



Post-Hurricane Response: Lessons Learned

Sara Merritt, Mark Gillman (NWD)

Monica Wilson (Escambia County)

Chris French (Leon County)



Regulated Tanks in Path of Hurricane

- Bay, Calhoun, Franklin, Gulf, Jackson, and Liberty Counties
- 677 Open Facilities
 - 1,415 ASTs
 - 1,653 USTs



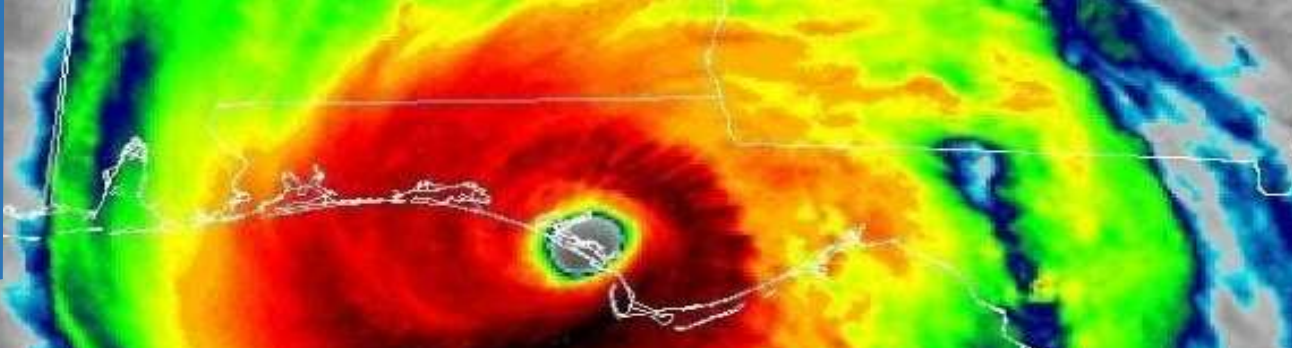


Post-Hurricane Response Actions

Joint Efforts of the NWD Office and the Division's Permitting & Compliance Assistance Program (Storage Tank Compliance)

3 Step Approach

- Facility Site Visits – Post-Hurricane Impact Surveys
- Outreach Phone Calls to Facilities
- Letter Outreach to Facility Owners



Post-Hurricane Impact Survey #1

- Escambia, Gulf & Leon Counties
- October 17-23, 2018
- 408 inspections completed
 - USTs & ASTs

HURRICANE MICHAEL FACILITY IMPACT QUESTIONNAIRE

Facility ID _____ Facility Name _____

Facility Address _____

Facility Contact _____ Facility Contact Phone _____

Fully operational (electricity)? Yes No

Fully operational (generator)? Yes No

Partially or non-operational? Yes No

Damage Assessment:

Facility Destroyed

Significant Damage (Repairable)

Damage (Operational)

Minor

Facility Damages:

Canopy

Dispensers

Tank Floated or Shifted

Were the damages repaired? Yes No

Cost Estimate: _____

Facility receiving deliveries of fuel? Yes No

Is product available? Yes No

Gasoline Diesel

Product Contamination

Fuel replaced due to water contamination? Yes No

Amount Contaminated: _____ gallons

Estimated Cost of Storm Damage:

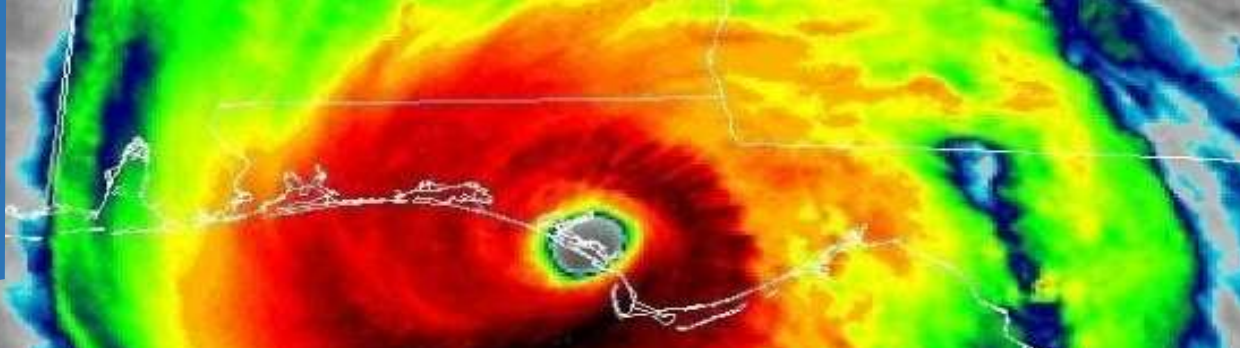
>\$500,000

<\$500,000 but >\$100,000

<\$100,000

Inspector Name: _____

Notes



Post-Hurricane Impact Survey #2

- DEP NWD
- Surge areas only
- November 5-8, 2018
- 65 inspections completed
 - ASTs only

HURRICANE MICHAEL SYSTEM STATUS QUESTIONNAIRE

Facility ID _____ Facility Name _____

Facility Address _____

Facility Contact _____ Facility Contact Phone _____

Incident Occurred? Yes No

INF Completed? Yes No

Resulted in Discharge? Yes No

Discharge Assessment: Notes: describe incident, repair and status.

Release inside containment?

Discharge outside of containment?

Discharge Report Form submitted?

Failed component repaired/isolated?

