Applying for Mitigation/Funding for Facility Hardening.

Ben Lewis
Florida Rural Water Association

Emily Atkin / September 14, 2017

Florida's Poop Nightmare Has Come True

Hurricane Irma caused massive sewage overflows, highlighting the twin dangers of an aging infrastructure and climate change.

Hurricane Matthew Takes Toll On Wastewater

By Peak Johnson

Ever since Hurricane Matthew struck last month, there have been steady reports of the destruction that it has brought in its wake. For example, many spills of improperly treated wastewater have been reported by utilities during the storm.

It was mere days after Matthew hit that nearly 14 million gallons of partially treated wastewater entered the Halifax River in Dayton Beach, FL, according to *The Daytona Beach News-Journal*.

Hurricane Hermine leaves Tampa Bay area befouled

Hurricane Hermine is gone, but it left the waters of the Tampa Bay area fouled with millions of gallons of sewage.

Sewage Spills: Hurricane Irma highlighted deficiencies in wastewater treatment

In the aftermath of Hurricane Irma 88 million gallons of wastewater spilled into state waters, according to the Department of Environmental Protection.

NATION NOW

Hurricane Michael's fury will have longstanding environmental effects

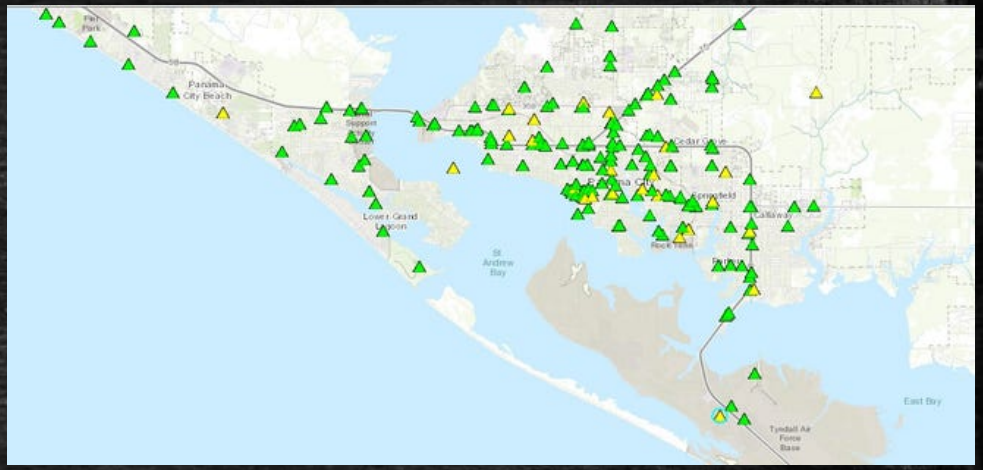
Jim Waymer Florida Today

Published 10:17 p.m. ET Oct. 12, 2018 | Updated 3:58 p.m. ET Oct. 14, 2018

Thousands of gallons of sewage discharged

As with Hurricane Irma last year, widespread sewage system and septic tank failures were expected during Michael, as floodwaters overtaxed lift stations and flooded septic tank drain fields.


LIVE
BREAKING NEWS
APALACHICOLA HIT BY FLOODING
WPTV
5:59 87°


Panama City Beach
Lower Grand Lagoon
St Andrew Bay
East Bay
Tyndall Air Force Base


PS 4
IN CASE OF EMERGENCY CALL 648-5700 OR 648-5983

Hazard Mitigation-Any action taken to reduce future disaster losses

- For utilities, this can mean things like elevating control panels, adding backup power generators, installing flood barriers, etc at lift stations and other critical infrastructure

Mitigation Options

LIFT STATIONS (page 1 of 2)

☑ Wastewater

Lift stations are typically located at the lowest points in gravity-fed sewer systems and are therefore prone to flooding. Lift stations are also vulnerable to power outages. When lift stations lose power and do not have adequate emergency power, untreated sewage can back up into homes and businesses, flood streets or run off into local waterways. This presents a serious threat to public health and the environment. Utilities should analyze various lift station failure scenarios (using flood stage in the flood zone for hydraulic calculations) and determine potential impacts to help inform mitigation decisions. Mitigation decisions will also depend on the type of lift station (e.g., wet or dry well), location (above or below grade), existing enclosure and ancillary equipment (e.g., minimal electrical/mechanical control equipment versus grit chambers, screens, electrical panels and other equipment).

See the following checklist for potential flood mitigation options for your utility lift stations.

✓	Mitigation Options for Collection System Lift Stations	Cost
1. Prevent lift stations from flooding.		
	a. Procure temporary flood barriers (e.g., sandbags) for use in minor floods.	$
	b. Extend vent lines above anticipated flood stage to prevent floodwater from entering the lift station.	$-$$
	c. Install gates and backflow prevention devices on influent and emergency overflow lines to prevent inundation of the lift station by the collection system and the overflow.	$
	d. Install permanent physical barriers (e.g., flood walls, levees, sealed doors).	$$
	e. Install green infrastructure to attenuate or divert flood water and storm surges away from lift stations.	$$
2. Protect critical components if lift stations do flood.		
	a. Install unions in the conduit system to reduce the time required to repair damaged sections.	$
	b. During upgrades or design of new equipment, develop capability to temporarily remove and safely store vulnerable components before a flood when there is enough advanced notice to do so.	$-$$$

Mitigation Options

LIFT STATIONS (page 2 of 2)

	c. Waterproof electrical components, controls and circuitry.	$$
	d. Relocate or elevate electrical components (e.g., motors, switchgears, motor control centers, cathodic protection systems, exhaust fans, etc.) above the flood stage.	$$
	e. Replace vulnerable components with a submersible option (e.g., pumps, flow meters, gate/valve operators, etc.).	$$$
	f. Replace a below-grade lift station with an above-grade station elevated higher than the flood stage.	$$$
3. Maintain lift station operations when the electrical grid is down. [1]		
	a. Consider options to procure generators (permanent or portable), increase fuel storage capacity or install an alternative energy supply. The generators should be elevated above the flood stage, have automated controls and be sized appropriately. On-site fuel storage should also be elevated and secured to prevent floatation.	$$
	b. Install energy efficient equipment to increase the longevity of the fuel supply for backup generators.	$$
	c. Replace pumps with diesel driven or dual-option counterparts.	$$
4. Have a means of bypassing normal lift station operations when necessary.		
	a. Maintain a call list of multiple vendors that can provide "pump around" services in an emergency or enter into an agreement with one.	$
	b. Procure portable pumps to restore operation of a damaged lift station following an event.	$$
	c. Implement a regionalization project to enable diversion of wastewater flows to an alternate system for emergency wastewater collection and conveyance.	$$$

Cost Key (*Provides relative costs of mitigation measures - actual costs may differ for your utility*)

$ - Little to no cost. Some internal level of effort required, but no contractor support needed.
$$ - Moderate cost/complexity. Likely involves contractual costs.
$$$ - High cost/complexity. Will require one or more contractors to implement this option.

[1] See Mitigation Options (Power Supply)

Relocate or elevate electrical components above the flood stage

Replace vulnerable components with submersible option

Replace a below-grade liftstation with an above-grade station elevated higher than the flood stage.

- Below-grade stations are often prone to flooding
- Replacing with an above-grade station mitigates that risk
- Modeling and engineering would need to be completed.
- Would be an expensive solution, however you may want to consider it if you are already looking to replace that lift station.

Install permanent physical barriers or green infrastructure to divert flood water and storm surges away

Figure 6 – Station No. 2 before improvements

Figure 7 – Station No. 2 after improvements

Figure 8 – Station with normal single door

Figure 9 – Station with single flood door

Generators

- Portable-
  - Advantages include they can be rotated between several lift stations.
  - If lift station has a emergency receptacle and the mate is on generator cable, Life is good. Some have receptacle, many utilities do not have extra plugs for generators
  - If lift station does not have emergency receptacle, generator must be wired in
  - Disadvantages include man power requirements to rotate equipment, possibility of one (or more) lift station overflowing while portable generator is on another

Generators

- Standby generators provide a permeant power source at an individual lift station.
  - The generator will start automatically once it senses there is no power. It will open a transfer switch that eliminates power coming from the utility and electrifies the panel.
  - Disadvantages include cost and maintenance requirements.
  - Standby generators are vital for master or other high flow lift stations

Bypass Pumps

- If control panel has been destroyed (knocked down/shorted out by lightening), then generators will be unable to turn pumps on/off.
  - Retrofitting existing lift stations with bypass hookups (inlet and outlet) allow the system to use a bypass pump to clear the sewage.
  - During power outages, a trailer mounted, engine-driven pump is transported to lift stations, quickly hooked up, then pumps the sewage from the lift station. A bypass port should be installed in the force main to keep the sewage moving down the line.

Mitigation Options

POWER SUPPLY (page 1 of 3)

- [x] Drinking water
- [x] Wastewater

Floods often result in power outages that have major implications for drinking water and wastewater utilities. Without a backup solution, outages can disrupt service leading to boil water advisories, sewer backups or the discharge of raw sewage. To ensure continued service in the event of a power outage, a utility should consider a number of different strategies (e.g., backup generators, alternative/auxiliary source of power, energy efficient equipment) to run the critical components of its system keeping in mind that the minimum level of service required after a flood may differ from "normal" demands. Deciding on a strategy requires that you identify and evaluate your facility's sources, reliability, redundancies and critical power needs. To get started, use the EPA's publication Is Your Water or Wastewater System Prepared? What You Need to Know About Generators (EPA 901-F-09-027, September 2009).

See the following checklist for potential flood mitigation options for your utility power supply.

✓	Mitigation Options for Power Supply	Cost
1. Long before a flood, take measures to reduce the duration of power outages.		
	a. Prepare a list of key utility facilities (e.g., intake works, pump stations, treatment facility) that require critical power restoration and include the physical locations of the facilities and their corresponding power company account numbers. Provide this information to the power company during an outage to expedite electricity restoration.	$
	b. Talk with your local emergency management agency and local power utility to increase the priority of power restoration for your utility's facilities.	$
	c. Working with the power utility, consider installation of two independent power feeds to your utility, elevating substations and/or ways to avoid downed power lines.	$$
	d. Establish more reliable connection to power source (e.g., install substation expressly for your utility or a dedicated feeder between the power station and the treatment plant).	$$$
2. Secure backup generators.[1]		
	a. For your electrical requirements, document the size and type of backup generator that you need including voltage, phase configuration, horsepower/amperage, fuel, etc.	$

[1] Regularly test/service backup generators and ensure that permanent/mobile generators are elevated or outside of flood zone.

FLOOD RESILIENCE: A Basic Guide for Water and Wastewater Utilities
EPA
Return to Mitigation Options

Mitigation Options

POWER SUPPLY (page 2 of 3)

	b. Have pump stations wired to accept a portable generator. Ensure that "quick connect" capability is installed and ready, and that on-site personnel are trained.	$
	c. Arrange to get portable generators in an emergency by maintaining a call list of multiple vendors that rent portable generators, entering into an agreement with a particular vendor or joining a mutual aid network (e.g., Water/Wastewater Agency Response Network [WARN]) to allow sharing of backup generators. During widespread flooding events, demand and competition for portable generators will be high.	$
	d. Procure and install your own portable or permanent generators. Consider multi-fuel generators.	$$$
3. Secure a source of fuel for backup generators.[1]		
	a. Fill fuel storage tanks in anticipation of flooding.	$
	b. Establish an agreement with your fuel supplier and provide estimates of fuel needs (e.g., volume and frequency) in the event of a power outage. Also, secure a list of alternative fuel suppliers. Maintain communication with your local emergency management agencies for priority in getting fuel supplies.	$
	c. Install fuel tanks on your utility's vehicles and train staff in moving the utility's fuel in an emergency.	$$
	d. Perform an energy audit of your facility to identify energy saving opportunities via operations and equipment modifications. Implement recommendations of the audit (e.g., replace equipment with energy efficient models) to extend the life of your backup power supply.	$$
	e. Install additional and/or larger fuel storage tanks.	$$
4. Install an alternative energy system.		
	a. Install solar panels or wind turbines to reduce dependence on the electrical grid and to potentially supplement your backup power supply (ensure your utility has the proper technical switches).	$$$
	b. Install cogeneration units and/or a waste heat recovery system at wastewater treatment plants to reduce or eliminate dependence on the grid.	$$$
5. Prepare/protect electrical connections/equipment.		
	a. Train staff to shut down electrical equipment (e.g., Supervisory Control and Data Acquisition [SCADA] systems, computers, field instruments) prior to a flood event to minimize potential damage from flood waters.	$
	b. Develop "start and connect" checklists specific to each piece of equipment.	$

[1] Regularly inspect/service fuel storage tanks and ensure that permanent/mobile fuel tanks are elevated or outside of flood zone.

Mitigation Options

BOOSTER STATIONS AND OTHER PUMPS (page 1 of 2)

☑ Drinking water

Flood waters can severely damage pumps, thereby impacting the entire drinking water system from intake through distribution. Similarly, loss of facility power could render pumps inoperable without adequate backup power. Vulnerable water facility control systems include pump controls, variable frequency drives, electrical panels, motor control centers and Supervisory Control and Data Acquisition (SCADA) systems.

See the following checklist for potential flood mitigation options for your utility booster station/pumps.

✓	Mitigation Options for Booster Stations and Other Pumps	Cost
1. Prevent booster stations from flooding.		
	a. Procure temporary flood barriers (e.g., sandbags) for use in minor floods.	$
	b. Install permanent physical barriers (e.g., flood walls, levees, sealed doors).	$$
2. Protect critical components if booster stations do flood.		
	a. During upgrades or design of new equipment, develop capability to temporarily remove and safely store vulnerable components in advance of a flood.	$-$$$
	b. Waterproof, relocate or elevate motor controls, variable frequency drives, computers and electrical panels to a higher elevation by constructing platforms or integrating controls into existing buildings or infrastructure on-site.	$$
	c. De-energize systems prior to flooding to mitigate damage to electrical components.	$
	d. Replace non-submersible pumps with submersible pumps, if cost effective.	$$-$$$
	e. Replace standard electrical conduits with sealed, waterproof conduits. Replace electrical panels with submersion rated enclosures.	$$$
	f. Install sump pumps for below-ground facilities. Although not typically used to protect against flooding events, sump pumps may provide additional time to take other mitigation measures.	$
	g. Replace a below-grade booster station with an above-grade station elevated higher than the flood stage.	$$$

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Mitigation Options

BOOSTER STATIONS AND OTHER PUMPS (page 2 of 2)

3. Maintain pumping operations when the electrical grid is down.[1]		
	a. Store temporary or replacement pumps out of the flood zone.	$
	b. Install energy efficient equipment to increase the longevity of the fuel supply for backup generators.	$$
	c. Replace pumps with diesel driven or dual-option counterparts.	$$
	d. Consider options for procuring generators (permanent or portable) or an alternative energy supply.	$$
4. Maintain pumping operations.		
	a. Maintain a call list of multiple vendors that can provide "pump around" services in an emergency or enter into an agreement with one.	$
	b. Procure extra portable pumps or specialized parts to repair damaged pumps. Consider stockpiling major components of specialized high capacity pumps.	$$-$$$

Cost Key (*Provides relative costs of mitigation measures - actual costs may differ for your utility*)

$ - Little to no cost. Some internal level of effort required, but no contractor support needed.
$$ - Moderate cost/complexity. Likely involves contractual costs.
$$$ - High cost/complexity. Will require one or more contractors to implement this option.

[1] See Mitigation Options (Power Supply)

Mitigation Options

DRINKING WATER TREATMENT PLANT (page 1 of 2)

☑ Drinking water

Flood waters may inundate a treatment facility and wash out open tanks and filter beds, damage mechanical equipment, render electrical power and controls useless, spoil finished water storage, deposit debris on-site or wash contaminants into the treatment process. Flood waters may also alter source water chemistry and turbidity, posing treatment challenges to utilities that continue to operate during a flood. For example, residence times may need to be significantly longer following a flood to attain safe drinking water standards due to high turbidity and the potential influence of contaminants in the flood waters.

See the following checklist for potential flood mitigation options for your utility treatment plant.

