

Subapplicant information

Name of federal agency

FEMA

Type of submission

Application

TOWN OF HILLSBOROUGH

105 E CORBIN ST

HILLSBOROUGH, NC 27278 United States

State	DUNS #	EIN #
NC	091570440	566001246

Subapplicant type

Local Government

Is the subapplicant subject to review by Executive Order 12372 Process?

No - Not selected

Is the subapplicant delinquent on any federal debt?

No

Contact information

Subrecipient Authorized Representative (SAR)

Marie Strandwitz marie.strandwitz@hillsboroughnc.gov	Primary phone 9192969631 Work	Mailing address
Tiffany Long tiffany.long@hillsboroughnc.gov	Primary phone	Mailing address
Eric Peterson eric.peterson@hillsboroughnc.gov	Primary phone	Mailing address

Point(s) of contact

Marie Strandwitz Utilities Director	Primary phone 9192969631 Work Fax	Additional phones 9192969631 Work	Mailing address 105 E. Corbin St Hillsborough NC 27278
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marie.strandwitz@hillsboroughnc.gov

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.

Community name	County code	CID number	CRS community	CRS rating	U.S. Congressional District
HILLSBOROUGH, TOWN OF	135	370343	N		2
ORANGE COUNTY *	135	370342	Y	6	1,2

Please provide any additional comments below (optional).

Portions of Orange County outside of town yet within the town water and sewer boundary would benefit from the project.

Attachments

Filename	Date uploaded	Uploaded by	Label	Description	Action
Attachment 1 - Project Location Map.pdf	11/24/2021	madeleine.lane@icf.com	Community Attachments	Map of existing and proposed site with major roads and floodways.	

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

Plan name	Plan type	Plan approval date
Eno-Haw Regional Hazard Mitigation Plan	Local Multijurisdictional Multi-Hazard Mitigation Plan	06/08/2020

Proposed activity description

The proposed project will allow the Town of Hillsborough to construct a water booster pumping station at a key location to allow for potable water interconnections with a neighboring utility. This project would mitigate disruption to the Town's potable water supply due to drought and water contamination events by connecting to a redundant water supply from a nearby utility

by allowing for regional interconnection. This project aligns with Action P-4 for Orange County as identified in Table 7.12 of the Eno-Haw Regional Hazard Mitigation Plan, continuing to collaborate and support municipal mitigation strategies.

Please provide any additional comments below (optional).

Attachments

Filename	Date uploaded	Uploaded by	Label	Description	Action
Attachment 2 - Eno-Haw Hazard Mitigation Plan.pdf	11/23/2021	chris.mewes@icf.com	Mitigation Plan Attachments	Relevant excerpt from Eno-Haw Regional Hazard Mitigation Plan.	

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)

Town of Hillsborough NC - Resilient Regional Water Supply Project

Activities

Primary activity type

Utility and infrastructure protection

Primary sub-activity type

Potable water

Secondary activity type (Optional)

Partnerships

Secondary sub-activity type

Other

If Other please specify

Potable water interconnectivity.

Tertiary activity type (Optional)

Geographic areas description

The site of this mitigation activity is Hillsborough, North Carolina 27278 at 36.005533 latitude and -79.107223 longitude. The site is in the North Carolina Department of Transportation (NCDOT) Right of Way (ROW) along Old NC 86. It is north of New Hope Creek and directly south of Starfield Circle. Refer to the Attachment 1 - Project Location Map for more information. See Attachment 12 - DOT Permits for Work.

Community lifelines

Primary community lifeline

Food, water, shelter

Primary sub-community lifeline

Water

Secondary community lifeline (optional)

Safety and security

Secondary sub-community lifeline

Fire service

Tertiary community lifeline (optional)

Health and medical

Tertiary sub-community lifeline

Hazard sources

Primary hazard source

Secondary hazard source (optional)

Tertiary hazard source (optional)

Is this a phased project?

Are you doing construction in this project?

Population affected

Detail/description of stated percentage

Provide a clear and detailed description of your proposed activity

Medical care**Drought****Infrastructure failure****Yes****Yes****100**

100-percent of the Town's water service area, approximately 15,990 people, would benefit from this proposed mitigation activity. Additionally, UNC Hospitals, a critical medical facility and community lifeline, depends upon the Town's potable water supply and would benefit from the project. UNC Hospitals is currently completing a second expansion to provide a total of 172 beds.

To address drought and unforeseen outage or contamination events, the Town of Hillsborough proposes to build a water booster pumping station to allow for potable water interconnection with a neighboring water provider to provide redundancy and resiliency to the Town's potable water supply. The Town of Hillsborough Utilities Department is responsible for providing water service to Hillsborough residents and visitors, overseeing the town's Water Treatment Plant and Water Distribution divisions. In 2020, Hillsborough treated over 537 million gallons of drinking water for an average of 1.6 million gallons per day, treating and testing for more than 150 substances. Hillsborough's drinking water is drawn from the Eno River at three sites located in the Upper Neuse River watershed: Lake Ben Johnston, Lake Orange, and West Fork Eno Reservoir. Drawing raw surface water from these sites allows the Town to treat up to 3 million gallons of potable water per day. However, over the past few years, the town has experienced droughts that have impacted its ability to withdraw water. In 2010 and 2011, the Piedmont region experienced 10 or more months of drought conditions, the longest consecutive stretch of drought conditions in almost a century. Since records began in 1909, the Durham area has had 87 periods of severe drought, some lasting as long as 29 weeks. While the long-term nature of drought events and difficulty in identifying the true start of drought conditions tends to result in an underestimation of the measurable costs associated with drought events, a consistent record of drought impacts in the region indicates that future impacts are very likely worsening with climate conditions. The Town has also been placed on voluntary water restrictions intermittently since 2008; the Town was placed on Stage 1 Voluntary Water Restrictions in fall 2019, lifted in February 2020 (for town press releases and public outreach regarding water restrictions, see Attachment 14.1). Due to low water volumes within the Town's reservoir, the Town anticipates placing Voluntary Water Restrictions in the future. To address drought, low flows, and possible contamination events on the Eno River, the Town of Hillsborough proposes to build a water booster pumping station at a key location to allow for potable water interconnection with the Orange Water and Sewer Authority (OWASA), providing redundancy and resiliency to the City's potable water supply. The 16-inch piping to allow for interconnection with OWASA is already in place; however, a new booster pumping station is needed to allow potable water to flow to the Town of Hillsborough to its highest water pressure zone. Because OWASA draws from different watersheds than Hillsborough, Cane Creek Reservoir and University Lake, their water supply may not be as heavily impacted by the same