Facility Status:

In-Service

Out of Service

Abandoned

Registration changes for status needed? Yes No

Explain _____

Facility receiving fuel? Yes No

Is product available? Yes No

G D

Repairs of storage system ongoing Yes No

_____ Estimated completion date

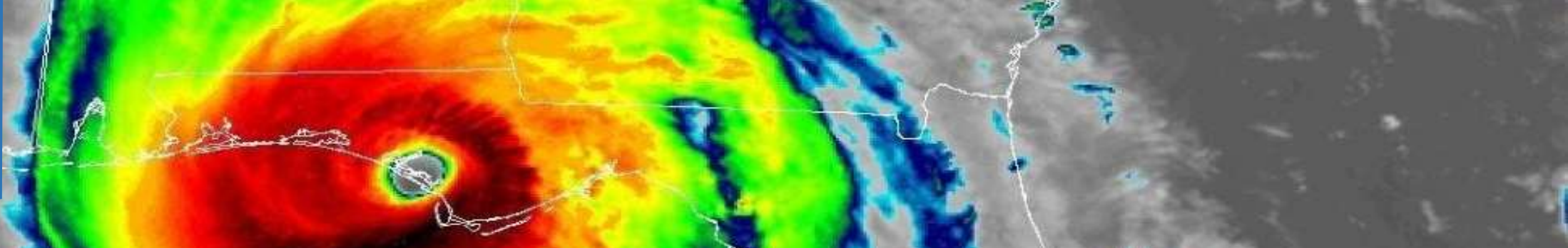
Follow up inspection needed?

Discharge Inspection?

Component Install/Closure?

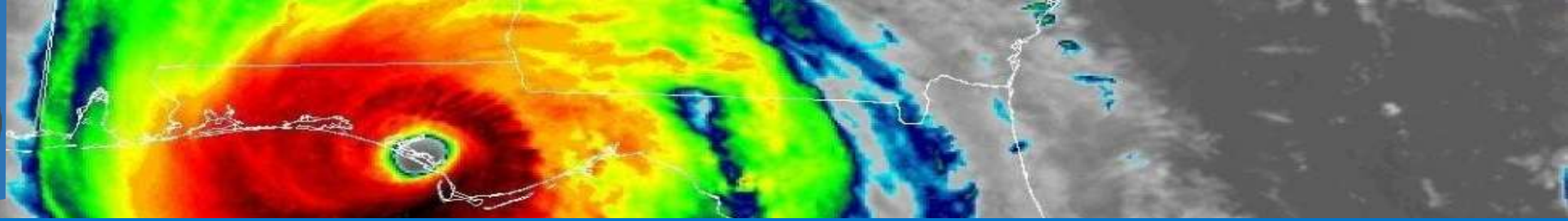
System Closure?

Inspector Name: _____




Post-Hurricane Telephone Outreach

- **NWD and Division Staff**
- **November 8 and After**
- **286 Facilities contacted by telephone**



Post-Hurricane Letter to Facilities

 **FLORIDA DEPARTMENT OF Environmental Protection**
 Northwest District
 160 W. Government Street, Suite 308
 Pensacola, Florida 32502

Rick Scott
 Governor
 Carlos Lopez-Castilla
 Lt. Governor
 Noah Valenstein
 Secretary

November X, 2018

«FIRST_NAME» «LAST_NAME», «TITLE»
 «ME_NAME»
 «ADDRESS1»
 «CITY», «STATE_ID» «ZIP5»

Re: Damage to Petroleum Storage Systems - Hurricane Michael

To Whom It May Concern:

Hurricane Michael devastated several counties in the Florida panhandle. The department's records indicate that your company owns or operates a petroleum storage system that may have incurred some damage. During this difficult time of recovery and rebuilding following this storm, the Florida Department of Environmental Protection (DEP) would like to offer assistance to owners and operators of underground and aboveground storage tank systems damaged by Hurricane Michael. It is our goal to facilitate the process of initial notifications and offer guidance for repairs or out-of-service procedures you may encounter.

If components of your storage tank system that were damaged during Hurricane Michael contain petroleum; we remind you that certain notifications to the department or local program are necessary.

- Notification of storage tank system damage, incidents or discharges contact the appropriate following office:
 - For Gulf, Calhoun, Franklin, Jackson, and Liberty Counties contact the Florida Department of Health 850-227-1276 ext. 125;
 - For Bay and Washington Counties contact the Florida Department of Health 850-595-6707; or
 - Florida Department of Environmental Protection – Northwest District 850-595-0586.
- For on-going discharges of regulated substances outside of containment, you are required to contact the State Watch Office 1-800-320-0519.
- If water has compromised fuel in your storage tank system or damaged the dispenser, please contact the Department of Agriculture and Consumer Services, Division of Standards, Petroleum Inspection 850-921-1545.

«ME_NAME»
 Page 2
 November X, 2018


Damage to storage system components that normally store, transfer or dispense petroleum products that are underground, over water or in contact with the soil are required to be repaired by a licensed General Contractor with Pollutant Storage Specialty Contractor endorsement issued by the Florida Department of Business and Professional Regulation (www.myfloridalicense.com).

Attached to this letter is a guidance document concerning notification, repair and out-of-service requirements for owners of storage tank systems. If the department can provide you with technical assistance regarding compliance please contact Mark Gillman of DEP's Northwest District Office at 850-595-0586.

Sincerely,

Elizabeth Mullins Orr
 Assistant Director

EMO/vpb

 **Post Hurricane Guidance for Regulated Storage Tank System Owners/Operators**

Notification of an Incident
 The presence of free product, a visible sheen, sludge, or emission of a regulated substance outside secondary containment must be reported to the county within 24 hours of discovery or before close of next business day. For further information on reporting requirements, please see Rule 62-761.430, Florida Administrative Code (F.A.C.) in Chapter 62-761, F.A.C., for underground storage tank systems, or Rule 62-762.431, F.A.C. in Chapter 62-762, F.A.C., for aboveground storage tank systems.

