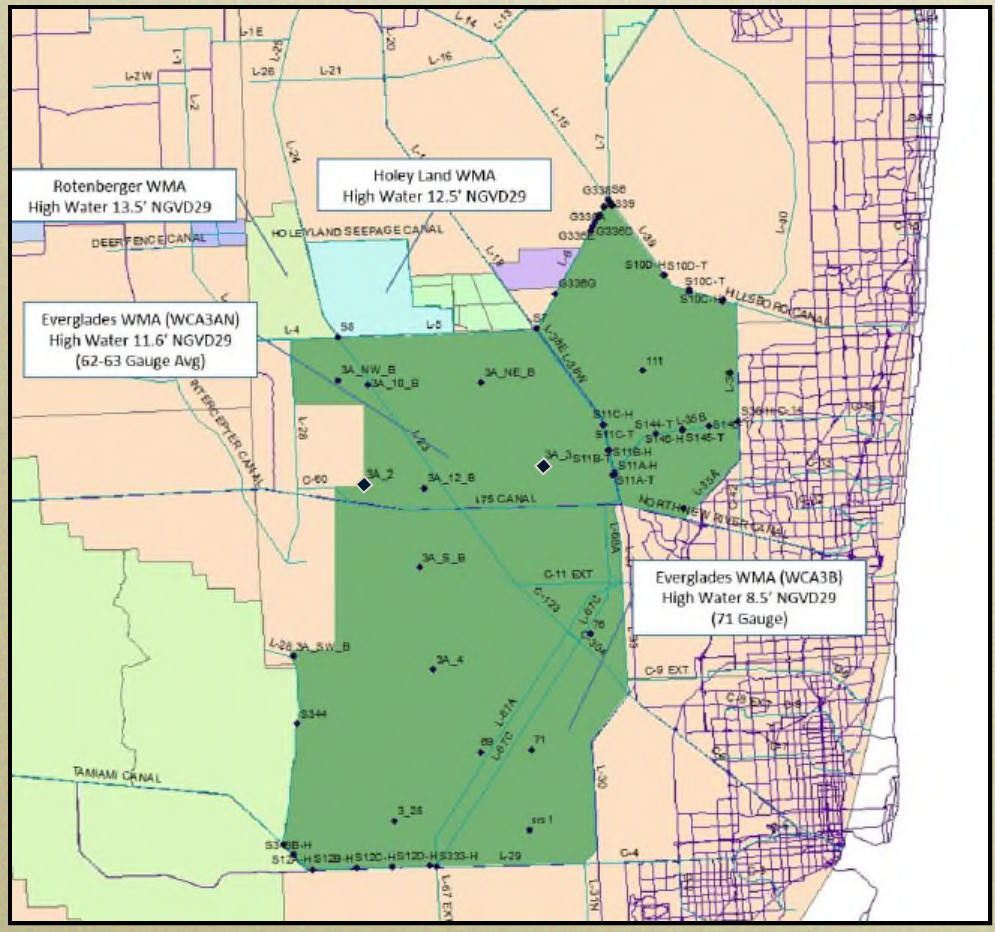
Emergency High Water Actions Critical to Everglades Wildlife and Habitat Recovery

James M. Erskine
Everglades Coordinator
Florida Fish and Wildlife Conservation Commission

FWC Responsibilities

- Water Conservation Areas 2 and 3 managed as Everglades and Francis S. Taylor Wildlife Management Area (EWMA)

- EWMA High Water Key
  - Average of 62 and 63 water gauges
  - 11.60 feet set as high water closure criterion
  - Wildlife observations



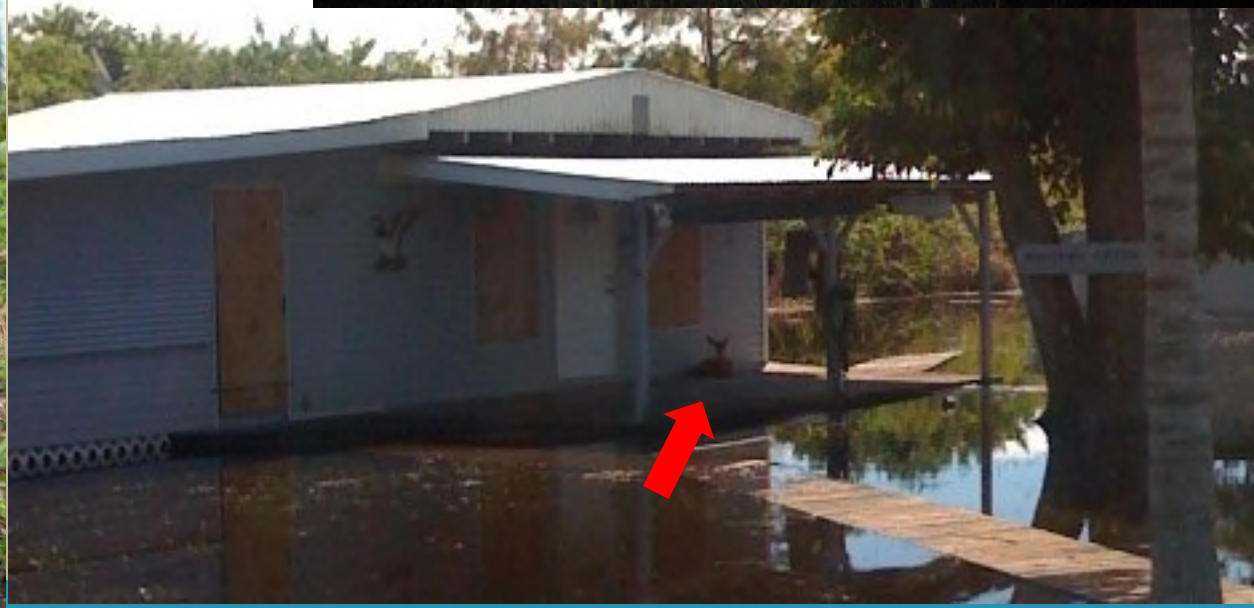
FWC's Position on Hydrologic Requirements for the EWMA

- Average maximum depth of 2 feet – wet season
- Depth near ground level – dry season
- Ascension and recession $\leq$ 0.25 feet per week
- Depths in excess of 2.5 feet should not persist longer than 60 days.
    - During extreme storms events or unusually wet seasons water levels may rise above 2.5 feet but should not persist.

High Water Effects

- The EWMA has important habitat for a diversity of imperiled wildlife species.
- Resources at risk:
  - Elevated tree islands and their associated wildlife assemblages
  - Colonial wading bird nesting habitat (large willow strands)
  - Suitable wading bird foraging habitat
  - