



Orange County BCC

Hurricane Irma Recovery Update

September 19, 2017



Presentation Outline

- Hurricane Irma Information
- EOC Activation
- Shelters
- Power Restoration
- Convention Center
- Fire Response
- Sheriff's Response
- Communications
- Damage and Recovery
- FEMA Assistance
- Summary



Photo Credit: NASA / AFP



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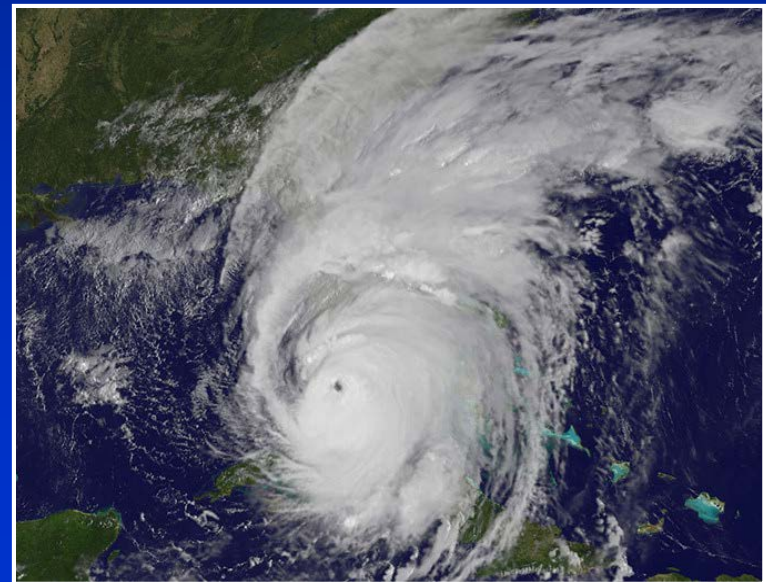
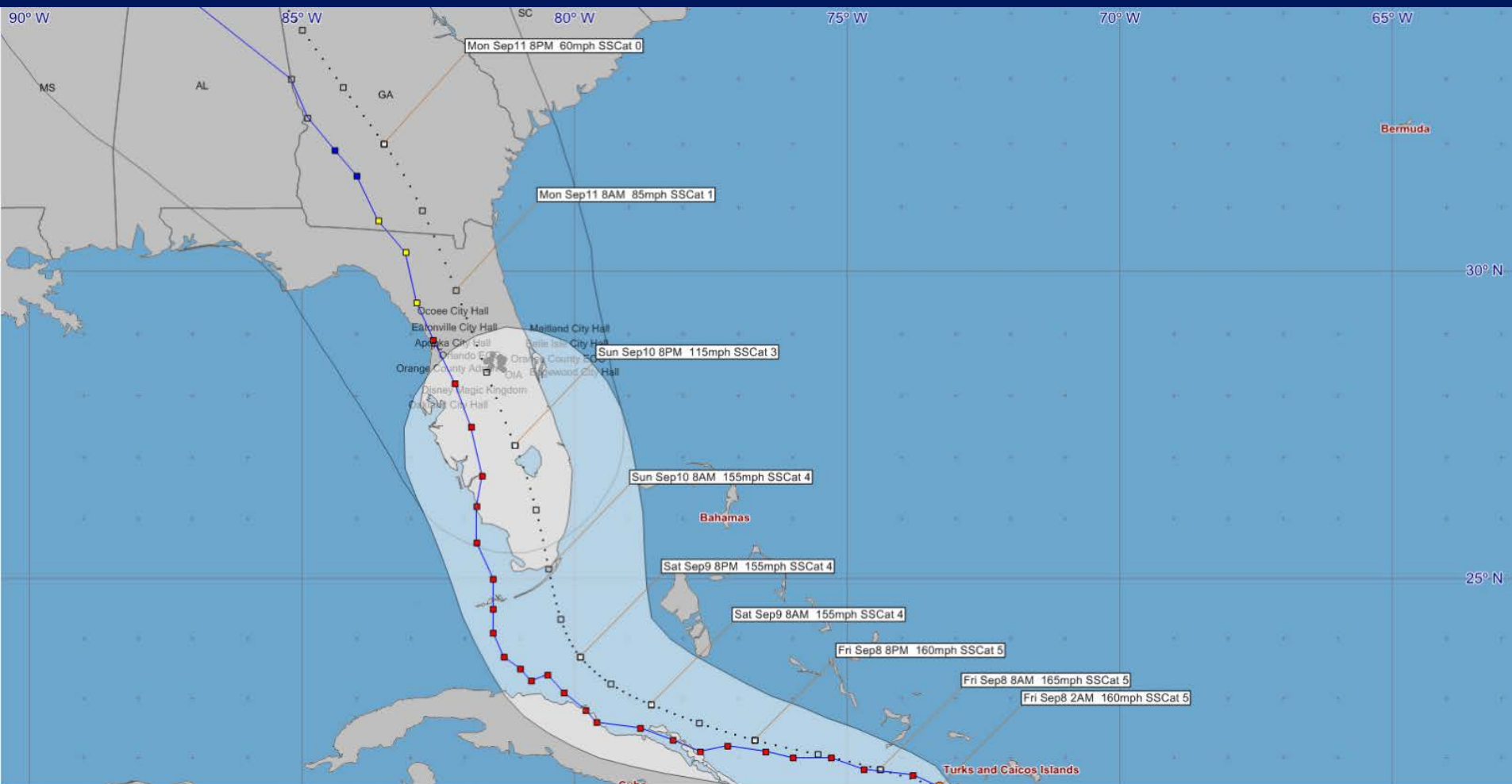


Photo Credit: NASA / AFP



Hurricane Irma Information

■ Projected Route 72 Hours before Impact



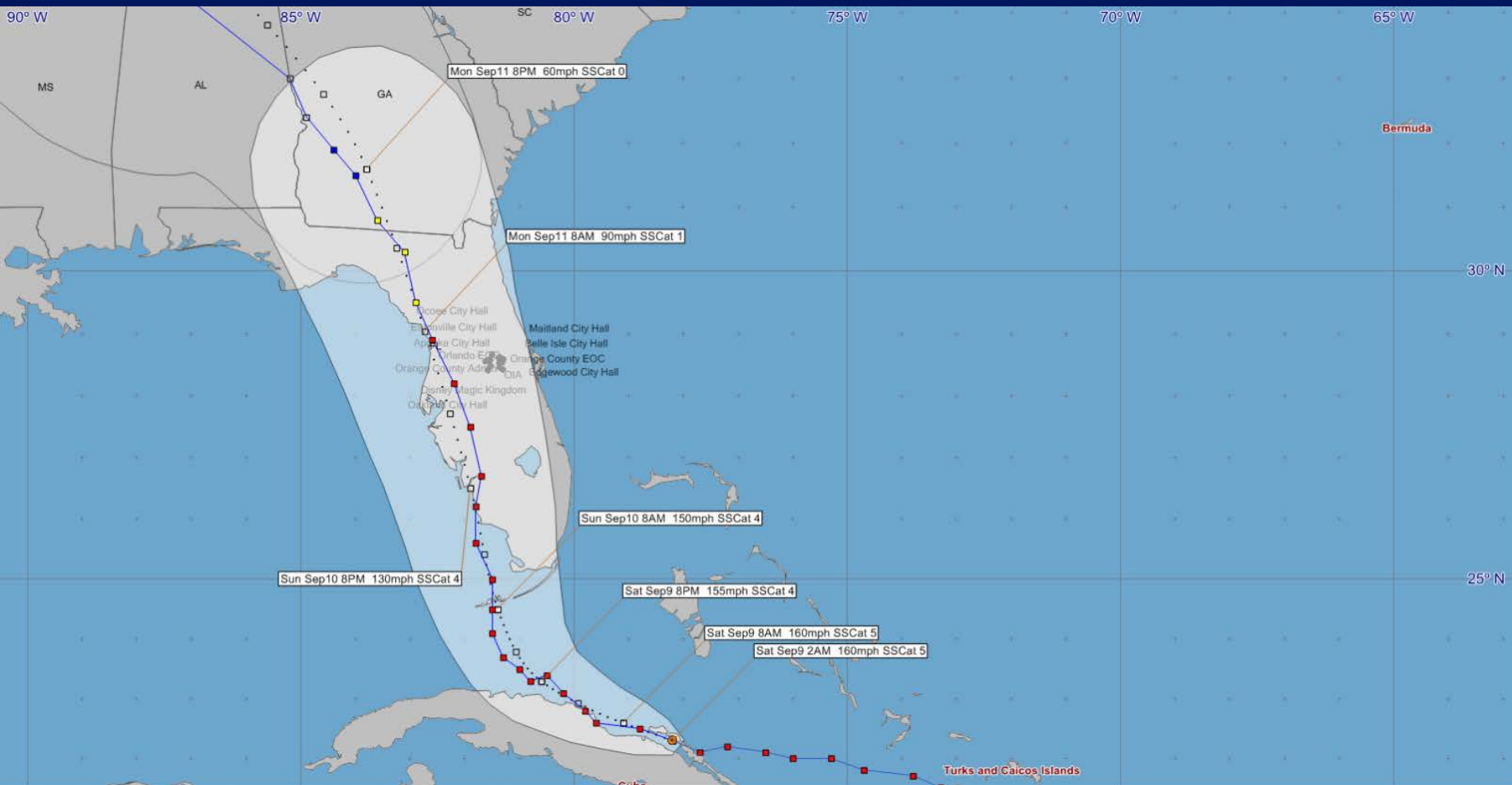
Hurricane Irma - Friday, September 8, 2017 2 AM EDT Advisory #36A

Center Location: 21.5 N 73.3 W Maximum Sustained Winds: 160 mph (Cat 5) Movement: 16 mph WNW



Hurricane Irma Information

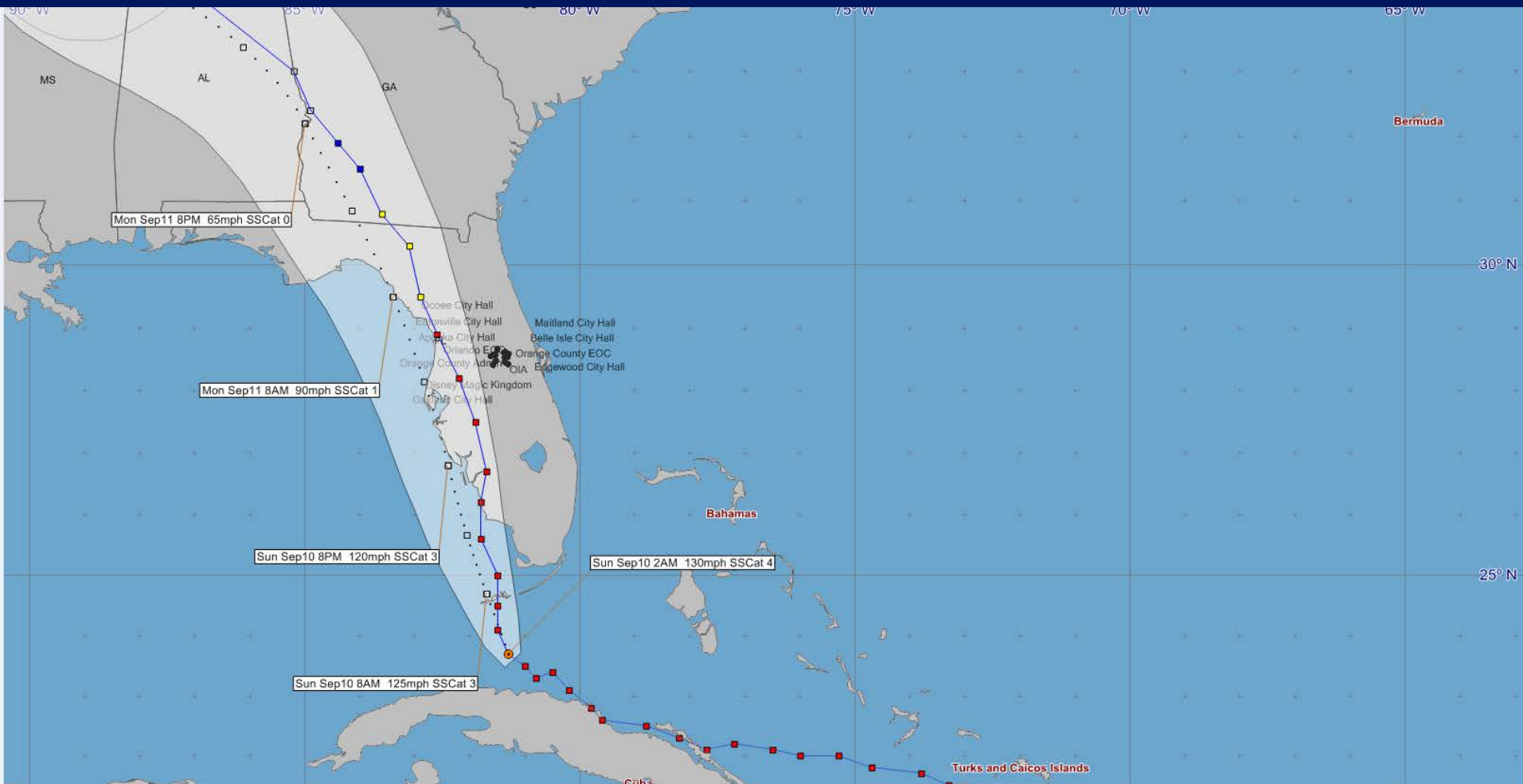
■ Projected Route 48 Hours before Impact



Hurricane Irma - Saturday, September 9, 2017 2 AM EDT Advisory #40A
● Center Location: 22.3 N 78.2 W Maximum Sustained Winds: 160 mph (Cat 5) Movement: 12 mph W



