



Project File Memorandum

From: Tom Gruis

8/22/2019

**Subject: Iowa Watershed Approach: Iowa County Program Area—CDBG 13-NDRI-006
Environmental Review/Floodplain and Wetlands (8-Step Process)**

This Eight-Step Decision Making Process for floodplain and wetlands evaluation is prepared for a proposed pond and grassed waterway to be installed at the East Iowa Bible Camp, 1433 F52 Trail, Deep River, Iowa, within the English River Watershed as part of the Iowa Watershed Approach project, funded through the U.S. Department of Housing and Urban Development's (HUD) National Disaster Resilience Competition. The practices implemented will restore provide flood hazard mitigation and other environmental benefits.

The Eight-Step Decision Making Process is comprised of the following actions:

1. Determine if the proposal is located in a wetland or the 100-year floodplain (or in the 500-year floodplain for a critical action, i.e. actions for which even a slight chance of flooding would be too great). If the proposal will not be conducted in these areas, then no further compliance with this part is required.
2. Notify the public of the intent to locate the proposed action in the floodplain or wetland. The notice must be published at least once in a local newspaper of general circulation (in cities where there is no newspaper of general circulation, notices must be displayed in the local post office and its substations). The public must be given at least fifteen days to comment. The notice is titled *Notice of Proposed Project to be Located in a Floodplain or Wetland*.
3. Identify and evaluate practicable alternatives to locating in the floodplain. This requires the applicant to consider whether the floodplain or wetland can be avoided either through selecting alternative sites, choosing alternative actions to serve the identical project objective, or taking no action. Note that specific, actual alternative site must be identified and evaluated.
4. Identify potential direct or indirect impacts associated with the occupancy or modification of the floodplain or wetland.
5. Identify methods where practicable, to design or modify the proposal to minimize the potential adverse impacts within the floodplain or wetland and restore and preserve its natural and beneficial value.
6. Reevaluate the alternatives, taking into account the identified impacts, the steps necessary to minimize these impacts and the opportunities to restore and preserve floodplain values.

7. If the recipient determines the only practicable alternative is locating in the floodplain or wetland, a final public notice shall be published. This public notice MUST be published at least 8 days before the Notice of Intent to Request Release of Funds (NOI/RROF) or Concurrent Notice whichever is applicable. A sample notice that is titled Notice of a Decision Regarding Project to be Located in a Floodplain or Wetland can be found on the following pages. The notice will include the reason for locating the project in a floodplain or wetland, the alternatives that were considered, and any mitigation measures that are planned.
8. The proposed action can be implemented after steps 1 through 7 have been completed and all other requirements are met. There is a continuing responsibility to ensure that any mitigation measures identified in Step 7 are implemented.

Proposal

Table 1 shows the proposed best management practices (BMP) that comprise a construction bid packet, including practice type and a description of the sites. Locations of the proposed projects are shown in Map 1 through Map 6. Site maps are shown for each site containing a 100-year floodplain or wetland in Map 7 through Map 14.

Table 1: Proposed BMP Structures

Division I

Project BMP IDs	Description
ER-219-GLASPIE (WASCOB) ER-220-GLASPIE (WASCOB) ER-221-GLASPIE (WASCOB) ER-222-GLASPIE (WASCOB)	The proposed project area effect (APE) is currently agricultural land. The proposed project consists of constructing 4 WASCOBs to control gully erosion, improve water quality, and reduce flood risk in the Gritter Creek subwatershed.
ER-058-OROURKE (WASCOB) ER-059-OROURKE (WASCOB) ER-060-OROURKE (WASCOB) ER-061-OROURKE (WASCOB) ER-062-OROURKE (WASCOB) ER-063-OROURKE (WASCOB) ER-064-OROURKE (WASCOB) ER-065-OROURKE (WASCOB) ER-066-OROURKE (POND) ER-067-OROURKE (WASCOB) ER-068-OROURKE (WASCOB) ER-069-OROURKE (WASCOB) ER-070-OROURKE (WASCOB)	The proposed project area effect (APE) is currently agricultural land. The proposed project consists of constructing 12 WASCOBs and 1 pond to control gully erosion, improve water quality, and reduce flood risk in the Gritter Creek subwatershed.
ER-551-BENDER (WASCOB) ER-552-BENDER (WASCOB) ER-553-BENDER (WASCOB) ER-554-BENDER (GRASSED WATERWAY) ER-555-BENDER (GRASSED WATERWAY)	The proposed project area effect (APE) is currently agricultural land. The proposed project consists of constructing 3 WASCOBs and 2 grassed waterways to control gully erosion, improve water quality, and reduce flood risk in the Gritter Creek subwatershed.

Project BMP IDs	Description
ER-011-VANDEE (WASCOB) ER-012-VANDEE (WASCOB) ER-013-VANDEE (WASCOB) ER-014-VANDEE (WASCOB) ER-015-VANDEE (WASCOB) ER-016-VANDEE (WASCOB) ER-017-VANDEE (WASCOB) ER-018-VANDEE (WASCOB)	The proposed project area effect (APE) is currently agricultural land. The proposed project consists of constructing 8 WASCOBs to control gully erosion, improve water quality, and reduce flood risk in the Middle English River and Gritter Creek subwatersheds.
ER-162-OROURKE (GRASSED WATERWAY) ER-164-OROURKE (WASCOB) ER-165-OROURKE (WASCOB) ER-166-OROURKE (WASCOB) ER-167-OROURKE (WASCOB) ER-168-OROURKE (WASCOB) ER-169-OROURKE (WASCOB) ER-170-OROURKE (WASCOB) ER-171-OROURKE (WASCOB) ER-172-OROURKE (STORM WATER DETENTION BASIN) ER-173-OROURKE (GRASSED WATERWAY)	The proposed project area effect (APE) is currently agricultural land. The proposed project consists of constructing 8 WASCOBs, 2 grassed waterways, and 1 stormwater detention basin to control gully erosion, improve water quality, and reduce flood risk in the Gritter Creek subwatershed.
ER-160-OROURKE (STORM WATER DETENTION BASIN) ER-161-OROURKE (GRASSED WATERWAY)	The proposed project area effect (APE) is currently agricultural land. The proposed project consists of constructing 1 grassed waterway and 1 stormwater detention basin to control gully erosion, improve water quality, and reduce flood risk in the Gritter Creek subwatershed.

ESTIMATED COSTS: \$337,735.50

Division II

Project BMP IDs	Description
ER-274-ACHENBACH (WASCOB) ER-275-ACHENBACH (WASCOB) ER-276-ACHENBACH (WASCOB) ER-277-ACHENBACH (WASCOB) ER-278-ACHENBACH (WASCOB) ER-279-ACHENBACH (WASCOB) ER-280-ACHENBACH (WASCOB) ER-281-ACHENBACH (Terrace) ER-282-ACHENBACH (Terrace) ER-283-ACHENBACH (WASCOB) ER-284-ACHENBACH (WASCOB) ER-285-ACHENBACH (WASCOB)	The proposed project area effect (APE) is currently agricultural land. The proposed project consists of constructing 10 WASCOBs and 2 terraces to control gully erosion, improve water quality, and reduce flood risk in the Middle English River subwatershed.

Project BMP IDs	Description
ER-286-KNIPFER (WASCOB)	The proposed project area effect (APE) is currently agricultural land. The proposed project consists of constructing 24 WASCOBs to control gully erosion, improve water quality, and reduce flood risk in the Middle English River subwatershed.
ER-287-KNIPFER (WASCOB)	
ER-288-KNIPFER (WASCOB)	
ER-289-KNIPFER (WASCOB)	
ER-290-KNIPFER (WASCOB)	
ER-291-KNIPFER (WASCOB)	
ER-292-KNIPFER (WASCOB)	
ER-293-KNIPFER (WASCOB)	
ER-294-KNIPFER (WASCOB)	
ER-295-KNIPFER (WASCOB)	
ER-296-KNIPFER (WASCOB)	
ER-297-KNIPFER (WASCOB)	
ER-298-KNIPFER (WASCOB)	
ER-299-KNIPFER (WASCOB)	
ER-400-KNIPFER (WASCOB)	
ER-401-KNIPFER (WASCOB)	
ER-402-KNIPFER (WASCOB)	
ER-403-KNIPFER (WASCOB)	
ER-404-KNIPFER (WASCOB)	
ER-405-KNIPFER (WASCOB)	
ER-406-KNIPFER (WASCOB)	
ER-407-KNIPFER (WASCOB)	
ER-408-KNIPFER (WASCOB)	
ER-409-KNIPFER (WASCOB)	
ER-566-HERTEL (GRASSED WATERWAY)	The proposed project area effect (APE) is currently agricultural land. The proposed project consists of constructing 4 WASCOBs, 1 grassed waterway, and 1 storm water detention basin to control gully erosion, improve water quality, and reduce flood risk in the Middle English River subwatershed.
ER-567-HERTEL (WASCOB)	
ER-568-HERTEL (WASCOB)	
ER-569-HERTEL (WASCOB)	
ER-570-HERTEL (WASCOB)	
ER-571-HERTEL (STORM WATER DETENTION BASIN)	

Project BMP IDs	Description
ER-461-MCCAMMANT (WASCOB) ER-462-MCCAMMANT (GRASSED WATERWAY) ER-463-MCCAMMANT (WASCOB) ER-464-MCCAMMANT (WASCOB) ER-465-MCCAMMANT (WASCOB) ER-466-MCCAMMANT (WASCOB) ER-467-MCCAMMANT (WASCOB) ER-468-MCCAMMANT (WASCOB) ER-469-MCCAMMANT (GRADE STABILIZATION) ER-470-MCCAMMANT (WASCOB) ER-471-MCCAMMANT (WASCOB) ER-472-MCCAMMANT (TERRACE) ER-473-MCCAMMANT (GRASSED WATERWAY) ER-474-MCCAMMANT (WASCOB) ER-475-MCCAMMANT (GRADE STABILIZATION) ER-476-MCCAMMANT (STORM WATER DETENTION BASIN) ER-477-MCCAMMANT (WASCOB) ER-478-MCCAMMANT (WASCOB) ER-479-MCCAMMANT (WASCOB) ER-480-MCCAMMANT (WASCOB) ER-481-MCCAMMANT (WASCOB) ER-482-MCCAMMANT (WASCOB)	The proposed project area effect (APE) is currently agricultural land. The proposed project consists of constructing 16 WASCOBs, 1 stormwater detention basin, 2 grassed waterways, 2 grade stabilization structures, and 1 terrace to control gully erosion, improve water quality, and reduce flood risk in the Middle English River subwatershed.
ER-191-TALIGA ER-192-TALIGA ER-193-TALIGA	The proposed project area effect (APE) is currently non-agricultural land and is seeded into prairie. The proposed project consists of constructing 2 small emergent wetland areas and 1 pond to control gully erosion, improve water quality, and reduce flood risk in the Devil's Run subwatershed.
	ESTIMATED COSTS \$464,320.00

Determination (Step 1)

Using Geographic Information System (GIS) data provided by the Federal Emergency Management Agency (FEMA) and the U.S. Fish and Wildlife Service (FWS), it has been determined a 100-year floodplain or National Wetland Inventory-designated wetland is present in the following sites:

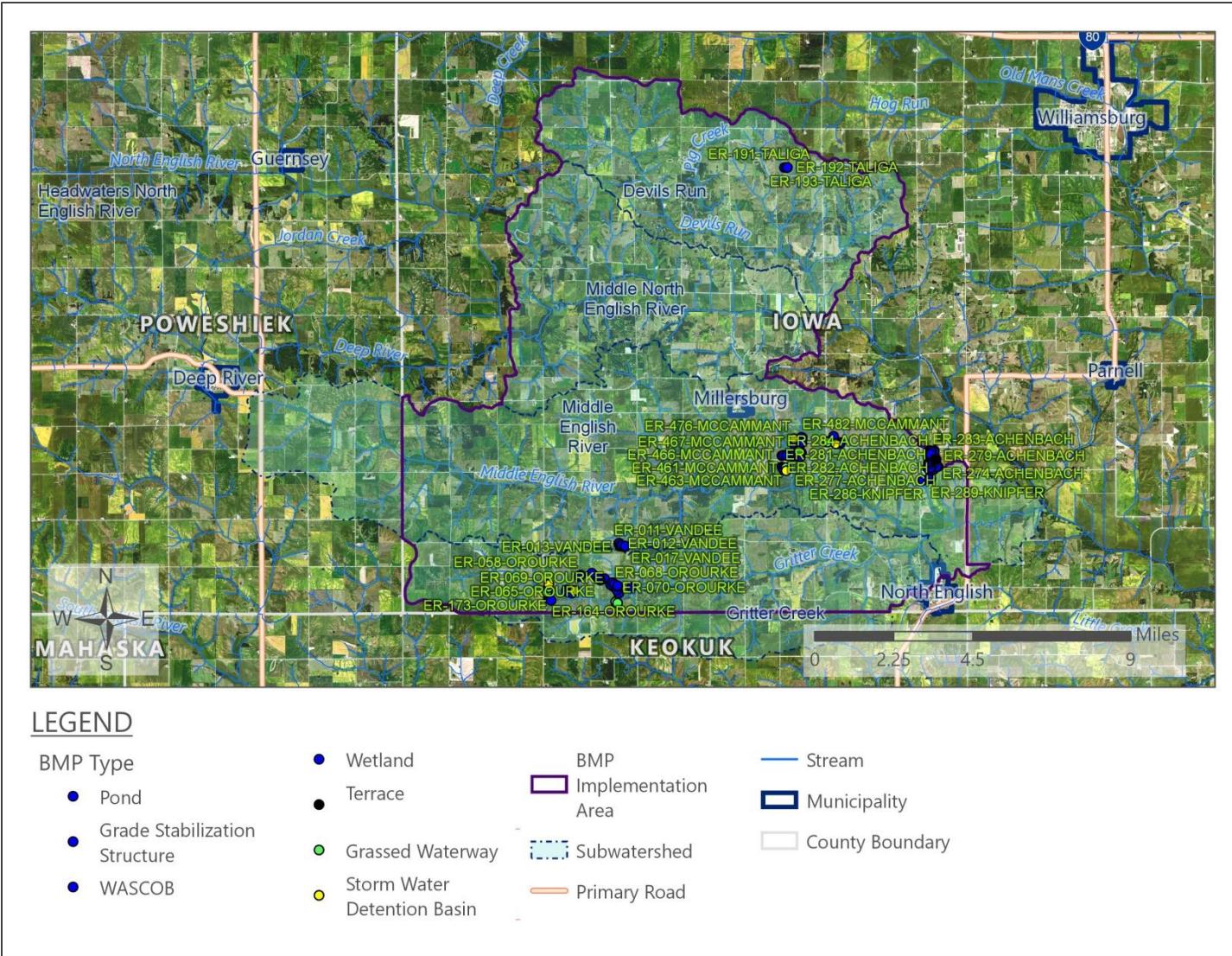
Practice	Floodplain	Wetland
ER-553-BENDER	0.15	.01
ER-555-BENDER	0.15	0

