EAST CENTRAL IOWA
COUNCIL OF GOVERNMENTS
YOUR REGIONAL PLANNING AGENCY

Project File Memorandum
From: Tom Gruis
9/13/2019

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 it 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) 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)	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-566-HERTEL (GRASSED WATERWAY) ER-567-HERTEL (WASCOB) ER-568-HERTEL (WASCOB) ER-569-HERTEL (WASCOB) ER-570-HERTEL (WASCOB) ER-571-HERTEL (STORM WATER DETENTION BASIN)	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.

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. No comments were received.

Identify and Evaluate Practicable Alternatives (Step 3)

Due to the nature of these practices, which restore or enhance floodplains or wetlands and rely on voluntary participation from landowners, identifying alternative locations is infeasible. As part of the Tier I environmental review, *CDBG-NDR Phased Programmatic Environmental Assessment for Practices Associated with the Clear Creek Watershed and English River Watershed Projects – Iowa, Johnson, and Poweshiek Counties*, for the Clear Creek and English River Watershed Projects [CCWP and ERWP], two implementation actions were considered: 1) No Action Alternative and 2) Proposed Action Alternative. The following summary of each alternative was provided in the Tier I review:

1.5. Alternative Development

NEPA [National Environmental Policy Act] requires the investigation and evaluation of a range of reasonable project alternatives as part of the project environmental review process. This PEA [Programmatic Environmental Assessment] addresses two alternatives: the No Action Alternative (where no HUD grant funding is applied toward construction of structures or implementation of practices) and the Proposed Action (where HUD grant funding is applied toward construction of structures and implementation of practices in the targeted sub-watersheds).

1.5.1. No Action Alternative

Agriculture is the primary land use throughout both the CCCW [Clear Creek Watershed] and the ERW [English River Watershed]. The No Action Alternative

would allow the continued degradation of water quality and the increase of flooding events currently resulting from poor agricultural practices and other sources to continue. Nonpoint source pollution of surface water is a widespread problem in Iowa and surrounding Midwest states. Common pollutants include excessive nutrients, sediments, pesticides, and bacteria. Many of Iowa's rivers and lakes receive direct discharge of treated effluent from municipal and industrial sources, as well as runoff from urbanized areas, construction sites, and agricultural areas. Sedimentation and nutrient enrichment are problems associated with runoff that can impact surface water quality. Nitrogen concentrations generally tend to be greatest in rivers that drain urban or heavily agricultural areas (U.S. Geological Survey, 2017a). Agricultural non-point source pollutants are a primary (but not exclusive) cause of surface water quality degradation in Iowa (NASS, 2016). With the selection of the No Action Alternative, modes of agricultural production would remain as they have for decades. There would be no incentives to construct structures or implement practices. The installation of filter strips, buffers, and other structures or practices that reduce pollutant loading and reduce flooding intensity would not be funded. High levels of nutrients would continue to periodically accumulate and pollute the watershed. The potential for negative economic impacts resulting from reduced water quality and quantity would remain present and possibly increase.

1.5.2. Proposed Action Alternative

Implementation of the Proposed Action Alternative would target approximately 88.3 square miles (56,512 acres) in the seven sub-watersheds within the CCW and ERW targeted for the installation and maintenance of selected structures. CCWC [Clear Creek Watershed Coalition] and ERWMA [English River Watershed Management Authority] would provide the financial and technical assistance necessary to assist eligible Iowa farmers and livestock producers in voluntarily establishing structures or practices to control water runoff and nonpoint source pollution, including nutrient loading, soil erosion, and sedimentation. The landowners would be funded through a cost-sharing arrangement to install these approved structures or practices. Implementing structures associated with the CCWP and ERWP would decrease the amount of nonpoint source pollution and high-water flow, thereby reducing these factors throughout the entire CCW and ERW. Proposed practices have been shown to decrease watershed contaminants, which would improve water quality and provide cleaner water sources for drinking and recreation (Center for Agriculture and Rural Development, 2017). Additionally, proposed structures and practices would lessen the severity of flooding (especially in low- to middle-income neighborhoods in urban areas of the watershed) by temporarily impounding water in basins, ponds, constructed wetlands, and other structures.

Identify Potential Direct or Indirect Impacts (Step 4)

Potential direct impacts include reducing the rate at which water enters the floodplain and reducing nutrients and soil entering streams and rivers.

The reduction of water flow from the site could lead to lower stream elevations in areas near the project sites during rain events. The reduction in nutrients and soil entering streams and rivers would also have indirect effects outside of the project sites.

Identify Mitigating Features (Step 5)

These proposed practices are mitigation features for nutrient and soil loading and flood hazards.

Revaluate Alternatives (Step 6)

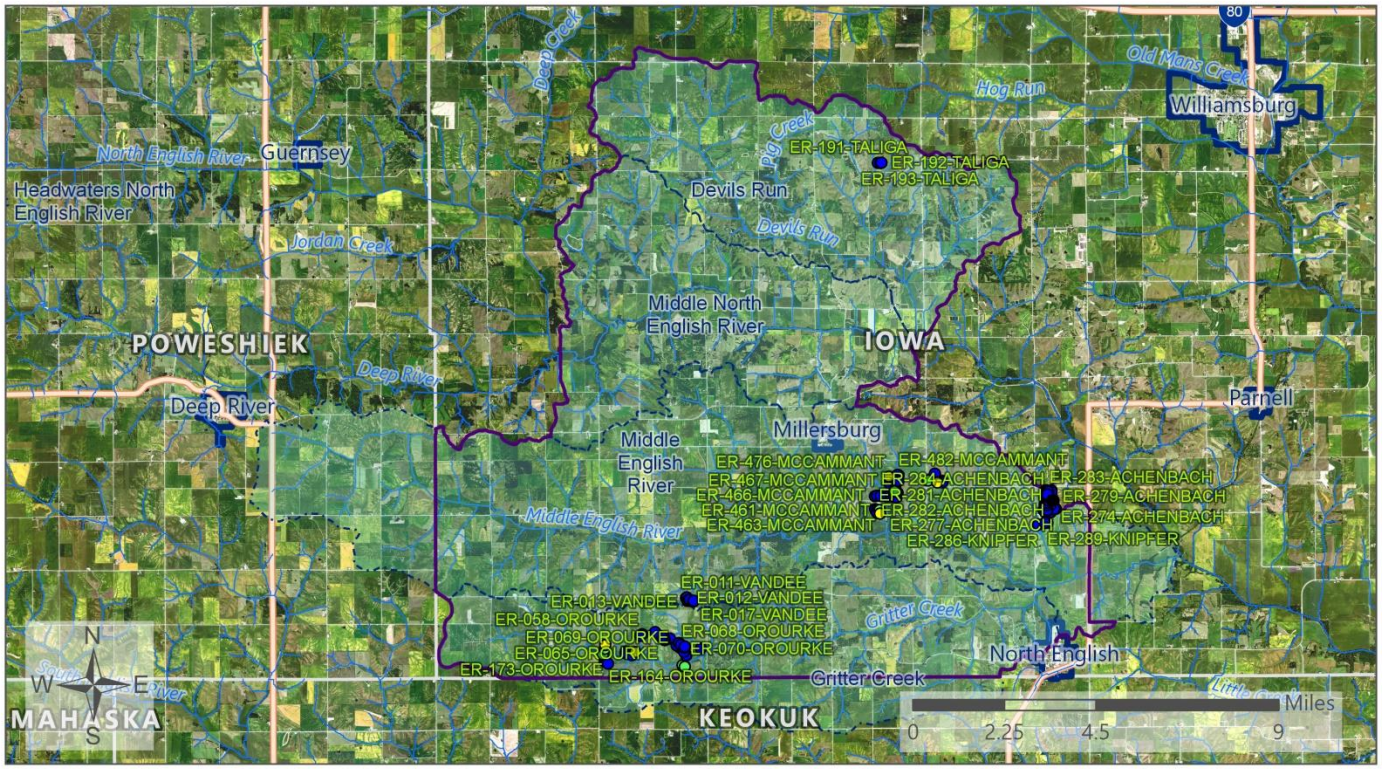
Following the 15-day public comment period, the City of Kalona, Iowa, will conduct a proposed project re-evaluation and, if it is determined that the only practicable alternative is locating in the proposed project in the floodplain or wetland, a 7-day final public notice shall be published that includes the reasoning for locating the proposal in a floodplain or wetland, the alternatives that were considered, and any mitigation measures that are planned.

