information associated with this structure.

The flood hazard data inside this boundary on this FIRM panel has been republished from the previous effective (hybrid) FIRM for this area, after being converted from NGVD 29 to NAVD 88.

SCALE

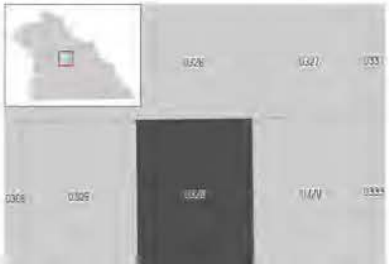
Map Projection:
Pennsylvania State Plane Zone 3702, North American Datum 1983,
ORS_1980 Spheroid; North American Vertical Datum of 1988

1 inch = 500 feet 1:6,000

0 500 1,000 2,000 Feet

0 130 260 520 Meters

PANEL LOCATOR



FEMA

National Flood Insurance Program

NATIONAL FLOOD INSURANCE PROGRAM

FLOOD INSURANCE RATE MAP

YORK COUNTY, PENNSYLVANIA

(All Jurisdictions)

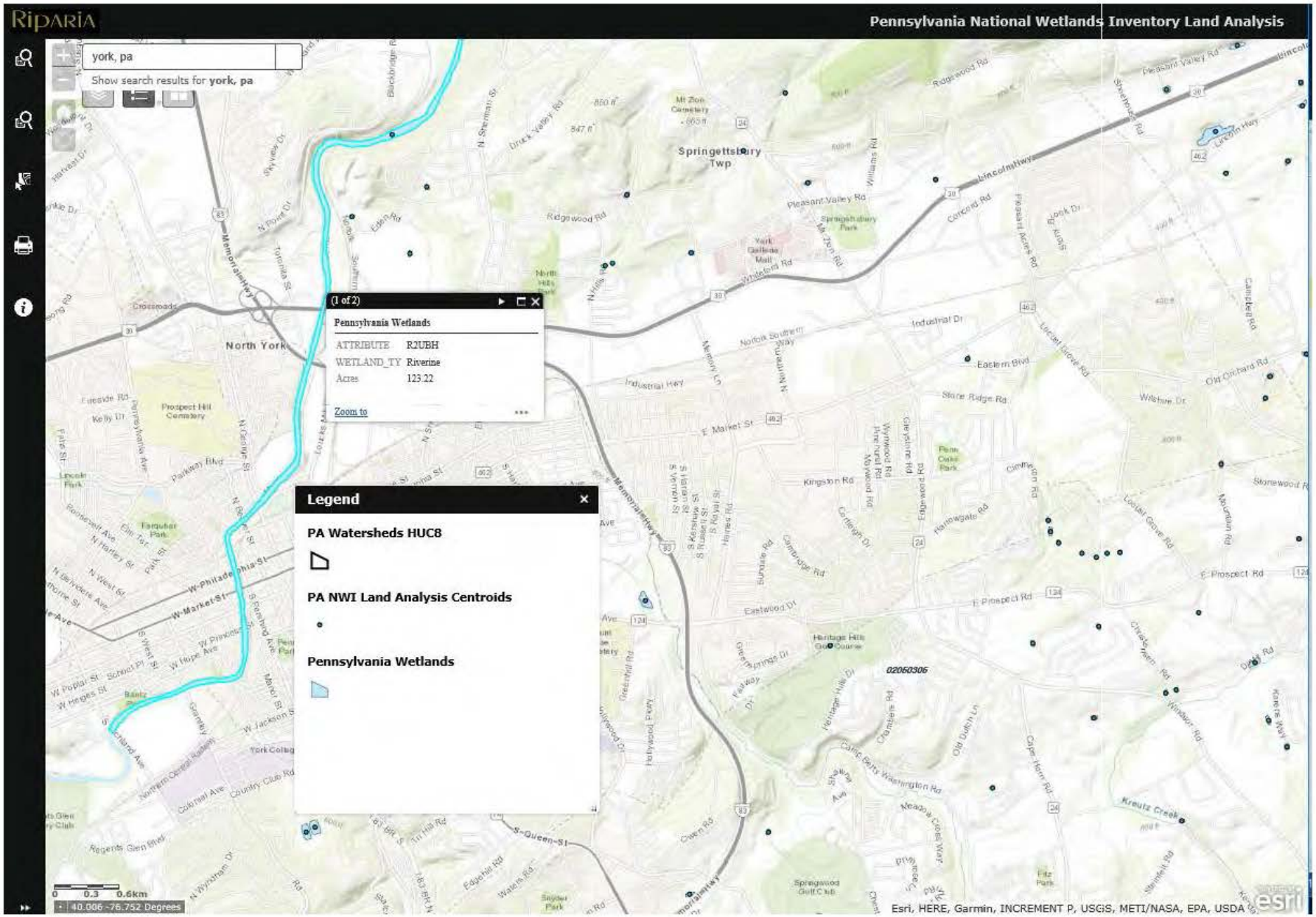
PANEL 328 OF 701

FEMA

Panel Contains

COMMUNITY	NUMBER	PANEL	SUFFIX
NORTH YORK, BOROUGH OF	420933	0328	F
SPRING GARDEN TOWNSHIP OF	420937	0328	F
WEST MANCHESTER TOWNSHIP OF	422233	0328	F
WEST YORK, BOROUGH OF	420941	0328	F
YORK, CITY OF	420945	0328	F

Appendix 1.12 PANWI Map


RiPARIA
Pennsylvania National Wetlands Inventory Land Analysis
york, pa
Show search results for york, pa
(1 of 2)
Pennsylvania Wetlands
ATTRIBUTE R2UBH
WETLAND_TY Riverine
Acres 123.22
Zoom to
Legend
PA Watersheds HUC8
PA NWI Land Analysis Centroids
Pennsylvania Wetlands
02060306
North York
Springettsbury Twp
0 0.3 0.6km
40.006 -76.752 Degrees
Esri, HERE, Garmin, INCREMENT P, USGS, METI/NASA, EPA, USDA

Appendix 1.13 EPA Green Book

Pennsylvania Nonattainment/Maintenance Status for Each County by Year for All Criteria Pollutants

Data is current as of April 30, 2018

Listed by County, NAAQS, Area. The 8-hour Ozone (1997) standard was revoked on April 6, 2015 and the 1-hour Ozone (1979) standard was revoked on June 15, 2005.

* The 1997 Primary Annual PM-2.5 NAAQS (level of 15 µg/m^3) is revoked in attainment and maintenance areas for that NAAQS. For additional information see the PM-2.5 NAAQS SIP Requirements Final Rule, effective October 24, 2016. (81 FR 58009)

Change the State:
PENNSYLVANIA GO

Important Notes

County	NAAQS	Area Name	Nonattainment in Year	Redesignation to Maintenance	Classification	Whole or/ Part County	Population (2010)	State/ County FIPS Codes
PENNSYLVANIA								
Adams County	1-Hour Ozone (1979) -NAAQS revoked	York, PA	92 93 94 95 96 97 98 99 00 01 02 03 04	/ /	Marginal	Whole	101,407	42/001
Adams County	8-Hour Ozone (1997) -NAAQS revoked	York, PA	04 05 06 07	02/13/2008	Former Subpart 1	Whole	101,407	42/001
Allegheny County	1-Hour Ozone (1979) -NAAQS revoked	Pittsburgh-Beaver Valley, PA	92 93 94 95 96 97 98 99 00	11/19/2001	Moderate	Whole	1,223,348	42/003
Allegheny County	8-Hour Ozone (1997) -NAAQS revoked	Pittsburgh-Beaver Valley, PA	04 05 06 07 08 09 10 11 12 13 14	/ /	Moderate	Whole	1,223,348	42/003

County	NAAQS	Area Name	Nonattainment in Year	Redesignation to Maintenance	Classification	Whole or/ Part County	Population (2010)	State/ County FIPS Codes
Allegheny County	8-Hour Ozone (2008)	Pittsburgh-Beaver Valley, PA	12 13 14 15 16 17 18	/ /	Marginal	Whole	1,223,348	42/003
Allegheny County	Carbon Monoxide (1971)	Pittsburgh, PA	92 93 94 95 96 97 98 99 00 01 02	01/13/2003	Not Classified	Part	320,395	42/003
Allegheny County	PM-10 (1987)	Clairton & 4 Boroughs, PA	92 93 94 95 96 97 98 99 00 01 02	10/14/2003	Moderate	Part	18,700	42/003
Allegheny County	PM-2.5 (1997)	Liberty-Clairton, PA	05 06 07 08 09 10 11 12 13 14 15 16 17 18	/ /	Moderate	Part	20,789	42/003
Allegheny County	PM-2.5 (1997) -NAAQS revoked	Pittsburgh-Beaver Valley, PA	05 06 07 08 09 10 11 12 13 14	10/02/2015 *	Moderate	Part	1,206,540	42/003
Allegheny County	PM-2.5 (2006)	Liberty-Clairton, PA	09 10 11 12 13 14 15 16 17 18	/ /	Moderate	Part	20,789	42/003
Allegheny County	PM-2.5 (2006)	Pittsburgh-Beaver Valley, PA	09 10 11 12 13 14	10/02/2015	Moderate	Part	1,206,540	42/003
Allegheny County	PM-2.5 (2012)	Allegheny County, PA	15 16 17 18	/ /	Moderate	Whole	1,223,348	42/003
Allegheny County	Sulfur Dioxide (1971)	Hazelwood, PA	92 93 94 95 96 97 98 99 00 01 02 03	08/20/2004		Part	387,190	42/003
Allegheny County	Sulfur Dioxide (2010)	Allegheny, PA	13 14 15 16 17 18	/ /		Part	126,934	42/003
Armstrong County	1-Hour Ozone (1979) -NAAQS revoked	Pittsburgh-Beaver Valley, PA	92 93 94 95 96 97 98 99 00	11/19/2001	Moderate	Whole	68,941	42/005
Armstrong County	8-Hour Ozone (1997) -NAAQS revoked	Pittsburgh-Beaver Valley, PA	04 05 06 07 08 09 10 11 12 13 14	/ /	Moderate	Whole	68,941	42/005
Armstrong County	8-Hour Ozone (2008)	Pittsburgh-Beaver Valley, PA	12 13 14 15 16 17 18	/ /	Marginal	Whole	68,941	42/005
Armstrong County	PM-2.5 (1997) -NAAQS revoked	Pittsburgh-Beaver Valley, PA	05 06 07 08 09 10 11 12 13 14	10/02/2015 *	Moderate	Part	4,511	42/005
Armstrong County	PM-2.5 (2006)	Pittsburgh-Beaver Valley, PA	09 10 11 12 13 14	10/02/2015	Moderate	Part	4,511	42/005

County	NAAQS	Area Name	Nonattainment in Year	Redesignation to Maintenance	Classification	Whole or/ Part County	Population (2010)	State/ County FIPS Codes
Armstrong County	Sulfur Dioxide (1971)	Armstrong Co, PA	92 93 94 95 96 97 98 99 00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18	/ /		Part	4,516	42/005
Armstrong County	Sulfur Dioxide (2010)	Indiana, PA	13 14 15 16 17 18	/ /		Part	3,898	42/005
Beaver County	1-Hour Ozone (1979) -NAAQS revoked	Pittsburgh-Beaver Valley, PA	92 93 94 95 96 97 98 99 00	11/19/2001	Moderate	Whole	170,539	42/007
Beaver County	8-Hour Ozone (1997) -NAAQS revoked	Pittsburgh-Beaver Valley, PA	04 05 06 07 08 09 10 11 12 13 14	/ /	Moderate	Whole	170,539	42/007
Beaver County	8-Hour Ozone (2008)	Pittsburgh-Beaver Valley, PA	12 13 14 15 16 17 18	/ /	Marginal	Whole	170,539	42/007
Beaver County	Lead (2008)	Lower Beaver Valley, PA	10 11 12 13 14 15 16 17 18	/ /		Part	17,654	42/007
Beaver County	PM-2.5 (1997) -NAAQS revoked	Pittsburgh-Beaver Valley, PA	05 06 07 08 09 10 11 12 13 14	10/02/2015 *	Moderate	Whole	170,539	42/007
Beaver County	PM-2.5 (2006)	Pittsburgh-Beaver Valley, PA	09 10 11 12 13 14	10/02/2015	Moderate	Whole	170,539	42/007
Beaver County	Sulfur Dioxide (2010)	Beaver, PA	13 14 15 16 17 18	/ /		Part	14,780	42/007
Berks County	1-Hour Ozone (1979) -NAAQS revoked	Reading, PA	92 93 94 95 96	06/06/1997	Moderate	Whole	411,442	42/011
Berks County	8-Hour Ozone (1997) -NAAQS revoked	Reading, PA	04 05 06	09/10/2007	Former Subpart 1	Whole	411,442	42/011
Berks County	8-Hour Ozone (2008)	Reading, PA	12 13 14 15 16 17 18	/ /	Marginal	Whole	411,442	42/011
Berks County	Lead (2008)	Lyons, PA	10 11 12 13 14 15 16 17 18	/ /		Part	19,480	42/011

County	NAAQS	Area Name	Nonattainment in Year	Redesignation to Maintenance	Classification	Whole or/ Part County	Population (2010)	State/ County FIPS Codes
Berks County	Lead (2008)	North Reading, PA	10 11 12 13 14 15 16 17 18	/ /		Part	29,334	42/011
Berks County	PM-2.5 (1997) -NAAQS revoked	Reading, PA	05 06 07 08 09 10 11 12 13 14	03/04/2015 *	Moderate	Whole	411,442	42/011
Blair County	1-Hour Ozone (1979) -NAAQS revoked	Altoona, PA	92 93 94 95 96 97 98 99 00 01 02 03 04	/ /	Marginal	Whole	127,089	42/013
Blair County	8-Hour Ozone (1997) -NAAQS revoked	Altoona, PA	04 05 06	08/01/2007	Former Subpart 1	Whole	127,089	42/013
Bucks County	1-Hour Ozone (1979) -NAAQS revoked	Philadelphia-Wilmington-Trenton, PA-NJ-DE-MD	92 93 94 95 96 97 98 99 00 01 02 03 04	/ /	Severe 15	Whole	625,249	42/017
Bucks County	8-Hour Ozone (1997) -NAAQS revoked	Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE	04 05 06 07 08 09 10 11 12 13 14	/ /	Moderate	Whole	625,249	42/017
Bucks County	8-Hour Ozone (2008)	Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE	12 13 14 15 16 17 18	/ /	Marginal	Whole	625,249	42/017
Bucks County	PM-2.5 (1997) -NAAQS revoked	Philadelphia-Wilmington, PA-NJ-DE	05 06 07 08 09 10 11 12 13 14	04/21/2015 *	Moderate	Whole	625,249	42/017
Bucks County	PM-2.5 (2006)	Philadelphia-Wilmington, PA-NJ-DE	09 10 11 12 13 14	04/21/2015	Moderate	Whole	625,249	42/017
Butler County	1-Hour Ozone (1979) -NAAQS revoked	Pittsburgh-Beaver Valley, PA	92 93 94 95 96 97 98 99 00	11/19/2001	Moderate	Whole	183,862	42/019
Butler County	8-Hour Ozone (1997) -NAAQS revoked	Pittsburgh-Beaver Valley, PA	04 05 06 07 08 09 10 11 12 13 14	/ /	Moderate	Whole	183,862	42/019

County	NAAQS	Area Name	Nonattainment in Year	Redesignation to Maintenance	Classification	Whole or/ Part County	Population (2010)	State/ County FIPS Codes
Butler County	8-Hour Ozone (2008)	Pittsburgh-Beaver Valley, PA	12 13 14 15 16 17 18	/ /	Marginal	Whole	183,862	42/019
Butler County	PM-2.5 (1997) -NAAQS revoked	Pittsburgh-Beaver Valley, PA	05 06 07 08 09 10 11 12 13 14	10/02/2015 *	Moderate	Whole	183,862	42/019
Butler County	PM-2.5 (2006)	Pittsburgh-Beaver Valley, PA	09 10 11 12 13 14	10/02/2015	Moderate	Whole	183,862	42/019
Cambria County	1-Hour Ozone (1979) -NAAQS revoked	Johnstown, PA	92 93 94 95 96 97 98 99 00 01 02 03 04	/ /	Marginal	Whole	143,679	42/021
Cambria County	8-Hour Ozone (1997) -NAAQS revoked	Johnstown, PA	04 05 06	08/01/2007	Former Subpart 1	Whole	143,679	42/021
Cambria County	PM-2.5 (1997) -NAAQS revoked	Johnstown, PA	05 06 07 08 09 10 11 12 13 14	07/16/2015 *	Moderate	Whole	143,679	42/021
Cambria County	PM-2.5 (2006)	Johnstown, PA	09 10 11 12 13 14	07/16/2015	Moderate	Whole	143,679	42/021
Carbon County	1-Hour Ozone (1979) -NAAQS revoked	Allentown-Bethlehem-Easton, PA-NJ	92 93 94 95 96 97 98 99 00 01 02 03 04	/ /	Marginal	Whole	65,249	42/025
Carbon County	8-Hour Ozone (1997) -NAAQS revoked	Allentown-Bethlehem-Easton, PA	04 05 06 07	04/03/2008	Former Subpart 1	Whole	65,249	42/025
Carbon County	8-Hour Ozone (2008)	Allentown-Bethlehem-Easton, PA	12 13 14 15 16 17 18	/ /	Marginal	Whole	65,249	42/025
Centre County	8-Hour Ozone (1997) -NAAQS revoked	State College, PA	04 05 06	12/14/2007	Former Subpart 1	Whole	153,990	42/027

County	NAAQS	Area Name	Nonattainment in Year	Redesignation to Maintenance	Classification	Whole or/ Part County	Population (2010)	State/ County FIPS Codes
Chester County	1-Hour Ozone (1979) -NAAQS revoked	Philadelphia-Wilmington-Trenton, PA-NJ-DE-MD	92 93 94 95 96 97 98 99 00 01 02 03 04	/ /	Severe 15	Whole	498,886	42/029
Chester County	8-Hour Ozone (1997) -NAAQS revoked	Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE	04 05 06 07 08 09 10 11 12 13 14	/ /	Moderate	Whole	498,886	42/029
Chester County	8-Hour Ozone (2008)	Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE	12 13 14 15 16 17 18	/ /	Marginal	Whole	498,886	42/029
Chester County	PM-2.5 (1997) -NAAQS revoked	Philadelphia-Wilmington, PA-NJ-DE	05 06 07 08 09 10 11 12 13 14	04/21/2015 *	Moderate	Whole	498,886	42/029
Chester County	PM-2.5 (2006)	Philadelphia-Wilmington, PA-NJ-DE	09 10 11 12 13 14	04/21/2015	Moderate	Whole	498,886	42/029
Clearfield County	8-Hour Ozone (1997) -NAAQS revoked	Clearfield and Indiana Cos, PA	04 05 06 07 08	04/20/2009	Former Subpart 1	Whole	81,642	42/033
Columbia County	1-Hour Ozone (1979) -NAAQS revoked	Scranton-Wilkes-Barre, PA	92 93 94 95 96 97 98 99 00 01 02 03 04	/ /	Marginal	Whole	67,295	42/037
Crawford County	1-Hour Ozone (1979) -NAAQS revoked	Crawford Co, PA	92 93 94 95 96 97 98 99 00 01 02 03 04	/ /	Incomplete Data	Whole	88,765	42/039
Cumberland County	1-Hour Ozone (1979) -NAAQS revoked	Harrisburg-Lebanon-Carlisle, PA	92 93 94 95 96 97 98 99 00 01 02 03 04	/ /	Marginal	Whole	235,406	42/041
Cumberland County	8-Hour Ozone (1997) -NAAQS revoked	Harrisburg-Lebanon-Carlisle, PA	04 05 06	07/25/2007	Former Subpart 1	Whole	235,406	42/041

County	NAAQS	Area Name	Nonattainment in Year	Redesignation to Maintenance	Classification	Whole or/ Part County	Population (2010)	State/ County FIPS Codes
Cumberland County	PM-2.5 (1997) -NAAQS revoked	Harrisburg-Lebanon-Carlisle, PA	05 06 07 08 09 10 11 12 13	12/08/2014 *	Moderate	Whole	235,406	42/041
Cumberland County	PM-2.5 (2006)	Harrisburg-Lebanon-Carlisle-York, PA	09 10 11 12 13	12/08/2014	Moderate	Whole	235,406	42/041
Dauphin County	1-Hour Ozone (1979) -NAAQS revoked	Harrisburg-Lebanon-Carlisle, PA	92 93 94 95 96 97 98 99 00 01 02 03 04	/ /	Marginal	Whole	268,100	42/043
Dauphin County	8-Hour Ozone (1997) -NAAQS revoked	Harrisburg-Lebanon-Carlisle, PA	04 05 06	07/25/2007	Former Subpart 1	Whole	268,100	42/043
Dauphin County	PM-2.5 (1997) -NAAQS revoked	Harrisburg-Lebanon-Carlisle, PA	05 06 07 08 09 10 11 12 13	12/08/2014 *	Moderate	Whole	268,100	42/043
Dauphin County	PM-2.5 (2006)	Harrisburg-Lebanon-Carlisle-York, PA	09 10 11 12 13	12/08/2014	Moderate	Whole	268,100	42/043
Delaware County	1-Hour Ozone (1979) -NAAQS revoked	Philadelphia-Wilmington-Trenton, PA-NJ-DE-MD	92 93 94 95 96 97 98 99 00 01 02 03 04	/ /	Severe 15	Whole	558,979	42/045
Delaware County	8-Hour Ozone (1997) -NAAQS revoked	Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE	04 05 06 07 08 09 10 11 12 13 14	/ /	Moderate	Whole	558,979	42/045
Delaware County	8-Hour Ozone (2008)	Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE	12 13 14 15 16 17 18	/ /	Marginal	Whole	558,979	42/045
Delaware County	PM-2.5 (1997) -NAAQS revoked	Philadelphia-Wilmington, PA-NJ-DE	05 06 07 08 09 10 11 12 13 14	04/21/2015 *	Moderate	Whole	558,979	42/045
Delaware County	PM-2.5 (2006)	Philadelphia-Wilmington, PA-NJ-DE	09 10 11 12 13 14	04/21/2015	Moderate	Whole	558,979	42/045

County	NAAQS	Area Name	Nonattainment in Year	Redesignation to Maintenance	Classification	Whole or/ Part County	Population (2010)	State/ County FIPS Codes
Delaware County	PM-2.5 (2012)	Delaware County, PA	15 16 17 18	/ /	Moderate	Whole	558,979	42/045
Erie County	1-Hour Ozone (1979) -NAAQS revoked	Erie, PA	92 93 94 95 96 97 98 99 00 01 02 03 04	/ /	Marginal	Whole	280,566	42/049
Erie County	8-Hour Ozone (1997) -NAAQS revoked	Erie, PA	04 05 06	11/08/2007	Former Subpart 1	Whole	280,566	42/049
Fayette County	1-Hour Ozone (1979) -NAAQS revoked	Pittsburgh-Beaver Valley, PA	92 93 94 95 96 97 98 99 00	11/19/2001	Moderate	Whole	136,606	42/051
Fayette County	8-Hour Ozone (1997) -NAAQS revoked	Pittsburgh-Beaver Valley, PA	04 05 06 07 08 09 10 11 12 13 14	/ /	Moderate	Whole	136,606	42/051
Fayette County	8-Hour Ozone (2008)	Pittsburgh-Beaver Valley, PA	12 13 14 15 16 17 18	/ /	Marginal	Whole	136,606	42/051
Franklin County	1-Hour Ozone (1979) -NAAQS revoked	Franklin Co, PA	92 93 94 95 96 97 98 99 00 01 02 03 04	/ /	Incomplete Data	Whole	149,618	42/055
Franklin County	8-Hour Ozone (1997) -NAAQS revoked	Franklin Co, PA	04 05 06	07/25/2007	Former Subpart 1	Whole	149,618	42/055
Greene County	1-Hour Ozone (1979) -NAAQS revoked	Greene Co, PA	92 93 94 95 96 97 98 99 00 01 02 03 04	/ /	Incomplete Data	Whole	38,686	42/059
Greene County	8-Hour Ozone (1997) -NAAQS revoked	Greene Co, PA	04 05 06 07 08	04/20/2009	Former Subpart 1	Whole	38,686	42/059

County	NAAQS	Area Name	Nonattainment in Year	Redesignation to Maintenance	Classification	Whole or/ Part County	Population (2010)	State/ County FIPS Codes
Greene County	PM-2.5 (1997) -NAAQS revoked	Pittsburgh-Beaver Valley, PA	05 06 07 08 09 10 11 12 13 14	10/02/2015 *	Moderate	Part	2,818	42/059
Greene County	PM-2.5 (2006)	Pittsburgh-Beaver Valley, PA	09 10 11 12 13 14	10/02/2015	Moderate	Part	2,818	42/059
Indiana County	8-Hour Ozone (1997) -NAAQS revoked	Clearfield and Indiana Cos, PA	04 05 06 07 08	04/20/2009	Former Subpart 1	Whole	88,880	42/063
Indiana County	PM-2.5 (1997) -NAAQS revoked	Johnstown, PA	05 06 07 08 09 10 11 12 13 14	07/16/2015 *	Moderate	Part	13,244	42/063
Indiana County	PM-2.5 (2006)	Johnstown, PA	09 10 11 12 13 14	07/16/2015	Moderate	Part	13,244	42/063
Indiana County	Sulfur Dioxide (2010)	Indiana, PA	13 14 15 16 17 18	/ /		Whole	88,880	42/063
Juniata County	1-Hour Ozone (1979) -NAAQS revoked	Juniata Co, PA	92 93 94 95 96 97 98 99 00 01 02 03 04	/ /	Incomplete Data	Whole	24,636	42/067
Lackawanna County	1-Hour Ozone (1979) -NAAQS revoked	Scranton-Wilkes-Barre, PA	92 93 94 95 96 97 98 99 00 01 02 03 04	/ /	Marginal	Whole	214,437	42/069
Lackawanna County	8-Hour Ozone (1997) -NAAQS revoked	Scranton-Wilkes-Barre, PA	04 05 06	12/19/2007	Former Subpart 1	Whole	214,437	42/069
Lancaster County	1-Hour Ozone (1979) -NAAQS revoked	Lancaster, PA	92 93 94 95 96 97 98 99 00 01 02 03 04	/ /	Marginal	Whole	519,445	42/071
Lancaster County	8-Hour Ozone (1997) -NAAQS revoked	Lancaster, PA	04 05 06	07/06/2007	Marginal	Whole	519,445	42/071