Practice	Floodplain	Wetland
ER-162-OROURKE	0	0.32
ER-168-OROURKE	0.16	0
ER-171-OROURKE	0.15	0
ER-172-OROURKE	0.18	0
ER-173-OROURKE	0.43	0.13
ER-160-OROURKE	0	0.21
ER-161-OROURKE	0.14	0.12
ER-568-HERTEL	0	0.01
ER-469-MCCAMMANT	0.08	0.02
ER-475-MCCAMMANT	0.08	0.02
ER-191-TALIGA	0	0.42
Total	1.52	1.26

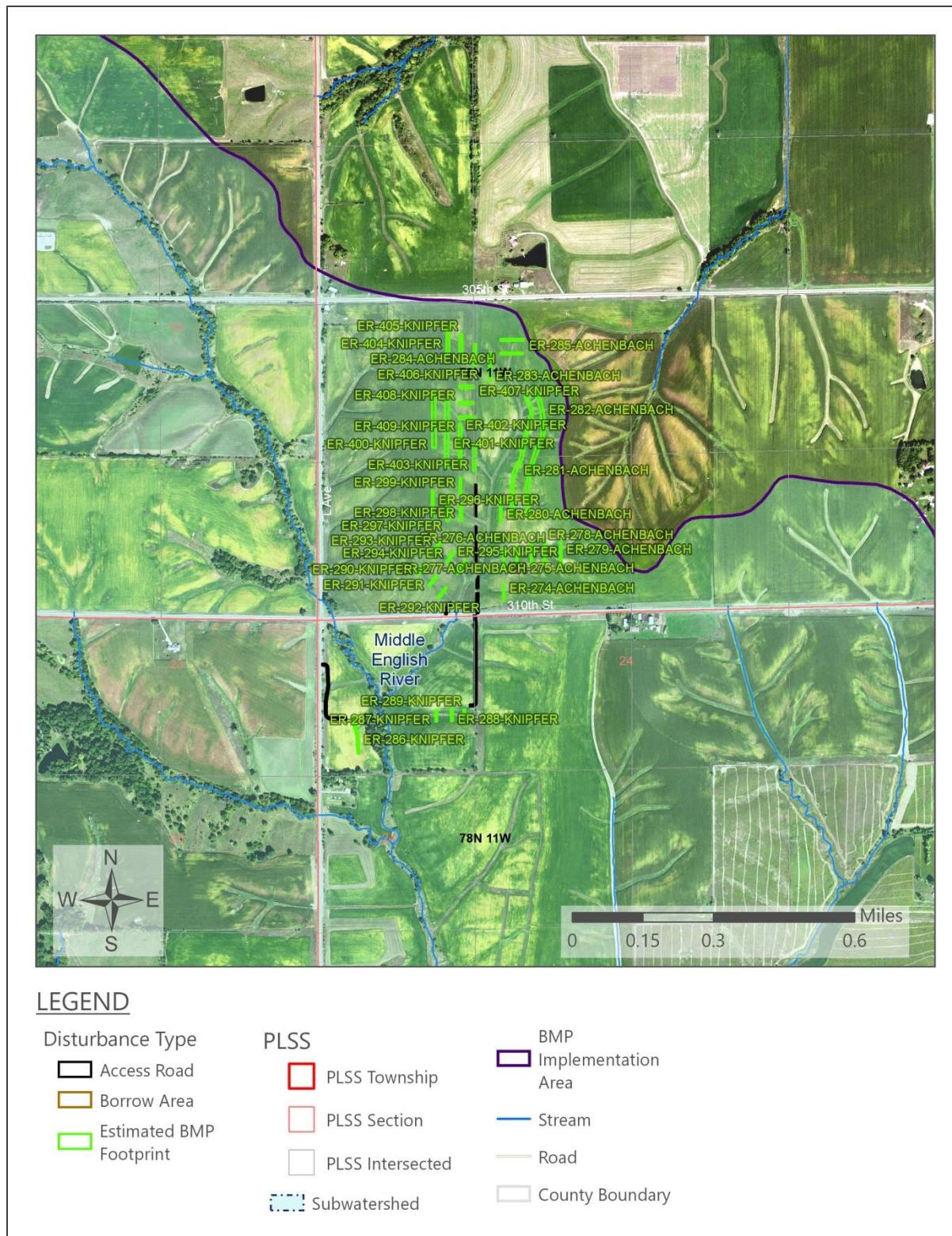
Preliminary Notice (Step 2)

Early Notice and Public Review of a Proposed Activity in a Wetland was published August 22, 2019 providing local opportunity for 15-day review and comment, to end September 6, 2019.

