Hurricane Irma's Effect on Florida's Fuel Distribution System and Recommended Improvements

Prepared By:

The Florida Department of Transportation

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1.0 SITUATION SUMMARY

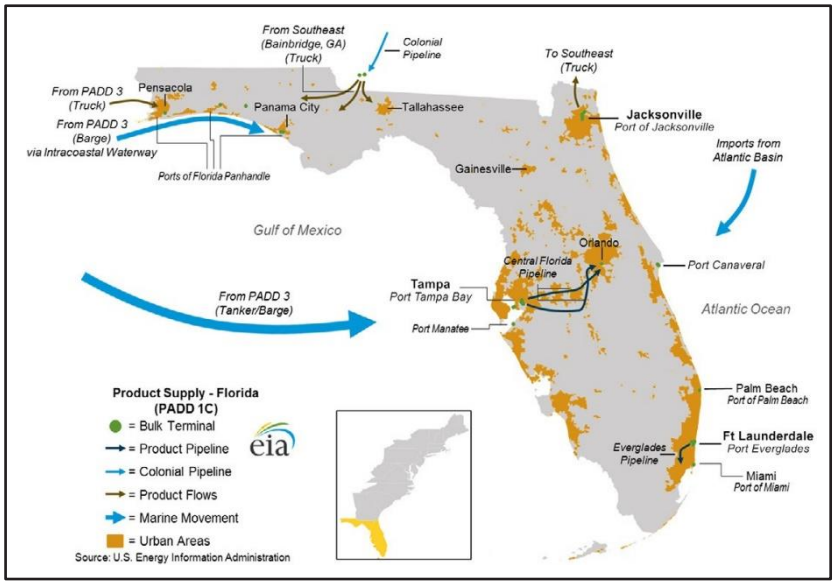
Largest Evacuation in U.S. History

K. Clark, Miami Herald

On September 4, 2017, Governor Rick Scott, working with Florida cities and counties, declared a State of Emergency in preparation for Hurricane Irma. At that time, 23 counties implemented mandatory evacuations, and the remaining 44 ordered voluntary evacuations. Approximately 6.8 million Floridians and tourists heeded the warning and began making their way to safe locations. Several news outlets reported that the evacuation was the largest in U.S. history.[i] During the initial evacuation, Florida's fuel stores were well supplied. According to the American Fuel & Petrochemical Manufacturers, demand increased five-fold as people evacuated ahead of Hurricane Irma. The rapid spike in demand in advance of Hurricane Irma made it difficult for distributors to keep gas stations supplied as consumers filled up their cars and fuel containers for generators in preparation for uncertain conditions. During and immediately following the storm, impacts of Hurricane Irma on infrastructure including ports, roads, and power, created challenges to moving fuel from barges to the port terminals to retail outlets.[ii] This report assesses the conditions that affected Florida's fuel distribution system, identifies positive actions that aid efficient fuel distribution, and provides recommendations for improvements.

Hurricane Harvey's Effect

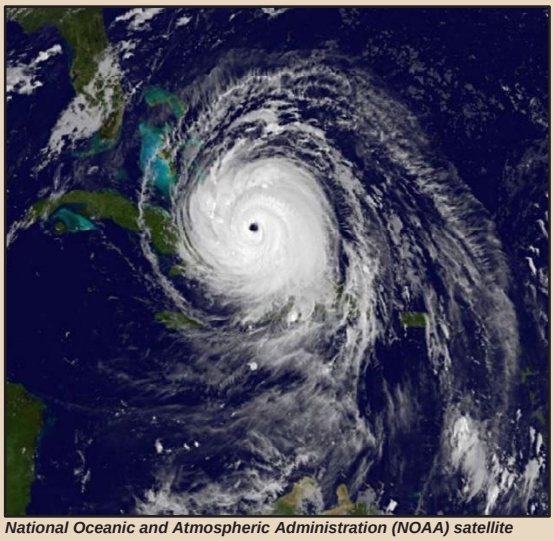
The fuel supply chain is very complex, and Florida is particularly vulnerable due to geography and natural and/or human caused incidents. Disruption of any part of the fuel supply chain ripple throughout the system. "This can be as simple as retail stations losing power and the ability to pump fuel out of the underground storage tanks. It may include flooded roads that prevent the delivery of fuel to stations. It may be lack of access to pipeline, terminals, or any other major asset in the bulk transfer system."[iii] This is what happened when Hurricane Harvey hit Houston, Texas. Hurricane Harvey caused significant damage to major ports on the Texas Gulf Coast, which forced 24 refineries to shut down or run at reduced rates.[iv] Refinery production was reduced by roughly five million barrels per day – 25-30% of overall US capacity [50% of the region] – at the height of Harvey's impact.[v] Since Florida's fuel supply primarily comes from the northern Gulf Coast, the damaged refineries in Houston directly affected the fuel supply in Florida.