County	NAAQS	Area Name	Nonattainment in Year	Redesignation to Maintenance	Classification	Whole or/ Part County	Population (2010)	State/ County FIPS Codes
Lancaster County	8-Hour Ozone (2008)	Lancaster, PA	12 13 14 15 16 17 18	/ /	Marginal	Whole	519,445	42/071
Lancaster County	PM-2.5 (1997) -NAAQS revoked	Lancaster, PA	05 06 07 08 09 10 11 12 13 14	07/16/2015 *	Moderate	Whole	519,445	42/071
Lancaster County	PM-2.5 (2006)	Lancaster, PA	09 10 11 12 13 14	07/16/2015	Moderate	Whole	519,445	42/071
Lawrence County	1-Hour Ozone (1979) -NAAQS revoked	Lawrence Co, PA	92 93 94 95 96 97 98 99 00 01 02 03 04	/ /	Incomplete Data	Whole	91,108	42/073
Lawrence County	PM-2.5 (1997) -NAAQS revoked	Pittsburgh-Beaver Valley, PA	05 06 07 08 09 10 11 12 13 14	10/02/2015 *	Moderate	Part	1,722	42/073
Lawrence County	PM-2.5 (2006)	Pittsburgh-Beaver Valley, PA	09 10 11 12 13 14	10/02/2015	Moderate	Part	1,722	42/073
Lebanon County	1-Hour Ozone (1979) -NAAQS revoked	Harrisburg-Lebanon-Carlisle, PA	92 93 94 95 96 97 98 99 00 01 02 03 04	/ /	Marginal	Whole	133,568	42/075
Lebanon County	8-Hour Ozone (1997) -NAAQS revoked	Harrisburg-Lebanon-Carlisle, PA	04 05 06	07/25/2007	Former Subpart 1	Whole	133,568	42/075
Lebanon County	PM-2.5 (1997) -NAAQS revoked	Harrisburg-Lebanon-Carlisle, PA	05 06 07 08 09 10 11 12 13	12/08/2014 *	Moderate	Whole	133,568	42/075
Lebanon County	PM-2.5 (2006)	Harrisburg-Lebanon-Carlisle-York, PA	09 10 11 12 13	12/08/2014	Moderate	Whole	133,568	42/075
Lebanon County	PM-2.5 (2012)	Lebanon County, PA	15 16 17 18	/ /	Moderate	Whole	133,568	42/075
Lehigh County	1-Hour Ozone (1979) -NAAQS revoked	Allentown-Bethlehem-Easton, PA-NJ	92 93 94 95 96 97 98 99 00 01 02 03 04	/ /	Marginal	Whole	349,497	42/077

County	NAAQS	Area Name	Nonattainment in Year	Redesignation to Maintenance	Classification	Whole or/ Part County	Population (2010)	State/ County FIPS Codes
Lehigh County	8-Hour Ozone (1997) -NAAQS revoked	Allentown-Bethlehem-Easton, PA	04 05 06 07	04/03/2008	Former Subpart 1	Whole	349,497	42/077
Lehigh County	8-Hour Ozone (2008)	Allentown-Bethlehem-Easton, PA	12 13 14 15 16 17 18	/ /	Marginal	Whole	349,497	42/077
Lehigh County	PM-2.5 (2006)	Allentown, PA	09 10 11 12 13 14	04/13/2015	Moderate	Whole	349,497	42/077
Luzerne County	1-Hour Ozone (1979) -NAAQS revoked	Scranton-Wilkes-Barre, PA	92 93 94 95 96 97 98 99 00 01 02 03 04	/ /	Marginal	Whole	320,918	42/079
Luzerne County	8-Hour Ozone (1997) -NAAQS revoked	Scranton-Wilkes-Barre, PA	04 05 06	12/19/2007	Former Subpart 1	Whole	320,918	42/079
Mercer County	1-Hour Ozone (1979) -NAAQS revoked	Youngstown-Warren-Sharon, OH-PA (PA portion)	92 93 94 95 96 97 98 99 00 01 02 03 04	/ / [Split]	Marginal	Whole	116,638	42/085
Mercer County	8-Hour Ozone (1997) -NAAQS revoked	Youngstown-Warren-Sharon, OH-PA	04 05 06	11/19/2007	Former Subpart 1	Whole	116,638	42/085
Monroe County	1-Hour Ozone (1979) -NAAQS revoked	Scranton-Wilkes-Barre, PA	92 93 94 95 96 97 98 99 00 01 02 03 04	/ /	Marginal	Whole	169,842	42/089
Monroe County	8-Hour Ozone (1997) -NAAQS revoked	Scranton-Wilkes-Barre, PA	04 05 06	12/19/2007	Former Subpart 1	Whole	169,842	42/089
Montgomery County	1-Hour Ozone (1979) -NAAQS revoked	Philadelphia-Wilmington-Trenton, PA-NJ-DE-MD	92 93 94 95 96 97 98 99 00 01 02 03 04	/ /	Severe 15	Whole	799,874	42/091

County	NAAQS	Area Name	Nonattainment in Year	Redesignation to Maintenance	Classification	Whole or/ Part County	Population (2010)	State/ County FIPS Codes
Montgomery County	8-Hour Ozone (1997) -NAAQS revoked	Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE	04 05 06 07 08 09 10 11 12 13 14	/ /	Moderate	Whole	799,874	42/091
Montgomery County	8-Hour Ozone (2008)	Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE	12 13 14 15 16 17 18	/ /	Marginal	Whole	799,874	42/091
Montgomery County	PM-2.5 (1997) -NAAQS revoked	Philadelphia-Wilmington, PA-NJ-DE	05 06 07 08 09 10 11 12 13 14	04/21/2015 *	Moderate	Whole	799,874	42/091
Montgomery County	PM-2.5 (2006)	Philadelphia-Wilmington, PA-NJ-DE	09 10 11 12 13 14	04/21/2015	Moderate	Whole	799,874	42/091
Northampton County	1-Hour Ozone (1979) -NAAQS revoked	Allentown-Bethlehem-Easton, PA-NJ	92 93 94 95 96 97 98 99 00 01 02 03 04	/ /	Marginal	Whole	297,735	42/095
Northampton County	8-Hour Ozone (1997) -NAAQS revoked	Allentown-Bethlehem-Easton, PA	04 05 06 07	04/03/2008	Former Subpart 1	Whole	297,735	42/095
Northampton County	8-Hour Ozone (2008)	Allentown-Bethlehem-Easton, PA	12 13 14 15 16 17 18	/ /	Marginal	Whole	297,735	42/095
Northampton County	PM-2.5 (2006)	Allentown, PA	09 10 11 12 13 14	04/13/2015	Moderate	Whole	297,735	42/095
Northumberland County	1-Hour Ozone (1979) -NAAQS revoked	Northumberland Co, PA	92 93 94 95 96 97 98 99 00 01 02 03 04	/ /	Incomplete Data	Whole	94,528	42/097
Perry County	1-Hour Ozone (1979) -NAAQS revoked	Harrisburg-Lebanon-Carlisle, PA	92 93 94 95 96 97 98 99 00 01 02 03 04	/ /	Marginal	Whole	45,969	42/099
Perry County	8-Hour Ozone (1997) -NAAQS revoked	Harrisburg-Lebanon-Carlisle, PA	04 05 06	07/25/2007	Former Subpart 1	Whole	45,969	42/099

County	NAAQS	Area Name	Nonattainment in Year	Redesignation to Maintenance	Classification	Whole or/ Part County	Population (2010)	State/ County FIPS Codes
Philadelphia County	1-Hour Ozone (1979) -NAAQS revoked	Philadelphia-Wilmington-Trenton, PA-NJ-DE-MD	92 93 94 95 96 97 98 99 00 01 02 03 04	/ /	Severe 15	Whole	1,526,006	42/101
Philadelphia County	8-Hour Ozone (1997) -NAAQS revoked	Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE	04 05 06 07 08 09 10 11 12 13 14	/ /	Moderate	Whole	1,526,006	42/101
Philadelphia County	8-Hour Ozone (2008)	Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE	12 13 14 15 16 17 18	/ /	Marginal	Whole	1,526,006	42/101
Philadelphia County	Carbon Monoxide (1971)	Philadelphia-Camden Co, PA-NJ	92 93 94 95	03/15/1996	Moderate <= 12.7ppm	Part	673,750	42/101
Philadelphia County	PM-2.5 (1997) -NAAQS revoked	Philadelphia-Wilmington, PA-NJ-DE	05 06 07 08 09 10 11 12 13 14	04/21/2015 *	Moderate	Whole	1,526,006	42/101
Philadelphia County	PM-2.5 (2006)	Philadelphia-Wilmington, PA-NJ-DE	09 10 11 12 13 14	04/21/2015	Moderate	Whole	1,526,006	42/101
Pike County	1-Hour Ozone (1979) -NAAQS revoked	Pike Co, PA	92 93 94 95 96 97 98 99 00 01 02 03 04	/ /	Incomplete Data	Whole	57,369	42/103
Schuylkill County	1-Hour Ozone (1979) -NAAQS revoked	Schuylkill Co, PA	92 93 94 95 96 97 98 99 00 01 02 03 04	/ /	Incomplete Data	Whole	148,289	42/107
Snyder County	1-Hour Ozone (1979) -NAAQS revoked	Snyder Co, PA	92 93 94 95 96 97 98 99 00 01 02 03 04	/ /	Incomplete Data	Whole	39,702	42/109
Somerset County	1-Hour Ozone (1979) -NAAQS revoked	Johnstown, PA	92 93 94 95 96 97 98 99 00 01 02 03 04	/ /	Marginal	Whole	77,742	42/111

County	NAAQS	Area Name	Nonattainment in Year	Redesignation to Maintenance	Classification	Whole or/ Part County	Population (2010)	State/ County FIPS Codes
Susquehanna County	1-Hour Ozone (1979) -NAAQS revoked	Susquehanna Co, PA	92 93 94 95 96 97 98 99 00 01 02 03 04	/ /	Incomplete Data	Whole	43,356	42/115
Tioga County	8-Hour Ozone (1997) -NAAQS revoked	Tioga Co, PA	04 05 06	07/06/2007	Former Subpart 1	Whole	41,981	42/117
Warren County	1-Hour Ozone (1979) -NAAQS revoked	Warren Co, PA	92 93 94 95 96 97 98 99 00 01 02 03 04	/ /	Incomplete Data	Whole	41,815	42/123
Warren County	Sulfur Dioxide (1971)	Conewango Township (Warren County), PA	92 93 94 95 96 97 98 99 00 01 02 03	08/02/2004		Part	3,594	42/123
Warren County	Sulfur Dioxide (1971)	Warren Co, PA	92 93 94 95 96 97 98 99 00 01 02 03	08/02/2004		Part	15,781	42/123
Warren County	Sulfur Dioxide (2010)	Warren, PA	13 14 15 16 17 18	/ /		Part	18,056	42/123
Washington County	1-Hour Ozone (1979) -NAAQS revoked	Pittsburgh-Beaver Valley, PA	92 93 94 95 96 97 98 99 00	11/19/2001	Moderate	Whole	207,820	42/125
Washington County	8-Hour Ozone (1997) -NAAQS revoked	Pittsburgh-Beaver Valley, PA	04 05 06 07 08 09 10 11 12 13 14	/ /	Moderate	Whole	207,820	42/125
Washington County	8-Hour Ozone (2008)	Pittsburgh-Beaver Valley, PA	12 13 14 15 16 17 18	/ /	Marginal	Whole	207,820	42/125
Washington County	PM-2.5 (1997) -NAAQS revoked	Pittsburgh-Beaver Valley, PA	05 06 07 08 09 10 11 12 13 14	10/02/2015 *	Moderate	Whole	207,820	42/125
Washington County	PM-2.5 (2006)	Pittsburgh-Beaver Valley, PA	09 10 11 12 13 14	10/02/2015	Moderate	Whole	207,820	42/125

County	NAAQS	Area Name	Nonattainment in Year	Redesignation to Maintenance	Classification	Whole or/ Part County	Population (2010)	State/ County FIPS Codes
Wayne County	1-Hour Ozone (1979) -NAAQS revoked	Wayne Co, PA	92 93 94 95 96 97 98 99 00 01 02 03 04	/ /	Incomplete Data	Whole	52,822	42/127
Westmoreland County	1-Hour Ozone (1979) -NAAQS revoked	Pittsburgh-Beaver Valley, PA	92 93 94 95 96 97 98 99 00	11/19/2001	Moderate	Whole	365,169	42/129
Westmoreland County	8-Hour Ozone (1997) -NAAQS revoked	Pittsburgh-Beaver Valley, PA	04 05 06 07 08 09 10 11 12 13 14	/ /	Moderate	Whole	365,169	42/129
Westmoreland County	8-Hour Ozone (2008)	Pittsburgh-Beaver Valley, PA	12 13 14 15 16 17 18	/ /	Marginal	Whole	365,169	42/129
Westmoreland County	PM-2.5 (1997) -NAAQS revoked	Pittsburgh-Beaver Valley, PA	05 06 07 08 09 10 11 12 13 14	10/02/2015 *	Moderate	Whole	365,169	42/129
Westmoreland County	PM-2.5 (2006)	Pittsburgh-Beaver Valley, PA	09 10 11 12 13 14	10/02/2015	Moderate	Whole	365,169	42/129
Wyoming County	1-Hour Ozone (1979) -NAAQS revoked	Scranton-Wilkes-Barre, PA	92 93 94 95 96 97 98 99 00 01 02 03 04	/ /	Marginal	Whole	28,276	42/131
Wyoming County	8-Hour Ozone (1997) -NAAQS revoked	Scranton-Wilkes-Barre, PA	04 05 06	12/19/2007	Former Subpart 1	Whole	28,276	42/131
York County	1-Hour Ozone (1979) -NAAQS revoked	York, PA	92 93 94 95 96 97 98 99 00 01 02 03 04	/ /	Marginal	Whole	434,972	42/133
York County	8-Hour Ozone (1997) -NAAQS revoked	York, PA	04 05 06 07	02/13/2008	Former Subpart 1	Whole	434,972	42/133

County	NAAQS	Area Name	Nonattainment in Year	Redesignation to Maintenance	Classification	Whole or/ Part County	Population (2010)	State/ County FIPS Codes
York County	PM-2.5 (1997) -NAAQS revoked	York, PA	05 06 07 08 09 10 11 12 13	12/08/2014 *	Moderate	Whole	434,972	42/133
York County	PM-2.5 (2006)	Harrisburg-Lebanon-Carlisle-York, PA	09 10 11 12 13	12/08/2014	Moderate	Whole	434,972	42/133

Important Notes

Discover. **Connect.** **Ask.** **Follow.**

2018-4-30

Appendix 1.14 Codorus Creek Beautification Initiative – Overall Corridor Plan

Appendix 2.0 Agency Coordination

Appendix 2.1 IPaC Resource List

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Pennsylvania Ecological Services Field Office
110 Radnor Road Suite 101
State College, PA 16801-7987
Phone: (814) 234-4090 Fax: (814) 234-0748
http://www.fws.gov/northeast/pafo/

In Reply Refer To:
Consultation Code: 05E2PA00-2018-SLI-0639
Event Code: 05E2PA00-2018-E-02865
Project Name: York Codorus FRM Project

February 27, 2018

Subject: List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 *et seq.*), and projects affecting these species may require development of an eagle conservation plan (http://www.fws.gov/windenergy/eagle_guidance.html). Additionally, wind energy projects should follow the wind energy guidelines (http://www.fws.gov/windenergy/) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm; http://www.towerkill.com; and http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html.

Any activity proposed on National Wildlife Refuge lands must undergo a "Compatibility Determination' conducted by the Refuge. Please contact the individual Refuge to discuss any questions or concerns.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List
- USFWS National Wildlife Refuges and Fish Hatcheries

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Pennsylvania Ecological Services Field Office
110 Radnor Road Suite 101
State College, PA 16801-7987
(814) 234-4090

Project Summary

Consultation Code: 05E2PA00-2018-SLI-0639

Event Code: 05E2PA00-2018-E-02865

Project Name: York Codorus FRM Project

Project Type: STREAM / WATERBODY / CANALS / LEVEES / DIKES

Project Description: Line down through Codorus Creek along approximate project center line with 500 feet width (latter selected through IPaC). Includes areas in York County in which work not proposed as of February 2018.

Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/place/39.97412622733437N76.72622151470142W

Counties: York, PA

Endangered Species Act Species

There is a total of 3 threatened, endangered, or candidate species on this species list. Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species. See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

Mammals

NAME	STATUS
Indiana Bat *Myotis sodalis* There is **final** critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/5949	Endangered
Northern Long-eared Bat *Myotis septentrionalis* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9045	Threatened

Reptiles

NAME	STATUS
Bog Turtle *Clemmys muhlenbergii* Population: Wherever found, except GA, NC, SC, TN, VA No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/6962	Threatened

Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

USFWS National W ildlife Refuge Lands And Fish Hatcheries

Any activity proposed on lands managed by the National Wildlife Refuge system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS OR FISH HATCHERIES WITHIN YOUR PROJECT AREA.

Appendix 2.2 PennDOT Map

MAR 12 2018

US Army Corps of Engineers
Baltimore District

Planning Division

Public Notice

Indian Rock Dam/Codorus Creek Flood Risk Management Project, Pennsylvania

All Interested Parties: The U.S. Army Corps of Engineers, Baltimore District, (USACE-Baltimore) is proposing to undertake major repairs to the Codorus Creek Flood Risk Management (FRM) component of the overall Indian Rock Dam/Codorus Creek FRM Project on Codorus Creek. The project passes through West Manchester Township, Spring Garden Township, York City, North York Borough, and Springettsbury Township, all located in York County, Pennsylvania (Enclosure 1). USACE-Baltimore operates and maintains the FRM project, which was constructed in the 1930s and operational in the 1940s. The FRM project is 4.8 miles in length, and includes a widened and deepened creek channel, levees, floodwalls, and bank protective works. The project's infrastructure is aging and in need of major repairs to ensure it continues to properly perform its FRM functions. At this time, rehabilitation of floodwall, levee, drainage structures, and bank protective works is anticipated. USACE-Baltimore is preparing an environmental assessment (EA) for the proposed repairs in accordance with the National Environmental Policy Act of 1969, as amended. The current schedule calls for the draft EA to be publicly released in Summer 2018.

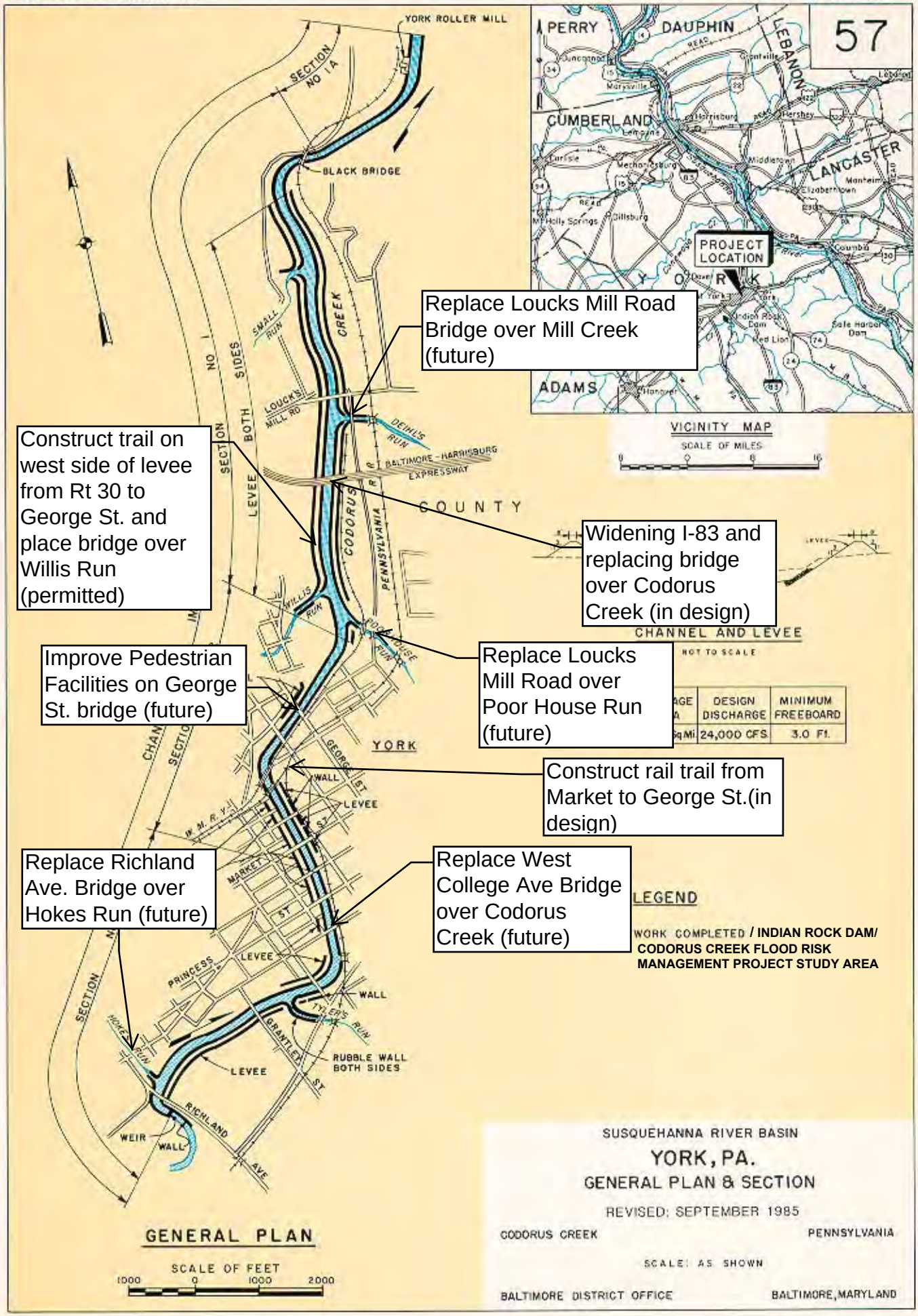
The purpose of this notice is to inform the public of the start of this assessment and to request any information that may affect the implementation of future maintenance work within the project. We request that federal and state agencies provide information concerning interests within your organization's area of responsibility or expertise, and the public provide information which may be pertinent to this project, within 30 days from the date of this notice to the address or listed below. A timely review of the enclosed information and a written response will be greatly appreciated and will assist us with preparation of the EA.

If you have any questions regarding this project, please contact Ms. Tarrie Ostrofsky by phone at (410) 962-4633, by e-mail at Tarrie.L.Ostrofsky@usace.army.mil or by mail at USACE, Planning Division (ATTN: Ostrofsky), 2 Hopkins Plaza, Baltimore, MD 21201.

for Michael J. Conaway
Daniel M. Bierly, P.E.
Chief, Civil Project Development Branch

CORPS OF ENGINEERS

U. S. ARMY



VICINITY MAP

SCALE OF MILES 0 8 16

Replace Loucks Mill Road Bridge over Mill Creek (future)

Construct trail on west side of levee from Rt 30 to George St. and place bridge over Willis Run (permitted)

Widening I-83 and replacing bridge over Codorus Creek (in design)

CHANNEL AND LEVEE

NOT TO SCALE

Improve Pedestrian Facilities on George St. bridge (future)

Replace Loucks Mill Road over Poor House Run (future)

AGE	DESIGN DISCHARGE	MINIMUM FREEBOARD
SqMi	24,000 CFS	3.0 Ft.

Construct rail trail from Market to George St.(in design)

Replace Richland Ave. Bridge over Hokes Run (future)

Replace West College Ave Bridge over Codorus Creek (future)

LEGEND

WORK COMPLETED / INDIAN ROCK DAM/ CODORUS CREEK FLOOD RISK MANAGEMENT PROJECT STUDY AREA

GENERAL PLAN

SCALE OF FEET 1000 0 1000 2000

SUSQUEHANNA RIVER BASIN

YORK, PA.

