Iowa County English River F67
Bridge Flood Mitigation 2020 BRIC

Subapplicant information

Name of federal agency: FEMA
Type of submission: Application

Iowa County
970 Court Ave
Marengo, IA 52301 United States

<table>
<thead>
<tr>
<th>State</th>
<th>DUNS #</th>
<th>EIN #</th>
</tr>
</thead>
<tbody>
<tr>
<td>IA</td>
<td>034442103</td>
<td>426004930</td>
</tr>
</tbody>
</table>

Subapplicant type: Local Government
Is the subapplicant subject to review by Executive Order 12372 Process?: No - Not covered
Is the subapplicant delinquent on any federal debt?: No
Iowa County English River F67
Bridge Flood Mitigation 2020 BRIC

Community

Please provide the following information. If the Congressional district number for your community does not display correctly, please contact your State NFIP coordinator.

Add Communities

Please find the community(ies) that will benefit from this mitigation activity by clicking on the Find communities button. If needed, modify the Congressional District number for each community by entering the updated number under the U.S. Congressional District column for that community. When finished, click the Continue button. NOTE: You should also notify your State NFIP coordinator so that the updated U.S. Congressional District number can be updated in the Community Information System (CIS) database.

<table>
<thead>
<tr>
<th>Community name</th>
<th>County code</th>
<th>CID number</th>
<th>CRS community</th>
<th>CRS rating</th>
<th>U.S. Congressional District</th>
</tr>
</thead>
<tbody>
<tr>
<td>IOWA COUNTY *</td>
<td>095</td>
<td>190878</td>
<td>N</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

Please provide any additional comments below (optional).

Attachments

<table>
<thead>
<tr>
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<th>Action</th>
</tr>
</thead>
</table>

Continue
Mitigation plan

Please provide your plan information below.

Is the entity that will benefit from the proposed activity covered by the current FEMA approved multi-hazard mitigation plan in compliance with 44 CFR Part 201? Yes

Please provide plan detail

<table>
<thead>
<tr>
<th>Plan name</th>
<th>Plan type</th>
<th>Plan approval date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Iowa County Multi-Jurisdictional Hazard Mitigation Plan 2020–2025</td>
<td>Local Multi-Hazard Mitigation Plan</td>
<td>07/27/2020</td>
</tr>
</tbody>
</table>

Proposed activity description

Proposed project completes this mitigation action listed in the Mitigation Plan: “Construct Road/Dam Structures to help reduce downstream flash flooding” (see page 198).

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</tr>
</thead>
<tbody>
<tr>
<td>Iowa Co HMP APA ltr (Jul20).pdf</td>
<td>12/31/2020</td>
<td><a href="mailto:jim.marwedel@iowa.gov">jim.marwedel@iowa.gov</a></td>
<td>Mitigation Plan Attachments</td>
<td>Plan approval letter</td>
<td></td>
</tr>
</tbody>
</table>
Scope of work

The project Scope of Work (SOW) identifies the eligible activity, describes what will be accomplished and explains how the mitigation activity will be implemented. The mitigation activity must be described in sufficient detail to verify the cost estimate. All activities for which funding is requested must be identified in the SOW prior to the close of the application period. FEMA has different requirements for project, planning and management cost SOWs.

Subapplication title (include type of activity and location) Iowa County English River F67 Bridge Flood Mitigation 2020 BRIC

Activities

Primary activity type Flood control
Primary sub-activity type Detention/retention basins
Secondary activity type (Optional) Flood control
Secondary sub-activity type Wetland restoration/creation
Tertiary activity type (Optional) Flood control
Tertiary sub-activity type Floodwater storage and diversion

Geographic areas description

The area where structures and practices to be installed to mitigate flooding of County Road F67 at the North English River are scattered throughout southwest Iowa County upstream of the F67 bridge over the North English River. Refer to the attached map below "Map of Iowa Co English River F67 Bride Project Locations".

Community lifelines

Primary community lifeline Transportation
Primary sub-community lifeline Highway/roadway/motor vehicle
Secondary community lifeline (optional) Food, water, shelter
<table>
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<th>Hazard sources</th>
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<tr>
<td>Primary hazard source</td>
<td>Flooding</td>
</tr>
<tr>
<td>Secondary hazard source (optional)</td>
<td></td>
</tr>
<tr>
<td>Tertiary hazard source (optional)</td>
<td></td>
</tr>
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</table>

| Is this a phased project? | No |
| Are you doing construction in this project? | Yes |
| Population affected | 3.1 |

**Detail/description of stated percentage**

According to numbers provided by the Iowa DOT, there are 500 trips each day over the F67 bridge over the North English River. This bridge approach becomes inaccessible when floodwaters overtop the approach. It is this flooding that is being mitigated by this proposed project. According to [https://www.census.gov/quickfacts/iowacountyiowa](https://www.census.gov/quickfacts/iowacountyiowa), the estimated population of Iowa County, the sub-applicant jurisdiction, in 2019 was 16,184. Dividing 500 by 16,184 is 3.1%.

**Provide a clear and detailed description of your proposed activity**

The proposed mitigation activity uses several nature-based solutions that detain and/or infiltrate run-off water to reduce downstream flood volumes and risk of water overtopping Iowa County Road F67 at its approach to the “Squirrel Bridge” over the English River. The activity proposed to be funded with BRIC funds is to construct dozens of water and sediment control basins (WASCOBs), wetlands, storm water detention basins, and ponds, with associated riparian area, upstream of the F-67 bridge (see mapped locations in the attachment "Map of Iowa Co English River F67 Bridge Project Locations"). The proposed structures have already been designed (funded through a US HUD CDBG-DR National Disaster Resiliency project), have already completed environmental and cultural inventory per SHPO and FWS procedures, and have been cleared for construction. They are considered to be "bid ready" projects. The following list provides details...
These proposed projects will be bid out through a competitive bidding process. A project engineer was procured through the federally-funded NDR-HUD projects, through a documented competitive procurement process, and we propose that we retain this engineering firm to assist with bidletting, construction oversight, and construction checkout procedures on this project. Next steps include preparing projects for bidletting, procuring contractors to do the work,
Describe how the project is technically feasible and will be effective in reducing the risk by reducing or eliminating damage to property and/or loss of life in the project area. Please include engineering design parameters and references to the following: preliminary schematic or engineering drawings/design; applicable building codes; engineering practices and/or best practices; level of protection (e.g., life safety, 100-yr flood protection with freeboard, 100-yr wind design, etc.);

Who will manage and complete the mitigation activity?

Will the project address the hazards identified and what risks will remain from all hazards after project implementation (residual risk)?

Designs by the engineering firm and subsequent flood modeling by the project engineer, in conjunction with the Iowa Flood Center, demonstrate these detention structures provide a reduction in peak flow of the English River during storm events. These proposed projects will provide additional benefits reducing downstream flooding, in conjunction with 300+ detention structures we have constructed in the same subwatersheds through the NDR-HUD grant over the last 3 years.

The project will be managed by the English River Watershed Management Authority Project Coordinator.

The proposed project will address the identified flood hazard of recurrent flooding of Iowa County Road F67 at the bridge approach at the English River. The attached Hydrology and Hydraulic Study report by French-Reneker Engineers (“UofI Report (20-069) Final.pdf”) details the flood hazard there and the residual risk that remains after implementation of the specific actions proposed in this project. As explained in the Study report, flooding may occur over F67 in the future, but not as often as this project reduces the recurrence interval at which floodwaters would rise to the level of overtopping the road. It should be noted, however, that the proposed structures/practices are just a part of a greater effort that is ongoing in the English River watershed, undertaken by the English River Watershed Management Authority and funded by a US HUD CDBG-DR “National Disaster Resilience” grant. The Study report does not examine the effects of these additional practices and structures, but certainly when they are considered, the residual risk will be even less than that documented in “UofI Report (20-069) Final.pdf”. Also, the Study report does not analyze the flood risk reduction due to these structures and practices at other locations downstream where flooding is known to occur; flood risk there will also likely be reduced due to the installation of these structures and practices. Finally, these projects will hopefully serve as a catalyst for greater change: the proposed actions can be expanded upon in the future with similar actions elsewhere in the watershed that would hold back
and infiltrate more run-off, and thereby reduce residual risk even more going into the future.

When will the mitigation activity take place?

Construction is anticipated to begin in late fall and all structures completed within 18 months of start of construction.

Explain why this project is the best alternative. What alternatives were considered to address the risk and why was the proposed activity considered the best alternative?

Three basic alternatives were considered for addressing the risk of flooding of Highway F67 at the North English River: (1) No Action Alternative, (2) raising Highway 67, and (3) the proposed alternative of distributed upstream flood storage and diversion (and infiltration). The No Action Alternative would allow the continued increase of flooding events to continue. With the selection of the No Action Alternative, methods of agricultural production would remain as they have for decades, with many of those methods contributing to increased flooding downstream. There would be no incentives to construct structures or implement practices. The installation of structures or practices that reduce flooding intensity would not be funded. The potential for negative economic impacts resulting from reduced water quantity would remain present and possibly increase. One alternative for dealing with flooding over Highway F67 at the North English River is to raise the road approach to the bridge. This was not considered the best alternative for a couple of reasons. While the historical record only spans 29 years, records show that flooding of the approach is happening more frequently in recent years. This could be from rain events being more intense, but it could also be from changes in agricultural practices, like increased tiling. If F67 were raised, to bring it above current flood water levels, we may find in just a few years that flooding has become just that much higher because nothing has changed upstream; indeed, if current trends continued, the situation upstream would worsen (at least in terms of water runoff). Raising F67 does nothing to address those upstream issues. A second reason the alternative of raising F67 was not considered the best alternative is because this option would not do anything for reduction of floods elsewhere. Indeed, it may even worsen flooding elsewhere, as it could cause flood damage to crops of farms upstream where water would back-up from the new, higher road that would block water flow. There is another alternative that not only reduces flooding at F67, but also has the potential to reduce flooding at points upstream and downstream, including the City of Kalona which
sees frequent flooding from the English River. That alternative is the Proposed Alternative of distributing structures and practices upstream that detain water, slow water, and provide greater infiltration of rainwater into the soil. Implementation of the Proposed Action Alternative targets some of the highest priority sub-watersheds in the English River Watershed targeted for installation and maintenance of selected structures. This project 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. The landowners would be funded through a cost-sharing arrangement to install these approved structures or practices. Implementing structures would decrease the amount of high-water flow. Proposed practices would lessen the severity of flooding by temporarily impounding water in basins, ponds, constructed wetlands, and other structures. Plus, the proposed structures/practices have more benefits than just flood control. They reduce soil erosion and improve water quality, and thereby improve habitat for fish and wildlife along the streams and rivers. Finally, the proposed alternative can serve as a catalyst for greater change: the proposed actions can be expanded upon in the future with similar actions elsewhere in the watershed that would bring more and more flood reduction for all points downstream.

Please identify the entity that will perform any long-term maintenance and provide a maintenance, schedule and cost information. The subapplicant or owner of the area to be mitigated is responsible for maintenance (including costs of long-term care) after the project is completed?

The projects will be built on privately owned farm properties. Producers will be provided with written guidelines for appropriate annual maintenance and they will be responsible for the maintenance. Refer to "Sample Project Maintenance Agreement Document" below for a sample. Maintenance agreements will be established with landowners stating that they agree to conduct the recommended annual maintenance, and that they are financially responsible for the cost of repairs required if poor maintenance results in issues. Producers have incentive to maintain the structures because if they will see degradation of their own farmland and farm output. Contractors are required to provide a 1-year warranty on structures and will be asked to remedy issues that arise in the first year after construction checkout.
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<tbody>
<tr>
<td>Sample Project Maintenance Agreement Document.pdf</td>
<td>01/27/2021</td>
<td><a href="mailto:jbailey@englishriverwma.org">jbailey@englishriverwma.org</a></td>
<td>Scope of Work Attachments</td>
<td>Sample Project Maintenance Agreement</td>
</tr>
<tr>
<td>UofI Report (20-069) Final.pdf</td>
<td>01/27/2021</td>
<td><a href="mailto:jim.marwedel@iowa.gov">jim.marwedel@iowa.gov</a></td>
<td>Scope of Work Attachments</td>
<td>Hydrology and Hydraulic Study report by French-Reneker Engineers. Appendices include plans for proposed structures/practices at the 9 proposed sites. Report details the flood hazard, how addressed by proposed activities, and details pre-mitigation and post-mitigation flood risk where F67 crosses the English River.</td>
</tr>
<tr>
<td>Map of Iowa Co English River F67 Bridge Project Locations.pdf</td>
<td>01/22/2021</td>
<td><a href="mailto:jbailey@englishriverwma.org">jbailey@englishriverwma.org</a></td>
<td>Scope of Work Attachments</td>
<td>Map of locations of proposed projects in select subwatersheds of the English River.</td>
</tr>
</tbody>
</table>
## Schedule

Specify the work schedule for the mitigation activities.

### Add tasks to the schedule

Please include all tasks necessary to implement this mitigation activity; include descriptions and estimated time frames.

<table>
<thead>
<tr>
<th>Task Name</th>
<th>Start Month</th>
<th>Task Duration (in Months)</th>
<th>Task Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Go/No: USACE Permit for DeBrower</td>
<td>1</td>
<td>2</td>
<td>USACE Permit for DeBrower. DeBrower is the only project site that requires a USACE permit.</td>
</tr>
<tr>
<td>Bidletting</td>
<td>2</td>
<td>2</td>
<td>This task involves procurement, selection, and development of a contract with a construction company that will build the structures.</td>
</tr>
<tr>
<td>Construction</td>
<td>3</td>
<td>14</td>
<td>This task involves construction of the project, on site check-ins, and facilitating communication between contractors and landowners.</td>
</tr>
<tr>
<td>Construction checkout</td>
<td>14</td>
<td>4</td>
<td>This task involves a walkthrough of the completed project with the landowner, contractor, and engineering team to ensure plans have been followed and work is thorough.</td>
</tr>
<tr>
<td>Task Name</td>
<td>Start Month</td>
<td>Task Duration (in Months)</td>
<td>Task Description</td>
</tr>
<tr>
<td>-------------------------------</td>
<td>-------------</td>
<td>---------------------------</td>
<td>-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Project Reporting</td>
<td>2</td>
<td>17</td>
<td>This task involves ongoing completion of all reporting requirements.</td>
</tr>
<tr>
<td>Project Closeout</td>
<td>16</td>
<td>3</td>
<td>Closeout</td>
</tr>
<tr>
<td>Outreach and Information</td>
<td>2</td>
<td>15</td>
<td>This task involves following up with landowners and others who have previously expressed interest in a partnership with the English River WMA for projects like those in the Iowa County English River F67 Bridge Flood Mitigation project. Staff would also reach out to new landowners to grow the list of future possible projects. Site visits will establish pre-engineering project scope and feasibility. Information will be disseminated to watershed landowners about best management practices on agricultural lands, and how they can participate in future projects.</td>
</tr>
</tbody>
</table>

Estimate the total duration of your proposed activities (in months). 18

**Proposed project start and end dates**

- **Start Date**: 2021-09-01
- **End Date**: 2023-03-01
Project subapplication

Subapplicant information
Contact information
Community
Mitigation plan
Scope of work
Schedule
Budget
Cost-effectiveness
Environmental/Historic Preservation (EHP) Review Information
A. National Historic Preservation Act - Historic Buildings and Structures
B. National Historic Preservation Act - Archeological Resources
C. Endangered Species Act and Fish and Wildlife Coordination Act
D. Clean Water Act, Rivers and Harbors Act, and Executive Order 11990 (Protection of Wetlands)
E. Executive Order 11988 (Floodplain Management)
F. Coastal Zone Management Act
G. Farmland Protection Policy Act
H. Resource Conservation and Recovery Act (RCRA) and Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (Hazardous and Toxic Materials)
I. Executive Order 12898, Environmental Justice for Low Income and Minority Populations
J. Other Environmental/Historic Preservation Laws or Issues
K. Summary and Cost of Potential Impacts
Evaluation
Comments & attachments
Location
Project location
Project benefiting area
Project impact area
Project site inventory
Assurances and certifications
**Scope of work**

The project Scope of Work (SOW) identifies the eligible activity, describes what will be accomplished and explains how the mitigation activity will be implemented. The mitigation activity must be described in sufficient detail to verify the cost estimate. All activities for which funding is requested must be identified in the SOW prior to the close of the application period. FEMA has different requirements for project, planning and management cost SOWs.

Subapplication title (include type of activity and location)
**Iowa County English River F67 Bridge Flood Mitigation 2020 BRIC**

**Activities**

- **Primary activity type**
  - *Flood control*

- **Primary sub-activity type**
  - *Detention/retention basins*

- **Secondary activity type (Optional)**
  - *Flood control*

- **Secondary sub-activity type**
  - *Wetland restoration/creation*

- **Tertiary activity type (Optional)**
  - *Flood control*

- **Tertiary sub-activity type**
  - *Floodwater storage and diversion*

Geographic areas description
The area where structures and practices to be installed to mitigate flooding of County Road F67 at the North English River are scattered throughout southwest Iowa County upstream of the F67 bridge over the North English River. Refer to the attached map below "Map of Iowa Co English River F67 Bride Project Locations".

**Community lifelines**

- **Primary community lifeline**
  - *Transportation*

- **Primary sub-community lifeline**
  - *Highway/roadway/motor vehicle*
Secondary community lifeline (optional)
Food, water, shelter

Secondary sub-community lifeline
Agriculture

Tertiary community lifeline (optional)

Hazard sources
Primary hazard source
Flooding

Secondary hazard source (optional)

Tertiary hazard source (optional)

Is this a phased project?
No

Are you doing construction in this project?
Yes

Population affected
3.1

Detail/description of stated percentage
According to numbers provided by the Iowa DOT, there are 500 trips each day over the F67 bridge over the North English River. This bridge approach becomes inaccessible when floodwaters overtop the approach. It is this flooding that is being mitigated by this proposed project. According to https://www.census.gov/quickfacts/iowacountyiowa, the estimated population of Iowa County, the sub-applicant jurisdiction, in 2019 was 16,184. Dividing 500 by 16,184 is 3.1%

Provide a clear and detailed description of your proposed activity
The proposed mitigation activity uses several nature-based solutions that detain and/or infiltrate run-off water to reduce downstream flood volumes and risk of water overtopping Iowa County Road F67 at its approach to the “Squirrel Bridge” over the English River. The activity proposed to be funded with BRIC funds is to construct dozens of water and sediment control basins (WASCOBs), wetlands, storm water detention basins, and ponds, with associated riparian area, upstream of the F-67 bridge (see mapped locations in the attachment "Map of Iowa Co English River F67 Bridge Project Locations"). The proposed structures have already been designed (funded through a US HUD CDBG-DR National Disaster Resiliency project), have already completed environmental and cultural inventory per SHPO and FWS procedures, and have been cleared for construction. They are considered to be "bid ready" projects. The following list provides details of these flood diversion and storage structures/practices at the 9 sites at which they will be located (map showing sites is in "Map of Iowa Co English River F67 Bridge Project Locations.pdf"): 1. DeBrower site at latitude 41.611140, longitude -92.239416: Wetland area and 2 Ponds 2. Fisher 01 site at latitude 41.524264, longitude -92.159703: Pond 3. Fisher 02 site at latitude 41.515155, longitude -92.255115: Grass Waterway and Terraces 4. Fisher 03 site at latitude 41.533311, longitude -92.237447: Pond and Riparian Area 5. Gorsch Farms site at latitude 41.569646, longitude -92.211529: 7 Terraces 6.
McCammant 01 site at latitude 41.543439, longitude -92.178870: 2 Grass Waterways, 14 Terraces, 2 Contour Terraces, 2 Detention Basins, and Riparian Area 7. McCammant 03 site at latitude 41.619878, longitude -92.217422: Grass Waterway and 7 Terraces 8. McCammant 04 site at latitude 41.627473, longitude -92.104946: 5 Terraces and 4 Detention Basins 9. VanDee Farms site at latitude 41.528143, longitude -92.212090: 16 Terrace structures Plans for each of these sites are shown in Appendix C of the attached engineer’s Hydrology and Hydraulics Study report (“UofI Report (20-069) Final.pdf”). As the engineer’s Study report describes in detail, the dozens of structures and practices proposed in this project reduce the volume of water that will flow downstream where flood waters frequently overtop Iowa County Road F67, and not only are flood volumes reduced there, but also at downstream points, including the City of Kalona that sees frequent flooding of the English River. So, this project has the potential to reduce flooding in more than the location that is analyzed in the report. Plus, the proposed structures/practices have more benefits than just flood control. They reduce soil erosion and improve water quality, and thereby improve habitat for fish and wildlife along the streams and rivers.

How will the mitigation activity be implemented?

These proposed projects will be bid out through a competitive bidding process. A project engineer was procured through the federally-funded NDR-HUD projects, through a documented competitive procurement process, and we propose that we retain this engineering firm to assist with bidletting, construction oversight, and construction checkout procedures on this project. Next steps include preparing projects for bidletting, procuring contractors to do the work, construction supervision and checkout procedures.