✓	Mitigation Options for Drinking Water Treatment Plant	Cost
1. Prevent structures from flooding.		
	a. Install physical barriers to protect the entire facility from flooding (e.g., flood walls, levees) or be able to deploy temporary systems that achieve the required protection.	$$-$$$
	b. Install green infrastructure within or beyond the boundaries of the treatment plant to attenuate, divert or retain flood water and storm surges.	$$-$$$
	c. Install flood water pumping systems and/or channel/culvert systems to collect and divert flood water away from treatment processes.	$$
2. Protect critical components if the treatment plant does flood.		
	a. During upgrades or design of new equipment, develop capability to temporarily remove and safely store vulnerable components before a flood when there is enough advanced notice to do so.	$-$$$
	b. Install saltwater-resistant equipment and storage tanks (e.g., for chemicals and fuel).	$$
	c. Waterproof electrical components (e.g., pump motors, monitoring equipment) and circuitry.	$$
	d. Elevate, relocate or cap individual assets to prevent damage from flood waters; vertically extend the walls of a treatment structure (e.g., basin, tank, filter) above flood stage; and/or flood-proof/seal structures to prevent seepage of flood water into the treatment train.	$$$

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Mitigation Options

DRINKING WATER TREATMENT PLANT (page 2 of 2)

	e. Replace motorized and electrical equipment with submersible equipment (e.g., submersible pumps).	$$$
3. Maintain delivery of safe drinking water during flooding.		
	a. Monitor the quality of raw water entering the treatment plant and be prepared to adjust the treatment process as necessary (e.g., chemical addition, residence time) to account for higher contaminant loading or increased turbidity.	$
	b. Purchase portable, handheld testing equipment to serve as a backup to permanent mounted testing equipment that may be inoperable during a flood.	$
	c. Develop process guidelines or models to understand potential water quality changes, adjustments that may have to be made to attain drinking water standards and the potential costs of changes in treatment.	$$
	d. Explore interconnections or other partnership opportunities to share resources or facilitate emergency public water supply services with neighboring water utilities.	$$-$$$
4. Maintain operation of treatment plant if electrical grid is down. [1]		
	a. Install energy-efficient equipment to increase the longevity of the fuel supply for backup generators.	$$
	b. Replace motorized equipment with diesel-driven or dual-option counterparts.	$$
5. Increase storage capacity in preparation for floods.		
	a. Consider filling finished water storage tanks to capacity prior to a storm event to maximize storage if service is interrupted or if the utility is damaged.	$
	b. Install larger capacity chemical storage tanks to ensure a sufficient supply through and beyond an emergency until the supply chain is restored.	$$
	c. Determine if increased finished water emergency storage capacity would be beneficial (as opposed to water age/quality concerns).	$$

Cost Key (*Provides relative costs of mitigation measures - actual costs may differ for your utility*)

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$$ - Moderate cost/complexity. Likely involves contractual costs.
$$$ - High cost/complexity. Will require one or more contractors to implement this option.

[1] See Mitigation Options (Power Supply)

Mitigation Options

HEADWORKS (page 1 of 2)

☑ Wastewater

The headworks includes the structures and equipment at the beginning of the wastewater treatment plant, such as gates and flow controls, metering equipment, pumps, mechanical screens and grit removal systems. This equipment is often at a lower elevation compared to the rest of the facility, increasing its vulnerability to flooding. If the headworks is off-line due to flooding, the rest of the plant would be inoperable. A failure of the headworks without a relief or bypass may also create backwater effects on the collection system that could flood streets and basements. Utility operators should identify how a headworks failure would affect the collection system and wastewater treatment plant performance using flood water elevations in the flood zone for hydraulic calculations and then implement the appropriate mitigation measures.

See the following checklist for potential flood mitigation options for your utility headworks.

✓	Mitigation Options for Headworks	Cost
1. Protect critical headworks components from flooding.		
	a. Install nonelectrical backup controls where possible (e.g., float switches for pumps).	$
	b. During upgrades or design of new equipment, develop capability to temporarily remove and safely store vulnerable components before a flood when there is enough advanced notice to do so.	$-$$$
	c. Upgrade mechanical screens to prevent debris blockages and hydraulic restrictions in anticipation of higher than normal sand, grit, trash and debris loading during and immediately after a flood event.	$$
	d. Waterproof or elevate motor control units, instrumentation and controls, electrical panels, variable frequency drives and other systems.	$$
	e. Elevate pump and screen motors and other process mechanical/electrical equipment above flood stage.	$$
	f. Replace dry well pumps with submersible pumps; consider increased capacity needed during storm/flood events.	$$

Mitigation Options

HEADWORKS (page 2 of 2)

2. Maintain headworks operation when the electrical grid is down.[1]		
	a. Secure backup power supply for the headworks. Consider installing a generator just for the headworks or procuring a mobile generator with sufficient output for the same purpose.	$$
	b. Replace motorized equipment with diesel driven or dual-option counterparts.	$$

Cost Key (*Provides relative costs of mitigation measures - actual costs may differ for your utility*)

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[1] See Mitigation Options (Power Supply)

Mitigation Options

WASTEWATER TREATMENT PLANT (page 1 of 2)

Wastewater

Wastewater treatment plants are typically located at low elevations and near a receiving water body, which may pose a significant flood risk to a facility. Coastal facilities face additional risk from storm surges and saline flood waters that can corrode storage tanks, circuitry and equipment.

Flood waters can wash out primary and secondary clarifiers, aeration tanks and chlorine contact chambers, as well as upset bioreactors. Other impacts from flood waters include damage to mechanical and electrical equipment/controls, interference with biosolids handling and disposal systems as well as washing of contaminants into the treatment train. Treatment plants that are still operational during a flood need to be prepared to accommodate higher flow rates and increased pollutant loads.

See the following checklist for potential flood mitigation options for your utility treatment plant.

✓	Mitigation Options for Wastewater Treatment Plant	Cost
1. Prevent treatment plant from flooding.		
	a. Install physical barriers to protect the entire facility from flooding (e.g., flood walls, levee, sealed doors) or be able to deploy temporary systems that achieve the required protection.	$$
	b. Install green infrastructure within or beyond the boundaries of the treatment works to attenuate, divert or retain flood water and storm surges.	$$
	c. Install flood water pumping systems and or channel/culvert systems to collect and divert flood water.	$$
	d. Correct infiltration and inflow problems to reduce flows to the treatment works in a flood.	$$$
	e. Separate combined sewers to reduce flows to the treatment works in a flood.	$$$
	f. Construct a large storage tank to store overflows for future treatment (e.g., a large-capacity combined sewerage overflow (CSO) tunnel).	$$$
2. Protect critical components if treatment plant does flood.		
	a. Secure air tanks to prevent floatation if flooded.	$
	b. During upgrades or design of new equipment, develop capability to temporarily remove and safely store vulnerable components before a flood when there is enough advanced notice to do so.	$-$$$

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WASTEWATER TREATMENT PLANT (page 2 of 2)

	c. Install saltwater resistant equipment and storage tanks (e.g., for chemicals and fuel), if near a coastline/brackish water.	$
	d. Waterproof electrical components (e.g., pump motors) and circuitry.	**$$**
	e. Elevate, relocate or cap individual assets (e.g., blowers, chemical/fuel/air tanks, instrumentation/controls) to prevent damage from flood waters; vertically extend the walls of a treatment structure (e.g., clarifier, basin, tank) above flood stage and/or flood-proof/seal structures to prevent seepage of flood water into the treatment train.	$$$
	f. Replace motorized and electrical equipment with submersible equipment (e.g., submersible pumps).	$$$
	g. Have an alternative access plan in case normal access to the treatment plant is blocked. Consult with other entities (e.g., Department of Transportation) to consider alternate road/transportation options (e.g., watercraft).	$
3. Maintain treatment plant operations when the electrical grid is down[1] and/or access routes are blocked.		
	a. Install larger capacity chemical and fuel storage tanks to ensure a sufficient supply through and beyond an emergency until the supply chain is restored.	$
	b. Install energy efficient equipment to increase the longevity of the fuel supply for backup generators.	$$
	c. Replace motorized equipment with diesel driven or dual-option counterparts.	$$
	d. Consider options for procuring backup generators or an alternative energy supply.	$$
4. Have a means of bypassing normal treatment plant operations when necessary.		
	a. Install an external connection to the facility's compressed air system to allow a temporary, portable air compressor to be used if the main air compressor becomes disabled.	$
	b. Procure portable pumps or maintain a call list of multiple vendors that can provide "pump around" services in case part of the treatment train is off-line.	$$
	c. Implement a regionalization project to enable diversion of wastewater flows to an alternate system for emergency wastewater collection and treatment services.	$$$

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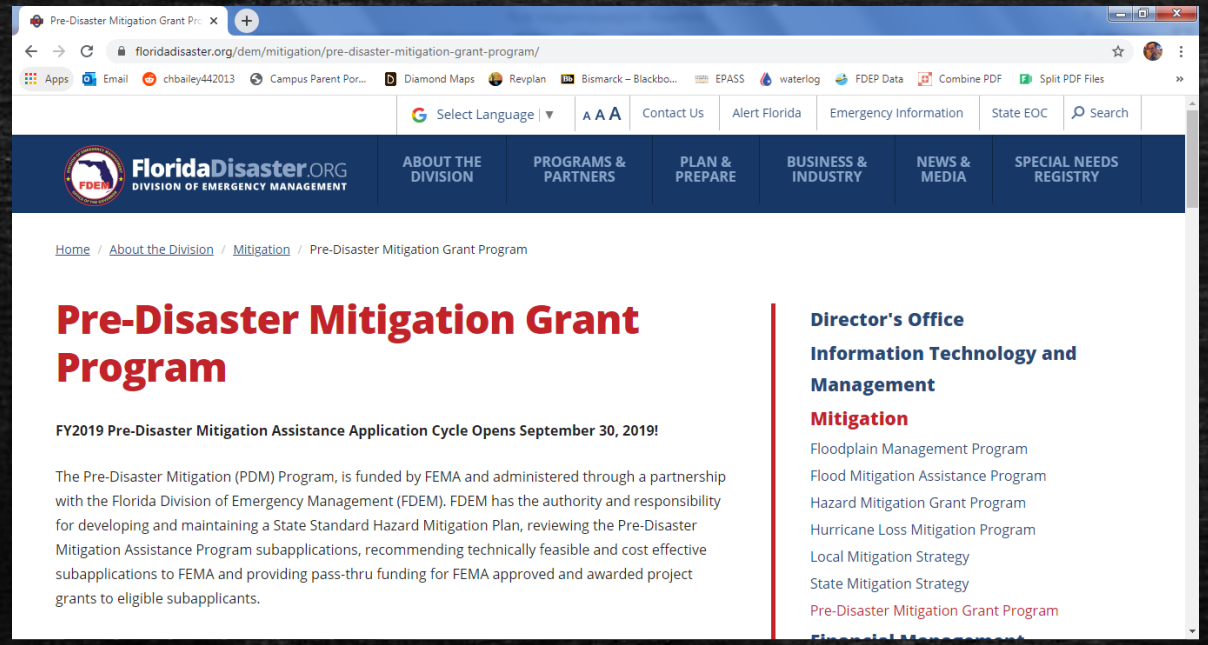
So we've identified ways to harden your facilities, but now the important question…

How to apply for Hazard Mitigation Grant funding

Pre-Disaster Mitigation Grant Program



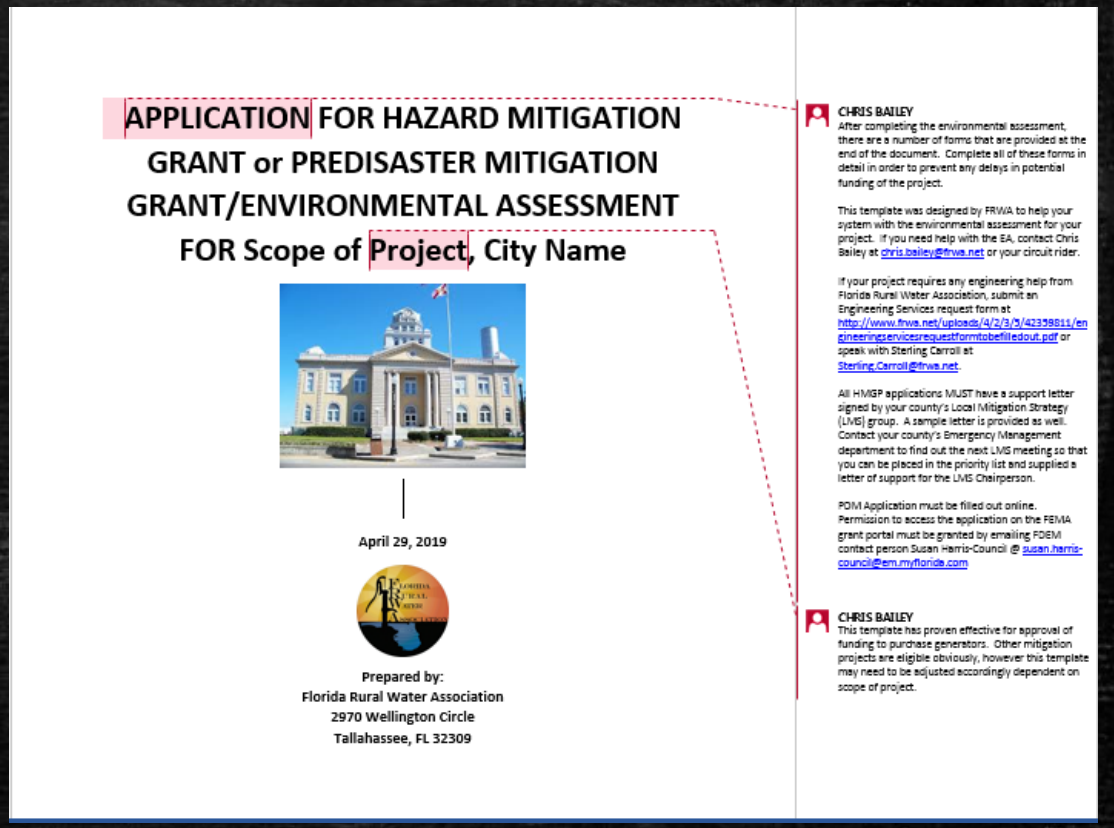
- Pre-Disaster Mitigation Grant:
  - Online application generally opens in September and closes late Oct-early November
- National annual competitive fund to mitigate natural disasters ***before*** an incident
- Must hold FEMA approved PDM Plan
- Up to $4 million per project **max** Federal
- 75% Fed Share – 25% local match (cash/soft/ in kind)
- Projects must go through a comprehensive environmental review and be completed 3 years after sub award is awarded.
- https://www.floridadisaster.org/dem/mitigation/pre-disaster-mitigation-grant-program/

Hazard Mitigation Grant Program

- Paper application submitted directly to state Emergency Management
- Also known as 404 Mitigation
- Competitively funded against other mitigation projects in the state. Only available after Presidentially declared natural disaster.
- Can be used throughout the state for NON-DAMAGED FACILITIES for the purpose of hazard mitigation
- Can potentially be combined with 406 mitigation funding
- Usually a 1 year application period from the date the disaster was declared.
- MUST be accompanied by letter of support from Local Mitigation Strategy (LMS) group
- https://www.floridadisaster.org/dem/mitigation/hazard-mitigation-grant-program/

FRWA Mitigation Grant/Environmental Assessment Template

- The purpose of this template is to provide a narrative that can be attached to your HMGP/PDM application. Information contained within the template can be copy/pasted into the appropriate sections of the application, whether it is online via PDM or on paper via HMGP.
  - Some sections have a great amount of detail included in the descriptions and the application boxes are sometimes limited on space, so what you write here may need to be condensed for the actual application, however it is still recommended to go into great detail in here since it can be referenced back to.
  - Completion of this template should make filling out the applications easier.
  - Once you have completed the applications, there may still be questions that FDEM will email you. Referencing back to the template or updating it as needed is a simple solution
- For PDM Application: Contact state DEM to grant access to the application on FEMA grant portal.
- For HMGP Application: Forms and instructions will be placed on state DEM website after storm. State usually holds trainings in properly filling out application in affected areas.



APPLICATION FOR HAZARD MITIGATION GRANT or PREDISASTER MITIGATION GRANT/ENVIRONMENTAL ASSESSMENT FOR Scope of Project, City Name

April 29, 2019

Prepared by:
Florida Rural Water Association
2970 Wellington Circle
Tallahassee, FL 32309

CHRIS BAILEY
After completing the environmental assessment, there are a number of forms that are provided at the end of the document. Complete all of these forms in detail in order to prevent any delays in potential funding of the project.