The City of Kalona, Iowa, received no comments following the Preliminary Notice. Its initial evaluation of the alternatives remains valid. The nature of these structures, which restore wetlands and/or enhance the floodplain, will make locations within or overlapping floodplains or designated wetlands inherently suitable. Alternative locations are not practical because landowner participation in the project is voluntary. Furthermore, the projects are mitigating actions, and they are intended to provide direct and indirect benefits.

Final Notice (Step 7)

Final Notice and Public Explanation of a Proposed Activity in a 100-Year Floodplain or Wetland was published September 12, 2019 providing local opportunity for 7-day review and comment, to end September 23, 2019.

Map 1: Project Map



LEGEND

BMP Type

- Pond
- Grade Stabilization Structure
- WASCOB
- Wetland
- Terrace
- Grassed Waterway
- Storm Water Detention Basin
- BMP Implementation Area
- Subwatershed
- Primary Road
- Stream
- Municipality
- County Boundary

Map 2: Area Map—ACHENBACH and KNIPFER

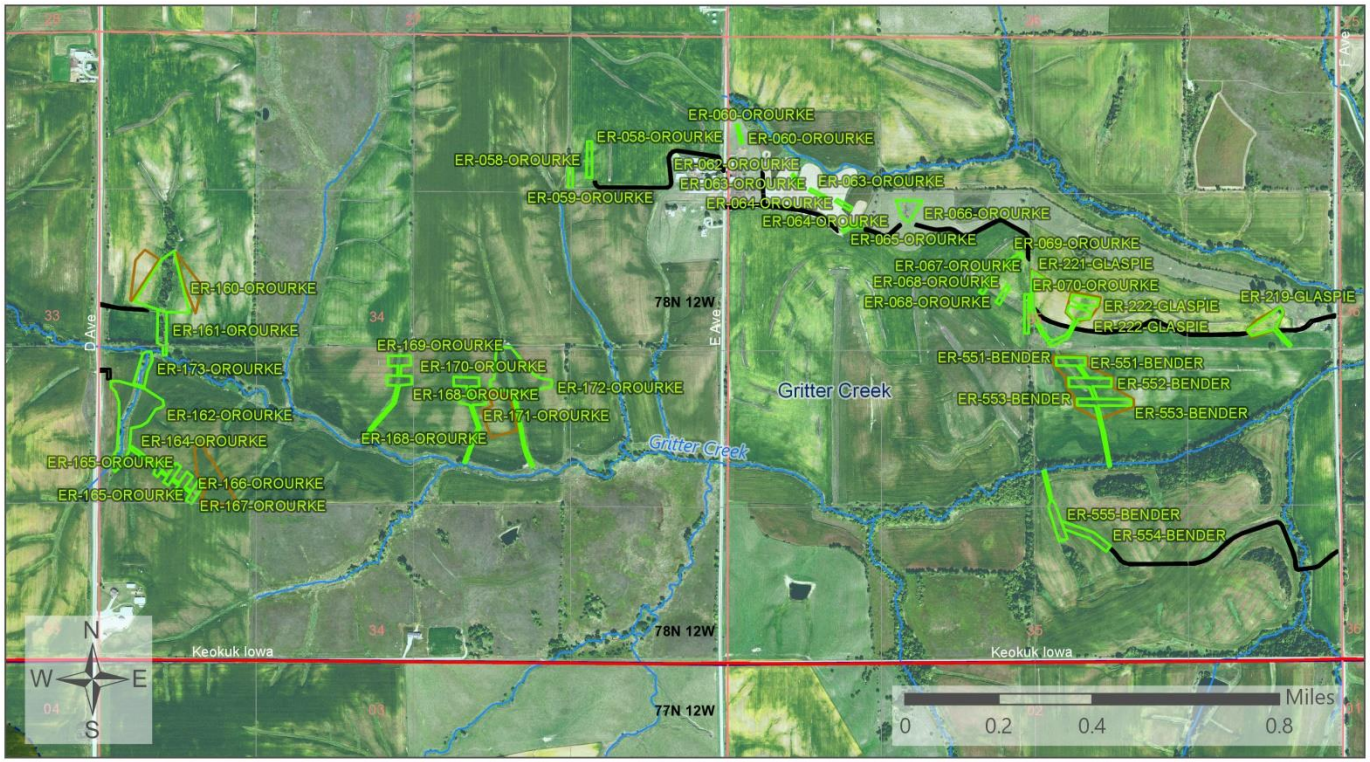
LEGEND

Disturbance Type
- Access Road
- Borrow Area
- Estimated BMP Footprint

PLSS
