

Planning for the Unexpected: Natural Disaster Management for In Bloom Programs – Things We Wish We'd Known

**Greenwood, South Carolina
Tavares, Florida**





Surviving Hurricane
Helene
Greenwood, SC
September 27, 2024
*How to Expect the
Unexpected*



OVERVIEW

Project HOPE
Foundation
www.projecthope.org



When everyone left the office the day before, no one could have predicted the drastic change in course



By 5:00 a.m. (September 27)



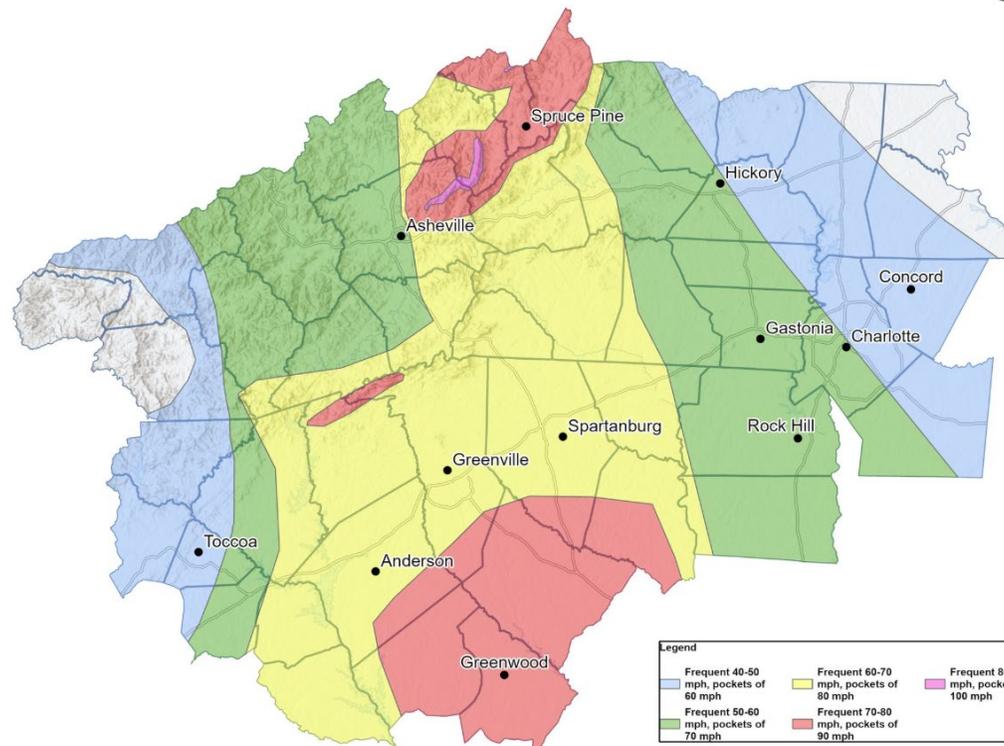
Totally, and unexpectedly **SLAMMED** by this storm

- 100 % of all roads in Greenwood County impassable
- 100% Power loss
- 0 Communications



Sustained 70-80 mph winds with gusts of 90 mph

Estimated Peak Wind Gusts Associated with Tropical Cyclone Helene



Esri, CGIAR, USGS, Esri, TomTom, Garmin, FAO, NOAA, USGS, EPA, NPS, USFWS





**HOW WE WERE
PREPARED**

A “New “ Kind of Preparedness for the City of Greenwood.

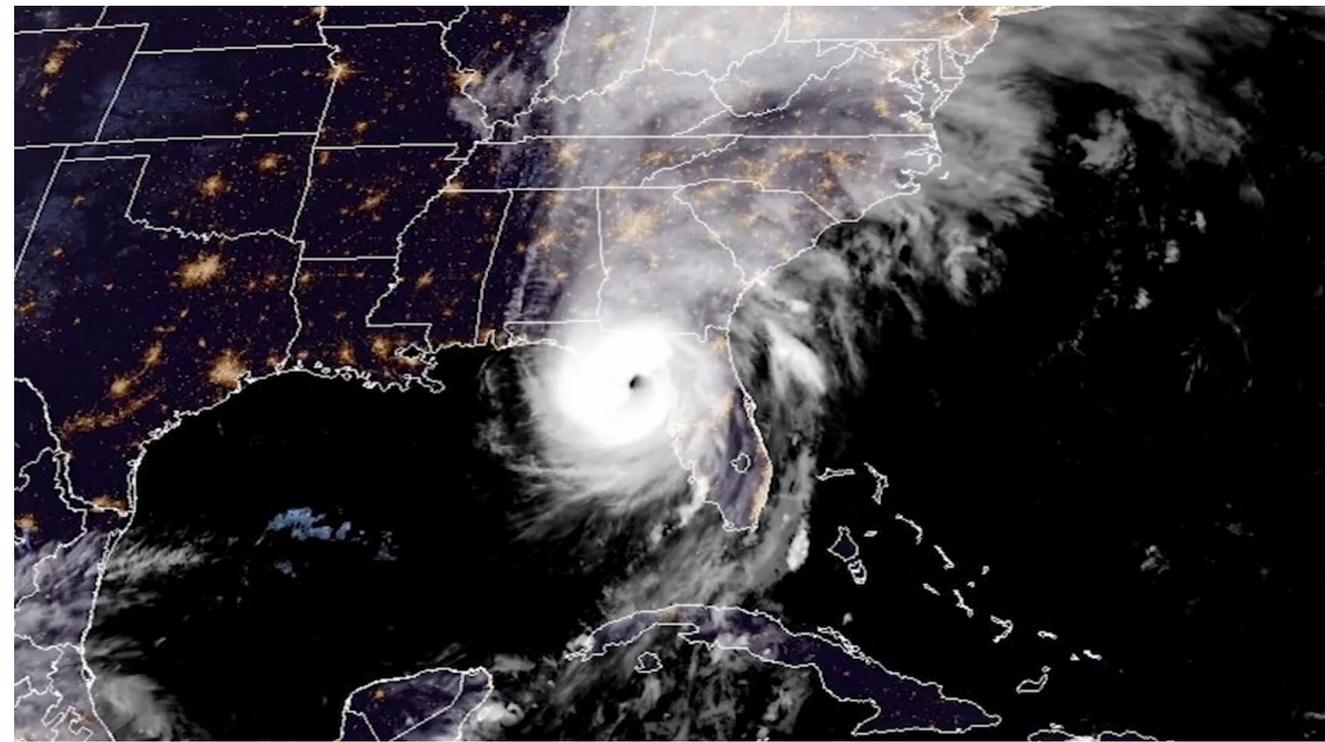
Prepared with FEMA spreadsheets sent to City Staff a couple of days ahead of storm.