GENERAL PLAN & SECTION

REVISED: SEPTEMBER 1985

CODORUS CREEK PENNSYLVANIA

SCALE: AS SHOWN

BALTIMORE DISTRICT OFFICE BALTIMORE, MARYLAND

Appendix 2.3 USACE and Resource agency letters and Correspondence

MAY 07 2018

DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS, BALTIMORE DISTRICT
2 HOPKINS PLAZA
BALTIMORE, MD 21201

May 7, 2018

Ms. Andrea MacDonald
Deputy State Historic Preservation Officer
Pennsylvania Historical and
Museum Commission
400 North Street
Commonwealth Keystone Building, 2nd Floor
Harrisburg, PA 17120-0093

Dear Ms. MacDonald,

The purpose of this letter is to initiate consultation with your office in accordance with Section 106 of the National Historic Preservation Act, as amended, and its implementing regulations at 36 CFR Part 800, regarding the Codorus Creek Flood Risk Management (FRM) Project. The United States Army Corps of Engineers, Baltimore District (USACE) is proposing to rehabilitate critical FRM features along Codorus Creek in downtown York, PA (Enclosure 1). The FRM features, consisting of floodwalls, levees, and bank protective works, are one component of the overall York Indian Rock Dam Project. The proposed project consists of 1) the cleaning and inspection of approximately 100 drainage conduits; 2) the installation of riprap upstream of the existing Southeast levee on Codorus Creek and near the Penn Street bridge; 3) the repair and stabilization of the floodwall located immediately downstream of the Market Street Bridge; and 4) the replacement of the existing concrete floodwall near Penn Street.

The existing drainage conduits are located along the entire project area from South Richland Avenue to Blackbridge Road, and consist of storm drains and relief culverts. As part of ongoing maintenance measures, USACE has previously inspected and cleaned approximately 200 drainage conduits. USACE is proposing to inspect the remaining structures and clean, repair, or replace them as deemed necessary. Refer to Enclosure 2 for the locations of the remaining drainage structures. Ground disturbance, while not anticipated, will be limited to previously-disturbed areas.

Upstream of the existing levee on Codorus Creek, riprap will be installed to hinder the excessive bank destabilization (Enclosure 3). The bank has succumbed to extreme erosion and scouring, and needs to be stabilized to protect the existing concrete floodwall from failure. Displaced riprap will also be replaced near the bridge at Penn Street. Riprap currently exists along the project area, so installation or replacement of riprap material would not be a visual intrusion to the cultural landscape. Furthermore, placement of riprap will occur in previously disturbed areas.

The masonry wall, capped by concrete as part of a 1970s USACE project, sits immediately downstream of the Market Street Bridge and is in need of repair and stabilization (Enclosure 4). Recently, some of the masonry stones detached from the wall, but emergency repair work was

conducted in February to replace the masonry stones and mortar. Currently, the masonry wall features a new bulge moving outward toward Codorus Creek. Repair of this bulge is a more immediate concern, but stabilization of the entire wall is the overall objective. While replacing the wall in kind is a possible alternative, total replacement is not desired due to its proximity and physical connection to the 19th century Hotel Codorus, a contributing resource to the York Historic District. If replacement in kind is not chosen as an alternative, then repair or rehabilitation would be pursued.

The final task for this project is to replace the existing concrete flood wall along Codorus Creek near Penn Street due to deterioration and structural erosion (Enclosure 5). Of note is a portion of the abandoned Schmidt-Ault Paper Mill currently located on top of the existing flood wall. In order for the wall to be replaced, a portion of the encroaching paper mill will need to be demolished. Just south of the paper mill sits the Philip J. King House, which has been determined to be eligible for listing on the National Register of Historic Places (NRHP), but the proposed project or demolition should not have an impact on this building. Also proposed are repairs, consisting of concrete and/or grout application, to the masonry wall where it intersects with the concrete flood wall at Tyler Run.

The area of potential effect (APE) for the project is the area of direct construction impacts and the areas within which the undertaking may directly or indirectly cause alterations in the character or use of historic properties, including visual effects. The APE would include work performed on the floodwalls adjacent to Codorus Creek and Tyler Run, staging areas, and any other areas of potential ground disturbance. The viewsheds of any nearby historic properties would also be included in the APE.

USACE believes that partial demolition of the Schmidt-Ault Paper Mill could constitute an adverse effect if it is deemed eligible or potentially eligible for the NRHP. It may be warranted to complete a Determination of Eligibility form, in accordance with the *Guidelines for Architectural Investigations in Pennsylvania*, to assess the eligibility of this property.

We look forward to consulting with your office regarding the nature and scope of investigations to identify historic properties in the project area, and to assess potential effects to those properties should they exist. We would appreciate your review of the tasks described in this letter for their potential effect on historic properties.

Thank you for your assistance with the Codorus Creek FRM Project. If you have any questions please contact Mr. Ethan A. Bean at (410) 962-2173 or ethan.a.bean@usace.army.mil.

Sincerely,

Daniel Bierly, P.E.
Chief, Civil Projects Development Branch
Planning Division

Enclosures

Pennsylvania State Historic Preservation Office
PENNSYLVANIA HISTORICAL AND MUSEUM COMMISSION

November 28, 2018

Mr. Ethan A. Bean
USACE, Baltimore District
2 Hopkins Plaza
Baltimore, MD 21201

RE: ER 2018-1446-133-B; COE: Codorus Creek FRM Project; York, York County; Schmidt & Ault Paper Company (Key No. 209630)

Dear Mr. Bean,

Thank you for submitting information concerning the above referenced project. The Pennsylvania State Historic Preservation Office (PA SHPO) reviews projects in accordance with state and federal laws. Section 106 of the National Historic Preservation Act of 1966, and the implementing regulations (36 CFR Part 800) of the Advisory Council on Historic Preservation, is the primary federal legislation. The Environmental Rights amendment, Article 1, Section 27 of the Pennsylvania Constitution and the Pennsylvania History Code, 37 Pa. Cons. Stat. Section 500 et seq. (1988) is the primary state legislation. These laws include consideration of the project's potential effects on both historic and archaeological resources.

Above Ground Resources
Based on the information received as well as available within our files, it is the opinion of the State Historic Preservation Officer that the Schmidt & Ault Paper Company (Key No. 209630) is Not Eligible for listing in the National Register of Historic Places due to a lack of integrity.

Therefore, **No Historic Buildings, Structures, Districts, and/or Objects will be Affected** by the proposed project and consultation with our office is complete.

If you need further information concerning this review, please contact Emma Diehl at emdiehl@pa.gov or (717) 787-9121.

Sincerely,

Douglas C. McLearen, Chief
Division of Environmental Review

Ostrofsky, Tarrie L CIV USARMY CENAB (US)

From: Dershem, Bonnie <bonnie_dershem@fws.gov>
Sent: Thursday, March 22, 2018 9:24 AM
To: Ostrofsky, Tarrie L CIV USARMY CESAJ (US)
Subject: [Non-DoD Source] Indian Creek Dam PNDI
Attachments: indian_rock_dam_codorus_c_652992_FINAL_1.pdf

Tarrie,

I ran a PNDI for you on this project. As you can see, there a an avoidance measure from the USFWS. This is a finalized receipt that you can use. You will get no further correspondence from this office.

Bonnie

Bonnie Dershem
Endangered Species Biologist
U.S. Fish and Wildlife Service

Pennsylvania Field Office

110 Radnor Rd; Suite 101
State College, PA 16801
814-206-7453

1. PROJECT INFORMATION

Project Name: **Indian Rock Dam/ Codorus Creek Flood Risk Management**
Date of Review: **3/22/2018 09:18:19 AM**
Project Category: **In-stream / Riverine Activities and Projects, Levees and similar flood control structures (construction, modification, maintenance)**
Project Area: **198.31 acres**
County(s): **York**
Township/Municipality(s): **MANCHESTER; NORTH YORK; SPRING GARDEN; SPRINGETTSBURY; WEST MANCHESTER; YORK**
ZIP Code: **17401; 17402; 17403; 17404**
Quadrangle Name(s): **YORK; YORK HAVEN**
Watersheds HUC 8: **Lower Susquehanna**
Watersheds HUC 12: **Codorus Creek-Susquehanna River; Mill Creek; Willis Run-Codorus Creek**
Decimal Degrees: **39.952754, -76.738055**
Degrees Minutes Seconds: **39° 57' 9.9128" N, 76° 44' 16.9979" W**

2. SEARCH RESULTS

Agency	Results	Response
PA Game Commission	**Potential Impact**	**FURTHER REVIEW IS REQUIRED, See Agency Response**
PA Department of Conservation and Natural Resources	No Known Impact	No Further Review Required
PA Fish and Boat Commission	**Potential Impact**	**FURTHER REVIEW IS REQUIRED, See Agency Response**
U.S. Fish and Wildlife Service	**Avoidance Measure**	**See Agency Response**

As summarized above, Pennsylvania Natural Diversity Inventory (PNDI) records indicate there may be potential impacts to threatened and endangered and/or special concern species and resources within the project area. If the response above indicates "No Further Review Required" no additional communication with the respective agency is required. If the response is "Further Review Required" or "See Agency Response," refer to the appropriate agency comments below. Please see the DEP Information Section of this receipt if a PA Department of Environmental Protection Permit is required.

Note that regardless of PNDI search results, projects requiring a Chapter 105 DEP individual permit or GP 5, 6, 7, 8, 9 or 11 must comply with the bog turtle habitat screening requirements of the PASPGP.

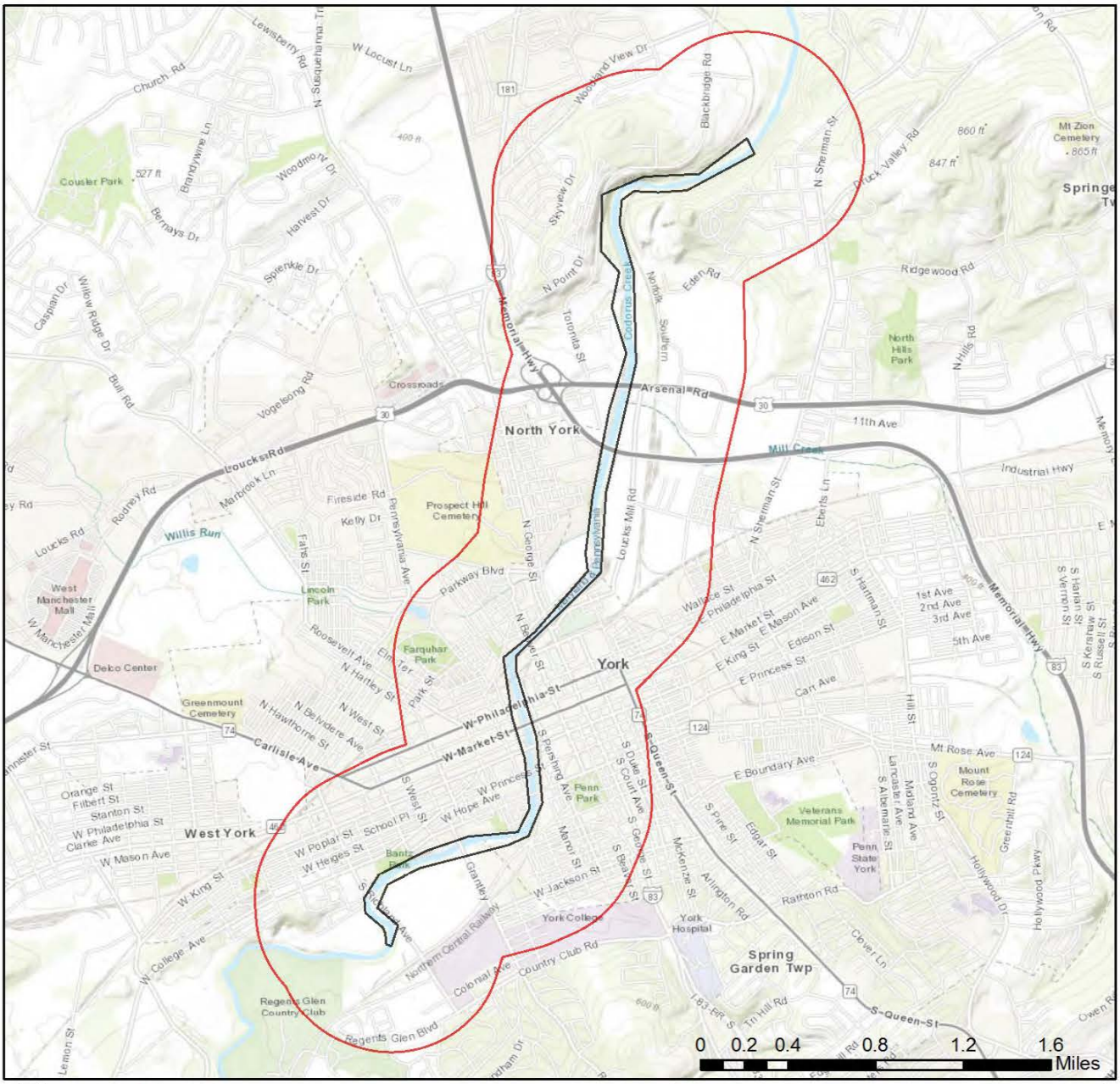
Indian Rock Dam/ Codorus Creek Flood Risk Management

Project Boundary

Buffered Project Boundary

Service Layer Credits: Sources: Esri, HERE, DeLorme, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, MapmyIndia, © OpenStreetMap contributors, and the GIS User Community
Esri, HERE, Garmin, © OpenStreetMap contributors, and the GIS user community

Indian Rock Dam/ Codorus Creek Flood Risk Management



Project Boundary

Buffered Project Boundary

Service Layer Credits: Sources: Esri, HERE, DeLorme, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, MapmyIndia, © OpenStreetMap contributors, and the GIS User Community
Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS,

3. AGENCY COMMENTS

Regardless of whether a DEP permit is necessary for this proposed project, any potential impacts to threatened and endangered species and/or special concern species and resources must be resolved with the appropriate jurisdictional agency. In some cases, a permit or authorization from the jurisdictional agency may be needed if adverse impacts to these species and habitats cannot be avoided.

These agency determinations and responses are **valid for two years** (from the date of the review), and are based on the project information that was provided, including the exact project location; the project type, description, and features; and any responses to questions that were generated during this search. If any of the following change: 1) project location, 2) project size or configuration, 3) project type, or 4) responses to the questions that were asked during the online review, the results of this review are not valid, and the review must be searched again via the PNDI Environmental Review Tool and resubmitted to the jurisdictional agencies. The PNDI tool is a primary screening tool, and a desktop review may reveal more or fewer impacts than what is listed on this PNDI receipt. The jursidictional agencies **strongly advise against** conducting surveys for the species listed on the receipt prior to consultation with the agencies.

PA Game Commission

RESPONSE:

Further review of this project is necessary to resolve the potential impact(s). Please send project information to this agency for review (see WHAT TO SEND).

PGC Species: (Note: The Pennsylvania Conservation Explorer tool is a primary screening tool, and a desktop review may reveal more or fewer species than what is listed below.)

Scientific Name	Common Name	Current Status
Ardea alba	Great Egret	Endangered
Ardea herodias	Great Blue Heron	Special Concern Species*
Nyctanassa violacea	Yellow-crowned Night-heron	Endangered
Nycticorax nycticorax	Black-crowned Night-heron	Endangered

PA Department of Conservation and Natural Resources

RESPONSE:

No Impact is anticipated to threatened and endangered species and/or special concern species and resources.

PA Fish and Boat Commission

RESPONSE:

Further review of this project is necessary to resolve the potential impact(s). Please send project information to this agency for review (see WHAT TO SEND).

PFBC Species: (Note: The Pennsylvania Conservation Explorer tool is a primary screening tool, and a desktop review may reveal more or fewer species than what is listed below.)

Scientific Name	Common Name	Current Status
Sensitive Species**		Special Concern Species*
Sensitive Species**		Special Concern Species*

U.S. Fish and Wildlife Service

RESPONSE:

Information Request: Due to the proximity of this project to a bald eagle nest, it is possible that project activities may disturb bald eagles, which is a form of "take" under the Bald and Golden Eagle Protection Act and may require a permit. The Service has prepared a project screening form to help you determine which specific measures may be necessary to avoid disturbing bald eagles and their nests, based on the type and scope of your proposed project or activity, and its distance from a bald eagle nest. Complete the "Bald Eagle Project Screening Form" (see https://www.fws.gov/northeast/pafo/pdf/Bald_Eagle_Project_Screening_Form_102716.pdf) and implement the measures identified on that form. Submit a copy of the completed Screening Form to the appropriate federal or state permitting agencies (e.g., PA DEP).

As the project proponent or applicant, I certify that I will implement the above Avoidance Measure:
_____(Signature)

SPECIAL NOTE: **If you agree to implement the above Avoidance Measure, no further coordination with this agency regarding threatened and endangered species and/or special concern species and resources is required.** If you are not able to comply with the Avoidance Measures, you are required to coordinate with this agency - please send project information to this agency for review (see "What to Send" section).

* Special Concern Species or Resource - Plant or animal species classified as rare, tentatively undetermined or candidate as well as other taxa of conservation concern, significant natural communities, special concern populations (plants or animals) and unique geologic features.
** Sensitive Species - Species identified by the jurisdictional agency as collectible, having economic value, or being susceptible to decline as a result of visitation.

WHAT TO SEND TO JURISDICTIONAL AGENCIES

If project information was requested by one or more of the agencies above, upload* or email* the following information to the agency(s). Instructions for uploading project materials can be found here. This option provides the applicant with the convenience of sending project materials to a single location accessible to all three state agencies. Alternatively, applicants may email or mail their project materials (see AGENCY CONTACT INFORMATION).
***Note:** U.S.Fish and Wildlife Service requires applicants to mail project materials to the USFWS PA field office (see AGENCY CONTACT INFORMATION). USFWS will not accept project materials submitted electronically (by upload or email).

Check-list of Minimum Materials to be submitted:
____Project narrative with a description of the overall project, the work to be performed, current physical characteristics of the site and acreage to be impacted.
____A map with the project boundary and/or a basic site plan(particularly showing the relationship of the project to the physical features such as wetlands, streams, ponds, rock outcrops, etc.)
In addition to the materials listed above, USFWS REQUIRES the following
____**SIGNED** copy of a Final Project Environmental Review Receipt

The inclusion of the following information may expedite the review process.
____Color photos keyed to the basic site plan (i.e. showing on the site plan where and in what direction each photo was taken and the date of the photos)
____Information about the presence and location of wetlands in the project area, and how this was determined (e.g., by a qualified wetlands biologist), if wetlands are present in the project area, provide project plans showing the location of all project features, as well as wetlands and streams.

4. DEP INFORMATION

The Pa Department of Environmental Protection (DEP) requires that a signed copy of this receipt, along with any required documentation from jurisdictional agencies concerning resolution of potential impacts, be submitted with applications for permits requiring PNDI review. Two review options are available to permit applicants for handling PNDI coordination in conjunction with DEP's permit review process involving either T&E Species or species of special concern. Under sequential review, the permit applicant performs a PNDI screening and completes all coordination with the appropriate jurisdictional agencies prior to submitting the permit application. The applicant will include with its application, both a PNDI receipt and/or a clearance letter from the jurisdictional agency if the PNDI Receipt shows a Potential Impact to a species or the applicant chooses to obtain letters directly from the jurisdictional agencies. Under concurrent review, DEP, where feasible, will allow technical review of the permit to occur concurrently with the T&E species consultation with the jurisdictional agency. The applicant must still supply a copy of the PNDI Receipt with its permit application. The PNDI Receipt should also be submitted to the appropriate agency according to directions on the PNDI Receipt. The applicant and the jurisdictional agency will work together to resolve the potential impact(s). See the DEP PNDI policy at https://conservationexplorer.dcnr.pa.gov/content/resources.

5. ADDITIONAL INFORMATION

The PNDI environmental review website is a preliminary screening tool. There are often delays in updating species status classifications. Because the proposed status represents the best available information regarding the conservation status of the species, state jurisdictional agency staff give the proposed statuses at least the same consideration as the current legal status. If surveys or further information reveal that a threatened and endangered and/or special concern species and resources exist in your project area, contact the appropriate jurisdictional agency/agencies immediately to identify and resolve any impacts.

For a list of species known to occur in the county where your project is located, please see the species lists by county found on the PA Natural Heritage Program (PNHP) home page (www.naturalheritage.state.pa.us). Also note that the PNDI Environmental Review Tool only contains information about species occurrences that have actually been reported to the PNHP.

6. AGENCY CONTACT INFORMATION

PA Department of Conservation and Natural Resources
Bureau of Forestry, Ecological Services Section
400 Market Street, PO Box 8552
Harrisburg, PA 17105-8552
Email: RA-HeritageReview@pa.gov

U.S. Fish and Wildlife Service
Pennsylvania Field Office
Endangered Species Section
110 Radnor Rd; Suite 101
State College, PA 16801
NO Faxes Please

PA Fish and Boat Commission
Division of Environmental Services
595 E. Rolling Ridge Dr., Bellefonte, PA 16823
Email: RA-FBPACENOTIFY@pa.gov

PA Game Commission
Bureau of Wildlife Habitat Management
Division of Environmental Planning and Habitat Protection
2001 Elmerton Avenue, Harrisburg, PA 17110-9797
Email: RA-PGC_PNDI@pa.gov
NO Faxes Please

7. PROJECT CONTACT INFORMATION

Name:_____
Company/Business Name:_____
Address:_____
City, State, Zip:_____
Phone:(_____)_____Fax:(_____)_____
Email:_____

8. CERTIFICATION

I certify that ALL of the project information contained in this receipt (including project location, project size/configuration, project type, answers to questions) is true, accurate and complete. In addition, if the project type, location, size or configuration changes, or if the answers to any questions that were asked during this online review change, I agree to re-do the online environmental review.

_____ _____
applicant/project proponent signature date

DEPARTMENT OF THE ARMY
BALTIMORE DISTRICT, CORPS OF ENGINEERS
2 HOPKINS PLAZA
BALTIMORE, MARYLAND 21201

Planning Division

March 8, 2018

Mr. Robert Anderson
U.S. Fish and Wildlife Service
Pennsylvania Field Office
110 Radnor Road, Suite 322
State College, Pennsylvania 16801

Dear Mr. Anderson:

The U.S. Army Corps of Engineers, Baltimore District (USACE-Baltimore) is proposing to undertake major repairs to the Indian Rock Dam/Codorus Creek Flood Risk Management (FRM) Project on Codorus Creek. The project passes through West Manchester Township, Spring Garden Township, York City, North York Borough, and Springettsbury Township, all located in York County, Pennsylvania (Enclosure 1). USACE-Baltimore operates and maintains the FRM project, which was constructed in the 1930s and operational in the 1940s. The project consists of 4.8 miles of FRM improvements, including a widened and deepened creek channel, levees, floodwalls, and bank protective works. The project's infrastructure is aging and in need of major repairs to ensure it continues to properly perform its FRM functions. At this time, rehabilitation of floodwall, levee, drainage structures, and bank protective works is anticipated. USACE is preparing an environmental assessment (EA) for the proposed repairs in accordance with the National Environmental Policy Act of 1969, as amended. The purpose of this letter is to inform you of the assessment and to solicit U.S. Fish and Wildlife Service (USFWS) input pursuant to the Fish and Wildlife Coordination Act (FWCA) and Endangered Species Act (ESA).

The USACE-Baltimore is requesting any information your office has on the presence of federally protected species of animals and plants listed by Section 7 of the ESA within the project area. The USFWS Information, Planning, and Conservation (IPaC) web site (http://ecos.fws.gov/ipac/) was consulted on 27 February 2018, and a draft IPaC resources list (Consultation Code: 05E2PA00-2018-SLI-0639) was prepared for the project's boundaries using an uploaded SHAPE file (Enclosure 2). The draft IPaC resource list identifies federally listed endangered species, migratory birds, and wetlands as occurring within the project boundaries. The federally listed endangered species include the endangered Indiana bat (*Myotis sodalist*), threatened Northern long-eared bat (*Myotis septentrionalis*), and threatened bog turtle (*Clemmys muhlenbergii*). No critical habitat was identified within the project boundaries. The migratory birds, protected under the Migratory Bird Treaty Act and the Bald and Golden Eagle Protection Act, include 12 species, identified as birds of particular concern. The wetland polygon is classified as National Wetlands Inventory riverine wetlands, and the polygon encompasses the 4.8-mile length of the Codorus Creek channel associated with this project.

We would also like to discuss the appropriate level of involvement for the U.S. Fish and Wildlife Service pursuant to the FWCA (i.e., technical services, planning aid letter, or FWCA report). Please provide us with a point of contact for FWCA activities and collaborative planning on this project.

If you have any questions, please contact Ms. Tarrie Ostrofsky by phone at (410) 962-4633, by e-mail at tarrie.l.ostrofsky@usace.army.mil, or by mail at USACE, Planning Division (Attn: Ostrofsky), 2 Hopkins Plaza, Baltimore, MD 21201.

Sincerely,

Daniel M. Bierly, P.E.
Chief, Civil Project Development Branch

Enclosures
(1: Study Area Map; 2: IPaC Draft Resource List)

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Pennsylvania Ecological Services Field Office
110 Radnor Road Suite 101
State College, PA 16801-7987
Phone: (814) 234-4090 Fax: (814) 234-0748
http://www.fws.gov/northeast/pafo/

In Reply Refer To:
Consultation Code: 05E2PA00-2018-SLI-0639
Event Code: 05E2PA00-2018-E-02865
Project Name: York Codorus FRM Project

February 27, 2018

Subject: List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 *et seq.*), and projects affecting these species may require development of an eagle conservation plan (http://www.fws.gov/windenergy/eagle_guidance.html). Additionally, wind energy projects should follow the wind energy guidelines (http://www.fws.gov/windenergy/) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm; http://www.towerkill.com; and http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html.