drought event. The proposed scope of work will be implemented as a phased project; Phase 1 will include the study, design, permitting, environmental review, and refining of the benefit-cost analysis. Phase 2 will include construction procurement, siting, installation, and commissioning of a permanent water booster pump station and related pipeline valving for the purpose of providing a redundant water supply from OWASA to the Town during drought and contamination events. The required station size will meet the maximum day demand of 2,000 gallons per minute at 270 total dynamic head. The station will be placed at a location where water pressure will not drop below 20 psi. This will meet projected daily demand for Hillsborough's entire service area based on 2018 demand records (see Attachment 3 - Hazen BPS Sizing). The Town of Hillsborough had previously conducted a preliminary analysis on the required station size and placement when it created its new pressure zone; the analysis is attached as Attachment 4. However, the current operating conditions have changed, reflecting demand growth. The original analysis, performed in 2013, suggested that the water booster pump station should supply 1.65 MGD; a more recent analysis, based on 2018 demand, suggested that the water booster pump station should supply 2.88 MGD. The booster station will be skid mounted in a small enclosure and permanently piped to the main transferring the water along with all controls and appurtenances for a functioning system. A 250-kW permanent generator will also be included in the project design to assure continued operation during widespread power outage events and severe storms. Additionally, the project design will include a control valve which will ensure an accurate amount of water will be distributed to the appropriate pressure zones. The project also directly meets the goals of the Triangle Water Supply Partnership, a group of public water supply purveyors focused on regional water interconnections and resiliency. See Attachment 10 - Booster Pump Options, Attachment 13 - Original OWASA Hillsborough Interconnect Operation Diagram, for drawings and diagrams.

How will the mitigation activity be implemented?

The Town of Hillsborough will manage the proposed project and contract with a qualified design engineer and construction contractor through an open procurement process. The Town of Hillsborough Utilities Department proposes to implement the project in two phases, in accordance with the FEMA Hazard Mitigation Guidance and FEMA BRIC program support material. Phase 1 will include surveying, design, permitting, and conducting a new benefit-cost analysis (BCA). Permits will be obtained from all appropriate local, state, and federal agencies for construction activity, stormwater discharges, floodplain management, land disturbance, drainage review and approval, and environmental quality reviews. Upon completion of Phase 1 and approval from FEMA, Phase 2 will consist of project construction, acquisition of equipment and materials, siting, installation, and commissioning of a permanent water booster pump station. Implementation of the project will require staging and construction management. Timing and initiation of this project will be to be closely coordinated and managed by the Town of Hillsborough. Site preparation will necessitate a staging area for material and equipment delivery, and this is reflected in Attachment 5 - Ground Disturbance Map.

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.):

This project is technically feasible because the Town of Hillsborough already has a potable water interconnection between OWASA and Hillsborough through intergovernmental agreement (Attachment 6); additionally, it has expended resources to model the proposed station and has preliminary plans and an access permit (Attachment 12) to perform the work to provide redundancy and resiliency to its water operation. The Town needed to add another pressure zone to its area which rendered the existing interconnection obsolete in the manner that the town cannot currently receive water from OWASA. In 2013, a consultant performed field tests and modeling to understand the feasibility of pumping potable water from OWASA's distribution system to the Town of Hillsborough's system to its highest-pressure

zone. Completed in 2013, the report recommended that a booster pump station be sited at New Hope Creek, south of town, and sized to meet the maximum day demand of 1.65 MGD (Attachment 4). However, a more recent update of this analysis indicates a larger pump, supplying 2.88 MGD, is required (Attachment 3). Plans were developed for a new meter vault and portable pumping station site along with several interconnections of the supply main to the town's other distribution main. An encroachment agreement was executed with the North Carolina Department of Transportation to install the meter vault and portable pumping station site. The meter vault is complete. However, the portable pumping station site will now be a permanent station as outlined in this application. As part of Phase One of the project, Hillsborough will complete the engineering necessary to confirm the exact location and specification of the booster pump station, adhering to all applicable electrical, building, and plumbing codes as well as state design criteria, permit conditions, and best practices. The pump station will be sited outside of the Special Flood Hazard Area. Remaining permits and any additional land acquisition will be sought. During Phase Two, the construction phase, the Town of Hillsborough will seek to minimize the contingencies associated with built in place construction, by competitively procuring a prefabricated water booster pump station that will be completely assembled in a quality-controlled manufacturing environment and arrive at the job site fully tested and ready to be connected to piping and commissioned. These pump stations typically come with a building warranty, industry-standard equipment, and have a low cost of ownership and operation relative to site-built stations. In addition, their construction is to all water quality standards and makes them nearly impervious to chemical exposure and elements. The work will also include installation of a control valve to bleed water into other pressure zones during pumping operations and cellular communications with the water treatment plant monitoring system. Taken together, these steps will ensure that the project is delivered on time and on budget and is effective at mitigating the risk of loss of potable water use in the Town of Hillsborough by providing for a redundant water supply from a separate basin and a 500-year level of protection.

Who will manage and complete the mitigation activity?

The Town of Hillsborough Utilities Department will manage the mitigation activity. The department has prior experience with projects of similar scope and scale, including construction of its Waterstone water tank, upgrading its Mayo Booster Pumping Station, several distribution system extensions and water plant upgrade projects from preliminary engineering to construction closeout. The Town of Hillsborough has received and administered numerous federal, state, and local grants and loans across town departments, including the Utilities, Police, Planning, Tourism, and Public Works Departments. The Town is well versed in being able to follow specific procurement and administration requirements including incorporating special conditions and form inserts into bid documents, meeting goals for minority and women owned participation, Davis-Bacon prevailing wage, quarterly and annual reporting of project expenditures, and requesting reimbursements through necessary procedures and systems. The town is capable of meeting the requirements to receive and comply with funding received under the FEMA BRIC program. The Utilities Department has directly received grants and loans through the State Revolving Fund, Clean Water Management Trust Fund, and the Department of Housing and Urban Development's Community Development Block Grant program for new projects as well as upgrades and extensions of its facilities and systems. An organizational chart of the project's grant management team can be found in Attachment 11.1.