Notification of a Discharge
 The presence of free product, a visible sheen, sludge, or emission of a regulated substance outside secondary containment must be reported to the county within 24 hours of discovery or before close of next business day. For further information on reporting requirements, please see Rule 62-761.440, F.A.C., in Chapter 62-761, F.A.C., for Underground Storage Tank Systems, or Rule 62-762.441, F.A.C. in Chapter 62-762, F.A.C., for Aboveground Storage Tank Systems. Each component of the storage tank system shall be integrity tested within three days of discovery of the discharge if the source or cause of the discharge is unknown unless the storage tank system has been properly placed out-of-service.

Storage Tank System Repairs
 Repairs shall be performed if any component of a storage tank system has caused a release or discharge, or a problem that could cause a release or discharge. The storage tank system shall immediately cease operating, dispensing, and accepting deliveries if repairs are required for any component of a storage tank system. For further information on repairs, please see Rule 62-761.700, F.A.C., in Chapter 62-761, F.A.C., for Underground Storage Tank Systems, or Rule 62-762.701, F.A.C., in Chapter 62-762, F.A.C., for Aboveground Storage Tank Systems.

Severely Damaged or Destroyed Storage Tank Systems
 Storage tank systems that are severely damaged or destroyed must be taken out of service until repairs have been completed. Owners of out-of-service storage tank systems must continue to operate and maintain corrosion protection, continue to maintain and demonstrate financial responsibility, leave vent lines open and functioning, remove all regulated substances and close off the system to outside access. For further information on out-of-service storage tank systems, please see Rule 62-761.800, F.A.C., in Chapter 62-761, F.A.C., for underground storage tank systems, or Rule 62-762.801, F.A.C., in Chapter 62-762, F.A.C., for Aboveground Storage Tank Systems.

Required Registration Updates
 Owners or operators must update the Storage Tank Registration Form 62-762.900(2) within 10 days following the completion of a change in service status (e.g., taking a system or system component out-of-service for repairs), or closure of a system or system component, or change in owner or operator of a facility or storage tank system. For the installation of a new system or system component, submit a registration form seven (7) days prior to regulated substances being put into the system of a currently registered facility.



NWD Goals for 2019 Hurricane Season

- **Have a strategic plan for selecting facilities to survey**
 - **Prioritize.**
- **Communicate with Hazardous Response Team (HART)**
- **Design a site visit survey questionnaire that will better capture the conditions of a facility's storage tank system(s).**
- **Provide information to facility owners and operators prior to hurricane season**
 - **Newsletter**

Hurricane Michael Post Assessment

**Monica Wilson, Planning Consultant I
Environmental Health**

April 10, 2019



Timeline

10/09/2018 – Hurricane Michael hit as a Category 4 making landfall near Mexico Beach

10/10/2018 – FDOH-Escambia opened

10/15/2018 – Tallahassee offices opened

10/16/2018 – FDOH-Escambia tasked with assessing 307 Bay County Facilities

10/17/2018 – FDOH-Escambia tasked with assessing 28 Jackson County Facilities

☐ FDOH-Escambia conducted 332 inspections from 10/17/2018 to 10/23/2018

11/07/2018 – FDOH-Bay opened

FDOH Preparation

- ❑ Governor's Emergency Declaration
 - Executive Order Number 18-276

- ❑ Mission Number
 - SERT Mission FL-027613

- ❑ State Vehicles

What We Did To Prepare


- ❑ Bay County road maps
- ❑ Meeting to discuss mission/form
- ❑ Two person team – 5 teams
- ❑ Paper surveys for field use
- ❑ Map/distribute list of 307 facilities
- 61 per team.

HURRICANE MICHAEL FACILITY IMPACT QUESTIONNAIRE

Facility ID _____ Facility Name: _____
Facility Address _____
Facility Contact _____ Facility Contact Phone: _____

Fully operational (electricity)? Yes No
Fully operational (generator)? Yes No
Partially or non-operational? Yes No

Damage Assessment:
 Facility Destroyed
 Significant Damage (Repairable)
 Damage (Operational)
 Minor

Notes: 