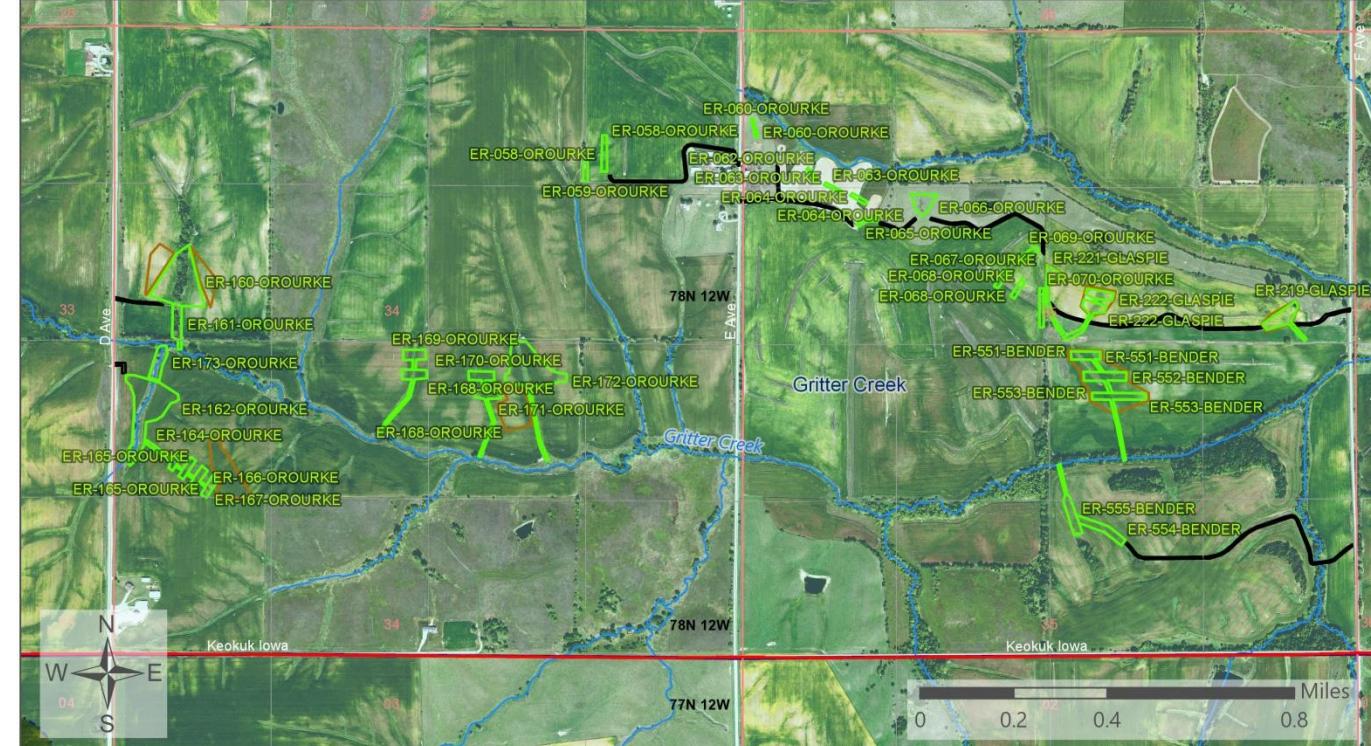
Map 1: Project Map



Map 2: Area Map—ACHENBACH and KNIPFER



Map 3: Area Map—BENDER, GLASPIE, and OROURKE



LEGEND

Disturbance Type

- Access Road
- Borrow Area
- Estimated BMP Footprint

BMP Implementation Area

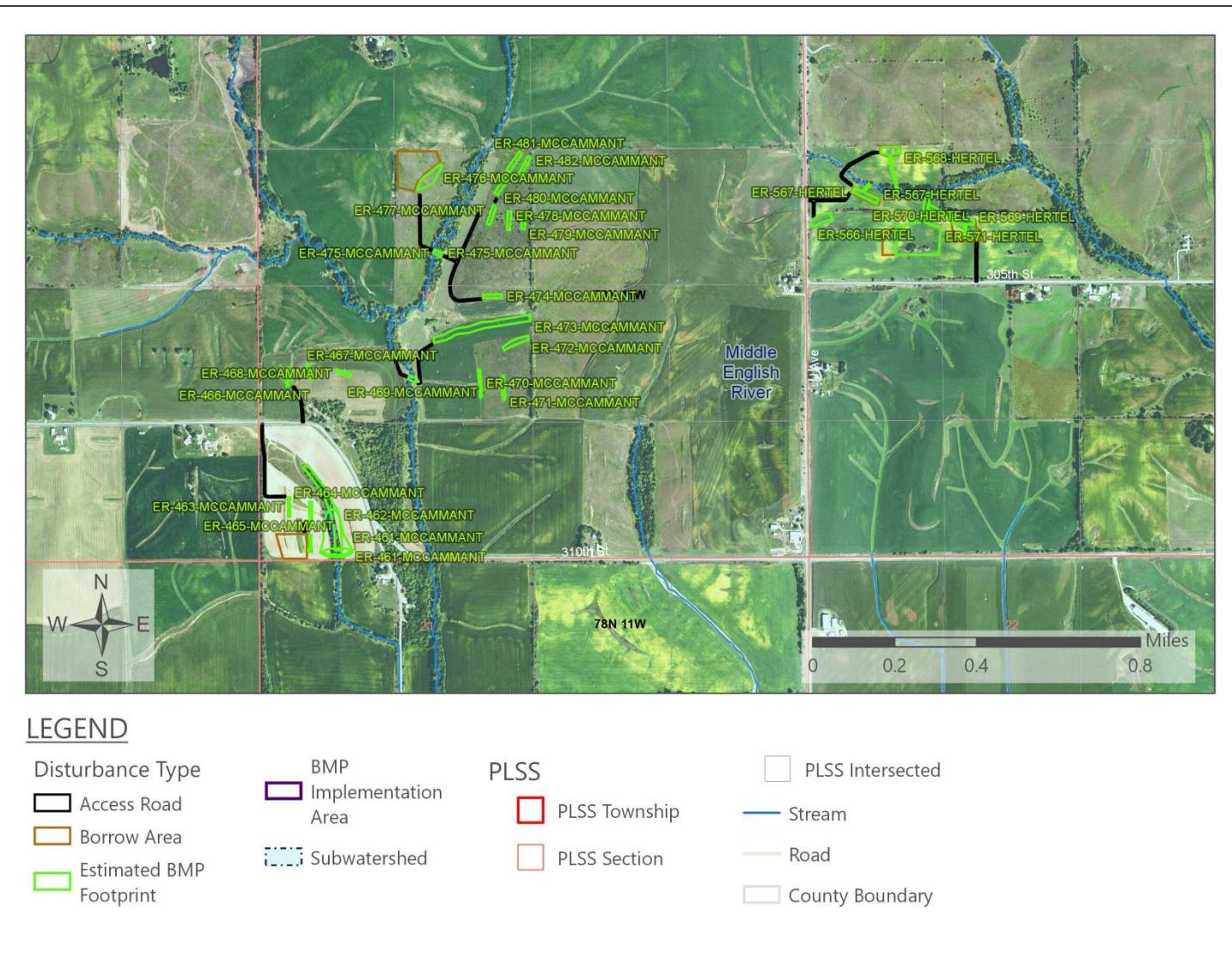
- Subwatershed

PLSS

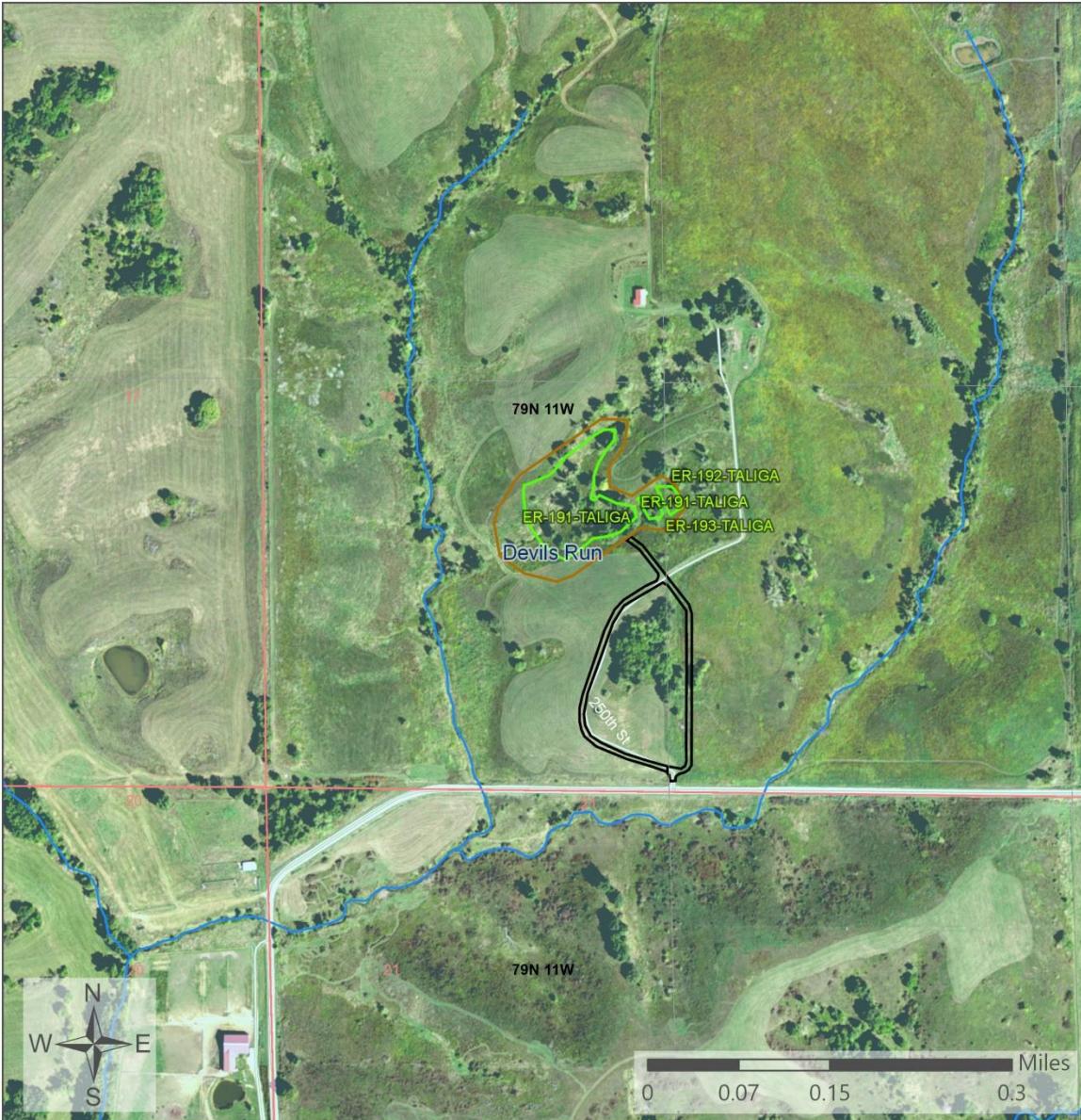
- PLSS Township
- PLSS Section

- PLSS Intersected
- Stream
- Road
- County Boundary

Map 4: Area Map—HERTEL and MCCAMMANT



Map 5: Area Map—TALIGA



LEGEND

Disturbance Type	PLSS	BMP
Access Road	PLSS Township	Implementation Area
Borrow Area	PLSS Section	Stream
Estimated BMP Footprint	PLSS Intersected	Road
	Subwatershed	County Boundary

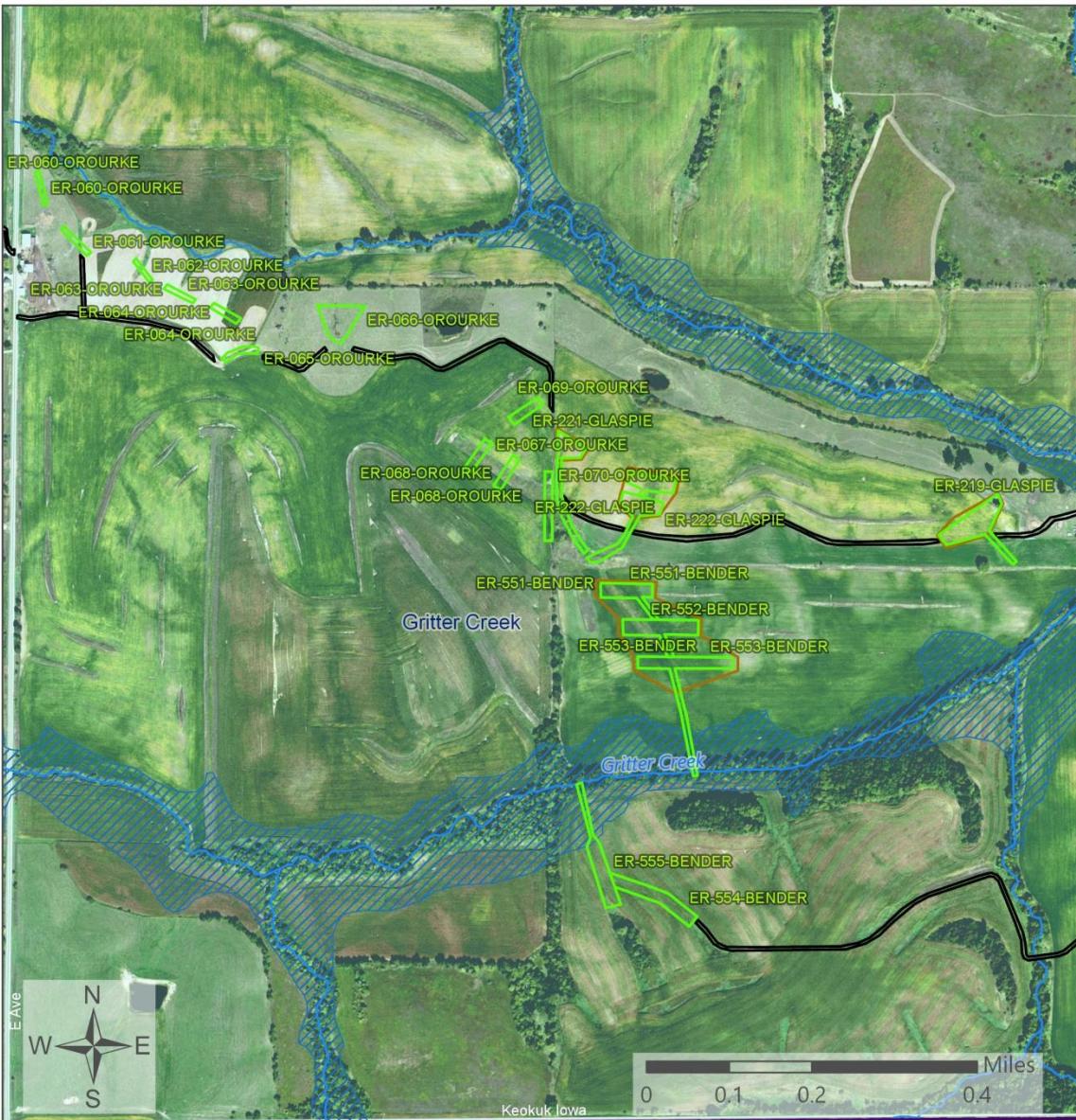
Map 6: Area Map—VANDEE



LEGEND

Disturbance Type	PLSS	BMP
Access Road	PLSS Township	Implementation Area
Borrow Area	PLSS Section	Stream
Estimated BMP Footprint	PLSS Intersected	Road
	Subwatershed	County Boundary

