

The Florida Senate
COMMITTEE MEETING EXPANDED AGENDA

ENVIRONMENT AND NATURAL RESOURCES

Senator Montford, Chair
Senator Albritton, Vice Chair

MEETING DATE: Tuesday, January 8, 2019

TIME: 4:30—6:00 p.m.

PLACE: *Mallory Horne Committee Room, 37 Senate Building*

MEMBERS: Senator Montford, Chair; Senator Albritton, Vice Chair; Senators Berman, Mayfield, and Wright

TAB		BILL NO. and INTRODUCER	BILL DESCRIPTION and SENATE COMMITTEE ACTIONS	COMMITTEE ACTION
1		Introduction of committee members and staff		Discussed
2		Environmental Impacts of Hurricane Michael		Presented
3		Other Related Meeting Documents		

Hurricane Michael Response

Kevin Guthrie

January 8, 2019



Hurricane Michael

- Estimated 375,000 Floridians were ordered to evacuate.
- 6,577 Floridians took refuge in 44 shelters.
- More than 7,000 missions were entered into the State Emergency Response Team's Common operation platform.
- The SERT established 23 points of distribution to provide survivors with critical supplies.



Hurricane Michael

- Federal Individual Assistance declarations were received for 12 counties.
- As of January 2nd 102,757 IA registrations with over \$129 million disbursed.
- 1,361 applicants approved for Direct Housing.
- 195 temporary housing units leased-in.
- 16 counties qualified for Federal Public Assistance.



Questions?