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

The project will satisfy drought risk for the Town of Hillsborough by providing for a redundant water supply that draws from separate watersheds – Cane Creek Reservoir and University Lake – than its current source of raw water, the Eno River. The Town is vulnerable to

disruption to its potable water supply due to drought and water contamination events. The Town currently intakes raw water from the Eno River; additionally, Hillsborough has a long-standing mutual aid agreement and interconnection with the Orange Water and Sewer Authority (Attachment 6). However, because of its topography, Hillsborough is currently unable to draw water from OWASA by gravity, so a water booster pump station is required. Additionally, the State of North Carolina oversees the voluntary Eno River Capacity Use Investigation Water Management Operations Plan to which the Town is subject (Attachment 9). It establishes raw water withdrawal constraints that provide for equitable use of water resources amongst users, while providing minimum flows in the Eno River. When the Eno River is at a low stage, the Town has limited water withdraw capabilities. The Town must maintain a minimum flow of 3 CFS in the Eno River at all times and must release enough water from the West Fork Eno River Reservoir to maintain minimum flows. Additionally, when the average flow at the USGS Eno River gauge in Hillsborough falls below 10 cubic feet per seconds for 7 consecutive days, the Town has a withdraw limit of 1.510 million gallons per day at minimum release at Stage 1 of 5 restrictive stages. The Town's current average day demand often exceeds this. The Town has been on Stage 1 water withdraw restrictions since August 2, 2021, and if demand continues and flows remain low, will be placed on Stage 2 withdraw restrictions in the near future. In times of severe drought, this proposed mitigation activity will allow the town to receive potable water from OWASA, as OWASA obtains water from the Haw River watershed at Cane Creek Reservoir and University Lake. Currently, the Town cannot receive any water from OWASA, due to elevation differences between the water distribution systems. This project will MITIGATE OUTAGE SCENARIOS. The Town has evaluated complete water outage scenarios of its own treatment plant as well as various existing water booster pumping stations, which is attached to this application (Attachment 7). In the central pressure zone (one of three zones where water is first pumped from the water treatment plant) with a full WTP outage, pressures first drop below 20 psi after half an hour, and a larger number of locations after 2.5 hours (if the Town is pumping from the main tank to other pressure zones). Pressure below 20 psi means a boil water notice must be issued for possible contamination. Having a functional interconnection whereby the Town can receive water from a neighboring utility in such instances will mitigate a water emergency for utility customers, especially critical facilities. There are at least **THREE FEMA COMMUNITY LIFELINES THAT WILL BE POSITIVELY IMPACTED** by this project. Food, Water, and Shelter The Town of Hillsborough will secure an additional water supply to use when the main raw water source, the Eno River, has flows that render it too low to draw from. Safety and Security There are four fire departments in Hillsborough, serving a population of 7,033 in-town residents, as well as businesses and schools and rural areas of the county. The fire departments rely on water from the Town for continuity of operations for direct firefighting or pump and haul to outside areas in their tankers. Health & Medical Within the service area, there are several medical facilities that depend upon a reliable and potable water source to provide continuous care to patients, such as the UNC Hospitals Hillsborough Campus. There are also several convalescent facilities, such as Brookside and Elmcroft, within the service area, as well as a dialysis center through Duke University that depend upon water from the town. Residual risk would be if OWASA was unable to provide water to the town due to their own unique circumstances.

When will the mitigation activity take place?

The Town has previously modeled design conditions and obtained a NCDOT encroachment permit to access the station site. Assuming FEMA funding is awarded, the project will begin in January 2023 and finish by the end of December 2025. Phase 1, including procurement, permitting and design is expected to take 15 months. Phase 2 including bidding, award and construction is expected to take 21 months. See Attachment 8 - Schedule.

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?

Several alternatives were considered for this project, including the "No Action" alternative and an alternative with a mobile booster pumping station. The "No Action" alternative was determined to be insufficient because it would not connect the Town to an alternate water source during drought periods or an unplanned outage, resulting in mandatory water use restrictions and potential potable water service interruption. The Town of Hillsborough and OWASA also evaluated quick connections to a portable water booster pumping station. However, due to the size of the pumps and the concern of hauling, connecting, and tending to the station during an emergency event, a permanent booster station is the best solution for continuity of potable water service.

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 Town of Hillsborough Utilities Department will be responsible for long-term maintenance of the project, including annual inspections, testing, and general repairs and maintenance. Maintenance costs for the project are expected to be approximately \$5,000 per year and will be built into the town's routine operational costs. The costs include site electricity, generator fuel and annual testing, routine pump and controls maintenance, and site housekeeping. The Town currently owns three additional booster pumping stations and will incorporate the proposed project into the town's routine water infrastructure maintenance activities and budget. For more detail, refer to the attached Maintenance Agreement Letter (Attachment 11).

Additional comments (optional)

OWASA, the Triangle Water Supply Partnership, Orange County, and the Orange Rural Fire Department all support the proposed project and their letters are attached to a subsequent section of this submittal.

Attachments

Filename	Date uploaded	Uploaded by	Label	Description	Action
Attachment 3 - Hazen BPS Sizing.pdf	11/23/2021	chris.mewes@icf.com	Scope of Work Attachments	Hazen recommendations as to booster pump station sizing.	
Attachment 7 - Hillsborough Water Outage Scenarios.pdf	11/23/2021	chris.mewes@icf.com	Scope of Work Attachments	Analysis performed by Hazen modeling likely outage scenarios including pressures and durations.	
Attachment 12 - DOT Permits for Work.pdf	11/24/2021	madeleine.lane@icf.com	Scope of Work Attachments	Permit for previous work at project site.	
Attachment 8 - Detailed Schedule.pdf	11/24/2021	madeleine.lane@icf.com	Scope of Work Attachments	Estimated project schedule with durations for each phase and milestone.	
Attachment 4 - Preliminary Project Study and Plan.pdf	11/23/2021	chris.mewes@icf.com	Scope of Work Attachments	Summarizes hydraulic testing and modeling of the interconnection between Hillsborough and OWASA water distribution systems.	
Attachment 5 - Ground Disturbance Map.pdf	11/23/2021	chris.mewes@icf.com	Scope of Work Attachments	Map of ground and vegetation disturbance at proposed site.	