Florida Fuel Supply Chain

Hurricane Irma's Unpredictable Path

One of the issues that complicated preparation for Hurricane Irma's landfall was the storm's unpredictable path. Initially, the storm was predicted to hit Miami and the east coast of Florida. As the storm approached the State, it's impact prediction changed. The storm eventually made landfall in the Keys, then again just south of Naples, at Marco Island, before moving northeast entering the Panhandle of Florida. Hurricane warnings and watches were issued throughout the state. Due to uncertainty over the storm's path and potential impacts, Governor Scott warned Floridians and visitors to heed local evacuation orders.



National Oceanic and Atmospheric Administration (NOAA) satellite image of Hurricane Irma September 8, 2017

2017 was one of the most active hurricane seasons the US has seen since 2005 with 17 named storms. It was also the costliest season on record.

Hurricane Irma achieved Category 5 strength, but was downgraded to a Category 4. According to the National Hurricane Center, it carried winds as strong as 150 miles per hour (mph). Tropical storm force winds extended outward up to 400 miles from the center with hurricane force winds extended up to 80 miles. Hurricane force wind gusts (i.e.

74 mph or more) were reported along much of the east coast of Florida, from Miami to Jacksonville. In addition to the long periods of heavy rain and strong winds, storm surge flooding also occurred well away from the storm center, including the Jacksonville area, where strong and persistent onshore winds had been occurring for days before Irma's center made its closest approach. It was the strongest hurricane ever observed in the open Atlantic Ocean.

National Weather Service, NOAA, *Detailed Meteorological Summary on Hurricane Irma*

Major Florida Ports Closed

Florida's major fuel terminals are located at Port Everglades, Port Canaveral, JaxPort, and Port Tampa Bay. However, facilities are also located at Port Manatee, PortMiami, the Port of Palm Beach, Port Panama City, and Port Pensacola. The Florida Port Authorities and U.S. Coast Guard began to close ports or kept them open with restrictions on September 8, 2017. Port Everglades and Miami Port were the first to close with all remaining Florida ports closing until September 13, 2017. The closures affected fuel deliveries throughout the State as the majority of Florida's fuel comes via ship to our ports.

According to FUELSNews, "Distribution was the main limitation for fuel deliveries in Florida. With nearly every fuel-buying site in Florida needing fuel after the storm, demand surged to 150% from normal demand. While carriers can traditionally meet demand in Florida, the surge of deliveries, accompanied by the hundreds of gas stations awaiting resupply, led to a rush for supply. Combine higher-than-average demand with longer delivery times, and you get a major bottleneck on delivery capacity."[vi]

Congestion and Shortages in Wildwood, Lake City, and Panhandle

As traffic increased on main highways, congestion began to occur in Wildwood where the Florida Turnpike merges with Interstate 75. Fuel shortages developed in Wildwood and in areas north near Lake City and the Panhandle. These areas faced continual shortages because of the limited number of gas stations and the ability to refuel those stations. Fuel trucks were also caught in the same heavy traffic, which affected delivery times.

Demand for Drivers and Fuel Trucks

Despite the effects of Hurricane Harvey, Florida had sufficient fuel available before Hurricane Irma made landfall. During hurricane season, petroleum companies keep a larger supply of fuel on hand in case of a storm. What made distribution difficult during the evacuation, though, was that there were not enough carriers or drivers to meet demand.[vii] During the evacuation, gas stations went from a full supply of fuel to empty in as little as two hours. To exacerbate the problem further, the petroleum industry had a shortage of fuel trucks and drivers to deliver the fuel. Drivers were being brought in from other states, as far as Arizona, to deliver fuel to gas stations. Further, as ports began to reopen, some did not have full power or working generators needed to power the pumps at the racks.