www.floridadisaster.org

Twitter: @FLSERT



**GET A
PLAN!**
FloridaDisaster.org



Hurricane Michael and the Path Forward

Environment and Natural Resources Committee
Florida Senate
January 8, 2019

David Clark, Deputy Secretary

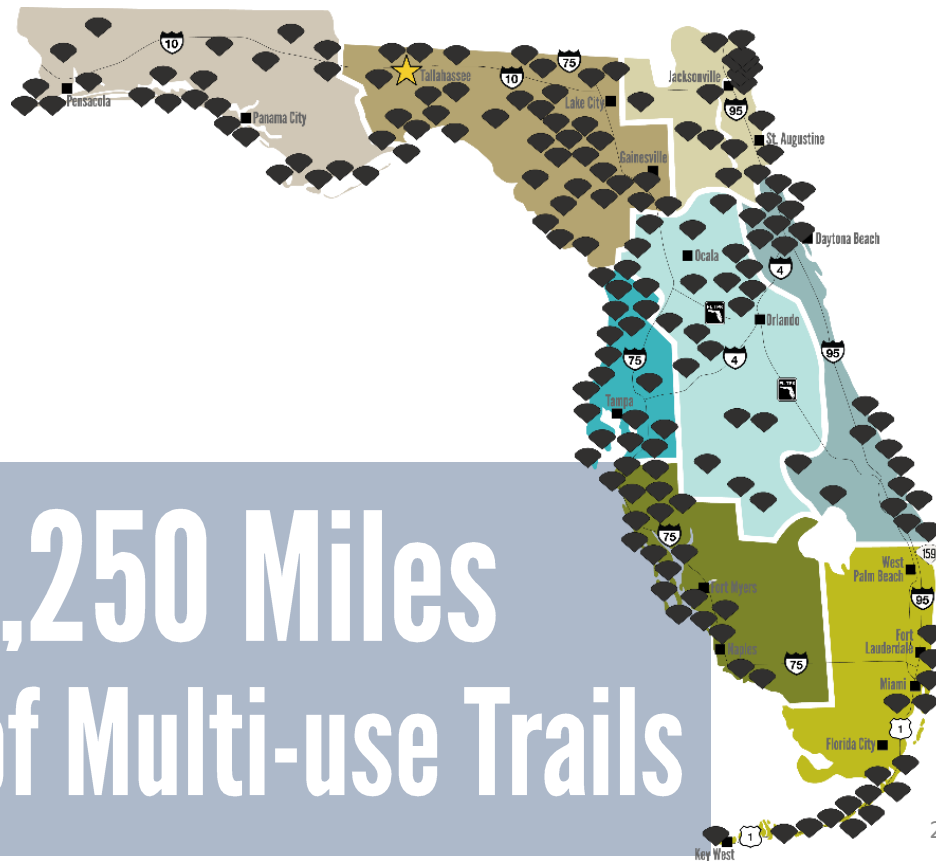


Florida State Parks...*the Real Florida*SM

175 State
Parks

800,000 Acres
of Managed Lands

1,250 Miles
of Multi-use Trails





Revenue – Visitation – Economy

FY 2017

\$

\$66M

Park Revenue



28.1M

Annual Visitation



\$2.3B

Economic Impact



Impact to Park Operations

Park Closures

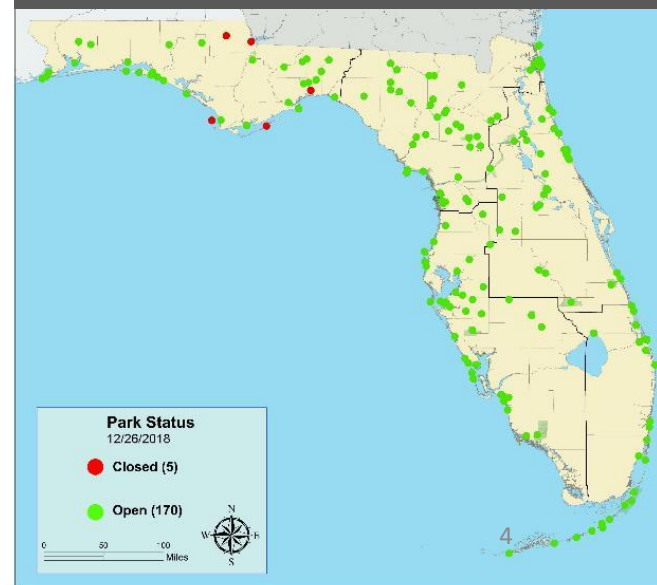
October 9, 2018



October 17, 2018



December 26, 2018





Post Storm Response

Strike Teams





Impact to Park Operations

\$50M Estimated Impact

\$7M Revenue Loss Estimate





Impact to Park Operations

1.6M Visitation Loss Estimate

6 Campgrounds Remain Closed – Major Repairs

\$15M Wildfire Risk Mitigation





Post Storm Needs

Fuel/Fire Mitigation





Post Storm Needs

Reforestation

Pre-Storm



Post-Storm





Post Storm Needs

Longer-Term Needs



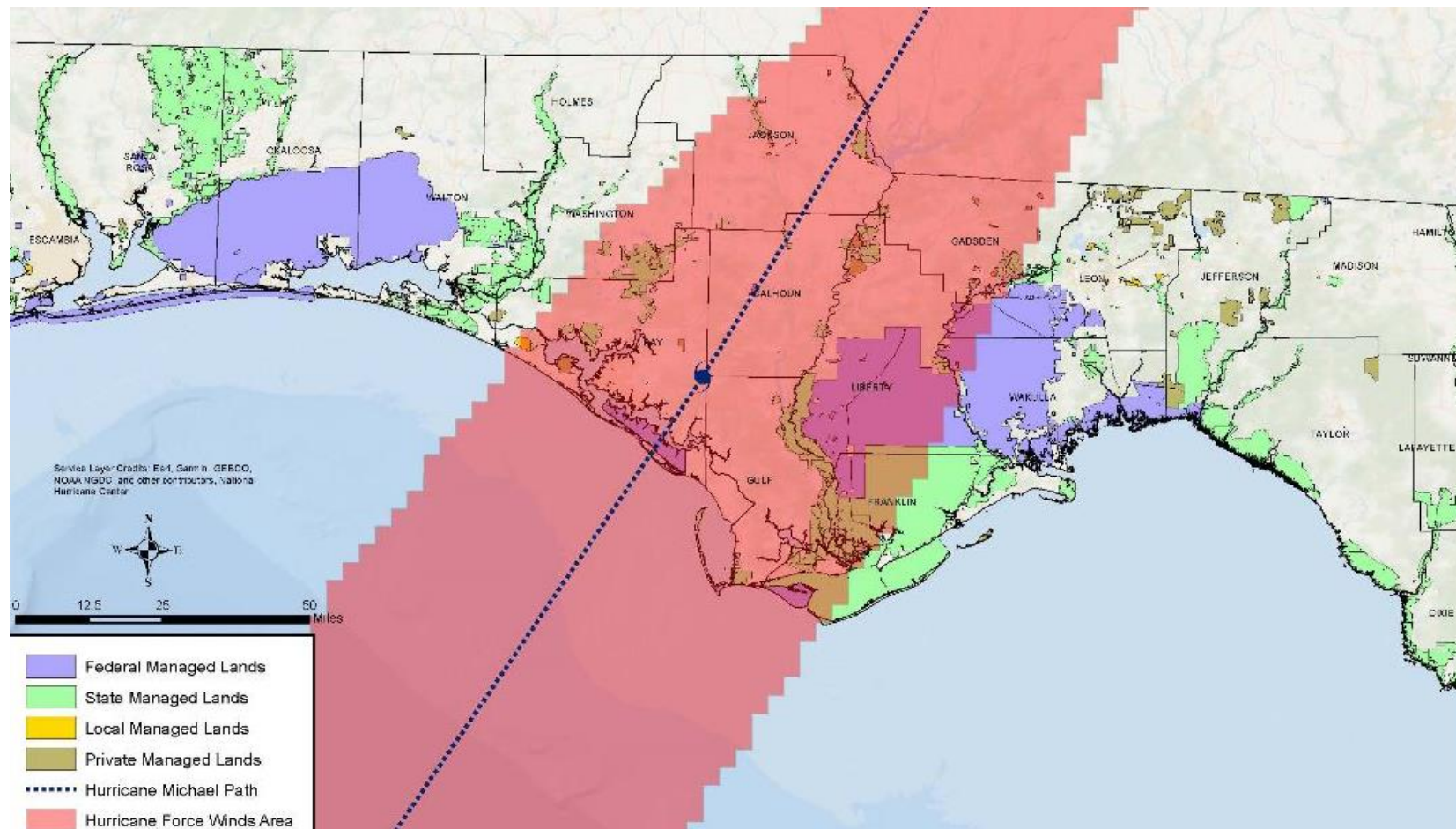
Infrastructure



Natural Resources

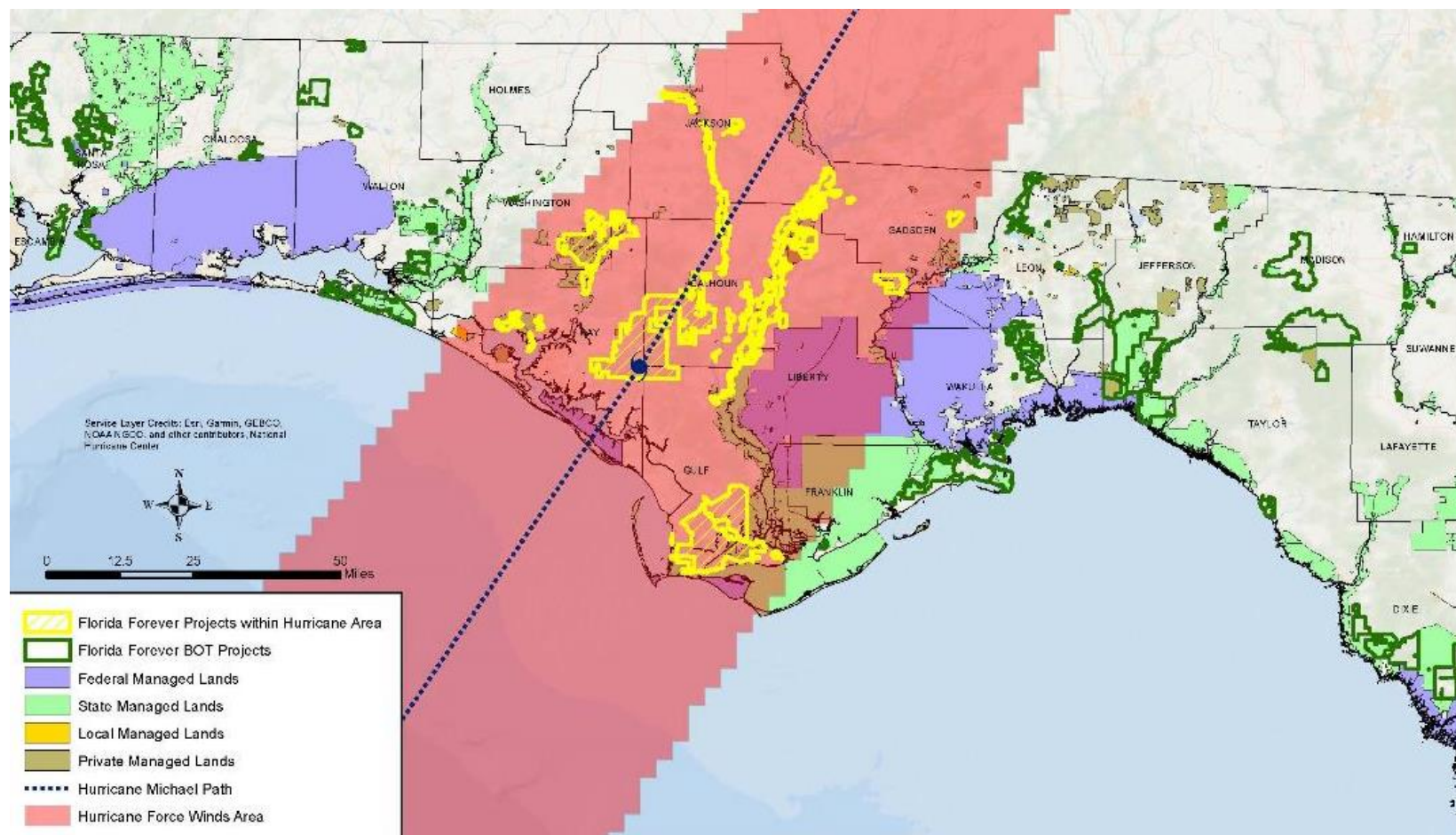


Storm Path





Storm Path





Teamwork





Hurricane Michael and the Path Forward

David A. Clark
Deputy Secretary, Land & Recreation

(850) 245-2044

David.A.Clark@FloridaDEP.gov



Hurricane Michael Impacts

January 8, 2019

Brett J. Cyphers, Executive Director

Hurricane Michael Impacts

Upland Resource Impacts on District Lands

- **44,457 total acres impacted**
242,000 tons | 1.45m cubic yards
- 2,213 acres catastrophic damage
39,176 tons | 235,055 cubic yards
- 42,243 acres moderate damage
202,783 tons | 1.22m cubic yards
- 399 miles of public access roads
- 128 miles of recreational trails
- 47 recreation sites along Econfina Creek and the Chipola River as well as the Econfina Field Office



Road within the Econfina Creek Water Management Area

Hurricane Michael Impacts

Watershed Impacts

Trees and debris disrupting normal streamflow, impacting up to **1,189 miles** along:

- Econfina Creek (52 miles)
- Chipola River (97 miles)
- Bear Creek (30 miles)
- Telogia Creek (25 miles)
- Other tributaries (985 miles)