■ Projected Route 24 Hours before Impact

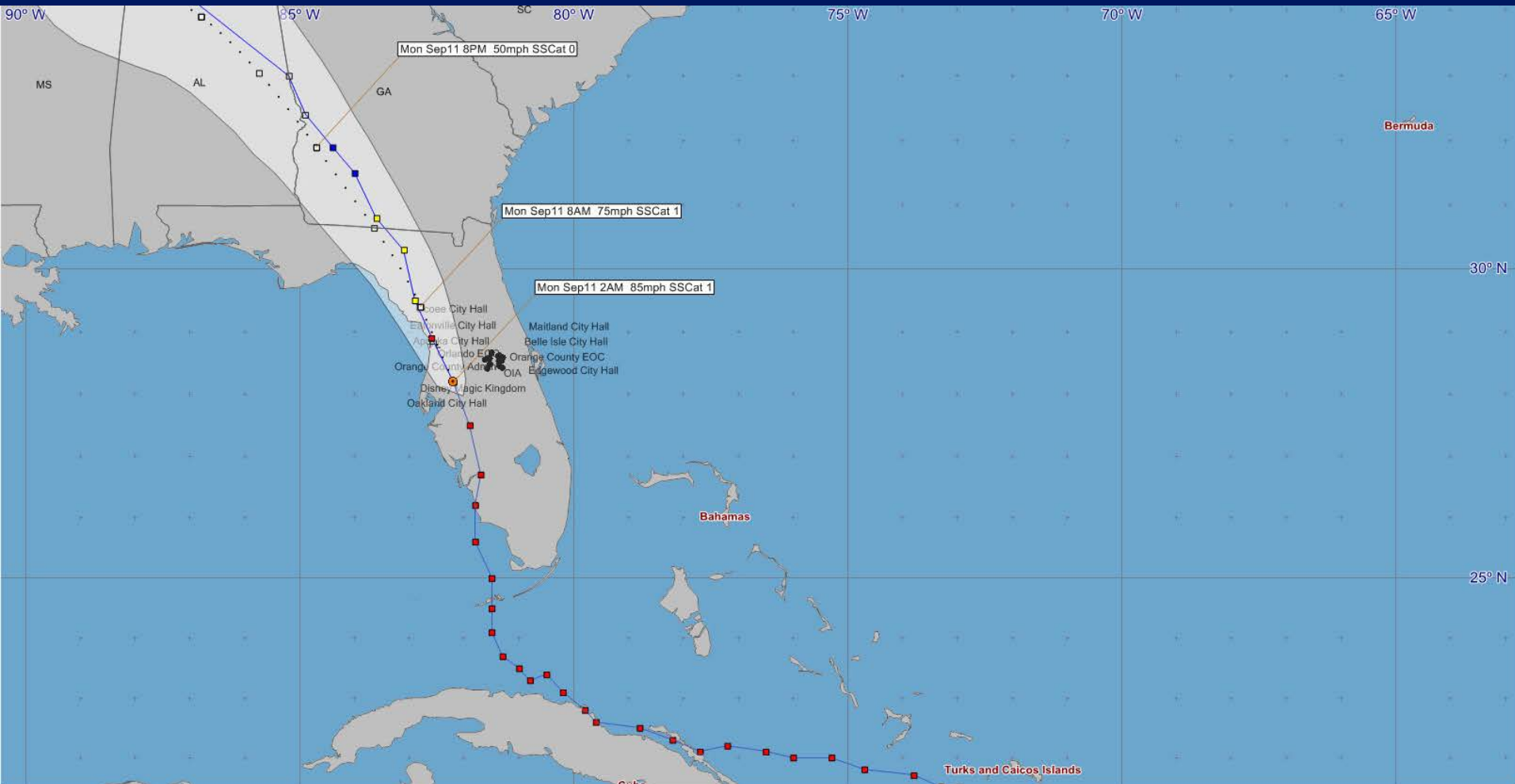


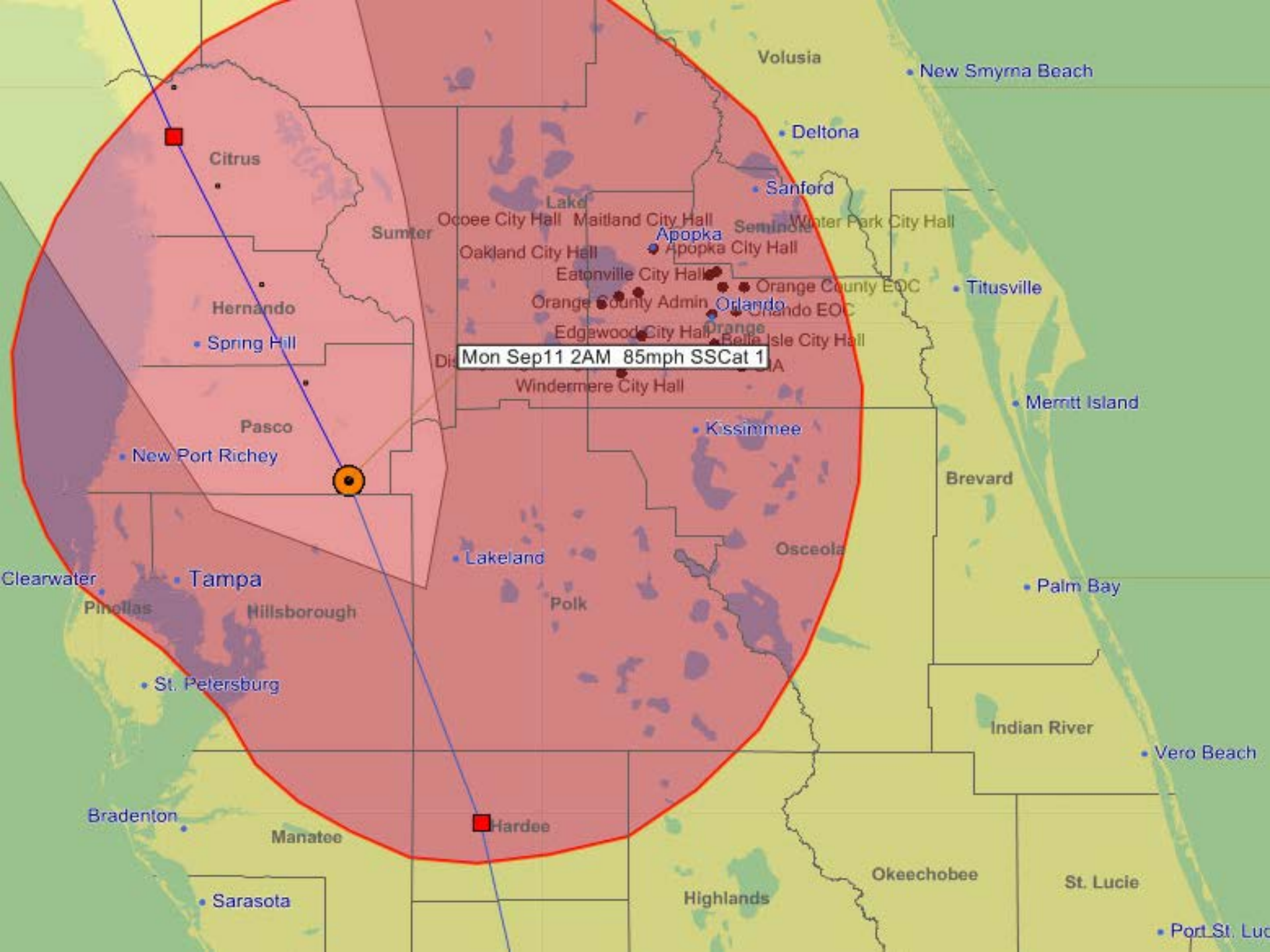
Hurricane Irma - Sunday, September 10, 2017 2 AM EDT Advisory #44A
 ☉ Center Location: 23.7 N 81.3 W Maximum Sustained Winds: 130 mph (Cat 4) Movement: 6 mph NW



Hurricane Irma Information

Actual Route







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Photo Credit: NASA / AFP



EOC Activation

▪ EOC Structure

–ESFs (Emergency Support Functions)

- Transportation ESF#1 - Lynx, OCPS Transportation
- Communications ESF#2 - OC ISS
- Public Works & Engineering ESF#3 - OC PW
- Fire Fighting/Urban Search & Rescue ESF#4,9 - OCFRD
- Information & Planning ESF#5 -OEM
- Mass Care ESF#6 - Red Cross
- Resource Support ESF#7 – OC Procurement
- Health & Medical ESF#8 – OC Health Services



EOC Activation

▪ EOC Structure (cont.)

–ESFs (Emergency Support Functions)

- Environmental Protection ESF#10 - OCEPD
- Food & Water ESF#11 – Salvation Army
- Energy ESF#12 – OUC, Duke Energy, TECO
- Military Support ESF#13 – National Guard & US Coast Guard
- Public Information ESF#14 – OC PIO
- Volunteers & Donation Management ESF#15 – OC HR
- Law Enforcement & Security ESF#16 – OCSO, FDLE
- Animal Care ESF#17 – OC Animal Services
- Community & Business ESF#18 – States Attorney and Neighborhood Services

EOC Activation

▪ EOC Structure (cont.)

—ESFs (Emergency Support Functions)

- Damage Assessment ESF#19 – OC Property Appraiser
- Utilities ESF#20 – OC Utilities

—Emergency Coordinating Officers (ECOs)

- Municipalities - 13
- Theme Parks - 4
- Colleges - 4
- FDOT
- OC Conv. Center / Corrections





EOC Activation

- **Emergency Preparedness**
 - Annual Statewide Hurricane Exercise and Governor's Hurricane Conference
 - Annual County Hurricane Expo
 - Senior Officials Workshop
 - Faith Based Breakfast
 - OCERT Bi-Monthly Meetings with ESF & ECO partners
 - Professional Workshops, Conferences, and Training





EOC Activation

- Level 3 – Daily Operations and Monitoring
- Level 2 – Partial Thursday and Friday
- Level 1 - Full Saturday – Wednesday
- **Level 2 – Currently**
- State of Local Emergency
 - Mayor signs Declaration of Emergency, Thursday, Sept. 7
 - Mayor signs Curfew Executive Order
 - Start - Sunday 7:00 pm
 - End - Monday 6:00 pm



EOC Activation

▪ Executive Policy Group

—Began meeting Tuesday, Sept. 5

- Mayor
- County Administrator
- Health and Public Safety Director
- Department Directors
- Director of Emergency Management

▪ County Closure

—Sunday, Sept. 10

—Monday, Sept. 11





EOC Activation

- **Elected Official Briefings**
 - Governor Scott visits EOC
 - Briefing with Senior Officials
 - Press Conference at EOC
 - Mayor Jacobs hosts hurricane briefing for federal and state legislative delegation





EOC Activation

■ Coordination

—State EOC

- EM Constellation missions and resources
- National Hurricane Center

—National Weather Service-Melbourne

- Local weather tracking/paths

—Regional EM Counties

- Coordinate county activities



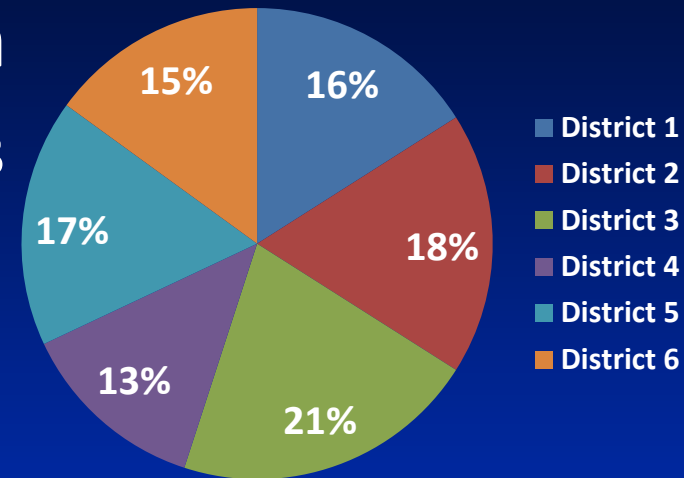
NATIONAL WEATHER SERVICE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION



EOC Activation

■ 311 - Staffing and Coordination

- Agents: 44 staff and 67 volunteers
- Total contacts – 21,000
(80% Voice & 20% Digital)



■ 311 Extended Hours

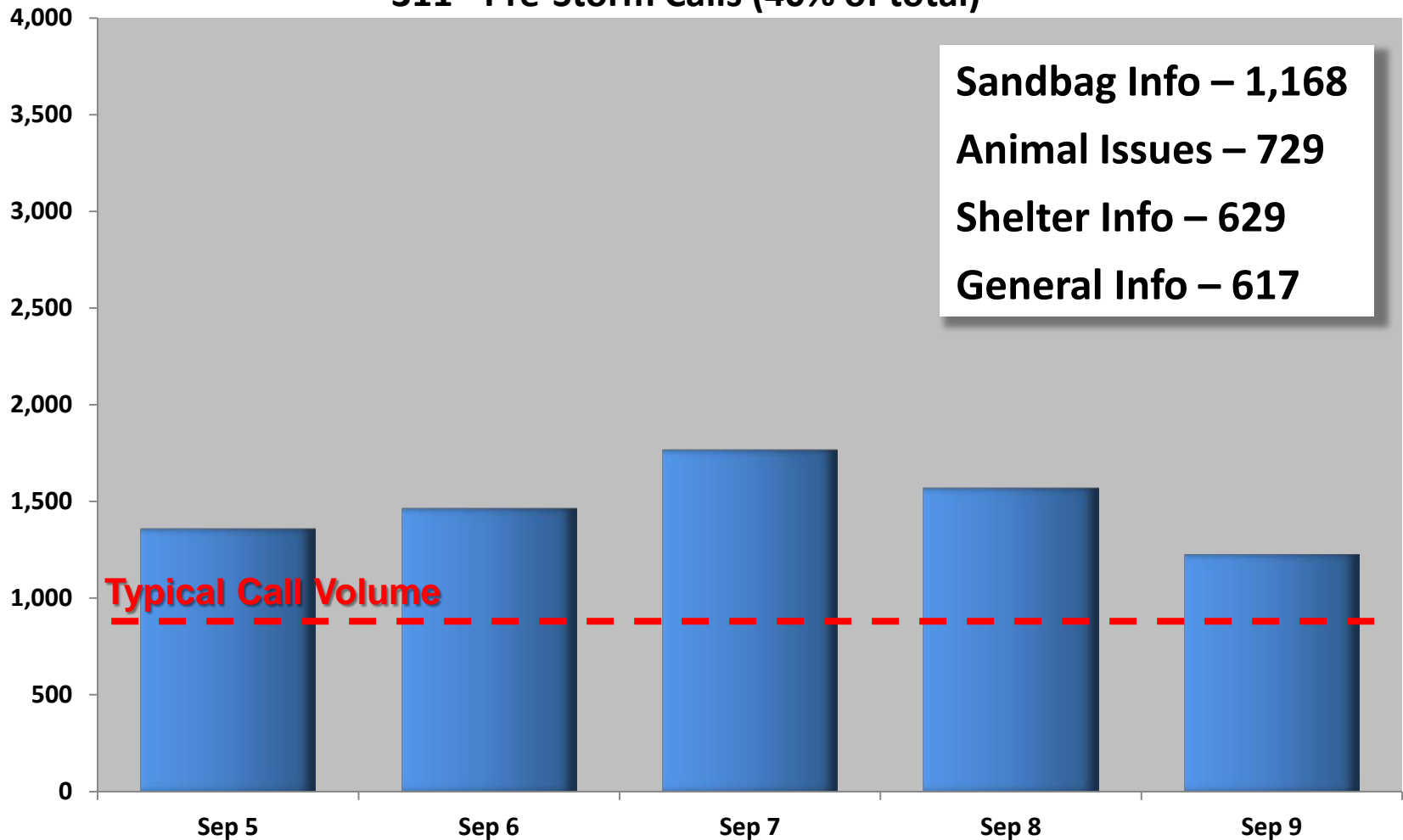
- Weekdays 7am-9pm
- Weekends 8am-5pm
- Emergency hours – 24 hours





EOC Activation

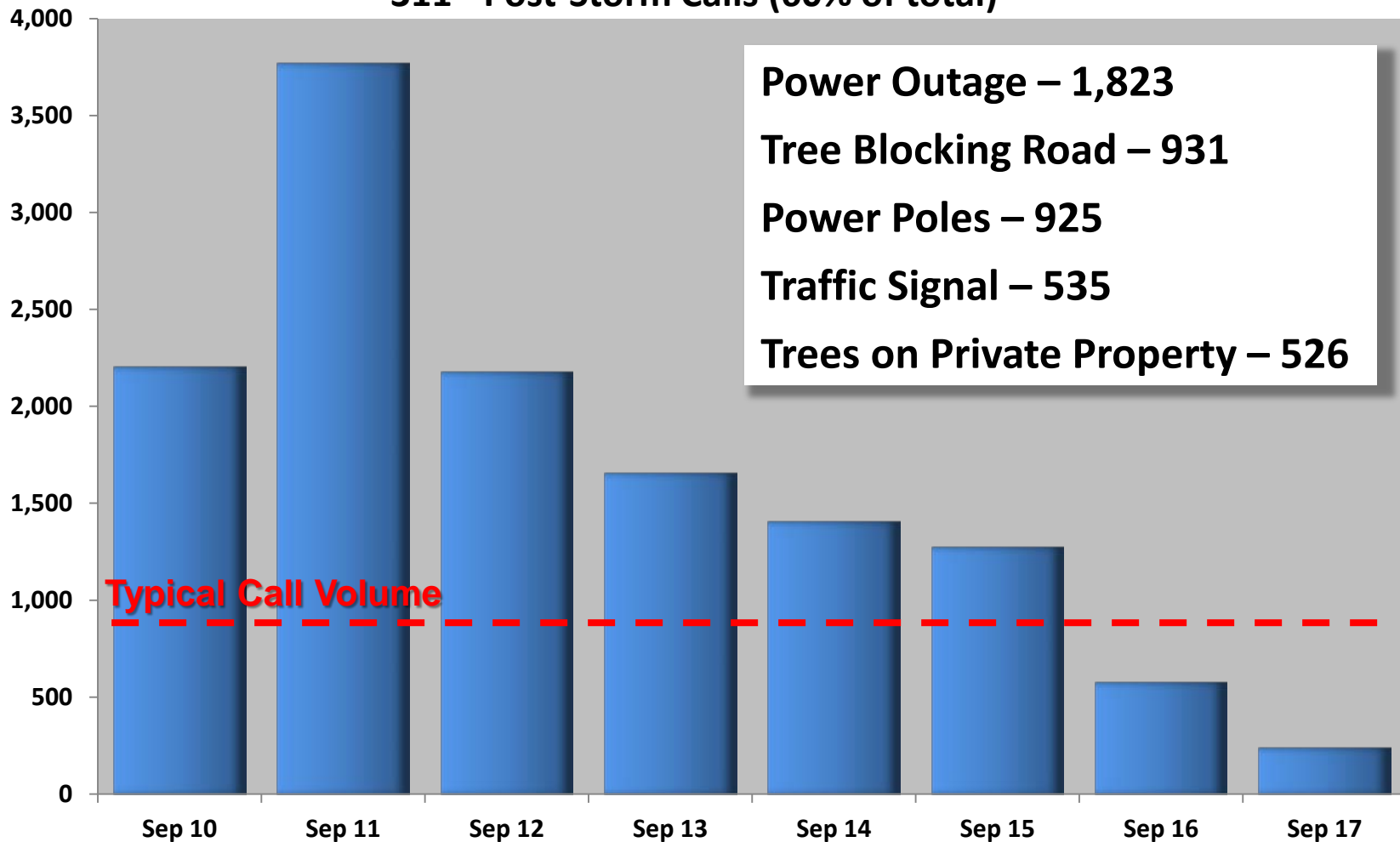
311 - Pre-Storm Calls (40% of total)





EOC Activation

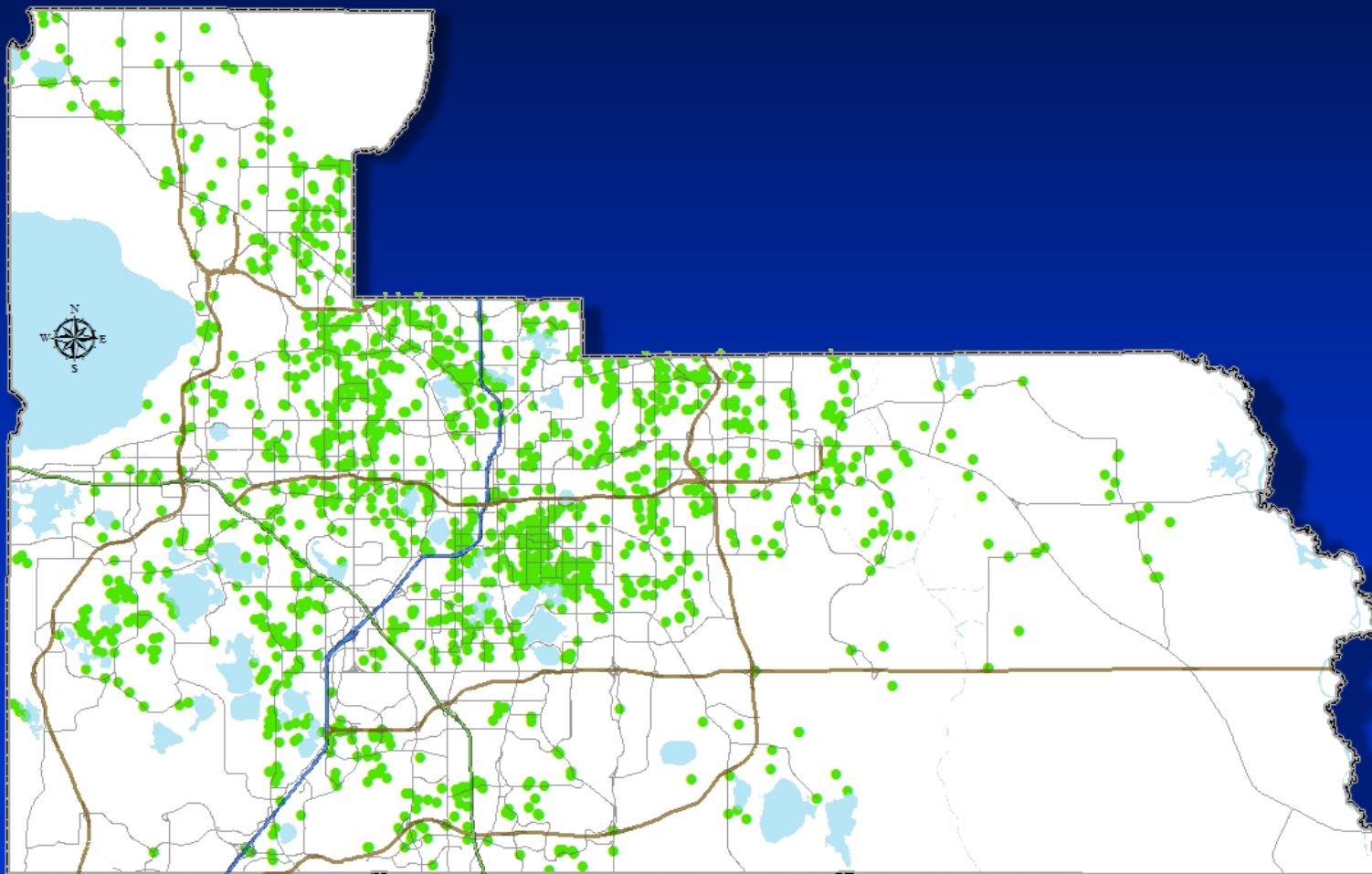
311 - Post-Storm Calls (60% of total)





EOC Activation

■ 311 - Post-Storm Calls – Tree Issues





Presentation Outline

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- **Shelters**
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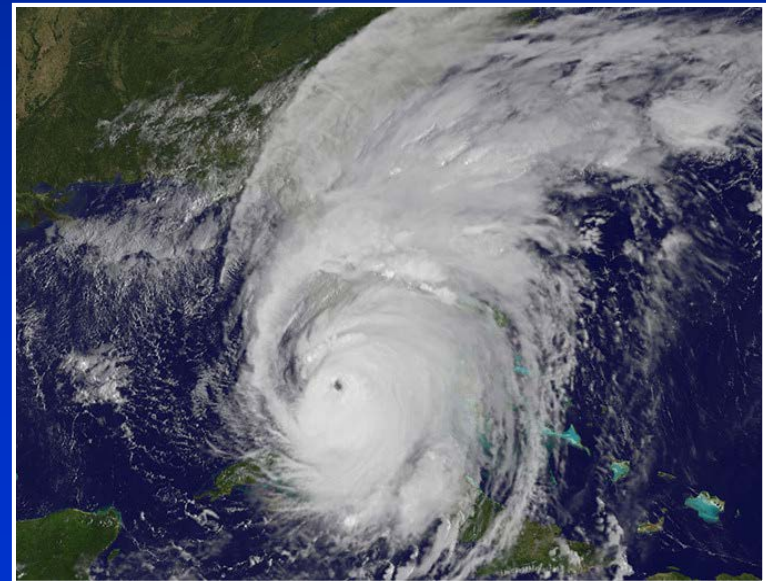


Photo Credit: NASA / AFP



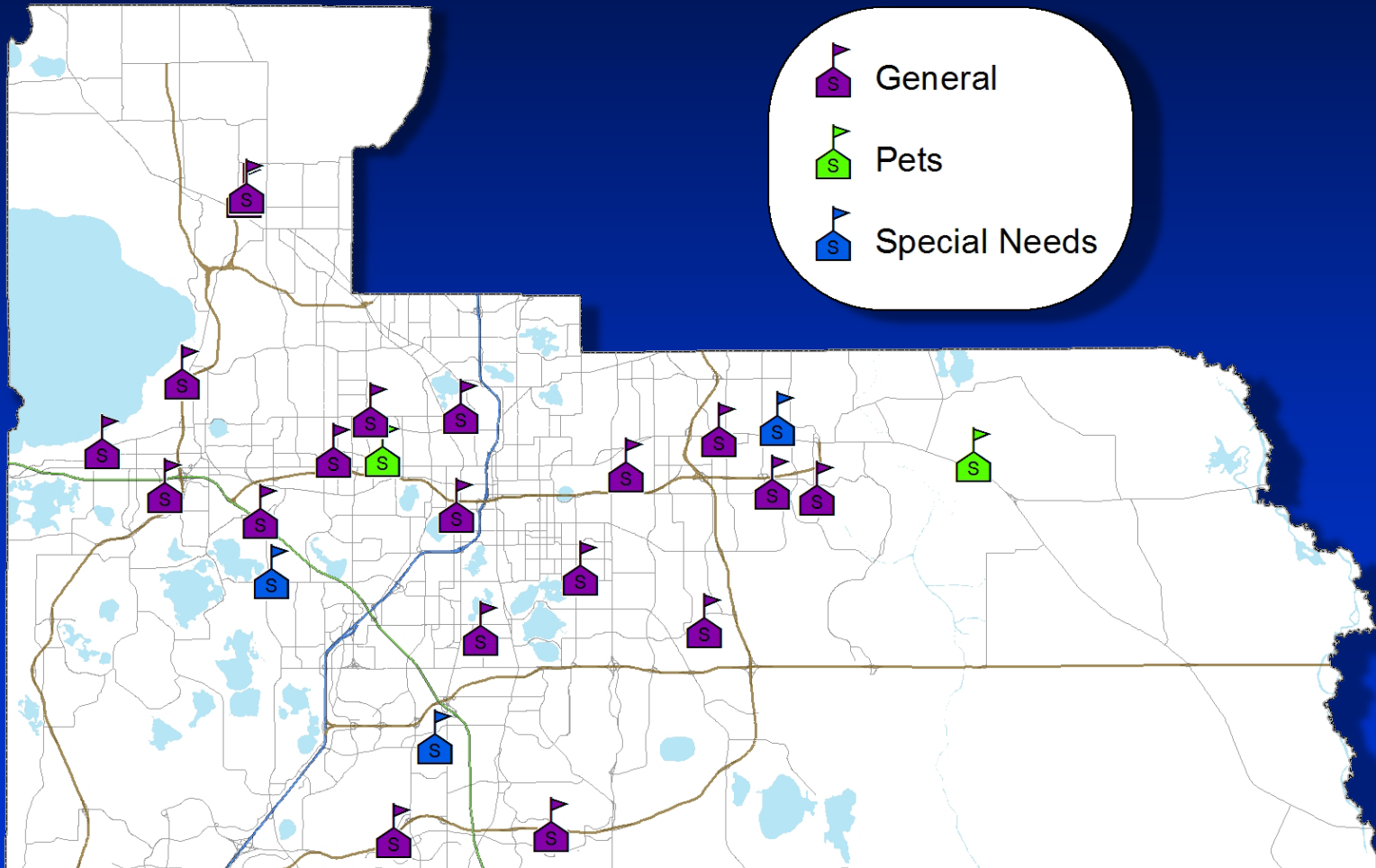
Shelters

- **Orange County activated 21 shelters**
 - **General Population (15)**
 - **Host Shelters at State request (2)**
 - **Pet Friendly (3)**
 - **People With Special Needs (3)**
- **Total population – 4,391**
- **Dates – Sept. 9 – 17 (Sept. 8)**



Shelters

■ Shelter Locations





Shelters

- **People with Special Needs (PSN)**
 - Over 350 PSNs were sheltered
 - Orange County staff sets up the PSN shelters and handles logistics
 - FL-DOH staff provide assistance and medical support to evacuees
 - Lynx provides the majority transports
 - More than 1,300 trips overall





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Photo Credit: NASA / AFP



Power Restoration

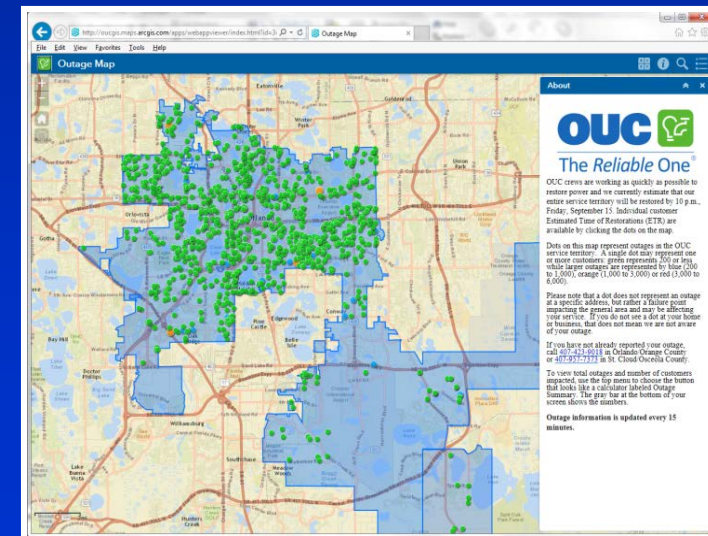
■ Power Outages

—OUC and Duke Energy are the main electric providers servicing Orange County

■ Total customer base in Orange County

—OUC = approx. 200,000

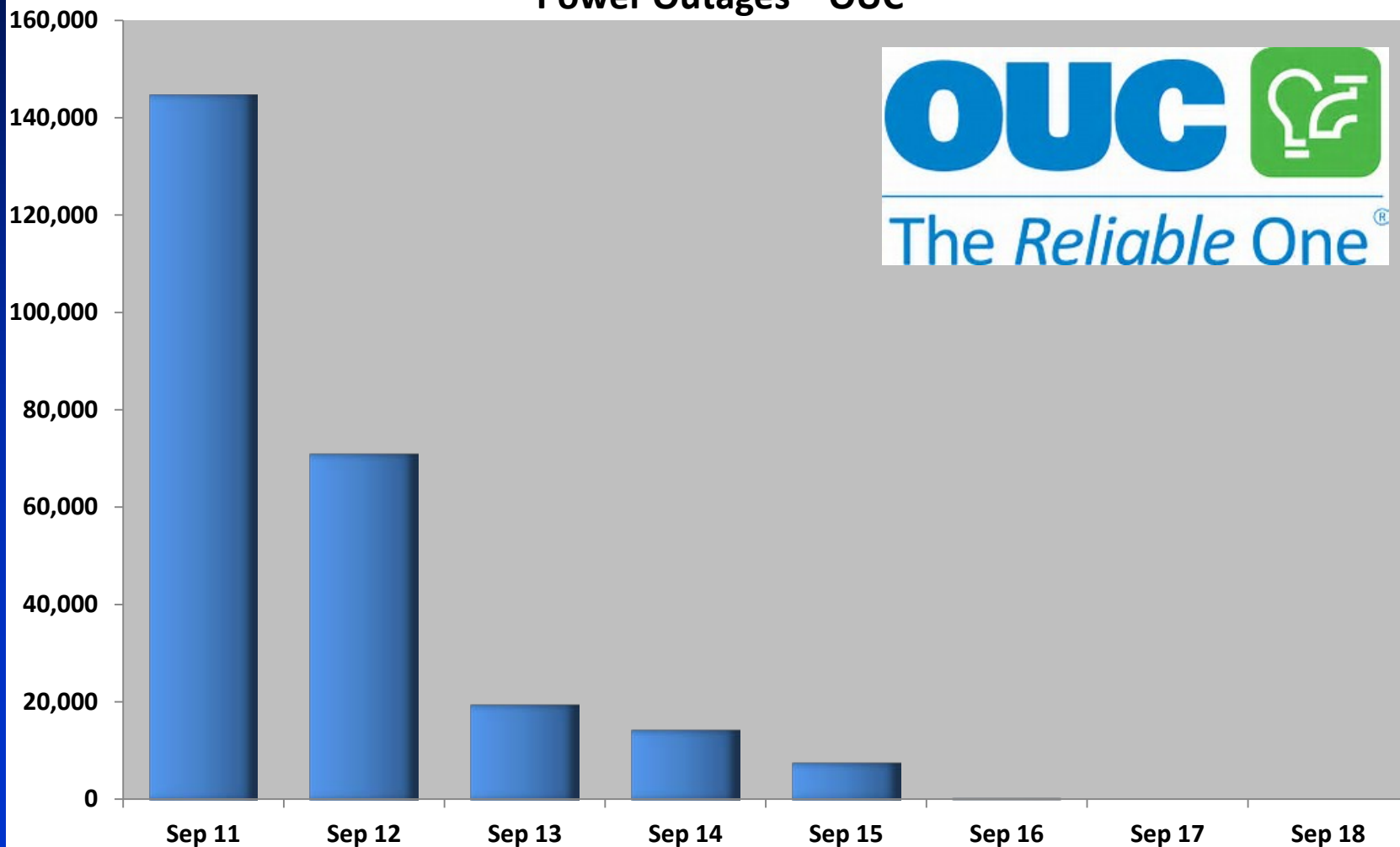
—Duke Energy = approx. 370,000





Power Restoration

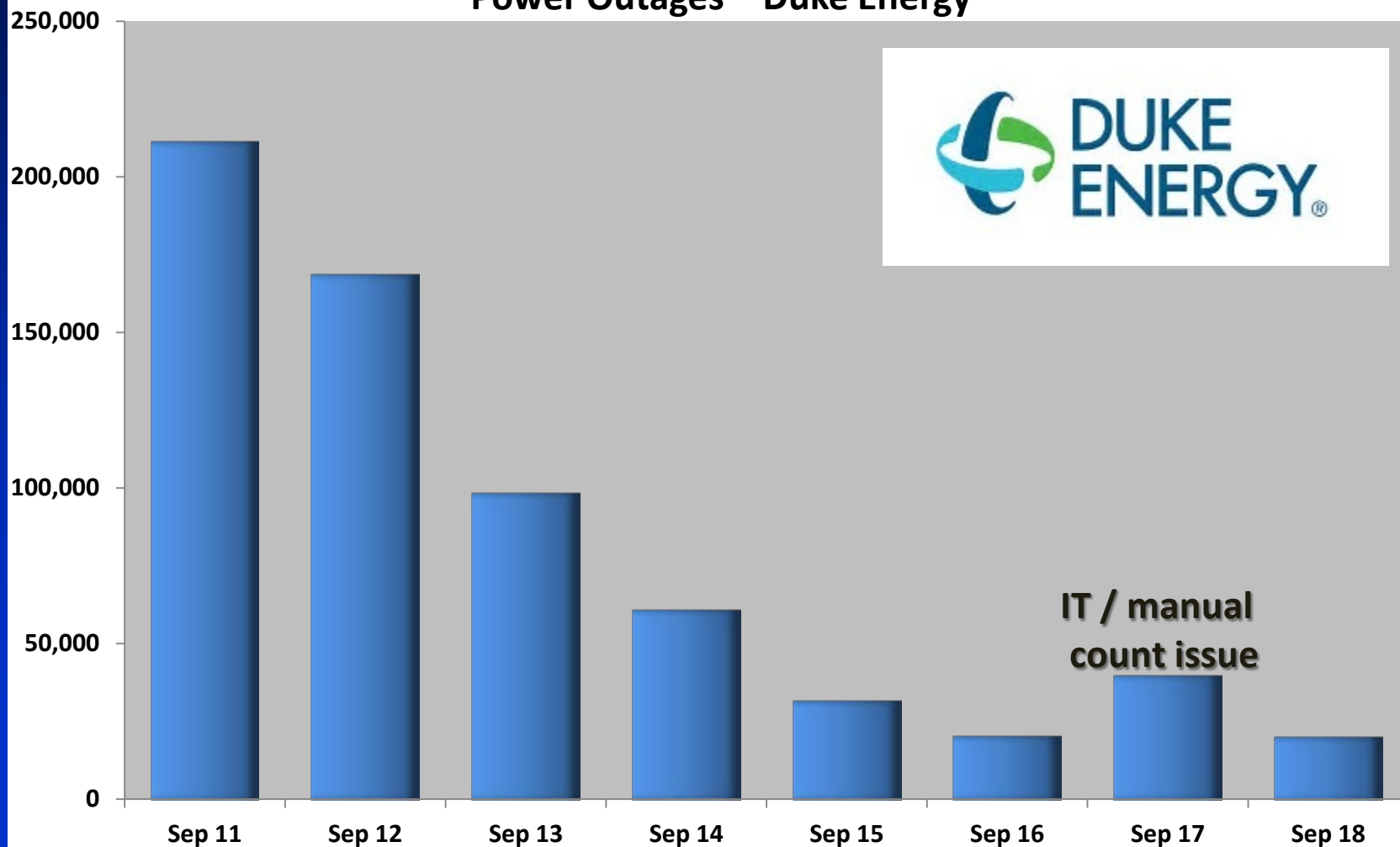
Power Outages – OUC





Power Restoration

Power Outages – Duke Energy





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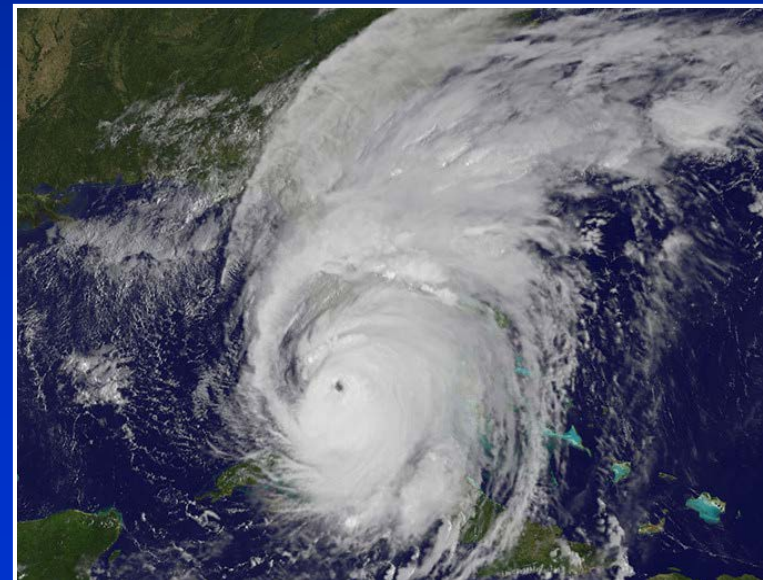


Photo Credit: NASA / AFP



Convention Center

- First responders, vehicles and equipment descended on the OCCC to wait out Hurricane Irma





Convention Center

U.S. Airforce Blackhawk Helicopters





Convention Center

Hosted Agencies



U.S. AIR FORCE





Convention Center

Logistics





Convention Center

Communications





Convention Center

National Guard – Impromptu Wedding!





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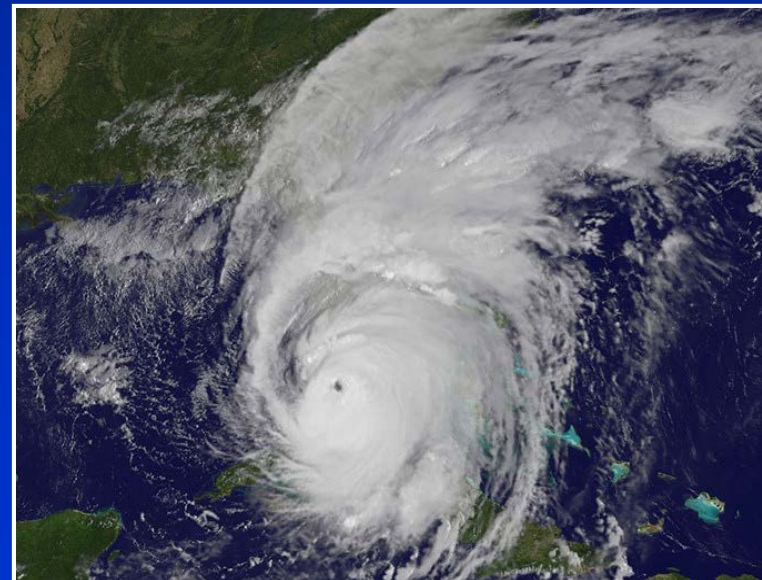


Photo Credit: NASA / AFP



Fire Rescue

- Pre-Storm Activities
- Storm Activities
- Post-Storm Activities
- Recovery





Fire Rescue

Pre-Storm Activities

- **March/April**
 - Station/Facility Level Preparedness
- **Instituted Incident Action Plan**
 - Defines Disaster Operations
- **Staffing of Units**
 - Increased staffing levels
- **Mandatory Evacuations**
 - Mobile Homes

FORMS ADAPTED FOR USE BY OCFRD

INCIDENT ACTION PLAN

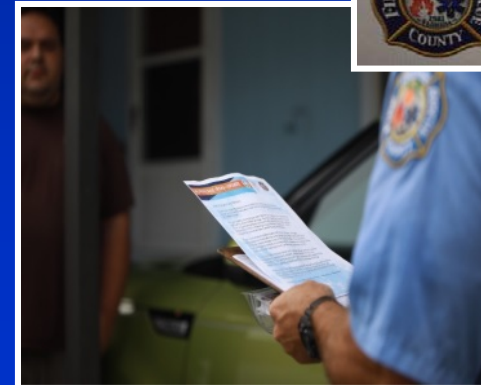
Hurricane Irma

09/14/2017 0730
to
09/15/2017 0730
Operational Period # 11

Approved by:

Incident Commander	Otto Drozd, III	
Operations Section Chief	Mike Wajda	
Safety Officer	Joe Washington	
Planning Section Chief	David Rathbun	

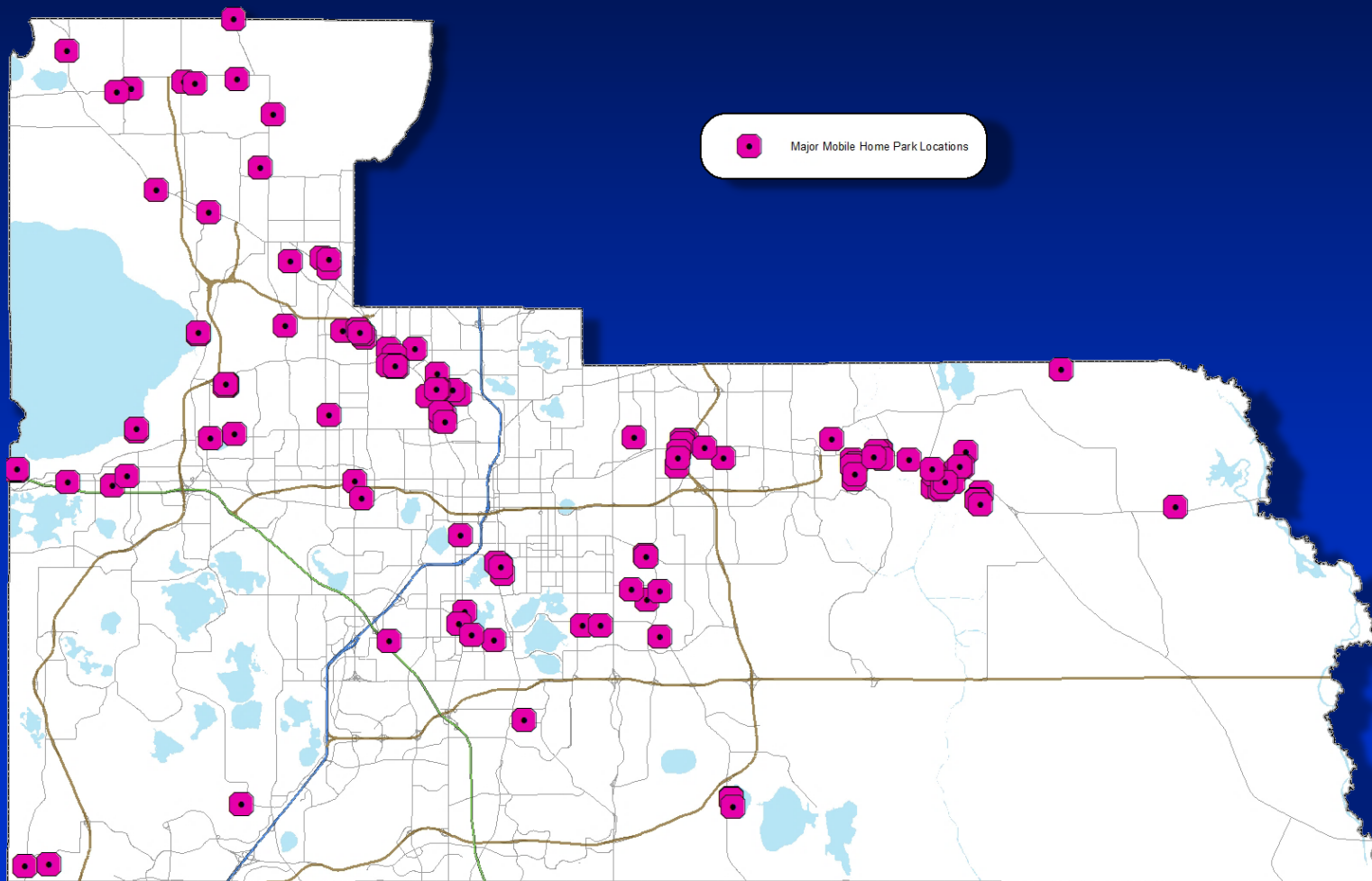




Fire Rescue

Pre-Storm Activities

Mandatory Evacuations for Mobile Home





Fire Rescue

Storm Activities

- **Emergency Response Plan**
 - Dispatch of Units adjusted to meet demands of storm
- **Cessation of Response**
 - 50 MPH Sustained or 65 MPH Gusts
 - Local Conditions determined by Officers in the field

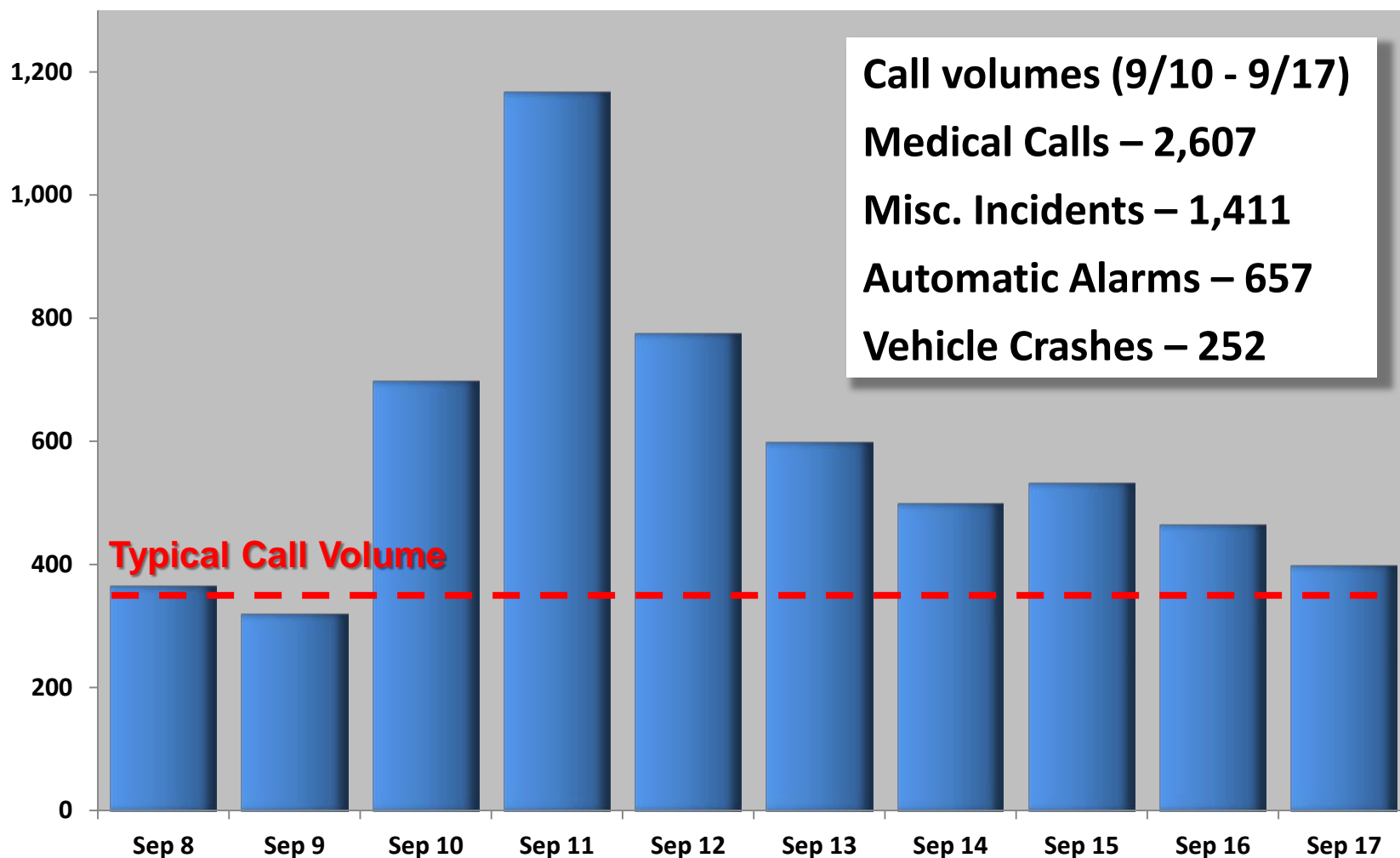




Fire Rescue

Post-Storm Activities

911 Call Volumes





Fire Rescue

Post-Storm Activities

- **911 Calls by PSAP location (Sept. 10 – 17)**
 - Apopka – 2,009
 - GOAA – 463
 - Orange Fire – 4,968
 - Orange Sheriff – 17,814
 - Orlando Fire – 1,796
 - Orlando Police – 8,546
 - UCF Police – 160
 - Winter Garden – 982
 - Winter Park – 790



Fire Rescue

Post-Storm Activities

- **Emergency Response**
 - Windshield Surveys conducted by Station
 - Flooding Response
 - Hope Circle
 - Place at Alafaya







Fire Rescue

Post-Storm Activities

- **Nursing Homes / Assisted Living Facilities Assessments**
- **Mayor's Executive Emergency Order**
 - Mandatory Enactment of Emergency Management Plans





Fire Rescue

Recovery

- **Community Action Response Teams (CART)**
 - Assist residents with removal of trees and large debris
 - Blue tarps, water, insect spray









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Photo Credit: NASA / AFP



Orange County Sheriff's Office





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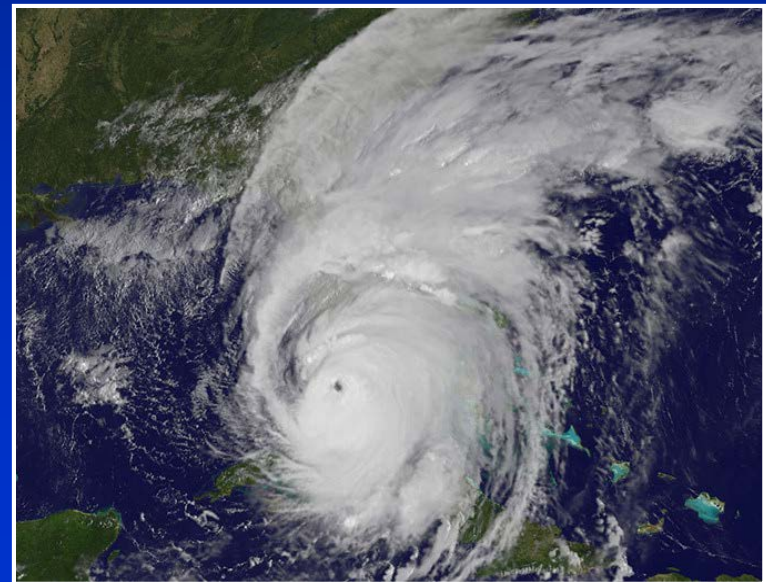


Photo Credit: NASA / AFP



Communications


- Press briefings (13)
- Media calls (+400)
- Social media
 - Website, Facebook, Twitter
 - Over 2.8 million visits to OCFL.net
 - Top day was Monday, Sept. 11
- Employee hotline





Communications

- **OCFL Alert App**
 - Hurricane/Tornado warnings
 - Generator use
 - Curfew
 - Sewage backups
 - Evacuation routes
- **App downloads**
 - Sept. 10-15
 - 3,880 (2,902 on Sept. 10)



IRMA RECOVERY
Your Orange County Guide to Assist in Hurricane Irma Recovery

Click below for more information

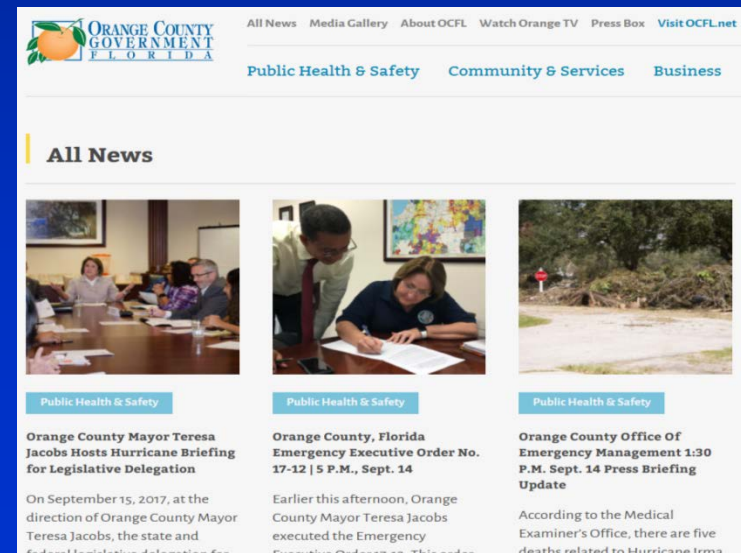
- [Debris Drop-Off Locations](#)
- [Generator Safety](#)
- [Permitting Information](#)
- [Water Conservation](#)
- [Curbside Collection](#)
- [Hurricane Irma Information](#)
- [Hurricane Irma Assistance](#)

Office of Emergency Management | ocem@ocfl.net | 407-836-9140



Communications

- **OCFL Newsroom**
 - Shelter locations
 - FEMA major disaster declaration
 - Repair permits/License contractor
 - Debris information
 - Executive order
- **App downloads**
 - Sept. 10-15
 - 919 (347 on Sept. 10)