This template was designed by FRWA to help your system with the environmental assessment for your project. If you need help with the EA, contact Chris Bailey at chris.bailey@frwa.net or your circuit rider.

If your project requires any engineering help from Florida Rural Water Association, submit an Engineering Services request form at http://www.frwa.net/uploads/4/2/3/5/42359811/engineeringservicesrequestformtobefilledout.pdf or speak with Sterling Carroll at Sterling.Carroll@frwa.net.

All HMGP applications MUST have a support letter signed by your county's Local Mitigation Strategy (LMS) group. A sample letter is provided as well. Contact your county's Emergency Management department to find out the next LMS meeting so that you can be placed in the priority list and supplied a letter of support for the LMS Chairperson.

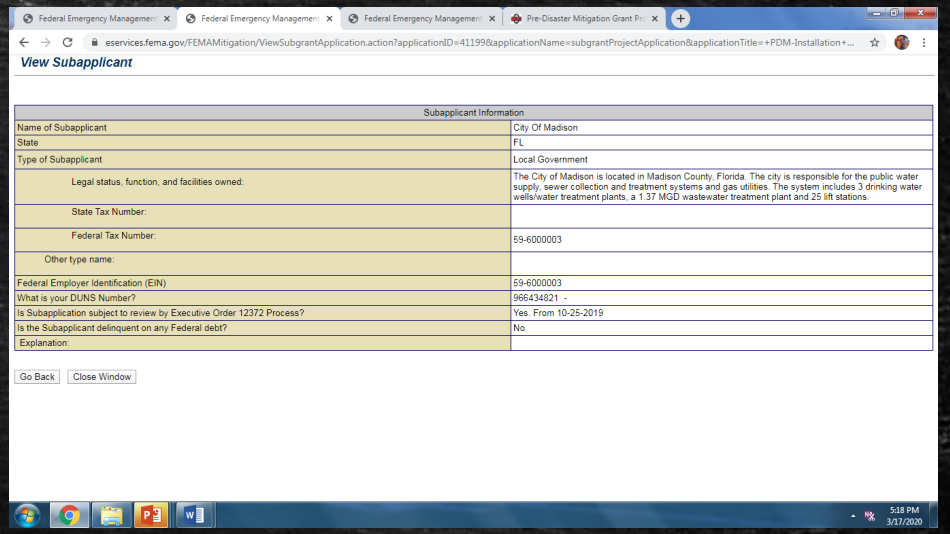
PDM Application must be filled out online. Permission to access the application on the FEMA grant portal must be granted by emailing FDEM contact person Susan Harris-Council @ susan.harris-council@em.myflorida.com

CHRIS BAILEY
This template has proven effective for approval of funding to purchase generators. Other mitigation projects are eligible obviously, however this template may need to be adjusted accordingly dependent on scope of project.

Applicant Information

- Applicant information provides identifying information to FEMA.
- This information is not contained within the template, however information such as your DUNs and Federal Tax ID can be acquired through city hall.
- Other Info such as congressional district, FIPS #, NFIP #, etc can be acquired online.
- Contact info is also contained within section. Determine best contact person to deal with the multiple requests from DEM or FEMA you will receive after submittal.
- Majority of the remainder of the application can be derived from the FRWA template.

PDM

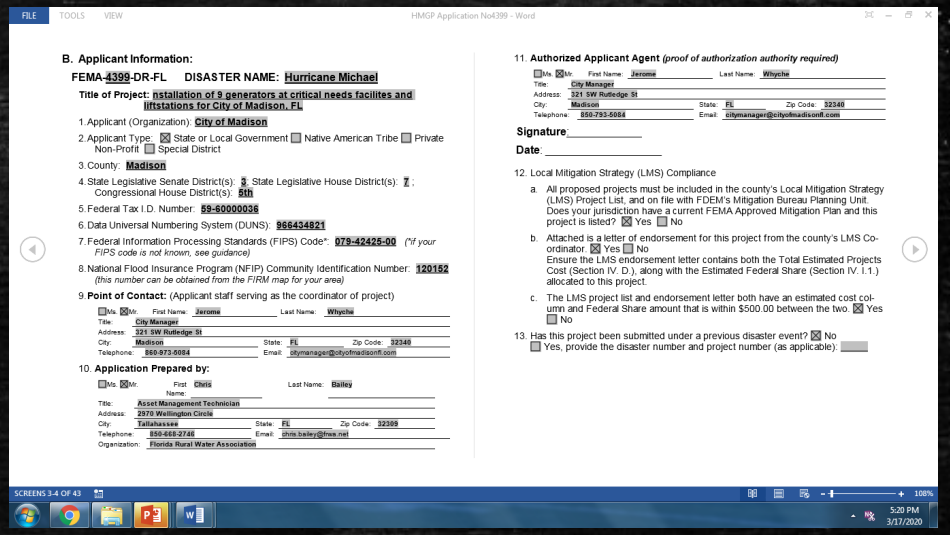


View Subapplicant

Subapplicant Information	
Name of Subapplicant	City Of Madison
State	FL
Type of Subapplicant	Local Government
Legal status, function, and facilities owned:	The City of Madison is located in Madison County, Florida. The city is responsible for the public water supply, sewer collection and treatment systems and gas utilities. The system includes 3 drinking water wells/water treatment plants, a 1.37 MGD wastewater treatment plant and 25 lift stations.
State Tax Number:	
Federal Tax Number:	59-6000003
Other type name:	
Federal Employer Identification (EIN)	59-6000003
What is your DUNS Number?	966434821 -
Is Subapplication subject to review by Executive Order 12372 Process?	Yes. From 10-25-2019
Is the Subapplicant delinquent on any Federal debt?	No
Explanation:	

Go Back | Close Window

HMGP



B. Applicant Information:

FEMA-4399-DR-FL DISASTER NAME: Hurricane Michael

Title of Project: Installation of 9 generators at critical needs facilites and liftstations for City of Madison, FL

1. Applicant (Organization): City of Madison
2. Applicant Type: ☒ State or Local Government ☐ Native American Tribe ☐ Private Non-Profit ☐ Special District
3. County: Madison
4. State Legislative Senate District(s): 3; State Legislative House District(s): 7; Congressional House District(s): 5th
5. Federal Tax I.D. Number: 59-60000036
6. Data Universal Numbering System (DUNS): 966434821
7. Federal Information Processing Standards (FIPS) Code*: 079-42425-00 *(*if your FIPS code is not known, see guidance)*
8. National Flood Insurance Program (NFIP) Community Identification Number: 120152 *(this number can be obtained from the FIRM map for your area)*
9. **Point of Contact:** (Applicant staff serving as the coordinator of project)

☐Ms. ☒Mr. First Name: Jerome Last Name: Whyche
Title: City Manager
Address: 321 SW Rutledge St
City: Madison State: FL Zip Code: 32340
Telephone: 869-973-5084 Email: citymanager@cityofmadisonfl.com

10. **Application Prepared by:**

☐Ms. ☒Mr. First Name: Chris Last Name: Bailey
Title: Asset Management Technician
Address: 2970 Wellington Circle
City: Tallahassee State: FL Zip Code: 32309
Telephone: 850-668-2746 Email: chris.bailey@frwa.net
Organization: Florida Rural Water Association

11. **Authorized Applicant Agent** *(proof of authorization authority required)*

☐Ms. ☒Mr. First Name: Jerome Last Name: Whyche
Title: City Manager
Address: 321 SW Rutledge St
City: Madison State: FL Zip Code: 32340
Telephone: 850-793-5084 Email: citymanager@cityofmadisonfl.com

Signature:_____

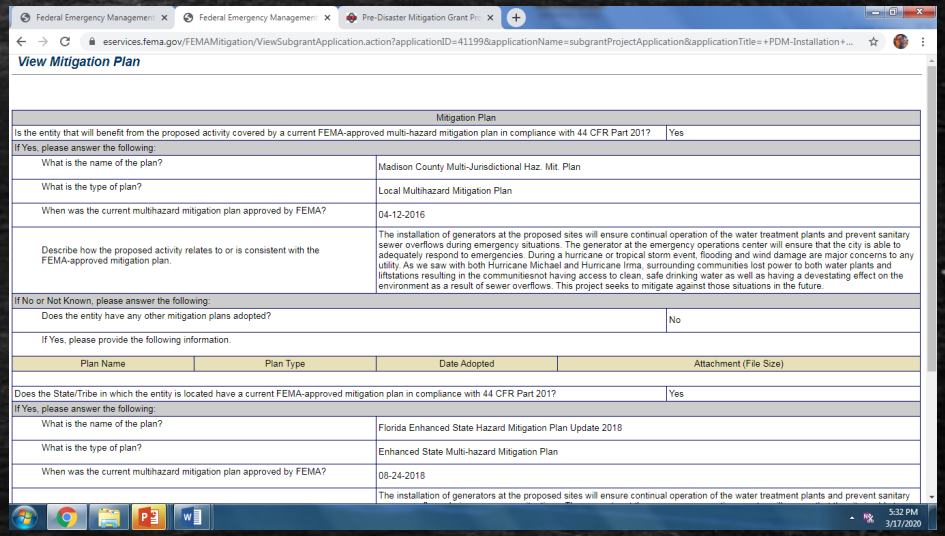
Date:_____

12. Local Mitigation Strategy (LMS) Compliance
    a. All proposed projects must be included in the county's Local Mitigation Strategy (LMS) Project List, and on file with FDEM's Mitigation Bureau Planning Unit. Does your jurisdiction have a current FEMA Approved Mitigation Plan and this project is listed? ☒ Yes ☐ No
    b. Attached is a letter of endorsement for this project from the county's LMS Coordinator. ☒ Yes ☐ No
    Ensure the LMS endorsement letter contains both the Total Estimated Projects Cost (Section IV. D.), along with the Estimated Federal Share (Section IV. I.1.) allocated to this project.
    c. The LMS project list and endorsement letter both have an estimated cost column and Federal Share amount that is within $500.00 between the two. ☒ Yes ☐ No
13. Has this project been submitted under a previous disaster event? ☒ No ☐ Yes, provide the disaster number and project number (as applicable):

Mitigation Plan

- Applicants must be covered by FEMA approved Hazard Mitigation Plan
- In PDM online application, information is required detailing name of plan and how your project fits into plan.
- In HMGP application, this information is not required, however an endorsement letter from your county's LMS group is required.

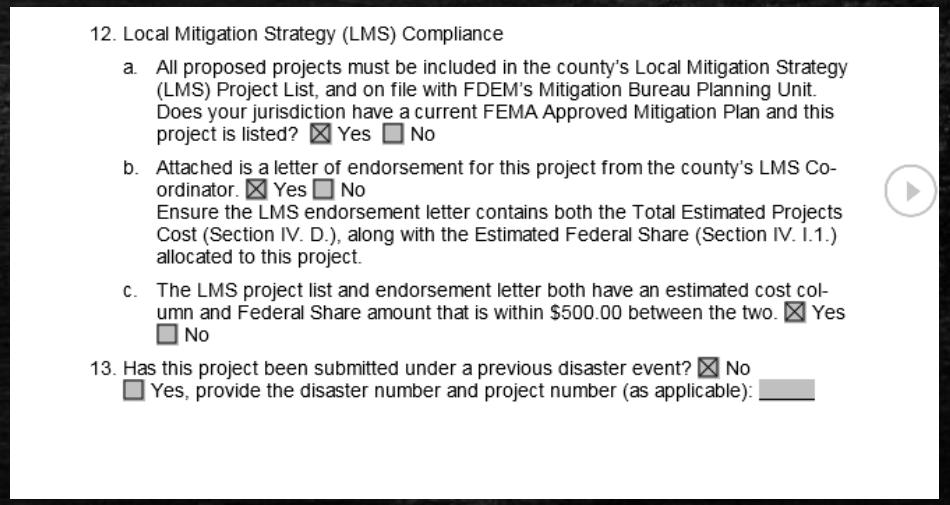
PDM



View Mitigation Plan

Mitigation Plan			
Is the entity that will benefit from the proposed activity covered by a current FEMA-approved multi-hazard mitigation plan in compliance with 44 CFR Part 201?	Yes		
If Yes, please answer the following:			
What is the name of the plan?	Madison County Multi-Jurisdictional Haz. Mit. Plan		
What is the type of plan?	Local Multihazard Mitigation Plan		
When was the current multihazard mitigation plan approved by FEMA?	04-12-2016		
Describe how the proposed activity relates to or is consistent with the FEMA-approved mitigation plan.	The installation of generators at the proposed sites will ensure continual operation of the water treatment plants and prevent sanitary sewer overflows during emergency situations. The generator at the emergency operations center will ensure that the city is able to adequately respond to emergencies. During a hurricane or tropical storm event, flooding and wind damage are major concerns to any utility. As we saw with both Hurricane Michael and Hurricane Irma, surrounding communities lost power to both water plants and liftstations resulting in the communitiesnot having access to clean, safe drinking water as well as having a devestating effect on the environment as a result of sewer overflows. This project seeks to mitigate against those situations in the future.		
If No or Not Known, please answer the following:			
Does the entity have any other mitigation plans adopted?	No		
If Yes, please provide the following information.			
Plan Name	Plan Type	Date Adopted	Attachment (File Size)
Does the State/Tribe in which the entity is located have a current FEMA-approved mitigation plan in compliance with 44 CFR Part 201?	Yes		
If Yes, please answer the following:			
What is the name of the plan?	Florida Enhanced State Hazard Mitigation Plan Update 2018		
What is the type of plan?	Enhanced State Multi-hazard Mitigation Plan		
When was the current multihazard mitigation plan approved by FEMA?	08-24-2018		
	The installation of generators at the proposed sites will ensure continual operation of the water treatment plants and prevent sanitary		

HMGP



12. Local Mitigation Strategy (LMS) Compliance

a. All proposed projects must be included in the county's Local Mitigation Strategy (LMS) Project List, and on file with FDEM's Mitigation Bureau Planning Unit. Does your jurisdiction have a current FEMA Approved Mitigation Plan and this project is listed? ☒ Yes ☐ No

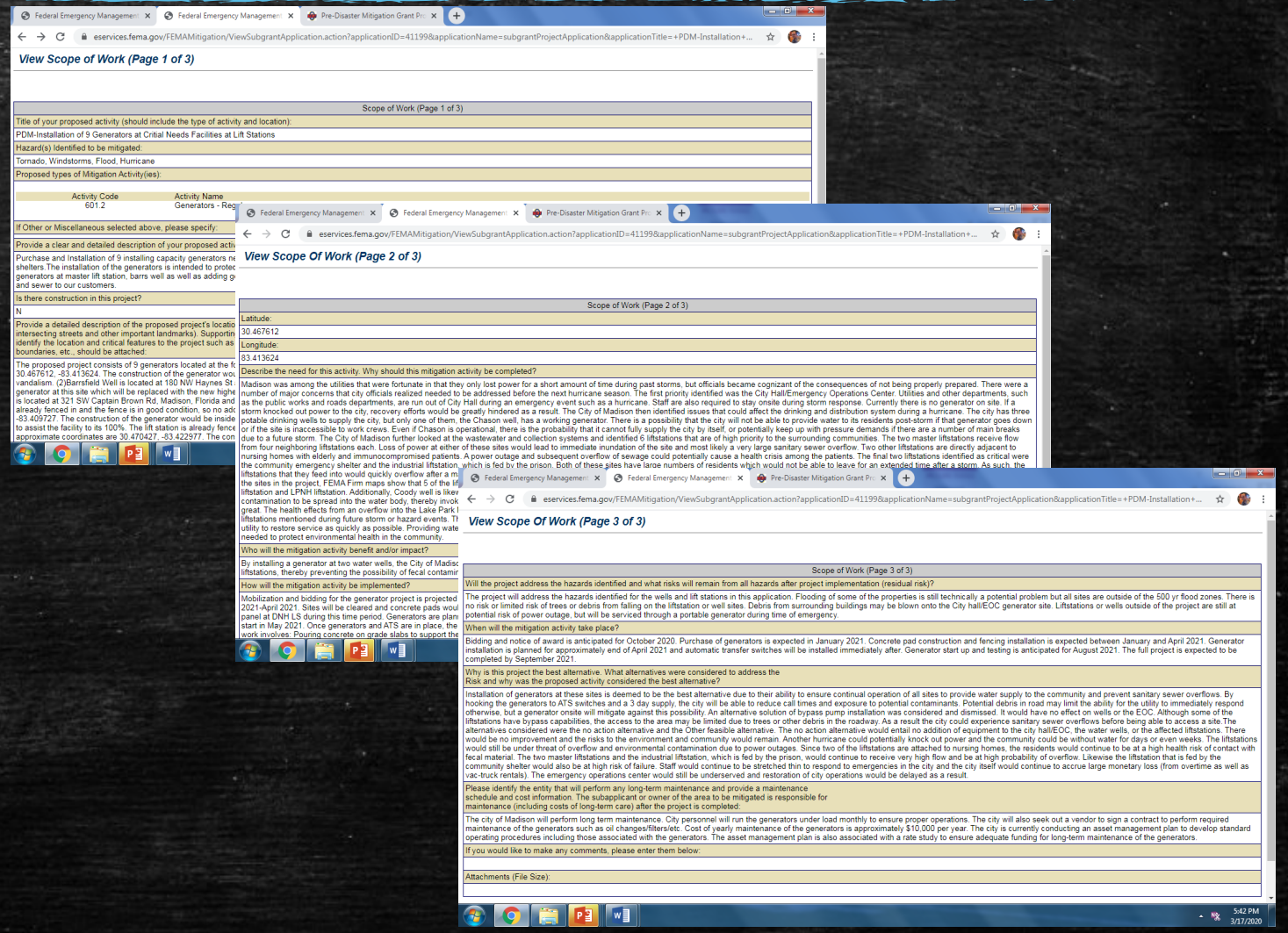
b. Attached is a letter of endorsement for this project from the county's LMS Co-ordinator. ☒ Yes ☐ No
Ensure the LMS endorsement letter contains both the Total Estimated Projects Cost (Section IV. D.), along with the Estimated Federal Share (Section IV. I.1.) allocated to this project.