Econfina Creek near Blue Spring

Hurricane Michael Impacts

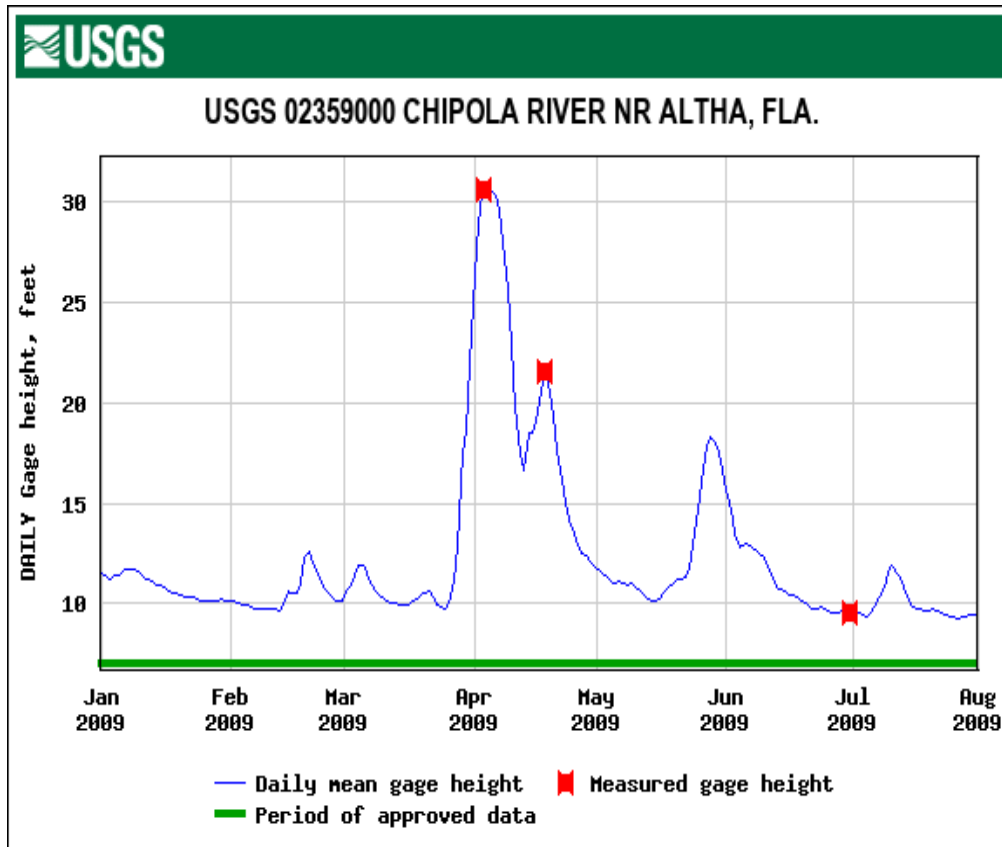
Precipitation and Hydrology

District-wide: Average of 79 inches | Most in more than 30 years

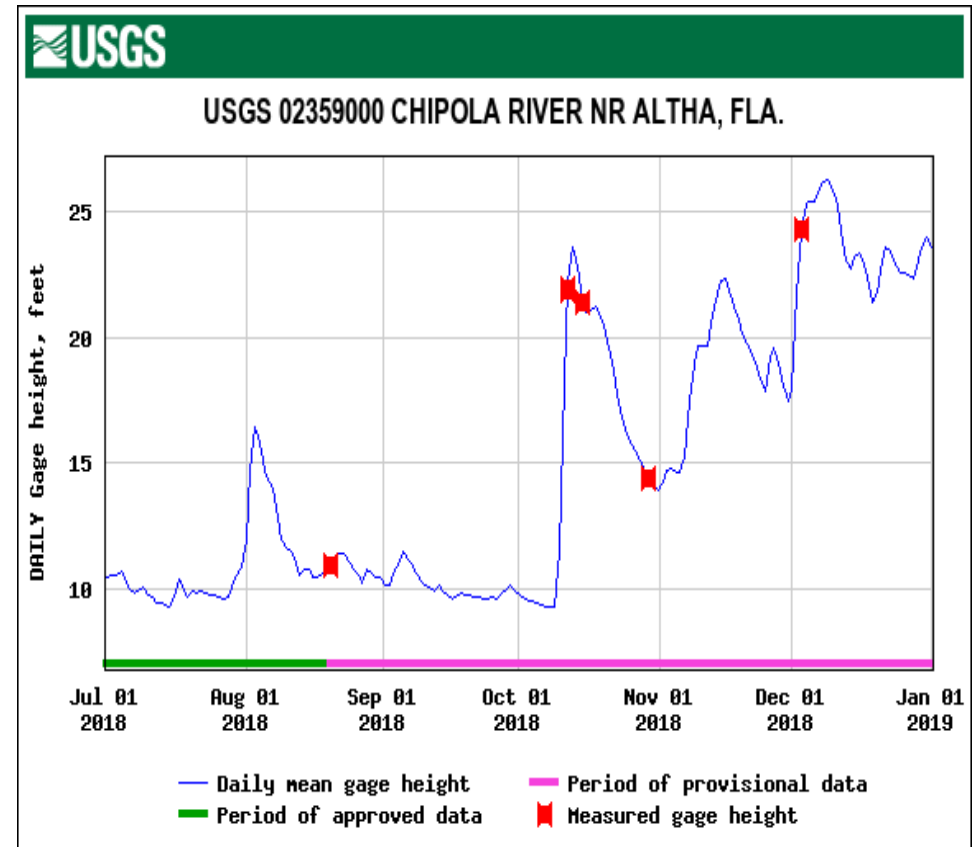
Washington County: 36.35 inches above normal

Jackson County: 32.28 inches above normal

Normal Hydrologic Pattern (2009)



Post-Michael Hydrologic Pattern (Current)



Hurricane Michael Resource Impacts

Northwest Florida Water Management District

Upland Resource Impacts

- **44,457 acres** of District lands impacted; 242,000 tons and 1.45 million cubic yards of debris
- **2,213 acres** of District timber lands suffered **catastrophic damage** (66-100% timber on the ground) or **severe damage** (35-65% timber on ground) requiring complete clearing and restoration. Debris: **39,176 tons; 235,055 cubic yards**.
- **42,243 acres** of District timber lands received minimal to moderate damage (up to 35% of timber loss). Debris: **202,783 tons; 1.22 million cubic yards**.
- **399 miles of public roads and 128 miles of recreational trails** on District lands received direct impacts from the hurricane, requiring an estimated removal of more than 12,930 tons (77,582 cubic yards) of debris (over 50,000 tons).
- **47 recreation sites, including the Econfina Field Office**, received direct impacts and extensive impacts to facilities, including three premier springs sites.
- Widespread downed timber has increased the risk of wildfires, as well as the threat for insect and disease damage to regional forestry resources.

Watershed Impacts

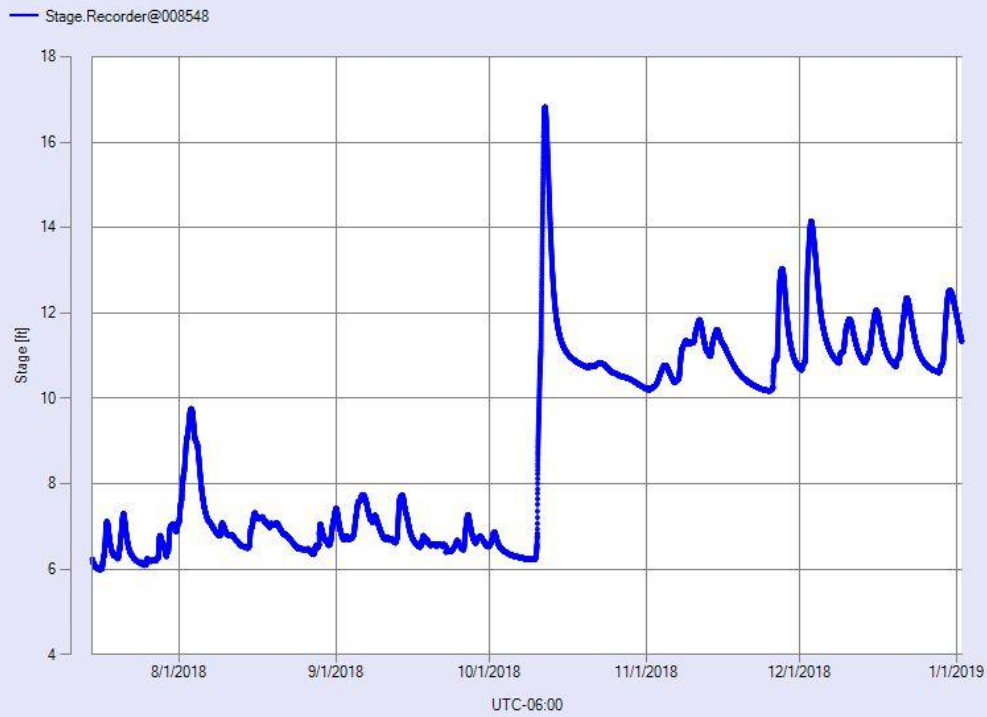
Trees and debris deposited within rivers and the floodplain have disrupted normal streamflow, causing persistent flooding. The storm affected up to **1,189 total miles** including, but not limited to:

- **52 miles of Econfina Creek** (Washington and Bay counties), discharging to Deer Point Lake Reservoir
- **97 miles along the Chipola River** (Jackson, Calhoun, and Gulf counties) from Marianna to Dead Lakes
- **30 miles along Bear Creek and Little Bear Creek** (Bay County), draining to Deer Point Lake Reservoir
- **25 miles** along Telogia Creek (Liberty, Gadsden counties)
- **985 miles** of tributaries

Historic precipitation levels exacerbate impacts.

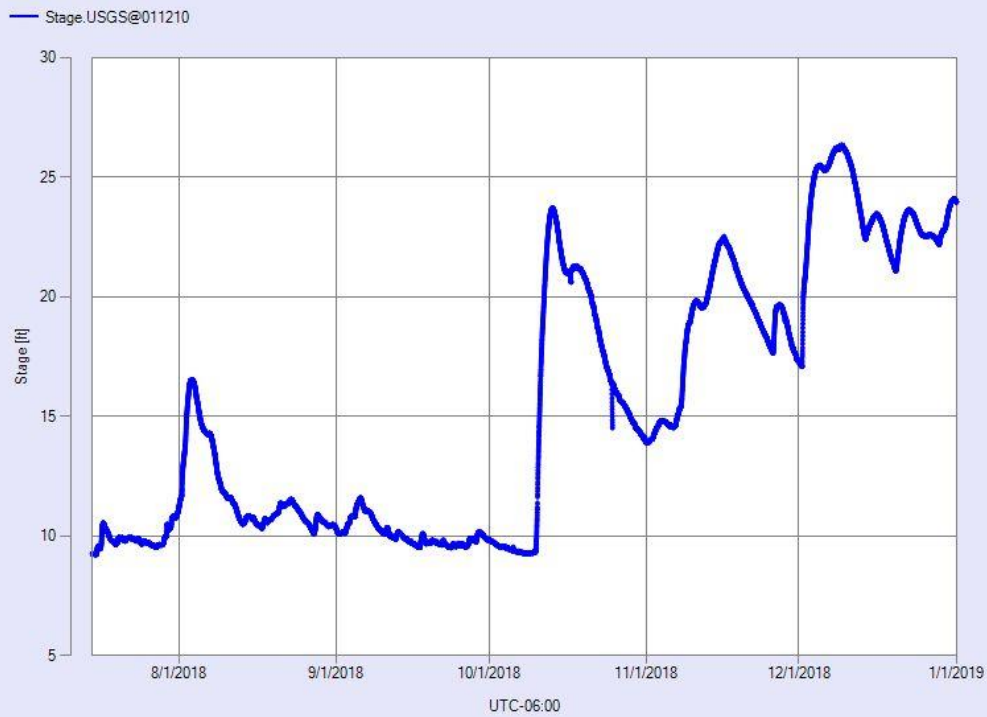
- District-wide: 79 inches of rainfall (avg.) | Most in more than 30 years
- Washington County: 96.79 inches (avg.) | 36.35 inches above normal
- Jackson County: 88.97 inches (avg.) | 32.28 inches above normal

Econfina Creek @ Hwy 20



Representative Hydrograph Demonstrating Stage Shift: Econfina Creek at State Road 20

Chipola River @ Altha



Representative Hydrograph Demonstrating Stage Shift: Chipola River at Altha



Florida Department of Agriculture and Consumer Services

Hurricane Michael Impacts, Actions and Needs January 8, 2019

Senator Montford, Chair –
Environment and Natural Resources Committee

Jim Karels, Director,
Florida Forest Service

Hurricane Michael



Agricultural Impacts include:

Forestry: \$1.289 Billion	Other Field Crops: \$7.28 Million
Cotton: \$56.06 Million	Dairy: \$6.43 Million
Cattle: \$43.31 Million	Aquaculture: \$5.00 Million
Peanuts: \$23.04 Million	Fruits: \$4.35 Million
Nurseries and Floriculture: \$16.11 Million	Tree Nuts: \$4.08 Million
Poultry and Eggs: \$10.02 Million	Apiary: \$1.96 Million
Vegetables: \$8.61 Million	Commercial Fisheries – Unable to compile enough data
Total Losses All Commodities: \$1.475 Billion	

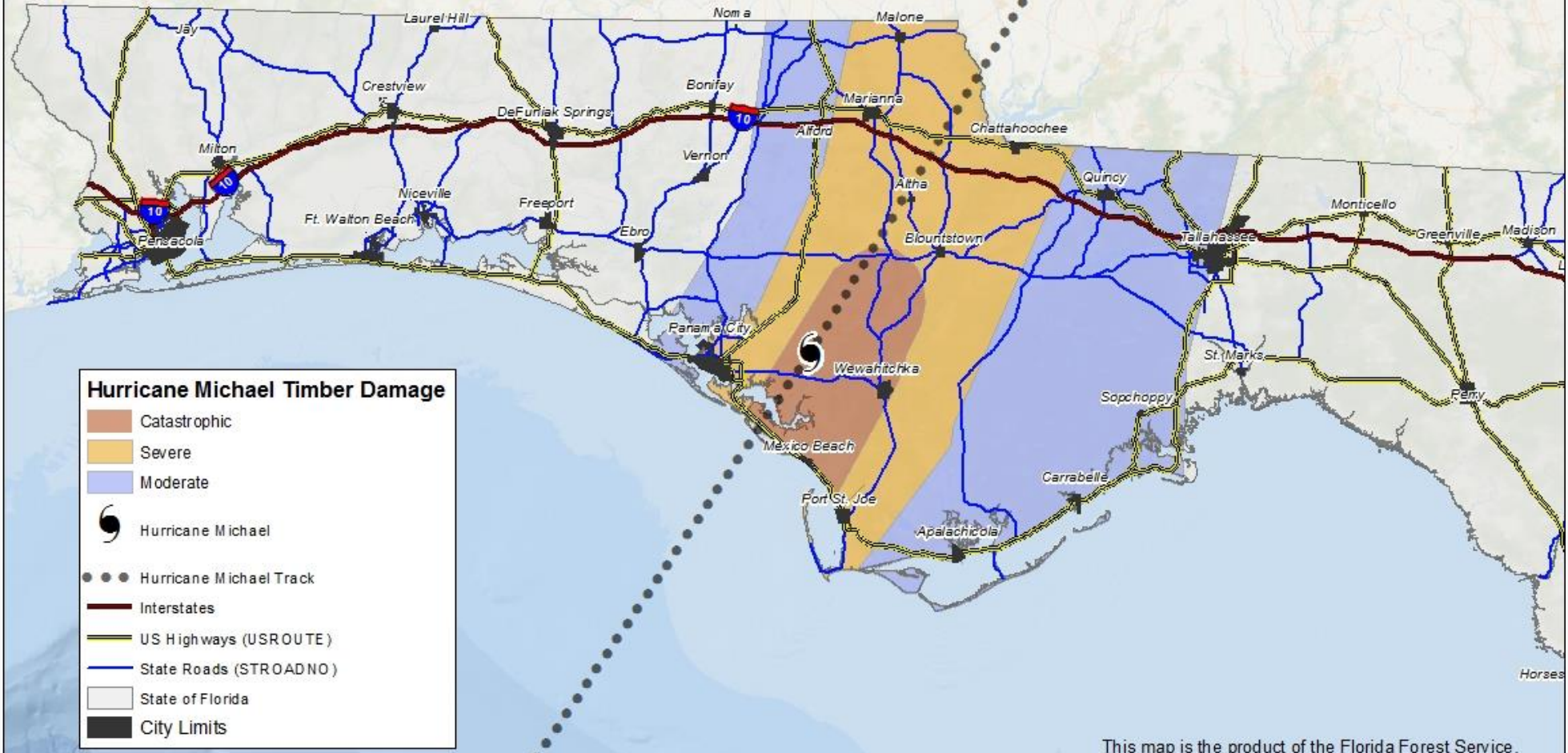




Hurricane Michael State of Florida

Map created 10/17/2018

Sources: National Weather Service;
National Oceanic and Atmospheric Administration.