Filename	Date uploaded	Uploaded by	Label	Description	Action
Attachment 6 - OWASA – Hillsborough Mutual Aid Agreement.pdf	11/23/2021	chris.mewes@icf.com	Scope of Work Attachments	Mutual aid agreement between OWASA and Hillsborough water districts.	
Attachment 11 - Maintenance Agreement Letter.pdf	11/23/2021	chris.mewes@icf.com	Scope of Work Attachments	Maintenance agreement.	
Attachment 14 - Photo Log.pdf	11/23/2021	chris.mewes@icf.com	Scope of Work Attachments	Photos of current and proposed project sites.	
Attachment 11.1 - Grant Management Team Organization Chart.pdf	01/07/2022	chris.mewes@icf.com	Scope of Work Attachments	Organizational chart of key personnel responsible for grant management.	
Attachment 9 - Eno River Water Management Plan.pdf	11/23/2021	chris.mewes@icf.com	Scope of Work Attachments	ENO RIVER CAPACITY USE INVESTIGATION WATER MANAGEMENT OPERATIONS PLAN August 19, 1988	
Attachment 10 - Booster Pump Options.pdf	11/23/2021	chris.mewes@icf.com	Scope of Work Attachments	Meter site and bypass connection plans and details.	
Attachment 13 - Original OWASAHillsborough Interconnect Operation Diagram.pdf	11/23/2021	chris.mewes@icf.com	Scope of Work Attachments	Diagram of interconnection between OWASA and Hillsborough water distribution systems.	

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.

Task Name Phase 1: Design Contracting	Start Month 1	Task Duration (in Months) 1 months
Task Description Design contract procurement and execution		
Task Name Phase 1: Assessment, Preliminary Design, and 60% Design Documents	Start Month 2	Task Duration (in Months) 5 months
Task Description Design activities through the 60% drawings milestone		
Task Name Phase 1: Permitting	Start Month 7	Task Duration (in Months) 6 months

Task Description

Applying for and receiving permits during the design phase. This includes from all appropriate local, state, and federal agencies for construction activity, floodplain management, land disturbance, drainage review and approval, and environmental quality reviews as applicable to the project.

Task Name

Phase 1: Final Design Documents

Start Month

13

Task Duration (in Months)

3 months

Task Description

Design activities to finalize the design and create a bid package

Task Name

Phase 1: Submittal

Start Month

15

Task Duration (in Months)

1 months

Task Description

Review and closeout phase one, submit deliverables to FEMA

Task Name

Phase 2: Construction Bidding and Award

Start Month

16

Task Duration (in Months)

3 months

Task Description

Advertising bid documents, receiving and evaluating bids, and awarding a construction contract

Task Name

Phase 2: Construction- Booster Station

Start Month

19

Task Duration (in Months)

12 months

Task Description

Construction activities related to booster station construction.

Task Name

Phase 2: Closeout

Start Month

29

Task Duration (in Months)

2 months

Task Description

Close out grant.

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

30

Proposed project start and end dates

Start Date

2023-01-01

End Date

2025-06-30

Budget

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: \$1,450,670.33

Budget type: Construction

▶ Cost type: Cost estimate	\$1,386,487.34
▶ Cost type: Management cost	\$64,182.99

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.

	% Percentage	\$ Dollar amount
Is this a small impoverished community? ⓘ This determines your federal/non-federal share ratio. No	Proposed federal share 70.00	1015469.23
	Proposed non-federal share 30.00	435201.10
		Based on total budget cost: \$1,450,670.33

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.

Funding source	Funding amount	% Non-federal share by source
▶ Funding source: Town of Hillsborough	\$145,067.03	33.33%
▶ Funding source: Town of Hillsborough	\$145,067.03	33.33%
▶ Funding source: Town of Hillsborough	\$145,067.04	33.33%

Please provide any additional comments below (optional).

Attachments

Filename	Date uploaded	Uploaded by	Label	Description	Action
Attachment 15 - Cost Commitment Letter.pdf	11/24/2021	madeleine.lane@icf.com	Budget Attachments	Cost commitment letter.	

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? (\$) **13690129**

What are the total project cost? (\$) **1407975**

What is the benefit-cost ratio (BCR) for the entire project? **9.72**

Was sea level rise incorporated into the flood elevations in the BCA? **No**

Were environmental benefits added to the project benefits? **No**

Were social benefits added to the project benefits? **Yes**

Does the mitigation measure incorporate nature-based solutions? **No**

Please provide any additional comments below (optional).

Attachments

Filename	Date uploaded	Uploaded by	Label	Description	Action
Resilient Water Supply BCA Report.pdf	01/07/2022	chris.mewes@icf.com	Cost Effectiveness Attachments	Report from Benefit-Cost Calculator 6.0.	
Resilient Water Supply BCA Methodology 11232021.pdf	11/23/2021	chris.mewes@icf.com	Cost Effectiveness Attachments	Memo describing BCA methodology and inputs.	
Resilient Water Supply BCA Export.zip	01/07/2022	chris.mewes@icf.com	Cost Effectiveness Attachments	Export from Benefit-Cost Calculator 6.0.	

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

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.)

- The property address and original date of construction for each property affected (unless this information is already noted in the Properties section).
- A minimum of two color photographs showing at least three sides of each structure (Please label the photos accordingly).
- A diagram or USGS 1:24,000 scale quadrangle map displaying the relationship of the property (s) to the project area.

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

- Information gathered about potential historic properties in the project area, including any evidence indicating the age of the building or structure and presence of buildings or structures that are listed or eligible for listing on the National Register of Historic Places or within or near a National Register listed or eligible historic district. Sources for this information may include the State Historic Preservation Officer, and/or the Tribal Historic Preservation Officer (SHPO/THPO), your local planning office, historic preservation organization, or historical society.
- Consideration of how the project design will minimize adverse effects on known or potential historic buildings or structures, and any alternatives considered or implemented to avoid or minimize effects on historic buildings or structures. Please address and note associated costs in your project budget.
- For acquisition/demolition projects affecting historic buildings or structures, any data regarding the consideration and feasibility of elevation, relocation, or flood proofing as alternatives to demolition.
- Attached materials or additional comments.