Loss of Power

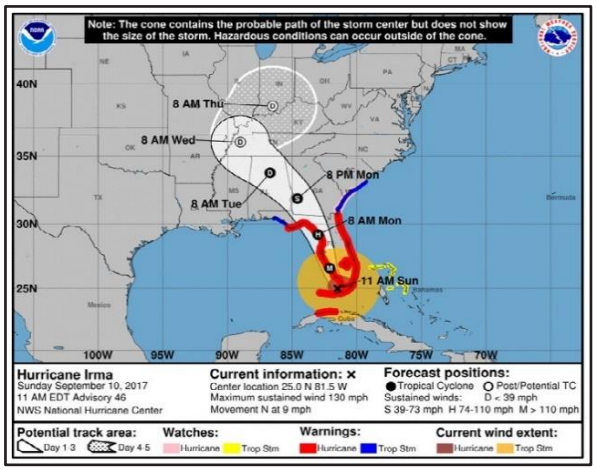
Pumping gas tanks requires electricity, which is often unavailable for days or weeks in a hurricane's aftermath. Section 526.143, F.S., requires gas stations located along evacuation routes to have backup power to pump fuel so residents can evacuate before a storm and return after it has passed. The law also requires that each motor fuel terminal facility and wholesaler that sells motor fuel in Florida be capable of operating the distribution loading racks for a minimum of 72 hours after a storm. Stations, however, have up to 36 hours after impact to start operating. Each business must keep a copy of the documentation of such installation on site or at its corporate headquarters. In addition, each business must keep a written statement attesting to the periodic testing and ensured operational capacity of the equipment. The required documents must be made available, upon request, to the Florida Division of Emergency Management and the county emergency management office. It was noted that, on a few occasions, while a gas station had a generator, it was not hooked up properly or it was not tested prior to the storm. Some fuel truck drivers also encountered this problem at the terminals and were not able to fill their trucks right away.

2.0 ASSESSMENT PROCESS

To better understand the complexities of the motor fuel supply chain and the obstacles to distributing fuel in the State of Florida during catastrophic events, the Florida Department of Transportation (FDOT) sought guidance and feedback from State and Federal agencies and private sector stakeholders.

- Florida Department of Revenue
- Florida Division of Emergency Management
- Florida Highway Patrol
- Florida Petroleum Council
- Florida Petroleum Marketers and Convenience Store Association
- Florida Rock and Tank
- Florida Trucking Association
- CSX Transportation
- U.S. Department of Homeland Security

Because Florida is vulnerable to a variety of natural and manmade threats, it has several plans and procedures in place to prepare and respond to pre-, during, and post-impact. In preparation for this Report, FDOT reviewed plans and after-action assessments from storms that have hit Florida in the past 25 years, including Hurricanes Andrew, Charley, Ivan, and Wilma, as well as testimonies given to the U.S. House Committee on Energy and Commerce about Hurricanes Harvey and Irma on November 2, 2017.



3.0 OVERVIEW OF FLORIDA'S FUEL DISTRIBUTION SYSTEM

Port Everglades provides petroleum to 12 counties in South Florida. It is the gateway for international trade and serves as South Florida's primary storage and distribution seaport for refined petroleum products. Twelve petroleum terminals and pipeline companies operate at the Port.

Port Tampa Bay supplies petroleum products to almost 1.1 million more residents than are served by Port Everglades. Port Tampa Bay fuel deliveries have increased significance because they also support the Orlando tourist population. However, Port Tampa Bay has less storage capacity than Port Everglades, which results in higher storage tank utilization rates and more frequent fuel deliveries, limiting its ability to meet demand increases from disruption at another port.

JaxPort and Port Canaveral provide petroleum products to approximately 10% and 8% of Florida's population, respectively. Expansion at Port Canaveral in 2009 enabled the port to accommodate more petroleum products.

Florida is the third most populous state in the United States and its population continues to grow. Because of Florida's increasing population, strong tourism industry, and passenger and cargo traffic through the State's airports and ports, gasoline consumption is among the highest in the country. The highest consumption of fuel occurs in the Miami, Tampa Bay, Orlando, and Jacksonville metropolitan areas.