Began by assessing any flood prone areas with placement of barricades.

Somewhat prepared for flooding, but not at all prepared for severity of the wind.

Purchased extra chain saws.

County began preparing the Emergency Operations Center.



A photograph showing a person in a blue shirt climbing a large tree next to a house. The house has a damaged roof and a window with a white mesh covering it. The date '9.28.2024' is visible in the bottom right corner.

HOW WE WERE NOT PREPARED

9.28.2024



No Designated Shelter – Our Greenwood Family YMCA quickly stepped into that role.

Lots of Generators – little to no Fuel Sources due to widespread power outages.

Local gas supplier, Commissioners of Public Works, overwhelmed with power outages and downed trees, so gas service was not the priority.

Local hospital became top priority to become operational asap.

Fuel trucks brought in to assist local essential health care, law enforcement, public works, and other government vehicles.





WISSY ON
LIVE

INITIAL IMPACT

CALLS FROM FIRE, POLICE, PUBLIC WORKS STARTED COMING IN EARLY FRIDAY AM, BEGINNING AROUND 5:00 AM.

WHILE MANY OF THE CITY STAFF WANTED TO COME IN, THEY WERE TRAPPED IN THEIR OWN HOMES DUE TO DOWNED TREES ON STRUCTURES, DRIVEWAYS, AND OUTLET ROADS.

HOSPITAL AND AREA LIFE FLIGHT DOWN FOR SEVERAL HOURS BUT MOBILIZED QUICKLY.

CITY FIRE BECAME THE ONLY FIRE SERVICE RUNNING CALLS DUE TO HAZARDOUS WEATHER CONDITIONS BUT NEVER CEASED RESCUE CALLS.

THE LOSS OF A FIRE ENGINE DUE TO TREE DAMAGE.

THE RESCUE OF A FATALITY DUE TO SAFETY CONCERNS FOR THE CREW.

OVERWHELMING AMOUNT OF DAMAGED HOMES, INACCESSIBLE DRIVEWAYS AND ROADS CREATING AN OVERLOAD OF CALLS FOR LOCAL 911.

THOSE IN THE FIELD FACED DANGEROUS CONDITIONS AS THE STORM CONTINUED ON WHILE TRYING TO CLEAR ROADS, CUT TREES, AND ADDRESS STORM-RELATED EMERGENCIES.



CHALLENGES





TREES STILL COMING DOWN WHILE FIRST RESPONDERS ARE OPERATING.

GETTING TO EVERYONE'S PLACE OF EMPLOYMENT WAS VIRTUALLY IMPOSSIBLE DUE TO IMPASSABLE ROADS, OUTAGES, COMMUNICATION CHALLENGES WITH LITTLE TO NO CELL SERVICE. ESSENTIAL HEALTHCARE AND GOVERNMENT PERSONNEL WERE TRANSPORTED VIA FIRST RESPONDERS.

NO ONE INDIVIDUAL WAS ASSIGNED FROM THE CITY TO THE EOC – LACK OF CITY PERSONNEL AVAILABLE DUE TO VACATIONS, WORK CONFERENCES, TRAVEL.

COMMUNICATION – QUICKLY PARTNERED WITH COUNTY PUBLIC INFORMATION OFFICER TO TEAM UP ON SOCIAL MEDIA POSTS AND PRESS RELEASES, PRESS CONFERENCES, ETC. STORM LEFT GREENWOOD VIRTUALLY HELPLESS FOR MANY.

A PHONE CHARGING STATION WAS PLACED IN THE CITY CENTER.

POWER OUTAGES LINGERED FOR OVER 2 WEEKS, ESPECIALLY IN RURAL AREAS.

NO WATER IN MANY AREAS SERVICED BY WELLS.

LACK OF FOOD...FEMA PROVIDED MRE'S AND WATER ACROSS THE CITY AND COUNTY, BEGINNING THE MONDAY AFTER THE STORM.



A photograph showing the aftermath of a storm. A large, thick tree trunk has fallen across the roof and side of a brick house, causing significant damage to the garage and roof structure. Debris is scattered around the base of the tree and the house. A blue car is partially visible in the bottom right corner. The sky is overcast.

RECOVERY PROCESS

Power restoration – over 27,000 linemen from across US and Canada deployed to area for immediate power restoration.

National Guard deployed to Greenwood to provide recovery support.

Storm debris clean up supported by county and city public works along with SC Department of Transportation.

Area non-profit organizations and churches partnered to provide food and other resources to everyone.

Area restaurants and food trucks donated meals to citizens throughout the city and the county.

Local industry provided product for local healthcare and law enforcement professionals for the first week of recovery.