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

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

Attachments

Filename	Date uploaded	Uploaded by	Label	Description	Action

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)

The booster site is currently in the Department of Transportation Right of Way, directly adjacent to Old NC 86. The land is currently zoned as a Rural Buffer district by Orange County.

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

Attachments

Filename	Date uploaded	Uploaded by	Label	Description	Action
Attachment 19 - USGS Topographic Map.pdf	11/23/2021	chris.mewes@icf.com	involveDisturbanceOfGround.attachmentIds	Topographic map of project area.	
Attachment 18 - SHPO Letter.pdf	11/24/2021	madeleine.lane@icf.com	involveDisturbanceOfGround.attachmentIds	Letter from Utilities Director to NC State Historic Preservation Officer.	
Attachment 5 - Ground Disturbance Map.pdf	11/23/2021	chris.mewes@icf.com	involveDisturbanceOfGround.attachmentIds	Map of vegetation and ground disturbance at project site.	

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? **No**

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.)

Information you obtained to identify species in or near the project area. Provide the source and date of the information cited.

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

Any request for information and associated response from the USFWS, the National Marine Fisheries Service (NMFS) (for affected ocean-going fish), or your State Wildlife Agency, regarding potential listed species present and potential of the project to impact those species.

Attached materials or additional comments.

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

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

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)

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

3. Is your project in, near (within 200 feet), or likely to affect any type of waterway or body of water? **No**

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.)

- A USGS 1:24,000 scale quadrangle map showing the project activities in relation to all nearby water bodies (within 200 feet).
- Any information about the type of water body nearby including: its dimensions, the proximity of the project activity to the water body, and the expected and possible changes to the water body, if any. Identify all water bodies regardless whether you think there may be an effect.
- A photograph or digital image of the site showing both the body of water and the project area.

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

- Evidence of any discussions with the US Fish and Wildlife Service (USFWS), and/or your State Wildlife Agency concerning any potential impacts if there is the potential for the project to affect any water body.

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

Attachments

Filename	Date uploaded	Uploaded by	Label	Description	Action
Attachment 20 - IPaC Report.pdf	11/23/2021	chris.mewes@icf.com	endangeredSpecies.attachmentIds	USFWS IPaC report.	
Attachment 21 - Fish and Wildlife Letter.pdf	11/23/2021	chris.mewes@icf.com	endangeredSpecies.attachmentIds	Letter from Utilities Director to US Fish and Wildlife, Raleigh Ecological Field Services Office.	
Attachment 5 - Ground Disturbance Map.pdf	11/23/2021	chris.mewes@icf.com	endangeredSpecies.attachmentIds	Map of vegetation and ground disturbance at project site.	

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? **No**

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? **No**

2. Does the project alter a watercourse, water flow patterns, or a drainage way, regardless of its floodplain designation? **No**

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? **Yes**

If Yes, you must confirm that you have provided the following either in the text box below or by attachment: (If you have not provided these documents in any other section of the application, please attach the required documents or provide the description below.)

Description of any disproportionate and adverse effects to these populations.

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

Description of the population affected and the portion of the population that would be disproportionately and adversely affected. Please include specific efforts to address the adverse impacts in your proposal narrative and budget.

Attached materials or additional comments.

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

Using the water booster station project location and service area and overlaying with HUD's low- and moderate-income summary data (LMISD), which is used to identify projects that provide benefit to low- and moderate-income persons on an area basis, this project will directly benefit low-income populations. The average LMI % of all census block groups in the water booster station's service area was 48.8%. See attached LMI report. No adverse impacts are perceived on these populations by the implementation of this project. In fact, this project is perceived to be of benefit to these populations as it will minimize the risk of critical lifeline services being disrupted during a drought event.

Attachments

Filename	Date uploaded	Uploaded by	Label	Description	Action
UPDATED Attachment 23 - LMI Map.pdf	01/07/2022	chris.mewes@icf.com	lowIncomeMinority.attachmentIds	Low-Moderate Income Map of project area.	

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? **Yes**

If Yes, please indicate in the text box below a description of the requirements, issues or public involvement effort.

Aside from discussing the project with direct stakeholders, a press release regarding the project was issued and articles were placed on the town's social media accounts and weekly digest. The reach is as follows: News releases (includes digest): 1,313 residents Facebook: 4,939 residents Twitter: 2,696 residents Nextdoor: 6,588 residents In addition, Hillsborough frequently issues communications relative to capital improvements around water quality, conservation efforts, and advisories. See attachment 14.1.

Attachments

Filename	Date uploaded	Uploaded by	Label	Description	Action
Attachment 14.1 - Press Releases and Newsletters.pdf	01/07/2022	chris.mewes@icf.com	otherEHPLawsIssues.attachmentIds	Hillsborough water utility press releases and newsletters.	
Attachment 24 - Project Press Release.pdf	11/23/2021	chris.mewes@icf.com	otherEHPLawsIssues.attachmentIds	Town of Hillsborough website page, Weekly Digest, and Facebook page announcing BRIC subapplications.	