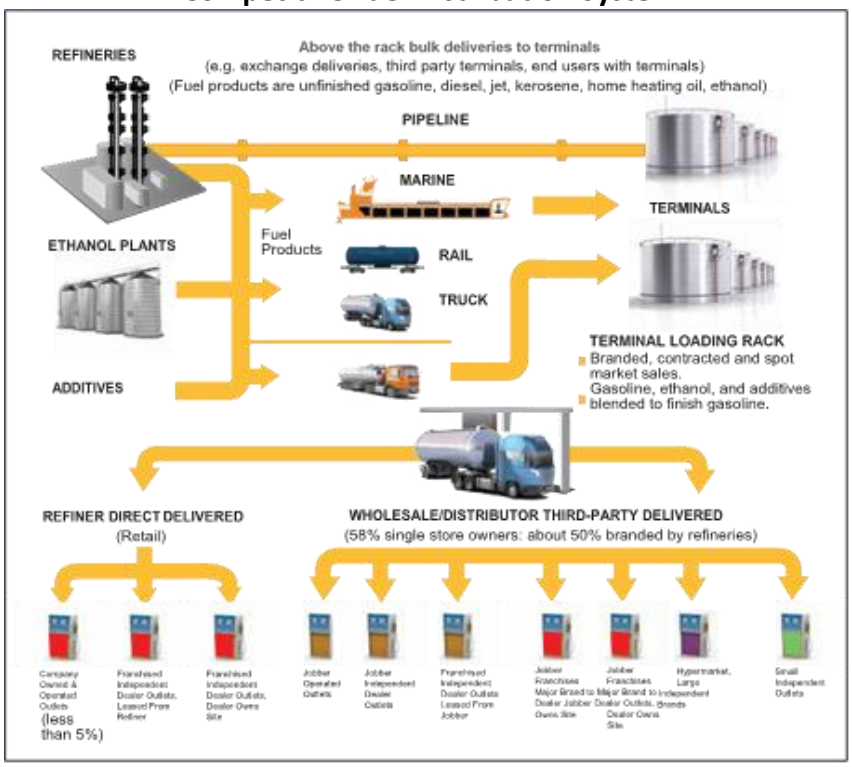
Understanding the Supply Chain

Terminals

In most US states, gasoline is transported by pipeline to large storage terminals near areas where gas is consumed. Ethanol is delivered by barge or train to the State and then delivered by truck into ethanol tanks at the terminal. The U.S. Environmental Protection Agency requires detergents and additives to be added to the fuel and those are also delivered by truck into separate smaller tanks at the terminal. Gasoline, ethanol, and additives are blended at the "Rack" and pumped into the tank truck, which then delivers the finished gasoline to gas stations. The "Rack" is the place where trucks go to get fuel. Most gasoline cannot be used by the consumer without being blended with ethanol and the additive package.

Florida's fuel supply is transported from outside of the State by mostly barge, as Florida has no significant oil production facilities or refineries. Nearly all of Florida's fuel – over 90% – comes from barge deliveries to four major ports: Everglades, Canaveral, Jacksonville, and Tampa Bay. However, Fuel is also delivered to additional ports. Fuel is also trucked into the state from distribution terminals in Alabama and Georgia that receive fuels off the Colonial Pipeline.[viii]

Competitive Fuel Distribution System



Florida Petroleum Council. 2017. Hurricanes Harvey and Irma. A presentation to FDOT on Hurricane Response and Preparedness

If a major storm disrupts the movement of fuel from one terminal, the ability to move fuels from any one major port area to other portions of the State is limited by factors such as driver credentialing, driver and equipment availability, difference in port and terminal operations, and access requirements. Further, if a terminal is damaged, re-opening a port after a major storm can take up to a month or more depending on the level of damage. Any disruption to these services hamper a port's ability to load and distribute fuel.

Fuel Truck Drivers

Fuel truck drivers must get safety, hazardous materials and fuel terminal operations training, as well as special clearance to access a port. Each port has their own special training. That means a fuel truck driver trained to receive fuel from one terminal, for example Jacksonville, is not able to pick up fuel at another terminal, such as Tampa, without additional training, even if the same company owns the terminals. Each port also has their own access requirements. For example, if a terminal is located near a port, the driver is required to have a Transportation Worker Identification Credential (TWIC), along with a company-specified credential or identification, to access the terminal. Some ports that require a TWIC may permit a driver to use an escort if they do not have a current TWIC; however, providing an escort during a natural or hazardous event would be difficult due to the shortage of drivers. Because the process of training and obtaining TWIC certifications for a new driver can take up to 4 weeks, trucking companies are limited in their ability to quickly provide more fuel truck drivers.

Storage Tanks

Most terminal operators do not own the products in their fuel storage tanks. When a hurricane is approaching, a major concern of a terminal operator is whether there is enough fuel in the tanks to maintain the integrity of the storage tanks in hurricane winds. Storage tanks must have a minimum level of fuel so that it does not float if flooding occurs. If terminal operators cannot obtain more fuel to fill the tanks, then they will fill the empty tank with water to maintain structural integrity. Filling the tanks with water contaminates the gasoline. If filled with water, tanks must be reconditioned so that gasoline can again be stored after getting mixed with water. Bringing a tank back online can be a time-consuming process with varying lengths of delays dependent on tank size and location.