c. The LMS project list and endorsement letter both have an estimated cost column and Federal Share amount that is within $500.00 between the two. ☒ Yes ☐ No

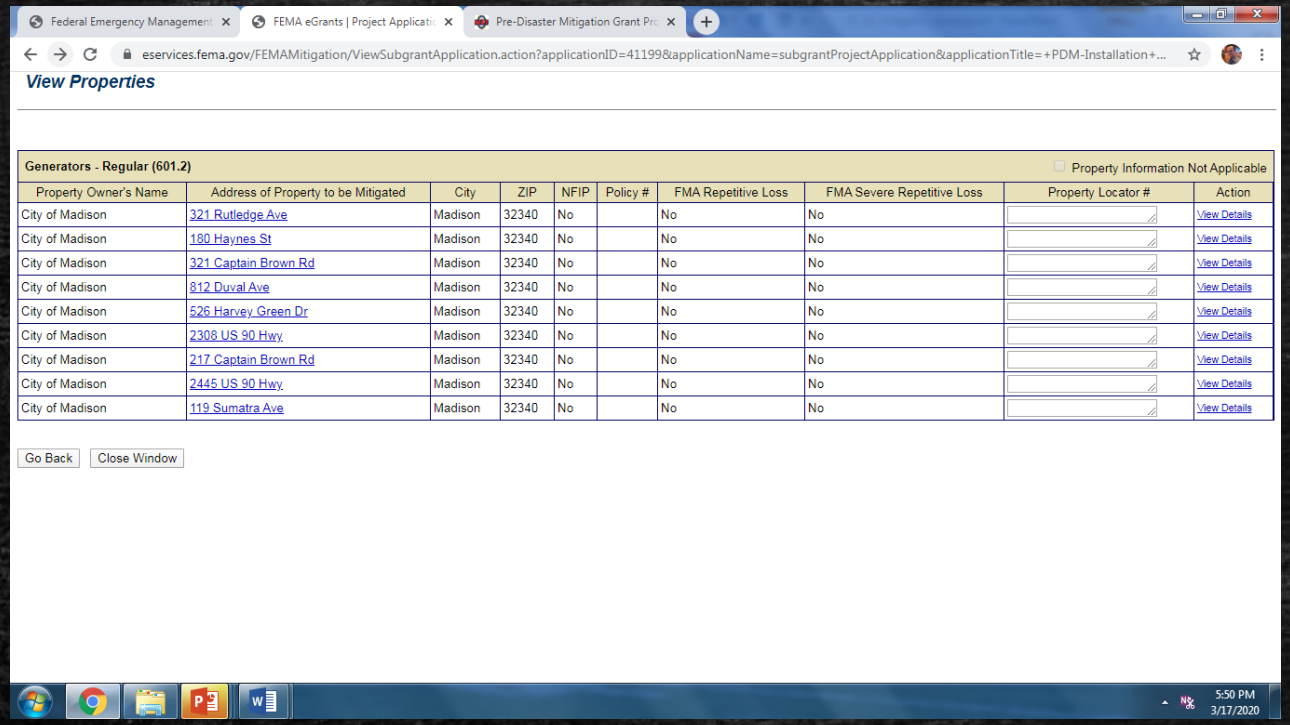
13. Has this project been submitted under a previous disaster event? ☒ No
☐ Yes, provide the disaster number and project number (as applicable): _____

Scope of Work-PDM Application

- PDM Application:
  - **Page 1/3: Title of Proposed Activity, hazards to be mitigated against, Mitigation activities (e.g Generators-Activity code 601.2), Detailed description of activity and location**
  - **Page 2/3: Describe need for the activity, who it will benefit, how it will be implemented and how it is technically feasible.**
  - **Page 3/3: When activity will take place, why the project is the best alternative**
- HMGP Application:
  - **Describe the existing problems, type of protection project will provide, and scope of work.**
- Corresponds to Section 1 and 2 of template



Properties



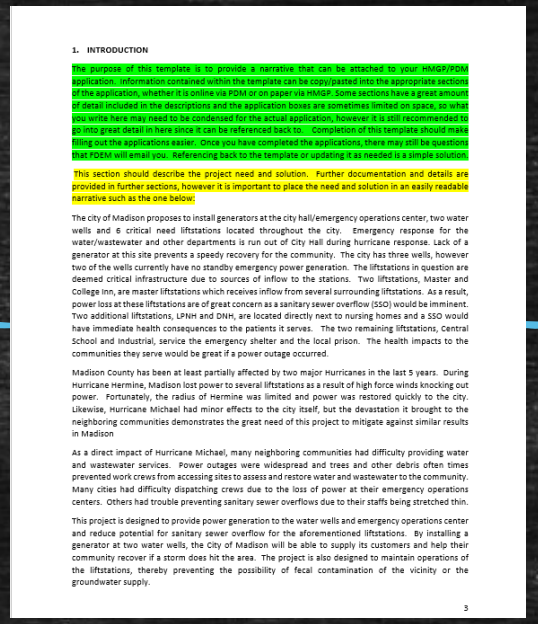
- On PDM application, each property will need to be detailed including address, coordinates, owner, if it has had repetitive loss, etc.
- Properties section on HMGP requires addresses and coordinates
- Information can be copy/pasted from FRWA template section 1 as needed.

FRWA Template-Section 1

- Introduction
  - This section should describe the project need and solution. Additional documentation and details are provided in further sections, however it is important to place the need and solution in an easily readable narrative immediately.
- Project Locations
  - Details of each site including GPS coordinates, reason for project inclusion, imagery maps, topo maps and at least 4 pics of each site.

Figure 2 Project location from each direction

7



1. INTRODUCTION

The purpose of this template is to provide a narrative that can be attached to your HMGP/PDM application. Information contained within the template can be copy/pasted into the appropriate sections of the application, whether it is online via PDM or on paper via HMGP. Some sections have a great amount of detail included in the descriptions and the application boxes are sometimes limited on space, so what you write here may need to be condensed for the actual application, however it is still recommended to go into great detail in here since it can be referenced back to. Completion of this template should make filling out the applications easier. Once you have completed the applications, there may still be questions that FDEM will email you. Referencing back to the template or updating it as needed is a simple solution.

This section should describe the project need and solution. Further documentation and details are provided in further sections, however it is important to place the need and solution in an easily readable narrative such as the one below:

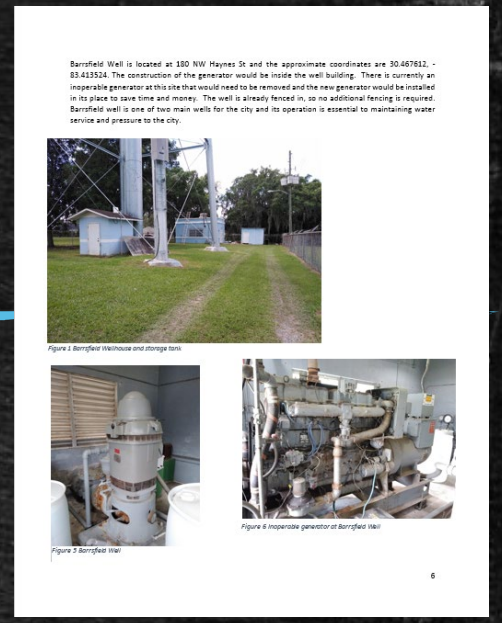
The city of Madison proposes to install generators at the city hall/emergency operations center, two water wells and 6 critical need liftstations located throughout the city. Emergency response for the water/wastewater and other departments is run out of City Hall during hurricane response. Lack of a generator at this site prevents a speedy recovery for the community. The city has three wells, however two of the wells currently have no standby emergency power generation. The liftstations in question are deemed critical infrastructure due to sources of inflow to the stations. Two liftstations, Master and College Inn, are master liftstations which receives inflow from several surrounding liftstations. As a result, power loss at these liftstations are of great concern as a sanitary sewer overflow (SSO) would be imminent. Two additional liftstations, LPNH and DNH, are located directly next to nursing homes and a SSO would have immediate health consequences to the patients it serves. The two remaining liftstations, Central School and Industrial, service the emergency shelter and the local prison. The health impacts to the communities they serve would be great if a power outage occurred.

Madison County has been at least partially affected by two major Hurricanes in the last 5 years. During Hurricane Hermine, Madison lost power to several liftstations as a result of high force winds knocking out power. Fortunately, the radius of Hermine was limited and power was restored quickly to the city. Likewise, Hurricane Michael had minor effects to the city itself, but the devastation it brought to the neighboring communities demonstrates the great need of this project to mitigate against similar results in Madison

As a direct impact of Hurricane Michael, many neighboring communities had difficulty providing water and wastewater services. Power outages were widespread and trees and other debris often times prevented work crews from accessing sites to assess and restore water and wastewater to the community. Many cities had difficulty dispatching crews due to the loss of power at their emergency operations centers. Others had trouble preventing sanitary sewer overflows due to their staffs being stretched thin.

This project is designed to provide power generation to the water wells and emergency operations center and reduce potential for sanitary sewer overflow for the aforementioned liftstations. By installing a generator at two water wells, the City of Madison will be able to supply its customers and help their community recover if a storm does hit the area. The project is also designed to maintain operations of the liftstations, thereby preventing the possibility of fecal contamination of the vicinity or the groundwater supply.

3



Barrsfield Well is located at 180 NW Haynes St and the approximate coordinates are 30.467612, -83.413524. The construction of the generator would be inside the well building. There is currently an inoperable generator at this site that would need to be removed and the new generator would be installed in its place to save time and money. The well is already fenced in, so no additional fencing is required. Barrsfield well is one of two main wells for the city and its operation is essential to maintaining water service and pressure to the city.

Figure 1 Barrsfield Wellhouse and storage tank

Figure 5 Barrsfield Well

Figure 6 Inoperable generator at Barrsfield Well

6

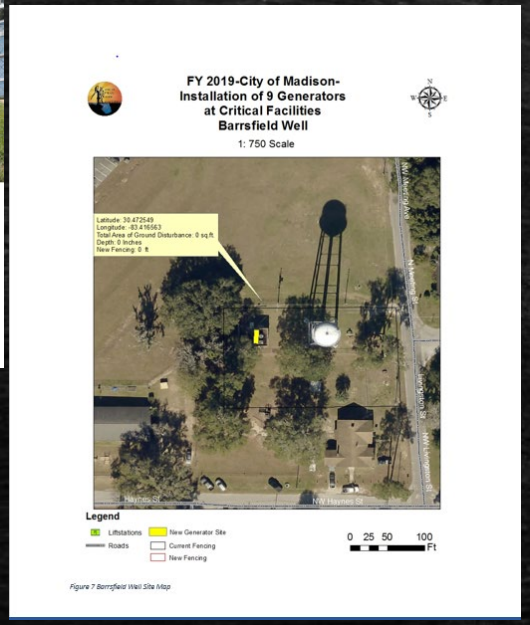


Figure 7 Barrsfield Well Site Map

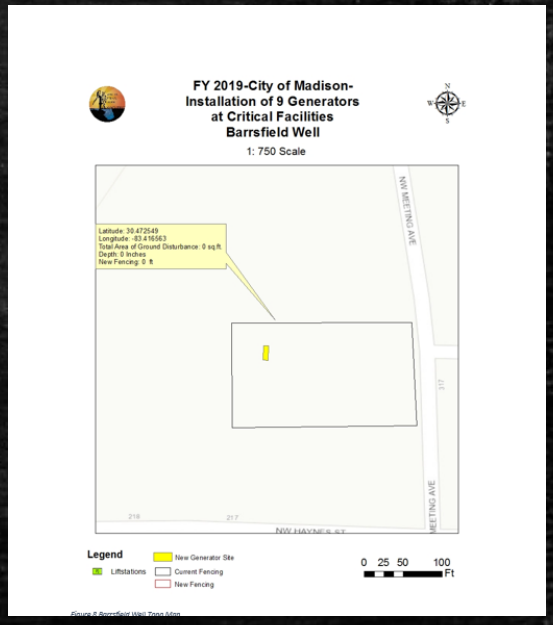


Figure 8 Barrsfield Well Topo Map

FRWA Template-Section 2

- Purpose and Need
  - This section should go into greater detail of the issue that the grant would solve.
  - In the sample template, the city was concerned with the effects of Hurricane Michael on surrounding communities and examined their community for shortcomings it wished to solve.
  - Going into a lot of detail helps to paint the picture as to why this project is needed and how it will protect the environment and the consumers of your utility.

2. Purpose and Need

This portion of the section should go into greater detail of the issue that the grant would solve. The sample city below was concerned after seeing the effects Hurricane Michael

During significant hurricane events like Hurricanes Michael, power is oftentimes lost to utility assets in the affected region. In a storm as large as Hurricane Michael, even areas that were not directly impacted from the eyewall of the storm lost power due to sustained winds throughout the state. Although Madison County did not have a direct impact from the storm, the severity of the storm in neighboring counties demonstrates the importance of mitigating the City of Madison against similar incidents in the future. Customers throughout the panhandle lost power for sustained periods of time. In nearby Gadsden County during Michael, almost 46,000 customers in the county lost power and areas weren't restored for almost two months. Since Hurricane Michael impacted such a large area and since devastation was widespread, power restoration crews were stretched thin and unable to restore service to the liftstation for a significant amount of time. Furthermore, high-force winds oftentimes knock down several trees making roads impassable to utility crews trying to restore service.

The City of Madison was among the utilities that were fortunate in that they only lost power for a short amount of time, however officials at the City became cognizant of the consequences of not being properly prepared. There were a number of major concerns that city officials realized needed to be addressed before the next hurricane season. The first priority identified was the City Hall/Emergency Operations Center. Utilities and other departments, such as the public works and roads departments, are run out of City Hall during an emergency event such as a hurricane. Staff are also required to stay onsite during storm response. Currently there is no generator on site. If a storm knocked out power to the city, recovery efforts would be greatly hindered as a result.

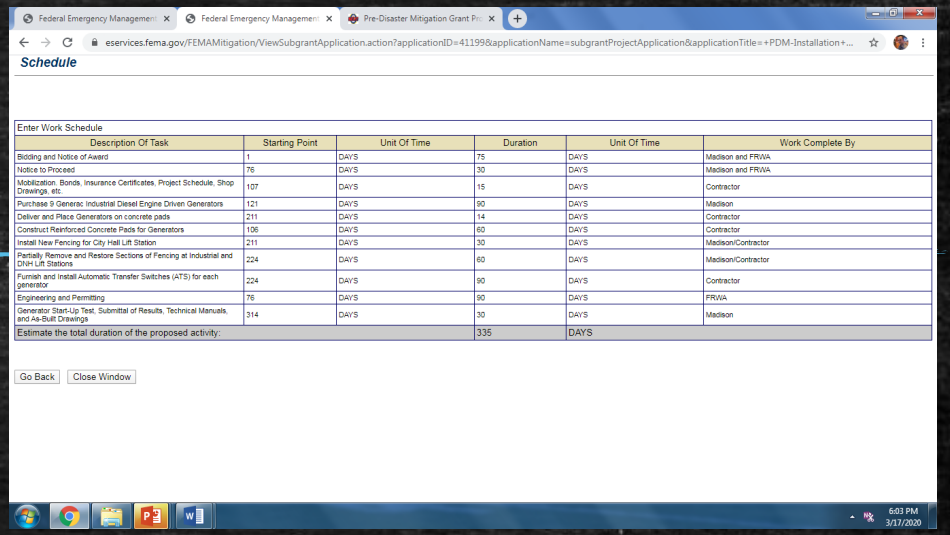
The City of Madison then identified issues that could affect the drinking and distribution system during a hurricane. The city has three potable drinking wells to supply the city, but only one of them, the Chason well, has a working generator. There is a possibility that the city will not be able to provide water to its residents post-storm if that generator goes down or if the site is inaccessible to work crews. Even if Chason is operational, there is the probability that it cannot fully supply the city by itself, or potentially keep up with pressure demands if there are a number of main breaks due to a future storm.

The City of Madison further looked at the wastewater and collection systems and identified 6 liftstations that are of high priority to the surrounding communities. The two master liftstations receive flow from four neighboring liftstations each. Loss of power at either of these sites would lead to immediate inundation of the site and most likely a very large sanitary sewer overflow. Two other liftstations are directly adjacent to nursing homes with elderly and immunocompromised patients. A power outage and subsequent overflow of sewage could potentially cause a health crisis among the patients. The final two liftstations identified as critical were the community emergency shelter and the industrial liftstation, which is fed by the prison. Both of these sites have large numbers of residents which would not be able to leave for an extended time after a storm. As such, the liftstations that they feed into would quickly overflow after a major hurricane.

Additionally, Hurricane Michael brought large amounts of rain to the area increasing the likelihood of a flood. Although this rain event did not flood the sites in the project, FEMA Firm maps show that 5 of the liftstation sites are within 250 feet of a Zone A special flood hazard area. These sites include both master

Schedule

- In PDM application you will enter a detailed schedule including project activity, starting point, duration, and who will complete the work.
- The corresponding section in the HMGP application is called "major milestones" and only require the milestone and number of months to complete, however, I would recommend putting the complete schedule in the scope of work.
- Corresponds to section 3 of FRWA template



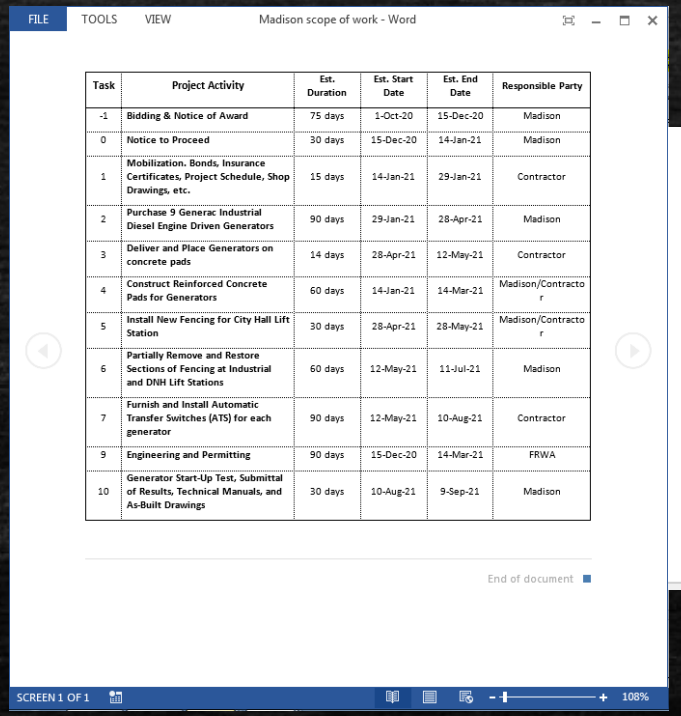
Schedule

Enter Work Schedule

Description Of Task	Starting Point	Unit Of Time	Duration	Unit Of Time	Work Complete By
Bidding and Notice of Award	1	DAYS	75	DAYS	Madison and FRWA
Notice to Proceed	76	DAYS	30	DAYS	Madison and FRWA
Mobilization. Bonds, Insurance Certificates, Project Schedule, Shop Drawings, etc.	107	DAYS	15	DAYS	Contractor
Purchase 9 Generac Industrial Diesel Engine Driven Generators	121	DAYS	90	DAYS	Madison
Deliver and Place Generators on concrete pads	211	DAYS	14	DAYS	Contractor
Construct Reinforced Concrete Pads for Generators	106	DAYS	60	DAYS	Contractor
Install New Fencing for City Hall Lift Station	211	DAYS	30	DAYS	Madison/Contractor
Partially Remove and Restore Sections of Fencing at Industrial and DNH Lift Stations	224	DAYS	60	DAYS	Madison/Contractor
Furnish and Install Automatic Transfer Switches (ATS) for each generator	224	DAYS	90	DAYS	Contractor
Engineering and Permitting	76	DAYS	90	DAYS	FRWA
Generator Start-Up Test, Submittal of Results, Technical Manuals, and As-Built Drawings	314	DAYS	30	DAYS	Madison
Estimate the total duration of the proposed activity:			335	DAYS	

Go Back | Close Window

PDM

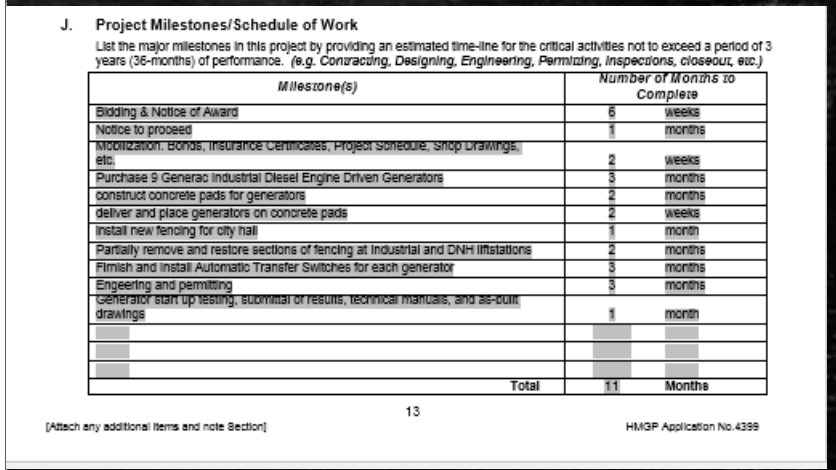


FILE TOOLS VIEW Madison scope of work - Word

Task	Project Activity	Est. Duration	Est. Start Date	Est. End Date	Responsible Party
-1	Bidding & Notice of Award	75 days	1-Oct-20	15-Dec-20	Madison
0	Notice to Proceed	30 days	15-Dec-20	14-Jan-21	Madison
1	Mobilization. Bonds, Insurance Certificates, Project Schedule, Shop Drawings, etc.	15 days	14-Jan-21	29-Jan-21	Contractor
2	Purchase 9 Generac Industrial Diesel Engine Driven Generators	90 days	29-Jan-21	28-Apr-21	Madison
3	Deliver and Place Generators on concrete pads	14 days	28-Apr-21	12-May-21	Contractor
4	Construct Reinforced Concrete Pads for Generators	60 days	14-Jan-21	14-Mar-21	Madison/Contractor
5	Install New Fencing for City Hall Lift Station	30 days	28-Apr-21	28-May-21	Madison/Contractor
6	Partially Remove and Restore Sections of Fencing at Industrial and DNH Lift Stations	60 days	12-May-21	11-Jul-21	Madison
7	Furnish and Install Automatic Transfer Switches (ATS) for each generator	90 days	12-May-21	10-Aug-21	Contractor
9	Engineering and Permitting	90 days	15-Dec-20	14-Mar-21	FRWA
10	Generator Start-Up Test, Submittal of Results, Technical Manuals, and As-Built Drawings	30 days	10-Aug-21	9-Sep-21	Madison

End of document

SCREEN 1 OF 1 108%



J. **Project Milestones/Schedule of Work**

List the major milestones in this project by providing an estimated time-line for the critical activities not to exceed a period of 3 years (36-months) of performance. *(e.g. Contracting, Designing, Engineering, Permitting, Inspections, closeout, etc.)*

Milestone(s)	*Number of Months to Complete*
Bidding & Notice of Award	6 weeks
Notice to proceed	1 months
Mobilization. Bonds, Insurance Certificates, Project Schedule, Shop Drawings, etc.	2 weeks
Purchase 9 Generac Industrial Diesel Engine Driven Generators	3 months
construct concrete pads for generators	2 months
deliver and place generators on concrete pads	2 weeks
install new fencing for city hall	1 month
Partially remove and restore sections of fencing at industrial and DNH liftstations	2 months
Firnish and install Automatic Transfer Switches for each generator	3 months
Engeering and permitting	3 months
Generator start up testing, submittal of results, technical manuals, and as-built drawings	1 month
Total	11 Months

13

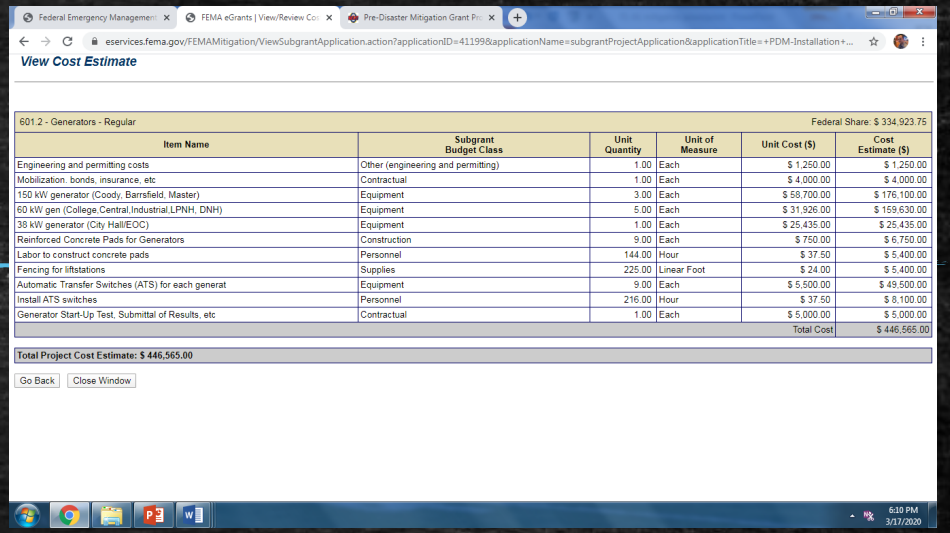
[Attach any additional items and note Section] HMGP Application No.4399

HMGP

Cost Estimate/Budget

- In both applications, you will need to provide a complete breakdown of costs associated with the project.
- For a generator project, for instance, you will want to put in concrete pads, transfer switches, fencing, etc. You'll also want to include labor.
- Include quotes where applicable but especially of big ticket items such as generators.
- Corresponds to Section 3 of FRWA template.

PDM



View Cost Estimate

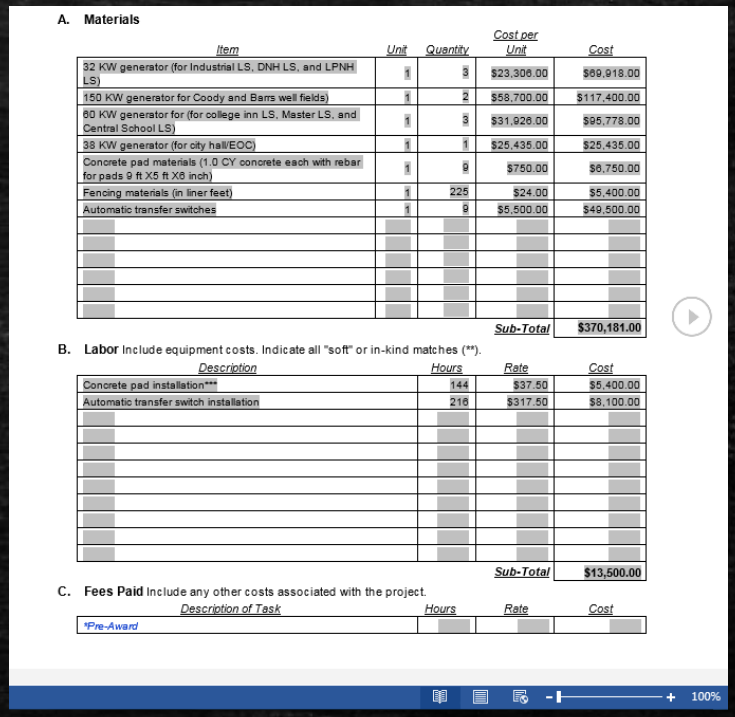
601.2 - Generators - Regular — Federal Share: $ 334,923.75

Item Name	Subgrant Budget Class	Unit Quantity	Unit of Measure	Unit Cost ($)	Cost Estimate ($)
Engineering and permitting costs	Other (engineering and permitting)	1.00	Each	$ 1,250.00	$ 1,250.00
Mobilization. bonds, insurance, etc	Contractual	1.00	Each	$ 4,000.00	$ 4,000.00
150 kW generator (Coody, Barrsfield, Master)	Equipment	3.00	Each	$ 58,700.00	$ 176,100.00
60 kW gen (College,Central,Industrial,LPNH, DNH)	Equipment	5.00	Each	$ 31,926.00	$ 159,630.00
38 kW generator (City Hall/EOC)	Equipment	1.00	Each	$ 25,435.00	$ 25,435.00
Reinforced Concrete Pads for Generators	Construction	9.00	Each	$ 750.00	$ 6,750.00
Labor to construct concrete pads	Personnel	144.00	Hour	$ 37.50	$ 5,400.00
Fencing for liftstations	Supplies	225.00	Linear Foot	$ 24.00	$ 5,400.00
Automatic Transfer Switches (ATS) for each generat	Equipment	9.00	Each	$ 5,500.00	$ 49,500.00
Install ATS switches	Personnel	216.00	Hour	$ 37.50	$ 8,100.00
Generator Start-Up Test, Submittal of Results, etc	Contractual	1.00	Each	$ 5,000.00	$ 5,000.00
				Total Cost	$ 446,565.00

Total Project Cost Estimate: $ 446,565.00

Go Back | Close Window

HMGP



A. Materials

Item	Unit	Quantity	Cost per Unit	Cost
32 KW generator (for Industrial LS, DNH LS, and LPNH LS)	1	3	$23,306.00	$69,918.00
150 KW generator for Coody and Barrs well fields)	1	2	$58,700.00	$117,400.00
60 KW generator for (for college inn LS, Master LS, and Central School LS)	1	3	$31,926.00	$95,778.00
38 KW generator (for city hall/EOC)	1	1	$25,435.00	$25,435.00
Concrete pad materials (1.0 CY concrete each with rebar for pads 9 ft X5 ft X6 inch)	1	9	$750.00	$6,750.00
Fencing materials (in liner feet)	1	225	$24.00	$5,400.00
Automatic transfer switches	1	9	$5,500.00	$49,500.00
			Sub-Total	$370,181.00

B. Labor Include equipment costs. Indicate all "soft" or in-kind matches (**).

Description	Hours	Rate	Cost
Concrete pad installation***	144	$37.50	$5,400.00
Automatic transfer switch installation	216	$317.50	$8,100.00
		Sub-Total	$13,500.00

C. Fees Paid Include any other costs associated with the project.

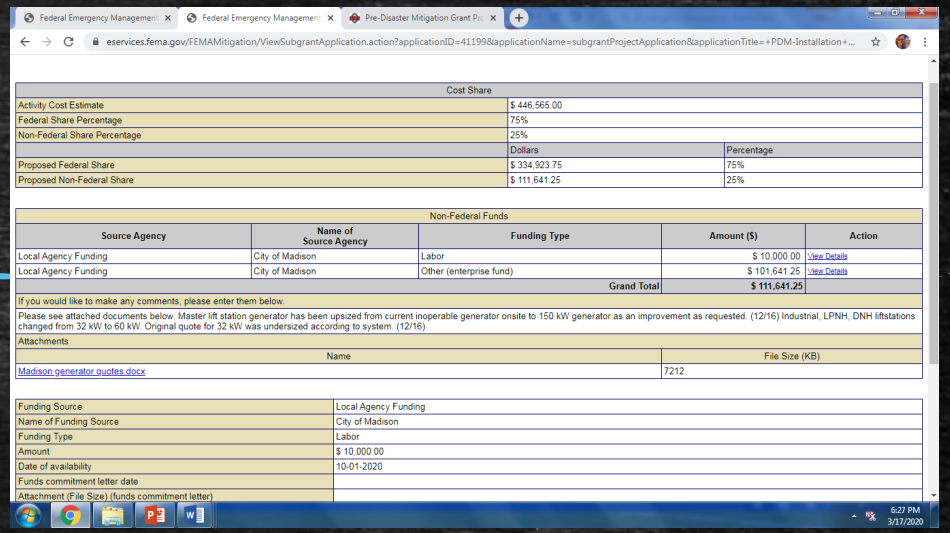
Description of Task	Hours	Rate	Cost
*Pre-Award			

100%

Cost Share

- Both PDM and HMGP are 75/25 grant/loan programs.
- The cost share breaks down the amount accordingly, but also identifies source of the city's share.
- You'll want to include a commitment letter for any potential funds that will cover the 25%.
- Some in-kind costs such as labor can also be attributed to the 25% and will be identified in this section.
- Corresponds to Section 3 of FRWA template.