TEAM Rubicon, a humanitarian aid organization from Los Angeles, brought in numerous teams to help homeowners with storm cleanup.





LESSONS LEARNED

Better established guidelines of who should be in EOC and their direct responsibilities.

Better education on major storm preparedness.

More public safety – more effective communication on operational fuel resources, gas stations, etc.

Chainsaw safety training 😊

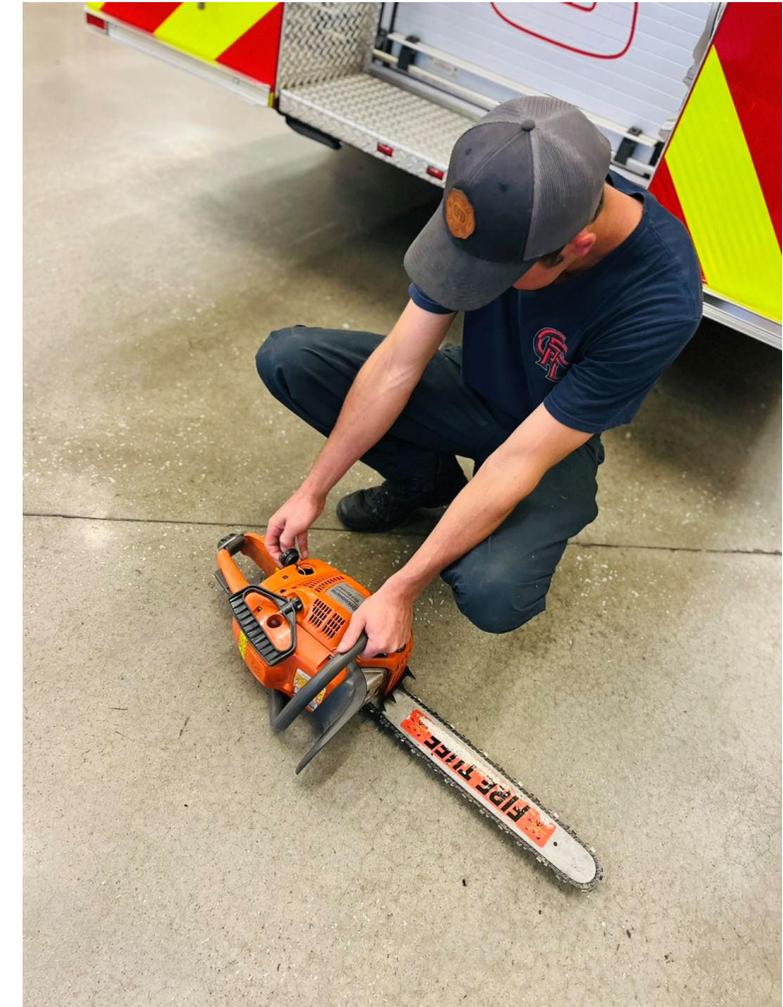
Develop a “Pre-Approved” list of tree removal contractors.

Thanks to COVID, most could work remotely if needed.

Make proper investments in infrastructure (underground power, etc.)

Proactivity on city tree inventory....unfortunately, post-Helene storms continue to take down major trees in key city areas, sometimes causing power outages, traffic challenges, etc.

Keep a running list of property damage and what falls under City prevue, what is personal property, etc.





SILVER LININGS



COUNTY PUBLIC WORKS QUICKLY DEVELOPED A NEW AREA OF THE LANDFILL SPECIFICALLY FOR DEBRIS DISPOSAL, AND ELIMINATED LIMB AND TREE REMOVAL AT EACH CONVENIENCE CENTER TO STREAMLINE THE DISPOSAL PROCESS.



INCREASED ACCOMMODATIONS TAX REVENUE DUE TO DISPLACED RESIDENTS, OUT OF TOWN CONTRACTORS, ETC.



INCREASED HOSPITALITY TAX REVENUE – MORE CITIZENS DINING OUT DUE TO LACK OF ABILITY TO COOK AT HOME.



CONSISTENT MESSAGING THANKS TO PARTNERING WITH COUNTY ON ALL PUBLIC INFORMATION EFFORTS.



BLESSED THAT ALL THREE SCHOOL DISTRICTS WERE ON FALL BREAK. THIS ALLEVIATED IMMEDIATE NEED AND RESPONSIBILITY OF SCHOOL PERSONNEL AND STUDENTS.





TEAM GREENWOOD!





BRACING FOR THE STORM



America's Seaplane City®

START OF STORM SEASON

- FEMA PREPAREDNESS; FORMS & NIMS CERTIFICATIONS
- UPDATE EMERGENCY CONTACT LIST AND DISTRIBUTE
- REVIEW EMERGENCY RESPONSE PLAN FOR NEEDED UPDATES
- MEET WITH LEADERSHIP TO DISCUSS PLAN
- NOTIFY CITY COUNCIL OF EMERGENCY PLAN AND THEIR ROLE
- EVALUATE TREES FOR DISEASE OR CONCERNS
- SECURE PURCHASE ORDERS THAT MAY BE USED AT A MOMENTS NOTICE
- IDENTIFY PROJECTS THAT MAY BE AT VARIOUS STAGES AND DEFINE NEEDS
- INVENTORY STORM RESPONSE EQUIPMENT AND SUPPLIES
- INSPECT BUILDINGS, PARKS , MARINAS, AND OTHER STRUCTURES
- LIST REPAIRS NEEDED TO WEATHER A STORM AND BEGIN ADDRESSING
- SECURE IMPORTANT CONTACTS AND DATA
- CONFIRM DISASTER DEBRIS MANAGEMENT SITE