Describe how the project is technically feasible and will be effective in reducing the risk by reducing or eliminating damage to property and/or loss of life in the project area. Please include engineering design parameters and references to the following: preliminary schematic or engineering drawings/design; applicable building codes; engineering practices and/or best practices; level of protection (e.g., life safety, 100-yr flood protection with freeboard, 100-yr wind design, etc.).

Designs by the engineering firm and subsequent flood modeling by the project engineer, in conjunction with the Iowa Flood Center, demonstrate these detention structures provide a reduction in peak flow of the English River during storm events. These proposed projects will provide additional benefits reducing downstream flooding, in conjunction with 300+ detention structures we have constructed in the same subwatersheds through the NDR-HUD grant over the last 3 years.

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When will the mitigation activity take place?

Construction is anticipated to begin in late fall and all structures completed within 18 months of start of construction.

Explain why this project is the best alternative. What alternatives were considered to address the risk and why was the proposed activity considered the best alternative?

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Please identify the entity that will perform any long-term maintenance and provide a maintenance, schedule and cost information. The subapplicant or owner of the area to be mitigated is responsible for maintenance (including costs of long-term care) after the project is completed?
The projects will be built on privately owned farm properties. Producers will be provided with written guidelines for appropriate annual maintenance and they will be responsible for the maintenance. Refer to "Sample Project Maintenance Agreement Document" below for a sample. Maintenance agreements will be established with landowners stating that they agree to conduct the recommended annual maintenance, and that they are financially responsible for the cost of repairs required if poor maintenance results in issues. Producers have incentive to maintain the structures because if they will see degradation of their own farmland and farm output. Contractors are required to provide a 1-year warranty on structures and will be asked to remedy issues that arise in the first year after construction checkout.

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<td>Sample Project Maintenance Agreement</td>
</tr>
<tr>
<td>UofI Report (20-069) Final.pdf</td>
<td>01/27/2021</td>
<td><a href="mailto:jim.marwedel@iowa.gov">jim.marwedel@iowa.gov</a></td>
<td>Scope of Work Attachments</td>
<td>Hydrology and Hydraulic Study report by French-Reneker Engineers. Appendices include plans for proposed structures/practices at the 9 proposed sites. Report details the flood hazard, how addressed by proposed activities, and details pre-mitigation and post-mitigation flood risk where F67 crosses the English River.</td>
</tr>
<tr>
<td>Map of Iowa Co English River F67 Bridge</td>
<td>01/22/2021</td>
<td><a href="mailto:jbailey@englishriverwma.org">jbailey@englishriverwma.org</a></td>
<td>Scope of Work Attachments</td>
<td>Map of locations of proposed projects in select subwatersheds of the English River.</td>
</tr>
<tr>
<td>Filename</td>
<td>Date uploaded</td>
<td>Uploaded by</td>
<td>Label</td>
<td>Description</td>
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<td>------------------</td>
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<tr>
<td>Project Locations.pdf</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Budget cost estimate should directly link to your scope of work and work schedule. You must add at least one item(s) greater than 0 for your cost estimate. As necessary, please adjust your federal/non-federal cost shares, and add the non-federal funding source(s) you are planning to use this project. Once you have completed this section, please click the Continue button at the bottom of this page to navigate to the next section.

Add budget cost types and item(s)

First, click the Add cost type button below to add cost type cost estimate and then click the Add item(s) button to add the item(s) for the cost estimate.

Grand total: $1,350,654.90

Budget type: Construction

Cost type: Cost estimate

Cost estimate is the line item(s) budget to support the scope of work for the execution and completion of the project. Be sure to include the cost associated with revisions/formal adoption. To add a line item, Please click on the Add an item button. Click anywhere within each row or the arrow to edit or delete the line item(s).
<table>
<thead>
<tr>
<th>Item</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Environmental Pre-award (Wetland Delineation/T&amp;E)</td>
<td>$4,037.00</td>
</tr>
<tr>
<td>Archaeological Reviews - Pre-award</td>
<td>$39,867.00</td>
</tr>
<tr>
<td>Analysis of potential of measures to reduce floods</td>
<td>$48,700.00</td>
</tr>
<tr>
<td>Construction Engineering/Oversight - DeBrower site</td>
<td></td>
</tr>
</tbody>
</table>
Item: Record Maintenance Agreements
$7,800.00

Item: Bid Specs, Bidletting Preparation
$441.00

Item: Construction Cost
$17,600.00

Item: Construction Cost
$918,000.00
<table>
<thead>
<tr>
<th>Item</th>
<th>Cost</th>
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</thead>
<tbody>
<tr>
<td>Engineering and Design Pre-award</td>
<td>$169,750.00</td>
</tr>
<tr>
<td>Advertise bids in newspapers</td>
<td>$500.00</td>
</tr>
<tr>
<td>Outreach, information dissemination activities</td>
<td>$70,012.80</td>
</tr>
<tr>
<td>Construction Engineering/Oversight at 8 sites</td>
<td>$37,600.00</td>
</tr>
</tbody>
</table>
### Cost type: Management cost

<table>
<thead>
<tr>
<th>Item</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supplies</td>
<td>$1,800.00</td>
</tr>
<tr>
<td>Salaries</td>
<td>$2,147.10</td>
</tr>
</tbody>
</table>

Management cost (optional) is the line item(s) to support the scope of work for the execution and completion of the project. Be sure to include the cost associated with managing the project/initiative/activity. To add a line item, please click on the Add an item button. Click anywhere within each row or the arrow to edit or delete the line item(s). Management cost is optional. However, if you want to include Management cost to your budget, you must add at least one item greater than $0 under the Management cost.
**Item: Salaries**

$32,400.00

Program income (optional)

**Cost share**

Cost share or matching means the portion of project costs not paid by federal funds.

**Proposed federal vs. non-federal funding shares**

Hazard Mitigation Assistance (HMA) funds may be used to pay up to 75% federal share of the eligible activity costs. For Building Resilient Infrastructure and communities (BRIC), small impoverished communities may be eligible for up to 90% federal share. For Flood Mitigation Assistance (FMA), and severe repetitive loss (SRL) properties may be eligible for up to 100% federal share. Repetitive loss (RL) properties may be eligible for up to 90% federal share. Flood Mitigation Assistance (FMA) and severe repetitive loss (SRL) properties may be eligible for up to 100% federal share. Repetitive loss (RL) properties may be eligible for up to 90% federal share.

**Is this a small impoverished community?**

This determines your federal/non-federal share ratio.

No

% Percentage

$ Dollar amount

**Proposed federal share**

70.84

956870.90

**Proposed non-federal share**

29.16
Non-federal funding sources here

That portion of the total costs of the program provided by the non-federal entity in the form of in-kind donations or cash match received from third parties or contributed by the agency. In-kind contributions must be provided and cash expended during the project period along with federal funds to satisfy the matching requirements.