PDM



Cost Share		
Activity Cost Estimate	$ 446,565.00	
Federal Share Percentage	75%	
Non-Federal Share Percentage	25%	
	Dollars	Percentage
Proposed Federal Share	$ 334,923.75	75%
Proposed Non-Federal Share	$ 111,641.25	25%

Non-Federal Funds				
Source Agency	Name of Source Agency	Funding Type	Amount ($)	Action
Local Agency Funding	City of Madison	Labor	$ 10,000.00	View Details
Local Agency Funding	City of Madison	Other (enterprise fund)	$ 101,641.25	View Details
		Grand Total	$ 111,641.25	

If you would like to make any comments, please enter them below.

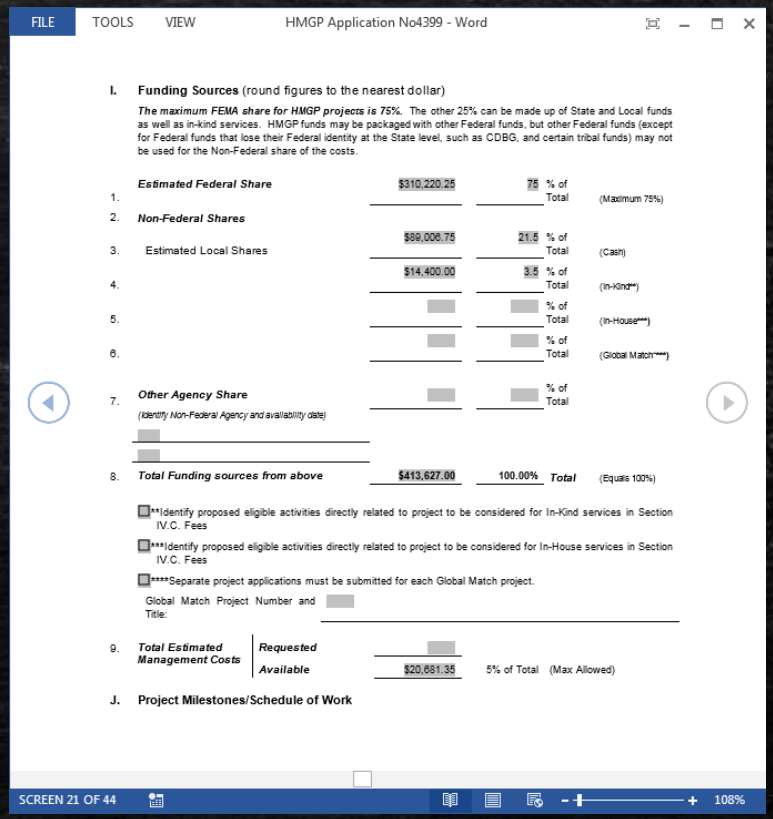
Please see attached documents below. Master lift station generator has been upsized from current inoperable generator onsite to 150 kW generator as an improvement as requested. (12/16) Industrial, LPNH, DNH liftstations changed from 32 kW to 60 kW. Original quote for 32 kW was undersized according to system. (12/16)

Attachments

Name	File Size (KB)
Madison generator quotes.docx	7212

Funding Source	Local Agency Funding
Name of Funding Source	City of Madison
Funding Type	Labor
Amount	$ 10,000.00
Date of availability	10-01-2020
Funds commitment letter date	
Attachment (File Size) (funds commitment letter)	

HMGP



FILE TOOLS VIEW HMGP Application No4399 - Word

I. Funding Sources (round figures to the nearest dollar)

The maximum FEMA share for HMGP projects is 75%. The other 25% can be made up of State and Local funds as well as in-kind services. HMGP funds may be packaged with other Federal funds, but other Federal funds (except for Federal funds that lose their Federal identity at the State level, such as CDBG, and certain tribal funds) may not be used for the Non-Federal share of the costs.

1.	***Estimated Federal Share***	$310,220.25	75 % of Total	(Maximum 75%)
2.	***Non-Federal Shares***			
3.	Estimated Local Shares	$89,006.75	21.5 % of Total	(Cash)
4.		$14,400.00	3.5 % of Total	(In-Kind**)
5.			% of Total	(In-House***)
6.			% of Total	(Global Match****)
7.	***Other Agency Share*** *(Identify Non-Federal Agency and availability date)*		% of Total	
8.	***Total Funding sources from above***	$413,627.00	100.00%	***Total*** (Equals 100%)

☐ **Identify proposed eligible activities directly related to project to be considered for In-Kind services in Section IV.C. Fees

☐ ***Identify proposed eligible activities directly related to project to be considered for In-House services in Section IV.C. Fees

☐ ****Separate project applications must be submitted for each Global Match project.

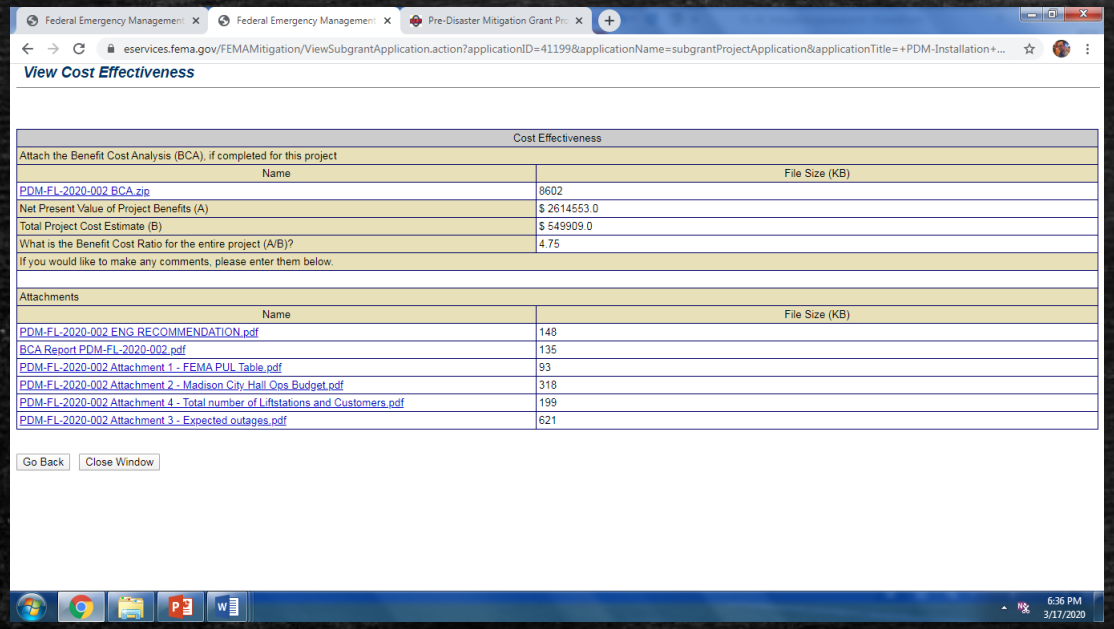
Global Match Project Number and Title:

9.	***Total Estimated Management Costs***	***Requested***		
		Available	$20,681.35	5% of Total (Max Allowed)

J. Project Milestones/Schedule of Work

SCREEN 21 OF 44 108%

Cost Effectiveness/Benefit-Cost Analysis



Federal Emergency Management | Federal Emergency Management | Pre-Disaster Mitigation Grant Pro

eservices.fema.gov/FEMAMitigation/ViewSubgrantApplication.action?applicationID=41199&applicationName=subgrantProjectApplication&applicationTitle=+PDM-Installation+...

View Cost Effectiveness

Cost Effectiveness	
Attach the Benefit Cost Analysis (BCA), if completed for this project	
Name	File Size (KB)
PDM-FL-2020-002 BCA.zip	8602
Net Present Value of Project Benefits (A)	$ 2614553.0
Total Project Cost Estimate (B)	$ 549909.0
What is the Benefit Cost Ratio for the entire project (A/B)?	4.75
If you would like to make any comments, please enter them below.	
Attachments	
Name	File Size (KB)
PDM-FL-2020-002 ENG RECOMMENDATION.pdf	148
BCA Report PDM-FL-2020-002.pdf	135
PDM-FL-2020-002 Attachment 1 - FEMA PUL Table.pdf	93
PDM-FL-2020-002 Attachment 2 - Madison City Hall Ops Budget.pdf	318
PDM-FL-2020-002 Attachment 4 - Total number of Liftstations and Customers.pdf	199
PDM-FL-2020-002 Attachment 3 - Expected outages.pdf	621

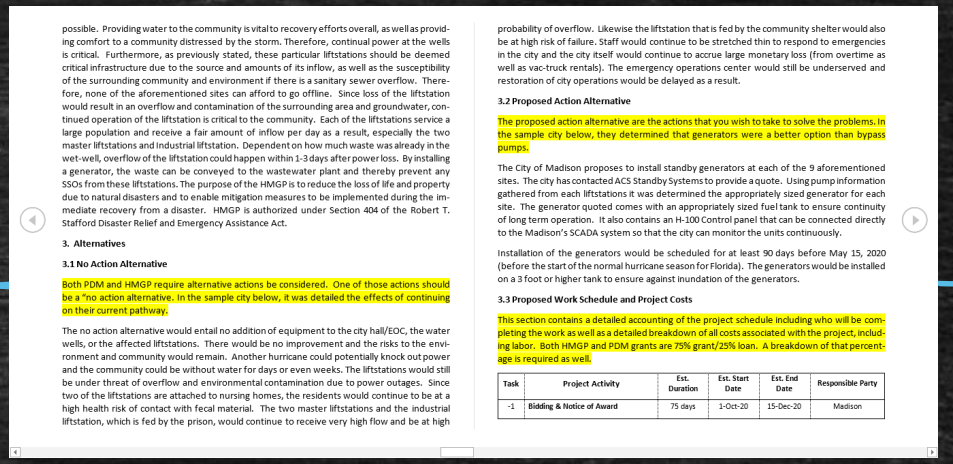
Go Back | Close Window

6:36 PM
3/17/2020

- FEMA uses the BCA analysis to determine if the project cost is worth the benefit it would provide.
- For complicated projects, an engineer would probably need to do a complete BCA
- For generator projects, FDEM may be able to complete that portion but you will need to coordinate with them and make sure it isn't delayed.
- Is not in template but standard BCA procedures are available online if you need to do it yourself.

FRWA Template- Section 3

- Alternatives
  - No action alternative-what will happen if project is not approved
  - Proposed Action Alternative-details of your project and the expected results
- Proposed Work Schedule
- Proposed Cost Estimate
  - Include quotes
- Cost share
- Alternatives considered and dismissed
  - Explain why other options may not be feasible (ex. Lift station does not have bypass capability for bypass pump)



possible. Providing water to the community is vital to recovery efforts overall, as well as providing comfort to a community distressed by the storm. Therefore, continual power at the wells is critical. Furthermore, as previously stated, these particular liftstations should be deemed critical infrastructure due to the source and amounts of its inflow, as well as the susceptibility of the surrounding community and environment if there is a sanitary sewer overflow. Therefore, none of the aforementioned sites can afford to go offline. Since loss of the liftstation would result in an overflow and contamination of the surrounding area and groundwater, continued operation of the liftstation is critical to the community. Each of the liftstations service a large population and receive a fair amount of inflow per day as a result, especially the two master liftstations and Industrial liftstation. Dependent on how much waste was already in the wet-well, overflow of the liftstation could happen within 1-3 days after power loss. By installing a generator, the waste can be conveyed to the wastewater plant and thereby prevent any SSOs from these liftstations. The purpose of the HMGP is to reduce the loss of life and property due to natural disasters and to enable mitigation measures to be implemented during the immediate recovery from a disaster. HMGP is authorized under Section 404 of the Robert T. Stafford Disaster Relief and Emergency Assistance Act.

3. Alternatives

3.1 No Action Alternative

Both PDM and HMGP require alternative actions be considered. One of those actions should be a "no action alternative. In the sample city below, it was detailed the effects of continuing on their current pathway.

The no action alternative would entail no addition of equipment to the city hall/EOC, the water wells, or the affected liftstations. There would be no improvement and the risks to the environment and community would remain. Another hurricane could potentially knock out power and the community could be without water for days or even weeks. The liftstations would still be under threat of overflow and environmental contamination due to power outages. Since two of the liftstations are attached to nursing homes, the residents would continue to be at a high health risk of contact with fecal material. The two master liftstations and the industrial liftstation, which is fed by the prison, would continue to receive very high flow and be at high probability of overflow. Likewise the liftstation that is fed by the community shelter would also be at high risk of failure. Staff would continue to be stretched thin to respond to emergencies in the city and the city itself would continue to accrue large monetary loss (from overtime as well as vac-truck rentals). The emergency operations center would still be underserved and restoration of city operations would be delayed as a result.

3.2 Proposed Action Alternative

The proposed action alternative are the actions that you wish to take to solve the problems. In the sample city below, they determined that generators were a better option than bypass pumps.

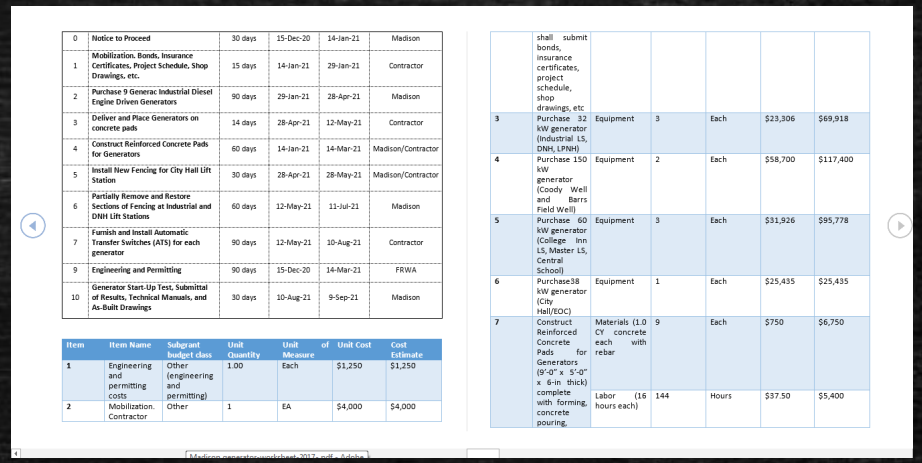
The City of Madison proposes to install standby generators at each of the 9 aforementioned sites. The city has contacted ACS Standby Systems to provide a quote. Using pump information gathered from each liftstations it was determined the appropriately sized generator for each site. The generator quoted comes with an appropriately sized fuel tank to ensure continuity of long term operation. It also contains an H-100 Control panel that can be connected directly to the Madison's SCADA system so that the city can monitor the units continuously.