Any activity proposed on National Wildlife Refuge lands must undergo a "Compatibility Determination' conducted by the Refuge. Please contact the individual Refuge to discuss any questions or concerns.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List
- USFWS National Wildlife Refuges and Fish Hatcheries

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Pennsylvania Ecological Services Field Office
110 Radnor Road Suite 101
State College, PA 16801-7987
(814) 234-4090

Project Summary

Consultation Code: 05E2PA00-2018-SLI-0639

Event Code: 05E2PA00-2018-E-02865

Project Name: York Codorus FRM Project

Project Type: STREAM / WATERBODY / CANALS / LEVEES / DIKES

Project Description: Line down through Codorus Creek along approximate project center line with 500 feet width (latter selected through IPaC). Includes areas in York County in which work not proposed as of February 2018.

Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/place/39.97412622733437N76.72622151470142W

Counties: York, PA

Endangered Species Act Species

There is a total of 3 threatened, endangered, or candidate species on this species list. Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species. See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

Mammals

NAME	STATUS
Indiana Bat *Myotis sodalis* There is **final** critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/5949	Endangered
Northern Long-eared Bat *Myotis septentrionalis* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9045	Threatened

Reptiles

NAME	STATUS
Bog Turtle *Clemmys muhlenbergii* Population: Wherever found, except GA, NC, SC, TN, VA No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/6962	Threatened

Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

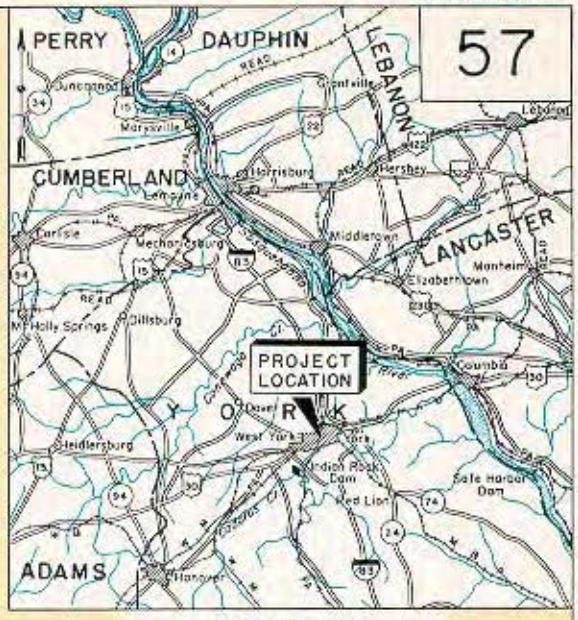
USFWS National W ildlife Refuge Lands And Fish Hatcheries

Any activity proposed on lands managed by the National Wildlife Refuge system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS OR FISH HATCHERIES WITHIN YOUR PROJECT AREA.

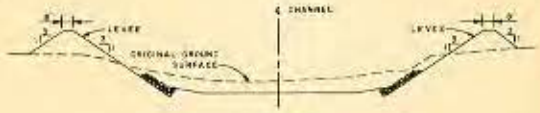
CORPS OF ENGINEERS

U. S. ARMY



VICINITY MAP

SCALE OF MILES



SECTION

CHANNEL AND LEVEE

NOT TO SCALE

STREAM	DRAINAGE AREA	DESIGN DISCHARGE	MINIMUM FREEBOARD
Codorus Creek	229 SqMi	24,000 CFS	3.0 Ft.

LEGEND

WORK COMPLETED

GENERAL PLAN

SCALE OF FEET

1000 0 1000 2000

SUSQUEHANNA RIVER BASIN

YORK, PA.

GENERAL PLAN & SECTION

REVISED: SEPTEMBER 1985

CODORUS CREEK PENNSYLVANIA

SCALE: AS SHOWN

BALTIMORE DISTRICT OFFICE BALTIMORE, MARYLAND

Enclosure 2

Ostrofsky, Tarrie L CIV USARMY CENAB (US)

From: Glyn, Rebecca <GLYN.REBECCA@EPA.GOV>
Sent: Friday, April 20, 2018 1:35 PM
To: Ostrofsky, Tarrie L CIV USARMY CENAB (US)
Cc: Rudnick, Barbara; Okorn, Barbara; Okin, Sharon; jonathan.crum@dot.gov
Subject: [Non-DoD Source] EPA Scoping Comments - Corps Indian Rock Dam/Codorus Creek FRM Project - York County, PA

Dear Ms. Ostrofsky:

In accordance with the National Environmental Policy Act (NEPA) of 1969, Section 309 of the Clean Air Act, and the Council on Environmental Quality regulations implementing NEPA (40 CFR 1500-1509), the U.S. Environmental Protection Agency (EPA) has reviewed your Public Notice (PN) dated March 12, 2018 requesting information pertinent to the implementation and future maintenance work for the U.S. Army Corps of Engineers' (Corps) proposed Indian Rock Dam/Codorus Creek Flood Risk Management (FRM) Project, in York County, Pennsylvania.

The Indian Rock Dam/Codorus Creek FRM project is 4.8 miles in length and proposes major repairs of aging infrastructure to ensure its continued proper functioning. The project is expected to entail rehabilitation of floodwall, levee, drainage structures, and bank protective works, with a draft Environmental Assessment (EA) for the project to be publicly released in summer 2018.

In response to the PN's request for information that may affect the implementation of future maintenance work within the project, EPA offers the following comments. Please note these comments are general in nature due to the limited information available at this time. Please keep us informed as the project progresses so that we may provide more specific input as appropriate.

1. Purpose and Need. We recommend the EA include a more detailed description of the purpose and need for the project, including how it will address specific flooding and infrastructure problems, alternatives considered, and a rationale for alternatives dismissed from the proposed action.

2. Environmental Analysis. The EA should describe potential impacts to the natural and human environment from the proposed action and its alternatives, including potential impacts to tributaries of Codorus Creek and other surrounding infrastructure. We also recommend the EA include a list of resource agencies and persons consulted and an outline of the environmental review schedule. EPA recommends early coordination with appropriate federal, state, and local agencies to minimize and avoid potential impacts to wetlands and streams, historic resources, and rare, threatened, and endangered species. For unavoidable resource impacts, EPA suggests the EA propose mitigation measures developed with resource agency input.

Please consider the following web-based tools to help assess potential resource impacts of the proposed project:

a. NEPAssist: Blockedhttps://www.epa.gov/nepa/nepassist. NEPAssist facilitates the environmental review process and project planning, drawing environmental data from EPA Geographic Information System databases and web services to screen for environmental assessment indicators within a user-defined area of interest.

b. EnviroMapper: Blockedhttps://www.epa.gov/waterdata/waters-watershed-assessment-tracking-environmental-results-system <Blockedhttps://www.epa.gov/waterdata/waters-watershed-assessment-tracking-environmental-results-system> . EnviroMapper accesses data for air, water, and land in the United States from several EPA databases.

c. Envirofacts: Blockedhttps://www3.epa.gov/enviro/. Envirofacts allows the user to retrieve environmental data from multiple sources for a geographic area or facility, including information on air, land, water, waste, toxics, radiation, and compliance, and allows for multi-system searches.

3. Wetlands and Aquatic Resources. The EA should evaluate potential impacts to aquatic resources and functions within the study area, including impacts to hydrology, water quality, and wetlands and streams present on, or immediately surrounding, the area of the proposed action. We recommend the EA provide an outline and map of proposed measures to protect aquatic resources and mitigate for unavoidable impacts in accordance with the Clean Water Act (CWA) Section 404 permitting program.

Please consider using the following web-based tools to access environmental data on aquatic resources within the study area:

a. Impaired Waters: Blockedhttps://www.epa.gov/exposure-assessment-models/303d-listed-impaired-waters <Blockedhttps://www.epa.gov/exposure-assessment-models/303d-listed-impaired-waters> . This link provides geospatial data on impaired waters listed under CWA Section 303(d).

b. WATERS (Watershed Assessment, Tracking & Environmental Resources System): Blockedhttps://www.epa.gov/waterdata/waters-watershed-assessment-tracking-environmental-results-system <Blockedhttps://www.epa.gov/waterdata/waters-watershed-assessment-tracking-environmental-results-system> . This tool integrates information from various EPA water programs with the national surface water network, which includes such databases as the National Hydrography Dataset (Blockedhttps://nhd.usgs.gov.), the National Elevation Dataset (Blockedhttps://nationalmap.gov/elevation.html) and the Watershed Boundary Dataset (Blockedhttps://nhd.usgs.gov/wbd.htm).

c. Watershed Resources Registry: Blockedhttps://watershedresourcesregistry.org/index.html <Blockedhttps://watershedresourcesregistry.org/index.html> . This newly released mapping and screening tool prioritizes areas for preservation and restoration of wetlands, riparian zones, terrestrial areas, and stormwater management across several states in the mid-Atlantic region, including Pennsylvania. This tool is useful for planners to access environmental data to avoid impacting natural areas and identify optimal mitigation areas.

4. Stormwater Management. We recommend considering best management practices for erosion and sediment control for any ground disturbances, as appropriate for the proposed action alternatives, to prevent release of sediment and other contaminants into stormwater runoff, and minimize or avoid potential adverse impacts to downstream water quality. Please refer to the National Pollutant Discharge Elimination System and state and local stormwater ordinances and requirements.

5. Biological and Terrestrial Resources. We recommend the EA describe potential adverse impacts to terrestrial habitat resources in the study area, as well as mitigation plans to compensate for unavoidable adverse impacts. It would

be helpful for the EA to describe and map existing biological resources, including a species list of mammals, birds, amphibians, reptiles, and plant species, and summarize composition and characteristics of community types and their functional values, total acreage, and surrounding land use. Additional helpful information would include: size of trees (dbh), percent canopy cover, understory and other components such as woody debris and snags, presence of invasive species, and soil type(s) as appropriate. We recommend the EA consider the effect of invasive species associated with alternatives, as well as potential impacts to bald and golden eagles and their habitat. Any potential impacts to threatened or endangered species or critical habitat within the study area should be identified in the EA, along with appropriate mitigation measures.

6. Community Impacts and Air Quality. An evaluation of air quality and community impacts, including noise, light, and possible traffic impacts, are recommended to be included in the EA. General conformity status, as well as attainment areas for National Ambient Air Quality Standards (NAAQS) and best management practices (BMPs) for controlling or minimizing temporary construction emissions are useful in environmental assessments.

7. Hazardous Materials, Solid Waste, and Pollution Prevention. We recommend the EA analyze any hazardous sites or materials and the status of any ongoing or past remediation efforts in the project area, including for groundwater contamination, as well as storage and disposal plans for any solid waste associated with the proposed action alternatives.

8. Environmental Justice. An evaluation of potential impacts to minority and low-income communities should be included in the EA, along with a description of proposals to provide for meaningful and timely community involvement, public outreach, and accessibility of public meetings, official documents, and notices to affected communities. Please consider using EJScreen, a screening and mapping tool developed by EPA that combines environmental and demographic data to help identify areas with potential Environmental Justice (EJ) concerns at: Blockedhttps://epa.gov/ejscreen. Additionally, consider referring to "Promising Practices for EJ Methodologies in NEPA Reviews document for EJ analysis in NEPA reviews", available at: Blockedhttps://www.epa.gov/environmentaljustice/ej-iwg-promising-practices-ej-methodologies-nepa-reviews <Blockedhttps://www.epa.gov/environmentaljustice/ej-iwg-promising-practices-ej-methodologies-nepa-reviews> . Our regional EJ expert would be pleased to discuss methodology for identifying communities with potential EJ concerns at your convenience.

9. Cumulative and Indirect Impacts. We suggest the EA evaluate potential indirect and cumulative impacts to environmental resources in the project area. This analysis may aid in identifying resources likely to be adversely affected by multiple projects, and sensitive resources that could require additional avoidance or mitigation measures. We suggest a secondary and cumulative effects analysis begin with defining the geographic and temporal limits of the study, which is generally broader than the study area of the project.

We recommend the EA describe potential cumulative resource impacts of the Indian Rock Dam/Codorus Creek FRM and the North York Interstate 83 Widening Project proposed by the Federal Highway Administration (FHWA) and the Pennsylvania Department of Transportation (PennDOT). Given flooding concerns at this section of I-83, we recommend the Corps and FHWA/PennDOT coordinate on the planning of these two projects, including sharing technical reports, detailed studies, mitigation proposals, and other pertinent information to the extent possible.

Thank you for the opportunity to review this project. We look forward to working with you as more information becomes available. Please let me know if you have any questions on the topics above. When the EA is available for review, please provide a copy to me at glyn.rebecca@epa.gov <mailto:glyn.rebecca@epa.gov> .

Sincerely,

Rebecca Souto-Glyn

CWA §404 Enforcement/NEPA Review

Environmental Assessment & Innovation Division

U.S. EPA Region 3, Mailcode: 3EA30

1650 Arch Street Philadelphia, PA 19103

Phone: (215) 814-2795 glyn.rebecca@epa.gov <mailto:glyn.rebecca@epa.gov>

From:	Glyn, Rebecca
To:	Bean, Ethan A CIV USARMY CENAB (US)
Cc:	Rudnick, Barbara; Santiago, Luis E CIV USARMY CENAB (US); Lapp, Jeffrey; Davis, Jamie
Subject:	[Non-DoD Source] RE: Codorus Creek Rehabilitation Draft Environmental Assessment
Date:	Thursday, September 27, 2018 12:37:37 PM

Hi Ethan:

In accordance with the National Environmental Policy Act (NEPA) of 1969, Section 309 of the Clean Air Act, and the Council on Environmental Quality regulations implementing NEPA (40 CFR 1500-1508), the U.S. Environmental Protection Agency, Region 3 (EPA) has reviewed the August 2018 Draft Environmental Assessment (EA) for the Indian Rock Dam/Codorus Creek Flood Risk Management Project (FRM) in York County, Pennsylvania.

The Indian Rock Dam/Codorus Creek FRM Project is 4.8 miles in length and entails major repairs of aging floodwall, levee, drainage structures, and bank protective works to ensure continued proper functioning. Our technical comments on the EA are provided below. Our limited number of comments reflects that much of the proposed action will occur within the footprint of existing structures with no land use changes proposed.

1. Surface Waters.
The EA states that installation of riprap or other bank stabilization features would provide habitat and cover for aquatic organisms. We recommend the Final EA explain how this will be achieved, along with potential opportunities to integrate bank vegetation into the stabilization features. It would be helpful to connect this discussion with more detail on fish-friendly habitat structures that Pennsylvania Fish & Boat Commission recommends incorporating into levee design, as described in Section 4.7 Threatened and Endangered Species. We recommend the EA provide more information on the length of time aquatic organisms are expected to be temporarily displaced during construction, measures planned (for normal and flood flows) for connectivity during construction and whether any monitoring will be conducted.

2. Air Quality.
Please consider ways to minimize the expected short-term temporary impacts to air quality during construction, such as mitigating vehicle fumes with low-emission vehicles, and reducing idling times, as well as potential dust control measures.

3. Environmental Justice.
While the EA states that 2016 U.S. Census Bureau data was used to identify percentages of minority and below-poverty level populations within the City of York, demographic data for residential populations potentially impacted by the project are unknown. Without maps or additional explanation in the EA, it is not clear where these potentially impacted residential areas may be, and if they lie only within the City of York or any of the other four municipalities the project passes through. It would be helpful to expand on this information in the EA and note whether a communication plan has been developed to reach out to neighborhoods that will be impacted by the project. EPA's EJ SCREEN screening and mapping tool (available at: Blockedhttps://epa.gov/ejscreen) may help further inform this Environmental Justice analysis and identify residential communities within the proposed work area.

Thank you for considering these comments. Please feel free to contact me with any questions. If you will need these comments in letter format, please reply all to this email letting us know and we will provide that to you as soon as possible.

Best regards,

Rebecca Souto-Glyn
Wetlands Enforcement Officer, NEPA Reviewer
Environmental Assessment & Innovation Division
U.S. Environmental Protection Agency, Mid-Atlantic Region 3

1650 Arch Street (3EA30) Philadelphia, PA 19103
Phone: (215) 814-2795 glyn.rebecca@epa.gov

-----Original Message-----
From: Bean, Ethan A CIV USARMY CENAB (US) [mailto:ETHAN.A.BEAN@usace.army.mil]
Sent: Monday, September 17, 2018 3:24 PM
To: Glyn, Rebecca <GLYN.REBECCA@EPA.GOV>
Subject: Codorus Creek Rehabilitation Draft Environmental Assessment

Hello,

The Codorus Creek Flood Risk Management Project Draft Environmental Assessment has been released for a 30-day public comment period. A Notice of Availability for the Draft Environmental Assessment has been mailed to the agency address listed in US Army Corps of Engineers records.

The Notice of Availability and Draft Environmental Assessment can be viewed at the following website: Blockedhttp://www.nab.usace.army.mil/Missions/Regulatory/Public-Notices/Public-Notice-View/Article/1615424/notice-of-availability-draft-environmental-assessment-for-indian-rock-damcodoru/

The public comment period lasts until September 30, 2018. If your agency has any comments to submit for the subject Draft Environmental Assessment, please feel free to submit comments to USACE staff at Ethan.A.Bean@usace.army.mil. If you have no comments, please reply with no comment at your earliest convenience.

Thank you for your time.

Ethan

Ethan A. Bean
Archaeologist
U.S. Army Corps of Engineers
Baltimore District
(410) 962-2173

DEPARTMENT OF THE ARMY
BALTIMORE DISTRICT, CORPS OF ENGINEERS
2 HOPKINS PLAZA
BALTIMORE, MARYLAND 21201

Planning Division

March 8, 2018

Mr. Patrick McDonnell, Secretary
Pennsylvania Department of Environmental Protection
Rachel Carson State Office Building
400 Market Street
Harrisburg, Pennsylvania 17101

Dear Mr. McDonnell:

The U.S. Army Corps of Engineers, Baltimore District (USACE-Baltimore) is proposing to undertake major repairs to the Indian Rock Dam/Codorus Creek Flood Risk Management (FRM) Project on Codorus Creek. The Indian Rock Dam and the Codorus Creek FRM Project are components of one overall project; however, the proposed improvements are associated with the Codorus Creek FRM component of the overall project. The project passes through West Manchester Township, Spring Garden Township, York City, North York Borough, and Springettsbury Township, all located in York County, Pennsylvania (Enclosure). The USACE-Baltimore operates and maintains the FRM project, which was constructed in the 1930s and operational in the 1940s. The project consists of 4.8 miles of FRM improvements, including a widened and deepened creek channel, levees, floodwalls, and bank protective works. The project's infrastructure is aging and in need of major repairs to ensure it continues to properly perform its FRM functions. At this time, rehabilitation of floodwall, levee, drainage structures, and bank protective works is anticipated. The USACE-Baltimore is preparing an environmental assessment (EA) for the proposed repairs in accordance with the National Environmental Policy Act of 1969, as amended. The USACE-Baltimore is coordinating this action with federal, state, and local government agencies, as well as the public in order to acquire information that may affect and assist us with the preparation of the EA and the implementation of the future maintenance work within the project. The current schedule indicates that the draft EA would be circulated for public review and comment during the summer of 2018.

Please provide any information or concerns that your agency may have, that will assist us with proper planning of the repairs and establishment of the EA, within 30 days of the date of this letter. Also, please include a point of contact with your submittal. A public notice announcing the preparation of the EA is also being posted to the USACE-Baltimore website.

If you have any questions regarding this assessment, please contact Mrs. Tarrie Ostrofsky by telephone at (410) 962-4633, by email at Tarrie.L.Ostrofsky@usace.army.mil, or by mail at USACE, Planning Division (Attn: Ostrofsky), 2 Hopkins Plaza, Baltimore, Maryland 21201.

Sincerely,

Daniel M. Bierly, P.E.
Chief, Civil Project Development Branch

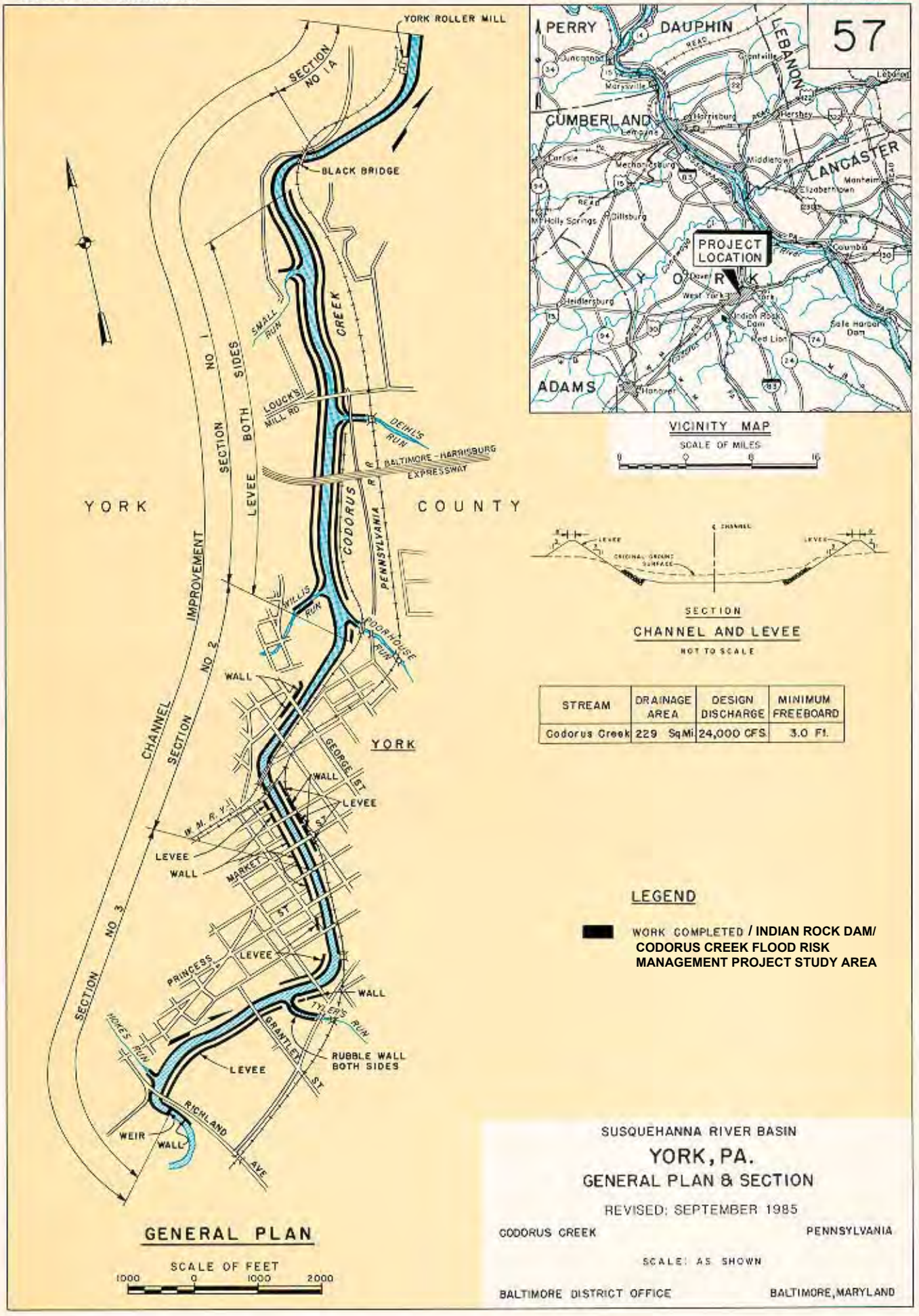
Enclosure
(1: Project map)

CC:

Mr. Joseph Adams, Regional Director
Pennsylvania Department of Environmental Protection
South Central (Harrisburg) Regional Office
909 Elmerton Avenue
Harrisburg, Pennsylvania 17110

CORPS OF ENGINEERS

U. S. ARMY



GENERAL PLAN

SCALE OF FEET

1000 0 1000 2000

VICINITY MAP

SCALE OF MILES

0 8 16

SECTION

CHANNEL AND LEVEE

NOT TO SCALE

STREAM	DRAINAGE AREA	DESIGN DISCHARGE	MINIMUM FREEBOARD
Codorus Creek	229 SqMi	24,000 CFS	3.0 Ft.

LEGEND

WORK COMPLETED / INDIAN ROCK DAM/ CODORUS CREEK FLOOD RISK MANAGEMENT PROJECT STUDY AREA

SUSQUEHANNA RIVER BASIN

YORK, PA.

GENERAL PLAN & SECTION

REVISED: SEPTEMBER 1985

CODORUS CREEK PENNSYLVANIA

SCALE: AS SHOWN

BALTIMORE DISTRICT OFFICE BALTIMORE, MARYLAND

Enclosure

DEPARTMENT OF THE ARMY
BALTIMORE DISTRICT, CORPS OF ENGINEERS
2 HOPKINS PLAZA
BALTIMORE, MARYLAND 21201

Planning Division

March 8, 2018

Mr. Greg Podniesinski
Pennsylvania Natural Heritage Program
400 Market Street
Harrisburg, Pennsylvania 17105

Dear Mr. Podniesinski:

The U.S. Army Corps of Engineers, Baltimore District (USACE-Baltimore) is proposing to undertake major repairs to the Indian Rock Dam/Codorus Creek Flood Risk Management (FRM) Project on Codorus Creek. The project passes through West Manchester Township, Spring Garden Township, York City, North York Borough, and Springettsbury Township, all located in York County, Pennsylvania (Enclosure). The USACE-Baltimore operates and maintains the FRM project, which was constructed in the 1930s and operational in the 1940s. The project consists of 4.8 miles of FRM improvements, including a widened and deepened creek channel, levees, floodwalls, and bank protective works. The project's infrastructure is aging and in need of major repairs to ensure it continues to properly perform its FRM functions. At this time, rehabilitation of floodwall, levee, drainage structures, and bank protective works is anticipated. The USACE-Baltimore is preparing an environmental assessment (EA) for the proposed repairs in accordance with the National Environmental Policy Act of 1969, as amended. The USACE-Baltimore is coordinating this action with federal, state, and local government agencies, as well as the public in order to acquire information that may affect and assist us with the preparation of the EA and the implementation of the future maintenance work within the project. The current schedule indicates that the draft EA would be circulated for public review and comment during the Summer of 2018.