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Photo Credit: NASA / AFP



Damage and Recovery

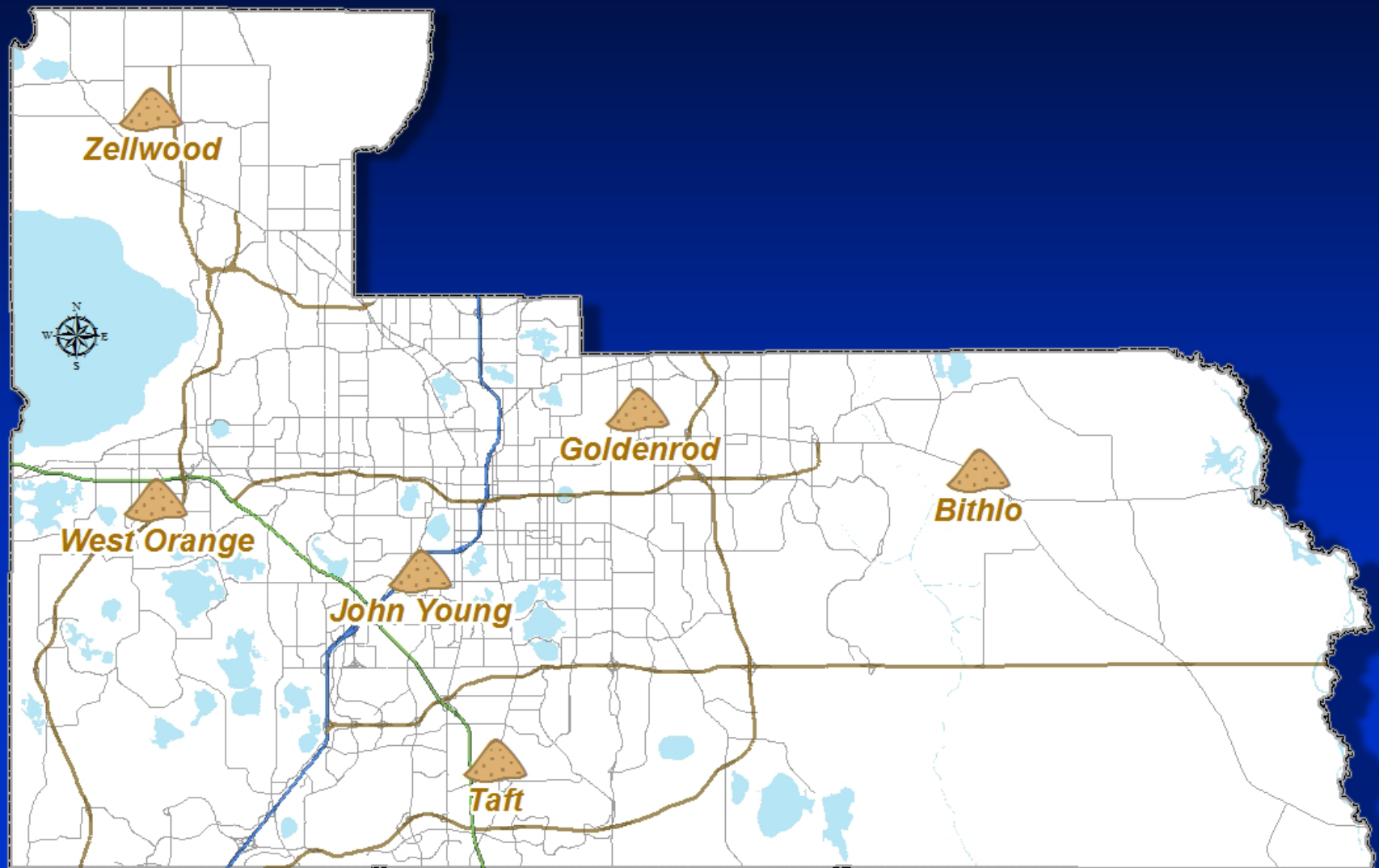
Public Works

- Hurricane Irma Preparation
 - Sandbags (123,000)
 - Stormwater outfall clearing
 - Lowering stormwater pond levels





Sandbag Locations





Damage and Recovery

Public Works

- Response focused on four main aspects:
 - Traffic signals
 - Trees blocking roadway
 - Flooded areas
 - Debris cleanup
- Assessment teams deployed 10:00 am Monday morning





Damage and Recovery

Public Works

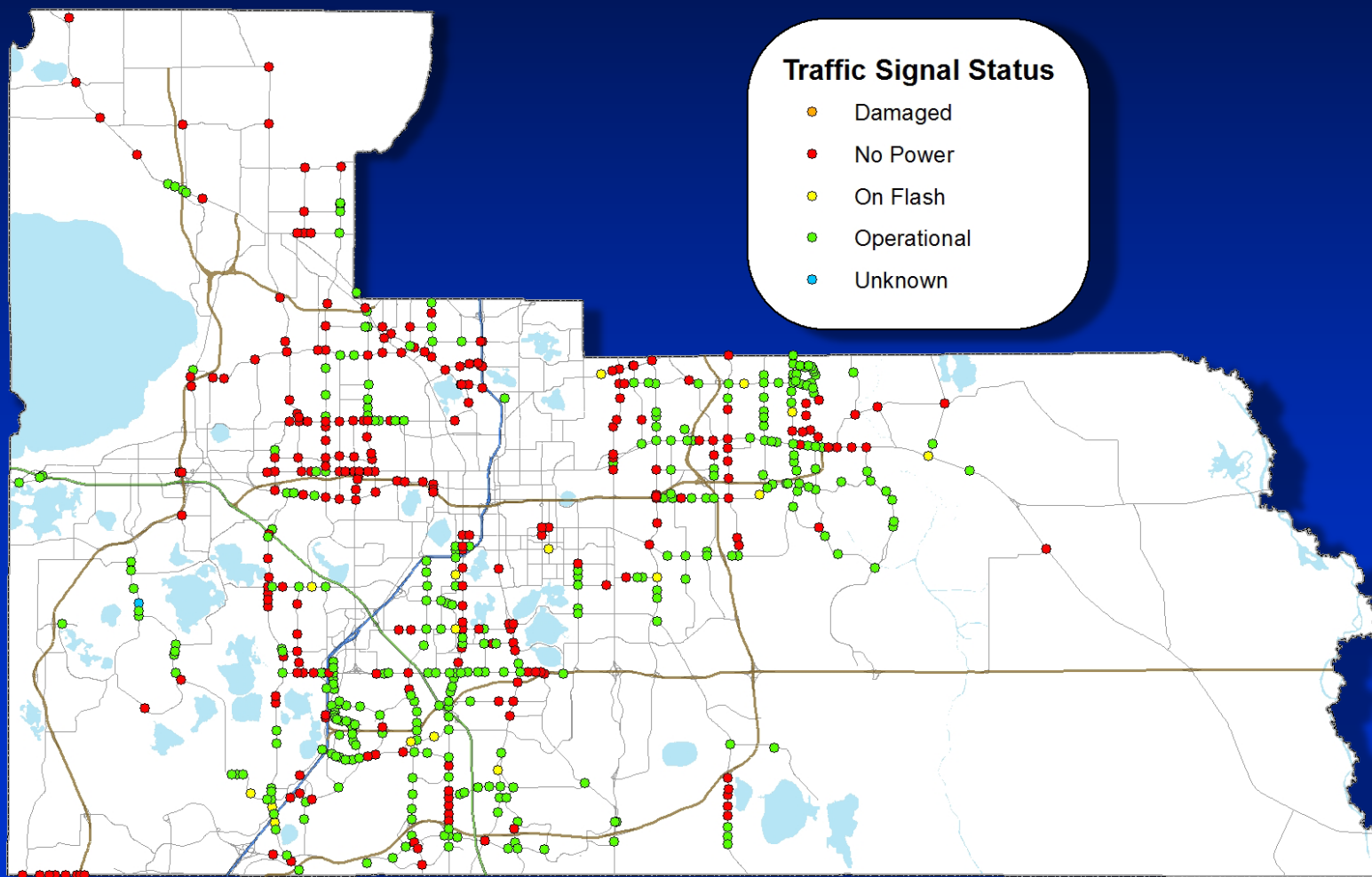
- **Traffic Signals**
 - County maintains 576 traffic signals
 - Power is dependent upon grid
 - Generators were used at major intersections
- **Coordination with OCSO for public safety**
- **Status**
 - Initial outage: 248 signals
 - After 48 hours: 98 signals
 - Current outage: 0 signals





Traffic Signal Outages

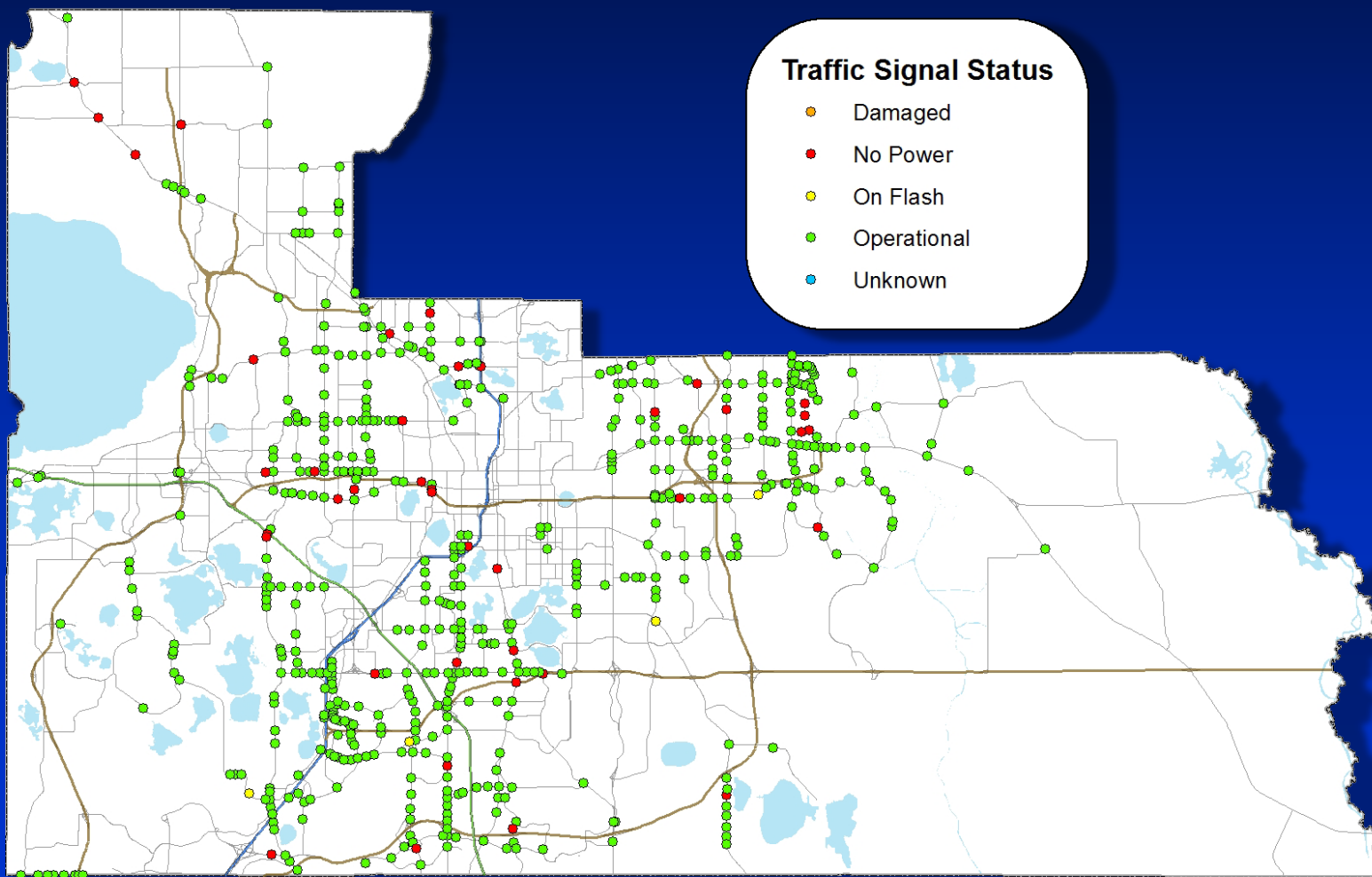
■ Traffic Signals - Initial Response





Traffic Signal Outages

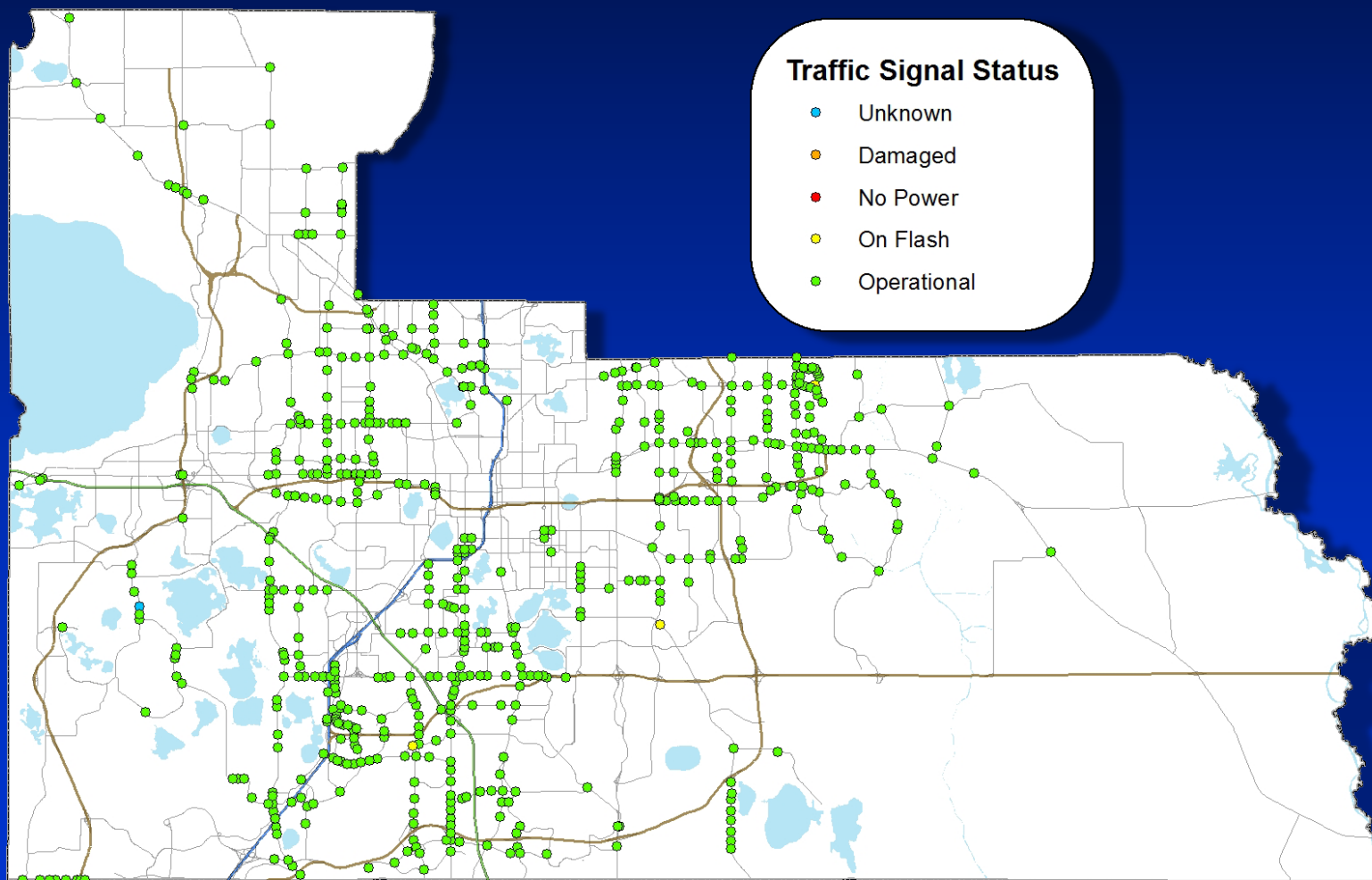
■ Traffic Signals – September 12





Traffic Signal Outages

■ Traffic Signals – September 18





Damage and Recovery

Public Works

- Traffic control signs
 - Portable stop signs on barricades
 - Repairs





Damage and Recovery

Public Works

- **Trees blocking roadways**
 - Priority on clearing roads for access
 - Assessment teams deployed 10:00am Monday morning
 - Trees entangled with power lines were coordinated with utility
 - Cone or barricades
- **Status**
 - Initial roads blocked: 234 roads
 - After 48 hours: 340 roads
 - All roads are passable today





Trees Blocking Roadways





Damage and Recovery

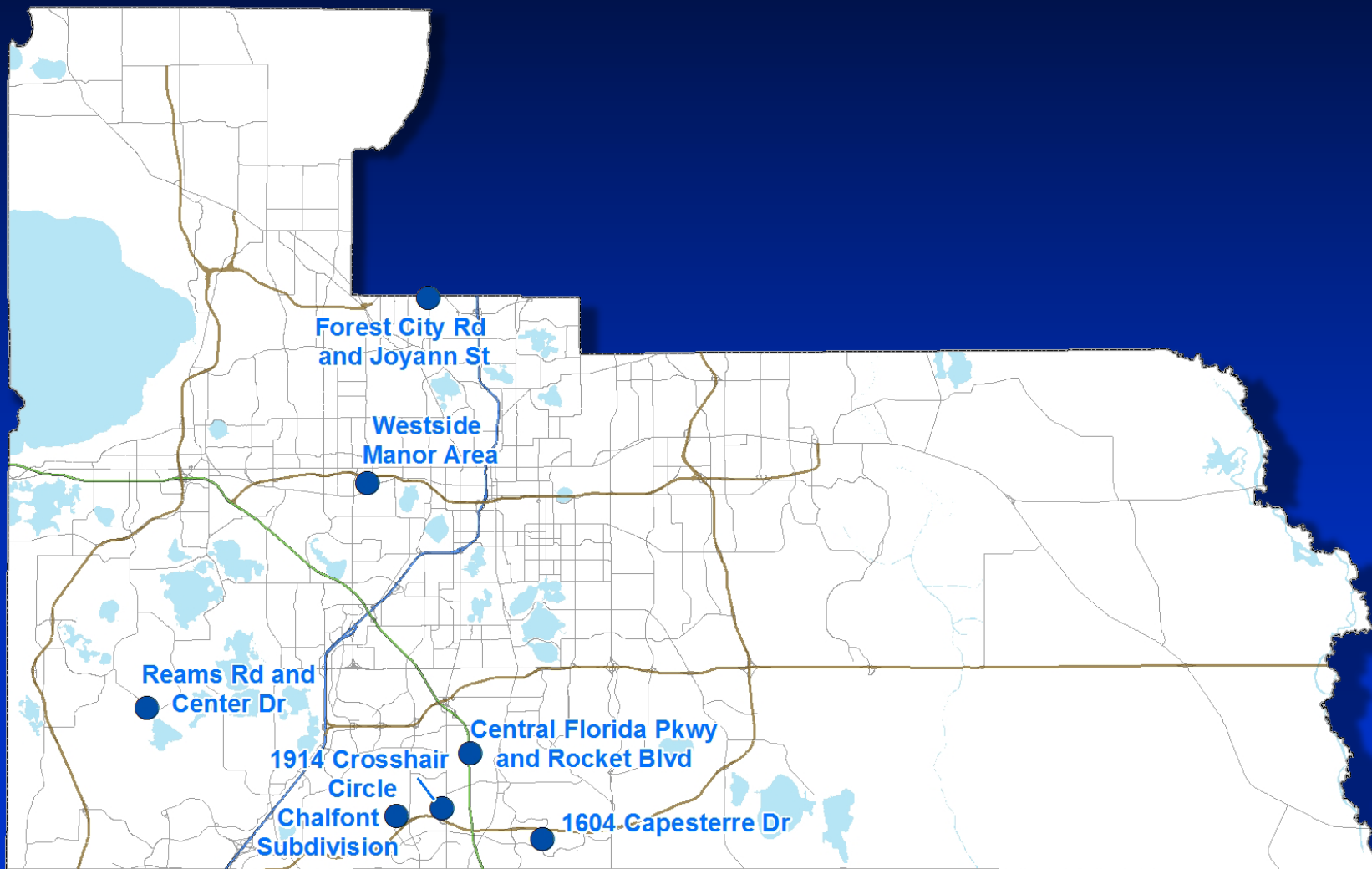
Public Works

- **Localized but significant flooding**
 - Westside Manor, Orlo Vista
 - Lake Cortez
 - Buck Road
 - Boggy Creek
- **Status**
 - Monitoring with afternoon rains