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? **No**

Evaluation

Is the applicant participating in the Community Rating System (CRS) ?	Yes
Select rating.	6
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 ?	Yes
Year of building code	2018
Please provide the building code.	North Carolina Building Code
Have the applicant's building codes been assessed on the Building Code Effectiveness Grading Schedule (BCEGS) ?	Yes
Select rating.	3
Describe involvement of partners to enhance the mitigation activity outcome.	<p>There are several partners that will enhance the mitigation project outcome and ensure project success. The Orange Water and Sewer Authority (OWASA) and Triangle Water Partnership will be engaged in aspects of project development and implementation. OWASA is a neighboring utility in Orange County. OWASA provides water, wastewater, and reclaimed water services to over 86,000 people in the Carrboro-Chapel Hill area, as well as the University of North Carolina at Chapel Hill. OWASA will act as the emergency water supplier, allowing Hillsborough to draw on OWASA’s system during drought periods through the new water booster pump station. OWASA provided a letter of support for this project during a previous funding cycle (Attachment 25). The letter emphasizes the importance of interlocal mutual aid agreements and the infrastructure required to support them to ensuring the reliability and resiliency of water supplies. The Triangle Water Supply Partnership (TWP) was formed in 2018 by jurisdictions and water systems in the North Carolina Research Triangle wishing to continue to strengthen water supply planning work. The TWP represents 13 water utilities that serve a population of over 1.6 million people in Chatham, Durham, Harnett, Johnston, Orange, and Wake Counties. As members, the Town of Hillsborough and OWASA will advance two of the TWP’s major goals through this project—improving cooperation between local water utilities and increasing the flexibility and reliability of local water supplies, especially during droughts. The Triangle Water Supply Partnership has provided a letter of support (Attachment 27), stating that the booster pumping station will support the entire town customer base in times of need by providing clean water to all users while avoiding disruption of emergency care, commerce, and the impact of unsanitary conditions. Hillsborough is a major municipality within Orange County. Orange County lies on the western edge of North Carolina’s Research Triangle. This area includes several institutions of higher learning, such as Duke University, Durham Technical Community College, North Carolina Central University, North Carolina State University, and UNC-Chapel Hill, as well as the Research Triangle Park, home to leading technological companies and federal research institutions, including Cisco, GlaxoSmithKline, IBM, National Institute of Environmental Health Sciences, RTI International, and the U.S. Environmental Protection Agency. Orange County has provided a letter of support for the OWASA interconnection project, stating the need for the water booster station on the basis of environmental protection and preservation as well as the potential benefits to Hillsborough water customers (Attachment 26). The fire department serving Hillsborough, the Orange Rural Fire Department, has also provided a letter of support, stating that their response to</p>

emergencies and quick mitigation of fires is greatly dependent on a stable and dependable town water supply (Attachment 28).

Discuss how anticipated future conditions are addressed by this project.

Droughts are a naturally occurring part of North Carolina's climate. Warmer and drier weather occurs when the Bermuda High, a semipermanent high pressure system centered off the Atlantic Coast, extends northwestward into the southeastern United States, culminating in heat waves and droughts. Climate model simulations indicate that this extension will occur more frequently in the future. And while overall precipitation in the project area is projected to increase over the useful life of the project, this is primarily due to larger volumes during heavy rain events. Intervening dry periods with little or no rain are projected to become more frequent in coming years, as higher temperatures more rapidly deplete soil moisture. The recent North Carolina Climate Report, Attachment 29, indicates that it is "likely that future severe droughts in their multiple forms in North Carolina will be more frequent and intense due to higher temperatures leading to increased evaporation." Hillsborough's reliance on the Eno River for drinking water and the consistent record of drought impacts at its raw water sources portends that the risk of potable water shortages will increase. As future drought conditions impact the region, an interconnection with OWASA will allow the Town the flexibility needed to avoid water shortages caused by drought conditions or in times of emergency need.

Additional comments (optional)

The Town of Hillsborough (Town) has an agreement with Orange County, NC (County) to perform building and fire inspections for all structures in its jurisdiction. Orange County received a commercial BCEGS score of 83.81/100 and residential BCEGS score of 78.64/100, which relates to a BCEGS Rating of 3 for both categories. The County's Building Inspections Division enforces the mandated North Carolina State Building Code (which conforms with the 2018 International Building Code) and conducts inspections to ensure code compliance during construction of buildings, electrical, mechanical, and plumbing systems. The Inspections Division issues zoning and building permits, issues occupancy permits upon compliance with state building codes and local regulations and takes proper corrective action when necessary. The Town must sign off on building permits and certificates of occupancy through their newly implemented EnerGov permit and inspections system that streamlines all building permit and inspections activities. While the County inspectors do most of the inspections, town staff also visit sites to provide further observations and to ask for corrective action if necessary. The County is responsible for enforcing corrective actions which may include fines or civil charges. The Town can encourage corrective actions by not approving the final occupancy. The County has developed a list of the most common causes of rejected permit applications and failed inspections for building, mechanical, electrical, and plumbing. See Attachment 31 regarding the county BCEGS score and inspections.

Attachments

Filename	Date uploaded	Uploaded by	Label	Description	Action
Attachment 25 - OWASA Letter of Support.pdf	11/23/2021	chris.mewes@icf.com	Evaluation Attachments	Letter of support from OWASA.	
Attachment 30 - NCEI Drought Report.pdf	11/23/2021	chris.mewes@icf.com	Evaluation Attachments	Report on drought from National Integrated Drought Information System.	
Attachment 26 - Orange County Letter of Support.pdf	11/23/2021	chris.mewes@icf.com	Evaluation Attachments	Letter of support from Orange County.	

Filename	Date uploaded	Uploaded by	Label	Description	Action
Attachment 28 - ORFD Letter of Support.pdf	11/23/2021	chris.mewes@icf.com	Evaluation Attachments	Letter of support from Orange Rural Fire Department.	
01_Risk Reduction Attachment.pdf	01/07/2022	chris.mewes@icf.com	Evaluation Attachments	<i>No description given.</i>	
02_Future Conditions Attachment.pdf	01/07/2022	chris.mewes@icf.com	Evaluation Attachments	<i>No description given.</i>	
03_Implementation Measures Attachment.pdf	01/07/2022	chris.mewes@icf.com	Evaluation Attachments	<i>No description given.</i>	
04_Impacted Population Attachment.pdf	01/07/2022	chris.mewes@icf.com	Evaluation Attachments	<i>No description given.</i>	
06_Leveraging Partners Attachment.pdf	01/07/2022	chris.mewes@icf.com	Evaluation Attachments	<i>No description given.</i>	
05_Outreach Activities Attachment.pdf	01/07/2022	chris.mewes@icf.com	Evaluation Attachments	<i>No description given.</i>	
Attachment 27 - Triangle Water Partnership Letter of Support.pdf	11/23/2021	chris.mewes@icf.com	Evaluation Attachments	Letter of support from Triangle Water Partnership.	
Attachment 29 - NC Climate Science Report.pdf	11/23/2021	chris.mewes@icf.com	Evaluation Attachments	Report from North Carolina Institute for Climate Studies.	
Attachment 31 - BCEGS Score Email.pdf	11/23/2021	chris.mewes@icf.com	Evaluation Attachments	Email correspondence re Hillsborough's BCEGS score.	

Comments & attachments

▶ Community	1 comment, 1 attachments
▶ Mitigation plan	0 comment, 1 attachments
▶ Scope of work	1 comment, 13 attachments
▶ Budget	0 comment, 1 attachments
▶ Cost-effectiveness	0 comment, 3 attachments
▶ Evaluation	1 comment, 13 attachments
▶ Environmental/Historic Preservation (EHP)	0 comment, 9 attachments
▶ Location	0 comment, 6 attachments

Introduction

Project location

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

The site of this mitigation activity is Hillsborough, North Carolina 27278 at 36.005533 latitude and -79.107223 longitude. The site is in the North Carolina Department of Transportation (NCDOT) Right of Way (ROW) along Old NC 86. It is north of New Hope Creek and directly south of Starfield Circle. Refer to the Project Location Map (Attachment 1) for more information.

Latitude

36.005533

Longitude

-079.107223

Attachments

Filename	Date uploaded	Uploaded by	Label	Description	Action
Attachment 1 - Project Location Map.pdf	11/23/2021	chris.mewes@jcf.com	Project Location Attachments	Map depicting proposed site as well as roads and floodways.	

Project benefiting area

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

More than the entire Town population of 9,660 would be impacted by the project as the town serves county customers outside of the town limits with water service as well. The total impacted population is over 15,990. All customers will be impacted by this project in a beneficial manner. Critical facilities, such as UNC Hospitals and emergency responders will also benefit from the proposed project. In accordance with the Justice40 initiative, the Town of Hillsborough has identified disadvantaged communities that will benefit from this project. Approximately 15,990 persons, including several low-income areas, depend upon the Town's potable water supply. There are several neighborhoods and mobile home parks with lower income families who will benefit from having a redundant source of water supply during an emergency or scheduled maintenance activity. These include the Timbers, Northside, Joppa Oaks, Orange Mobile Home Estates, and Woods Edge Mobile Home Parks, the Fairview community, and west Hillsborough area. Gateway Village (HUD housing), Hampton Pointe, Eno Haven and Coachwood apartments are also on the town water system and are advertised as affordable or low-income complexes. A redundant potable water supply will benefit these disadvantaged communities. Additionally, the attached SVI Map (Attachment 32) depicts the Centers for Disease Control and Prevention's Social Vulnerability Index (SVI) for the census tracts within the proposed water booster pump station's service area. SVI ranks the tracts on 15 social factors, including unemployment, minority status, and disability and further groups them into four related themes. The CDC SVI ranking variables for the four themes are for the Socioeconomic Status, Household Composition & Disability, Minority Status & Language, and Housing Type & Transportation. These indicators help support analysis on the relative vulnerability of a given census tract and helps identify communities that will need continued support to recover following an emergency or natural disaster. The attached map shows the overall ranking (RPL_Themes) which is a percentile ranking that represents the proportion of tracts that are equal to or lower than a tract of interest in terms of social vulnerability. For example, a CDC/ATSDR SVI ranking of 0.60 signifies that 60% of tracts in the state or nation are less vulnerable than the tract of interest and that 40% of tracts in the state or nation are more vulnerable. The average SVI ranking within the water service area is 46.1. Two census tracts within the service area, 111.01 and 109.2, appear especially vulnerable, with a SVI of 0.62 and 0.64 respectively; see Attachment 32 for further details. The Department of Housing and Urban Development has provided estimated counts of persons based on their family income, calculating the number and percentage of residents at or below 80% of the Area Median Income (AMI). The percentage of residents within Hillsborough water supply's service area living at or below 80% of the AMI is 48.2%, around 13,445 residents; see Attachment 23 for further information. There are three census blocks within the service area (110, 109.02, and 111.01) where

above 65% of residents are at or below 80% of the AMI (77.1%, 65.8%, and 65.3%, respectively). Additionally, the average poverty rate within the service area is 9.9%, numbering around 4,184 residents; see Attachment 33, Percent Poverty. Hillsborough's water supply serves several thousand low-income Hillsborough residents. Additionally, around 32% of residents within the Hillsborough's potable water service area identify as non-white, with around 13.2% identifying as Hispanic or Latino; see Attachment 34, Hillsborough Race and Ethnicity Map and Data.

Attachments

Filename	Date uploaded	Uploaded by	Label	Description	Action
Attachment 33 - Percent Poverty Service Area.pdf	01/07/2022	chris.mewes@icf.com	Location project benefiting area Attachments	Map of poverty in service area.	
UPDATED Attachment 32 - Overall SVI Percentile.pdf	01/07/2022	chris.mewes@icf.com	Location project benefiting area Attachments	CDC Social Vulnerability Index Map.	
Attachment 34 - Percent Minority Service Area.pdf	01/07/2022	chris.mewes@icf.com	Location project benefiting area Attachments	Percent Minority Map of service area.	
UPDATED Attachment 23 - LMI Map.pdf	01/07/2022	chris.mewes@icf.com	Location project benefiting area Attachments	Low-Moderate Income map of project area.	

Project impact area

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

The area impacted is the Town of Hillsborough and all of its approximately 7,161 residents, as well as approximately 5,000 out-of-town residents who are supplied water from the town.

Attachments

Filename	Date uploaded	Uploaded by	Label	Description	Action
Attachment 5 - Ground Disturbance Map.pdf	11/23/2021	chris.mewes@icf.com	Location project impact area Attachments	Map of vegetation and ground disturbance around project site.	

Project site inventory

Does this project subapplication propose to mitigate a property/structure(s)? **No**
 (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.

Assurances and certifications

OMB number: 4040-0009, Expiration date: 02/28/2022 [View burden statement](#)

SF-424D: Assurances - Construction Programs

Content:

OMB Number: 4040-0009

Expiration Date: 02/28/2022

Certain of these assurances may not be applicable to your project or program. If you have any questions, please contact the awarding agency. Further, certain Federal awarding agencies may require applicants to certify to additional assurances. If such is the case, you will be notified.