- PLSS Township
- PLSS Section
- PLSS Intersected
- Subwatershed

- BMP Implementation Area
- Stream
- Road
- County Boundary

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

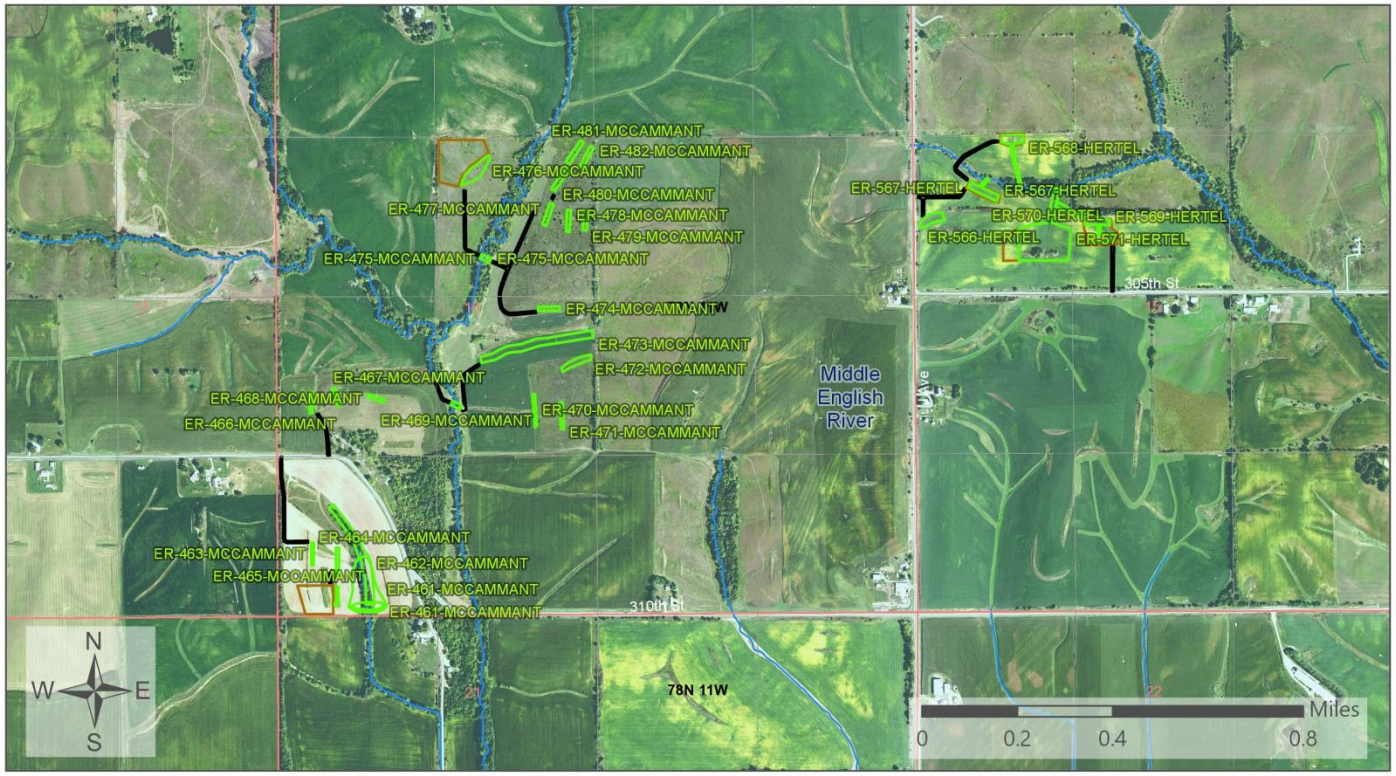
PLSS Intersected

Stream

Road

County Boundary

Map 4: Area Map—HERTEL and MCCAMMANT

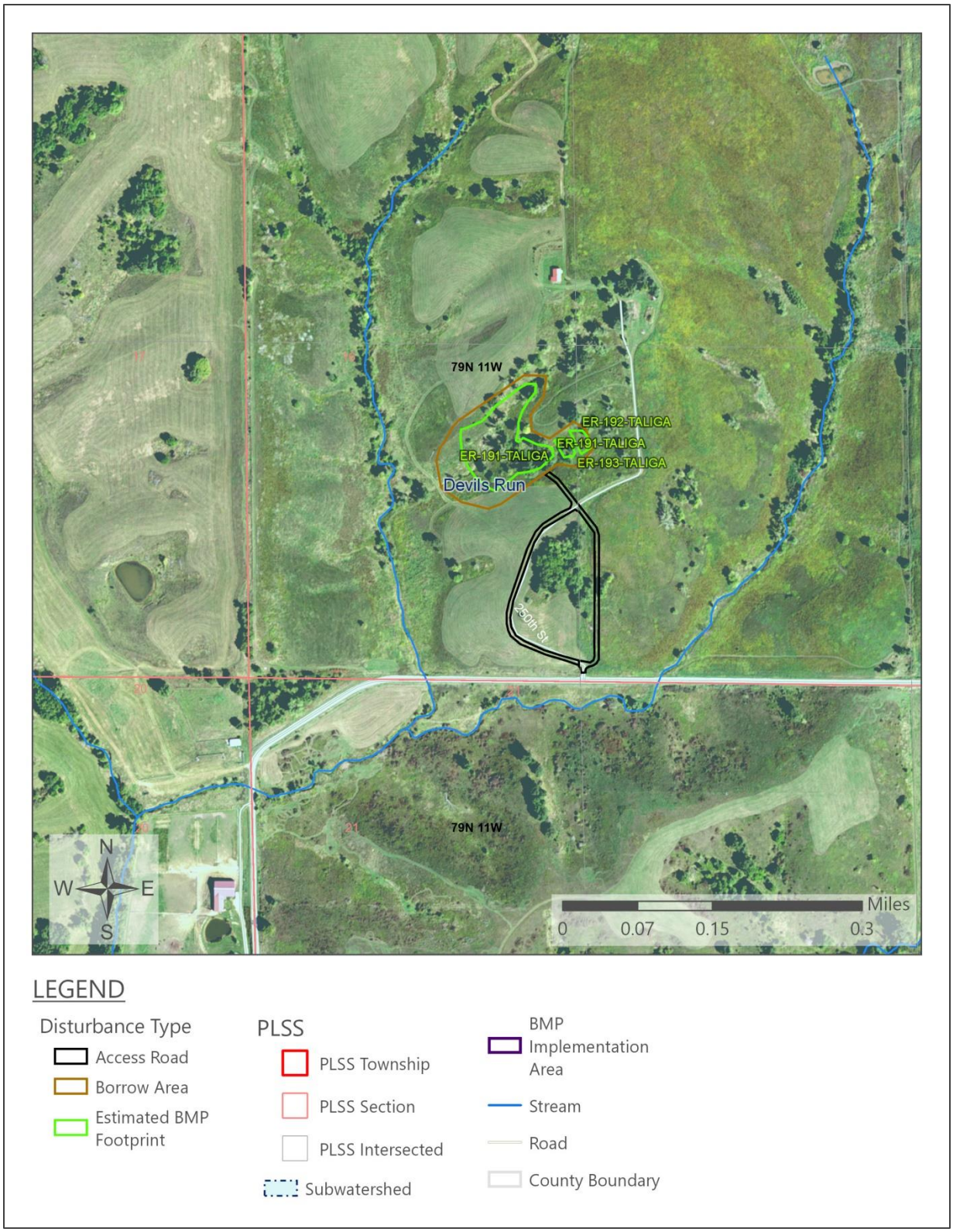


LEGEND

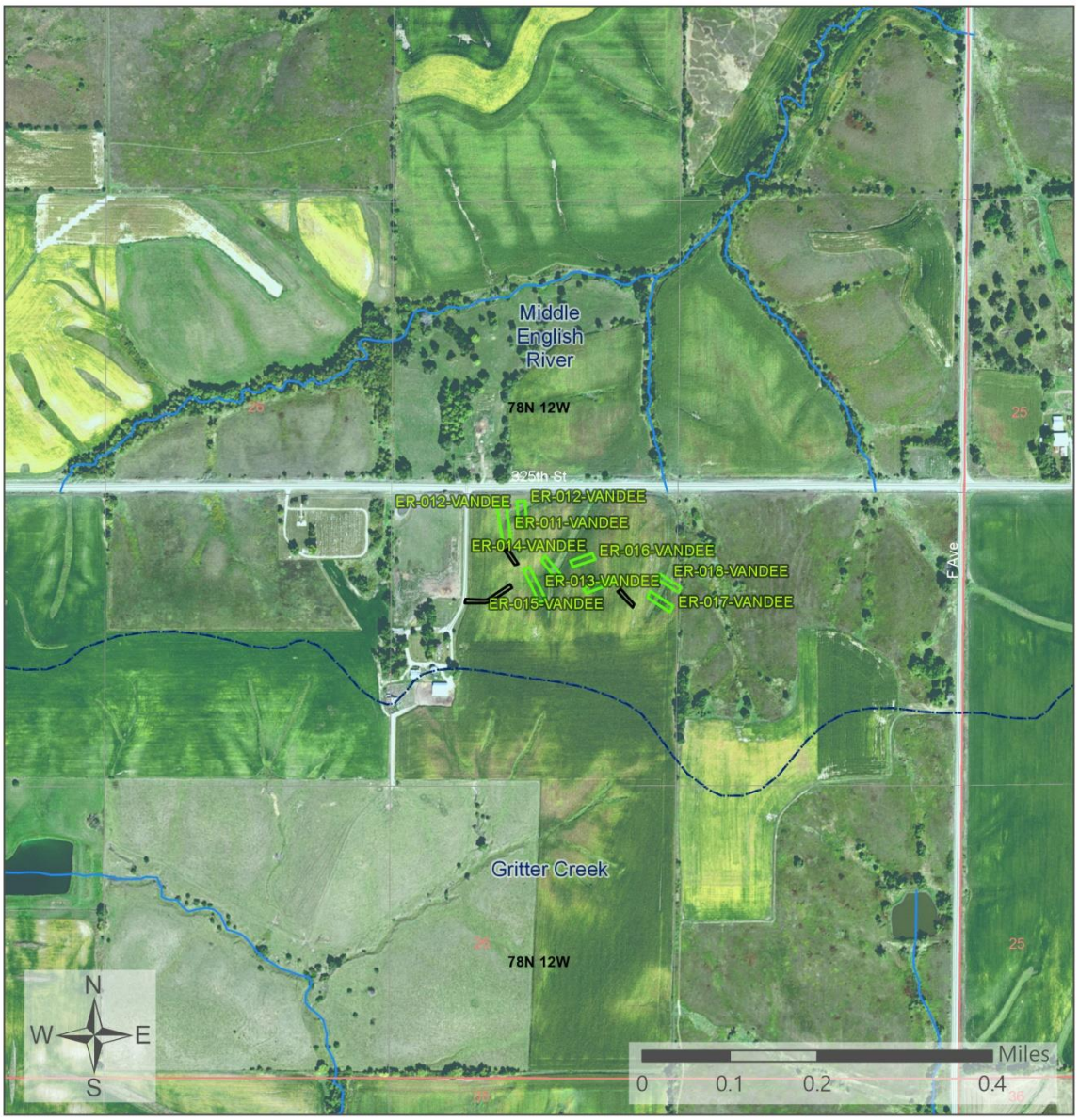
Disturbance Type
- Access Road
- Borrow Area
- Estimated BMP Footprint
- BMP Implementation Area
- Subwatershed

PLSS
- PLSS Township
- PLSS Section
- PLSS Intersected
- Stream
- Road
- County Boundary