Timber Damage Zones



- Catastrophic: 20 mile swath, 347,000 ac, 95% timber volume damaged
- Severe: 40 mile swath, 1.04 million ac 75% timber volume damaged
- Moderate: 80 mile swath, 1.42 million ac 15% timber volume damaged



Catastrophic Damage

Bay County



Severe Damage

Liberty County



Calhoun County



Liberty County

Moderate Damage



Forest Acres Affected



County Name	Catastrophic	Severe	Moderate	Total
Bay	71,422	118,616	90,870	280,908
Calhoun	150,983	172,828		323,811
Franklin			283,386	283,386
Gadsden		59,311	184,888	244,199
Gulf	124,507	141,168		265,675
Holmes			29,241	29,241
Jackson		295,628	98,501	394,129
Leon			154,245	154,245
Liberty		255,388	261,285	516,673
Wakulla			203,140	203,140
Washington			113,240	113,240
TOTAL	346,912	1,042,939	1,418,796	2,808,647



Timber Damage Values



Damage	Pine	Mixed	Bottomland	Est Value
Catastrophic – 95%	\$191,957,089	\$49,930,972	\$78,828,506	\$320,716,567
Severe – 75%	\$455,598,258	\$118,508,085	\$187,094,377	\$761,200,720
Moderate – 15%	\$123,957,506	\$32,243,245	\$50,904,005	\$207,104,756
Total				\$1,289,022,043



Landowner Types Impacted



Ownership	Catastrophic	Severe	Moderate	Total Acres*
Federal	10,448	114,246	487,500	612,193
State	908	76,749	317,552	395,209
Local Gov't	165	6,275	6,214	12,653
Private	333,925	835,885	600,174	1,769,984
Other	1,466	9,785	7,357	18,608
Total	346,912	1,042,939	1,418,796	2,808,647

*Data from Florida Comprehensive Statewide Forest Inventory Analysis Study

Number of Private Landowners impacted (over 16,000 total):

772 – Catastrophic Zone, 8,159 – Severe Zone, 7,884 – Moderate Zone



Hurricane Michael Response



- Urban Search and Rescue Support
- Forestry Saw Teams opened roads throughout impact area
- Managed base camps and supported county emergency response
- Facility and Equipment damage

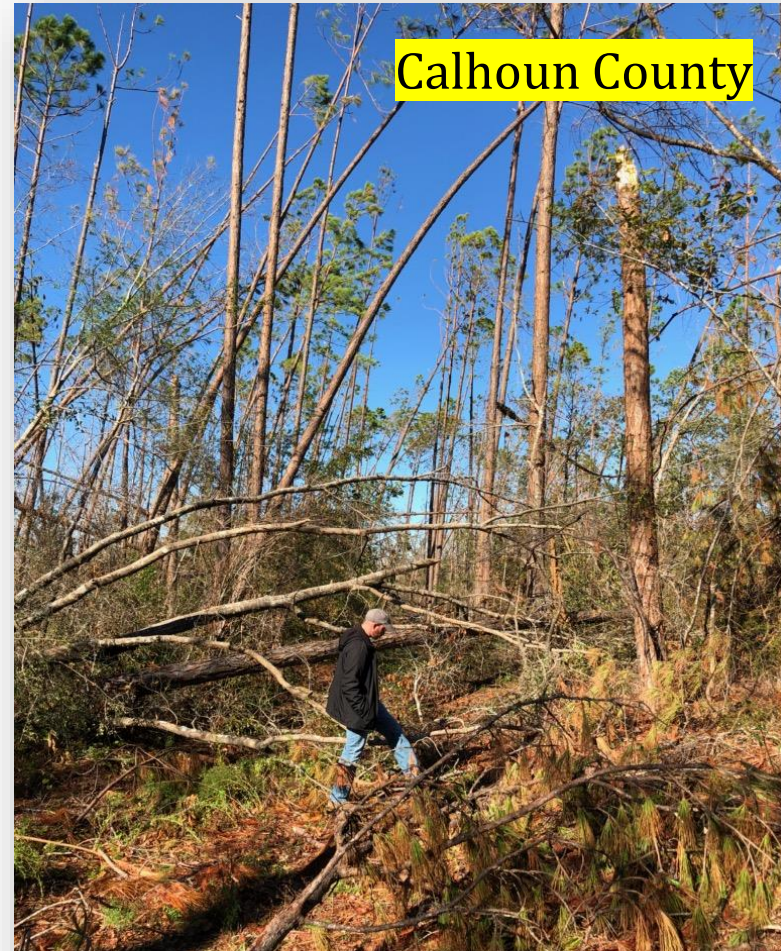


Private Lands Assistance



County Forester Strike Teams sent into impact area to provide:

- Landowner site visits
- Verification of damage on CRP lands
- Information on federal (EFRP) programs
- Site assessment for need of road access that can be provided by FFS saw crews to reduce risk of wildfire



Private Lands Assistance



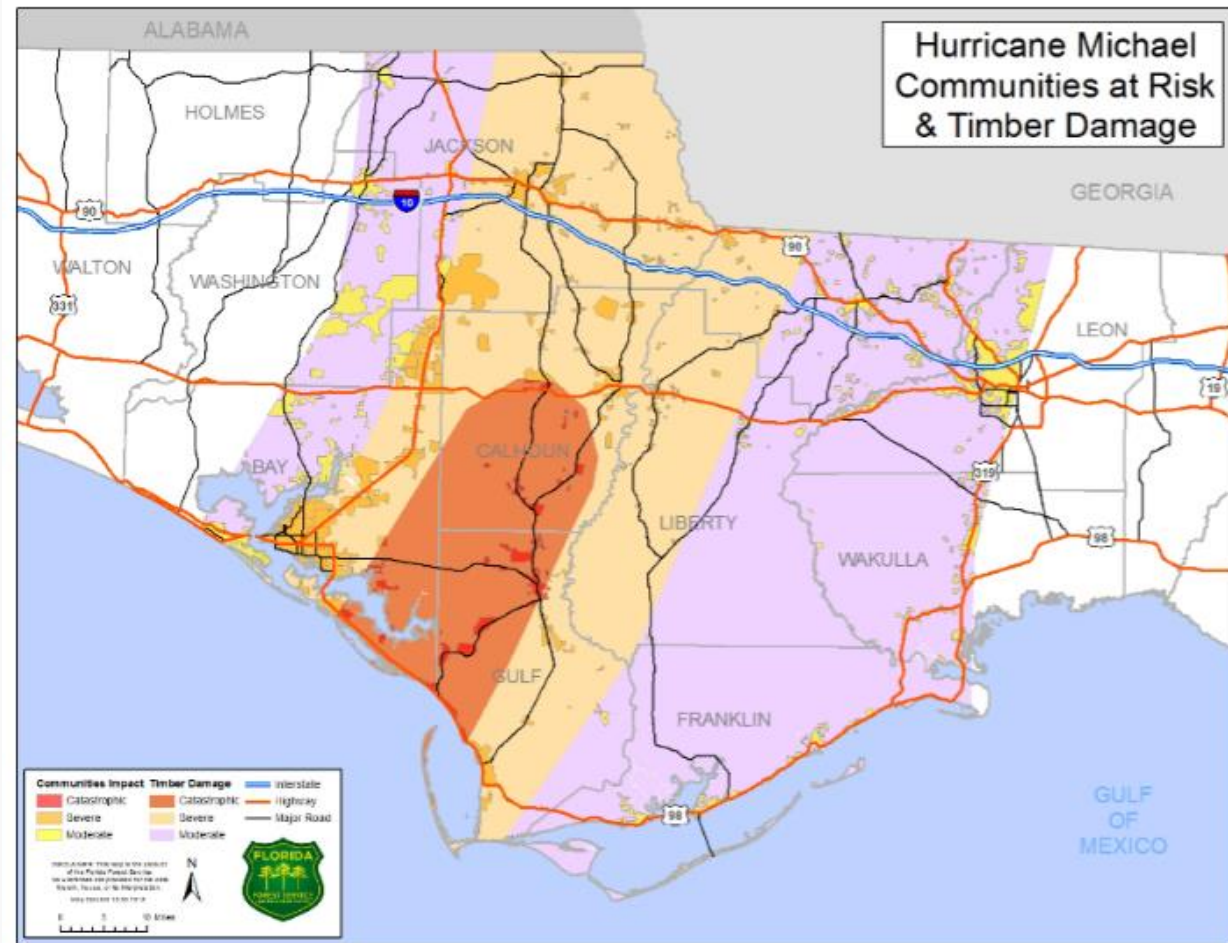
- FFS landowner meetings provided initial information in October
- FFS providing no-cost Pile Burning Classes in November & December for 300 landowners
- FFS Foresters provided on-site assistance for landowners impacted by hurricane.