Facility Damages:
 Canopy
 Dispensers
 Tank Floated or Shifted

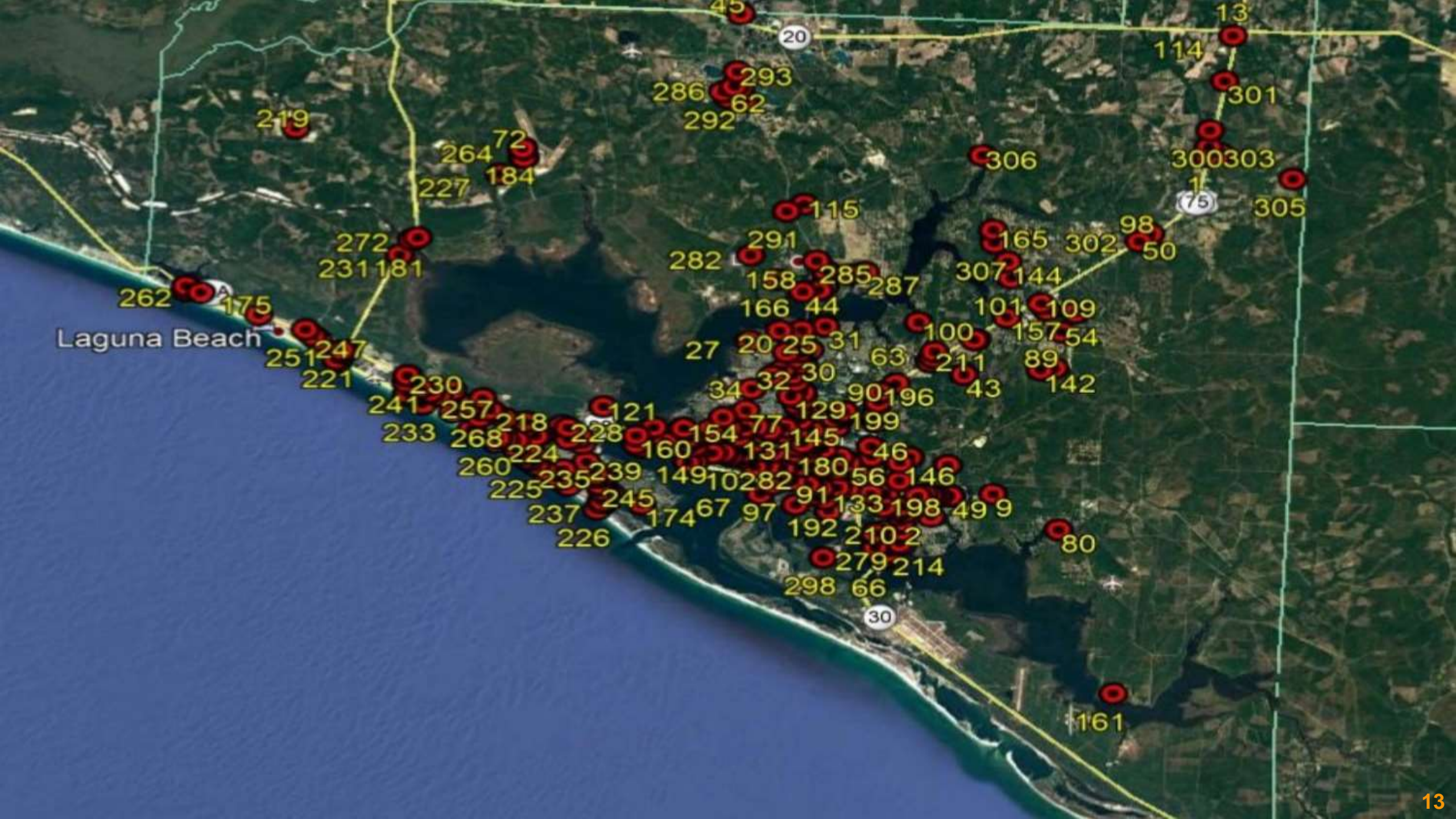
Were the damages repaired? Yes No
Cost Estimate: _____

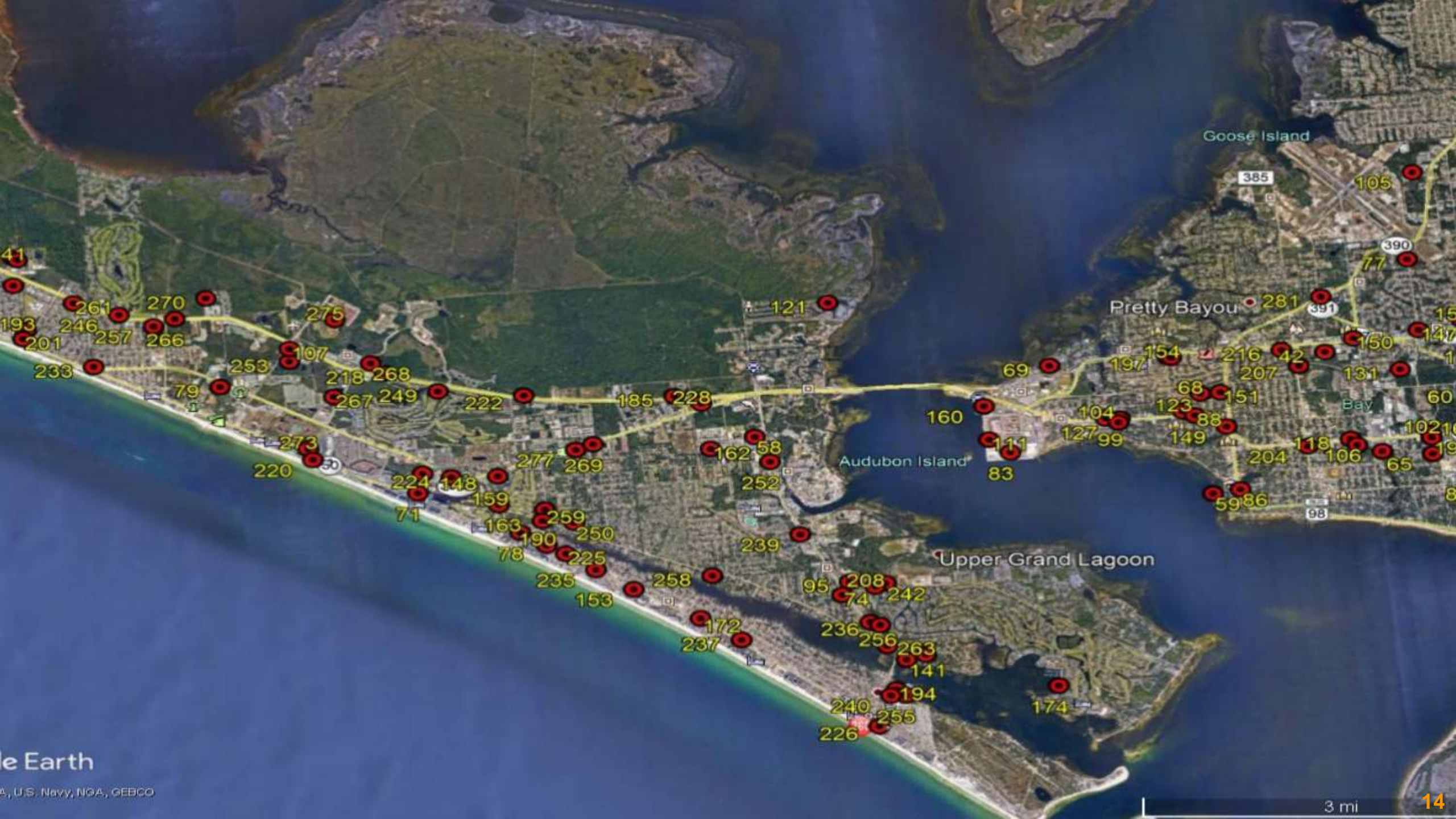
Facility receiving deliveries of fuel? Yes No
Is product available? Yes No
 Gasoline Diesel