Map 5: Area Map—TALIGA



Map 6: Area Map—VANDEE



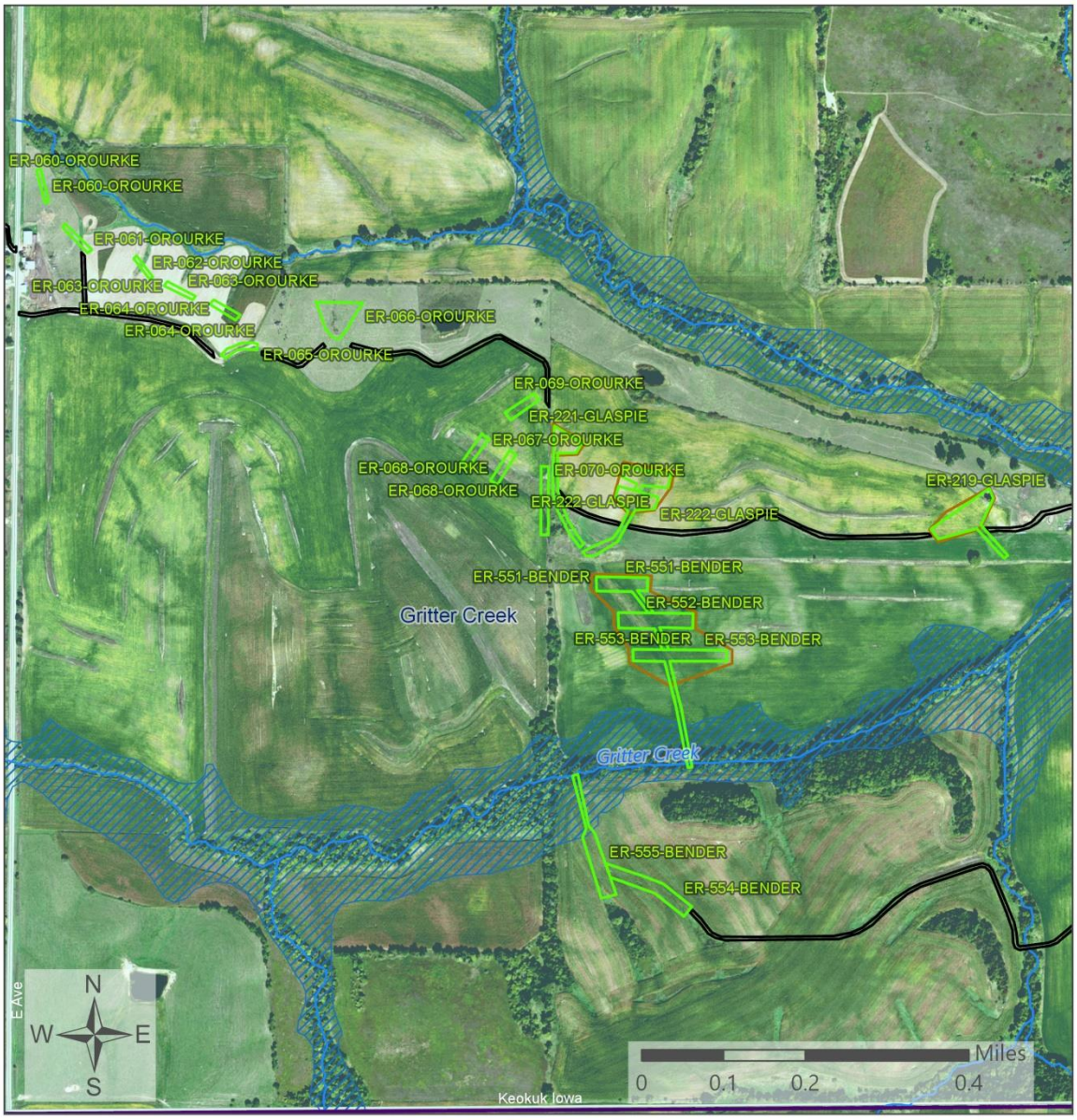
LEGEND

Disturbance Type
- Access Road
- Borrow Area
- Estimated BMP Footprint

PLSS
- PLSS Township
- PLSS Section
- PLSS Intersected
- Subwatershed

- BMP Implementation Area
- Stream
- Road
- County Boundary