Please provide any information or concerns that your agency may have, that will assist us with proper planning of the repairs and establishment of the EA, within 30 days of the date of this letter. Also, please include a point of contact with your submittal. A public notice announcing the preparation of the EA is also being posted to the USACE-Baltimore website.

If you have any questions regarding this assessment, please contact Mrs. Tarrie Ostrofsky by telephone at (410) 962-4633, by email at Tarrie.L.Ostrofsky@usace.army.mil, or by mail at USACE, Planning Division (Attn: Ostrofsky), 2 Hopkins Plaza, Baltimore, Maryland 21201.

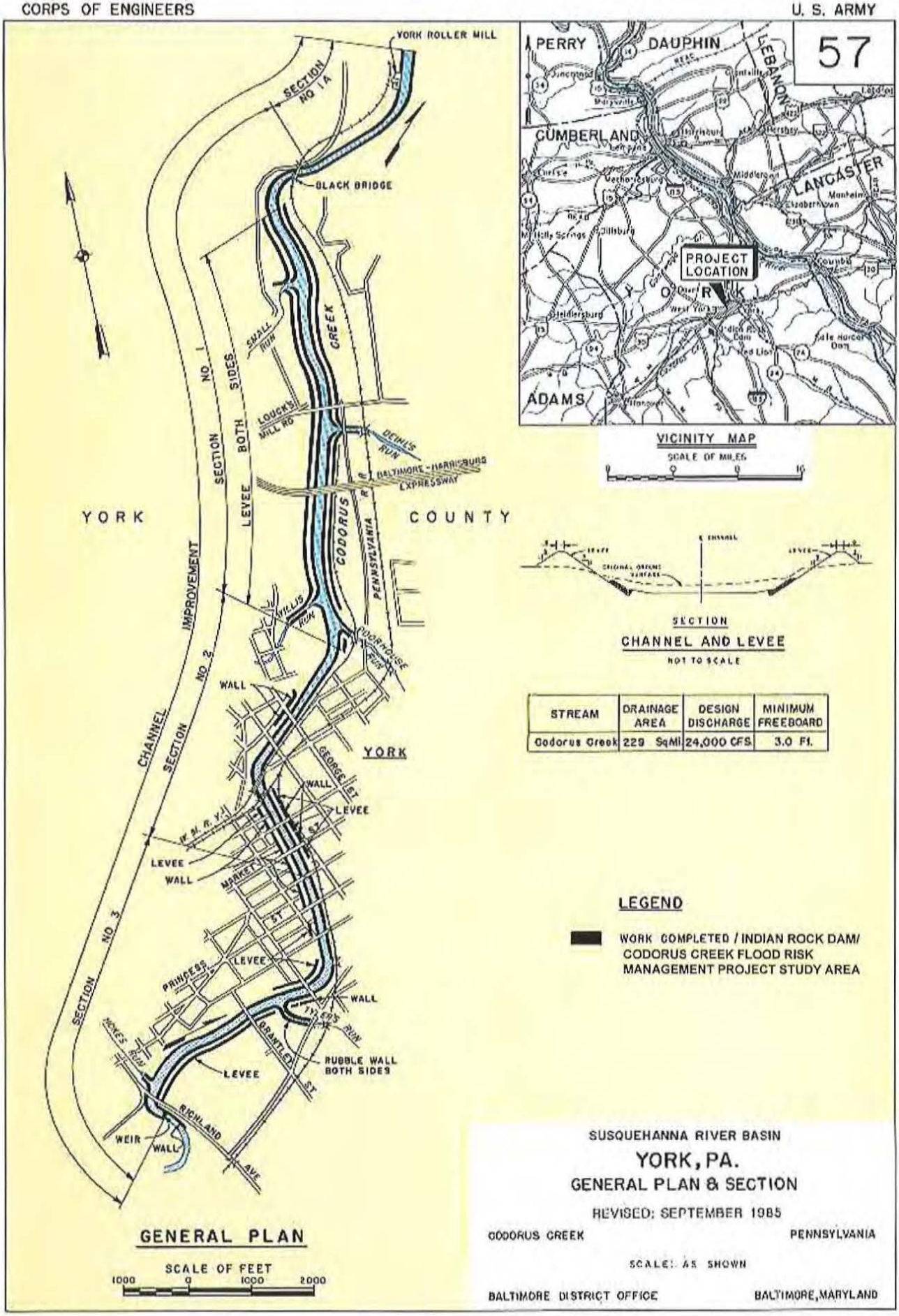
Sincerely,

Daniel M. Bierly, P.E.
Chief, Civil Project Development Branch

Enclosure
(1: Project map)

CORPS OF ENGINEERS

U. S. ARMY



VICINITY MAP

SCALE OF MILES 0 10

SECTION

CHANNEL AND LEVEE

NOT TO SCALE

STREAM	DRAINAGE AREA	DESIGN DISCHARGE	MINIMUM FREEBOARD
Codorus Creek	229 SqMi	24,000 CFS.	3.0 Ft.

LEGEND

WORK COMPLETED / INDIAN ROCK DAM/ CODORUS CREEK FLOOD RISK MANAGEMENT PROJECT STUDY AREA

SUSQUEHANNA RIVER BASIN

YORK, PA.

GENERAL PLAN & SECTION

REVISED: SEPTEMBER 1985

CODORUS CREEK PENNSYLVANIA

SCALE: AS SHOWN

BALTIMORE DISTRICT OFFICE BALTIMORE, MARYLAND

Enclosure

COMMONWEALTH OF PENNSYLVANIA
PENNSYLVANIA GAME COMMISSION
2001 Elmerton Avenue
Harrisburg, PA 17110-9797
Wildlife Habitat Management
(717) 787-6818

June 5, 2018

Ms. Tarrie Ostrofsky
US Army Corps of Engineers
2 Hopkins Plaza
Baltimore, Maryland 21201
tarrie.l.ostrofsky@usace.army.mil

PNDI Receipt File: *project_receipt_indian_rock_dam_codorus_c_655791_FINAL_1.pdf*
Re: Indian Rock Dam/Codorus Creek Flood Risk Management Project Repairs
Multiple Townships, York County, Pennsylvania

Dear Ms. Ostrofsky,

Thank you for submitting Pennsylvania Natural Diversity Inventory (PNDI) Environmental Review Receipt *project_receipt_indian_rock_dam_codorus_c_655791_FINAL_1.pdf* for review. The Pennsylvania Game Commission (PGC) screened this project for potential impacts to species and resources of concern under PGC responsibility, which includes birds and mammals only.

No Impact Anticipated

PNDI records indicate species or resources of concern are located within the vicinity of the project. However, based on the information you submitted concerning the nature of the project, the immediate location, and our detailed resource information, the PGC has determined that no impact is likely. Therefore, no further coordination with the PGC will be necessary for this project at this time.

This response represents the most up-to-date summary of the PNDI data files and is valid for two (2) years from the date of this letter. An absence of recorded information does not necessarily imply actual conditions on site. Should project plans change or additional information on listed or proposed species become available, this determination may be reconsidered.

Should the proposed work continue beyond the period covered by this letter, please resubmit the project to this agency as an "Update" (including an updated PNDI receipt, project narrative and accurate map). If the proposed work has not changed and no additional information concerning listed species is found, the project will be cleared for PNDI requirements under this agency for two additional years.

This finding applies to impacts to birds and mammals only. To complete your review of state and federally-listed threatened and endangered species and species of special concern, please be sure that the U.S. Fish and Wildlife Service, the PA Department of Conservation and Natural

Resources, and/or the PA Fish and Boat Commission have been contacted regarding this project as directed by the online PNDI ER Tool found at www.naturalheritage.state.pa.us.

Sincerely,

Olivia A. Braun
Environmental Planner
Division of Environmental Planning & Habitat Protection
Bureau of Wildlife Habitat Management
Phone: 717-787-4250, Extension 3128
Fax: 717-787-6957
E-mail: Olbraun@pa.gov

A PNHP Partner

OAB/oab

cc: File

Pennsylvania Fish & Boat Commission
established 1866

Division of Environmental Services
Natural Diversity Section
595 E Rolling Ridge Dr.
Bellefonte, PA 16823
814-359-5237

May 17, 2018

IN REPLY REFER TO
SIR# 49447

USACE - Baltimore
Tarrie Ostrofsky
2 Hopkins Plaza
Baltimore, Maryland 21201

RE: Species Impact Review (SIR) – Rare, Candidate, Threatened and Endangered Species
PNDI Search No. 655791_1
Indian Rock Dam/Codorus Creek Flood Risk Management Project Repairs
YORK County: Manchester Township

Dear Tarrie Ostrofsky:

This responds to your inquiry about a Pennsylvania Natural Diversity Inventory (PNDI) Internet Database search "potential conflict" or a threatened and endangered species impact review. These projects are screened for potential conflicts with rare, candidate, threatened or endangered species under Pennsylvania Fish & Boat Commission jurisdiction (fish, reptiles, amphibians, aquatic invertebrates only) using the Pennsylvania Natural Diversity Inventory (PNDI) database and our own files. These species of special concern are listed under the Endangered Species Act of 1973, the Wild Resource Conservation Act, and the Pennsylvania Fish & Boat Code (Chapter 75), or the Wildlife Code.

An element occurrence of a rare, candidate, threatened, or endangered species under our jurisdiction is known from the vicinity of the proposed project. However, given the nature of the proposed project, the immediate location, or the current status of the nearby element occurrence(s), no adverse impacts are expected to the species of special concern.

This response represents the most up-to-date summary of the PNDI data and our files and is valid for two (2) years from the date of this letter. An absence of recorded species information does not necessarily imply species absence. Our data files and the PNDI system are continuously being updated with species occurrence information. Should project plans change or additional information on listed or proposed species become available, this determination may be reconsidered, and consultation shall be re-initiated.

If you have any questions regarding this review, please contact Dave Lieb at 814-359-5234 and refer to the SIR # 49447. Thank you for your cooperation and attention to this important matter of species conservation and habitat protection.

Sincerely,

Christopher A. Urban, Chief
Natural Diversity Section

CAU/DAL/dn

DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS, BALTIMORE DISTRICT
2 HOPKINS PLAZA
BALTIMORE, MD 21201

Heather Smiles, Chief
Division of Environmental Services
Pennsylvania Fish & Boat Commission
Centre Region Office
595 E. Rolling Ridge Drive
Bellefonte, PA 16823

Dear Ms. Smiles:

I am writing in response to your letter dated April 18, 2018 (Enclosure 1), which provided comments in response to the Indian Rock/Codorus Creek Flood Risk Management (FRM) Project's public notice. The letter recommends that the United States Army Corps of Engineers, Baltimore District (USACE) evaluate opportunities to improve fish habitat within the FRM zone and assess the feasibility of providing access to the waterway. Your office also suggested that "fish-friendly" habitat structures could aid with bedload movement through the FRM zone, and that improvements to the fishery and reductions in future maintenance costs could be possible if proven habitat structures were incorporated into the project design.

The purpose of the Codorus Creek FRM levee system is to provide flood control and protection to the local and downstream community. USACE received funds for this fiscal year to rehabilitate and repair deficiencies of the aging Codorus Creek FRM system, identified by USACE during periodic inspections. While the integration of fish habitat structures would be beneficial to the aquatic habitat, USACE is limited in regard to variations of the existing flood control project design, parameters, and current funding.

As part of the Codorus Creek Comprehensive Plan, USACE will include information pertaining to the potential installation of fish habitat structures for aquatic habitat. If future federal funding is authorized for the operation and maintenance of the Codorus Creek FRM levee system, USACE will coordinate with your office to evaluate potential options that would be consistent with the levee system design and capacity. Habitat for aquatic organisms may be incorporated, where feasible. Additional components to be included in the Comprehensive Plan are the potential removal of the South Richland Avenue Dam and the shoals located within Codorus Creek, both of which may be beneficial to aquatic habitat.

We appreciate the opportunity to work with your office regarding the Indian Rock/Codorus Creek FRM Project. If you have any questions, please contact Mr. Luis Santiago by phone at (410) 962-6691, by e-mail at Luis.E.Santiago@usace.army.mil, or by mail at USACE, Planning Division (Attn. Santiago), 2 Hopkins Plaza, Baltimore, MD 21201.

Sincerely,

Daniel M. Bierly, P.E.
Chief, Civil Project Development Branch

Enclosures

Pennsylvania Fish & Boat Commission

established 1866

Division of Environmental Services
Centre Region Office
595 E. Rolling Ridge Drive
Bellefonte, PA 16823
(814)359-5147

April 18, 2018

Mr. Daniel M. Bierly, P.E.
Chief, Civil Project Development Branch
ATTN: MS Tarrie L. Ostrofsky
U.S. Army Corps of Engineers, Baltimore District-Planning Division
2 Hopkins Plaza
Baltimore, MD 21201

RE: Indian Rock Dam/Codorus Creek Flood Risk Management Project
Public Notice

Dear Mr. Bierly:

The Pennsylvania Fish and Boat Commission (PFBC) appreciates the opportunity to comment on the Public Notice for the Indian Rock Dam/Codorus Creek Flood Risk Management Project. As stated in the Public Notice, the U.S. Army Corps of Engineers is proposing to undertake major repairs to the Codorus Creek Flood Risk Management (FRM) component of the overall Indian Rock Dam/Codorus Creek FRM. The proposed improvements will include repairs along approximately 4.8 miles of Codorus Creek.

The proposed project is located within Section 7 of Codorus Creek which begins at the confluence with South Branch Codorus Creek and continues northeast to the mouth at the Susquehanna River. A survey by the PFBC Area 6 Fisheries Manager was last conducted within the proposed project area on August 14, 2008. Results from the survey show that Codorus Creek supports limited population of warm water fish species including yellow bullhead, rock bass, redbreast sunfish, bluegill, walleye, smallmouth bass, and largemouth bass.

The PFBC's mission is to protect, conserve, and enhance the Commonwealth's aquatic resources and provide fishing and boating opportunities. In accordance with our mission, the PFBC recommends that the U.S. Army Corps of Engineers evaluates opportunities to improve fish habitat within the FRM zone and to assess the feasibility of providing access to the waterway.

It is our understanding that bedload deposition within the existing channel has been a recurring concern within the FRM and that routine maintenance dredging is required. The PFBC Habitat Division has been involved in similar projects in Pennsylvania and is willing to discuss "fish friendly" habitat structures that could also aid with bedload movement through the FRM zone. By incorporating proven habitat structures into the proposed design, the opportunity exists to not only improve the fishery for the local community but also reduce future maintenance costs.

The PFBC looks forward to and encourages continued cooperation with the U.S. Army Corps of Engineers as this project moves through development and design.

April 18, 2018

Please contact Tyler Neimond of our Stream Habitat Section at 814-359-5185 or at tneimond@pa.gov if you have any questions regarding habitat structures that could be incorporated in the Indian Rock Dam/Codorus Creek FRM design.

Sincerely,

Heather Smiles

Heather Smiles, Chief
Division of Environmental Services

c: PFBC Andy Shiels, Tyler Neimond

Ostrofsky, Tarrie L CIV USARMY CENAB (US)

From: Braund, Jaclyn <c-jbraund@pa.gov>
Sent: Monday, March 26, 2018 10:22 AM
To: Ostrofsky, Tarrie L CIV USARMY CESAJ (US)
Subject: [Non-DoD Source] Indian Rock Dam/Codorus Creek Flood Risk Management Project

Hi Tarrie,

I have received the letter of notification for the Indian Rock Dam/Codorus Creek Flood Risk Management Project. We (DCNR) need to have more information for this in order to provide any comments or concerns. Please complete a PNDI through the Conservation Explorer Tool - conservationexplorer.dcnr.pa.gov to expedite this process.

Thanks,
Jaci

From: Ostrofsky, Tarrie L SPA
To: "Braund, Jaclyn"
Subject: RE: Indian Rock Dam/Codorus Creek Flood Risk Management Project
Date: Monday, March 26, 2018 10:30:00 AM
Attachments: indian_rock_dam_codorus_c_652992_FINAL_1.pdf

Hi Jaci:

Thank you for your response. Attached is the PNDI that USFWS ran when they reviewed the project on 22 March 2018.

Please let me know if you need additional information.

Thank you,

Tarrie

Tarrie Ostrofsky
Biologist, Planning Division
Location: 10-E-20
Phone: 410-962-4633

-----Original Message-----
From: Braund, Jaclyn [mailto:c-jbraund@pa.gov]
Sent: Monday, March 26, 2018 10:22 AM
To: Ostrofsky, Tarrie L CIV USARMY CESAJ (US) <Tarrie.L.Ostrofsky@usace.army.mil>
Subject: [Non-DoD Source] Indian Rock Dam/Codorus Creek Flood Risk Management Project

Hi Tarrie,

I have received the letter of notification for the Indian Rock Dam/Codorus Creek Flood Risk Management Project. We (DCNR) need to have more information for this in order to provide any comments or concerns. Please complete a PNDI through the Conservation Explorer Tool - conservationexplorer.dcnr.pa.gov to expedite this process.

Thanks,
Jaci

From:	Glyn, Rebecca
To:	Bean, Ethan A CIV USARMY CENAB (US)
Cc:	Rudnick, Barbara; Santiago, Luis E CIV USARMY CENAB (US); Lapp, Jeffrey; Davis, Jamie
Subject:	[Non-DoD Source] RE: Codorus Creek Rehabilitation Draft Environmental Assessment
Date:	Thursday, September 27, 2018 12:37:37 PM

Hi Ethan:

In accordance with the National Environmental Policy Act (NEPA) of 1969, Section 309 of the Clean Air Act, and the Council on Environmental Quality regulations implementing NEPA (40 CFR 1500-1508), the U.S. Environmental Protection Agency, Region 3 (EPA) has reviewed the August 2018 Draft Environmental Assessment (EA) for the Indian Rock Dam/Codorus Creek Flood Risk Management Project (FRM) in York County, Pennsylvania.

The Indian Rock Dam/Codorus Creek FRM Project is 4.8 miles in length and entails major repairs of aging floodwall, levee, drainage structures, and bank protective works to ensure continued proper functioning. Our technical comments on the EA are provided below. Our limited number of comments reflects that much of the proposed action will occur within the footprint of existing structures with no land use changes proposed.

1. Surface Waters.
The EA states that installation of riprap or other bank stabilization features would provide habitat and cover for aquatic organisms. We recommend the Final EA explain how this will be achieved, along with potential opportunities to integrate bank vegetation into the stabilization features. It would be helpful to connect this discussion with more detail on fish-friendly habitat structures that Pennsylvania Fish & Boat Commission recommends incorporating into levee design, as described in Section 4.7 Threatened and Endangered Species. We recommend the EA provide more information on the length of time aquatic organisms are expected to be temporarily displaced during construction, measures planned (for normal and flood flows) for connectivity during construction and whether any monitoring will be conducted.

2. Air Quality.
Please consider ways to minimize the expected short-term temporary impacts to air quality during construction, such as mitigating vehicle fumes with low-emission vehicles, and reducing idling times, as well as potential dust control measures.

3. Environmental Justice.
While the EA states that 2016 U.S. Census Bureau data was used to identify percentages of minority and below-poverty level populations within the City of York, demographic data for residential populations potentially impacted by the project are unknown. Without maps or additional explanation in the EA, it is not clear where these potentially impacted residential areas may be, and if they lie only within the City of York or any of the other four municipalities the project passes through. It would be helpful to expand on this information in the EA and note whether a communication plan has been developed to reach out to neighborhoods that will be impacted by the project. EPA's EJ SCREEN screening and mapping tool (available at: Blockedhttps://epa.gov/ejscreen) may help further inform this Environmental Justice analysis and identify residential communities within the proposed work area.

Thank you for considering these comments. Please feel free to contact me with any questions. If you will need these comments in letter format, please reply all to this email letting us know and we will provide that to you as soon as possible.

Best regards,

Rebecca Souto-Glyn
Wetlands Enforcement Officer, NEPA Reviewer
Environmental Assessment & Innovation Division
U.S. Environmental Protection Agency, Mid-Atlantic Region 3

1650 Arch Street (3EA30) Philadelphia, PA 19103
Phone: (215) 814-2795 glyn.rebecca@epa.gov

-----Original Message-----
From: Bean, Ethan A CIV USARMY CENAB (US) [mailto:ETHAN.A.BEAN@usace.army.mil]
Sent: Monday, September 17, 2018 3:24 PM
To: Glyn, Rebecca <GLYN.REBECCA@EPA.GOV>
Subject: Codorus Creek Rehabilitation Draft Environmental Assessment

Hello,

The Codorus Creek Flood Risk Management Project Draft Environmental Assessment has been released for a 30-day public comment period. A Notice of Availability for the Draft Environmental Assessment has been mailed to the agency address listed in US Army Corps of Engineers records.

The Notice of Availability and Draft Environmental Assessment can be viewed at the following website: Blockedhttp://www.nab.usace.army.mil/Missions/Regulatory/Public-Notices/Public-Notice-View/Article/1615424/notice-of-availability-draft-environmental-assessment-for-indian-rock-damcodoru/

The public comment period lasts until September 30, 2018. If your agency has any comments to submit for the subject Draft Environmental Assessment, please feel free to submit comments to USACE staff at Ethan.A.Bean@usace.army.mil. If you have no comments, please reply with no comment at your earliest convenience.

Thank you for your time.

Ethan

Ethan A. Bean
Archaeologist
U.S. Army Corps of Engineers
Baltimore District
(410) 962-2173

From:	May, Andrew NAB
To:	aorlovsky@pa.gov
Cc:	dholcombe@pa.gov; jchripczuk@pa.gov
Subject:	WQC for EA - Codorus Creek rehabilitation work (UNCLASSIFIED)
Date:	Monday, December 3, 2018 12:33:00 PM
Attachments:	20180815-Codorus Notice of Availability-signed.pdf 20180307-Letter to PADEP - Codorus-File Copy.pdf

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CLASSIFICATION: UNCLASSIFIED

Mr. Orlovsky,

I hope you're the right person to contact...or can point me in that direction.

I'm with the Corps of Engineers, Baltimore District's Planning Division. I believe you are aware that we're preparing to perform some repair and rehabilitation work on portions of the Codorus Creek Federal Flood Risk Management Project. As part of that effort, we are preparing an Environmental Assessment (EA) to comply with the National Environmental Policy Act (NEPA). For this federal action, we must obtain a WQC (or waiver thereof) under CWA s. 401, and I'm reaching out to you to determine whether PADEP has taken any action regarding the WQC.

Matters are complicated by the fact that our Engineering Division folks were originally the ones who were to be coordinating on the WQC request. Unfortunately, there have been several personnel changes in Engineering, and we cannot find any documentation that the required coordination has occurred, so I'm really starting from scratch here and hoping you have some information that could help. Specifically, I would like to 1) verify that PADEP is aware of our pending action and 2) obtain confirmation that a WQC will be granted (or waived) by PADEP.

If it helps to find our request in your system, I've attached:

1) Our March 8, 2018 letter to Secretary Patrick McDonnell, notifying PADEP of the EA preparation and soliciting information and input from your agency.
2) Our Notice of Availability of the Draft EA, which was mailed to agencies (including PADEP) and stakeholders on August 30th, soliciting further comments.

I'll follow this up with a phone call, but I wanted you to have this first. My understanding is that PADEP might not actually require or issue a WQC for this type of action (i.e. repair of an existing federal flood control project), but at a minimum we probably need confirmation that no WQC is required.

Thanks and I look forward to speaking with you soon.

-Andy

Andrew J. May
Civil Projects Development Branch
U.S. Army Corps of Engineers, Baltimore
2 Hopkins Plaza
Baltimore, MD 21201
(410) 962-9499
andrew.may@usace.army.mil

CLASSIFICATION: UNCLASSIFIED

From:	May, Andrew NAB
To:	"Muzic, Edward"
Cc:	Santiago, Luis E CIV USARMY CENAB (USA); Gomez, Michele L CIV USARMY CENAB (US); Williamson, Scott; Murin, Kenneth; Freyermuth, Sidney
Subject:	Follow-up to call re: WQC for Codorus Creek Rehab work (UNCLASSIFIED)
Date:	Wednesday, January 9, 2019 11:35:00 AM

Ed,

I'm following up on our conversation last week. To recap, as you, Luis & I discussed:

1) We concur that, for activities involving discharge of fill to Waters of the US, the Corps must obtain a 401 WQC from PADEP.
2) As a direct Corps action to rehabilitate a Corps project, a Dept. of the Army permit under s. 404 CWA is not required; compliance with s. 404 CWA is addressed by the Corps via our environmental assessment and 404(b)1 analysis for actions that cause a discharge to waters of the US.
3) PADEP intends to issue a standalone WQC for any discharge of fill to Section 404 waters.
4) The Environmental Assessment being completed covers 4 major rehabilitation work tasks. These tasks will be performed at different times under different contractors, based upon the Corps' priority, resources and contractor availability. The first task is the imminent repair of the riprap near the South Richland Avenue Bridge, for which the Corps hopes to be under contract in early February. The remaining tasks (Penn St. Floodwall replacement, Market St. Floodwall repair, and conduit repair/replacement/abandonment) would not begin until later this Fiscal Year, or early next.