Product Contamination
Fuel replaced due to water contamination? Yes No
Amount Contaminated: _____ gallons

Estimated Cost of Storm Damage:
 <\$500,000
 <\$500,000 but >\$100,000
 <\$100,000

Inspector Name: _____





What We Experienced

- Perfect situation
- Traffic jams/ curfew
- Spotty phone service/internet
- Needed Navigator



What We Experienced Continued

- ❑ Road hazards/not familiar with area
- ❑ Number of Tanks
- ❑ Security issues
- ❑ First-Responders and utility services

Surrounding Area

Surrounding Area



Surrounding Area



Surrounding Area



Surrounding Area



Surrounding Area



Surrounding Area



Surrounding Area



What We Discovered

- ❑ Surge Areas
- ❑ Panama City
- ❑ Visit facilities multiple days
- ❑ Someone in office

Damaged Canopies

Canopy Damage



Canopy Damage



Canopy Damage



Canopy Damage



Canopy Damage



Canopy Damage



Canopy Damage



Canopy Damage



Canopy Damage



Damaged Dispensers

Dispenser Damage



Dispenser Damage



Dispenser Damage



Dispenser Damage



Dispenser Damage



Damaged Store Fronts

Store Front Damage



Store Front Damage



Store Front Damage



Store Front Damage



Store Front Damage



Store Front Damage



Damaged Marinas

Marina Damage



Marina Damage



Marina Damage



Marina Damage



Marina Damage



Marina Damage



Marina Damage



Marina Damage



Damaged Facilities with No Tank Damage!

Facility Damaged But The Tank Was OK!



Facility Damaged But The Tank Was OK!



Facility Damaged But The Tank Was OK!



Facility Damaged But The Tank Was OK!



Facility Damaged But The Tank Was OK!



Facility Damaged But The Tank Was OK!



Facility Damaged But The Tank Was OK!



How We Reported

Facility ID: 8500707

Site Visit Comments

10/18/2018
Complaint Inspection conducted by Charles Payne and Monica Wilson on 10/18/2018.


Inspection Comments

10/22/2018
Complaint Inspection conducted per direction of FDEP Tank Division SERT Mission FL-027613 as a follow-up to Hurricane Michael. See attachments section for the field Hurricane Michael Facility Impact Questionnaire.

Attachment Documents

- 8500707 - Michael

Inspection Photos

Added Date: 10/22/2018	Added Date: 10/22/2018
Signage	Tank Pad
	

Activity Opened 10/22/2018 Page 3 of 4 Monica L Wilson

- ❑ Surveys turned in daily
- ❑ Tallahassee spreadsheet
- ❑ FIRST Entry
- ❑ Completed spreadsheet

Violation Resolved



Problems Faced

- ❑ Travel Time/ Curfew
- ❑ Not being familiar with the area/Road Closures
- ❑ Spotty Navigation System
- ❑ Traffic Jams



Problems Faced

- ❑ More Planning/training on form
- ❑ Not knowing how many tanks
- ❑ Registration Issues
- ❑ Feeling of being in the way of First Responders



Ways To Make It Better

- ❑ A standardized form (that can be modified if necessary) for Hurricane assessments that includes:
 - A place to add the inspection date to the form.
 - A place to write in an email address of the contact.
 - Distinguishing UST questions from AST questions.
 - Specific wording on what damage to estimate: facility, tank system, or both.
 - Add questions on if an incident occurred.

Ways To Make It Better

- Received list changes:
 - How many tanks
 - Unregulated facilities removed

- More time to plan and strategize because these are not perfect situations.

Concerns To Think About

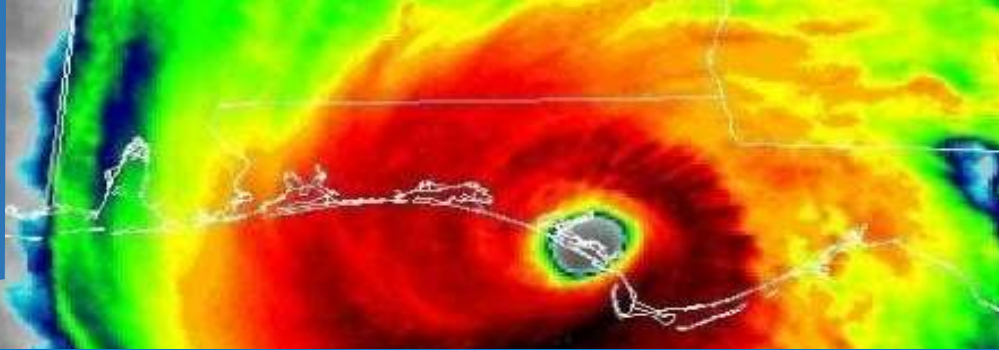
- ❑ What if hurricane directly impacted our county?
- ❑ Should these evaluations wait?