Map 7: BENDER Floodplain Map



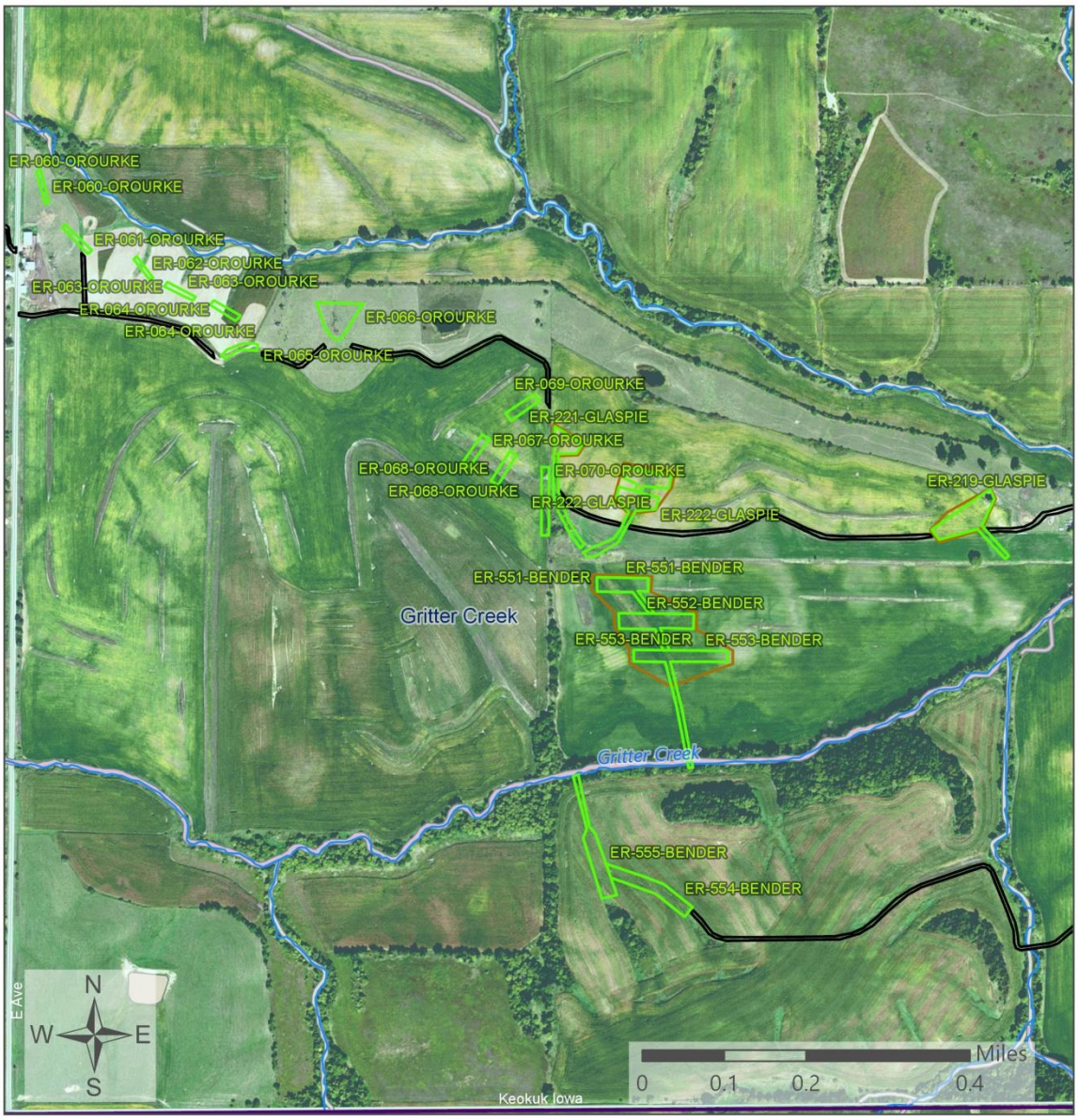
LEGEND

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 8: BENDER Wetland Map



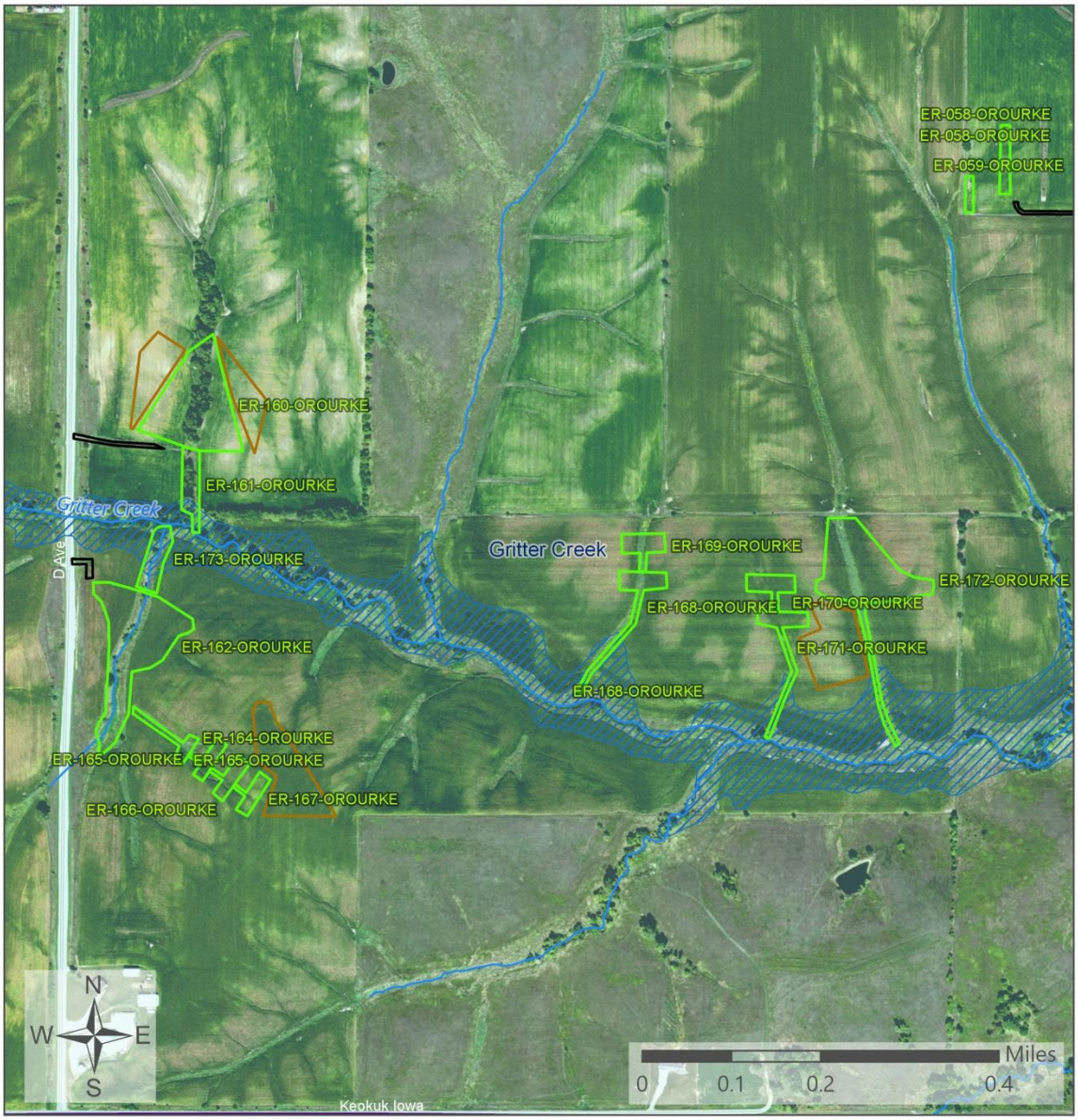
LEGEND

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

- BMP Implementation Area
- Stream
- Road
- County Boundary