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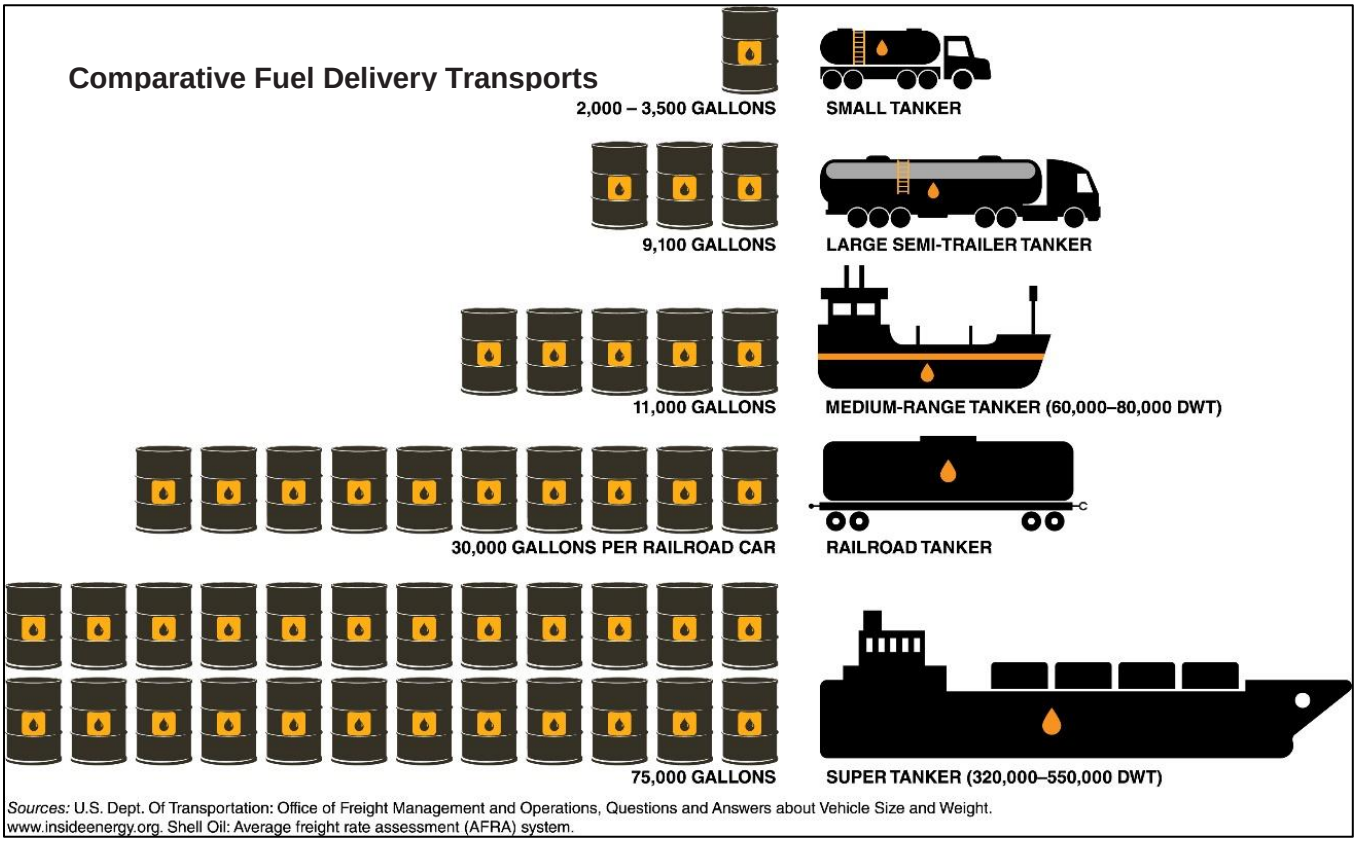
Oil Price Information Service (OPIS) 2017

Market Forces at Work: Contract Pricing vs Spot Pricing

Why did one station have gas when the station across the street was out of gas? This was a common question before and after the storm. The inconsistent supply of fuel to gas stations within close proximity was confusing and often frustrating. The answer to this common question is simple – market forces at work.