DEPARTMENT FUNCTIONS

- CITY ADMINISTRATOR – PROVIDING ACCURATE INFORMATION BEFORE, DURING, AND AFTER A DISASTER TO EMPLOYEES AND THE PUBLIC;
- LIBRARY - DEFINES LOCAL PROCEDURES FOR THE USE OF VOLUNTEER RESOURCES;
- FINANCE – PROVIDE FISCAL AND ADMINISTRATIVE PROCEDURES TO SUPPORT ALL LEVELS;
- ECONOMIC DEVELOPMENT – MANAGE RESOURCES NEEDED FOR THE CARE OF PETS, LIVESTOCK, WILDLIFE, AND EXOTIC ANIMALS. DEFINE POLICIES AND PROCEDURES USED TO COORDINATE INVOLVEMENT OF THE PRIVATE SECTOR WITH DISASTOR RECOVERY EFFORTS OF THE CITY;
- PUBLIC WORKS – TRANSPORTATION, ENGINEERING, DEBRIS MANAGEMENT, AND FACILITIES.

THESE ARE NOT INCLUSIVE OF ALL DEPARTMENTS, EVERYONE PLAYS A PART IN RETURNING THINGS TO NORMAL IN A SAFE, WELL-PLANNED MANNER.

FIRST NAMED STORM

- UPDATE TRAFFIC SIGNAL MAPS
- CHECK TREES THAT HAVE NOT BEEN ADDRESSED AND REPRIORITIZE
- STOCK UP ON STORM RELATED NECESSITIES; CHAINSAW BARS, CHAINS, TWO-CYCLE OIL, RAINGEAR, FLASHLIGHTS, BATTERIES, AND SMALL TOOLS
- REPRIORITIZE REPAIRS
- REINSPECT BUILDINGS, PARKS, MARINAS, AND OTHER STRUCTURES AND EVALUATE TO ESTABLISH A NEW CRITICAL LIST
- ESTABLISH AN UPDATED LIST OF REPAIRS THAT MAY BE ADDRESSED IMMEDIATELY
- REVIEW CONTRACTS WITH EMERGENCY SERVICES PROVIDERS