Installation of the generators would be scheduled for at least 90 days before May 15, 2020 (before the start of the normal hurricane season for Florida). The generators would be installed on a 3 foot or higher tank to ensure against inundation of the generators.

3.3 Proposed Work Schedule and Project Costs

This section contains a detailed accounting of the project schedule including who will be completing the work as well as a detailed breakdown of all costs associated with the project, including labor. Both HMGP and PDM grants are 75% grant/25% loan. A breakdown of that percentage is required as well.

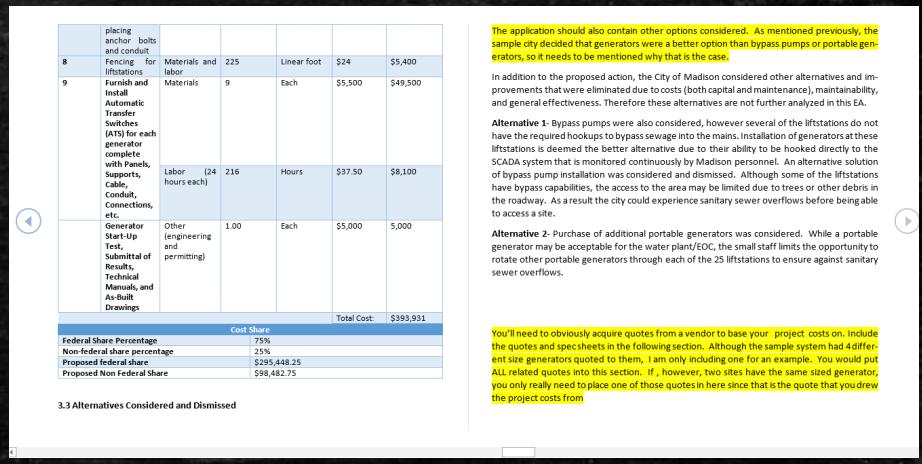
Task	Project Activity	Est. Duration	Est. Start Date	Est. End Date	Responsible Party
-1	**Bidding & Notice of Award**	75 days	1-Oct-20	15-Dec-20	Madison



0	**Notice to Proceed**	30 days	15-Dec-20	14-Jan-21	Madison
1	**Mobilization, Bonds, Insurance Certificates, Project Schedule, Shop Drawings, etc.**	15 days	14-Jan-21	29-Jan-21	Contractor
2	**Purchase 9 Generac Industrial Diesel Engine Driven Generators**	90 days	29-Jan-21	28-Apr-21	Madison
3	**Deliver and Place Generators on concrete pads**	14 days	28-Apr-21	12-May-21	Contractor
4	**Construct Reinforced Concrete Pads for Generators**	60 days	14-Jan-21	14-Mar-21	Madison/Contractor
5	**Install New Fencing for City Hall Lift Station**	30 days	28-Apr-21	28-May-21	Madison/Contractor
6	**Partially Remove and Restore Sections of Fencing at Industrial and DNH Lift Stations**	60 days	12-May-21	11-Jul-21	Madison
7	**Furnish and Install Automatic Transfer Switches (ATS) for each generator**	90 days	12-May-21	10-Aug-21	Contractor
9	**Engineering and Permitting**	90 days	15-Dec-20	14-Mar-21	FRWA
10	**Generator Start-Up Test, Submittal of Results, Technical Manuals, and As-Built Drawings**	30 days	10-Aug-21	9-Sep-21	Madison

Item	Item Name	Subgrant budget class	Unit Quantity	Unit Measure	of Unit Cost	Cost Estimate
1	Engineering and permitting costs	Other (engineering and permitting)	1.00	Each	$1,250	$1,250
2	Mobilization. Contractor	Other	1	EA	$4,000	$4,000

	shall submit bonds, insurance certificates, project schedule, shop drawings, etc					
3	Purchase 32 kW generator (Industrial LS, DNH, LPNH)	Equipment	3	Each	$23,306	$69,918
4	Purchase 150 kW generator (Coody Well and Barrs Field Well)	Equipment	2	Each	$58,700	$117,400
5	Purchase 60 kW generator (College Inn LS, Master LS, Central School)	Equipment	3	Each	$31,926	$95,778
6	Purchase38 kW generator (City Hall/EOC)	Equipment	1	Each	$25,435	$25,435
7	Construct Reinforced Concrete Pads for Generators (9'-0" x 5'-0" x 6-in thick) complete with forming, concrete pouring,	Materials (1.0 CY concrete each with rebar	9	Each	$750	$6,750
		Labor (16 hours each)	144	Hours	$37.50	$5,400



	placing anchor bolts and conduit					
8	Fencing for liftstations	Materials and labor	225	Linear foot	$24	$5,400
9	**Furnish and Install Automatic Transfer Switches (ATS) for each generator complete with Panels, Supports, Cable, Conduit, Connections, etc.**	Materials	9	Each	$5,500	$49,500
		Labor (24 hours each)	216	Hours	$37.50	$8,100
	Generator Start-Up Test, Submittal of Results, Technical Manuals, and As-Built Drawings	Other (engineering and permitting)	1.00	Each	$5,000	5,000
					Total Cost:	$393,931

Cost Share	
Federal Share Percentage	75%
Non-federal share percentage	25%
Proposed federal share	$295,448.25
Proposed Non Federal Share	$98,482.75

3.3 Alternatives Considered and Dismissed

The application should also contain other options considered. As mentioned previously, the sample city decided that generators were a better option than bypass pumps or portable generators, so it needs to be mentioned why that is the case.

In addition to the proposed action, the City of Madison considered other alternatives and improvements that were eliminated due to costs (both capital and maintenance), maintainability, and general effectiveness. Therefore these alternatives are not further analyzed in this EA.

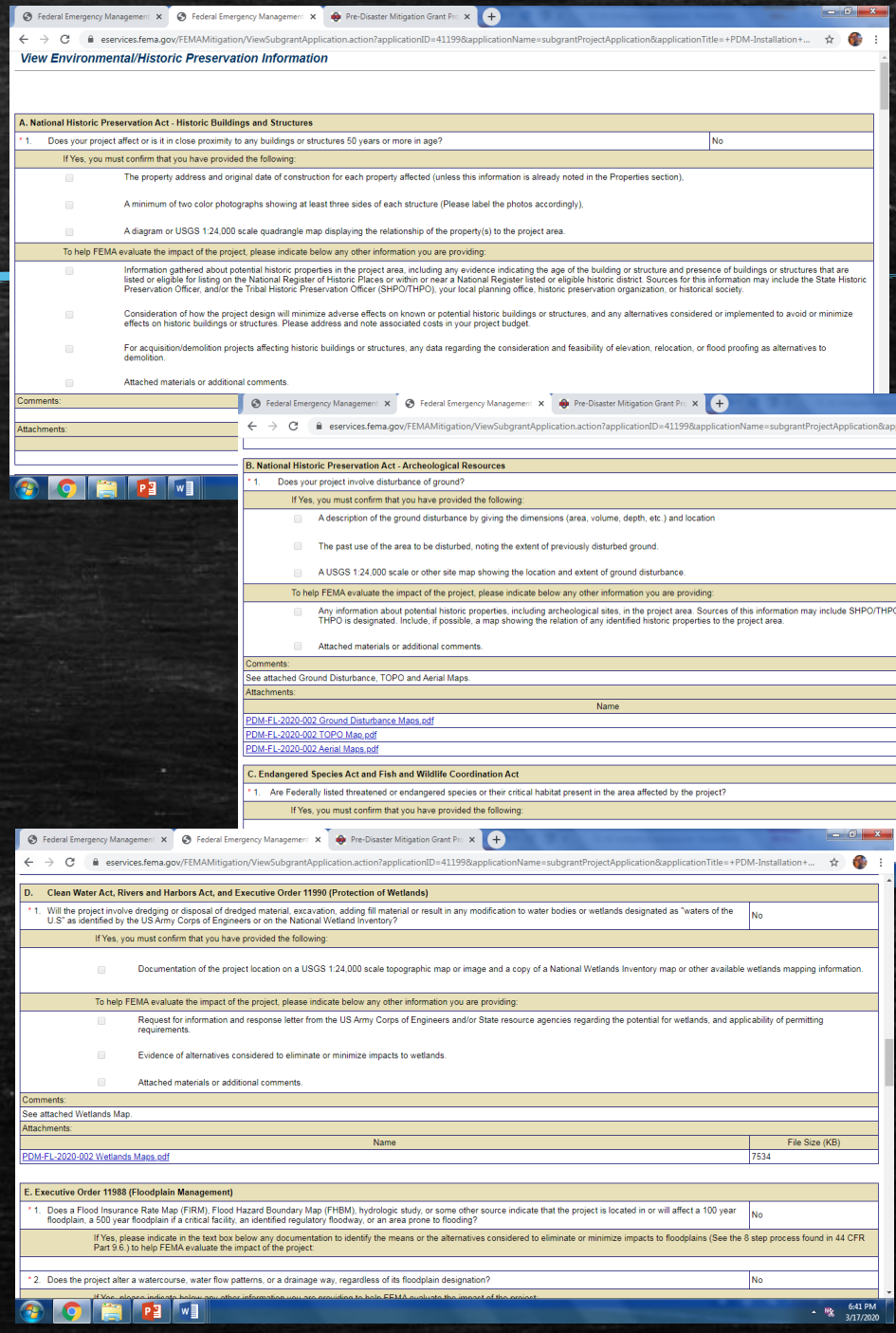
Alternative 1- Bypass pumps were also considered, however several of the liftstations do not have the required hookups to bypass sewage into the mains. Installation of generators at these liftstations is deemed the better alternative due to their ability to be hooked directly to the SCADA system that is monitored continuously by Madison personnel. An alternative solution of bypass pump installation was considered and dismissed. Although some of the liftstations have bypass capabilities, the access to the area may be limited due to trees or other debris in the roadway. As a result the city could experience sanitary sewer overflows before being able to access a site.

Alternative 2- Purchase of additional portable generators was considered. While a portable generator may be acceptable for the water plant/EOC, the small staff limits the opportunity to rotate other portable generators through each of the 25 liftstations to ensure against sanitary sewer overflows.

You'll need to obviously acquire quotes from a vendor to base your project costs on. Include the quotes and specsheets in the following section. Although the sample system had 4 different size generators quoted to them, I am only including one for an example. You would put ALL related quotes into this section. If , however, two sites have the same sized generator, you only really need to place one of those quotes in here since that is the quote that you drew the project costs from

Environmental/Historical Preservation sections

- Details any potential effects to the environment surrounding the project. Found on both applications, same basic format
- Imagery and Topo Maps of each location will need to be made showing where project is planned, nearby water bodies, ground disturbance area and depth, etc. This can easily be done in either ARCGIS or GoogleEarth. (Corresponds to Section 1 of template)
- Floodplain maps will also need to be made. These maps can be taken directly from the FEMA floodplain site.
- Both applications also need pictures be taken of the site from all four directions as well as any nearby water bodies.
- Corresponds to Section 4 of FRWA template.
- See next slide for examples of maps and pictures that you will need to compile.



FY 2019-City of Madison-
Installation of 9 Generators
at Critical Facilities
Barrsfield Well

1: 750 Scale

Legend

Liftstations — New Generator Site
Roads — Current Fencing
New Fencing

0 25 50 100 Ft

Figure 7 Barrsfield Well Site Map

8

National Flood Hazard Layer FIRMette

FEMA

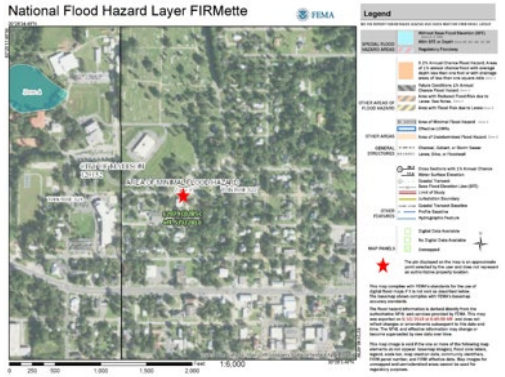
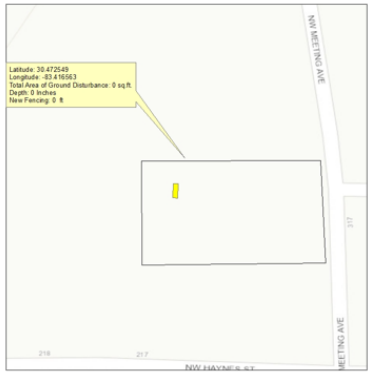


Figure 6. Barrsfield Well flood map

FY 2019-City of Madison-
Installation of 9 Generators
at Critical Facilities
Barrsfield Well

1: 750 Scale



Legend

Liftstations — New Generator Site
Current Fencing
New Fencing

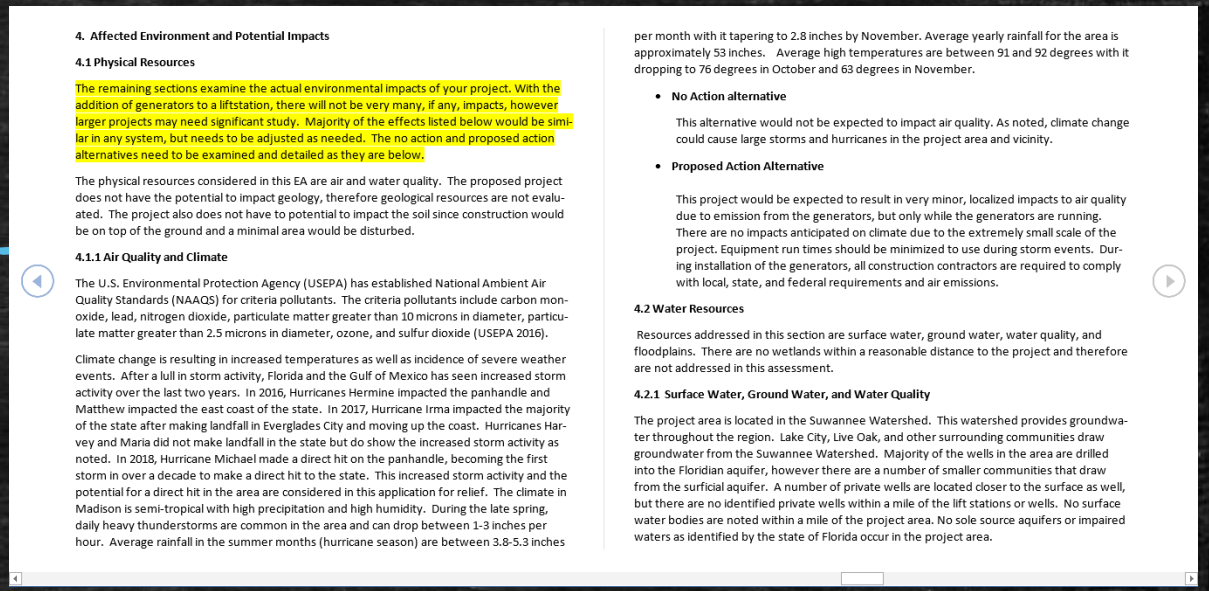
0 25 50 100 Ft

Figure 8 Barrsfield Well Topo Map

9

FRWA Template- Section 4

- Affected Environment and Potential Impacts
  - The remaining sections examine the actual environmental impacts of your project. With the addition of generators to a liftstation, there will not be very many, if any, impacts, however larger projects may need significant study. Majority of the effects listed in the template would be similar in any system, but needs to be adjusted as needed. The no action and proposed action alternatives need to be examined and detailed as they are in the template
  - Flood plain maps would be inserted into this section, go to FEMA flood plain site to make maps.



4. Affected Environment and Potential Impacts

4.1 Physical Resources

The remaining sections examine the actual environmental impacts of your project. With the addition of generators to a liftstation, there will not be very many, if any, impacts, however larger projects may need significant study. Majority of the effects listed below would be similar in any system, but needs to be adjusted as needed. The no action and proposed action alternatives need to be examined and detailed as they are below.

The physical resources considered in this EA are air and water quality. The proposed project does not have the potential to impact geology, therefore geological resources are not evaluated. The project also does not have to potential to impact the soil since construction would be on top of the ground and a minimal area would be disturbed.