As we discussed USACE-NAB and PADEP will work to address the required 401 WQC for this project as follows:

1) The Corps (or its contractor) will request and obtain WQC from PADEP prior to commencement of construction. The Corps will submit a formal request for WQC for all proposed work covered in the EA (i.e. all 4 work tasks), that includes the following supporting materials:
    a) A copy of our final Environmental Assessment for the overall rehabilitation effort, including the 404(b)1 analysis document and all appendices
    b) A complete set of design plans and other documentation for the proposed S. Richland Ave. rirprap repair, including all temporary fills (e.g. the riprap causeway) needed to construct that portion of the project.
2) PADEP will expeditiously notify us of any deficiencies and begin processing the WQC request. Design information & plans have only been prepared for the first task (riprap), however we intend to request WQC for all 4 tasks listed in the EA as a single and complete project/action. Because we will not have detailed design information for the remaining 3 tasks for some time, we understand that PADEP may condition the WQC to require submittal of those plans/designs for PADEP's review and approval, prior to commencement of work on those tasks. This was suggested during our call and we believe this would be an appropriate way to handle it.
3) The Corps' contractor will not begin any work until the 401 WQC has been granted, and would comply with all conditions, including any required approvals for the 3 subsequent work tasks.

THE ASK: Please provide written confirmation that you guys are onboard with this approach, so that we can complete our coordination record within the EA - an email response is fine! As points of clarification, can you please let us know whether there are any specific parties to which this request should be sent/cc'ed, as well as an estimated timeframe for completing the WQC review (assuming the Corps provides complete documentation)?

Thanks and we'll try to get our formal request to you guys ASAP. We're putting the final edits on the EA, then it has to go up our internal chain for signature before we can send it. In the meantime, I encourage you to review the draft EA that was provided earlier as well as the design plans for the S. Richland Ave. rirprap work (which you already have), so that when the formal request is submitted, it's essentially already been reviewed. The Draft EA and materials did not account for the temporary fill for the riprap repair, because the design work had not yet occurred at that time. That work is clearly shown on the plans, however, and will be thoroughly covered in the final EA & 404(b)1 analysis.

Thanks again for your help,

-Andy

Andrew J. May
Civil Projects Development Branch
U.S. Army Corps of Engineers, Baltimore
2 Hopkins Plaza
Baltimore, MD 21201
(410) 962-9499
andrew.may@usace.army.mil <mailto:andrew.may@usace.army.mil>

CLASSIFICATION: UNCLASSIFIED

From: Bean, Ethan A CIV USARMY CENAB (USA)
To: Santiago, Luis E CIV USARMY CENAB (USA); May, Andrew J CIV USARMY CENAB (USA)
Subject: FW: Indian Rock Dam/Codorus Creek FRM Project
Date: Friday, March 8, 2019 9:00:25 AM

FYI...NRCS review.

-----Original Message-----
From: Dostie, Daniel - NRCS, Harrisburg, PA [mailto:Daniel.Dostie@pa.usda.gov]
Sent: Thursday, March 7, 2019 5:23 PM
To: Bean, Ethan A CIV USARMY CENAB (USA) <ETHAN.A.BEAN@usace.army.mil>
Subject: [Non-DoD Source] Indian Rock Dam/Codorus Creek FRM Project

Greetings Ethan,

I learned of your project entirely too late and have been asked to inform you that NRCS has reviewed your project and found no agency interests in the proposed project area.

Dan

Dan Dostie | State Resource Conservationist

USDA, NRCS |359 East Park Drive, Suite 2 | Harrisburg, PA 17111

daniel.dostie@pa.usda.gov <mailto:daniel.dostie@pa.usda.gov> | 717-237-2256

"There is no virtue in planning merely for the sake of planning. Unless plans can be translated into action, planning becomes a profitless mental exercise." – Hugh Hammond Bennett, Chief, Soil Conservation Service

Appendix 3.0 Public Coordination

Appendix 3.1 Public Notice

US Army Corps
of Engineers
Baltimore District

MAR 12 2018

Planning Division

Public Notice

Indian Rock Dam/Codorus Creek Flood Risk Management Project, Pennsylvania

All Interested Parties: The U.S. Army Corps of Engineers, Baltimore District, (USACE-Baltimore) is proposing to undertake major repairs to the Codorus Creek Flood Risk Management (FRM) component of the overall Indian Rock Dam/Codorus Creek FRM Project on Codorus Creek. The project passes through West Manchester Township, Spring Garden Township, York City, North York Borough, and Springettsbury Township, all located in York County, Pennsylvania (Enclosure 1). USACE-Baltimore operates and maintains the FRM project, which was constructed in the 1930s and operational in the 1940s. The FRM project is 4.8 miles in length, and includes a widened and deepened creek channel, levees, floodwalls, and bank protective works. The project's infrastructure is aging and in need of major repairs to ensure it continues to properly perform its FRM functions. At this time, rehabilitation of floodwall, levee, drainage structures, and bank protective works is anticipated. USACE-Baltimore is preparing an environmental assessment (EA) for the proposed repairs in accordance with the National Environmental Policy Act of 1969, as amended. The current schedule calls for the draft EA to be publicly released in Summer 2018.

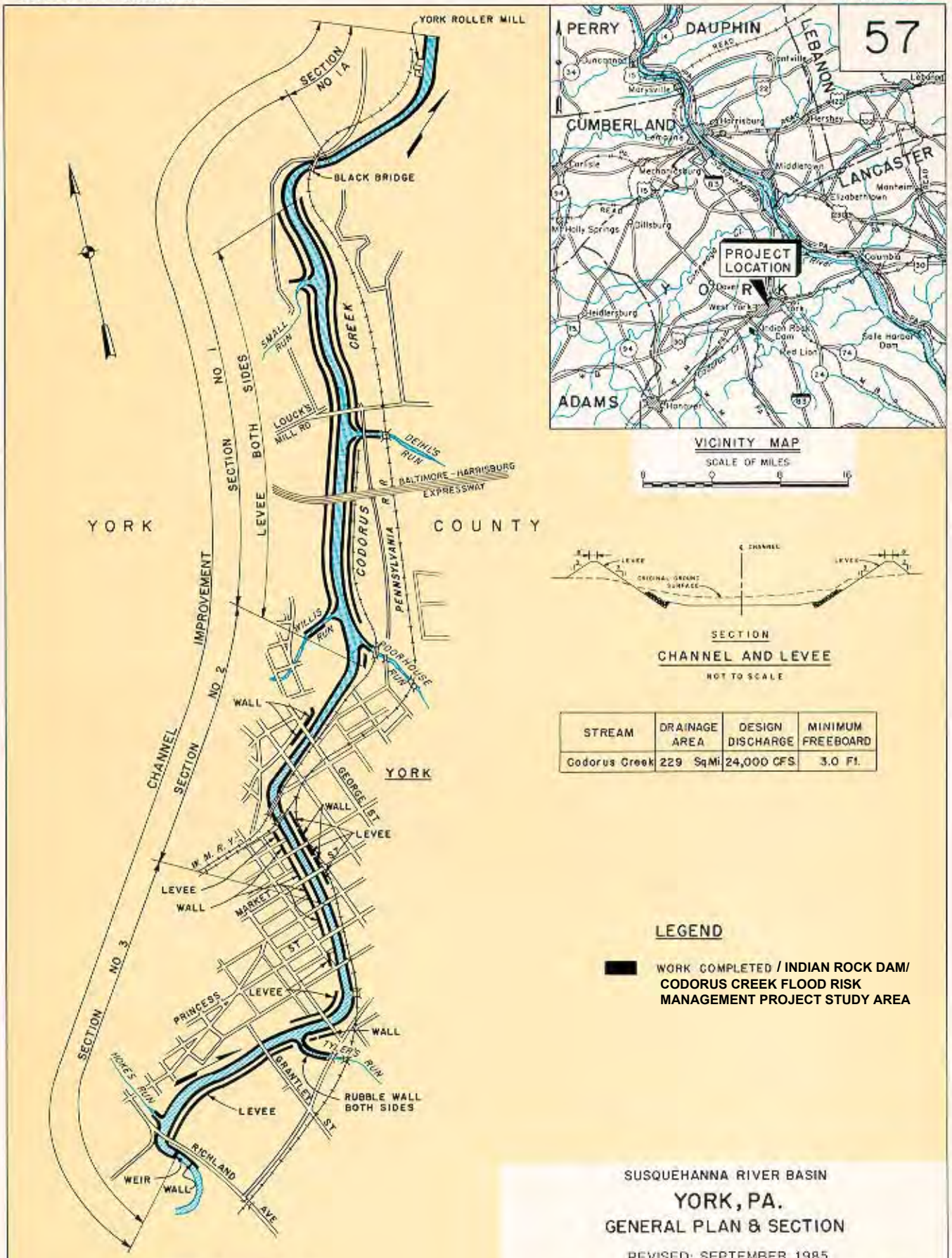
The purpose of this notice is to inform the public of the start of this assessment and to request any information that may affect the implementation of future maintenance work within the project. We request that federal and state agencies provide information concerning interests within your organization's area of responsibility or expertise, and the public provide information which may be pertinent to this project, within 30 days from the date of this notice to the address or listed below. A timely review of the enclosed information and a written response will be greatly appreciated and will assist us with preparation of the EA.

If you have any questions regarding this project, please contact Ms. Tarrie Ostrofsky by phone at (410) 962-4633, by e-mail at Tarrie.L.Ostrofsky@usace.army.mil or by mail at USACE, Planning Division (ATTN: Ostrofsky), 2 Hopkins Plaza, Baltimore, MD 21201.

for Michael J. Conley
Daniel M. Bierly, P.E.
Chief, Civil Project Development Branch

CORPS OF ENGINEERS

U. S. ARMY



GENERAL PLAN

SCALE OF FEET

1000 0 1000 2000

VICINITY MAP

SCALE OF MILES

0 8 16

SECTION

CHANNEL AND LEVEE

NOT TO SCALE

STREAM	DRAINAGE AREA	DESIGN DISCHARGE	MINIMUM FREEBOARD
Codorus Creek	229 SqMi	24,000 CFS	3.0 Ft.

LEGEND

WORK COMPLETED / INDIAN ROCK DAM/ CODORUS CREEK FLOOD RISK MANAGEMENT PROJECT STUDY AREA

SUSQUEHANNA RIVER BASIN

YORK, PA.

GENERAL PLAN & SECTION

REVISED: SEPTEMBER 1985

CODORUS CREEK PENNSYLVANIA

SCALE: AS SHOWN

BALTIMORE DISTRICT OFFICE BALTIMORE, MARYLAND

Appendix 3.2 Public Comment Letters and Correspondence

From: Bean, Ethan A CIV USARMY CENAB (US)
To: "Kyle Robson"
Cc: Matthew Nylin; Howard Conley
Subject: RE: Codorus Creek FRM Project
Date: Monday, September 17, 2018 8:23:00 AM

Hi Kyle,

Thank you for your interest in the Codorus Creek FRM project. Are you the manager of the mill on Black Bridge Road? If so, that location is outside of our current project boundaries, which means that what we're planning to do as part of this project wouldn't have any impacts on your flour mill.

However, in the future, I believe there will be an effort to put together a comprehensive FRM plan for York. The goal of that is to address various aspects of flooding across York and I'd imagine you could voice your concerns when that is being drafted. If you want, I can see if there's an updated schedule on it that I can send you.

Thanks,
Ethan

-----Original Message-----
From: Kyle Robson [mailto:Kyle.Robson@ardentmills.com]
Sent: Friday, September 14, 2018 10:06 AM
To: Bean, Ethan A CIV USARMY CENAB (US) <ETHAN.A.BEAN@usace.army.mil>
Cc: Matthew Nylin <Matthew.Nylin@ardentmills.com>; Howard Conley <Howard.Conley@ArdentMills.com>
Subject: [Non-DoD Source] Codorus Creek FRM Project

Ethan,

I am the plant manager for the flour mill located in York that sits right on the Codorus creek. Numerous times over the years, the mill has had to deal with floods. This year, in fact, we were about 6 inches away from the mill flooding on two occasions.

Is this project going to impact this portion of the Codorus Creek? Will we see less floodwaters as a result of this?

Thanks in advance,

Kyle Robson

Plant Manager – Culpeper, York & Red Lion

1900 Industry Dr. | Culpeper, VA 22701

O: 540-829-5550 | C: 309-530-2447

kyle.robson@ardentmills.com <mailto:kyle.robson@ardentmills.com>

Blockedwww.ardentmills.com <Blockedhttp://www.ardentmills.com/>

Leroy A. King, Jr.
333 East Seventh Avenue
York, PA 17404

September 12, 2018

Mr. Daniel Bierly
Chief, Civil Project Development Branch
US Army Corps of Engineers
Baltimore District
2 Hopkins Plaza
Baltimore, MD 21201

Dear Mr. Bierly:

In response to your letter received September 4 outlining the *Indian Rock Dam/Codorus Creek Flood Risk Management Project* in York County, Pa. I feel it is necessary to advise you about the location of a 122,000 square foot facility that I currently own in North York Borough; 333 E. Seventh Ave. York, Pa 17404.

A manufacturing building has been on this location for over 60 years. In 1990, I purchased the property and building for use as administrative offices and warehousing for the company that I am sole owner; Perform Group, LLC. This building is located along the Codorus Creek which the topography of the land causes the "natural" storm water run-off to be channeled in the direction of the Codorus Creek. No changes have been made to the storm water run-off flow since I have owned this facility and we have no plans, nor budget, to make changes to the flow of the storm water.

While the proposed repairs to the levee, floodwalls and drainage are probably necessary for the safety of York County, I am requesting that these repairs do not interfere with the operations of my building/company.

If you have any questions, please feel free to call me at 717-852-6961 or email me at Tking@performgroupllc.com

Sincerely,

Leroy A. "Tighe" King, Jr.

DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS, BALTIMORE DISTRICT
2 HOPKINS PLAZA
BALTIMORE, MD 21201

Mr. Leroy A. King
333 East Seventh Avenue
York, PA 17404

Dear Mr. King:

The United States Army Corps of Engineers, Baltimore District (USACE) appreciates your interest in the Indian Rock Dam/Codorus Creek Flood Risk Management Project in York County, Pennsylvania. In a letter dated September 12, 2018, you described the topographic setting of a manufacturing building you own within the project area. Although you recognized the overall benefit of the project to York County, you requested that any repairs avoid interference with the operations of your building.

As you referenced in your letter, the project components do include repairs to the levee, floodwalls, and drainage conduits along Codorus Creek. However, no repairs to the levee or floodwalls are planned in the immediate area of your building. Approximately 175 feet to the southeast of your building is a drainage conduit that is to be inspected, cleaned, and possibly repaired, but performing these actions will not have an adverse effect on your company's operations; our work will be confined only to property where we have easements. We will access the conduit through federal easements during the day, and equipment involved includes a high pressure water jet and a robotic camera. It should also be noted that inspecting and cleaning the drainage conduit may help alleviate any storm water run-off issues you experience.

If you have any further questions or comments, please contact Ethan Bean at (410) 962-2173 or ethan.a.bean@usace.army.mil.

Sincerely,

Daniel M. Bierly, P.E.
Chief, Civil Project Development Branch
Planning Division

From:	Ostrofsky, Tarrie L CIV USARMY CENAB (US)
To:	Paul Shiflet
Cc:	Bean, Ethan A CIV USARMY CENAB (US); Gomez, Michele L CIV USARMY CENAB (US); Santiago, Luis E CIV USARMY CENAB (US)
Subject:	RE: [Non-DoD Source] Codorus creek FRM
Date:	Tuesday, September 11, 2018 2:48:07 PM

Paul:

Thank you for contacting the U.S. Army Corps of Engineers (Corps) regarding this project.

I am not assigned as the Point of Contact for this project at this time.

I have included the emails for Mr. Ethan Bean and Mr. Luis Santiago of the Corps Planning Division as contacts for the most recent information and anticipated project schedule.

We appreciate your interest in this project.

Thank you,

Tarrie

Tarrie Ostrofsky
Project Manager (120-Day Detail)
Regulatory Division, Nashville District
U.S. Army Corps of Engineers
3701 Bell Road
Nashville, TN 37214
Mobile Phone: (410) 207-0753
Fax: (615) 369-7501

-----Original Message-----
From: Paul Shiflet [mailto:Paul.Shiflet@zeiglerconcrete.com]
Sent: Tuesday, September 11, 2018 1:30 PM
To: Ostrofsky, Tarrie L CIV USARMY CENAB (US) <Tarrie.L.Ostrofsky@usace.army.mil>
Subject: RE: [Non-DoD Source] Codorus creek FRM

Ms. Ostrofsky,
We received a letter from your office in regards to the public posting comments on how they would be adversely affected by the project of repairing the FRM project along the Codorus creek. Does this mean the project would be starting shortly after that? Just trying to keep tabs on the whole thing.

Thanks,

Paul Shiflet
WALTER W. ZEIGLER'S SONS, INC.
830 Loucks Mill Road
York, PA 17402-1941
o: 717-848-1464
f: 717-843-3582
c: 717-891-7227

-----Original Message-----
From: Ostrofsky, Tarrie L CIV USARMY CENAB (US) <Tarrie.L.Ostrofsky@usace.army.mil>
Sent: Monday, June 4, 2018 9:19 AM
To: Paul Shiflet <Paul.Shiflet@zeiglerconcrete.com>
Subject: RE: [Non-DoD Source] Codorus creek FRM

Good Morning Paul:

Thank you for inquiring on the status of the project. The project NEPA documents are currently undergoing internal reviews. I expect the draft NEPA documents to be posted to the USACE website in July 2018. I will be sending out a notification of the availability of the documents for public review at that time.

Thank you, and please continue to contact me if you have additional questions.

Tarrie

Tarrie Ostrofsky
Biologist, Planning Division
U.S. Army Corps of Engineers
Baltimore District
2 Hopkins Plaza
Baltimore, MD 21201
Phone: 410-962-4633

-----Original Message-----
From: Paul Shiflet [mailto:Paul.Shiflet@zeiglerconcrete.com]
Sent: Friday, June 1, 2018 9:43 AM
To: Ostrofsky, Tarrie L CIV USARMY CENAB (US) <Tarrie.L.Ostrofsky@usace.army.mil>
Subject: RE: [Non-DoD Source] Codorus creek FRM

Tarrie,
I am following up with you in regards to the Codorus creek FRM project. Is there an update?

Paul Shiflet
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c: 717-891-7227

-----Original Message-----
From: Ostrofsky, Tarrie L CIV USARMY CESAJ (US) <Tarrie.L.Ostrofsky@usace.army.mil>
Sent: Monday, March 19, 2018 5:31 PM
To: Paul Shiflet <Paul.Shiflet@zeiglerconcrete.com>
Subject: RE: [Non-DoD Source] Codorus creek FRM

Paul:

Thank you for this message and earlier phone call. We appreciate your information to help us with our evaluation of the proposed project.

Following is the website where the Public Notice introducing the Draft Environmental Assessment will be posted, likely in the July 2018 timeframe.

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/2018/

Please let me know if you have any questions.

Thank you,

Tarrie

Tarrie Ostrofsky
Biologist, Planning Division
U.S. Army Corps of Engineers
Baltimore District
2 Hopkins Plaza
Baltimore, MD 21201
Phone: 410-962-4633

-----Original Message-----
From: Paul Shiflet [mailto:Paul.Shiflet@zeiglerconcrete.com]
Sent: Monday, March 19, 2018 11:08 AM
To: Ostrofsky, Tarrie L CIV USARMY CESAJ (US) <Tarrie.L.Ostrofsky@usace.army.mil>
Subject: [Non-DoD Source] Codorus creek FRM

Mrs. Ostrofsky,

We received your correspondence in regards to the future renovations of the Indian Rock Dam/ Codorus Creek FRM project. We are located directly beside the Codorus creek on Loucks Mill Road behind the eastern levee between Diehl's run and Poorhouse Run. We are a PennDoT approved ready-mix plant and are the closest to the project. We would be very interested in discussing supply for the project as well as assist in any technical aspects as it pertains to concrete. Please add us to your list of contacts and consider including us in any future bid invitations or site meetings. Should you have any questions please feel free to reach out. We look forward to the project!

Respectfully,

Paul Shiflet

WALTER W. ZEIGLER'S SONS, INC.

830 Loucks Mill Road

York, PA 17402-1941

o: 717-848-1464

f: 717-843-3582

c: 717-891-7227

From: Paul Shiflet
To: Bean, Ethan A CIV USARMY CENAB (US)
Subject: RE: [Non-DoD Source] Codorus creek FRM
Date: Monday, September 17, 2018 9:13:11 AM

Ok thank you for your response.

Paul Shiflet
WALTER W. ZEIGLER'S SONS, INC.
830 Loucks Mill Road
York, PA 17402-1941
o: 717-848-1464
f: 717-843-3582
c: 717-891-7227

-----Original Message-----
From: Bean, Ethan A CIV USARMY CENAB (US) <ETHAN.A.BEAN@usace.army.mil>
Sent: Monday, September 17, 2018 8:27 AM
To: Paul.Shiflet@zeiglerconcrete.com
Subject: RE: [Non-DoD Source] Codorus creek FRM

Hi Paul,

Thank you for your interest in the Codorus Creek FRM project. In response to your email below, we currently have conduit cleaning and inspections that are ongoing through 2018. Any replacements to conduits or repairs/replacements to floodwalls would be conducted from 2019 through 2020.

I also received your email about supplying material for the project, and I'll try to find out more about that today.

Thanks,
Ethan

-----Original Message-----
From: Paul Shiflet [mailto:Paul.Shiflet@zeiglerconcrete.com]
Sent: Tuesday, September 11, 2018 1:30 PM
To: Ostrofsky, Tarrie L CIV USARMY CENAB (US)
<Tarrie.L.Ostrofsky@usace.army.mil>
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<Tarrie.L.Ostrofsky@usace.army.mil>
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Appendix 4.0 Section 404(b)(1) Guidelines

Section 404(b) (1) Guidelines for Specification of Disposal Sites for Dredged and Fill Material (40 CFR Part 230)
Section 404(b)(1) Evaluation
Clean Water Act

I. **Project Description**

a. Location - The Codorus Creek Flood Risk Management (FRM) System passes through West Manchester Township, Spring Garden Township, York City, North York Borough, and Springettsbury Township, all located in York County, Pennsylvania. The approximate coordinates of the levee system are as follows: Latitude: 39.947839, Longitude: -76.744812 to Latitude: 40.002382, Longitude: -76.720892. The levee system runs adjacent to approximately 4.8 miles of Codorus Creek and is along both banks of the Creek. Therefore, when considering both banks, the levee provides protection to nearly 10 miles of Creek bank (approximately 4.8 miles on each side). The levee construction consisted of approximately 23,000 feet of channel improvement, including channel widening and deepening, construction of flood walls and levees, protection of bank slopes, and removal of a mill dam which increased channel capacity to 24,000 cubic feet per second (cfs). The levee consists of eight hydraulically independent levee systems: York Northeast, York Northwest, York East Loucks Mill, York West Willis Run, York East Downtown, York West Downtown, York Southeast, and York Southwest. The U.S. Army Corps of Engineers (USACE) easement setback throughout the levee system varies, with some segments consisting of a USACE setback of up to approximately 30 feet and other segments where the USACE setback ends directly on the outside edge of the levee (i.e., floodwalls), approximately 5 feet. Codorus Creek is a perennial, nontidal, freshwater stream.

b. General Description - The project proposes multiple levee rehabilitation activities. The work tasks have been prioritized in accordance with those which have been identified through a periodic inspection as requiring repair/ rehabilitation action at the present time. These work tasks include the following:

Proposed Current Work Tasks:

(1) floodwall replacement near the Penn Street Bridge, including the replacement and addition of riprap at the base of the new floodwall;
(2) levee wall bulge repairs near the Market Street Bridge;
(3) bank stabilization near the South Richland Avenue Bridge; and
(4) cleaning, repair, replacement, and/or abandonment of drainage conduits along the length of the levee system.

Future rehabilitation work tasks to restore the project to the authorized design would also be covered by this document in the cumulative impacts evaluation.

c. Authority and Purpose

Authority: The project was authorized by the Flood Control Act of June 22, 1936, as amended by the Flood Control Act of June 28, 1938, and is described in House Document No. 702, 77th Congress, second session. The project contributes to Executive Order 13508 (Chesapeake Bay Restoration and Protection) goals to protect habitat and water quality within the Chesapeake Bay watershed by providing a stable levee system within a tributary of the Chesapeake Bay, thereby reducing erosion of the creek banks and sediment load from entering into the Chesapeake Bay watershed. The project is solely operational (i.e., not recreational).