Contact Information

Monica Wilson, Planning Consultant I
Environmental Health

Monica.Wilson@FLHealth.gov

850-595-6700 ext 2004



Post Hurricane Survey Leon County

HURRICANE MICHAEL FACILITY IMPACT QUESTIONNAIRE

Facility ID _____ Facility Name _____

Facility Address _____

Facility Contact _____ Facility Contact Phone _____

Fully operational (electricity)? Yes No

Fully operational (generator)? Yes No

Partially or non-operational? Yes No

Damage Assessment:

- Facility Destroyed
- Significant Damage (Repairable)
- Damage (Operational)
- Minor

Facility Damages:

- Canopy
- Dispensers
- Tank Floated or Shifted

Were the damages repaired? Yes No

Cost Estimate: _____

Facility receiving deliveries of fuel? Yes No

Is product available? Yes No

- Gasoline Diesel

Product Contamination

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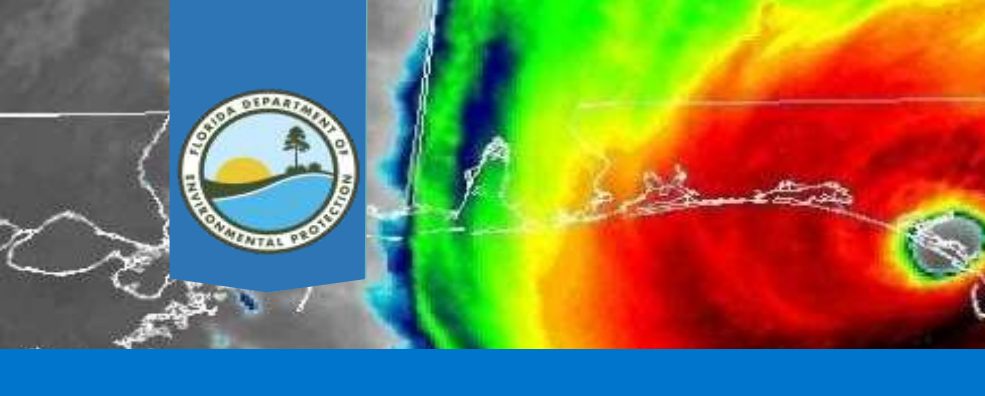
Amount Contaminated: _____ gallons

Estimated Cost of Storm Damage:

- >\$500,000
- <\$500,000 but >\$100,000
- <\$100,000

Inspector Name: _____

Notes



Prep Kit for Entering Natural Disaster Areas

- **Cash \$\$\$**
- **First Aid Kit**
- **Water & Food**
- **Extra gas**
- **Flashlight**
- **Batteries**
- **Multiple Cans of Fix-a Flat**
- **Hand held GPS (Some areas will have no cell tower coverage)**
- **Contact lists (Facility contacts, Emergency services)**
- **Car chargers for phones & laptops**
- **Measuring tape for sticking tanks**



HURRICANE MICHAEL DAMAGE ASSESSMENT INSPECTIONS



AST TIPPED BY WIND





CANOPY DAMAGE





CANOPY DAMAGE





DISPENSER DAMAGE





CANOPY COLLAPSE





SHEAR VALVES AT WORK





COLLAPSED AST BARN





ROOF DAMAGE





STRUCTURE DAMAGED





MARINE FACILITY AST





DESTROYED CANOPY





DESTROYED CANOPY / SHEAR VALVES WORKING





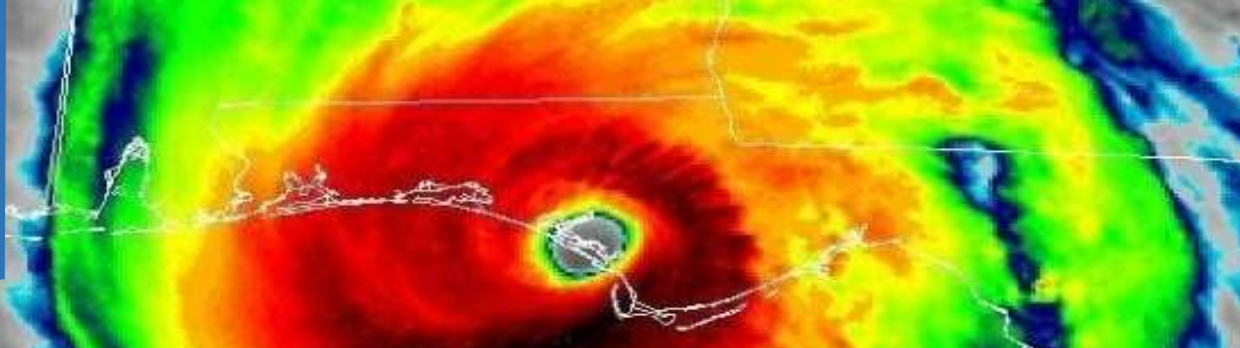
FACILITY DESTROYED





DISPENSER COVERS GONE





Proposed Post-Storm Survey

- Be better prepared for post-storms reactions in the future
- Develop a standard template to start from

POST HURRICANE QUESTIONNAIRE

Facility ID: _____ Facility Name: _____

Facility Address: _____

Facility Contact: _____ Facility Contact Phone: _____

Facility Contact Email: _____

No facility representative was available during the site visit. Facility not accessible.

FACILITY'S CURRENT STATUS:

Is the facility currently: Operating Open but no fuel services Unattended

If facility is operating, is it: Fully Operational Partially Operational _____

Is it powered by: Electricity Generator Backup Generator

Facility Receiving Fuel: Yes No Unknown

Is product available to the facility? Yes No Unknown

If yes: Gasoline Diesel Non-ethanol

FACILITY STORAGE TANK SYSTEMS: AST's # AST's: _____

UST's # UST's: _____

Comments: _____

DAMAGE ASSESSMENT:

Facility Destroyed

Facility has Significant Damage (repairable)

Facility is Damaged (still operational)

Facility has Minor Damage

Facility has NO visible damage

FACILITY DAMAGES: (✓ if affected)

Canopy

Dispensers

Shear Valves Open

Piping

Sumps

AST Shifted

AST Damaged

UST Floated

Unable to Determine

Other _____

INCIDENT / DISCHARGE ASSESSMENT:

Incident occurred? Yes No Unknown

• INF Completed? Yes No Unknown

Release inside containment? Yes No Unknown

Discharge outside of containment? Yes No Unknown

• DRF Submitted? Yes No Unknown

Failed Component that has been repaired/isolated? Yes No Unknown

PRODUCT CONTAMINATION:

Was system shut down prior to storm? Yes No Unknown

Was fuel removed from tank(s) prior to storm? Yes No Unknown

Has water contaminated the fuel in the tank(s)? Yes No Unknown

Estimate of fuel contaminated by water: _____ gallons

Contaminated fuel: Properly disposed of Polished & returned to system Unknown

FOLLOW UP ACTIVITIES / ACTIONS NEEDED:

Discharge Inspection

Component Install / Closure Inspection

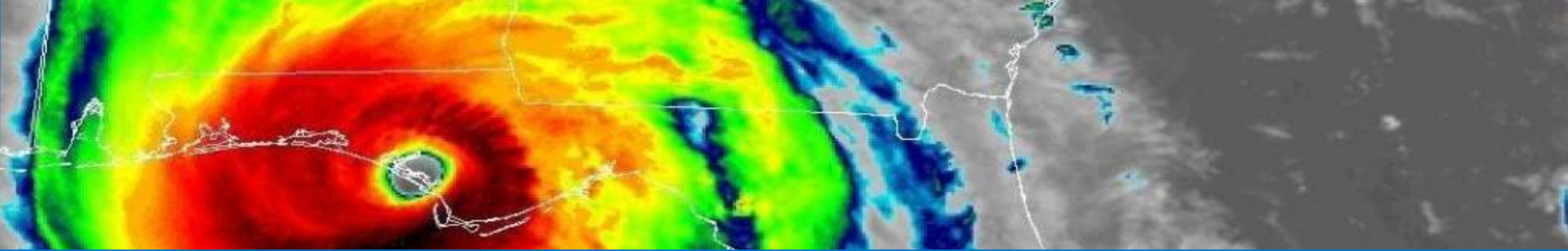
System Closure Inspection

Other Inspection _____

Registration status changes need to be made Explain: _____

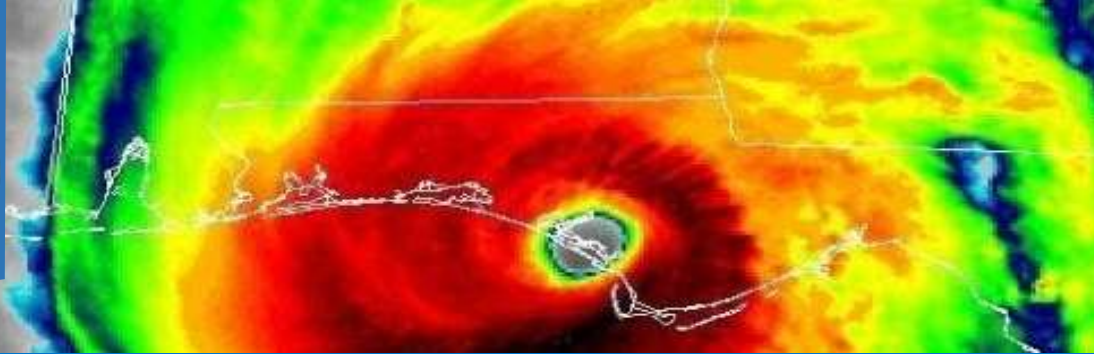
COMMENTS:

Inspector Name: _____ Date: _____



Survey Tools & Supplies: pre-hurricane preparation

- **Lists of open & regulated facilities by area**
- **Maps – hard copy**
- **Communication – push to talk, satellite phones**
- **Contact at office that can look up info**



Hazards

- Downed power lines
- Flooded areas
- Debris in roadway
- Flat tires

DOWNED AND DANGEROUS

Downed power lines can be deadly. **ALWAYS** assume a downed power line is live and avoid going near it or anything in contact with it.

USE PRECAUTION

Downed power lines can energize the ground up to **35 feet** away.

Never drive over downed power lines or through water that is in contact with them.

If you see a downed power line, immediately **notify** the local authorities.

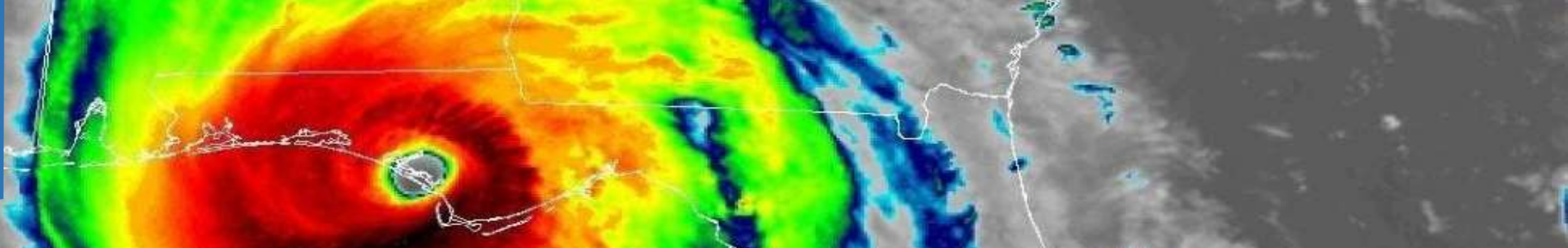
Never try to move a downed power line. Even using items that typically are not conductive **will not** prevent injury or death.

KNOW WHAT TO DO

The safe way to move away from a downed power line is to **shuffle** away with small steps, keeping your feet together and on the ground at all times.