Critical Areas with Flooding





Damage and Recovery

Public Works

■ Debris Cleanup

- Contractor starting assigned routes this week
 - Three contractor zones (4 contractor sites)
 - May take multiple passes through neighborhoods
 - Separation of yard debris versus C&D / residential waste
- Citizen debris sites active (11)

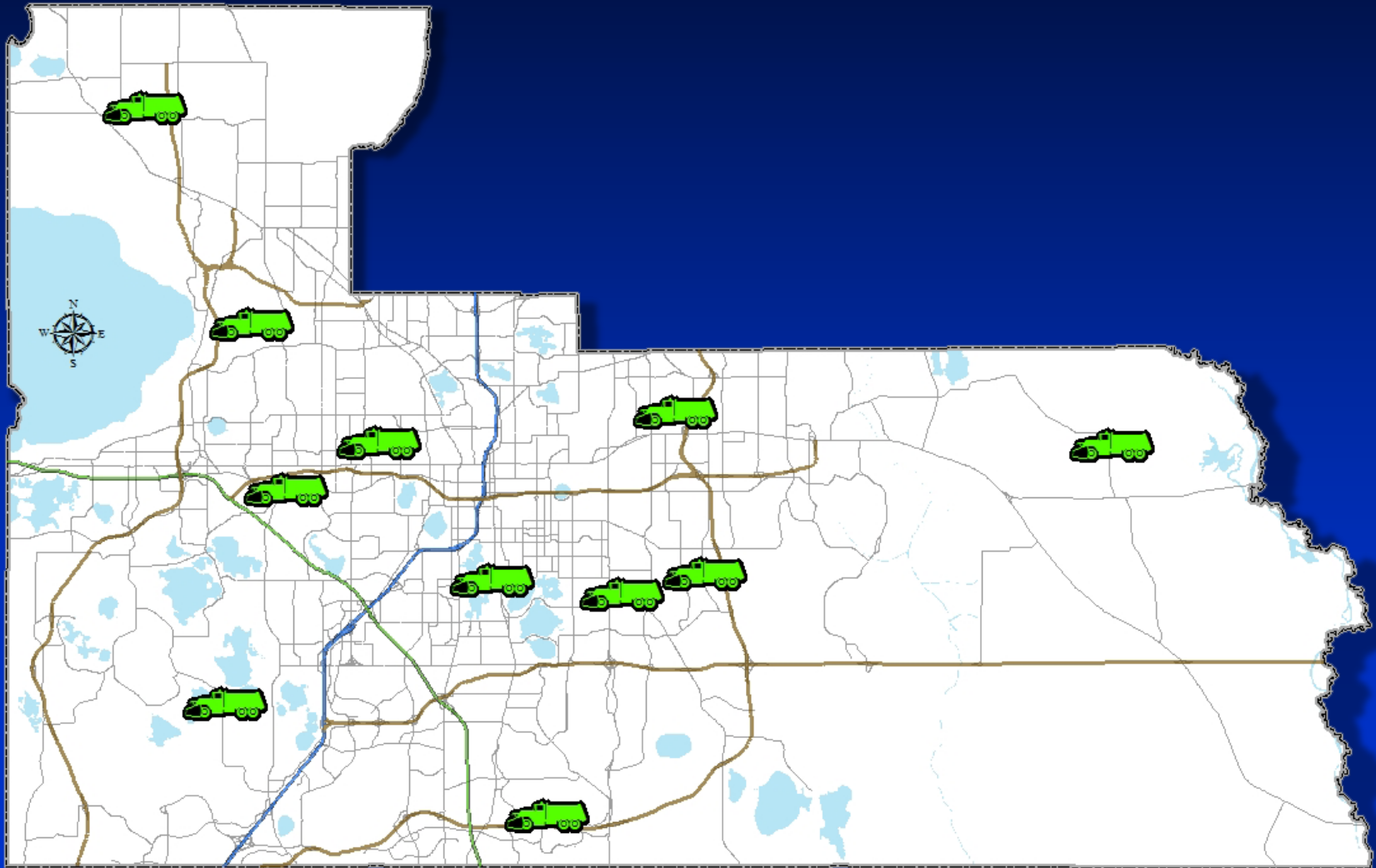
■ Status

- Rights-of-way debris removal will take approx. 8 weeks
- Citizen sites open 7 days per week, 7:00am to 7:00pm





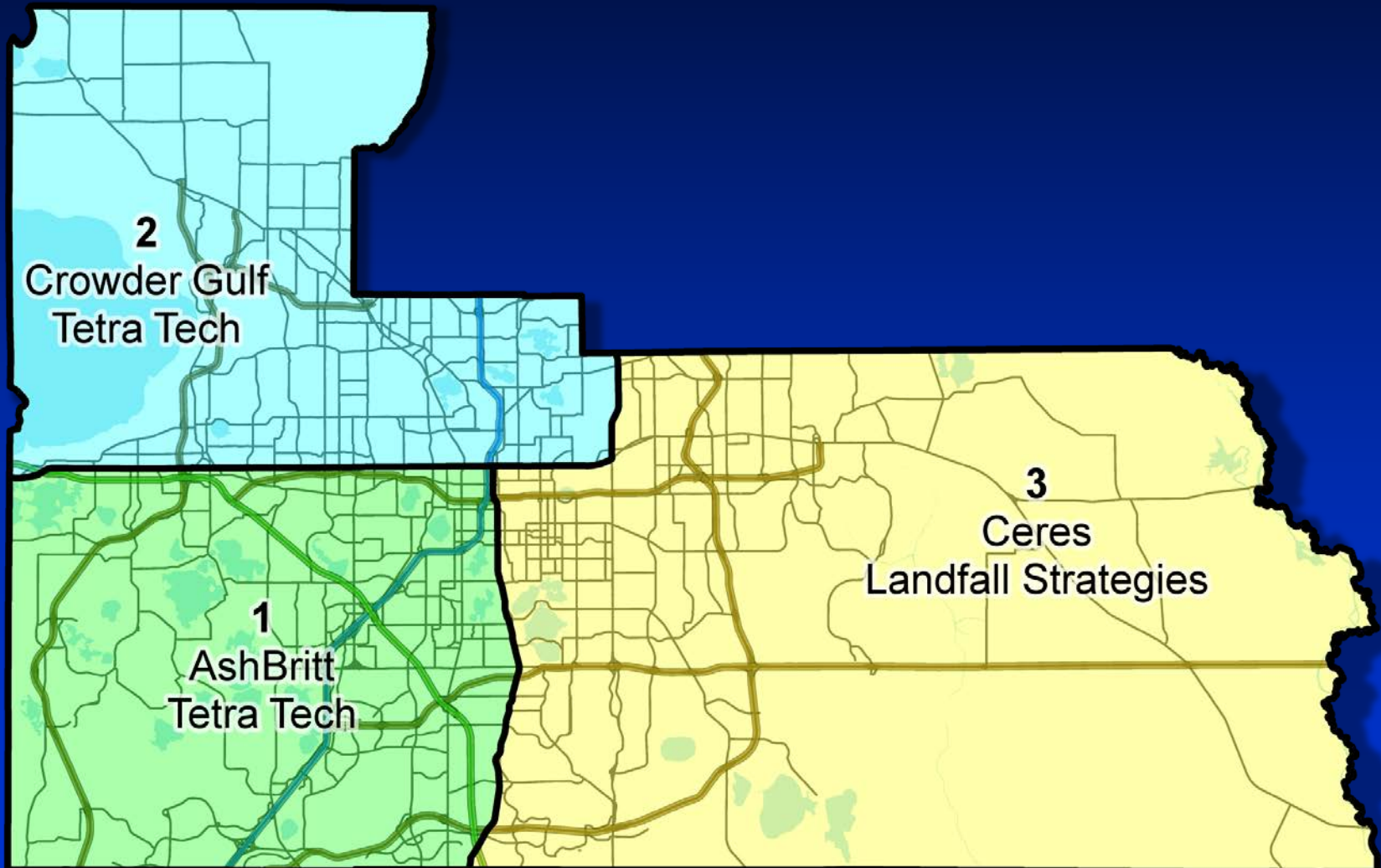
Citizen Debris Sites





Debris Removal Areas

Contractor Assignments





- Staged and staffed critical facilities with 50+ employees

-





Damage and Recovery

Utilities

- Response focused on four main aspects
 - Pump stations
 - Water reclamation facilities
 - Water mains
 - Garbage service





Damage and Recovery

Utilities

■ Post-storm pump stations response

—Monday, September 11

- Employees received all call at 3:30 am
- First assessment teams and generators in the field by 5:30 am
- Assessment completed at 3:00 pm
- Began 13-hour overlapping crew shifts