Project Purpose: The Codorus Creek FRM levee system was authorized under the Flood Control Act of 1936 to provide flood protection to the City of York and downstream communities. The levee system has been in operation since the 1940s. During the USACE 2015 periodic inspection of the levee system, deficiencies were identified which need to be addressed. The overall purpose of this proposed action is to rehabilitate and repair the Codorus Creek FRM levee system and the overall reliability of the Indian Rock Dam/Codorus Creek FRM project. The proposed work tasks are intended to restore the levee system to its originally-authorized design flood control capacity and integrity. Absent repairs and rehabilitation of the Codorus Creek FRM levee system, the existing conditions of the levee would continue to deteriorate and become compromised. The fiscal 2018 President's Budget includes $15.9 million for operation and maintenance of the aging Codorus Creek FRMS. The proposed rehabilitation and maintenance actions include four primary work tasks that the USACE identified as being the highest priorities, and which are proposed to occur in the near future. These work tasks are identified in Section I.b. under Proposed Current Work Tasks.

d. General Description of Dredged or Fill Material:

(1) General Characteristics of Material (grain size, soil type) – The fill materials that would be utilized for construction of the work tasks (e.g., bank stabilization) would include materials classified by ASTM D 2487 as well-to-poorly-graded gravels and sands, and inorganic silts. 18 inch diameter riprap, or similar size, would be utilized along the levee banks. 12-inch diameter riprap and bedding stone would also be utilized along with the 18 inch diameter riprap and geotextile or bedding for stabilization. Temporary fill, to include cofferdams and in-water pump around devices, would be expected to be utilized. The cofferdams may consist of metal or fiberglass sheet piles.

(2) Quantity of Material (cubic yards) – The cubic yards of material would be the minimum amount necessary to perform the work tasks. Some of the work

would occur above the ordinary high water mark of the stream (e.g., bulge repair), and would not result in a discharge of fill material into waters of the United States. The floodwall replacement near the Penn Street Bridge would occur within its approximate same footprint; therefore, it is not expected that additional permanent fill would be required. Riprap, which is currently located along the base of the floodwall, would be sorted and replaced with suitable sized riprap (e.g., 18 inch diameter riprap). The bank stabilization work task at the South Richland Avenue Bridge would involve re-sloping of the levee banks and installation of new riprap along a 190 foot length of unprotected channel bank to stabilize the existing floodwall tie-in. The anticipated amount of riprap is approximately 1,700 cubic yards. Additionally, approximately 4,200 cubic yards of soil would be utilized for the re-sloping of the embankment. Temporary fill (e.g., sheet piles) would be necessary for in-water best management practices, to minimize the occurrence of construction related activities from affecting adjacent waters. The temporary fill for in-water best management practices would be limited to the footprint of individual project construction zones. However, there would be work (e.g., conduit maintenance) on both banks along the length of the levee system where temporary containment structures may be necessary. Estimating 10 miles (4.8 miles on each side), with an approximate 0.375-inch thickness of sheet piles, it is calculated that if cofferdams were to be installed at various times along the entire length of the levee system, the total area of waters that may be affected by in-water containment, over the course of the proposed actions, would be approximately 7 acres, of which the temporary fill for sheet pile installation would be approximately 0.40 acre. Only a relatively small area, corresponding to active work site(s), would be affected at any one time. To access the South Richland Ave site, temporary fill may also be required to construct a low causeway within and across Codorus Creek, to facilitate access by construction equipment that must be staged from the opposite bank. The causeway, if used, would be constructed out of riprap (PA R-5), topped with a 15-foot-wide, drivable surface of six inches of coarse stone (AASHTO #1), with a low elevation to allow normal streamflow to pass over the surface. The quantity of fill required to construct the causeway, as measured within the streambed, is roughly 137 cubic yards. All temporary fill material would be removed upon completion of the project.

(3) Source of Material – The fill material would be obtained from a commercial source. The fill material would be free from items such as trash, debris, automotive parts, asphalt, construction materials, and concrete block with exposed reinforcement bars. Additionally, fill material would be free from soils contaminated with any toxic substance, in toxic amounts in accordance with Section 307 of the Clean Water Act. Large riprap which is existing in the stream may also be used if size and condition is acceptable.

e. Description of the Proposed Discharge Sites

(1) Location – The location where the work would occur is within Codorus Creek which runs through the levee system, along the levee banks and floodwalls, and adjacent to the levee system. Codorus Creek is a perennial, nontidal, freshwater stream.

(2) Size (acres) – The work would occur within and adjacent to Codorus Creek. In-water work involves placement of temporary best management practices, such as turbidity barriers and potentially coffer dams. The size of the in-water temporary work zones would be the minimum necessary in order to sufficiently and effectively protect the quality of the waters. Permanent impacts to waters of the United States would also occur for some of the proposed work tasks. The approximate 600-linear-foot floodwall replacement near the Penn Street Bridge would be performed in-kind, thus not resulting in increased area of permanent discharges into waters of the United States. However, riprap would be replaced/installed at the base of the Penn Street Floodwall for stabilization. This would be the minimal necessary in order to stabilize the new floodwall and is anticipated to be within an area of approximately 0.30 acre. Permanent impacts to waters of the United States would occur for the bank stabilization work task near the South Richland Avenue Bridge. The extent of stabilization work is approximately 690 linear feet adjacent to the existing floodwall upstream of South Richland Avenue Bridge along the east bank of Codorus Creek. This work includes (1) stabilization of existing riprap along a 500 foot length of channel bank starting from the South Richland Avenue Bridge to 500 feet upstream along the east bank of Codorus to where the existing riprap ends and (2) installation of new riprap along an approximately 190 linear foot length of eroded channel bank located immediately upstream of the existing riprap (proposed for stabilization as part of this work) and riverside of the existing floodwall. The installation of riprap at this location would result in permanent impacts to approximately 0.13 acre of surface waters, including approximately 1,880 square feet (0.04 acres) of new riprap embankment extending 10 feet channelward along the 190 linear feet restored bank. A temporary ramp and in-water causeway across Codorus Creek may be required, and if so, would comprise approximately 5,722 square feet of fill, as measured from the top of the embankment on the opposite bank. Temporary in-water containment structures (e.g., cofferdams) would be necessary in order to contain the construction zone for this work and is anticipated to comprise approximately 0.20 acre. Permanent fill is not anticipated for the conduit maintenance work task. However, temporary fill would be necessary for in-water containment structures at sporadic locations on both sides along the length of the approximate 4.8 mile levee project. The conduits are present at varied locations and along both sides of the levee system. Considering the total length of the levee (approximate length of 4.8 miles, with work along both banks, equals approximately 10 miles of levee bank), and an approximate 6-foot channelward extent for placement of in-water best management practices (e.g., sheet piles for cofferdams), an estimated calculation of in-water temporary best management practices where waters

would be contained is approximately 7 acres. Of the approximate 7 acres of contained waters, approximately 0.40 acre would consist of sheet piles. Active in-water work at any one time would be only a small fraction of this area.

(3) Type of Site (confined, unconfined, open water) – The waters within the area of review are confined. Within the project area, Codorus Creek flows through an approximate 4.8 mile levee system. The width of the Creek within the levee system varies, from a base width of approximately 80 feet to approximately 200 feet. The average height from the Creek bed is approximately 25 feet. The channel has a design capacity of 24,000 cfs. The average depth of the stream is approximately 3 feet. The depth behind the City of York's Bascule Dam in a raised position is approximately 6 feet.

(4) Type of habitat – Codorus Creek within the area of review is clearly-defined stream system, with bed and banks confined by constructed embankments, levees and floodwalls. Although shoals and other features associated with bedload movement within the system may temporarily support emergent or submergent vegetation, there are no stable wetland communities within the area of review. The waters within the project area of review are classified as supporting warm water and migratory fishes. There are numerous silt, sand, and gravel deposits throughout the project. These areas are frequented by local and transient wildlife.

(5) Timing and Duration of Discharge – The in-water work would occur over the course of approximately 24 months for the floodwall replacement project near the Penn Street Bridge, less than a year for the bank stabilization work near South Richland Avenue, and 6 months for the drainage conduit maintenance work. Bulge repairs are anticipated to occur over a few weeks, but may not result in any discharge. If work tasks remain on the anticipated schedule, the bank stabilization and drainage conduit work tasks are anticipated to commence in FY 2019. The floodwall replacement work and bulge repairs anticipated to commence in late FY 2019 or FY 2020.

f. Description of Disposal Method – The method of the work would involve the use of heavy machinery, which is expected to be stationed at the top of the levee bank, except for repair of the riprap embankment near the South Richland Avenue Bridge. The riprap repair would primarily be performed using equipment stationed within the creek. The installation of turbidity curtains would likely occur by hand, and if cofferdams are utilized, this would occur through the use of machinery either within the Creek or from the top of the levee bank. Removal of riprap would occur primarily by machinery, likely stationed on the top of the levee bank. Excavation of materials would involve use of a front-end loaders, backhoes and trackhoes. All materials which would be generated from project activities, such as demolition, excavation, drainage pipe cleaning, etc., would be contained and disposed of at approved upland disposal sites. Potential disposal sites would include Construction and Demolition Waste Landfills in Pennsylvania.

If materials tested at the Penn Street Floodwall location would contain any hazardous materials, the materials would be taken to an approved hazardous waste disposal site. Sites would need to be approved by regulatory authorities prior to disposal.

II. **Factual Determinations**

a. Physical Substrate Determinations

(1) Substrate Elevation and Slope –The proposed work tasks primarily involve work along the walls and banks of the levee system. The replacement of the floodwall near the Penn Street Bridge would be within the approximate footprint of the existing floodwall, and the riprap at the base of the wall would be replaced with suitable sized stone (i.e., 18 inch diameter riprap) to protect the wall. The bank stabilization near the South Richland Avenue Bridge would re-establish the slope to its authorized design of two feet horizontal to one feet vertical. New riprap placement is anticipated to be placed along 190 linear feet of the Creek, to a channelward distance of approximately 10 feet. The slope at the location of new riprap placement would be graded to one and a half feet horizontal to one feet vertical to reduce the steepness of the existing creek bank for riprap placement. The bulge repairs would not involve impacts to waters of the United States and would have no effect on substrate elevation and slope. Conduit maintenance activities would require temporary containment structures in waters of the United States in order to perform the work and collect sediments from the conduit pipes. This would temporarily alter substrate elevation and slope. However, upon removal of the temporary structures, the substrate conditions would be similar to the pre-construction conditions through natural stream current movement of substrate materials.

(2) Sediment Type – The substrate type near the Penn Street Bridge includes a stratum of random fill material over the entire project site to a depth of 20 feet composed primarily of gravel, sands, and silts as well as concrete and brick debris from previous demolitions at the site. Underlaying this stratum is a sandy silt layer to a depth of 16-18 feet and below that a soft silt layer and silty gravel/sand layer resting on bedrock. Soil composition for the general FRM project area is included in the soil classification report included in the associated EA in Appendix 1.8. This soil classification survey identifies a majority of the area adjacent to the levee system as containing urban soil.

The proposed work task actions would not significantly alter the existing sediment type throughout the length of the levee system. The levee is a manmade structure which contains approximately 4.8 miles of Codorus Creek, and the levee system and Creek have been subjected to periodic maintenance activities, to include riprap placement, excavation of shoals, etc., necessary to ensure the integrity of the levee system. The proposed replacement of the existing floodwall near the Penn Street Bridge would occur within its approximate

existing footprint, and existing riprap at the base would be replaced, with suitable sized stone (i.e., 18 inch diameter riprap). The levee bank near the Market Street Bridge is eroding, and as a result, upland materials are entering into the Creek. Stabilization of the levee bank at this location would positively alter the sediment type by protecting the bank from further erosion and continued sedimentation of the Creek. The work within the drainage pipes would not alter the sediment type, as the sediments which would be ejected from the drainage pipes during the cleaning process would be contained and disposed of at an approved upland disposal site. The proposed bulge repairs would occur outside of waters of the United States. Construction zones would be protected through the use of best management practices in uplands to ensure sediments do not enter into the Creek, and in-water containment structures, to limit the occurrence of construction materials from entering into waters outside of the work zones. Upon removal of the temporary in-water containment structures, the substrate conditions of the Creek would be similar to the pre-construction conditions through natural stream current movement of substrate materials. Based on the above factors, the proposed project work tasks would result in minimal effects to the physical substrate.

(3) Dredged/Fill Material movement - There may be temporary adverse effects during in-water construction activities, such as increased erosion, transportation of sediments, changes to the bottom contours of the Creek, etc., during construction activities. However, this would be minimal due to the implementation of the use of best management practices to contain sediments within the construction zones. Upon completion of construction activities, the work zones would be stabilized. Given the above factors, it is expected that there would be short-term adverse effects on material movement. Long-term effects from slope stabilization would be beneficial due to the rehabilitated levee system.

(4) Physical Effects on Benthos (burial, changes in sediment type) - Permanent adverse effects would occur to any benthos present within the footprint of in-water discharge locations as a result of fill and excavation activities due to smothering and removal of existing organisms. Additionally, if heavy machinery within the Creek would be necessary, benthos that are present would also be adversely affected by compaction of substrate and smothering. Additional temporary adverse impacts to benthos would occur within areas enclosed by temporary containment measures (e.g. sheetpile cofferdams) that may be used to prevent sedimentation and turbid discharges or to enable work to be completed in the dry. Such adverse effects within the containment areas may include smothering by sediment, obstruction of water circulation, and/or desiccation within dewatered areas. Given that some of the proposed work tasks would occur within their approximate existing footprints, and some activities would occur solely above the limits of the ordinary high water mark, the adverse effects would be minimal. Additionally, repopulation of species within the disturbed areas once construction is completed is expected to occur as

organisms recolonize within the impact locations. In-water work would occur within distinct locations (e.g., bank stabilization), as well as at sporadic locations (e.g., conduit maintenance) along the length of the levee system. Using an approximate calculation of the length of the levee, work along both banks, and 6-feet channelward, approximately 7 acres of temporary in-water containment (not all direct fill) may occur over the course of the work tasks. In-water permanent riprap is anticipated to be replaced/installed within an approximate 0.30 acre area near the Penn Street Floodwall location and a 0.12 acre area at the South Richland Avenue Bridge bank stabilization location, which includes impact to a 0.04 acre area of channel previously undisturbed but affected by existing bank erosion. In addition, the bank stabilization task near South Richland Avenue may require construction of a temporary causeway across the creek to enable heavy equipment to safely access the site from the opposite bank. The total area of fill estimated for the causeway (as measured below the top of the embankment) is approximately 5,722 square feet. The causeway, if used, would be constructed of riprap and (PA R-5) and coarse aggregate (AASHTO #1) with minimal fines, and therefore should not be a source of sediments causing smothering beyond the actual footprint of the causeway. Based on the above factors, there would be minimal short-term and long-term adverse effects to benthos due to temporary and permanent fill. However, the long-term effects would be minimal.

(5) Other Effects – Any adverse effects to resources are expected to be short-term and temporary. The rehabilitation and repair work tasks would address the existing conditions of the deteriorating floodwall and bank erosion. The work would result in a stable system and reduction of erosion.

(6) Actions Taken to Minimize Impacts – The proposed alternative for each work task has been designed to provide the required restoration of the levee system while resulting in the least amount and degree of impacts to aquatic resources and organisms. The floodwall near the Penn Street Bridge would be replaced within the approximate footprint of the existing floodwall, and the levee bank stabilization work task near the South Richland Avenue Bridge would reduce sedimentation of the Creek. Additionally, where feasible (e.g., where adjacent uplands provide suitable conditions), work would be performed through machinery stationed at the top of the levee. If machinery would be utilized within the Creek, this would occur in the dry or during low flow, when feasible to do so. Sediment erosion and control plans would be prepared and adhered to with best management practices implemented, for each proposed work task, to minimize the discharge and suspension of sediments during construction activities. This would include turbidity curtains; potentially cofferdams to protect the work zone; potentially water pump around techniques to dewater the work zones, if needed; silt fences; etc. Upon completion of the construction activities, the upland work sites would be stabilized to minimize the occurrence of erosion into waters of the United States.

b. Water Circulation, Fluctuation, and Salinity Determinations

(1) Water

(a) Salinity – N/A

(b) Water Chemistry – A marginal and short-term effect on water chemistry would occur from disturbance caused by construction activities in and adjacent to the creek. These changes may include temporary increases in suspended solids, soil particles, and organic materials in the creek near affected work areas. No long-term effects to water chemistry are expected.

(c) Clarity - There would be a minor and temporary change in water clarity during construction due to some of the proposed work tasks involving in-water activities. However, the in-water work areas would also be protected through the utilization of best management practices, to include turbidity curtains, potentially cofferdams, etc. Additionally, the upland work areas would also be protected during construction activities through the use of best management practices, to include sediment barriers, which would contain sediments which would be generated by the project. Water clarity is expected to return to pre-construction conditions once construction is completed, as turbidity is reduced, suspended sediments settle out, and the water column is restored. Therefore, the effect on water clarity would be minor and short-term. No long-term effects to water clarity are expected.

(d) Color - Marginal and temporary changes to water color are expected to occur during construction due to increases in turbidity, suspended sediments, etc. However, the work zones would be protected through the utilization of best management practices, to include turbidity curtains, potentially cofferdams, silt fences, etc. Water pump around techniques may be utilized, if necessary. Water color is expected to return to pre-construction conditions once construction is completed as suspended turbidity is reduced, sediments settle out, and the water column is restored. Therefore, the effect on water color would be minor and short-term. No long-term effects to water color are expected.

(e) Odor – The proposed project activities are not expected to result in changes to water odor. All materials to be used for construction activities would be clean and free of pollutants. The proposed construction areas would be protected through the utilization of best management practices. Therefore, there would be no expected effects to water odor.

(f) Taste – There would be no effect to water taste, as the waters where work is proposed are not utilized as potable water resources. Therefore, effects to water taste are not applicable to this project.

(g) Dissolved Gas/Oxygen Levels – The proposed project activities may result in minor and temporary changes to the dissolved oxygen levels within the Creek during construction activities. No long-term adverse effects to dissolved oxygen levels are expected.

(h) Nutrients – The project work tasks may temporarily increase nutrient loads into the waterway during construction. However, this would be minimal due to the construction zones being protected by best management practice

measures. Utilizing best management practices would minimize the release of construction materials from entering into the waters. If some materials do enter into the Creek, it is expected that the effects to the existing nutrient levels would be minor and short-term. No long-term adverse effects in regard to nutrient levels are expected.

(i) Eutrophication – The levee system runs through a multitude of adjacent land use classifications, to include residential, mixed use, institutional, commercial, industrial, transportation, and open space. As a result of the adjacent land uses, the waters are subjected to activities that routinely occur, including storm water runoff. The project work tasks are not expected to result in increases in dissolved nutrients (such as phosphates), as the construction zones would be protected and contained to minimize the transport of construction materials into the waters. However, if some materials were to enter into the waters, it is expected that the effect to the existing eutrophication would be minor and short term. No long-term adverse effects are expected.

(j) Others as Appropriate – All work activities would be required to adhere to federal, State, and local conditions. This would likely include monitoring to ensure that temporarily disturbed upland areas utilized for site access, staging of equipment, etc., have been restored in order to minimize the potential of erosion of upland materials from entering into waters of the United States (i.e., replanting of uplands, etc.). Testing would be performed on exposed soils during excavation and replacement of the Penn Street Floodwall, to identify any contaminated soils that may pose a pollution risk to adjacent waters.

(2) Current Patterns and Circulation

(a) Current Patterns and Flow – Current patterns and water flow would be temporarily affected as a result of the use of in-water best management practices which would surround the construction zones (i.e., cofferdams). The flow would be redirected around the in-water best management practice features and would not be completely restricted. This would result in minor changes to current patterns. Upon completion of construction and removal of the best management practice features, the current patterns and flow would be restored. It may be necessary to construct a temporary causeway across Codorus Creek to facilitate equipment access to the riprap repair site near South Richland Avenue. The causeway would be built at a low elevation, near the approximate, average water level within the Creek and two to three feet below the crest of the existing weir, 200 feet upstream. It would cause temporary disruption of normal flow patterns typical of a low-head structure (e.g. very minor rise in headwater elevation, and hydraulic jump immediately downstream, etc.). The causeway would be constructed of riprap overlain with coarse stone, and would be designed to withstand overtopping by normal, run-of-creek stream flows without failure. At completion of construction, the replacement of the floodwall near the Penn Street Bridge is not expected to alter flow, as the new wall is proposed to occur within the approximate footprint of the existing floodwall. Riprap would be replaced/added at the base of the wall for stabilization which would alter current

patterns and flow during high water events. However, riprap does exist at this location. Installation of new riprap for bank stabilization near the South Richland Avenue Bridge would also alter current patterns and flow along the bank by deflecting and decelerating rapid currents, especially following heavy rain events. Given the above factors, there would be minor short-term and long-term adverse effects on current patterns and flow.

(b)Velocity – Water velocity would be temporarily affected by the placement of in-water best management practices, such as turbidity barriers, potentially cofferdams, water pump around techniques if utilized, etc. However, this would be minor, and velocity would naturally return to preconstruction conditions upon removal of temporary construction practices. The temporary causeway across the creek, if used to facilitate repair of the riprap embankment near South Richland Avenue would produce localized, overtopping flows that are higher-velocity than would otherwise be the case. However, because the causeway crest elevation would be very close to normal water surface elevation, this effect would be minor and comparable to velocities over any other low-head, grade control structure (e.g. the control weir at the upstream end of the project) or through comparable natural features (e.g. a large riffle over bedload materials). The temporary causeway would be designed with materials of sufficient size to be stable and resist shear stress associated with overtopping flows. Velocity of waters adjacent to where the floodwall near the Penn Street Bridge would be replaced would not be permanently affected from the floodwall replacement activity, as the floodwall would be replaced within the approximate footprint as the existing floodwall. Water velocity where riprap would be replaced and added at the base of the floodwall would be altered during high flows; however, riprap currently exists at this location. The water velocity where bank stabilization work is proposed near the South Richland Avenue Bridge would be altered as a result of a slightly reduced channel width at this location. However, the velocity would be reduced through the addition of rough rock along the banks which would act to deflect rapid currents, thereby, reducing the potential of erosion along the levee banks. Based on the above factors, there would be minor short-term and long-term adverse effects on water velocity. The long-term effects would be beneficial. There would be no long-term adverse effects to velocity.

(c) Stratification – The waters within the project area of review are nontidal freshwater tributaries and are not stratified. Therefore, stratification is not expected to be affected by the proposed work tasks.

(d) Hydrologic Regime – Codorus Creek within the levee system transports perennial flow. The hydrologic regime of the Creek adjusts as a result of storm events and seasonal changes. Some of the project work tasks would be expected to result in a minor and short-term change to the existing hydrologic regime due to the implementation of in-water best management practices, such as turbidity curtains, potentially cofferdams, and if water pump around techniques are utilized. Once construction is completed, the hydrologic regime is expected to return to pre-construction conditions throughout the levee system. Given the above factors, adverse effects on the hydrologic regime would be minor and

short-term. No long-term adverse effects are expected, and the hydrologic regime would be improved.

(3) Normal Water Level Fluctuations – Water fluctuations would be temporarily altered within the in-water construction zones during work activities as a result of in-water construction best management practices. This would include the use of coffer dams and/or water pump around techniques. However, this would be minor and short-term, as water levels and fluctuations would naturally return to preconstruction conditions after the temporary best management practices are removed. The proposed work tasks are not expected to result in major permanent water level fluctuation changes, as the majority of work would occur outside of waters of the United States. Permanent fill includes fill material for bank stabilization and riprap, both of which would be the minimal amount necessary to achieve appropriate bank stabilization and erosion control results. Based on the above factors, there would be minor and short-term adverse effects on normal water fluctuation from installation of temporary containment structures. No adverse long-term effects are expected, and long-term effects would be beneficial.

(4) Salinity Gradients – N/A

(5) Actions to be Taken to Minimize Impacts - The construction zones would be protected through the utilization of best management practice measures. These would include, but are not limited to, in-water turbidity curtains, potentially cofferdams, sediment control barriers, staging of equipment outside of waters of the United States, etc. The barriers would minimize the potential for release of construction materials entering into the waters. Additionally, water pump around techniques may be utilized during construction to minimize water level fluctuations within the vicinity and downstream. All work tasks would be required to adhere to federal, State, and local conditions. Monitoring of disturbed upland locations would also be expected to occur to ensure stabilization of disturbed upland staging and access areas (e.g., replanting of disturbed uplands).

c. Suspended Particulate/Turbidity Determinations

(1) Expected Changes in Suspended Particulates and Turbidity Levels in the Vicinity of the Disposal Site – It is expected that there would be a local increase in turbidity within the limits of disturbance of the project work tasks during construction. However, this would be minimal given the use of best management construction practices. Additionally, the completion of the levee bank stabilization work task near the South Richland Avenue Bridge would result in a reduction of suspended particulates within its vicinity and downstream. Given the above factors, it is expected that minor and short-term adverse effects to suspended particulates and turbidity levels would occur during construction. No adverse long-term effects are expected to occur, and the project is expected to result in beneficial long-term effects.

(2) Effects on Chemical and Physical Properties of the Water Column

(a) Light Penetration – The project work tasks would result in a minor and short-term adverse effect on light penetration as a result of turbidity and suspended sediments during in water construction activities. However, this would be minimal given the use of best management construction practices, and light penetration within the waters would return to preconstruction conditions upon completion of construction activities. No adverse long-term effects are expected to occur to light penetration.

(b) Dissolved Oxygen - The proposed project activities may result in minor and temporary changes to the dissolved oxygen levels within the Creek during construction activities. No adverse, long-term effects are expected.

(c) Toxic Metals and Organics – All materials to be used for construction activities would be clean and free of pollutants. Additionally, the proposed construction zones would be protected and contained through the utilization of best management practices. Testing and monitoring of soils near the Penn Street floodwall replacement site would also occur prior to and during construction activities given the findings of one test site resulting in lead content higher than the PADEP standard. This would minimize the potential of toxic metals and organics from entering into the waters. Based on these factors, it is expected that the project activities would not affect the water column in regard to toxic metals and organics.

(d) Pathogens – The waters within the project area of review are not utilized as a drinking source. However, they are accessible for recreational activities, such as fishing and boating. All materials to be used for construction activities would be clean and free of pollutants, and the construction work zones would be contained and protected. Given these factors, the project work task activities are not expected to effect the levels of pathogens within the waters.

(e) Aesthetics – The levee system is currently showing signs of deficiencies along segments which are in need of rehabilitation, repair, or replacement. The existing conditions at these locations are that of deteriorating floodwalls, bulges within the floodwalls, eroding stream banks, etc. The project would result in the replacement of the floodwall near the Penn Street Bridge within its approximate footprint and dimensions. Additional riprap would be installed at the base of the new floodwall; however, riprap of varied sizes currently exists at this location, and replacement/addition of riprap would be a minimal change to the current conditions. The project would also result in repair of the bulges within the floodwalls near Market Street Bridge, and stabilization of the eroding stream bank near the South Richland Avenue Bridge. The conduit maintenance work would not result in major alterations to the aesthetics, as the conduits run through the levee banks. Aesthetics would be temporarily impacted during construction activities. However, upon completion of construction activities, the work would result in long-term beneficial affects to aesthetics. Based on the above factors, the project work tasks are expected to result in minor adverse short-term effects

on aesthetics (e.g., during construction) and minor long-term beneficial effects to the aesthetics of the area.

(f) Others as Appropriate - The work tasks would be required to adhere to all federal, State, and local special conditions, to include site monitoring.

(3) Effects on Biota

(a) Primary Production, Photosynthesis - It is expected that there would be an increase in turbidity within the limits of disturbance of the project work tasks during construction. This would affect photosynthesis, depending on the duration that these conditions occur. However, this would be minimal given the use of best management construction practices which would protect and contain the work zones. It is expected that adverse effects would be minor and short-term. Additionally, the proposed stabilization of the eroding levee bank near the South Richland Avenue Bridge would result in reduced suspended particulates upon completion of construction. Therefore, photosynthesis within the vicinity, and potentially downstream, would be improved due to reduced erosion. No expected long-term, adverse impacts are expected.

(b) Suspension/Filter Feeders – Mussels have not been identified by resource agencies as a species of concern for this project. However, if present, minor, temporary, and localized adverse effects on suspension/filter feeders (e.g., freshwater mussels, some insect larvae), may occur due to turbidity and suspended particulates within the water column during construction. The degree of the effect would depend on the duration of the turbidity. However, it is expected that the effect would be minimal given the use of best management construction practices which would protect and contain the work zones, minimizing the potential and extent of suspended sediments. Additionally, the proposed stabilization of the eroding levee bank near the South Richland Avenue Bridge would result in reduced suspended particulates upon completion of construction. A reduction of suspended particulates within the vicinity, and potentially downstream, would provide improved conditions for filter feeders. Short-term and temporary adverse effects would occur from this proposed project. No long term adverse impacts are expected. Beneficial long-term effects would occur.

(c) Sight Feeders – Given the expectation that there would be an increase in turbidity within the limits of disturbance of the project work tasks during construction, there would be a minor and short-term adverse effect on sight feeders. Upon completion of construction activities, areas where erosion and suspended particulates are present would be reduced due to the bank stabilization activities. No long-term, adverse effects to sight feeders are expected. Beneficial effects would occur as a result of reduced sedimentation of waters.

(4) Actions taken to Minimize Impacts: The proposed alternative for each work task has been designed to provide the required restoration of the levee system while resulting in the least amount and degree of impacts to aquatic resources

and organisms. The floodwall near the Penn Street Bridge would be replaced within the approximate footprint of the existing floodwall, and the levee bank stabilization work task near the South Richland Avenue Bridge would reduce sedimentation of the Creek. Additionally, where feasible, work would be performed through machinery stationed at the top of the levee. If machinery would be utilized within the Creek, this would occur in the dry or during low flow, when feasible to do so. Sediment erosion and control plans would be prepared and adhered to with best management practices implemented, for each proposed work task, to minimize the discharge and suspension of sediments during construction activities. This would include turbidity curtains; potentially cofferdams to protect the work zone; potentially water pump around techniques to dewater the work zones, if needed; silt fences; etc. Upon completion of the construction activities, the work sites would be stabilized to minimize the occurrence of erosion.

d. Contaminant Determinations – There are no properties which are listed on the Toxic Release Inventory; generators, transporters, treaters, storers, or disposers of hazardous waste; or Brownfield sites located within the levee system area of review. The area adjacent to the floodwall near the Penn Street Bridge was previously the property of a paper mill with a history of cardboard manufacturing. The property and structures are currently under the ownership of York College. The USACE performed a groundwater evaluation in 2011 and soils evaluation in 2012. The evaluation consisted of four soil borings drilled to 25-feet below ground surface or bedrock, whichever was shallower, two test pits; two existing monitoring wells, and one surface water sample. The findings of the soil sample results were below the PADEP Act 2 non-residential surface soil criteria, except for an isolated occurrence with a lead concentration of 2800 mg/kg. The findings of the groundwater survey indicated that groundwater was encountered at a depth of 15.3 to 19.5 feet below ground surface, and the groundwater samples were below the PADEP Act 2 MSC for non-use aquifers; and the surface water had no exceedance of the PADEP surface water quality standards. Although these test results do not give particular cause for concern, the contractor for this floodwall replacement would nevertheless be required to test soils for contaminants during excavation and demolition, and would be responsible for preventing unauthorized discharges as well as for disposal of any contaminated soils, debris or other materials at a suitable facility. Additionally, construction and fill material would be free from items such as trash, debris, automotive parts, asphalt, construction materials, and concrete block with exposed reinforcement bars. Construction and fill material would be free from soils contaminated with any toxic substance, in toxic amounts in accordance with Section 307 of the Clean Water Act. Given the above factors, the project would not result in contaminants entering into the waters of the United States.

e. Aquatic Ecosystem and Organism Determinations

(1) Effects on Plankton - Impacts from turbidity generated during construction are anticipated to be minor and localized to the immediate construction area. No long-term adverse effects are expected.

(2) Effects on Benthos - Permanent impacts would occur to any benthos living in the locations due to the placement of fill for permanent structures, including the additional riprap, causing smothering of existing benthos and removal of existing benthos. Those structures would, in turn, provide complex substrate that would be colonized by different benthic communities. Heavy machinery working in the Creek may be necessary. This would temporarily directly impact benthos due to compaction and smothering. Additional temporary adverse impacts to benthos would occur within areas enclosed by temporary containment measures (e.g. sheetpile cofferdams) that may be used to prevent sedimentation and turbid discharges or to enable work in the dry. Such adverse effects within the containment areas may include smothering by sediment, obstruction of water circulation, and/or desiccation within dewatered areas. Repopulation of the disturbed areas to pre-project levels is expected to occur as species repopulate within the work zones. Therefore, the adverse effects to benthos would be minimal and short-term. No long-term adverse effects are expected to occur.

(3) Effects on Nekton – It is expected that adverse effects on nekton would occur during construction due to the implementation of the in-water best management practice construction measures. The presence of in-water barriers would result in actively swimming aquatic organisms being blocked from entering into the work zones, thereby, altering their path. There would be sufficient area of waters outside of the work zones where aquatic organisms could travel. Therefore, it is expected that the adverse effects on nekton would be minor and short-term. No long-term adverse effects are expected.

(4) Effects on Aquatic Food Web – Although there would be localized, temporary disturbance to benthic communities, no significant impact to the aquatic food web is expected as a result of the proposed project work tasks. Best management practices would be implemented and adhered to during construction, and the work zones would be stabilized post construction to minimize erosion and sedimentation of the waters.

(5) Effects on Special Aquatic Sites

(a) Sanctuaries and Refuges – N/A. The proposed project work tasks are not located within any areas determined to be sanctuaries or refuges.

(b) Wetlands – N/A. The proposed project work tasks are not located within any areas determined to contain wetlands.

(c) Mud Flats – N/A. The proposed project work tasks are not located within any areas determined to contain mud flats.

(d) Vegetated Shallows – N/A. The proposed project work tasks are not located within an area determined to contain vegetated shallows.

(e) Coral Reefs – N/A. The proposed project work tasks are not located within any areas determined to contain coral reefs.

(f) Riffle and Pool Complexes – The waters within the project area of review flow along a relatively low gradient. Therefore, riffle and pool complexes would be minimal. Additionally, the project work tasks would result in the rehabilitation and repair of the existing levee system floodwalls and earthen banks. Periodic dredging of the Creek has occurred where deposits have formed. However, no dredging is proposed under the current work tasks. Given the above factors, it is expected that the project would have no adverse effects on riffle and pool complexes.

(6) Threatened and Endangered Species: Two federally listed threatened species and one endangered species were evaluated as potentially occurring within the project area of review. The federally listed species include the threatened Northern long-eared bat (*Myotis septentrionalis*), threatened bog turtle (*Clemmys muhlenbergii*), and endangered Indiana bat (*Myotis sodalis*). No critical habitat for any federally listed threatened or endangered species was identified within the project area of review. Additionally, the two migratory bird species were identified as potentially utilizing the area of review. These species include the bald eagle (*Haliaeetus leucocephalus*) and wood thrush (*Hylocichla mustelina*). State listed species were also identified and include the endangered great egret (*Ardea alba*), endangered yellow-crowned night-heron (*Nyctanassa violacea*), endangered black-crowned night-heron (*Nycticorax nyctiocorax*), and special concern species great blue heron (*Ardea Herodias*). The USFWS provided an avoidance measure which must be adhered to due to the proximity of the project to a bald eagle nest. No other species conditions were identified. The USACE would adhere to the avoidance measure. Therefore, through adherence to the USFWS avoidance measures, the project would result in no adverse effects to threatened and endangered species.

(7) Other Wildlife - Construction would result in noise disruption of some species of wildlife during periods of work. Any urban-tolerant species in the area would easily relocate to adjacent areas. Additionally, several species are active between dusk to dawn, and work would occur during daylight hours (dawn to dusk). Therefore, the proposed project would minimally impact wildlife.

(8) Actions to Minimize Impacts: The proposed alternative for each work task has been designed to provide the required restoration of the levee system while resulting in the least amount and degree of impacts to aquatic resources and organisms. The floodwall near the Penn Street Bridge would be replaced within the approximate footprint of the existing floodwall, and the levee bank stabilization work task near the South Richland Avenue Bridge would reduce sedimentation of the Creek. Additionally, where feasible, work would be performed through machinery stationed at the top of the levee. If machinery

would be utilized within the Creek, this would occur in the dry or during low flow, when feasible to do so. Sediment erosion and control plans would be prepared and adhered to with best management practices implemented, for each proposed work task, to minimize the discharge and suspension of sediments during construction activities. This would include turbidity curtains; potentially cofferdams to protect the work zone; potentially water pump around techniques to dewater the work zones, if needed; silt fences; etc. Upon completion of the construction activities, the upland work sites would be stabilized to minimize the occurrence of erosion from entering into the aquatic environment.

f. Proposed Disposal site Determinations

(1) Mixing Zone Determination – The project does not propose to discharge additional flow into the waters within the levee system.

(2) Determination of Compliance with Applicable Water Quality Standards – The project work tasks and construction methods would comply with the applicable water quality standards as identified by the PADEP.

(3) Potential Effects on Human Use Characteristic

(a) Municipal and Private water Supply – The project proposes rehabilitation and repairs of the existing manmade flood control levee system. The project work tasks would have no effect on municipal and private water supply.

(b) Recreational and Commercial Fisheries – The waters within the project area of review are utilized for public recreational fisheries. The utilization of in-water best management practices would block public recreational fishing from occurring within the work zones during construction. However, upon completion of construction, the conditions would be similar to pre-construction conditions, and improved in some locations. The replacement and addition of riprap would provide for areas where aquatic organisms could find refuge and habitat, thereby improving the fishing opportunities within the Creek. Given the above factors, the project is expected to have a short-term, adverse impact, but provide long-term benefits to recreational fisheries. The waters within the project area of review are not suitable for commercial fisheries. Therefore, there would be no effect on commercial fisheries.

(c) Water Related Recreation – The waters within the project area of review are utilized for public water related recreation, such as kayaking and canoeing. There is currently an access point within the City of York where boaters may gain access to Codorus Creek. There would be temporary impacts to water recreation during construction; however, it is not expected that recreational boating would be significantly adversely affected during construction activities, as there would be sufficient water surface area between the construction zones and opposite levee banks/floodwalls where boaters could safely and effectively navigate along the Creek. At completion of construction, the aesthetics of the

levee system would be improved; thereby providing a recreational boater with visible benefits. Given the above factors, it is expected that the project would result in minor and short-term adverse effects by a slightly reduced navigable area during construction and ultimately long-term beneficial effects to water related recreation.

(d) Aesthetics - The levee system is currently showing signs of deficiencies along segments which are in need of rehabilitation, repair, or replacement. The existing conditions at these locations are that of deteriorating floodwalls, bulges within the floodwalls, eroding stream banks, etc. The project would result in the replacement of the floodwall near the Penn Street Bridge within its approximate footprint and dimensions, and replacement/addition of riprap at the base of the new floodwall. The project would also result in repair of the bulges within the floodwalls near Market Street Bridge. Additionally, the project would provide riprap stabilization of the eroding stream bank near the South Richland Avenue Bridge. Placement of riprap at this location would not adversely alter the aesthetics given the current conditions consist of continuously eroding bank. The additional work tasks involving conduit cleaning, repair, replacement, or abandonment would be less visible in regard to aesthetics, other than during construction. Based on the above factors, the project work tasks are expected to result in minor benefits to the aesthetics of the area.

(e) Parks, National and Historical Monuments, National Seashores, Wilderness Areas, Research Sites, and Similar Preserves – There are multiple parks and trails within the City of York, some of which are within and adjacent to the levee system area of review. The parks are owned and managed by the City of York and the trails are managed by the Rail Trail Authority. The proposed work tasks would not adversely affect the parks and trails, as the USACE and local stakeholders would work together to ensure synergy of activities. There are no National or Historical Monuments, National Seashores, Wilderness Areas, Research Sites, and Similar Preserves within the project area.

g. Determination of Cumulative Effects on the Aquatic Ecosystem – The lands and waters within the area of review and vicinity of the Codorus Creek FRM levee system have been altered by various activities following settlement along the creek in the 1700s and canal construction in early 1800s. Activities included land disturbance as a result of commercial, educational, residential, and industrial development as settlement occurred; canal alterations for the transport of materials to the Susquehanna River, etc. Much of the development occurred prior to environmental regulations, such as Clean Water Act of 1972. Therefore, impacts to aquatic resources would have likely occurred as a result of the construction activities prior to environmental regulation. The federal work activities involved for the construction of the levee system included channel widening and deepening, flood walls, levees, protection of bank slopes, and removal of a mill dam. These activities were authorized, and construction practices were in accordance with required best management practices at the time of construction.

The currently proposed work tasks to rehabilitate the Codorus Creek FRM levee system, as described in the Environmental Assessment and this evaluation, would result in permanent and temporary impacts to waters of the United States. The purpose of performing the work tasks is to restore the levee system to its authorized conditions and capacity. Temporary impacts would be the result of the use of best management practices to contain construction generated materials within the construction work zones. Permanent impacts would be the result of the addition of riprap and materials for bank stabilization. The permanent fill would provide the necessary rehabilitation of the levee system; thereby, resulting in improved floodwater protection for the community and downstream locations.

The anticipated future work tasks which are dependent on federal funding and are beyond the scope of the Environmental Assessment, have been identified as a result of periodic inspection. Some of the work tasks would require work in waters of the United States, such as removal of shoaling and vegetation from the Creek, repair and replacement of riprap throughout the levee system, removal of rubble from the west downtown levee, and removal of the South Richland Avenue dam, if the USACE determines that this dam is not necessary for the integrity of the levee system. Dredging of the shoals would likely occur from the banks using a long arm excavator, and all dredged materials would be disposed of at an approved upland location, such as the County landfill or other upland disposal site suitable for such materials. Replacement and addition of riprap at varied locations along the levee system would be performed in order to install the appropriate size of riprap for proper bank stabilization and would be the minimal necessary. Removal of the rubble would occur from uplands; however, in-water containment structures and re-sloping and stabilization of the levee banks at this location would be necessary. If the USACE determines that the removal of the dam near the South Richland Avenue Bridge would not interfere with the integrity of the levee system, removal may occur. This would likely occur from uplands. However, waters would be disturbed as dam materials are lifted out of the Creek. The area would be protected to minimize adverse effects to waters outside of the construction footprint. Upon removal, the banks would be restored, and the channel depth would be consistent with the adjacent parameters. Removal would provide for unobstructed fish passage and recreational navigation. The remaining proposed future USACE work tasks may also result in minor and/or temporary impacts to waters of the Unites States. However, the ultimate results of carrying out these tasks would be improvements to the existing levee system which, in turn, would provide benefits to the watershed.

New development, such as residential, commercial, and industrial, is expected to occur by others within the watershed in the future as communities continue to grow. Some projects may be large scale, such as new and expanded developments and roadway construction. Other activities would be small scale, to include additions of boating access points into waters, such as identified by the City of York as being potential actions. Known future development activities are

discussed in greater detail in Section 6.2 of the Environmental Assessment for the proposed actions. Direct impacts to aquatic resources would be necessary in order to perform some of the actions within the watershed. However, all projects proposing to impact waters of the United States would be required to adhere to federal, State, and local regulations, to include Water Quality Certification requirements, thereby ensuring that avoidance, minimization, and mitigation of unavoidable impacted aquatic resources would occur. The current regulations also require that only minimal impacts to aquatic resources be authorized, and mitigation would be required to fully offset unavoidable impacts.

Given the above factors, the USACE has determined that the work tasks proposed for the Codorus Creek FRM levee system project, in conjunction with the past, present, and projects which are anticipated to occur within the foreseeable future, are not expected to result in adverse cumulative direct or indirect impacts within the vicinity of the levee system or in the watershed. The site is a previously disturbed area which is primarily surrounded by development. Deterioration of segments along the levee system have been identified, which is contributing to the sediment load and debris within the Creek. Implementation of the project work tasks would have a positive effect on the environment, as it would stabilize the levee bank, remove the potential for future sedimentation of the Creek, and promote the integrity and capacity of the FRM project, thereby resulting in benefits to the human and natural environment.

h. Determination of Secondary Effects on the Aquatic Ecosystem - Indirect impacts may occur as a result of construction activities, such as removal of vegetation within the upland work zones which may result in erosional conditions, disturbance to and displacement of aquatic organisms due to containment of waters from installation of cofferdams, and wildlife avoidance of using areas within construction zones for foraging. However, projects would be required to adhere to best management practices, such as containing and protecting the work zones to minimize the occurrence of construction activities resulting in materials entering into the waterway. Additionally, aquatic resources would be clearly identified in the field to ensure the authorized limits of disturbance are visible to contractors. There are no wetlands that were identified as being within close proximity to the work zones which would be affected indirectly by the project activities. The current conditions include a deteriorating levee system with floodwall debris falling into the Creek and eroding soils along the bank of the levee system. This results in materials flowing to downstream tributaries, resulting in added sediment within the watershed tributaries. The rehabilitation work along the levee system would result in beneficial effects to receiving tributaries through reduced erosional conditions. Given the above factors, indirect effects to the downstream waters would be beneficial through reduced sedimentation of the receiving waters, thereby, benefiting the watershed.

III. **Findings of Compliance or Non-Compliance with Restrictions on Discharge**

a. Adaptation of the Section 404(b) (1) Guidelines to this Evaluation - No adaptations of the Guidelines were made relative to this Evaluation.

b. Evaluation of Availability of practicable Alternatives to the Proposed Discharge Site Which would have Less Adverse impact on the Aquatic Ecosystem – Levee rehabilitation and repair design alternatives, as identified within the Environmental Assessment, were evaluated for minimizing impacts to and encroachments of Codorus Creek without compromising the stability of the work task designs and ultimate integrity of the levee system. Two additional alternatives were evaluated for the replacement of the Penn Street Floodwall but were eliminated due to high costs and inability to carry out the tasks in the near future as a result of additional funding necessary for the alternatives. Due to the identified need for additional funding, the alternatives were not pursued further given the need for the floodwall repairs at the current time. The selected alternatives were determined to be the most practicable and available alternatives with the least amount of adverse impacts on the aquatic ecosystem.

c. Compliance With Applicable State Water Quality Standards – The proposed work task activities and construction techniques would comply with the applicable state water quality standards and any conditions which were identified by the State agency. The USACE would coordinate with PADEP to ensure project compliance with Water Quality Certification requirements prior to commencement of work on the project. If an individual Water Quality Certification is required, USACE would obtain such certification prior to commencement of any work.

d. Compliance with Applicable Toxic Effluent Standard or Prohibition under Section 307 of the Clean Water Act – N/A

e. Compliance with Endangered Species Act of 1973 – No federally listed threatened or endangered species would be adversely affected by the proposed project. The USFWS has provided a minimization measure to protect Bald Eagles, and the USACE would adhere to the measures prior to the commencement of, and during project activities. Given the above factors, the proposed project work tasks are in full compliance with the Endangered Species Act of 1973.

f. Compliance with Specified Protection Measures for Marine Sanctuaries Designated by the Marine Protection, Research, and Sanctuaries Act of 1972 – N/A.

g. Evaluation of the Extent of Degradation of the Waters of the United States - No significant permanent adverse impacts to the aquatic ecosystem diversity, productivity and stability, and recreation, aesthetics and economic values

would occur as a result of this project. Codorus Creek is identified as a warm water and migratory fishery, and temporary adverse impacts would occur during construction activities. However, the species would have ample area to utilize waters outside of the construction zones. Permanent impacts to waters of the United States would be beneficial through the rehabilitated Codorus Creek FRM levee system.

(1) Significant Adverse Effects on Human Health and Welfare

(a) Municipal and Private Water Supplies – There would be no effect to municipal and private water supplies, as the waters within the project area of review are not utilized for these purposes.

(b) Recreation and Commercial Fisheries – The project area of review does not contain waters which are suitable for commercial fisheries. Therefore, there would be no effect on commercial fisheries. Waters within the project area of review are utilized as public recreation fisheries. However, any adverse effect from the project activities would not be significant, as identified under section II.f.(3)(b) of this this document.

(c) Plankton/Macroinvertebrates – There would be a minor and short-term adverse effect. No long-term adverse effects are expected.

(d) Fish – The waters within the area of review are classified as supporting warm water and migratory fisheries. Species would be expected to avoid the in-water construction zones and return upon completion of work activities. Given these factors, the adverse effects on fish would be short-term and minimal.

(e) Shellfish – Shellfish (freshwater molluscs) may be present at some locations within the waters. If individuals are present, they would be directly impacted as a result of direct fill (e.g., riprap, temporary in-water best management practices). However, species would be expected to recolonize shortly after construction. No long-term adverse effects are expected, and short-term and temporary adverse effects would be minimal.

(f) Wildlife – Minor and short-term adverse effects on wildlife would occur during construction. No long-term adverse effects are expected.

(g) Special Aquatic Sites - The proposed project work tasks are not located within any areas determined to be special aquatic sites, as identified under section II.e.(5) of this document.

(2) Significant Adverse Effects on Life Stages of Aquatic Life and Other Wildlife - The project area does not contain critical habitat for aquatic or wildlife species. Work tasks include replacement in kind, addition of riprap, temporary in-water best management practices, etc. The work tasks may interfere with life stages of aquatic and other wildlife temporarily and in the short-term (e.g., during construction). However, this would be minimal, as species which would be directly impacted by construction activities, as well as those which avoid the area during construction, would be expected to recolonize/return to the sites shortly after construction. Given these factors, there would no significant adverse effects on life stages of aquatic and other wildlife.

(3) Significant Adverse Effects on Aquatic Ecosystem Diversity, Productivity, and Stability – There would be no significant adverse effects on Aquatic Ecosystem Diversity, Productivity, and Stability.

(4) Significant Adverse Effects on Recreational, Aesthetic, and Economic Values –The proposed project activities are not recreation directed. However, the public does utilize waters within the levee system for recreational boating and fishing. Aesthetics would be improved as a result of the rehabilitation actions, as current conditions include deteriorating floodwalls and eroding levee banks. There would be temporary adverse effects on recreation and aesthetics due to reduced waterway widths during some project construction activities and presence of construction equipment, to include noise, additional light emissions, etc. However, this would be temporary. The community would benefit economically in regard to repairs to the deficiencies within the aging levee system which would provide the continued support of flood protection for the community. Given the above factors, there would be no significant adverse effects on recreational, aesthetic, and economic values, but instead the project would result in beneficial effects to these values.

h. Appropriate and Practicable Steps taken to Minimize Potential Adverse Impacts of the Discharge on the Aquatic Ecosystem – All appropriate and practicable steps would be taken to minimize potential adverse impacts. These include the use of best management practices; adherence to federal, State, and local special conditions, to include Water Quality Certificate requirements; and designing all work tasks to the minimum footprint and duration within waters of the United States feasible to meet the project purpose.

i. On the Basis of the Guidelines the proposed Disposal Site(s) for the Discharge of Dredged or Fill Material is/are: Specified as complying with the requirements of these guidelines, with the inclusion of appropriate and practical conditions to minimize pollution or adverse effects on the aquatic ecosystem.