Wildfire Threat



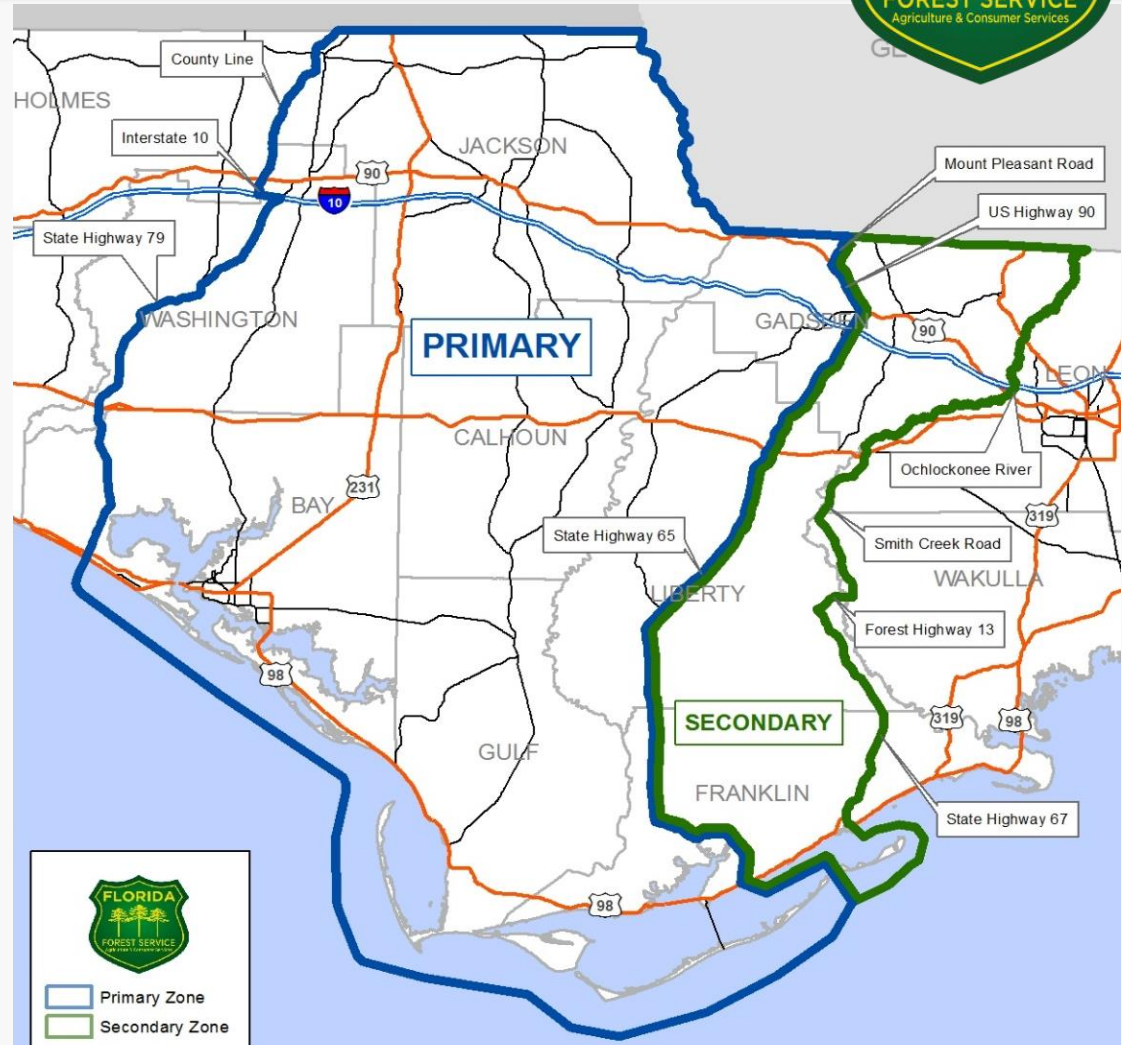
- Increased wildfire risk to 233 Communities
- Fire equipment access is significantly reduced
- Fuel loadings more than 10 times the normal



Prescribed Fire Impact



- On-site Inspection and Burning Zones
- Examine open burning procedures



Wildfire Mitigation Needed



- Establish fuel breaks around communities
- Manage open burning program
- Prepare for fire suppression



Summary of Impacts



2.81 million Acres impacted

**71.93 million Tons – 4.4 years of
annual forest harvest in Florida**

\$1.29 Billion in damaged resource

**16,000 private landowners
impacted**

233 Communities At Risk



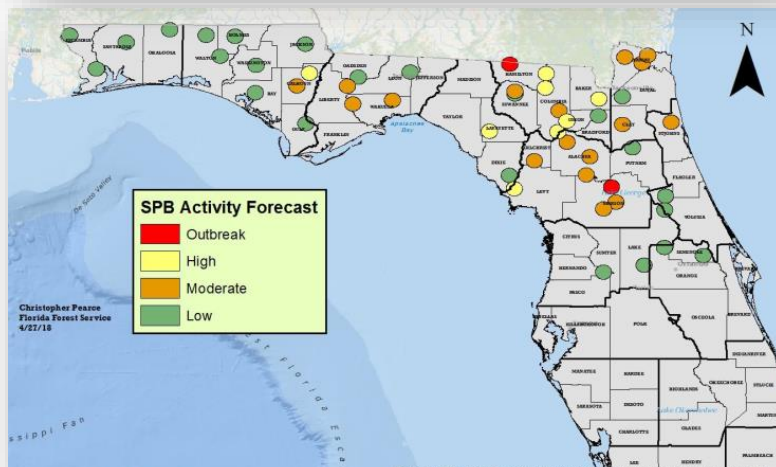
Recovery Needs



- **Heavy fire suppression dozers**
- **Helicopters for inaccessible areas**
- **Prevention and fire mitigation equipment and outreach.**



Recovery Needs



- **Surveillance and treatment to stop Pine Beetle epidemic and the spread of invasive species**





Support rural economy through private forest land debris removal and reforestation