4.1.1 Air Quality and Climate

The U.S. Environmental Protection Agency (USEPA) has established National Ambient Air Quality Standards (NAAQS) for criteria pollutants. The criteria pollutants include carbon monoxide, lead, nitrogen dioxide, particulate matter greater than 10 microns in diameter, particulate matter greater than 2.5 microns in diameter, ozone, and sulfur dioxide (USEPA 2016).

Climate change is resulting in increased temperatures as well as incidence of severe weather events. After a lull in storm activity, Florida and the Gulf of Mexico has seen increased storm activity over the last two years. In 2016, Hurricanes Hermine impacted the panhandle and Matthew impacted the east coast of the state. In 2017, Hurricane Irma impacted the majority of the state after making landfall in Everglades City and moving up the coast. Hurricanes Harvey and Maria did not make landfall in the state but do show the increased storm activity as noted. In 2018, Hurricane Michael made a direct hit on the panhandle, becoming the first storm in over a decade to make a direct hit to the state. This increased storm activity and the potential for a direct hit in the area are considered in this application for relief. The climate in Madison is semi-tropical with high precipitation and high humidity. During the late spring, daily heavy thunderstorms are common in the area and can drop between 1-3 inches per hour. Average rainfall in the summer months (hurricane season) are between 3.8-5.3 inches per month with it tapering to 2.8 inches by November. Average yearly rainfall for the area is approximately 53 inches. Average high temperatures are between 91 and 92 degrees with it dropping to 76 degrees in October and 63 degrees in November.

- **No Action alternative**

  This alternative would not be expected to impact air quality. As noted, climate change could cause large storms and hurricanes in the project area and vicinity.

- **Proposed Action Alternative**

  This project would be expected to result in very minor, localized impacts to air quality due to emission from the generators, but only while the generators are running. There are no impacts anticipated on climate due to the extremely small scale of the project. Equipment run times should be minimized to use during storm events. During installation of the generators, all construction contractors are required to comply with local, state, and federal requirements and air emissions.

4.2 Water Resources

Resources addressed in this section are surface water, ground water, water quality, and floodplains. There are no wetlands within a reasonable distance to the project and therefore are not addressed in this assessment.

4.2.1 Surface Water, Ground Water, and Water Quality

The project area is located in the Suwannee Watershed. This watershed provides groundwater throughout the region. Lake City, Live Oak, and other surrounding communities draw groundwater from the Suwannee Watershed. Majority of the wells in the area are drilled into the Floridian aquifer, however there are a number of smaller communities that draw from the surficial aquifer. A number of private wells are located closer to the surface as well, but there are no identified private wells within a mile of the lift stations or wells. No surface water bodies are noted within a mile of the project area. No sole source aquifers or impaired waters as identified by the state of Florida occur in the project area.

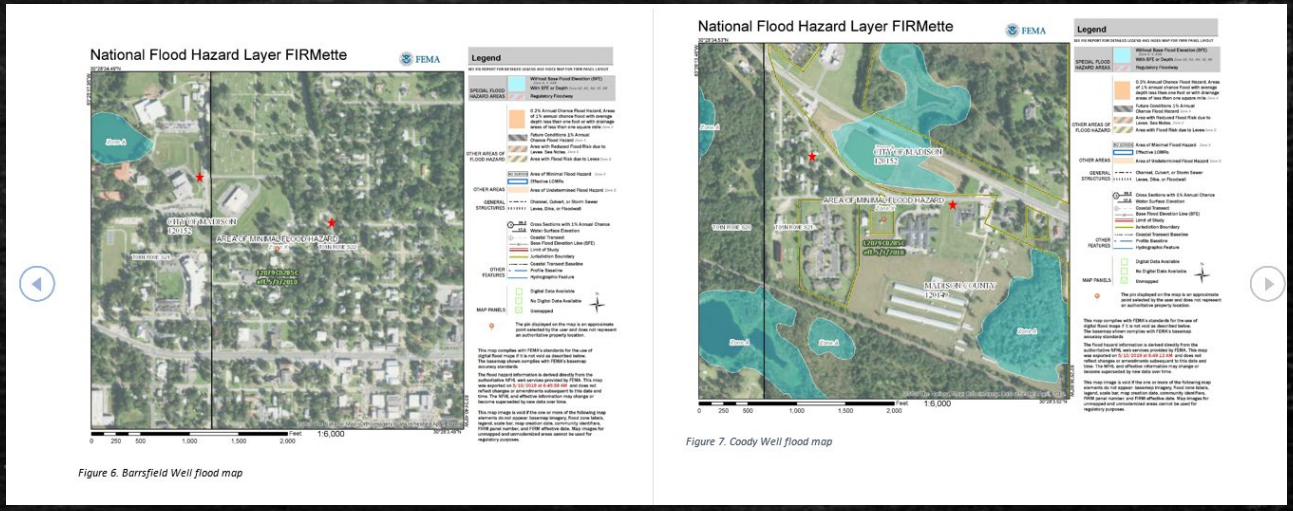
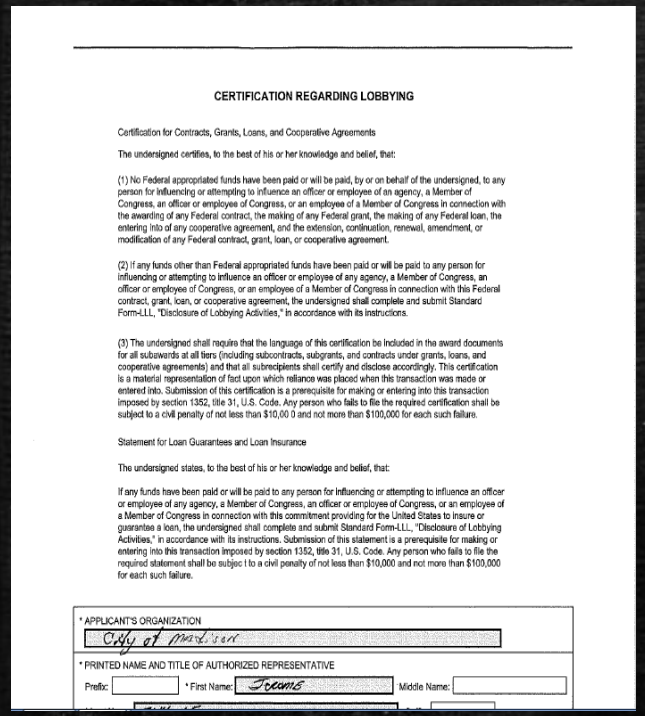


Figure 6. Barrsfield Well flood map

Figure 7. Coody Well flood map

Additional Forms needed to be attached



CERTIFICATION REGARDING LOBBYING

Certification for Contracts, Grants, Loans, and Cooperative Agreements

The undersigned certifies, to the best of his or her knowledge and belief, that:

(1) No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of an agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

(2) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure of Lobbying Activities," in accordance with its instructions.

(3) The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly. This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by section 1352, title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than $10,00 0 and not more than $100,000 for each such failure.

Statement for Loan Guarantees and Loan Insurance

The undersigned states, to the best of his or her knowledge and belief, that:

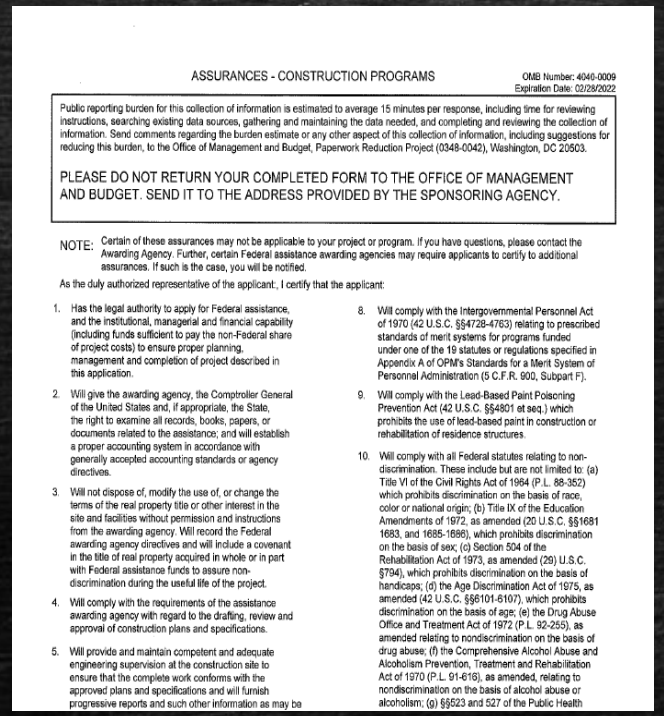
If any funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this commitment providing for the United States to insure or guarantee a loan, the undersigned shall complete and submit Standard Form-LLL, "Disclosure of Lobbying Activities," in accordance with its instructions. Submission of this statement is a prerequisite for making or entering into this transaction imposed by section 1352, title 31, U.S. Code. Any person who fails to file the required statement shall be subject t to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.

* APPLICANT'S ORGANIZATION

City of Madison

* PRINTED NAME AND TITLE OF AUTHORIZED REPRESENTATIVE

Prefix: * First Name: Jerome Middle Name:



ASSURANCES - CONSTRUCTION PROGRAMS

OMB Number: 4040-0009
Expiration Date: 02/28/2022

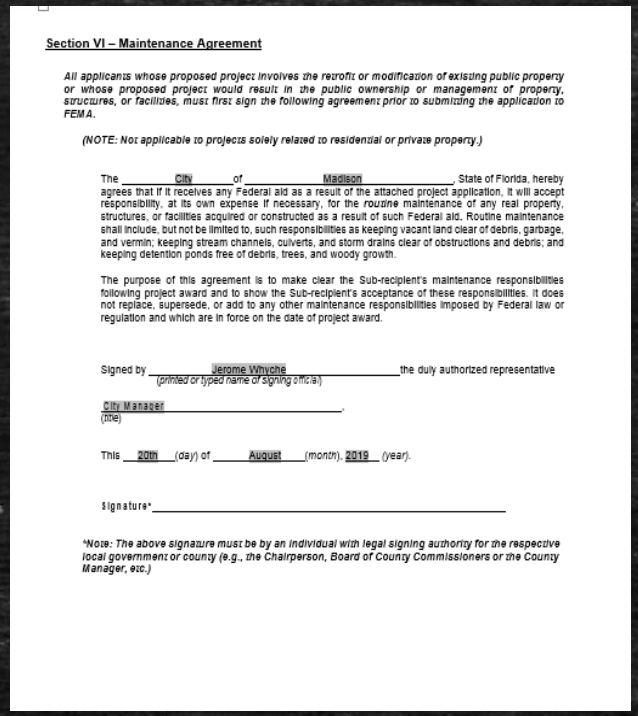
Public reporting burden for this collection of information is estimated to average 15 minutes per response, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to the Office of Management and Budget, Paperwork Reduction Project (0348-0042), Washington, DC 20503.

PLEASE DO NOT RETURN YOUR COMPLETED FORM TO THE OFFICE OF MANAGEMENT AND BUDGET. SEND IT TO THE ADDRESS PROVIDED BY THE SPONSORING AGENCY.

NOTE: Certain of these assurances may not be applicable to your project or program. If you have questions, please contact the Awarding Agency. Further, certain Federal assistance 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 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 non-discrimination 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
8. Will comply with the Intergovernmental Personnel Act of 1970 (42 U.S.C. §§4728-4763) relating to prescribed standards of 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 non-discrimination. 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



Section VI – Maintenance Agreement

All applicants whose proposed project involves the retrofit or modification of existing public property or whose proposed project would result in the public ownership or management of property, structures, or facilities, must first sign the following agreement prior to submitting the application to FEMA.

(NOTE: Not applicable to projects solely related to residential or private property.)

The City of Madison, State of Florida, hereby agrees that if it receives any Federal aid as a result of the attached project application, it will accept responsibility, at its own expense if necessary, for the *routine* maintenance of any real property, structures, or facilities acquired or constructed as a result of such Federal aid. Routine maintenance shall include, but not be limited to, such responsibilities as keeping vacant land clear of debris, garbage, and vermin; keeping stream channels, culverts, and storm drains clear of obstructions and debris; and keeping detention ponds free of debris, trees, and woody growth.

The purpose of this agreement is to make clear the Sub-recipient's maintenance responsibilities following project award and to show the Sub-recipient's acceptance of these responsibilities. It does not replace, supersede, or add to any other maintenance responsibilities imposed by Federal law or regulation and which are in force on the date of project award.

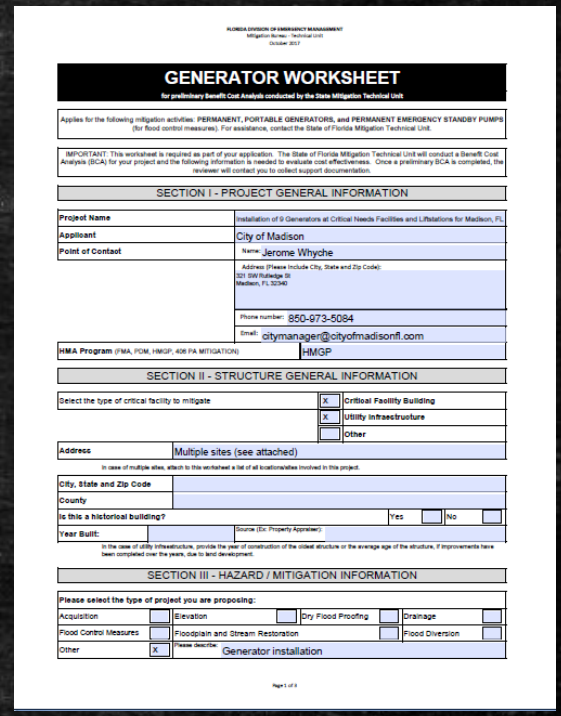
Signed by Jerome Whyche the duly authorized representative
(printed or typed name of signing official)

City Manager
(title)

This 20th *(day)* of August *(month)*, 2019 *(year)*.

Signature* _____

****Note: The above signature must be by an individual with legal signing authority for the respective local government or county (e.g., the Chairperson, Board of County Commissioners or the County Manager, etc.)***



FLORIDA DIVISION OF EMERGENCY MANAGEMENT
Mitigation Bureau - Technical Unit
October 2017

GENERATOR WORKSHEET

for preliminary Benefit Cost Analysis conducted by the State Mitigation Technical Unit

Applies for the following mitigation activities: **PERMANENT, PORTABLE GENERATORS, and PERMANENT EMERGENCY STANDBY PUMPS** (for flood control measures). For assistance, contact the State of Florida Mitigation Technical Unit.

IMPORTANT: This worksheet is required as part of your application. The State of Florida Mitigation Technical Unit will conduct a Benefit Cost Analysis (BCA) for your project and the following information is needed to evaluate cost effectiveness. Once a preliminary BCA is completed, the reviewer will contact you to collect support documentation.

SECTION I - PROJECT GENERAL INFORMATION

Project Name	Installation of 9 Generators at Critical Needs Facilities and Lift stations for Madison, FL
Applicant	City of Madison
Point of Contact	Name: Jerome Whyche Address (Please include City, State and Zip Code): 321 SW Rutledge St Madison, FL 32340 Phone number: 850-973-5084 Email: citymanager@cityofmadisonfl.com
HMA Program (FMA, PDM, HMGP, 406 PA MITIGATION)	HMGP

SECTION II - STRUCTURE GENERAL INFORMATION

Select the type of critical facility to mitigate	X	**Critical Facility Building**
	X	**Utility Infraestructure**
		Other
Address	Multiple sites (see attached)	

In case of multiple sites, attach to this worksheet a list of all locations/sites involved in this project.

City, State and Zip Code			
County			
Is this a historical building?		Yes	No
Year Built:	Source (Ex: Property Appraiser):		

In the case of utility infraestructure, provide the year of construction of the oldest structure or the average age of the structure. If improvements have been completed over the years, due to land development.

SECTION III - HAZARD / MITIGATION INFORMATION

Please select the type of project you are proposing:

Acquisition		Elevation		Dry Flood Proofing		Drainage	
Flood Control Measures		Floodplain and Stream Restoration				Flood Diversion	
Other	X	Please describe: Generator installation					

Page 1 of 3

PDM Application: Certification against lobbying, Construction Assurances

HMGP application: Maintenance Agreement, Generator worksheet

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Asset Management Supervisor
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