<table>
<thead>
<tr>
<th>Funding source</th>
<th>Funding amount</th>
<th>% Non-federal share by source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Funding source: State of Iowa</td>
<td>33.38%</td>
<td>$131,430.00</td>
</tr>
<tr>
<td>Funding source: Iowa County, with funds from HUD CDBG - DR (National Disaster Resilience) for Engineering</td>
<td>43.11%</td>
<td>$169,750.00</td>
</tr>
</tbody>
</table>
Funding source: U.S. HUD CDBG - DR (National Disaster Resilience) from Iowa Flood Center

12.37%
$48,700.00

Funding source: Iowa County, with funds from HUD CDBG-DR (National Disaster Resilience) for Archeological Reviews

10.12%
$39,867.00

Funding source: Iowa County, with funds from HUD CDBG-DR for Endangered Species Assessment & Wetland Delineation

1.03%
$4,037.00

Please provide any additional comments below (optional).
Please refer to "FEMA BRIC Budget Narrative" below for explanation of budget. Refer to the "Statement of Outreach and Dissemination Activities" below for more details on this proposed task. See "Iowa County Fund Commitment Letter for BRIC subapplication" for documentation and explanation of 3 funding sources coming from Iowa County, with funds from HUD CDBG-DR (National Disaster Resilience).

**Attachments**

<table>
<thead>
<tr>
<th>Filename</th>
<th>Date uploaded</th>
<th>Uploaded by</th>
<th>Label</th>
<th>Description</th>
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<tbody>
<tr>
<td>IIHRiowaCoBRIC CostShareLetter1-2021.pdf</td>
<td>01/25/2021</td>
<td><a href="mailto:jbailey@englishriverwma.org">jbailey@englishriverwma.org</a></td>
<td>Budget Attachments</td>
<td>Pre-award engineering report to support FEMA Bric application.</td>
</tr>
<tr>
<td>FEMA BRIC Budget Narrative.xlsx</td>
<td>01/26/2021</td>
<td><a href="mailto:jbailey@englishriverwma.org">jbailey@englishriverwma.org</a></td>
<td>Budget Attachments</td>
<td>Explanation of all budget items in one place.</td>
</tr>
<tr>
<td>Statement of Outreach &amp; Dissemination Activities.pdf</td>
<td>01/26/2021</td>
<td><a href="mailto:jbailey@englishriverwma.org">jbailey@englishriverwma.org</a></td>
<td>Budget Attachments</td>
<td>Outreach and Dissemination of Information Narrative.</td>
</tr>
<tr>
<td>Mitigation MA Cost Estimate English River worksheet.xlsx</td>
<td>01/26/2021</td>
<td><a href="mailto:jim.marwedel@iowa.gov">jim.marwedel@iowa.gov</a></td>
<td>Budget Attachments</td>
<td>Shows calculations to arrive at Management cost estimates.</td>
</tr>
<tr>
<td>ERWMA FEMA BRIC Estimated Project Engineering Costs from Project Engineer.pdf</td>
<td>01/22/2021</td>
<td><a href="mailto:jbailey@englishriverwma.org">jbailey@englishriverwma.org</a></td>
<td>Budget Attachments</td>
<td>After-survey estimated project costs from project engineer.</td>
</tr>
<tr>
<td>ERWMA FEMA BRIC Statement of Pre Award Engineering Fees from Project Engineer.pdf</td>
<td>01/22/2021</td>
<td><a href="mailto:jbailey@englishriverwma.org">jbailey@englishriverwma.org</a></td>
<td>Budget Attachments</td>
<td>Statement of Pre Award Engineering Fees from Project Engineer.</td>
</tr>
<tr>
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<tr>
<td>ERWMA FEMA BRIC Spreadsheet of Pre Award Non-Engineering Project Costs.pdf</td>
<td>01/22/2021</td>
<td><a href="mailto:jbailey@englishriverwma.org">jbailey@englishriverwma.org</a></td>
<td>Budget Attachments</td>
<td>Spreadsheet of Pre Award Non-Engineering Project Costs.</td>
</tr>
<tr>
<td>English River Archaeological Invoice - Gorsch.pdf</td>
<td>01/22/2021</td>
<td><a href="mailto:jbailey@englishriverwma.org">jbailey@englishriverwma.org</a></td>
<td>Budget Attachments</td>
<td>BCA invoice for archaeology - Gorsch. Pre award archaeology fees.</td>
</tr>
<tr>
<td>English River Archaeological Invoice - McCammant 1 &amp; 3 &amp; 4.pdf</td>
<td>01/22/2021</td>
<td><a href="mailto:jbailey@englishriverwma.org">jbailey@englishriverwma.org</a></td>
<td>Budget Attachments</td>
<td>BCA invoice for archaeology. Initial visit for McCammant 1. Pre award archaeology fees.</td>
</tr>
<tr>
<td>English River Archaeological Invoice - McCammant 3 &amp; 4.pdf</td>
<td>01/22/2021</td>
<td><a href="mailto:jbailey@englishriverwma.org">jbailey@englishriverwma.org</a></td>
<td>Budget Attachments</td>
<td>BCA invoice for archaeology. Initial visits for McCammant 3 &amp; 4. Pre award archaeology fees.</td>
</tr>
<tr>
<td>English River Archaeological Invoice - Van Dee.pdf</td>
<td>01/22/2021</td>
<td><a href="mailto:jbailey@englishriverwma.org">jbailey@englishriverwma.org</a></td>
<td>Budget Attachments</td>
<td>BCA invoice for archaeology - Van Dee. Pre award archaeology fees.</td>
</tr>
<tr>
<td>English River Archaeological Invoice - McCammant 1 &amp; DeBrower.pdf</td>
<td>01/22/2021</td>
<td><a href="mailto:jbailey@englishriverwma.org">jbailey@englishriverwma.org</a></td>
<td>Budget Attachments</td>
<td>BCA invoice for archaeology. Subsequent visit for McCammant 1. Pre award archaeology fees.</td>
</tr>
<tr>
<td>EOR Iowa Threatened &amp; Endangered Habitat Invoice - DeBrower.pdf</td>
<td>01/22/2021</td>
<td><a href="mailto:jbailey@englishriverwma.org">jbailey@englishriverwma.org</a></td>
<td>Budget Attachments</td>
<td>EOR, Inc. invoice for DeBrower T&amp;E. This is $1187.70 of the $4037 DeBrower pre-award environmental assessment fees.</td>
</tr>
<tr>
<td>Filename</td>
<td>Date uploaded</td>
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</tr>
<tr>
<td>Iowa County Fund Commitment Letter for BRIC subapplication.pdf</td>
<td>01/26/2021</td>
<td><a href="mailto:jim.marwedel@iowa.gov">jim.marwedel@iowa.gov</a></td>
<td>Budget</td>
<td>Letter from Iowa County authorized representative identifying pre-award costs for archaeological reviews, engineering and design, and wetland delineation and endangered species assessment as non-federal cost share ($39,867 for Archaeological Review; $169,750 for Engineering; $4037 for Wetland Delineation and Endangered Species Assessment).</td>
</tr>
<tr>
<td>EOR Iowa Wetland Delineation Invoice - DeBrower.pdf</td>
<td>01/22/2021</td>
<td><a href="mailto:jbailey@englishriverwma.org">jbailey@englishriverwma.org</a></td>
<td>Budget</td>
<td>EOR, Inc. invoice for DeBrower wetland delineation, $2850 of the $4037 DeBrower pre-award expenses. Pre award environmental assessment fees.</td>
</tr>
</tbody>
</table>
Cost-effectiveness

How was cost-effectiveness determined for this project?