Map 7: BENDER Floodplain Map



LEGEND

Disturbance Type

- Access Road
- Borrow Area
- Estimated BMP Footprint
- Subwatershed

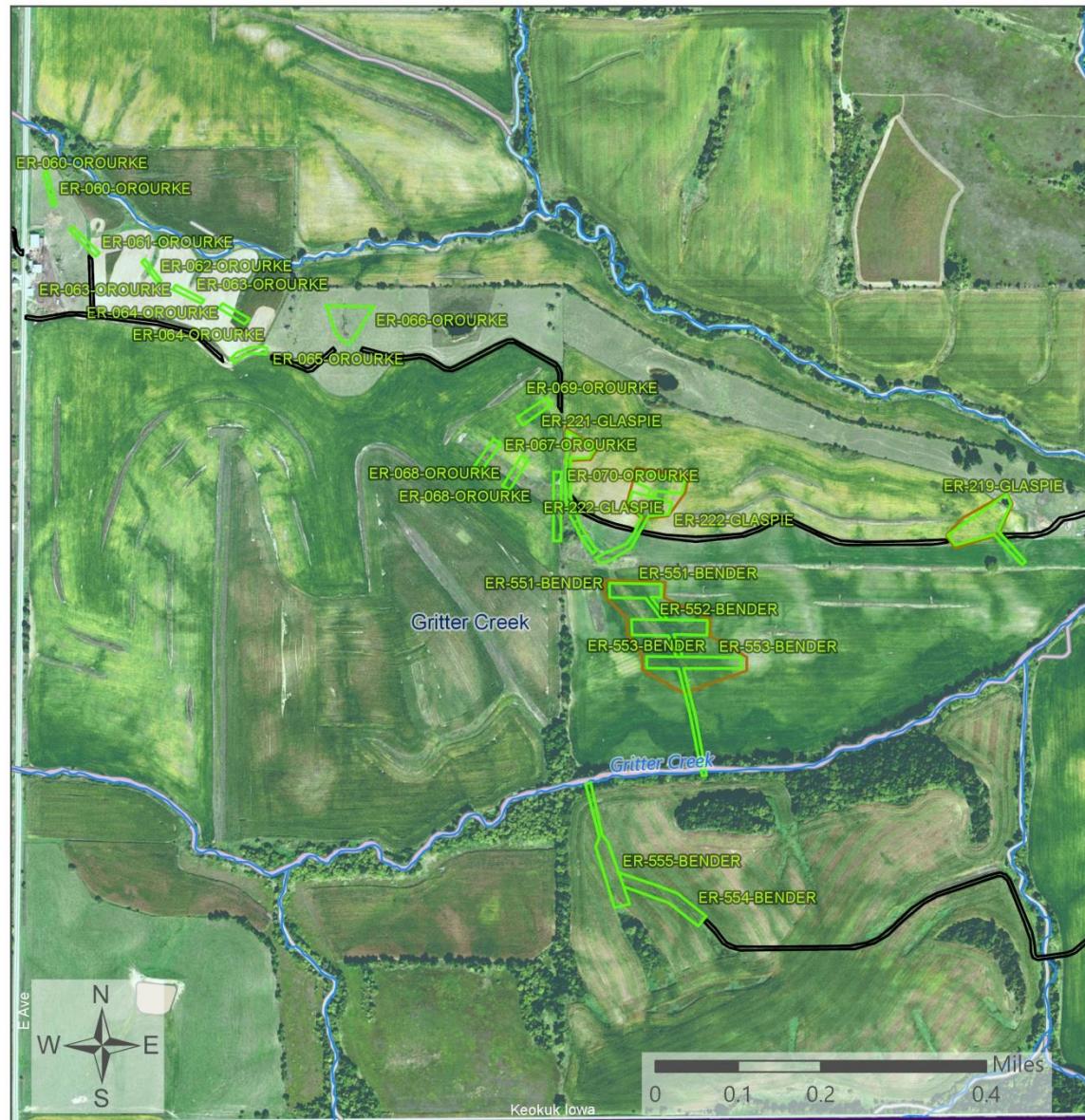
BMP

- Implementation Area
- Stream
- Road

Flood Zone

- 1.0 PCT ANNUAL
- CHANCE FLOOD HAZARD

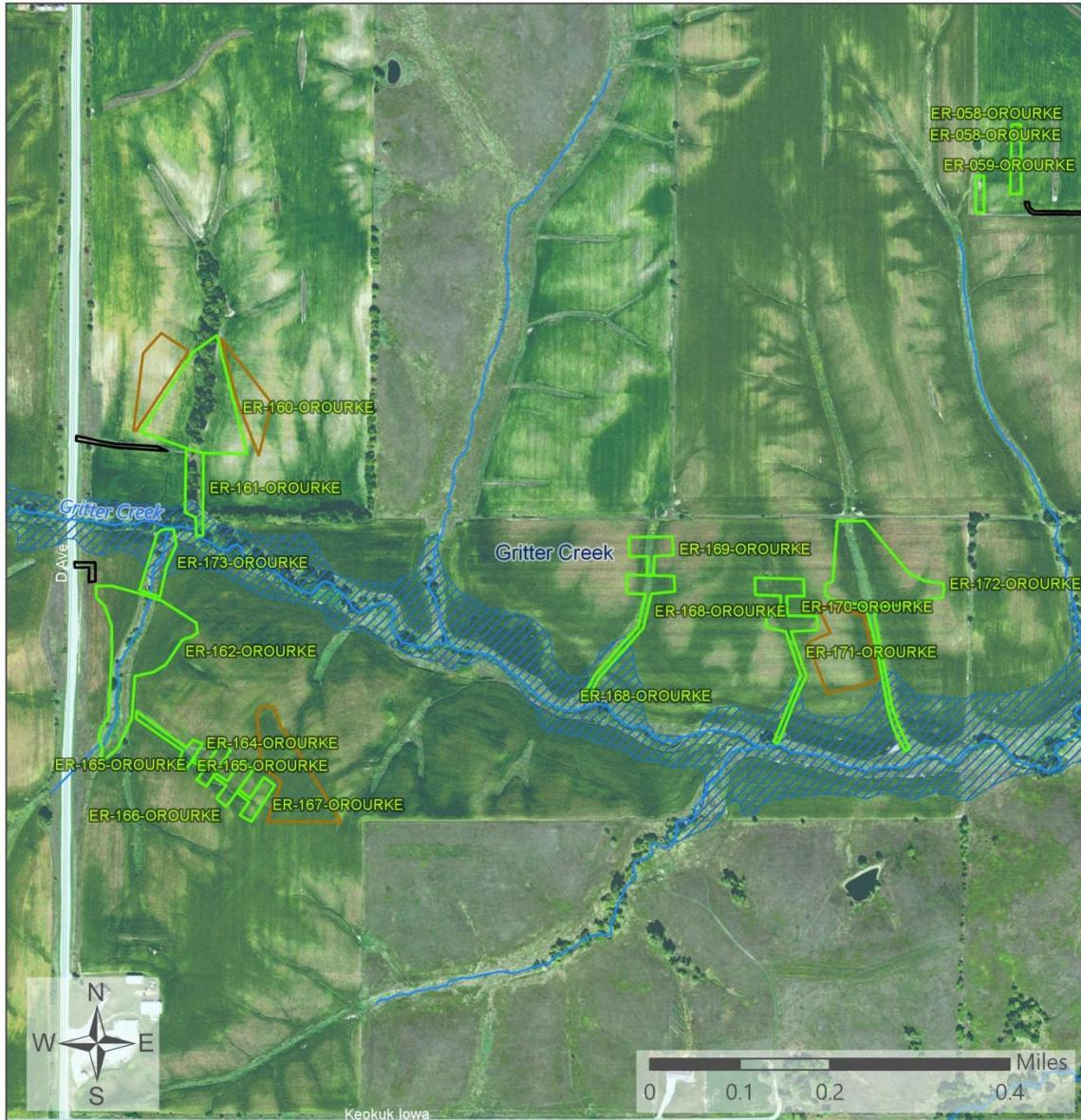
Map 8: BENDER Wetland Map



LEGEND

Disturbance Type	BMP	Wetland Type
Access Road	Implementation Area	Freshwater Emergent Wetland
Borrow Area	Stream	Freshwater Forested/Shrub Wetland
Estimated BMP Footprint	Road	Freshwater Pond
Subwatershed	County Boundary	Riverine