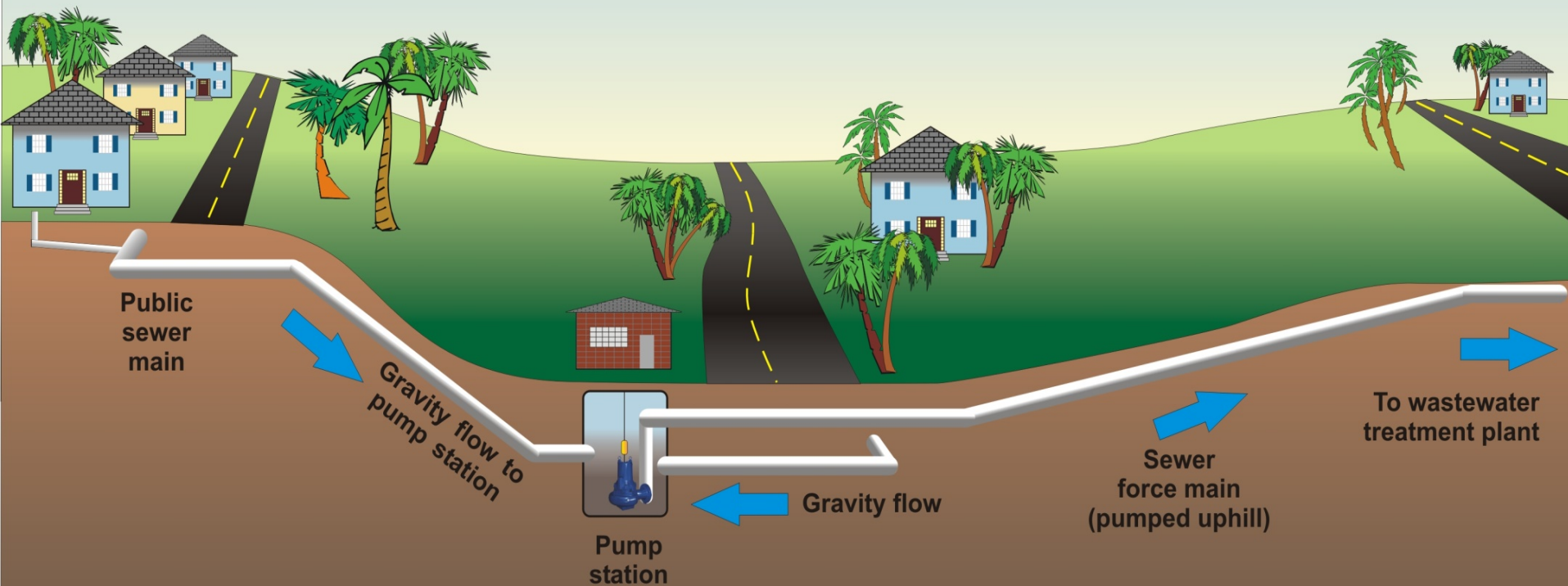




Damage and Recovery

Utilities

How the Sewer Works

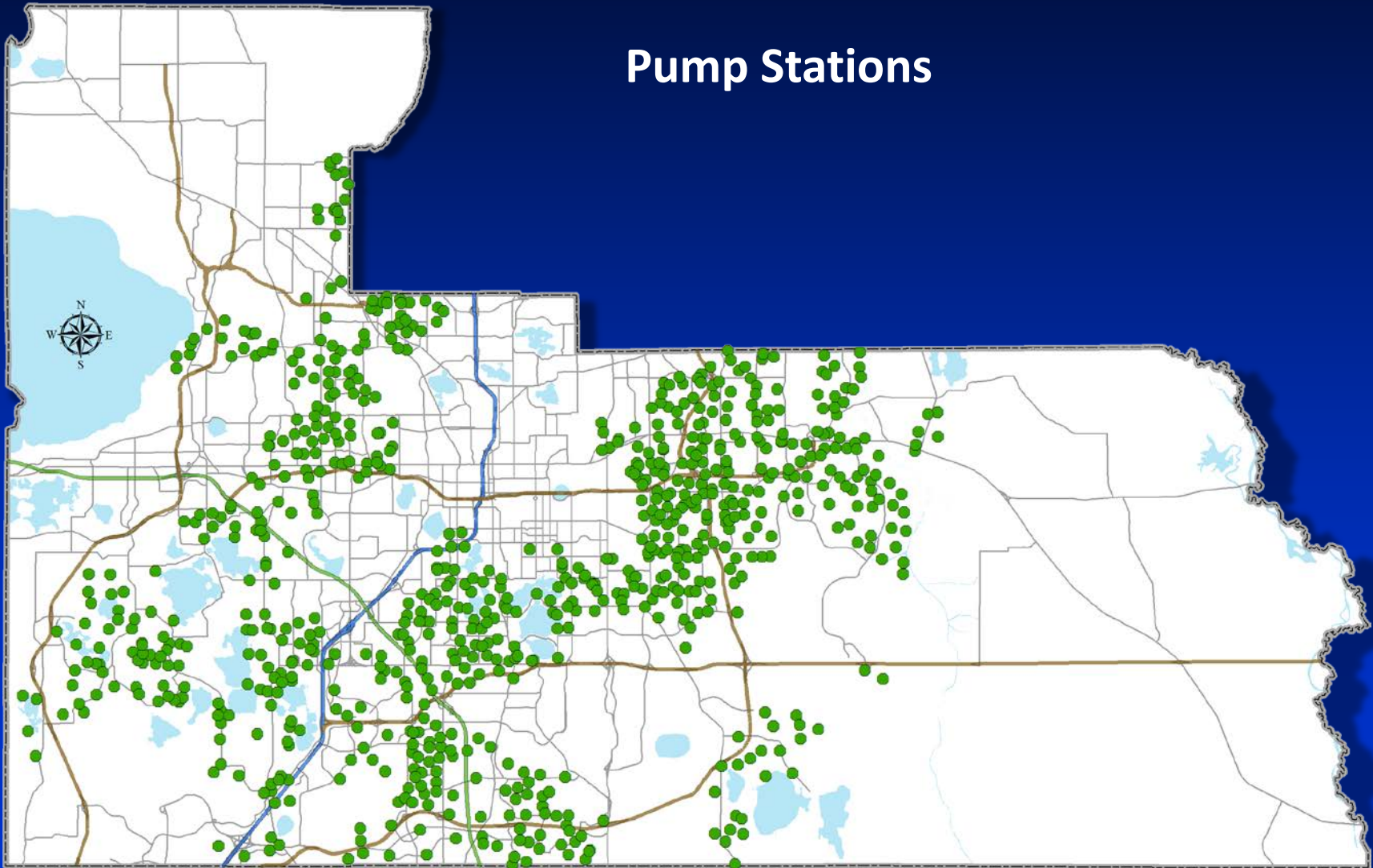




Damage and Recovery

Utilities

Pump Stations

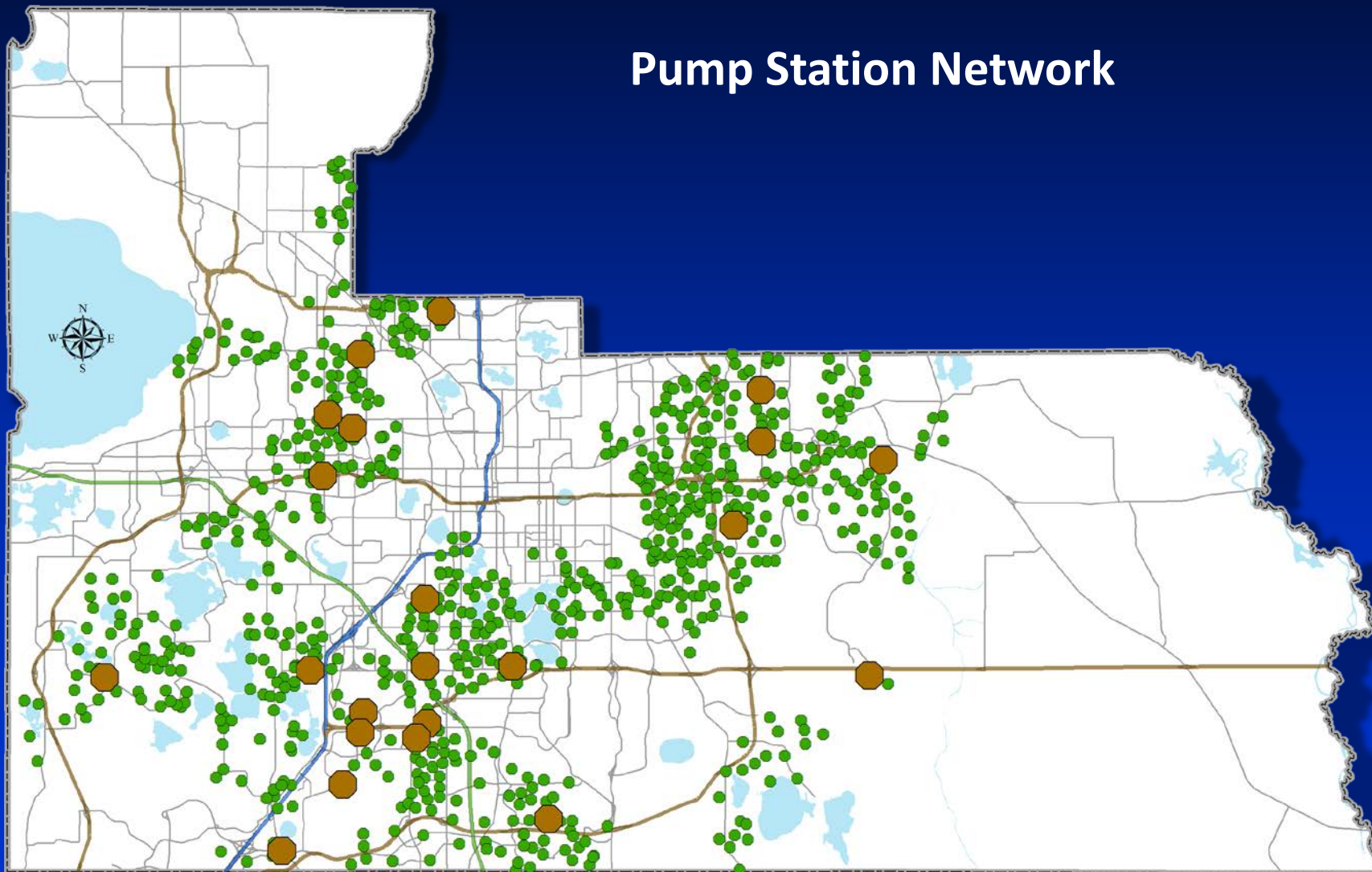




Damage and Recovery

Utilities

Pump Station Network





Damage and Recovery

Utilities



**Master Pump
Station**

**Typical Residential
Duplex Pump Station**

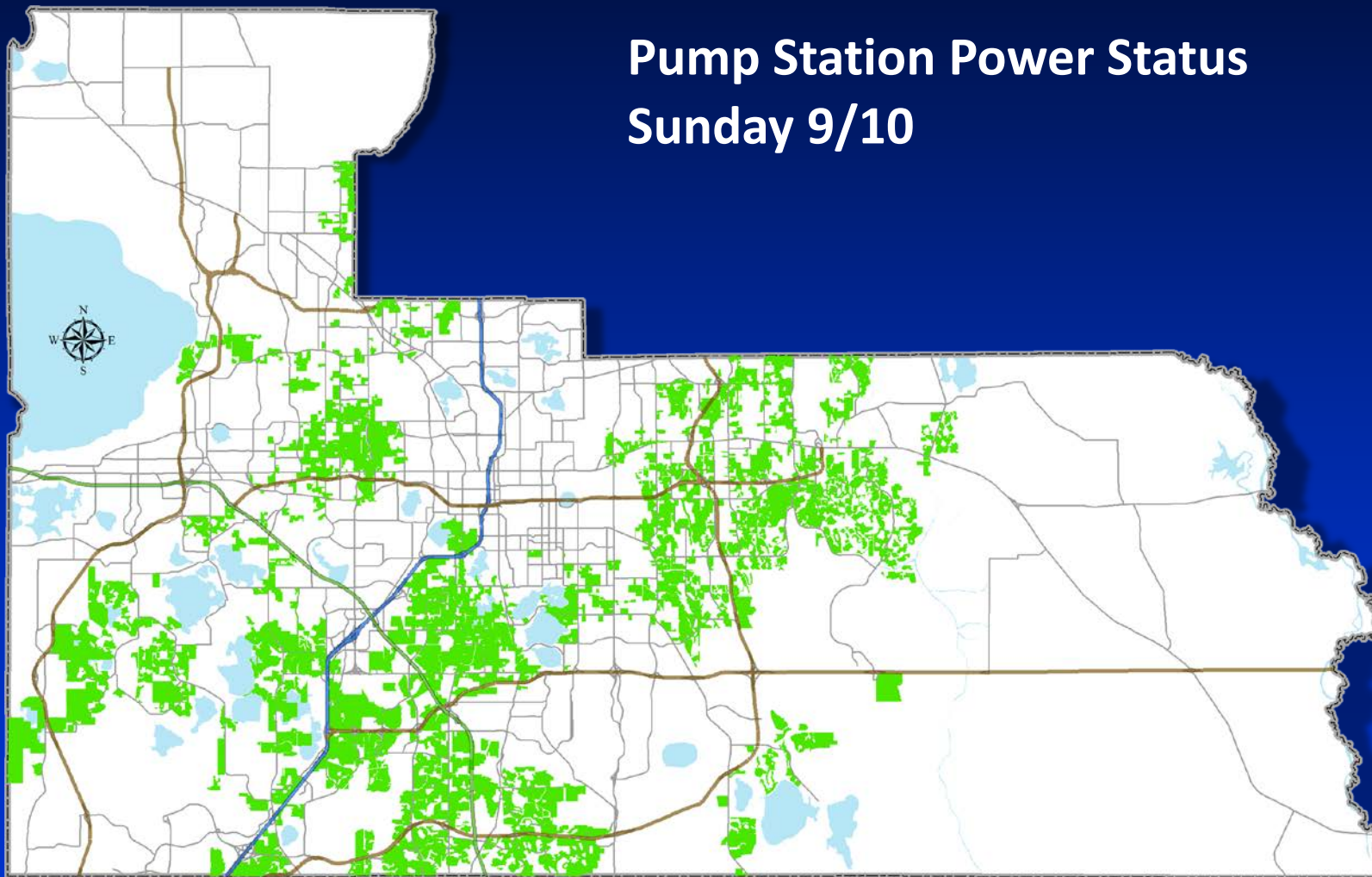




Damage and Recovery

Utilities

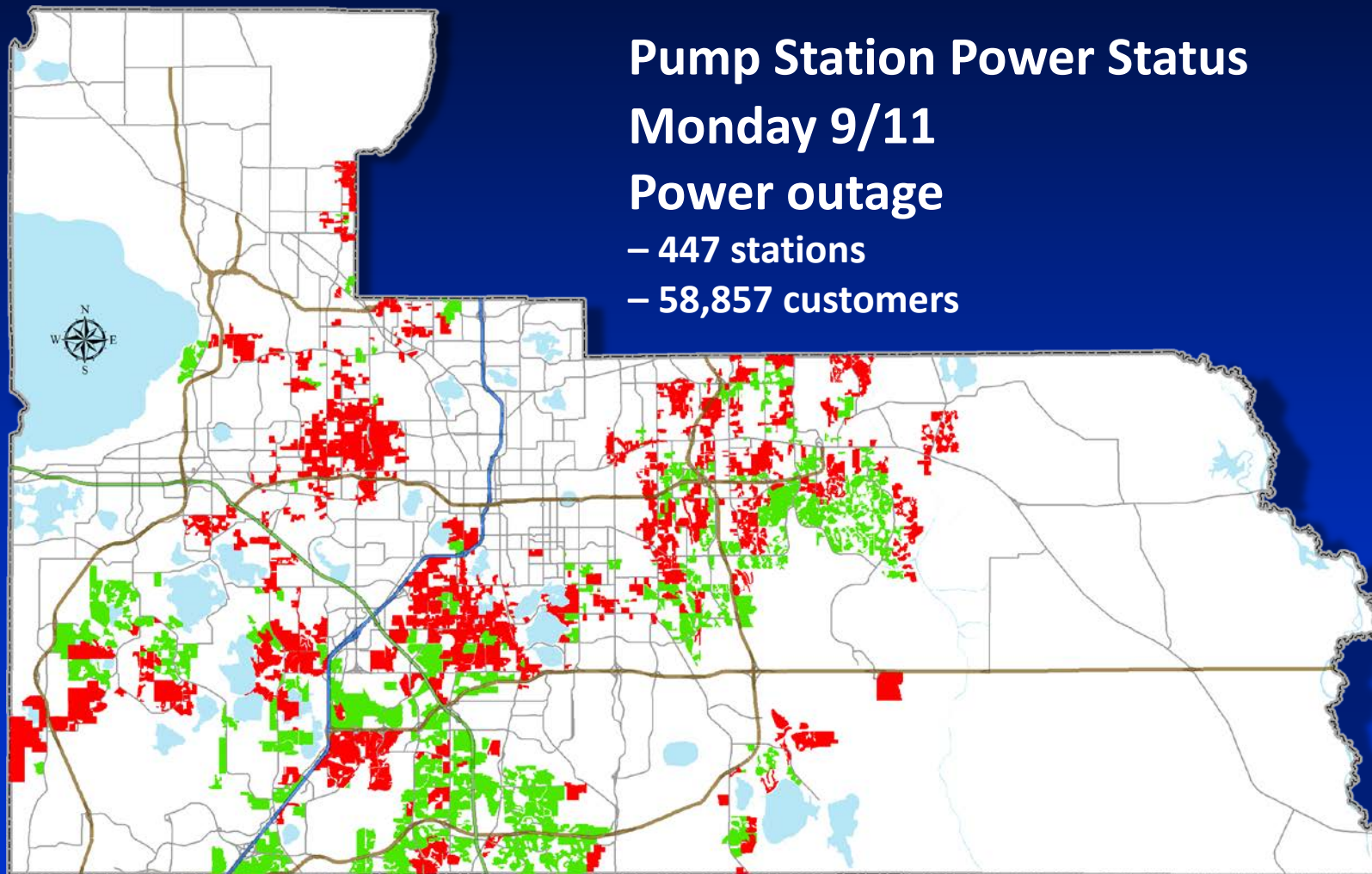
**Pump Station Power Status
Sunday 9/10**