ACCESSIBILITY

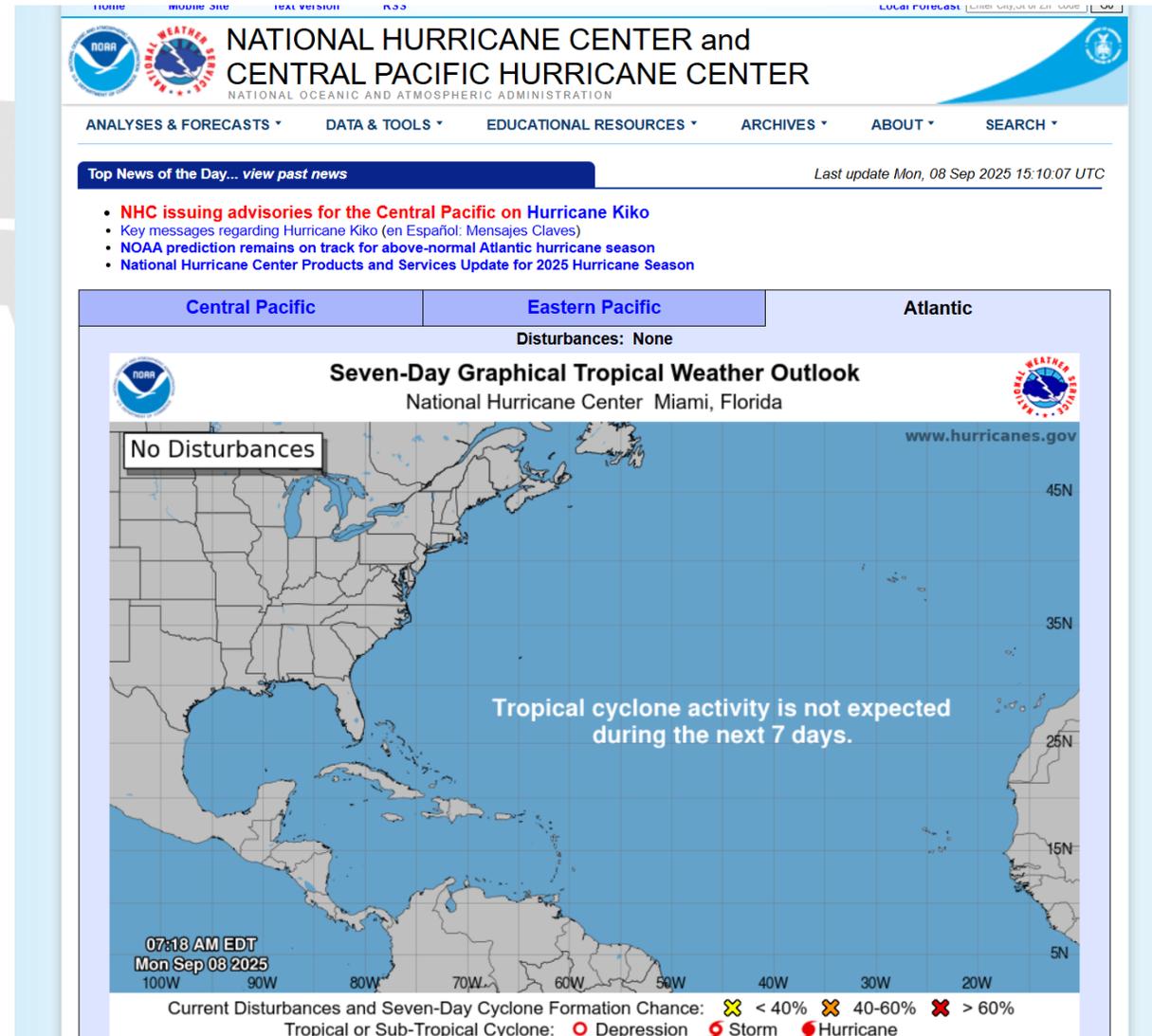


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7 DAYS BEFORE LANDFALL

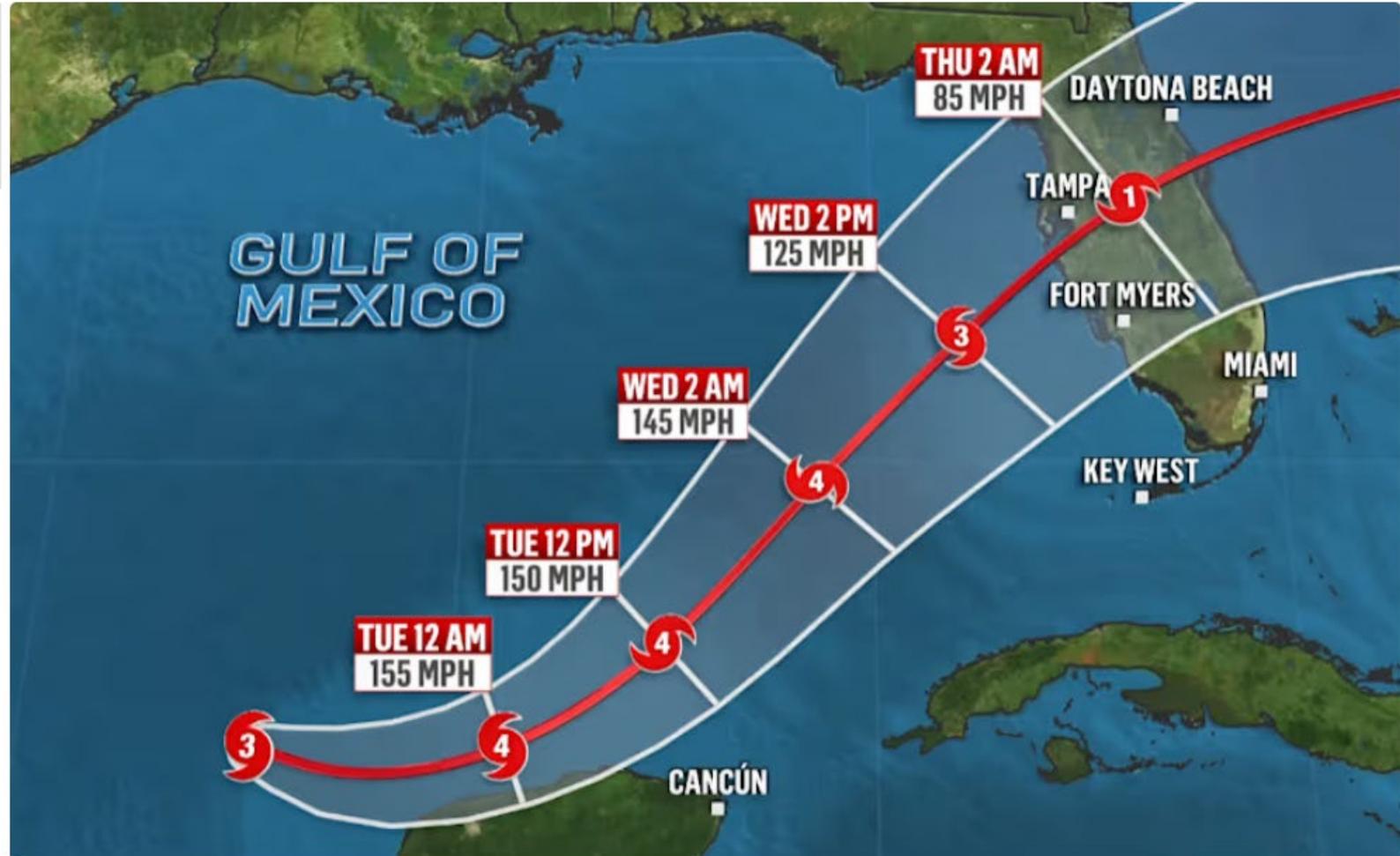
- MONITOR THE PATH
- BEGIN SECURING LARGE ITEMS
- PURCHASE NECESSARY TOOLS
(TARPS, CHAINS AND BARS FOR CHAINSAWS)
- CONFIRM DEPARTMENT HEADS AVAILABILITY
- STAFF MEETING
- RECONNECT WITH UTILITY PROVIDERS