Map 9: OROURKE Floodplain Map



LEGEND

Disturbance Type

- Access Road
- Borrow Area
- Estimated BMP Footprint
- Subwatershed

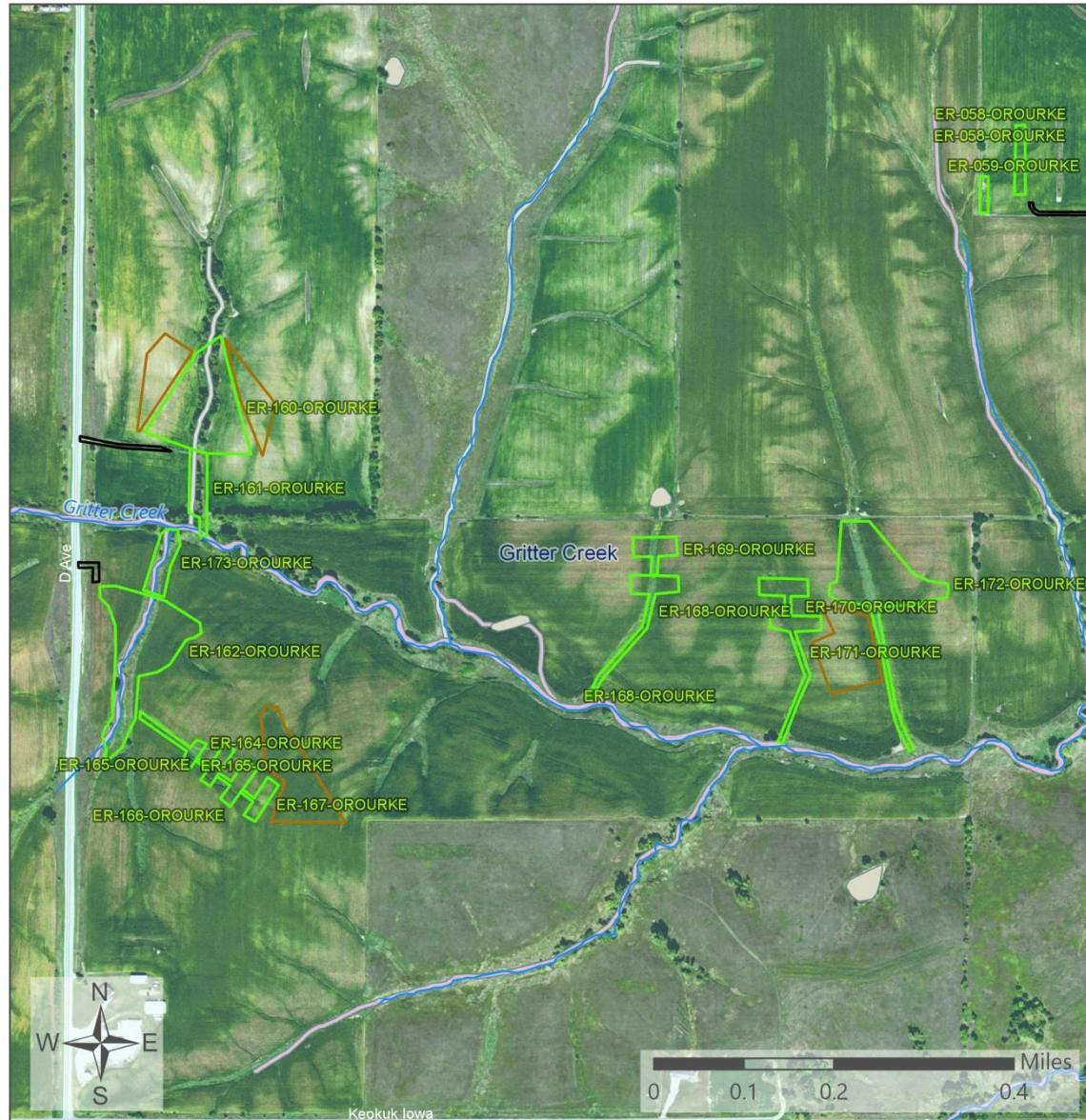
BMP

- Implementation Area
- Stream
- Road
- County Boundary

Flood Zone

- 1.0 PCT ANNUAL
- CHANCE FLOOD HAZARD

Map 10: OROURKE Wetland Map



LEGEND

Disturbance Type

- Access Road
- Borrow Area
- Estimated BMP Footprint
- Subwatershed

BMP

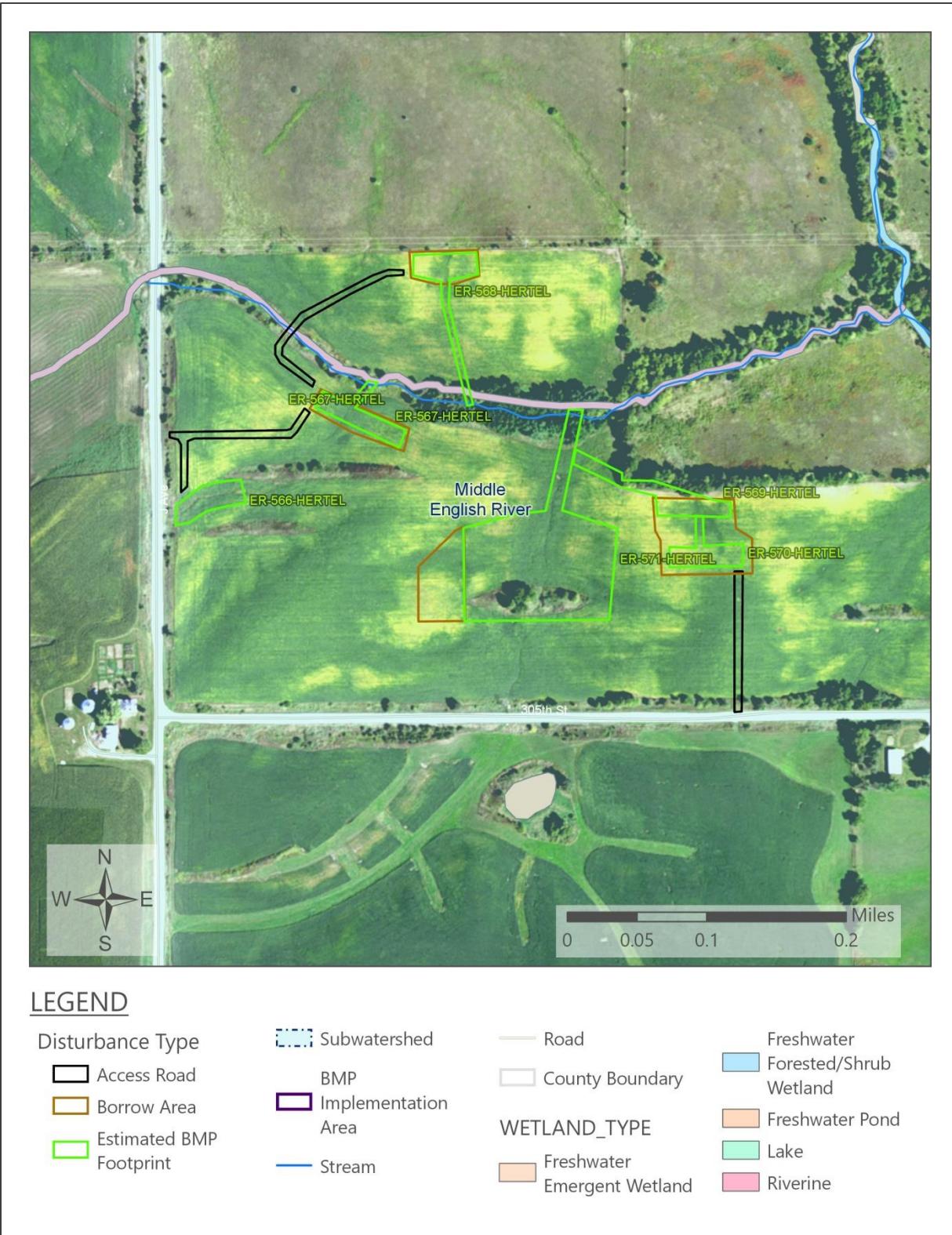
- Implementation Area
- Stream
- Road

County Boundary

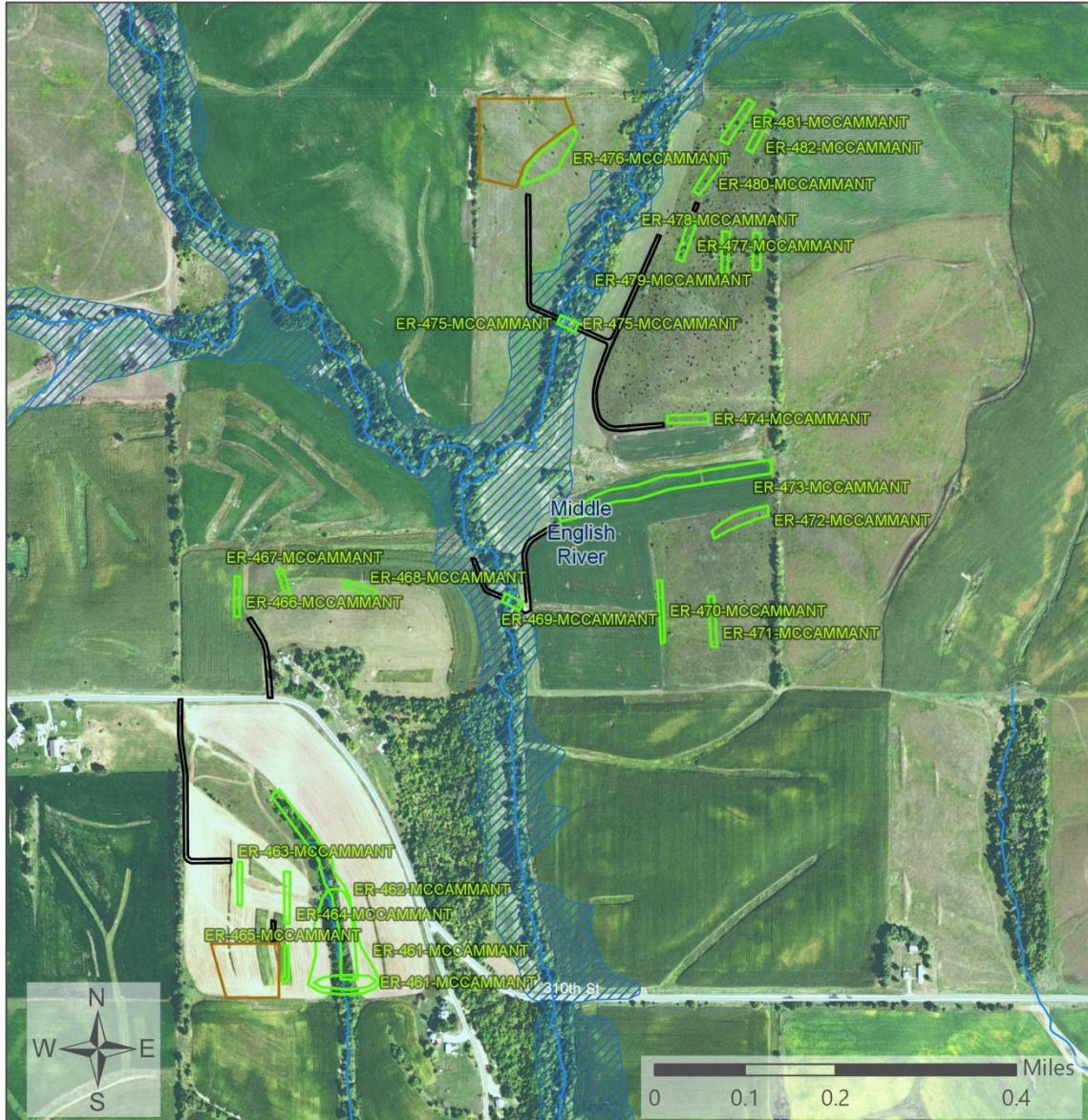
Wetland Type

- Freshwater
- Emergent Wetland
- Freshwater Pond
- Riverine

Map 11: HERTEL Wetland Map



Map 12: MCCAMMANT Floodplain Map



LEGEND

Disturbance Type

- Access Road
- Borrow Area
- Estimated BMP Footprint
- Subwatershed