Recovery Needs



**Support for urban
and community
tree restoration
and replacement
programs in
partnership with
non-profit groups**



Hurricane Michael Recovery



- **Federal Hurricane Michael recovery efforts include reauthorization of WHIP and state block grants including timber and agriculture**
- **Forest recovery at the state level:**
 - Reforestation efforts**
 - Reduce wildfire threat**
 - Forest Pest and Invasive species prevention**
 - Urban and Community Reforestation**



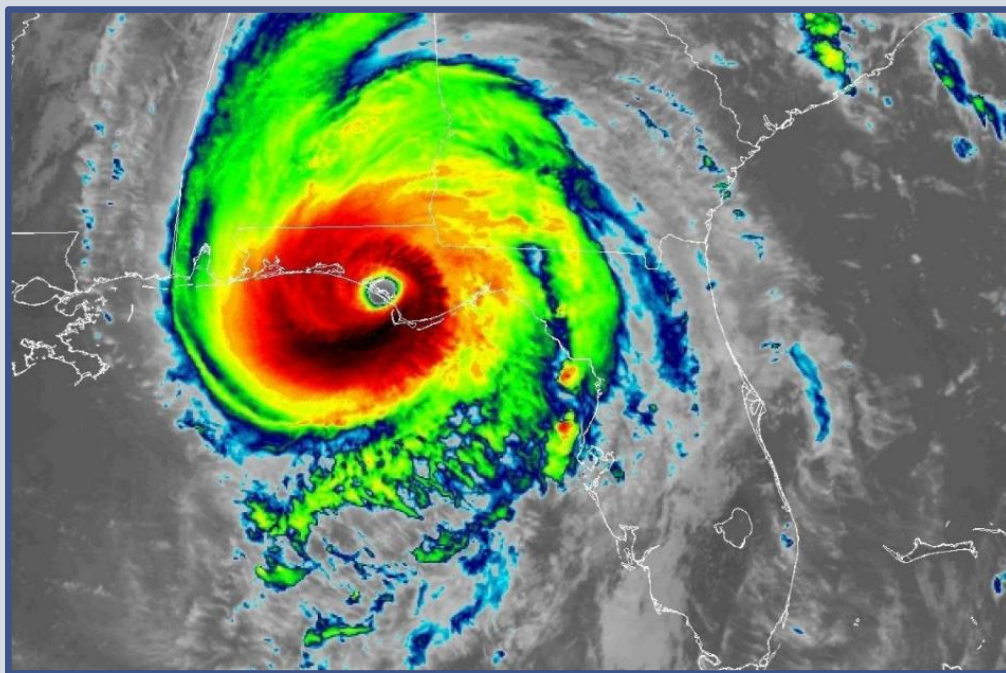
Questions?



Gulf County



Hurricane Michael Impacts to Fish and Wildlife Habitat and Populations



Florida Fish and Wildlife Conservation Commission

Version 1

Impacts to Forest Ecosystems

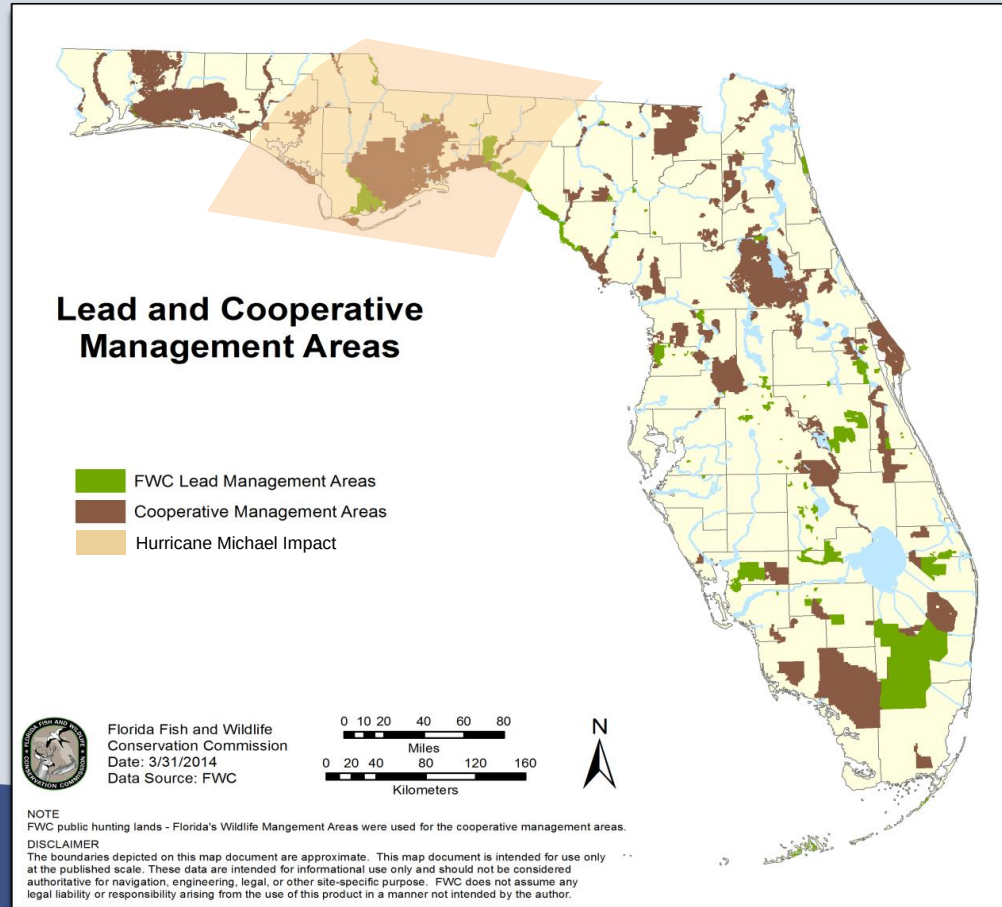


Impacts to Forest Ecosystems – Species and Habitats

- Red-cockaded woodpeckers (RCW)
- Flatwoods salamanders
- Bald eagles
- Panama City crayfish



Impacts to Forest Ecosystems - Wildlife Management Area System



Apalachee Wildlife Management Area, Jackson County



Impact to Coastal Ecosystems - Shorelines



Impacts to Coastal Ecosystems – Species and Habitats

- Shorebirds
- Beach mice
- Sea turtles
- Critical Wildlife Areas



Impacts to Coastal Ecosystems - Shellfish



Bay Scallop in Seagrass



Eastern Oyster Reef



Moving Forward

- Continued surveying of ecological impacts
- Continued work to mitigate ecological impacts
- Explore ways to manage changed landscapes
- Partner with Universities to assess long term ecological impacts
- Work with DEP and local governments on coastal restoration



APPEARANCE RECORD

(Deliver BOTH copies of this form to the Senator or Senate Professional Staff conducting the meeting)

01/08/2019

Meeting Date

N/A

Bill Number (if applicable)

N/A

Amendment Barcode (if applicable)

Topic HURRICANE MICHAEL PRESENTATION

Name KEVIN GUTHRIE

Job Title DEPUTY DIRECTOR

Address 2555 STANARD OAK DR
Street

Phone 904-234-7629

TALLAHASSEE FL 32399
City State Zip

Email KEVIN.GUTHRIE@EM.MYFLORIDA.COM

Speaking: ☐ For ☐ Against ☒ Information

Waive Speaking: ☐ In Support ☐ Against
(The Chair will read this information into the record.)

Representing FLORIDA DIVISION OF EMERGENCY MANAGEMENT

Appearing at request of Chair: ☒ Yes ☐ No

Lobbyist registered with Legislature: ☐ Yes ☐ No

While it is a Senate tradition to encourage public testimony, time may not permit all persons wishing to speak to be heard at this meeting. Those who do speak may be asked to limit their remarks so that as many persons as possible can be heard.

This form is part of the public record for this meeting.