72 HOURS BEFORE LANDFALL

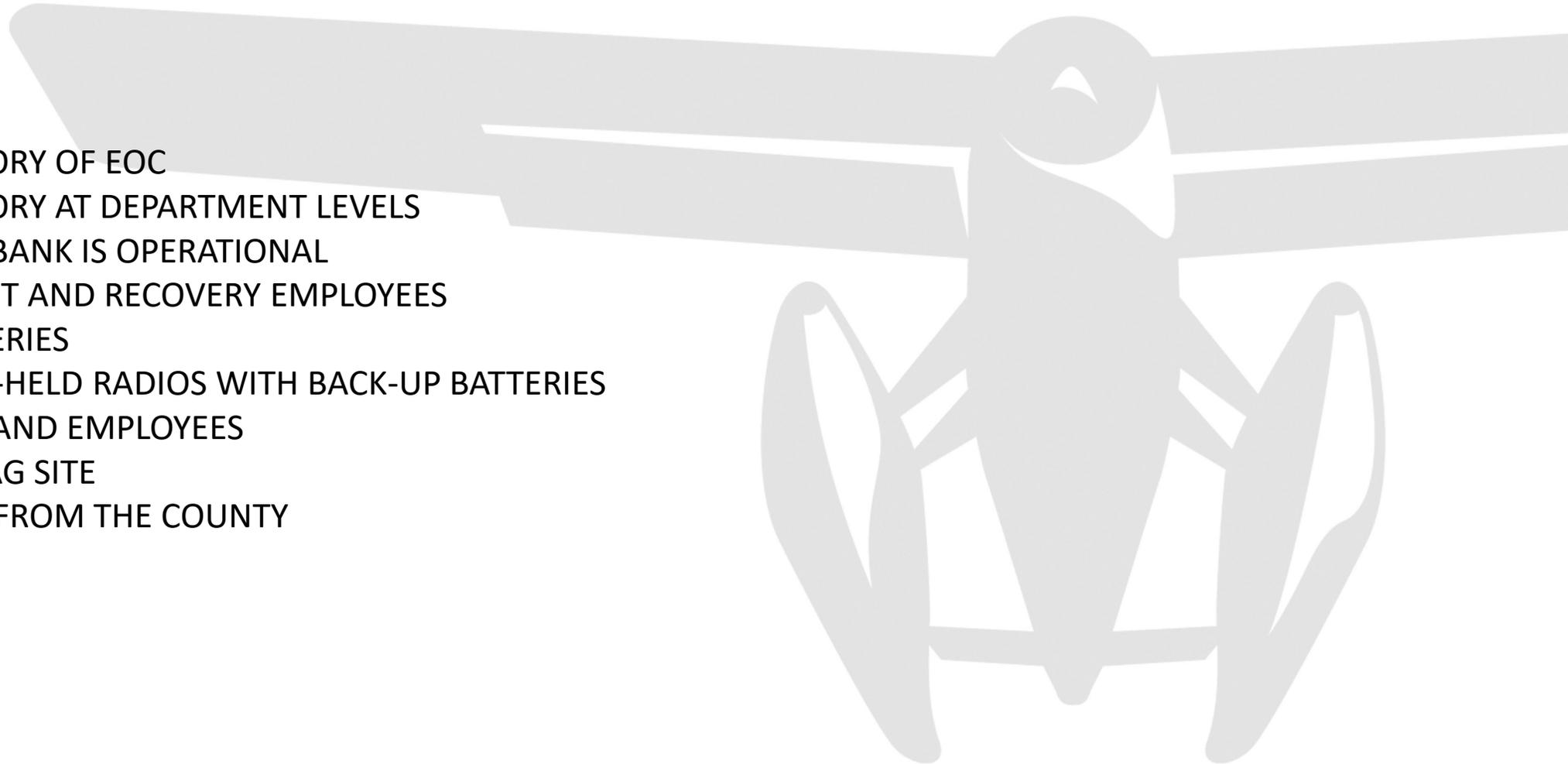
Milton strengthened into a Category 3 hurricane Monday

- STAFF MEETINGS
- ACTIVIAE EOC BLOG
- SET UP PHONE BANK
- STOCK EOC
- CONFIRM PARTICIPANTS IN EOC
- OPEN SANDBAG SITE
- REMOVE HANGING BASKETS



48 HOURS BEFORE LANDFALL

- CONFIRM INVENTORY OF EOC
- CONFIRM INVENTORY AT DEPARTMENT LEVELS
- CONFIRM PHONE BANK IS OPERATIONAL
- CONFIRM RIDE-OUT AND RECOVERY EMPLOYEES
- CHARGE ALL BATTERIES
- DISTRIBUTE HAND-HELD RADIOS WITH BACK-UP BATTERIES
- UPDATE COUNCIL AND EMPLOYEES
- MONITOR SANDBAG SITE
- SECURE GAS KEYS FROM THE COUNTY



24 HOURS BEFORE LANDFALL

- PACK OVERNIGHT BAG AND CONFIRM PLANS
- CHECK CHARGES ON ALL BATTERIES AND DEVICES
- STAFF EOC
- MONITOR EOC BLOG
- TOP OFF ALL FUEL POWERED ENGINES
- MONITOR PROPERTIES AND MAKE ANY LAST-MINUTE ATTEMPTS TO SECURE OR MAKE SAFE
- ALLOW STAFF TIME TO MAKE LAST MINUTE PREPARATIONS TO THEIR HOMES

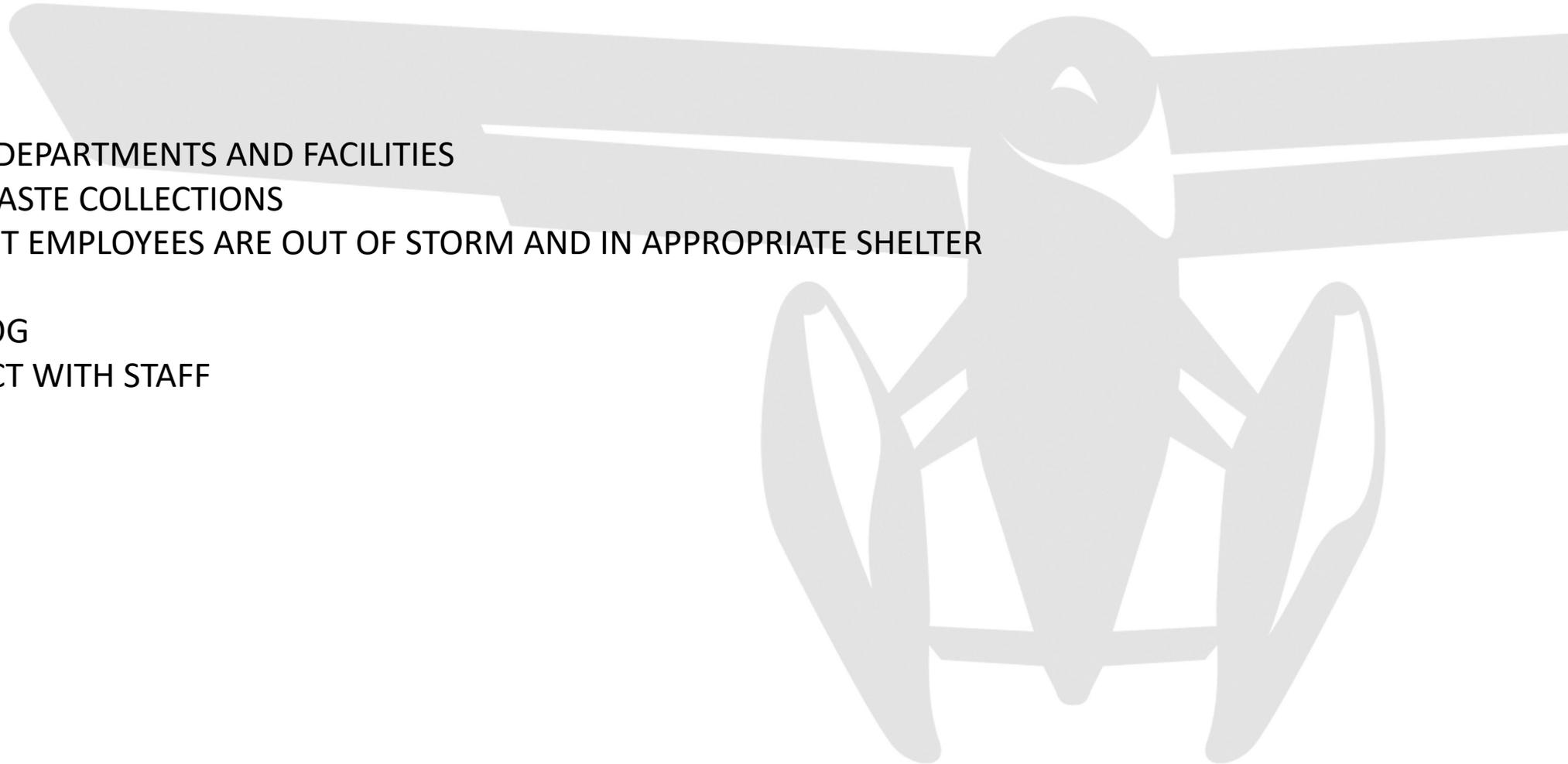
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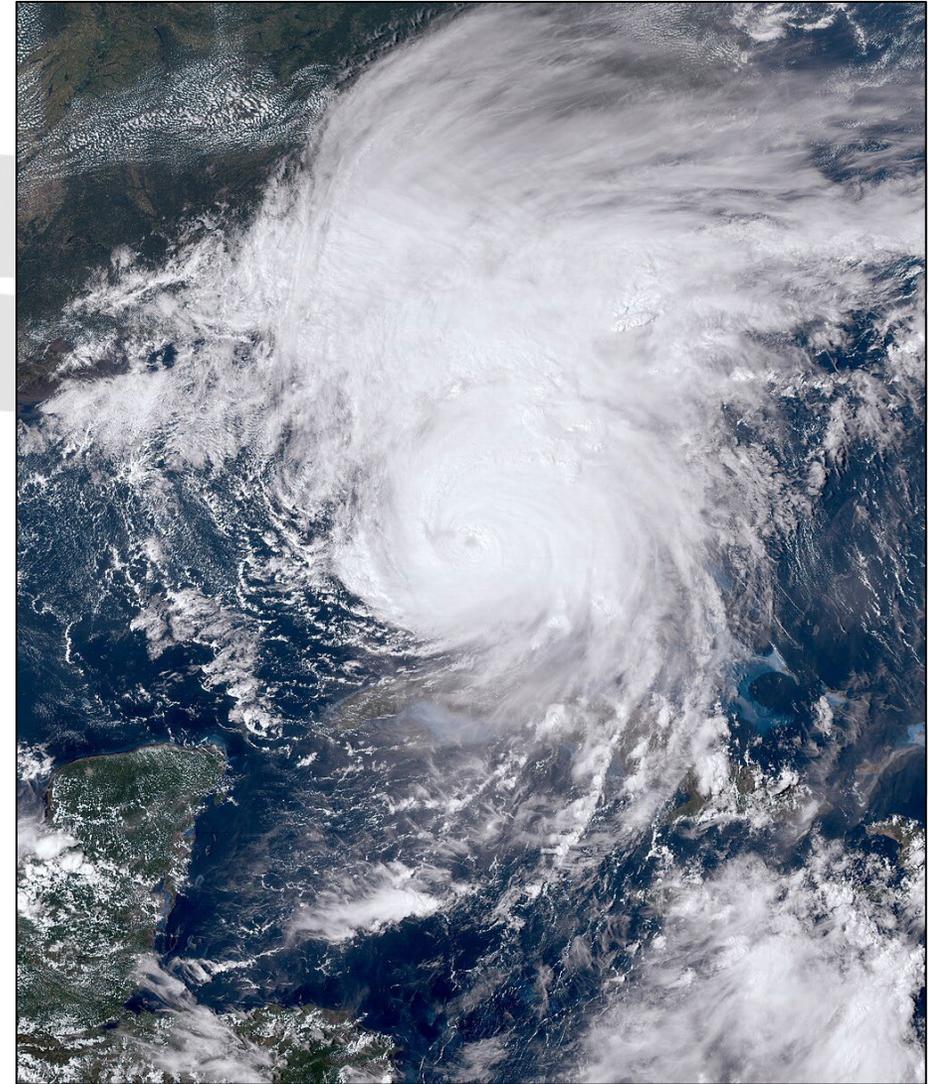
35 MPH SUSTAINED WINDS

- CLOSE DOWN ALL DEPARTMENTS AND FACILITIES
- SUSPEND SOLID WASTE COLLECTIONS
- CONFIRM RIDE-OUT EMPLOYEES ARE OUT OF STORM AND IN APPROPRIATE SHELTER
- STAFF EOC
- MONITOR EOC BLOG
- MAINTAIN CONTACT WITH STAFF



HURRICANE IRMA 9.10.2017

- HURRICANE IRMA MADE A SECOND FLORIDA LANDFALL ON SEPTEMBER 10, 2017, ALONG THE WEST COAST OF FLORIDA AS A CATEGORY 3 HURRICANE WITH SUSTAINED WINDS OF 115 MPH. IRMA LOST STRENGTH AS SHE BARRELLED ACROSS THE STATE, BUT NOT BEFORE INFLECTING MILLIONS OF DOLLARS IN DAMAGES.



TAVARES MARINA & SEAPLANE BASE



TAVARES MARINA & SEAPLANE BASE



- ONCE SUSTAINED WINDS DROP BELOW 35 MPH EVALUATE AND ASCERTAIN DAMAGE AND RISKS BEFORE BRINGING PERSONNEL AND CREWS BACK TO WORK. RIDE-OUT TEAMS BEGIN CLEARING ONCE ASSESSED, CREWS AND PERSONNEL WILL BE CALLED BACK TO WORK
- DETERMINE MAJOR TRAFFIC ROUTES TO BE CLEARED ON FIRST PUSH
- REQUEST TO ACTIVATE DDMS SITE BASED UPON DEBRIS LEVELS





Doug Roberts

Don't worry guys! TPD is on it! Thanks for the tip off. Owner has been contacted and will be enroute to get the dock soon. No looting this dock!



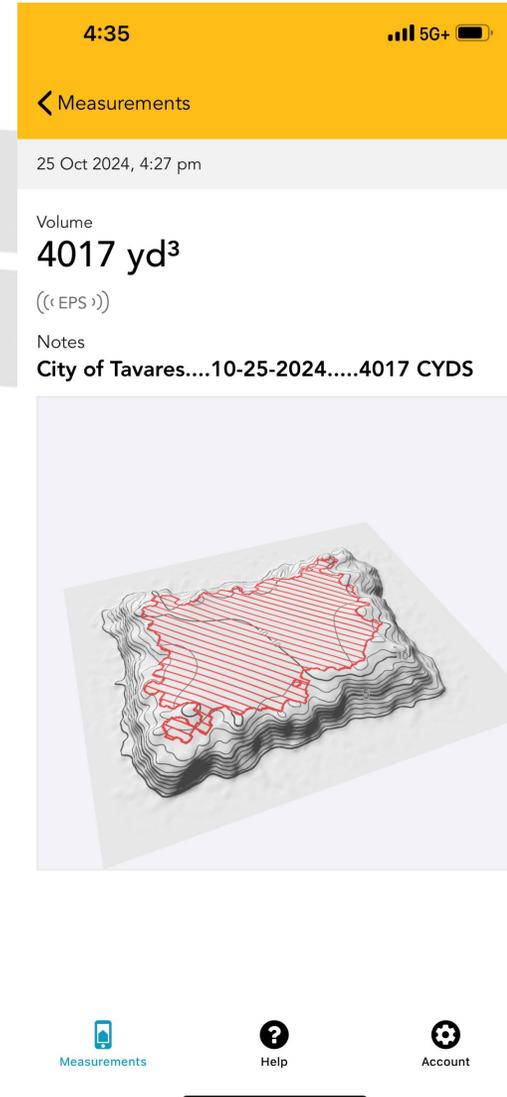
- ALL CITY VEHICLES HAULING DEBRIS MUST BE CHECKED AND DOCUMENTED BEFORE UNLOADING AT THE APPROVED DISASTER DEBRIS MANAGEMENT SITE



- TAVARES SOLID WASTE OPERATIONS MANAGER ACTING AS DDMS MANAGER RECORDS DAILY PHOTO AND VIDEO DOCUMENTATION OF THE SITE AND THE YARDAGE AMOUNT OF DEBRIS THAT ENTERS, CAPTURING PHOTOS OF THE VEHICLES AND MAINTAINING THAT ONLY NATURAL DEBRIS AND NO MAN-MADE ITEMS CONTAMINATE THE SITE



- UTILIZING TECHNOLOGY TO MEASURE AND RECORD THE AMOUNT OF SQUARE YARDS DEPOSITED AT THE DDMS
- CRITICAL RECORDKEEPING FOR POTENTIAL FEMA REIMBURSEMENT



- ON JUNE 1, 2021, THE TAVARES SEAPLANE BASE AND MARINA OFFICIALLY RE-OPENED
- THE CENTRAL DOCK EXTENDS INTO LAKE DORA 680', WITH FINGERS THAT PROVIDE LIGHTED, VARIOUS SIZED SLIPS THAT ACCOMMODATE 80 BOATS
- AMENITIES INCLUDE 30 AND 50-AMP ELECTRICAL SERVICES, WATER, AND A PUMPOUT STATION
- NEW DOCKS ARE MADE FROM HIGHER-GRADE ALUMINUM AND SECURED WITH HELICAL ANCHORS RATHER THAN PILINGS



RESILIENCE

RE-SIL-IENCE

THE CAPACITY TO WITHSTAND OR TO RECOVER QUICKLY FROM DIFFICULTIES; TOUGHNESS