Gas stations get their fuel supply in two ways. The first is through a wholesale contract where a dealer signs a contract with a supplier or with a particular brand that is owned or controlled by a refining company. The refiner may provide an unbranded gasoline or a branded gasoline. Regardless of whether it is a refiner or a supplier, the contract is an agreement between the parties that the gas station will have a regular supply of fuel for the contracted time period. When supplies are constrained, (such as was the case during Hurricane Irma evacuations and after its impact), those stations with a contract are given a higher priority. When the station owner signs the contract, they are guaranteed supply, when supplies are tight, those with a contract may be put on "allocation". "Allocation" means that they do not get 100% of the contracted supply, but get a smaller percentage. This is done to ensure that the limited fuel supply is available to all the stations with contracts. Allocation is applied to both branded and unbranded dealers/owners with a contract.

Gas stations can also purchase fuel on the Spot Market. The “Spot Market” is where fuel supplies that are available in excess of that needed to meet contractual obligations are treated as a surplus and sold at a discount. Spot Market fuel is often cheaper than contract fuel because there is “excess” fuel on the market; however, during emergencies, contractual needs are served first and there is little or no surplus. There may be a lot of fuel available, but if most of it is reserved for the stations that have a contract, the stations that rely on the Spot Market may not be able to access it.



4.0 WHAT WORKED WELL

Communication and Coordination

State run calls during the Irma event with the Petroleum industry officials and state and federal disaster response officials, convenience and fuel retailers, oil companies, terminal operators, and other segments of the supply chain before, during, and after the storm assisted in the anticipation of needs and issues and provided the opportunity to address some of the impacts.

Florida Highway Patrol Escorts

Florida Highway Patrol (FHP) and military escorts for fuel trucks and ships, easing the movement of product from tankers and barges, through ports and terminals, to retail fuel locations, and ultimately consumers' gas tanks worked very well. To help retail locations stay open as long as possible, law enforcement assisted gas station staff in the Keys who stayed on the job until the last minute get to evacuation centers with their families.[ix] While there were some instances when the escorts and trucks got stuck in heavy traffic, overall, they helped to navigate the trucks as well as gaining access into and out of gas stations so that the fuel trucks could safely replenish the fuel supply. Fuel truck escorts by the FHP not only afforded expedited passage during heavy traffic volume, they also provided general security of those fuel trucks and drivers while in transit.

cnn.com

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Regulation Waivers

Federal and state agencies worked quickly to issue various fuel, hours of service, and Jones Act waivers, listed below, that enabled State and local officials as well as the fuel industry to respond more quickly to hurricane preparation and recovery efforts.[x]

- **Fuels**: The Environmental Protection Agency (EPA) issued a multi-state waiver of the federal requirements for low volatility "summertime" and reformulated gasoline (RFG). These waivers were critical in allowing refiners to make and sell winter-grade fuel including components like butane that can be used to increase the volume of fuel supply. In response to a shortage of undyed diesel fuel for use in emergency response and disaster recovery vehicles, the EPA also issued a waiver allowing dyed diesel fuel to be sold, distributed, and used in highway vehicles in Florida.[xi]

- **Motor Carrier Regulations:** The Federal Motor Carrier Safety Administration waived Federal Motor Carrier Safety Regulations, including Hours of Service Regulations. for Hurricane Irma response. In addition, FDOT waived registration and size and weight restriction requirements for commercial motor vehicles that are in or that enter Florida to provide emergency services or supplies, to transport emergency equipment, supplies or personnel. These waivers allowed the trucking industry to more effectively support recovery and resupply efforts.[xii]

- **Federal Energy Regulatory Commission (FERC) Tariffs:** The fuel waivers granted by EPA are less effective if the fuel cannot be shipped through the pipeline infrastructure to reach consumers, even if it meets specifications. To address this issue, the EPA granted the Colonial Pipeline Company's request for a waiver of certain requirements of its tariffs for petroleum products transportation service between origin points in the Gulf Coast region and destination points on its pipeline system throughout the Southern and Eastern Seaboard states.

- **Jones Act:** The Jones Act, also known as the Merchant Marine Act of 1920 (46 U.S.C. § 688), requires cargo that is shipped between US ports move on US- flagged ships that are built, crewed, and owned by U.S. citizens. The Department of Homeland Security waived the Jones Act for refined petroleum products shipped from New York, Pennsylvania, Texas, and Louisiana to South Carolina, Georgia, Florida, and Puerto Rico, ahead of Hurricane Irma.
- **Tolls:** FDOT waived the collection of tolls and other fees and charges for the use of the Turnpike and coordinated with all State expressway authorities to do the same. The Georgia State Roadway and Toll Authority also waived fees for the toll lanes on I-75.

5.0 NEXT STEPS

The following includes a list of steps the Department could take if directed by Governor Scott. As Florida reevaluates its process and procedures, it provides an opportunity to work collaboratively with government stakeholders and private sector operators to find ways to improve or enhance the system through national/regional programs, and state, county, and local initiatives.

Coordination

1. Develop a Planning Guide

The Department and the Division and of Emergency Management, in coordination with the fuel industry, could develop a planning guide for public and private sector organizations to evaluate their fuel dependency. The guide could also include a template to collect fuel dependency information for non-emergency services and share that information with county and local emergency management officials. This guide would provide best practices guidance to assist organizations in reviewing and establishing emergency fuel contracts.

2. Engage with Trucking Industry

The Department and the Division and of Emergency Management, in coordination with the trucking industry, could engage trucking companies to get a better understanding of the gaps related to equipment and personnel. The Department and industry could also engage bulk terminal owners and operators to help develop a plan to better facilitate loading trucks during emergencies. This may also include consideration of developing a “bullpen” of certified (out of market) drivers to move to on- call status and mobilized when Florida is under a State of Emergency.

Assessment

Evaluate Options for Additional Fuel Storage

While evaluating Hurricane Irma’s effects on Florida port closures, a concept for permanent and/or temporary fuel storage locations emerged. The population in Florida is projected to grow by 36% by 2045. [xiii]As the population continues to grow, there will be greater demand in Florida.

Michelle Eve Sandberg/AFP/Getty Images

1. Permanent Facilities

The State and fuel industry need to plan now to meet future demand and be prepared for storm occurrences. As such, it is recommended that the State and fuel industry explore sites where more fuel can be stored and consider the feasibility of adding more racks at fuel terminals located within ports as well as other locations to enable more trucks to fill tanks faster. This could include already established fuel storage sites located on FDOT maintenance and operations centers. During emergency events, this fuel was critical to assist law enforcement, first responders and state-owned vehicles in their missions. By expanding this capacity, it would also allow for more fuel availability as first responders would have additional locations to receive fuel in emergency situations. When evaluating the feasibility for permanent facilities, the State and fuel industry should consider:

a. locating the facility at a strategic location, such as Wildwood, which is not at risk for storm surges or flooding
b. ease of access
c. ownership of the site
d. who will load the fuel
e. how the fuel will be loaded
f. safety issues

2. State Entities and Private Organizations

The State could also explore the potential of accessing fuel storages that other public and private sector organizations may have; for example, universities, government entities, rental car companies, and other companies that maintain vehicle fleets.

3. Mobile Solutions

Fuel trains with fuel tanker cars placed in strategic locations could also be considered. CSX could pull the fuel cars, but the cars are owned by the supplier. The cars would have to meet CSX safety standards. The supplier would have to pay close attention to how much a rail car holds and how quickly a truck would drain that resource. This would help determine number of rail cars to adequately serve as a temporary fueling location, as well as the size of a fuel storage yard and rail/truck access.

Response Actions

1. Provide Law Enforcement Escorts

As demonstrated during Hurricane Irma, FHP escorts proved effective in getting fuel trucks out of the ports and to their delivery points. Every interviewee noted this mission as successful. It is recommended that escorting fuel trucks before and after an event be documented in emergency management plans for implementation in future events in Florida. The following consideration (lessons learned) items could be included in planning documents, for future implementation;

a. Fuel trucks were permitted to leave ahead of the convoy at the discretion of the driver, but would be without police escort.
b. Communication with fuel terminals, drivers, and troopers was done through exchange of cellular numbers and consistent personnel in key positions.
c. Law enforcement was given discretion to stay with an escort considering local traffic, security, and driver familiarity with surface streets.
d. Law enforcement was equipped with on-board mapping and familiar with the local areas they were assigned.

e. Round-trip escorts were considered and occasionally occurred, but there was a decision to prioritize full tankers departing terminals.

f. FHP vehicles are equipped with automated vehicle identification (AVI)/mapping software and were tracked real-time, as needed, by the applicable FHP supervisor assigned to the mission request.

2. Communication on Fuel Availability during Events

Public communications about fuel availability and responsible filling practices are critical. The public must be informed about the challenges with fuel availability when making their decisions on where to evacuate to during emergencies and when to return home. It is also critical that public information officials manage the message so to avoid an unnecessary additional use of the supply. A coordination plan for public information campaigns on this issue could be developed via a planning check list with input from State Emergency Management officials and the Petroleum industry. Another component of the communications plan should include daily calls between State, local and federal agencies, petroleum industry representatives to monitor the availability of fuel along the critical evacuation corridors. This will assist in the planning and deployment of necessary resources to maintain fueling operations. Information requested could include available fuel and expected fuel deliveries by fuel type and major port area.