S-001 (10/14/14)

THE FLORIDA SENATE
APPEARANCE RECORD

(Deliver BOTH copies of this form to the Senator or Senate Professional Staff conducting the meeting)

01/08/19

Meeting Date

Bill Number (if applicable)

Topic Agriculture

Amendment Barcode (if applicable)

Name Jim Karels

Job Title Director - Florida Forestry Service

Address 400 S. Monroe St

Phone 850 617 7700

Street

Tallahassee

FL

32399

Email emily.buckley@freshfromflorida.com

City

State

Zip

Speaking: ☐ For ☐ Against ☒ Information

Waive Speaking: ☐ In Support ☐ Against
(The Chair will read this information into the record.)

Representing Department of Agriculture and Consumer Services

Appearing at request of Chair: ☒ Yes ☐ No

Lobbyist registered with Legislature: ☒ Yes ☐ No

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S-001 (10/14/14)

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1/8/19

Meeting Date

Bill Number (if applicable)

Topic Environmental and Natural Resources

Amendment Barcode (if applicable)

Name Ryan LockJob Title Planning Section ChiefAddress 2575 Shumard Oak Blvd

Street

Phone 850-841-9484Tallahassee

City

FL

State

32399

Zip

Email ryan.lock@em.mtfloridah.comSpeaking: ☐ For ☐ Against ☒ InformationWaive Speaking: ☐ In Support ☐ Against
(The Chair will read this information into the record.)

Representing _____

Appearing at request of Chair: ☒ Yes ☐ NoLobbyist registered with Legislature: ☐ Yes ☒ No

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1/8/19
Meeting Date

Bill Number (if applicable)

Topic Hurricane Impacts on Fish & Wildlife

Amendment Barcode (if applicable)

Name Kipp Frohlich

Job Title Director Habitat & Species, FWC

Address 620 S. Meridian
Street

Phone 850 528-8151

Tallahassee FL 32319
City State Zip

Email Kipp.frohlich@myfwc.com

Speaking: ☐ For ☐ Against ☒ Information

Waive Speaking: ☐ In Support ☐ Against
(The Chair will read this information into the record.)

Representing Fish & Wildlife Conservation Comm.

Appearing at request of Chair: ☒ Yes ☐ No

Lobbyist registered with Legislature: ☐ Yes ☒ No

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1/8/19

Meeting Date

Bill Number (if applicable)

Topic Hurricane Michael Impacts

Amendment Barcode (if applicable)

Name Brett J. Cyphers

Job Title Executive Director

Address 81 Water Management Dr.

Phone (850) 539-5999

Street

Havana

FL

32333

Email brett.cyphers@nwfwater.com

City

State

Zip

Speaking: ☐ For ☐ Against ☒ Information

Waive Speaking: ☐ In Support ☐ Against
(The Chair will read this information into the record.)

Representing Northwest Florida Water Management District

Appearing at request of Chair: ☒ Yes ☐ No

Lobbyist registered with Legislature: ☒ Yes ☐ No

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01/08/19

Meeting Date

Bill Number (if applicable)

Topic Agriculture

Amendment Barcode (if applicable)

Name Emily Buckley

Job Title Legislative Affairs Director

Address 400 S. Monroe St

Phone 850 617 7700

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City

State

Zip

Speaking: ☐ For ☐ Against ☒ Information

Waive Speaking: ☐ In Support ☐ Against
(The Chair will read this information into the record.)

Representing Department of Agriculture and Consumer Services

Appearing at request of Chair: ☒ Yes ☐ No

Lobbyist registered with Legislature: ☒ Yes ☐ No

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01/08/19

Meeting Date

Bill Number (if applicable)

Topic Agriculture

Amendment Barcode (if applicable)

Name Portia Sapp

Job Title Assistant Director - Division of Aquaculture

Address 400 S. Monroe St

Phone 850 617 7700

Street

Tallahassee

FL

32399

Email emily.buckley@freshfromflorida.com

City

State

Zip

Speaking: ☐ For ☐ Against ☒ Information

Waive Speaking: ☐ In Support ☐ Against
(The Chair will read this information into the record.)

Representing Department of Agriculture and Consumer Services

Appearing at request of Chair: ☒ Yes ☐ No

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S-001 (10/14/14)

CourtSmart Tag Report

Room: LL 37

Case No.:

Caption: Senate Environment and Natural Resources

Type:

Judge:

Started: 1/8/2019 4:30:19 PM

Ends: 1/8/2019 5:58:58 PM Length: 01:28:40

4:30:23 PM Meeting called to order
4:30:28 PM roll call
4:30:36 PM pledge
4:30:57 PM pledge
4:31:38 PM Chairman Montford's opening comments
4:32:00 PM Chairman Montford's opening comments
4:32:04 PM Chairman Montford introducing Ellen Rogers
4:32:05 PM Ellen Rogers introducing Kim Bonn
4:32:18 PM Ellen Rogers introducing Crystal Anderson
4:32:25 PM Ellen Rogers introducing Kaniel Schreiber
4:32:45 PM Ellen Rogers closing remarks
4:33:07 PM Members introducing themselves
4:36:36 PM Members introducing themselves
4:37:14 PM Senator Gainey recognized for comments
4:38:32 PM Senator Montford with comments
4:41:29 PM Kevin Guthrie, Chief of Staff, Department of Management Services
4:42:01 PM Kevin Guthrie, Chief of Staff, Department of Management Services
4:42:32 PM Kevin Guthrie, Guthrie, Chief of Staff, Department of Emergency Management presenting
4:45:52 PM Kevin Guthrie, Guthrie, Chief of Staff, Department of Emergency Management presenting
4:46:17 PM Senator Allbritton comments that he has a list of questions and will submit to Committee Staff
4:46:48 PM David Clark, Deputy Secretary, Land and Recreation, Depart. of Environmental Protection
5:00:03 PM Senator Montford with a question
5:01:00 PM David Clark responding
5:01:11 PM David Clark Responding
5:01:21 PM Senator Montford with follow up
5:01:57 PM David Clark responding
5:02:30 PM Brett Cyphers, Executive Director, NW Florida Water Management District
5:04:13 PM Brett Cyphers, Executive Director, NW Florida Water Management District
5:04:31 PM Senator Montford with question
5:04:43 PM Brett Cyphers continuing with presentation
5:13:15 PM Senator Gainer with comments
5:13:31 PM Senator Gainer with comments
5:13:36 PM Jim Karles, Director, State Forester, Florida Forest Service
5:13:37 PM Jim Karles, Director, State Forester, Florida Forest Service
5:13:37 PM Jim Karles, Director, State Forester, Florida Forest Service
5:13:37 PM Jim Karles, Director, State Forester, Florida Forest Service
5:14:13 PM Jim Karels, Director, State Forester, Florida Forest Service
5:35:36 PM Senator Montford with comments
5:36:36 PM Jim Karels responding
5:39:35 PM Portia Sapp, Assistant Director, Division of Aquaculture , Depart,of Ag.&con. Services
5:44:43 PM Senator Montford with question
5:44:49 PM Portia Sapp responding
5:45:17 PM Senator Montford with question
5:45:26 PM Portia Sapp responding
5:45:50 PM Senator Montford moving on to next speaker
5:46:27 PM Mr. Kipp Frohlich, Director of the Division of Habitat and Species Conservation
5:48:25 PM Senator Montford with comment
5:48:44 PM Senator Gainer with comment about grayfish
5:49:06 PM Mr. Frohlich continuing
5:49:30 PM Senator Gainer with comments
5:49:37 PM Mr. Frohlich continuing
5:50:09 PM Mr. Frohlich commenting on bald eagles

5:50:26 PM	Senator Montford with comments
5:50:33 PM	Senator Allbritton with comments
5:51:08 PM	Senator Montford responding
5:51:15 PM	Senator Bronson with comments
5:52:55 PM	senator Montford with comment
5:53:01 PM	Senator Gainer with comments
5:55:03 PM	Senator Mayfield with comments
5:56:11 PM	Senator Mayfield continuing with comments
5:56:43 PM	Senator Wright with comments
5:56:54 PM	Senator Berman with comments
5:57:18 PM	Senator Montford closing
5:58:51 PM	Meeting Adjourn