- BCA completed in FEMA’s BCA toolkit
  - Subapplicant must attach supporting documentation.
- Pre-calculated benefits
- Substantial damage in special flood hazard area
- Other BCA methodology approved by FEMA in writing
- Not applicable
- Not applicable

What are the total project benefits? ($) 3295788
What are the total project cost? ($) 1368656
What is the benefit-cost ratio (BCR) for the entire project? 2.40
Was sea level rise incorporated into the flood elevations in the BCA? No
Were environmental benefits added to the project benefits? Yes
Were social benefits added to the project benefits? No
Does the mitigation measure incorporate nature-based solutions? Yes

Please provide any additional comments below (optional).

The proposed mitigation activities involve several nature-based solutions to detain and/or infiltrate run-off water so that it does not continue downstream to cause flooding. As the attached Engineer’s Report (“UofI Report (20-069) Final.pdf”) describes in detail, the dozens of structure and practices proposed in this project reduce the volume of water that will flow downstream where flood waters frequently overtop the approach of the "Squirrel Bridge" over the North English River. And, not only are flood volumes reduced there, but also at downstream points, including the City of Kalona that sees frequent flooding of the English River. So, this
The project has the potential to reduce flooding in more than the location that is analyzed in the report. Plus, the proposed structures/practices have more benefits than just flood control. They reduce soil erosion and improve water quality, and thereby improve habitat for fish and wildlife along the streams and rivers. The attached benefit cost analysis uses the pre-calculated ecosystem service benefits for riparian area and wetlands, but in reality the other types of structures/practices (like water and sediment control basins built in a series) have ecosystem service benefits that, when considered comprehensively together, are likely greater than the ecosystem service benefits of the wetlands and riparian area listed and considered in the BCA. Finally, it should be mentioned that the structures and practices listed as part of this proposed project are really only just a part of a much greater effort. While this project, with its 9 specific sites, can stand alone and is considered on its own merits for its flood control potential, several other structures and practices being implemented this year upstream in the adjacent county will add to the flood control and ecosystem service benefits seen at Highway F67 and points downstream along the English River.

Attachments

<table>
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<th>Label</th>
<th>Description</th>
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<tbody>
<tr>
<td>UofI Report (20-069) Final.pdf</td>
<td>01/25/2021</td>
<td><a href="mailto:jim.marwedel@iowa.gov">jim.marwedel@iowa.gov</a></td>
<td>Cost Effectiveness Attachments</td>
<td>Engineer's Report that analyzes the effect of proposed flood mitigation structures/practices and their impact on flood reduction at the F67 bridge over the North English River in Iowa County.</td>
<td></td>
</tr>
<tr>
<td>Filename</td>
<td>Date uploaded</td>
<td>Uploaded by</td>
<td>Label</td>
<td>Description</td>
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<td>-------------</td>
<td></td>
</tr>
<tr>
<td>IOWA county traffic Counts.pdf</td>
<td>01/25/2021</td>
<td><a href="mailto:jim.marwedel@iowa.gov">jim.marwedel@iowa.gov</a></td>
<td>Cost Effectiveness Attachments</td>
<td>Shows Iowa DOT's number of trips for Iowa County, including for stretch of Hwy F67, also known as P Avenue or Co. Rd PP for that portion of the road that approaches and crosses the English River. The name &quot;P Ave&quot; is what is shown on the pdf and is found at Range10W Township78N.</td>
<td></td>
</tr>
<tr>
<td>25June2015 pic showing water 5 inches over F67.jpg</td>
<td>01/25/2021</td>
<td><a href="mailto:jim.marwedel@iowa.gov">jim.marwedel@iowa.gov</a></td>
<td>Cost Effectiveness Attachments</td>
<td>Picture showing road under 5 inches of water when the gage at the F67 Bridge was 27.44 feet. (Water overtops road at gage of 27 feet.)</td>
<td></td>
</tr>
<tr>
<td>Summary list of acreage of mitigation action sites - N English River.pdf</td>
<td>01/25/2021</td>
<td><a href="mailto:jim.marwedel@iowa.gov">jim.marwedel@iowa.gov</a></td>
<td>Cost Effectiveness Attachments</td>
<td>List number of acres in each of the 9 sites that are part of this project. Sums all acres to come up with total acres.</td>
<td></td>
</tr>
<tr>
<td>IowaCountyEnglishRiverBCA_202127192797.zip</td>
<td>01/27/2021</td>
<td><a href="mailto:jim.marwedel@iowa.gov">jim.marwedel@iowa.gov</a></td>
<td>Cost Effectiveness Attachments</td>
<td>Zip file for Benefit Cost Analysis run in the BCA 6.0 Tool.</td>
<td></td>
</tr>
<tr>
<td>Filename</td>
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<td>-----------------------------------------------------------------------------</td>
<td>--------</td>
</tr>
<tr>
<td><strong>Distance and time for detour route when F67 Squirrel Bridge approach under water.pdf</strong></td>
<td>01/27/2021</td>
<td><a href="mailto:jim.marwedel@iowa.gov">jim.marwedel@iowa.gov</a></td>
<td>Cost Effectiveness</td>
<td>Directions generated from Google Maps showing distance and time it takes to travel the detour route.</td>
<td></td>
</tr>
<tr>
<td><strong>Detour when F67 Squirrel Bridge approach under water.pdf.pdf</strong></td>
<td>01/27/2021</td>
<td><a href="mailto:jim.marwedel@iowa.gov">jim.marwedel@iowa.gov</a></td>
<td>Cost Effectiveness</td>
<td>Shows detour route when the F67 bridge over the English River is inaccessible because floodwaters have overtopped the bridge approach.</td>
<td></td>
</tr>
<tr>
<td><strong>McCammant E-008-01 FEMA PLAN SHEET.pdf</strong></td>
<td>01/27/2021</td>
<td><a href="mailto:jim.marwedel@iowa.gov">jim.marwedel@iowa.gov</a></td>
<td>Cost Effectiveness</td>
<td>Has details showing how much of McCammant 01 is Riparian Area (4.74 acres).</td>
<td></td>
</tr>
<tr>
<td><strong>Fisher E-023-03 FEMA PLAN VIEW.pdf</strong></td>
<td>01/27/2021</td>
<td><a href="mailto:jim.marwedel@iowa.gov">jim.marwedel@iowa.gov</a></td>
<td>Cost Effectiveness</td>
<td>Shows Riparian Area of 1.74 acres at the Fisher 03 site.</td>
<td></td>
</tr>
</tbody>
</table>
Environmental/Historic Preservation (EHP) Review Information

Introduction

An environmental/historic preservation review is required for all activities for which FEMA funds are being requested. FEMA will complete this review with the assistance of both the state or tribal government and the local applicant. It is important that you provide accurate information. If you are having problems completing this section, please contact your application point of contact.

A. National Historic Preservation Act - Historic Buildings and Structures

1. Does your project affect or is it in close proximity to any buildings or structures 50 years or more in age? No

B. National Historic Preservation Act - Archeological Resources

Does your project involve disturbance of ground? Yes

Please confirm that you have provided the information listed below by selecting each check box. (If you have not provided these documents in any other section of the application, please attach the required documents below.)