Wetland Type
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Riverine

Map 9: OROURKE Floodplain Map



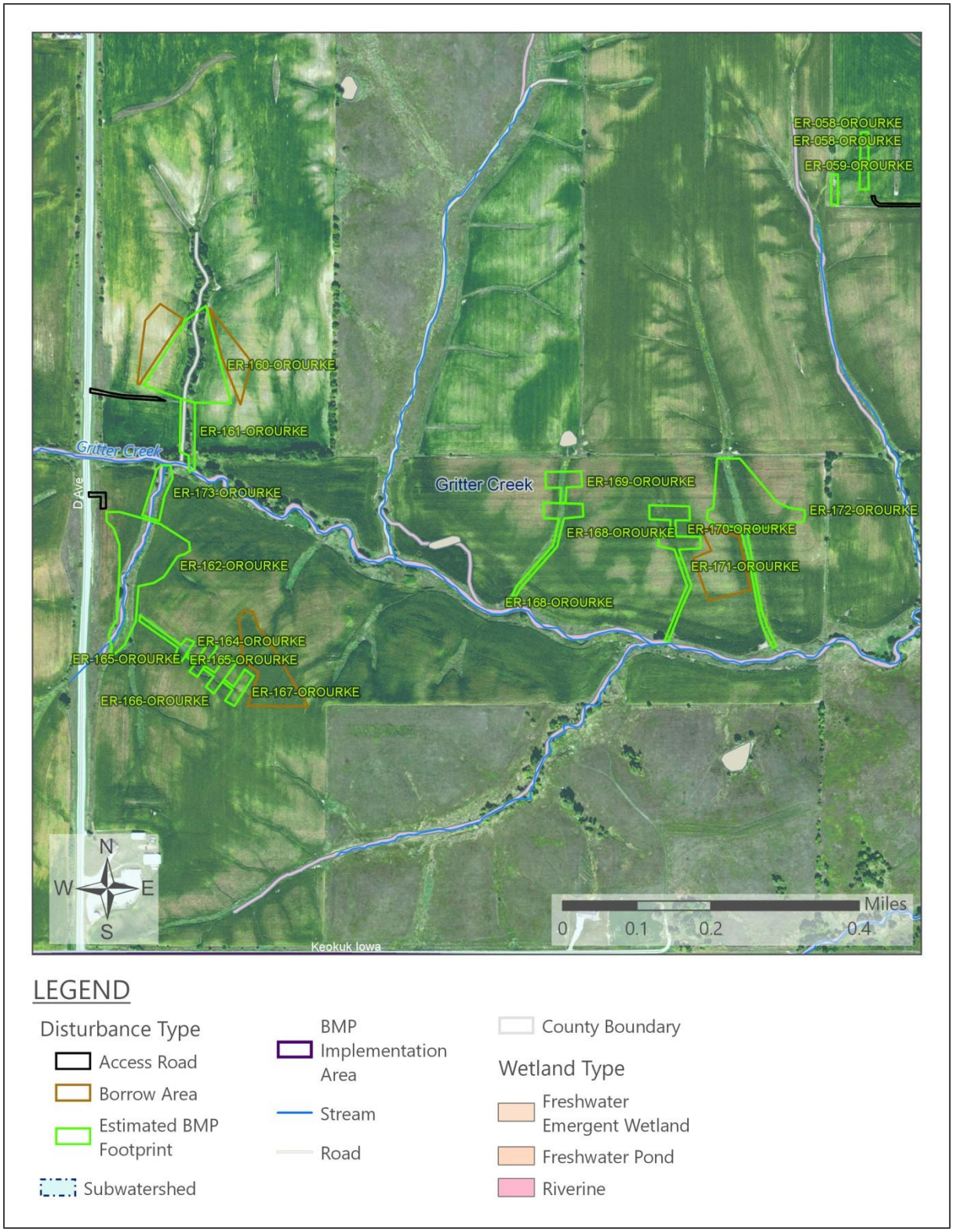
LEGEND

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

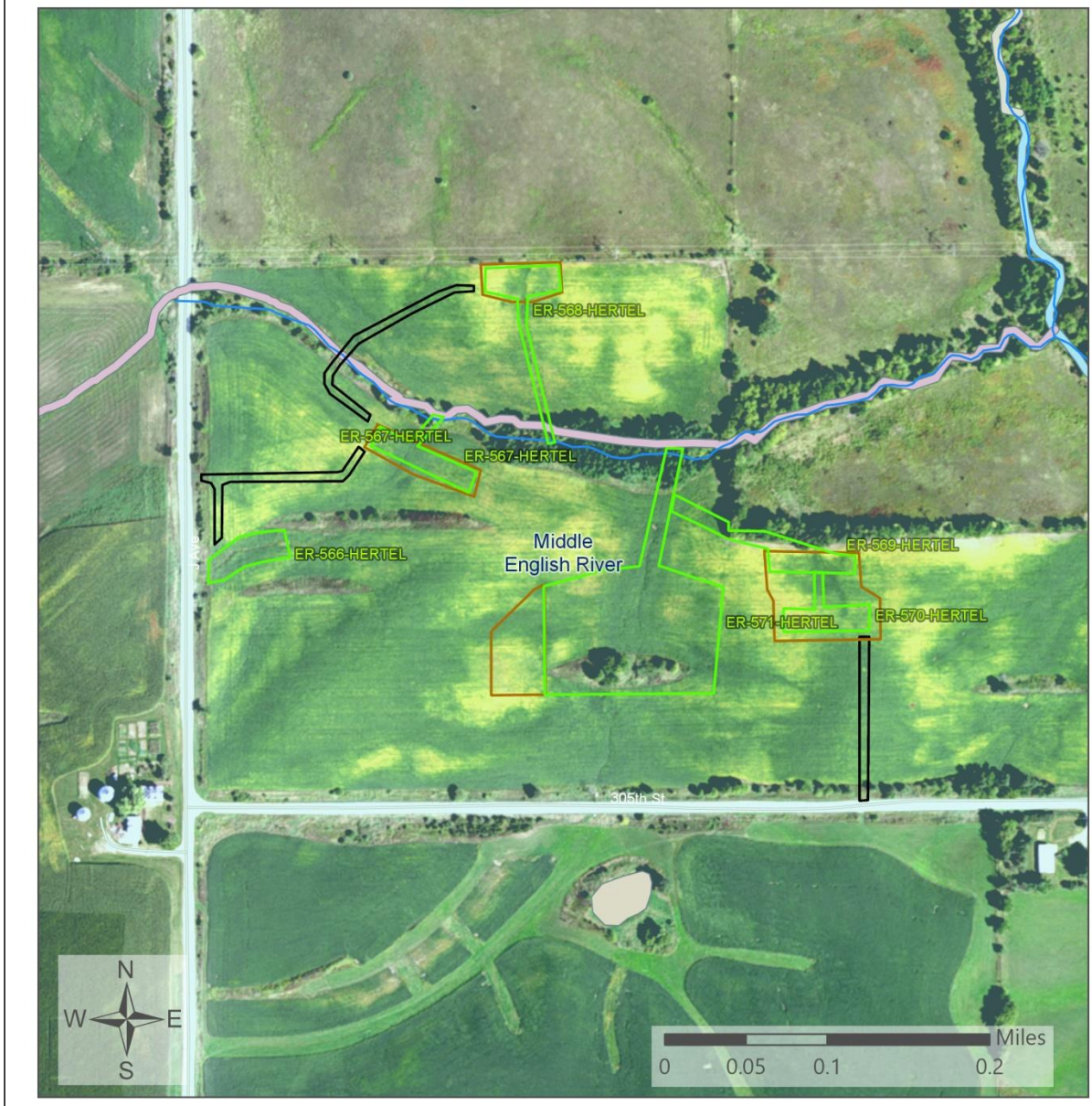
- BMP Implementation Area
- Stream
- Road
- County Boundary