BMP

- Implementation Area

- Stream

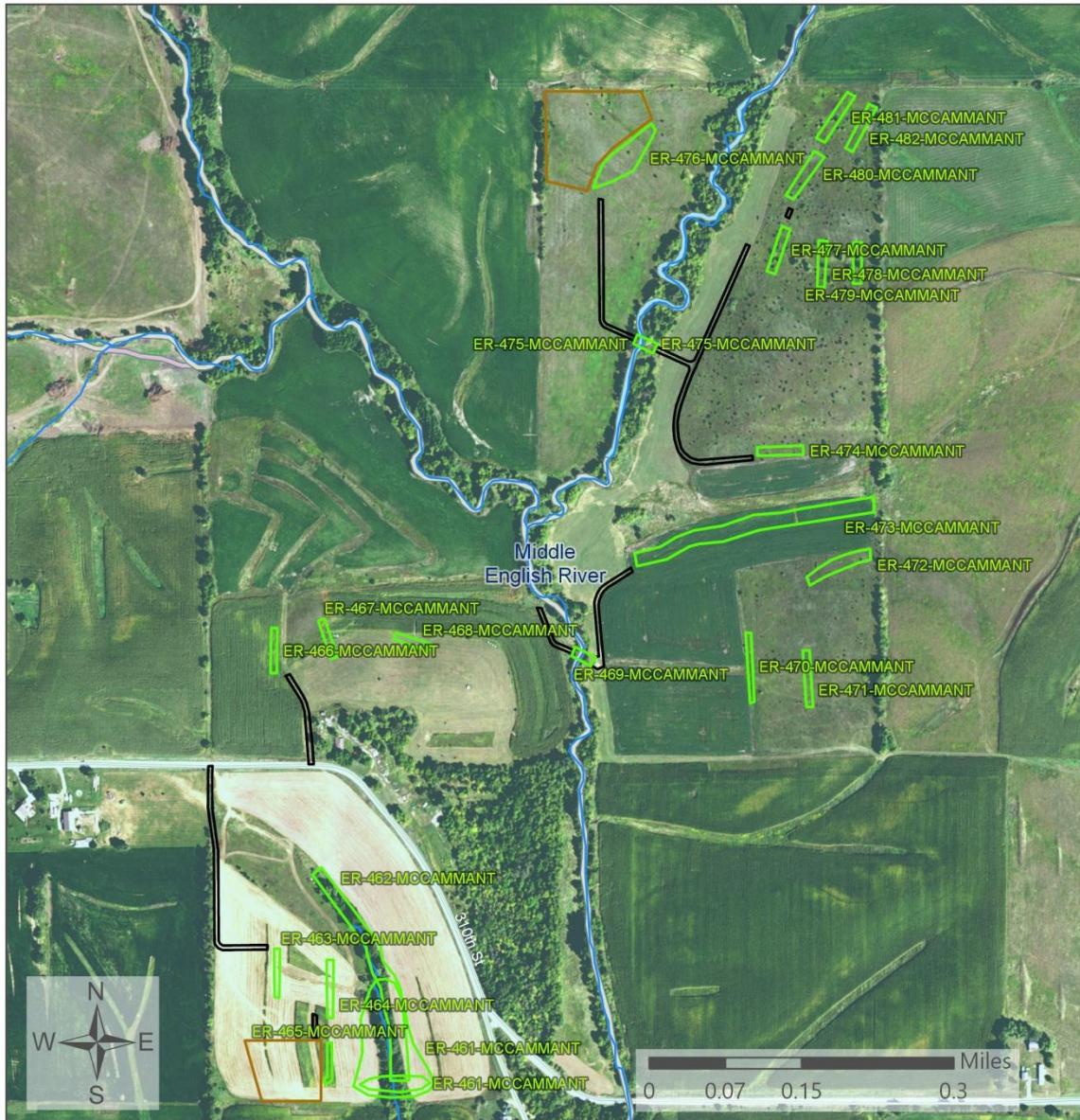
- Road

- County Boundary

Flood Zone

- 1.0 PCT ANNUAL
- CHANCE FLOOD HAZARD

Map 13: MCCAMMANT Wetland Map



LEGEND

Disturbance Type

- Access Road
- Borrow Area
- Estimated BMP
- Footprint
- Subwatershed

BMP Implementation Area

- Stream
- Road

Wetland Type

- | | |
|------------|------------------------|
| Freshwater | Emergent Wetland |
| Freshwater | Forested/Shrub Wetland |
| Riverine | |

Map 14: TALIGA Wetland Map



LEGEND

Disturbance Type

- Access Road
- Borrow Area
- Estimated BMP Footprint

Subwatershed

- BMP Implementation Area
- Stream

Road

County Boundary

WETLAND_TYPE

- Freshwater
- Freshwater Pond
- Emergent Wetland

Freshwater

Forested/Shrub Wetland

Lake

Riverine