- A description of the ground disturbance by giving the dimensions (area, volume, depth, etc.) and location.
- The past use of the area to be disturbed, noting the extent of previously disturbed ground.
- A USGS 1:24,000 scale or other site map showing the location and extent of ground disturbance.

To help FEMA evaluate the impact of the project, please indicate below any other information you are providing. (optional)

- Any information about potential historic properties, including archeological sites, in the project area. Sources of this information may include SHPO/THPO, and/or the Tribe's cultural resources contact if no THPO is designated. Include, if possible, a map showing the relation of any identified historic properties to the project area.

- Attached materials or additional comments.

Please provide an explanation and any information about this project that could assist FEMA in its review. (optional)

A summary of the archeological findings, including practice ID, maximum depth of excavation, results of the Phase I Needs Assessment/Phase I investigations can be found in the Appendix of the attached report "ER-INV-004-007 TIER II Report", pages 159 - 164. Individual site reports from consultants Impact 7G, Inc (formerly Earthview Environmental, Inc.) and Bear Creek Archaeology (BCA) are attached.
below along with site maps showing project area disturbed areas. Impact 7 G
determined if a Phase I archaeological survey was required at the project site. If so,
Bear Creek Archaeology was provided with GIS data of the proposed project and
disturbance area, and they conducted an onsite investigation. If the site did not
require archaeological survey, justification of that conclusion was provided to Iowa
Economic Development Authority by Impact 7G, outlining why.

Attachments

<table>
<thead>
<tr>
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<th>Date uploaded</th>
<th>Uploaded by</th>
<th>Label</th>
<th>Description</th>
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<td>IEDA-005B ER-SSR-025 FISHER 02.pdf</td>
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<td><a href="mailto:jbailey@englishriverwma.org">jbailey@englishriverwma.org</a></td>
<td>involveDisturbanceOfGround.attachmentIds</td>
<td>Archaeological Phase I report from Bear Creek Archaeology (BCA). No Phase I needed.</td>
</tr>
<tr>
<td>BCA2653 - Phase I Report - GORSCH FARMS.pdf</td>
<td>01/08/2021</td>
<td><a href="mailto:jbailey@englishriverwma.org">jbailey@englishriverwma.org</a></td>
<td>involveDisturbanceOfGround.attachmentIds</td>
<td>Archaeological Phase I report from Bear Creek Archaeology (BCA)</td>
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<tr>
<td>BCA2553 - Phase I Report - McCammant 04.pdf</td>
<td>01/08/2021</td>
<td><a href="mailto:jbailey@englishriverwma.org">jbailey@englishriverwma.org</a></td>
<td>involveDisturbanceOfGround.attachmentIds</td>
<td>Archaeological Phase I report from Bear Creek Archaeology (BCA)</td>
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<tr>
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<td><a href="mailto:jbailey@englishriverwma.org">jbailey@englishriverwma.org</a></td>
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<td>Archaeological Phase I report from Bear Creek Archaeology (BCA). No Phase I needed.</td>
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<tr>
<td>BCA2614 - Phase I Report - McCammant 03.pdf</td>
<td>01/08/2021</td>
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<td>Archaeological Phase I report from Bear Creek Archaeology (BCA)</td>
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<td>BCA2679 - Phase I Report - DeBrower.pdf</td>
<td>01/08/2021</td>
<td><a href="mailto:jbailey@englishriverwma.org">jbailey@englishriverwma.org</a></td>
<td>involveDisturbanceOfGround.attachmentIds</td>
<td>Archaeological Phase I report from Bear Creek Archaeology (BCA)</td>
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C. Endangered Species Act and Fish and Wildlife Coordination Act

1. Are federally listed threatened or endangered species or their critical habitat present in the area affected by the project?  
   Not known

   Please provide an explanation and any information about this project that could assist FEMA in its review.

   A finding of Not Likely to Adversely Affect threatened and endangered species is recommended. Some sites will require tree removal. Tree removal will occur between October 1 and March 31 to avoid destroying possible endangered bat habitat. An Official Species list was obtained. The US FWS was informally consulted. The IDNR was consulted regarding State threatened and endangered species. Responses from these agencies are documented in the attached ER-INV-004-007 TIER II Report, Appendix B (page 114-131).

2. Does your project remove or affect vegetation?  
   Yes

   Please confirm that you have provided the information listed below by selecting each check box. (If you have not provided these documents in any other section of the application, please provide the required documents either through attachment and/or comment box below.)

   - Description of the amount (area) and type of vegetation to be removed or affected.
   - A site map showing the project area and the extent of vegetation affected.
   - Photographs or digital images that show both the vegetation affected and the vegetation in context of its surroundings.

   To help FEMA evaluate the impact of the project, please indicate below any other information you are providing. (optional)

   Attached materials or additional comments.

   Please provide an explanation and any information about this project that could assist FEMA in its review. (optional)

   A finding of Not Likely to Adversely Affect threatened and endangered plant species is recommended. The majority of these projects are on row crop fields and few will disturb non-row crop areas. The only sites impacting non-row crop areas are DeBrower and McCammant 01. Both sites will be re-seeded to grassland following construction. Some sites will require tree removal. Tree removal will occur between October 1 and March 31 to avoid destroying possible endangered bat habitat. An Official Species list was obtained. The US FWS was informally consulted. The IDNR was consulted regarding State threatened and endangered species. See previously attached Project BMP and Disturbed Area maps of project sites.

3. Is your project in, near (within 200 feet), or likely to affect any type of waterway or body of water?  
   Yes

   If Yes, and project is not within an existing building, you must confirm that you have provided the following: (If you have not provided these documents in any other section of the application, please attach the required documents below.)
To help FEMA evaluate the impact of the project, please indicate below any other information you are providing. (optional)

The DeBrower project is the only project that is anticipated to disturb a wetland area identified on the National Wetland Inventory. However, USACE and the Iowa DNR will be consulted and necessary permits obtained prior to any construction on any sites if the project engineer determines they are not covered under existing regional permitting agreements. Site maps are attached above that show the proximity of proposed projects to nearby bodies of water.

Attachments

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D. Clean Water Act, Rivers and Harbors Act, and Executive Order 11990 (Protection of Wetlands)

1. Will the project involve dredging or disposal of dredged material, excavation, adding fill material or result in any modification to water bodies or wetlands designated as 'waters of the U.S' as identified by the US Army Corps of Engineers or on the National Wetland Inventory?

Yes

Please confirm that you have provided the information listed below by selecting each check box. (If you have not provided these documents in any other section of the application, please attach the required documents below.)

☑ Documentation of the project location on a USGS 1:24,000 scale topographic map or image.

☑ A copy of a National Wetlands Inventory map or other available wetlands mapping information.

☑ Request for information and response letter from the US Army Corps of Engineers and/or state resource agencies regarding the potential for wetlands, and applicability of permitting requirements.

☑ Evidence of alternatives considered to eliminate or minimize impacts to wetland.