As the duly authorized representative of the applicant, I certify that the applicant:

1. Has the legal authority to apply for Federal assistance and the institutional, managerial and financial capability (including funds sufficient to pay the non-Federal share of project costs) to ensure proper planning, management and completion of the project described in this application.
2. Will give the awarding agency, the Comptroller General of the United States and, if appropriate, the State, the right to examine all records, books, papers, or documents related to the assistance; and will establish a proper accounting system in accordance with generally accepted accounting standards or agency directives.
3. Will not dispose of, modify the use of, or change the terms of the real property title or other interest in the site and facilities without permission and instructions from the awarding agency. Will record the Federal awarding agency directives and will include a covenant in the title of real property acquired in whole or in part with Federal assistance funds to assure nondiscrimination during the useful life of the project.
4. Will comply with the requirements of the assistance awarding agency with regard to the drafting, review and approval of construction plans and specifications.
5. Will provide and maintain competent and adequate engineering supervision at the construction site to ensure that the complete work conforms with the approved plans and specifications and will furnish progressive reports and such other information as may be required by the assistance awarding agency or State.
6. Will initiate and complete the work within the applicable time frame after receipt of approval of the awarding agency.
7. Will establish safeguards to prohibit employees from using their positions for a purpose that constitutes or presents the appearance of personal or organizational conflict of interest, or personal gain.
8. Will comply with the Intergovernmental Personnel Act of 1970 (42 U.S.C. §§4728-4763) relating to prescribed standards for merit systems for programs funded under one of the 19 statutes or regulations specified in Appendix A of OPM's Standards for a Merit System of Personnel Administration (5 C.F.R. 900, Subpart F).
9. Will comply with the Lead-Based Paint Poisoning Prevention Act (42 U.S.C. §§4801 et seq.) which prohibits the use of lead-based paint in construction or rehabilitation of residence structures.
10. Will comply with all Federal statutes relating to nondiscrimination. These include but are not limited to: (a) Title VI of the Civil Rights Act of 1964 (P.L. 88-352) which prohibits discrimination on the basis of race, color or national origin; (b) Title IX of the Education Amendments of 1972, as amended (20 U.S.C. §§1681-1683, and 1685-1686), which prohibits discrimination on the basis of sex; (c) Section 504 of the Rehabilitation Act of 1973, as amended (29 U.S.C. §794), which prohibits discrimination on the basis of handicaps; (d) the Age Discrimination Act of 1975, as amended (42 U.S.C. §§6101-6107), which prohibits discrimination on the basis of age; (e) the Drug Abuse Office and Treatment Act of 1972 (P.L. 92-255), as amended, relating to nondiscrimination on the basis of drug abuse; (f) the Comprehensive Alcohol Abuse and Alcoholism Prevention, Treatment and Rehabilitation Act of 1970 (P.L. 91-616), as amended, relating to nondiscrimination on the basis of alcohol abuse or alcoholism; (g) §§523 and 527 of the Public Health Service Act of 1912 (42 U.S.C. §§290 dd-3 and 290 ee- 3), as amended, relating to confidentiality of alcohol and drug abuse patient records; (h) Title VIII of the Civil Rights Act of 1968 (42 U.S.C. §3601 et seq.), as amended, relating to nondiscrimination in the sale, rental or financing of housing; (i) any other nondiscrimination provisions in the specific statute(s) under which application for Federal assistance is being made; and, (j) the requirements of any other nondiscrimination statute(s) which may apply to the application.
11. Will comply, or has already complied, with the requirements of Titles II and III of the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (P.L. 91-646) which provide for fair and equitable treatment of persons displaced or whose property is acquired as a result of Federal or federally-assisted programs. These requirements apply to all interests in real property acquired for project purposes regardless of Federal participation in purchases.
12. Will comply with the provisions of the Hatch Act (5 U.S.C. §§1501-1508 and 7324-7328) which limit the political activities of employees whose principal employment activities are funded in whole or in part with Federal funds.
13. Will comply, as applicable, with the provisions of the Davis-Bacon Act (40 U.S.C. §§276a to 276a-7), the Copeland Act (40 U.S.C. §276c and 18 U.S.C. §874), and the Contract Work Hours and Safety Standards Act (40 U.S.C. §§327-333), regarding labor standards for federally-assisted construction subagreements.
14. Will comply with flood insurance purchase requirements of Section 102(a) of the Flood Disaster Protection Act of 1973 (P.L. 93-234) which requires recipients in a special flood hazard area to participate in the program and to purchase flood insurance if the total cost of insurable construction and acquisition is \$10,000 or more.

15. Will comply with environmental standards which may be prescribed pursuant to the following: (a) institution of environmental quality control measures under the National Environmental Policy Act of 1969 (P.L. 91-190) and Executive Order (EO) 11514; (b) notification of violating facilities pursuant to EO 11738; (c) protection of wetlands pursuant to EO 11990; (d) evaluation of flood hazards in floodplains in accordance with EO 11988; (e) assurance of project consistency with the approved State management program developed under the Coastal Zone Management Act of 1972 (16 U.S.C. §§1451 et seq.); (f) conformity of Federal actions to State (Clean Air) Implementation Plans under Section 176(c) of the Clean Air Act of 1955, as amended (42 U.S.C. §§7401 et seq.); (g) protection of underground sources of drinking water under the Safe Drinking Water Act of 1974, as amended (P.L. 93-523); and, (h) protection of endangered species under the Endangered Species Act of 1973, as amended (P.L. 93-205).
16. Will comply with the Wild and Scenic Rivers Act of 1968 (16 U.S.C. §§1271 et seq.) related to protecting components or potential components of the national wild and scenic rivers system.
17. Will assist the awarding agency in assuring compliance with Section 106 of the National Historic Preservation Act of 1966, as amended (16 U.S.C. §470), EO 11593 (identification and protection of historic properties), and the Archaeological and Historic Preservation Act of 1974 (16 U.S.C. §§469a--1 et seq.).
18. Will cause to be performed the required financial and compliance audits in accordance with the Single Audit Act Amendments of 1996 and OMB Circular No. A-133, "Audits of States, Local Governments, and Non-Profit Organizations."
19. Will comply with all applicable requirements of all other Federal laws, executive orders, regulations, and policies governing this program.
20. Will comply with the requirements of Section 106(g) of the Trafficking Victims Protection Act (TVPA) of 2000, as amended (22 U.S.C. 7104) which prohibits grant award recipients or a sub-recipient from (1) Engaging in severe forms of trafficking in persons during the period of time that the award is in effect (2) Procuring a commercial sex act during the period of time that the award is in effect or (3) Using forced labor in the performance of the award or subawards under the award.