3. Develop a Structure for Declaration of Regional Waivers

In order to develop a structure for declaration of regional waivers, the Department could facilitate pre-agreed upon communications with states and their Governors. During emergency events, the transportation fuel logistical chain is often affected and supplemented beyond state borders. Over the past several fuel disruptions, waivers for fuel supply delivery have had to be pieced together state by state – thus losing a lot of efficiency in the response. Whether dealing with fuel standards or the transport fleet operations (hours of operation, weight restrictions, etc.), expanding the response across a broader region would enhance the flexibility and timeliness of a response.

4. Identify Critical Gas Stations along the State Evacuation Corridors

It may be useful to identify what gas stations may be considered "critical" given size of station, number of pumps, and proximity to evacuation routes. The Department could evaluate the feasibility of requiring gas station owners, particularly those located on evacuation routes, to have a hurricane preparedness plan for their station and staff so they can remain open as long as possible and come back on line quickly after a storm. Section 526.143, F.S requires that specific retail outlets be equipped with the appropriate equipment to run on an alternative power source. It may be appropriate for the Department to coordinate with industry leaders on ensuring retail outlets are aware of this law and are in fact in compliance.

5. Station Attendants Managing Traffic at Station

The Department could evaluate the feasibility of requiring local emergency management agencies to encourage individual station operators to develop a plan for orderly fuel service during evacuation and emergency response periods. This could include encouraging station operators to have additional staff on hand to assist in the maintenance of vehicle flow. At the local level, stations where operators and attendants took extra steps to manage traffic within the stations/stores had smoother and more efficient fueling operations. Customers entered and exited in an orderly fashion reducing cutting in line and other undesirable behaviors. There was also a cumulative safety effect on the streets as it was clear where vehicles entered and exited a business.

6.0 SUMMARY

In order to provide residents, businesses, and visitors with access to fuel and to support the state's fuel supply the Department makes the following recommendations to the Governor for his consideration:

1. Coordination
    a. The Department and the Division and of Emergency Management, in coordination with the fuel industry, could coordinate with the Division of Emergency Management and industry partners to develop a planning guide. The guide would act as a template for businesses and provide best practices and guidance to assist organizations in reviewing and establishing emergency fuel contracts.
    b. The Department and the Division and of Emergency Management, in coordination with the fuel industry, could engage trucking companies and develop an emergency staffing plan.
2. Assessment
    a. The Department evaluate the options of additional fuel storage locations in the state.
        i. Permanent Facilities: The Department and fuel industry could explore sites where more fuel can be stored and evaluate the feasibility of adding more racks at fuel terminals within ports as well as other locations to enable more trucks to fill tanks faster.
        ii. Public Organizations and Private Entities: The Department could also assess the feasibility of accessing the fuel storage of other public and private entities for use during an emergency event. This may include universities, government entities,rental car companies, and other private organizations that maintain vehicle fleets.
        iii. Mobile Solutions: The Department, in coordination with the Railroad and Fuel industry, could study the option of using fuel trains with tanker cars to act as temporary storage and dispensing facilities for trucks working to accommodate the heavy demand for fuel.
3. Response
    a. It is recommended that Law Enforcement work to create a plan to allow for escorting fuel trucks before and after an event. This could be achieved by including in emergency management plans for implementation in future events in Florida.
        i. This recommendation should account for the lessons learned included on pages 11-12.
    b. The Department and the Division and of Emergency Management could create a public information plan on effective ways to communicate fuel availability for residents, businesses, and visitors during an emergency.
    c. The Department could coordinate with southeastern states and their Governors on pre-agreed upon regional waivers for emergencies. Expanding the response effort across a broader region would enhance the flexibility and timeliness of the response.
    d. The Department and fuel industry could identify critical gas stations along state evacuation corridors. This effort would also include the fuel industry educating gas stations on requirements and encourage those located at critical locations on the state highway system to have an emergency plan in place.

e. The Department and Division of Emergency Management could coordinate with local emergency management officials to develop a plan for orderly fuel service during emergencies, with the focus on primary evacuation routes.

If directed, the Department is committed to working with our partners in developing these strategies that may provide residents, businesses, and visitors with additional access to fuel and additional support to the state's fuel supply during emergencies.

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