To help FEMA evaluate the impact of the project, please indicate below any other information you are providing. (optional)
Please provide an explanation and any information about this project that could assist FEMA in its review. (optional)

EOR, Inc. was consulted to complete a wetland delineation on the DeBrower project site. This was the only site the project engineer identified as potentially impacting adjacent NWI waterbodies. EOR’s report is attached below. USACE and the Iowa DNR will be consulted for the DeBrower project, and any necessary permits obtained, prior to any construction commencing. The McCammant 01 site originally was identified as needing USACE consultation/permitting for a proposed grade stabilization structure at the south end of the property but that structure has since been struck from the plans. Documentation of the 8-Step process covering NWI wetlands is provided in the Appendix of the ER-INV-004-007 TIER II document, pages 133 - 158. Maps of each project area’s proximity to waterbodies from the USGS National Wetland Inventory (NWI) are attached below.

Attachments

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E. Executive Order 11988 (Floodplain Management)

1. Does a Flood Insurance Rate Map (FIRM), Flood Hazard Boundary Map (FHBM), hydrologic study, or some other source indicate that the project is located in or will affect a 100 year floodplain, a 500 year floodplain if a critical facility, an identified regulatory floodway, or an area prone to flooding?

Yes

Please explain in the text box below and/or provide any documentation to identify the means or the alternatives considered to eliminate or minimize impacts to floodplains (See the 8 step process found in 44 CFR Part 9.6.) to help FEMA evaluate the impact of the project:

Several of the proposed practices overlap a 100-year floodplain. The 8-Step Decision-Making Process for Proposed Activities in a 100-Year Floodplain or Wetland was followed. No comments were received. Because the 8-Step Process was followed for practices that overlap a National Wetland Inventory-designated (NWI) wetland too, documentation is presented in the Appendix of the ER-INV-004-007 TIER II Report, pages 133 - 158.

Please provide an explanation and any information about this project that could assist FEMA in its review. (optional)

2. Does the project alter a watercourse, water flow patterns, or a drainage way, regardless of its floodplain designation?

No

Attachments
F. Coastal Zone Management Act

1. Is the project located in the state’s designated coastal zone?  No

G. Farmland Protection Policy Act

1. Will the project convert more than 5 acres of prime or unique farmland outside city limits to a non-agricultural use?  No

H. Resource Conservation and Recovery Act (RCRA) and Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (Hazardous and Toxic Materials)

1. Is there a reason to suspect there are contaminants from a current or past use on the property associated with the proposed project?  No

2. Are there any studies, investigations, or enforcement actions related to the property associated with the proposed project?  No

3. Does any project construction or operation activities involve the use of hazardous or toxic materials?  No

4. Do you know if any of the current or past land-uses of the property affected by the proposed project or of the adjacent properties are associated with hazardous or toxic materials?  No

I. Executive Order 12898, Environmental Justice for Low Income and Minority Populations
1. Are there low income or minority populations in the project's area of effect or adjacent to the project area?  
   No

**J. Other Environmental/Historic Preservation Laws or Issues**

1. Are there other environmental/historic preservation requirements associated with this project that you are aware of?  
   No

2. Are there controversial issues associated with this project?  
   No

3. Have you conducted any public meeting or solicited public input or comments on your specific proposed mitigation project?  
   No

**K. Summary and Cost of Potential Impacts**

Having answered the questions in parts A. through J., have you identified any aspects of your proposed project that have the potential to impact environmental resources or historic properties?  
   Yes

If Yes, you must confirm that you have provided the following: (If you have not provided these documents in any other section of the application, please attach the required documents below.)

- ✔ Evaluated these potential effects and provided the materials required in Parts A through J that identify the nature and extent of potential impacts to environmental resources and/or historic properties.
- ✔ Consulted with appropriate parties to identify any measures needed to avoid or minimize these impacts.
- ✔ Considered alternatives that could minimize both the impacts and the cost of the project.
- ✔ Made certain that the costs of any measures to treat adverse effects are realistically reflected in the project budget estimate.

Please enter your comments below. (optional): (Please indicate why in the text box below and any information about this project that could assist FEMA in its review).

We consulted with Bear Creek Archaeology to make changes to construction plans to avoid disturbing sensitive cultural areas and those changes have been made to the plans already. We plan to consult with USACE on appropriate wetland mitigation measures that may be needed to modify the wetland (as proposed) on the DeBrower site.
## Evaluation

Is the applicant participating in the Community Rating System (CRS)?  No

Is the applicant a Cooperating Technical Partner (CTP)?  No

Was this created from a previous FEMA HMA Advance assistance / Project scoping award?  No

Has the applicant adopted building codes consistent with the international codes?  No

Have the applicant's building codes been assessed on the Building Code Effectiveness Grading Schedule (BCEGS)?  No

Describe involvement of partners to enhance the mitigation activity outcome.

The mitigation activities of this project involve many partners, including the English River Watershed Management Authority (a collaboration of cities, counties, and soil & water conservation districts), Iowa County, City of Kalona, state universities, and state agencies. Refer to the attachment "Statement of Project Partners" below for background and description of the partners.

Discuss how anticipated future conditions are addressed by this project.

Historic flood events in the English River watershed are happening at increased frequency and severity in the last decade and are anticipated to continue on this trajectory. We are looking at more proactive, versus reactive, ways to mitigate flood impacts in the watershed by implementation practices that can help manage peak flow events.

Additional comments (optional)

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Project location

Provide a detailed description of the proposed project's location.

The proposed projects are located in 4 subwatersheds (HUC-12s) just upstream of the F-67 bridge. The F-67 bridge is located on 335th Street, also known as F-67, slightly northeast of the community of North English. North English is in Iowa County, Iowa. A map of the project locations, relative to the F-67 bridge are attached below in the attachment labeled "Map of Iowa Co English River F67 Bridge Project Locations" below. The FIRM map ("National Flood Hazard Layer FIRMette") is also attached below.

Latitude 41.526831
Longitude -091.989492

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Project benefiting area

Provide a detailed description of the proposed project's benefiting area.

The F-67 bridge crosses the English River in Iowa County northeast of the community of North English, and is the direct area that will benefit from this project. This bridge and highway are prone to
frequent flood events which make it difficult for producers to access agricultural businesses in North English, as well as preventing commuters from direct routes to and from work places and residences in North English. The "Map (aerial) of F-67 Bridge Location" attachment below shows the bridge and surrounding landscape in more detail.

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**Project impact area**

Provide a detailed description of the proposed project's impact area.

The English River has significant flood impacts on the watershed's three most populated communities: Wellman, Kalona, & Riverside, impacting residential homes, businesses, and infrastructure. The proposed project area is upstream of these communities (refer to attachment below "Map of English River Flood Impacted Communities & Confluence with Iowa River" for proximity of the proposed project area to these three communities, and the confluence of the English River with the Iowa River). Flood concerns in these communities were behind the motivation for creating the English River Watershed Management Authority (ERWMA). These communities are downstream from the project area, and with continued efforts to install detention structures across the watershed, the ERWMA hopes to see reduced peak flow impacts at the F-67 bridge, as well as further downstream in these communities.
Map of flood impacted communities in the English River watershed, and watershed confluence with the Lower Iowa River watershed.

**Project site inventory**

Does this project subapplication propose to mitigate a property/structure(s)? (Examples: residential home, commercial building, bridge, fire station, levee, pumping station, wastewater treatment plant, telephone pole, electric line, etc.)

Please [download the excel template](#), and then fill out the template with building or infrastructure data.

Enter the location of the property/structure.

Continue