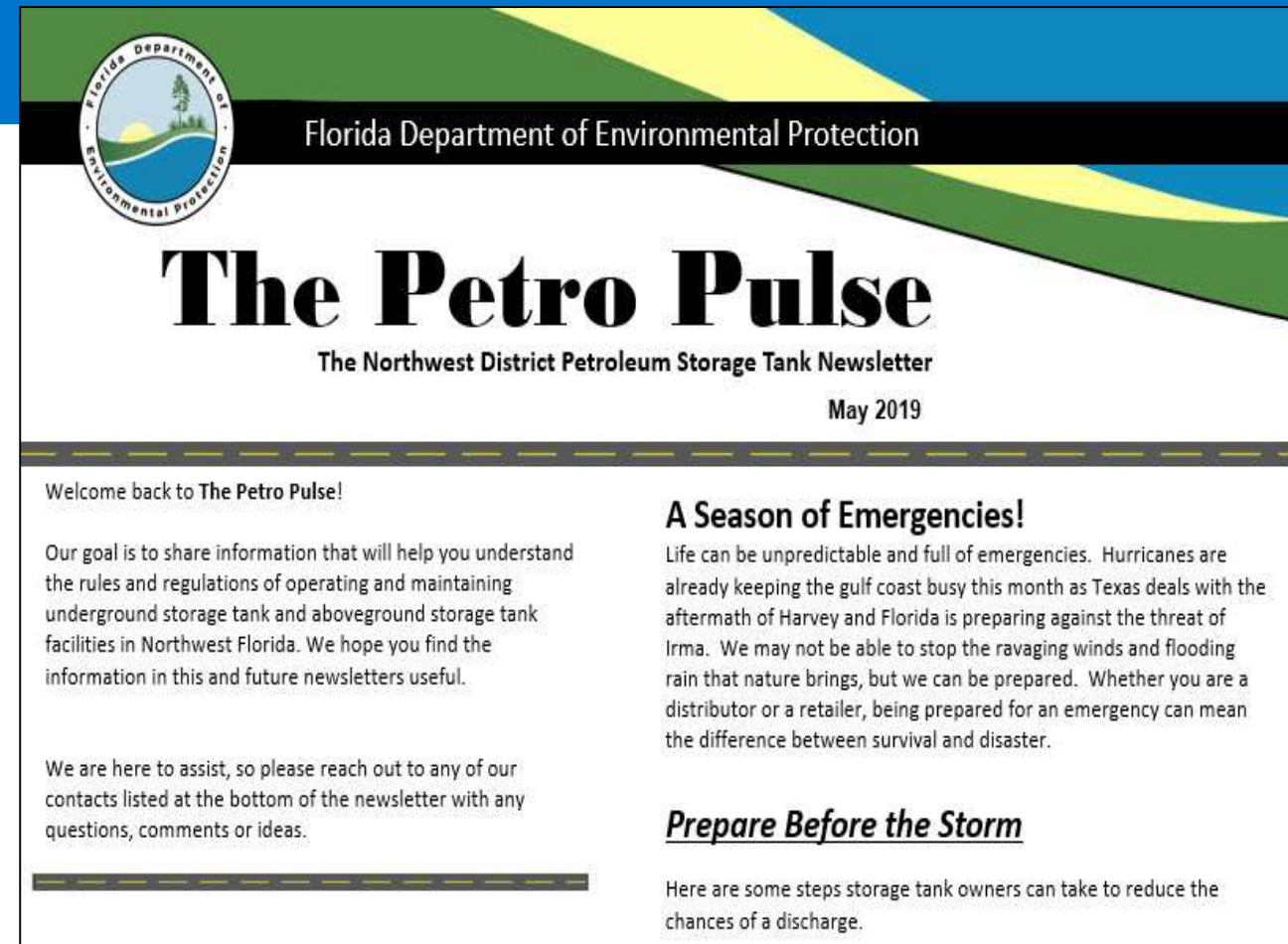
If your car comes in contact with a downed power line while you are inside, **stay in the car**. Do not touch any part of the car's frame or any other metal. Use a cell phone or honk your horn to summon help. Allow only rescue personnel to approach the car.





Future Outreach

- Prepare for future storms
- Newsletter



The image shows the cover of a newsletter titled "The Petro Pulse". At the top left is the Florida Department of Environmental Protection logo. To its right, the text "Florida Department of Environmental Protection" is written in white on a black background. Below this, the title "The Petro Pulse" is displayed in a large, bold, black serif font. Underneath the title, it says "The Northwest District Petroleum Storage Tank Newsletter" and "May 2019". The main body of the newsletter is white with a dashed horizontal line separating the header from the content. The content includes a welcome message, a goal statement, a section titled "A Season of Emergencies!" with a paragraph of text, and a section titled "Prepare Before the Storm" with a paragraph of text. A thick dashed horizontal line is at the bottom of the content area.

Florida Department of Environmental Protection

The Petro Pulse

The Northwest District Petroleum Storage Tank Newsletter
May 2019

Welcome back to **The Petro Pulse!**

Our goal is to share information that will help you understand the rules and regulations of operating and maintaining underground storage tank and aboveground storage tank facilities in Northwest Florida. We hope you find the information in this and future newsletters useful.

We are here to assist, so please reach out to any of our contacts listed at the bottom of the newsletter with any questions, comments or ideas.

A Season of Emergencies!

Life can be unpredictable and full of emergencies. Hurricanes are already keeping the gulf coast busy this month as Texas deals with the aftermath of Harvey and Florida is preparing against the threat of Irma. We may not be able to stop the ravaging winds and flooding rain that nature brings, but we can be prepared. Whether you are a distributor or a retailer, being prepared for an emergency can mean the difference between survival and disaster.

Prepare Before the Storm

Here are some steps storage tank owners can take to reduce the chances of a discharge.



Questions / Discussion

Hurricane Michael – October 10, 2018