Flood Zone
- 1.0 PCT ANNUAL CHANCE FLOOD HAZARD

Map 10: OROURKE Wetland Map



Map 11: HERTEL Wetland Map



LEGEND

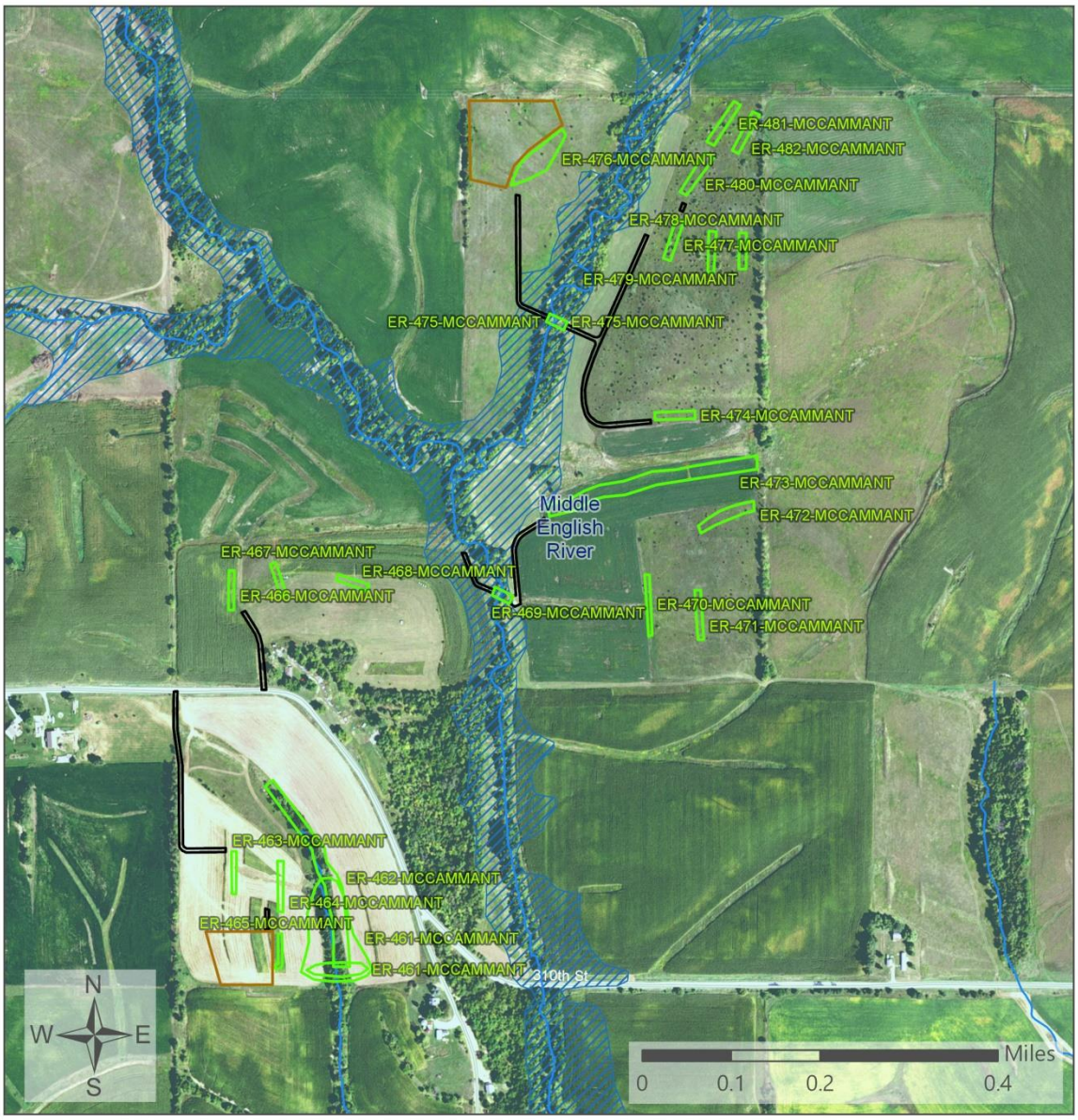
Disturbance Type
- Access Road
- Borrow Area
- Estimated BMP Footprint

- Subwatershed
- BMP Implementation Area
- Stream

- Road
- County Boundary

WETLAND_TYPE
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Riverine

Map 12: MCCAMMANT Floodplain Map



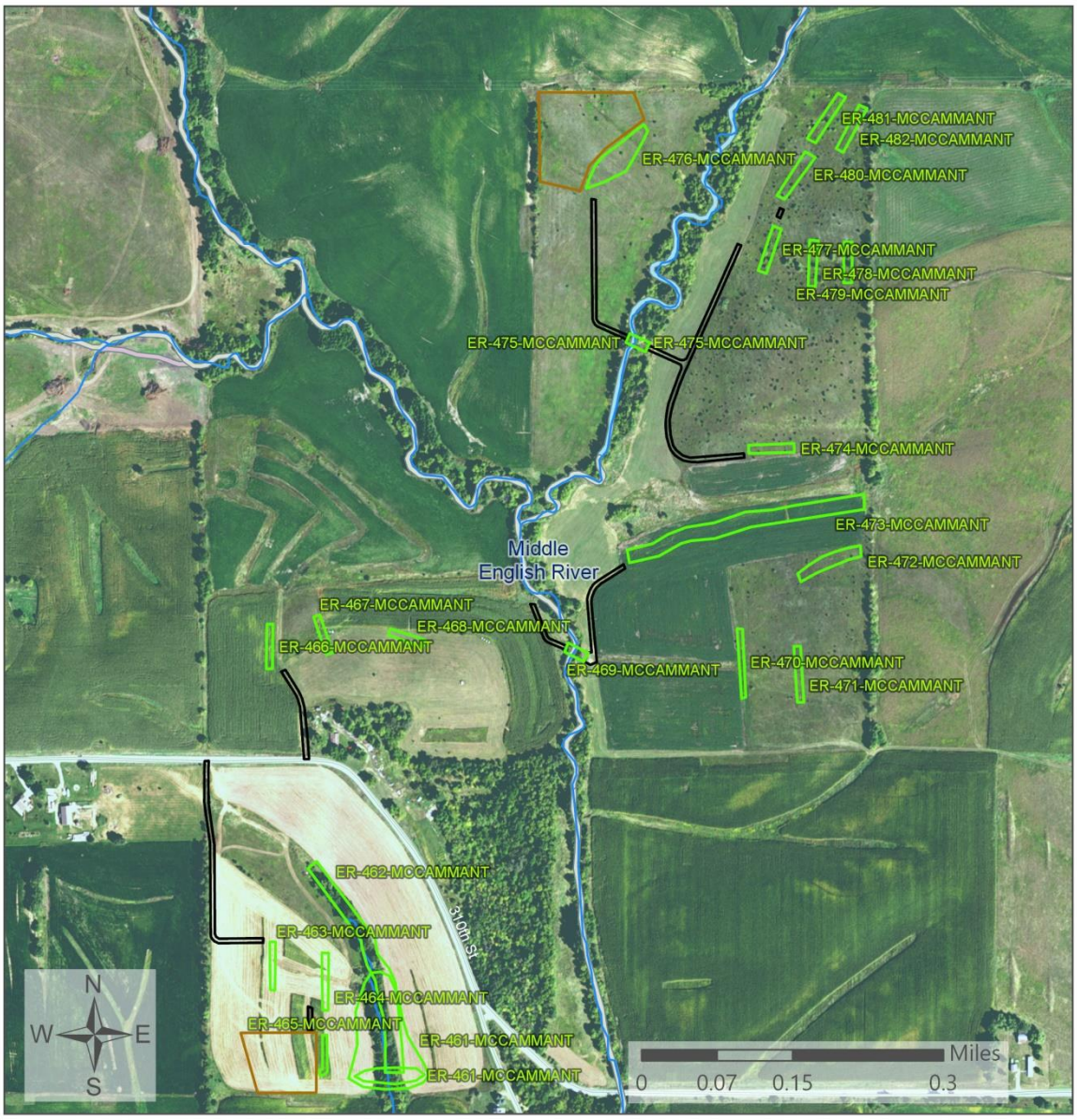
LEGEND

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