Damage and Recovery

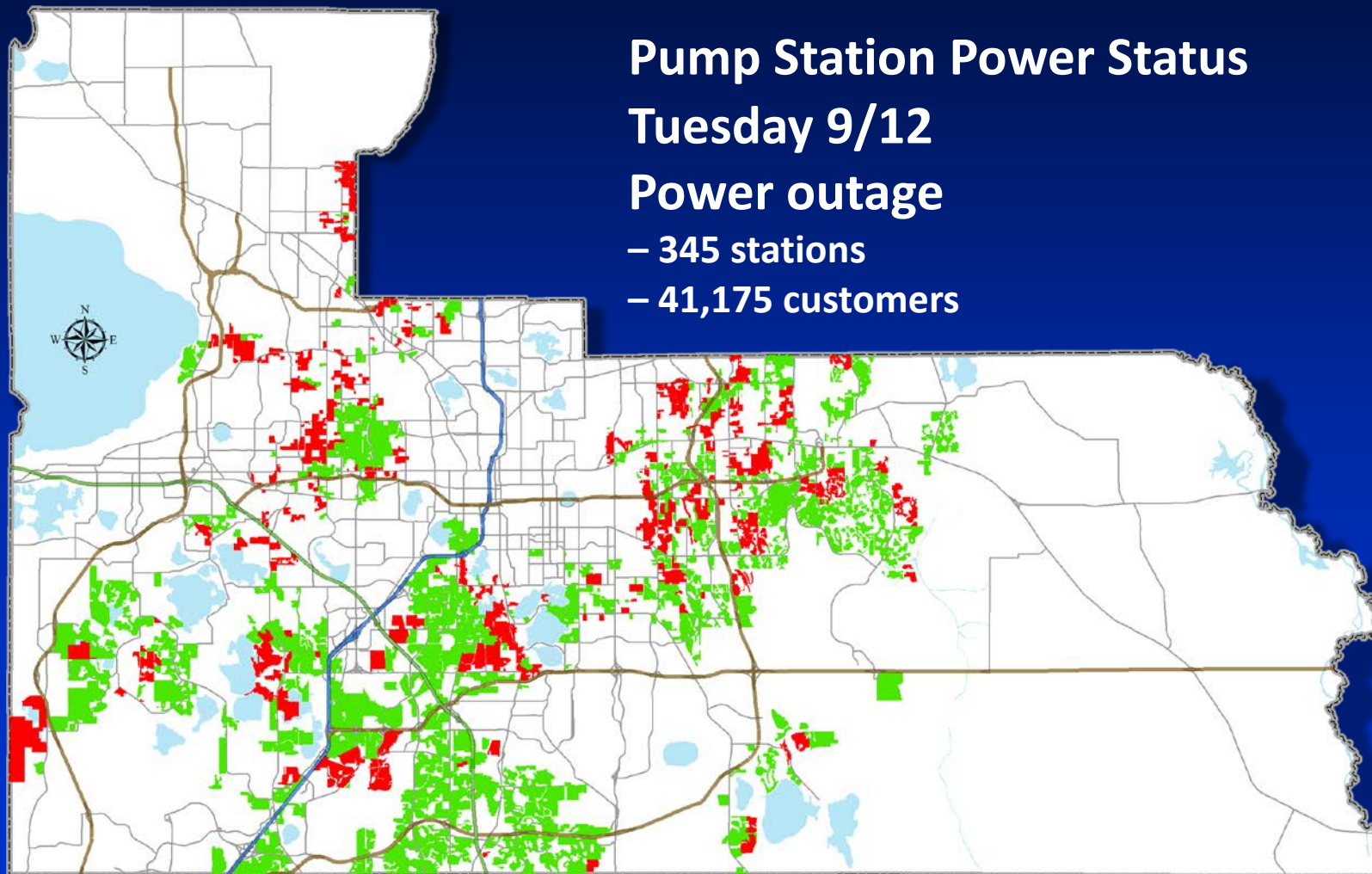
Utilities





Damage and Recovery

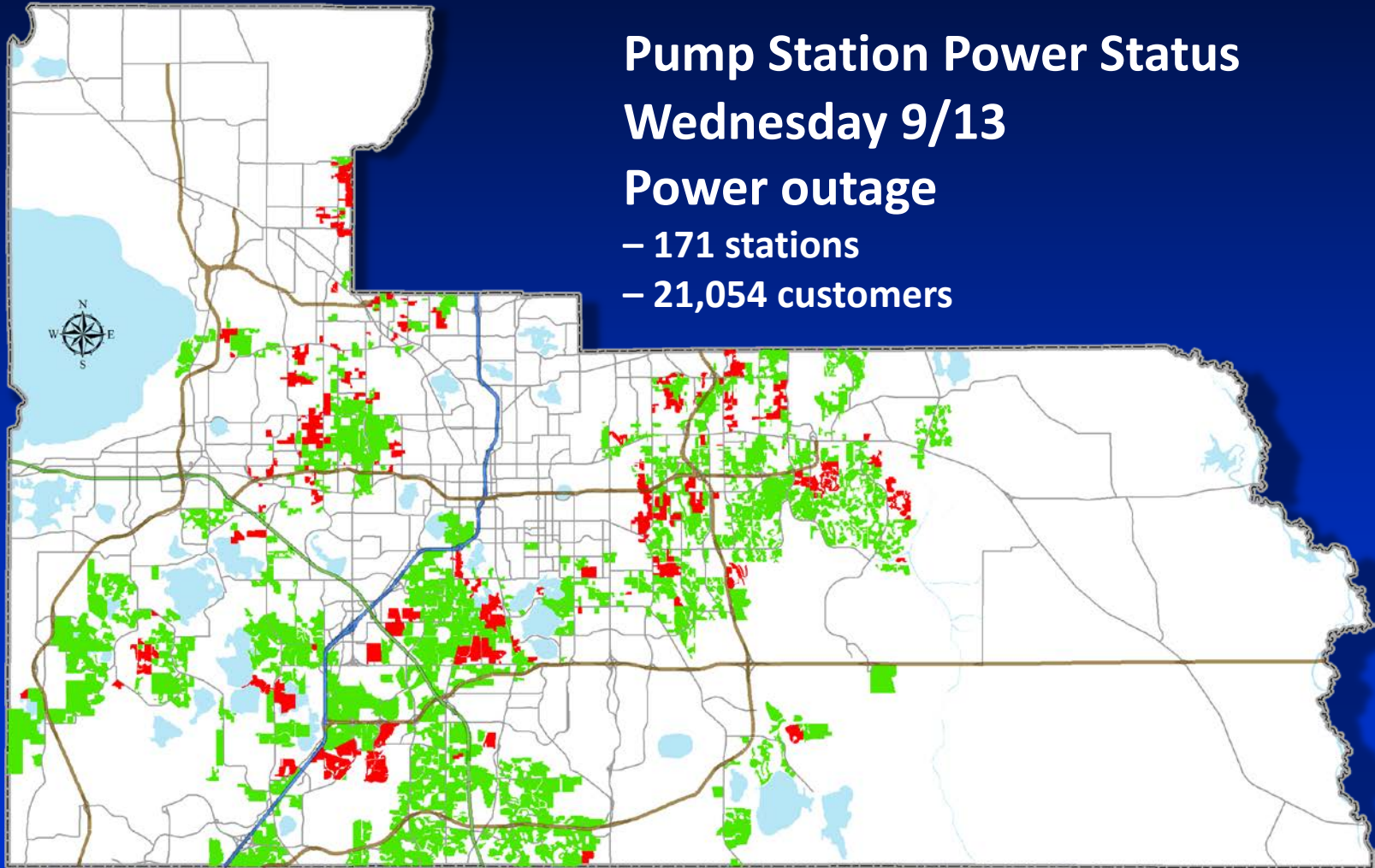
Utilities





Damage and Recovery

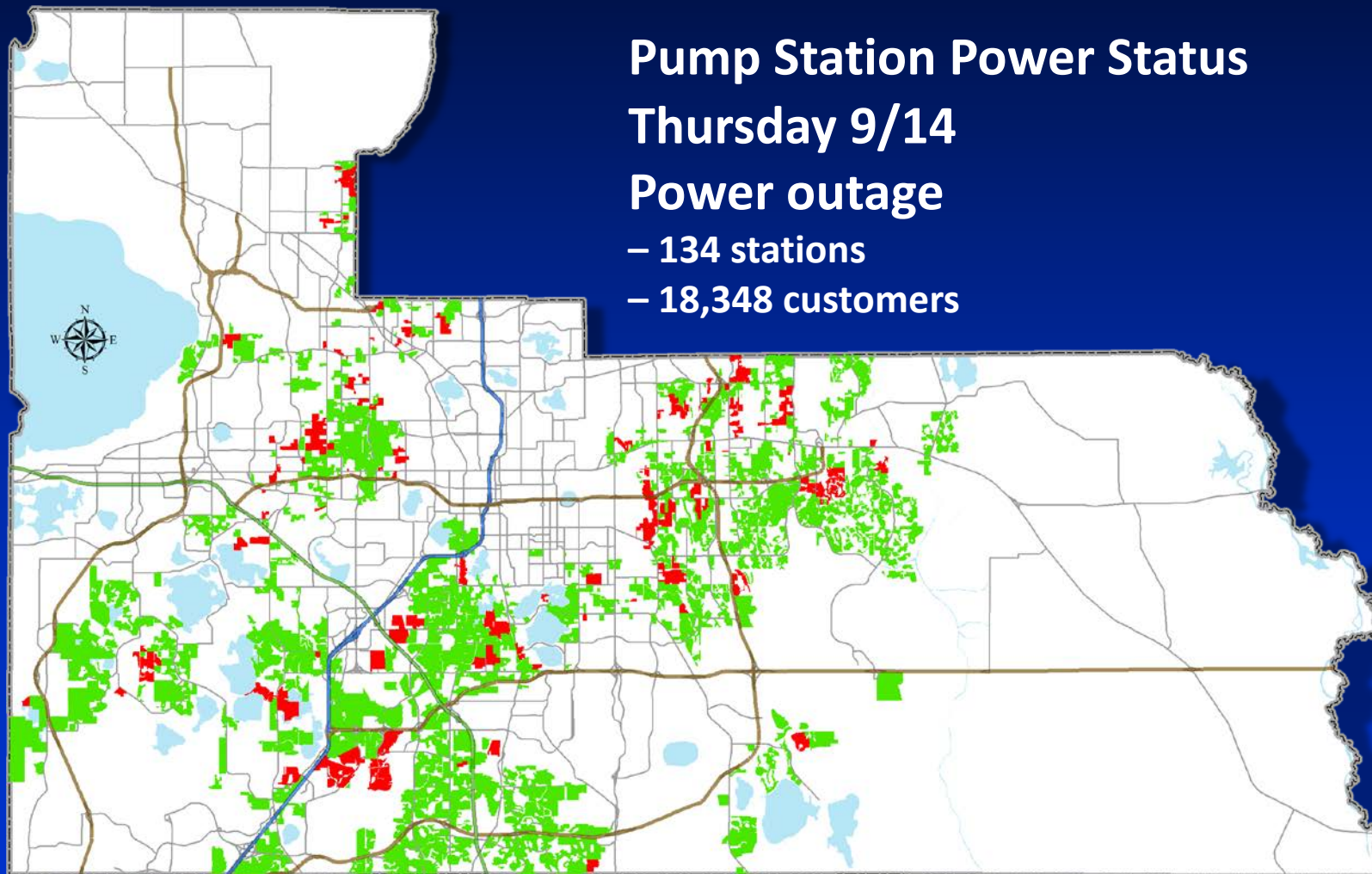
Utilities





Damage and Recovery

Utilities



Pump Station Power Status

Thursday 9/14

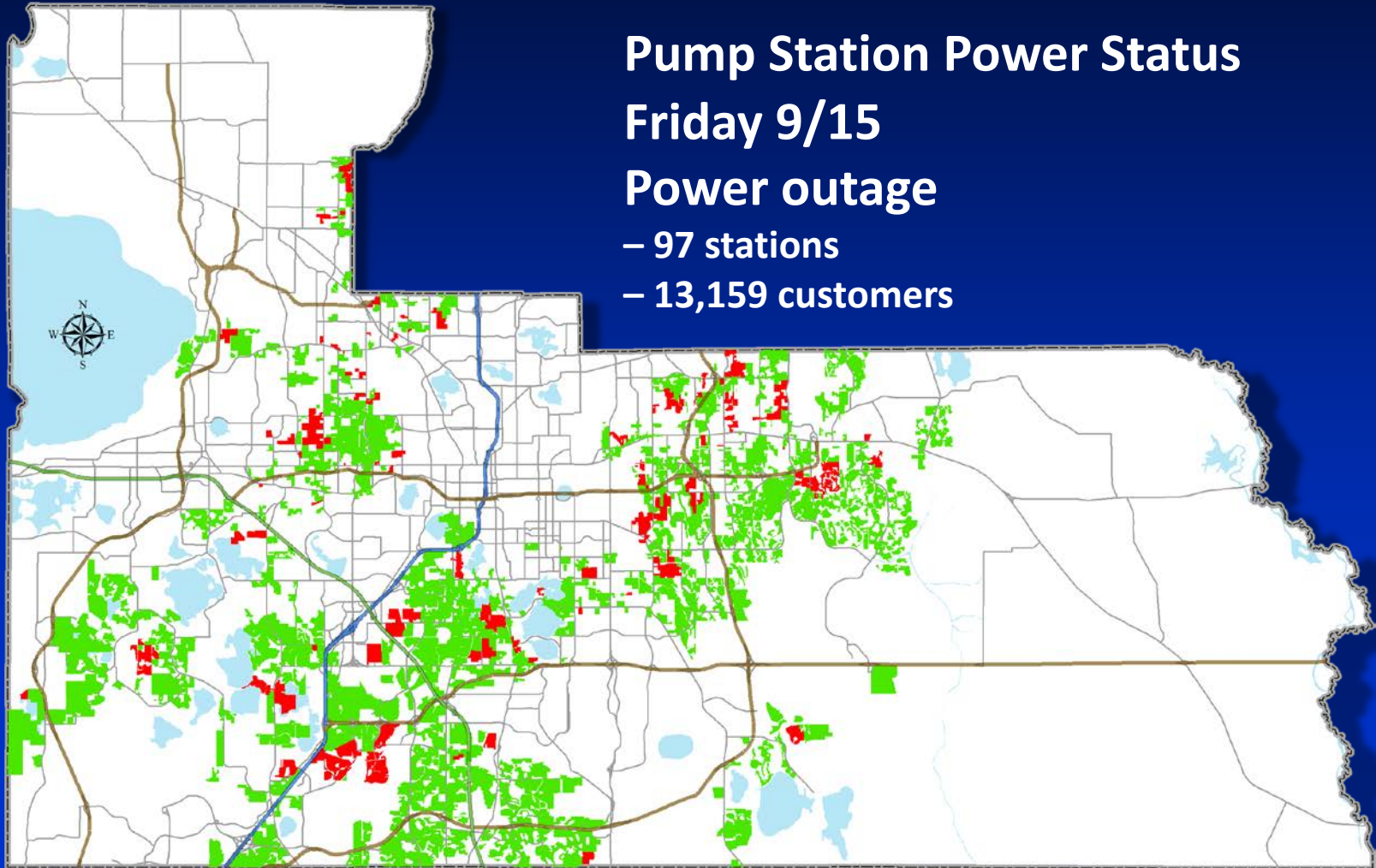
Power outage

- 134 stations
- 18,348 customers



Damage and Recovery

Utilities





Damage and Recovery

Utilities

- **Pump station recovery challenges**
 - System becomes surcharged during event
 - Widespread power outages
 - Stormwater inflow to sewer in flooded areas





Damage and Recovery

Utilities

■ Pump station recovery challenges

—Managing high flows

- Pump down initial accumulated water
- Many stations returned to service simultaneously
- Significant peaks observed at water reclamation facilities (28,000 gpm at EWRF; 49,000 gpm at SWRF)
 - Impacts ability to produce reclaimed water in certain facilities





Damage and Recovery

Utilities

- **Pump station recovery challenges**
 - **Sanitary sewer Overflows and Building Backups**
 - Localized overflows, some reaching waterbodies
 - Coordination with EPD to determine appropriate response including local postings, OC Alert, and news releases
 - **Building Backups**
 - 59 reported sewer lateral backups



Damage and Recovery

Utilities

- **Water Mains**
 - **Distribution trouble calls**
 - 179 calls
 - **One water main break**
 - Gatlin Heights
 - 25 customers impacted
 - Precautionary boil water advisory issued
 - **Water service line leaks / breaks**
 - 29 on County side



Damage and Recovery

Utilities

■ Garbage Service

- Landfill and transfer stations closed Saturday at 2 p.m.
- Collections moved during storm week

SOLID WASTE
COLLECTION UPDATE

NO COLLECTION on **Monday, September 11**, for garbage, recycling, or yard waste due to **Hurricane Irma**. All collection days for the week will be moved to the **next day**.



M	11	Tu	12	W	13	Th	14	F	15	S	16
NO COLLECTION	Collection for Monday customers	Collection for Tuesday customers	Collection for Wednesday customers	Collection for Thursday customers	Collection for Friday customers						

 ORANGE COUNTY
UTILITIES
DEPARTMENT



Damage and Recovery

Utilities

- **Landfill & Transfer Stations**
 - Heavy demand prior to storm event
 - Opened on Tuesday morning
 - Extended hours at all sites





Damage and Recovery

Utilities

■ Curbside Collection

—Haulers to collect yard waste
set out according
to residential guidelines

- Bags, bundles, cans under 60 pounds
- 3 cubic yards
- Limbs tied and under 3 feet

—Residents to schedule bulk collection





Damage and Recovery

Community, Environmental and Development Services

- Response focused on three main aspects:
 - Building Damage Assessment
 - Billboard Damage Assessment
 - Parks Assessment
- Assessment teams deployed 11:00am Monday morning





Damage and Recovery

Community, Environmental and Development Services

- **Building Damage Assessment**
 - Focus on habitability and public safety
 - Coordination with Property Appraiser's Office
- **Initial assessment focused:**
 - 311 calls reporting damage
 - Sweeps in impacted neighborhoods
- **Completed assessment on Friday, September 15**





Damage and Recovery

Community, Environmental and Development Services

■ Findings:

- 41,722 structures assessed
 - 186 Structural damage
 - 320 Non-structural damage
 - 21 Uninhabitable
- Power pulled from 278 units

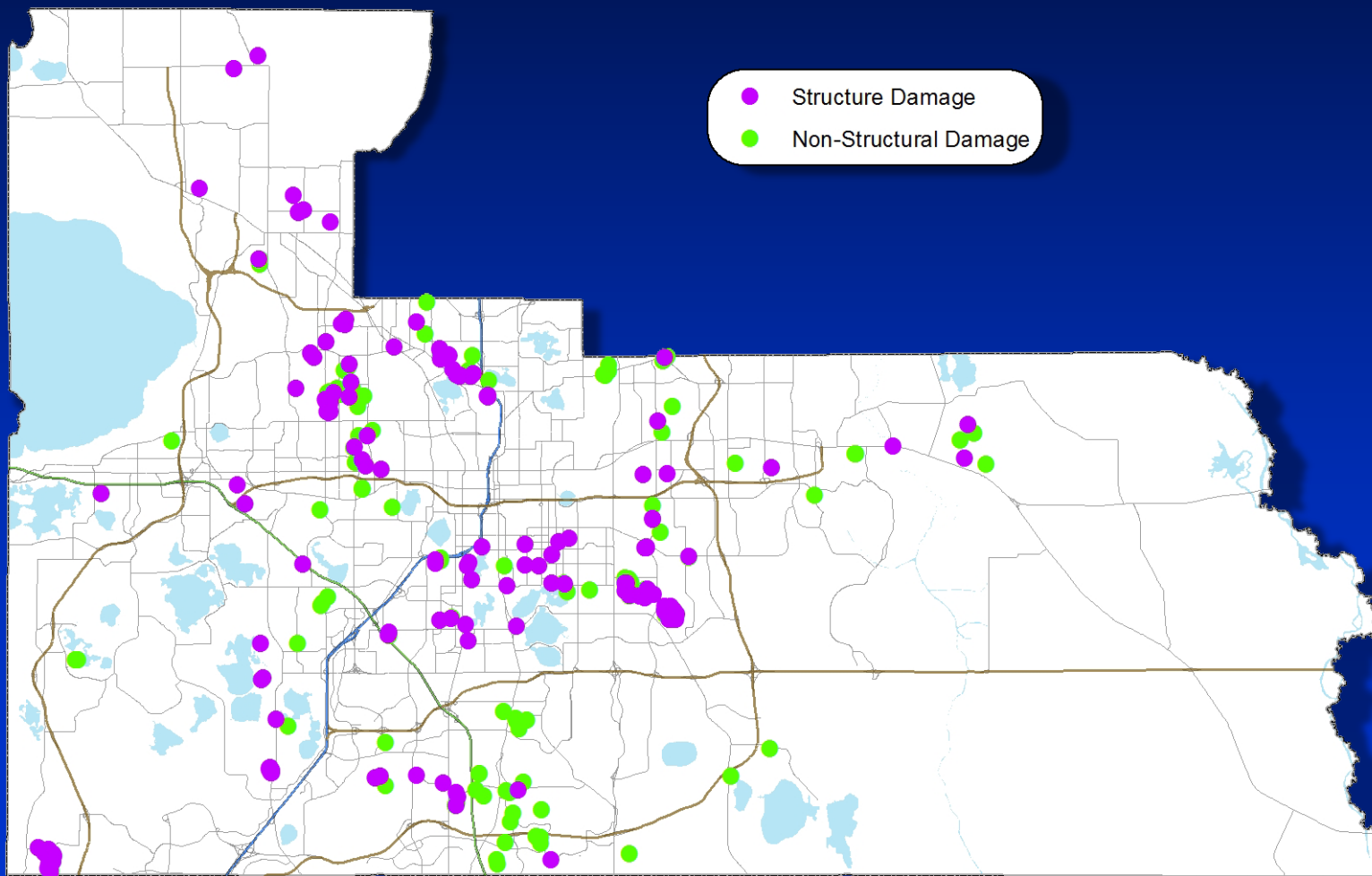




Damage and Recovery

Community, Environmental and Development Services

■ Damage Assessment





Damage and Recovery

Community, Environmental and Development Services

■ Recovery Permitting

- Waive permit fees for repairs (track costs)
 - Residential and commercial
 - Roof, structural, electrical, dock, sea wall, etc.
- Prioritize lobby services and Fast Track review
- Communications plan for scope of work and unlicensed contractors
 - Website, Newsroom
 - 311, Permitting Services call center
 - Consumer Fraud



Damage and Recovery

Community, Environmental and Development Services

- **Billboard Damage Assessment**
 - Focus on non-conforming billboards (300)
 - Significantly damaged billboards cannot be replaced
- **Completed assessment on Wednesday, Sept. 13**
- **Only minimal damage observed**





Damage and Recovery

Community, Environmental and Development Services

- **50+ County parks were significantly impacted**
 - Many county park sites still closed (40)
 - Power and phone outages
 - Most have significant debris
 - Damage to fences, shade structures
 - West Orange Trail washout
 - Several park sites utilized as shelters and debris sites
 - Working to resume normal activities and programming





This play equipment is
designed for children ages
5 to 12
Adult supervision
is required.
All equipment is
subject to inspection.

West Orange Trail – Winter Garden Station



Shadow Bay Park



Presentation Outline

- Hurricane Irma Information
- EOC Activation
- Shelters
- Power Restoration
- Convention Center
- Fire Response
- Sheriff's Response
- Communications
- Damage and Recovery
- **FEMA Assistance**
- Summary



Photo Credit: NASA / AFP



FEMA Assistance

- Orange County declared eligible for FEMA Assistance
 - Emergency Measures: Costs reimbursed at 100% (30 day period)
 - Debris: Eligible costs reimbursed at 75%
- Utilize county reserves for:
 - Up front costs
 - County's portion





FEMA Individual Assistance

- **Orange County approved for FEMA's Individual Assistance Program**
 - Initial application submitted on Sept. 10th
 - Property Appraiser submitted damage assessment on Sept. 12th
 - September 13th Orange County became eligible
- **Orange County citizens are eligible to apply for assistance**
 - Grants: Temporary housing, home repairs, and other serious disaster related needs
 - Loans and other assistance





FEMA Individual Assistance

Register for Disaster Assistance

WEB: www.DisasterAssistance.gov

PHONE: **800-621-FEMA (3362)** | TTY: **800-462-7585**
(711/Video Relay Service)

Have this information ready when you apply:

- Social Security number (one per household)
- Address of the damaged home or apartment
- Description of the damage
- Information about insurance coverage
- Telephone number
- Mailing address
- Bank account & routing numbers for direct deposit of funds



Disaster assistance is available without regard to race, color, religion, national origin, sex, age, disability, English proficiency or economic status. If you or someone you know has been discriminated against, call FEMA at 1-800-621-3362.



FEMA



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Photo Credit: NASA / AFP



Summary

- EOC remains at Level 2
- Recovery operations are continuing
- Debris removal will be main focus in the coming weeks
- Citizen communication will be updated and ongoing through the recovery phase
- Debrief for lessons learned planned in near future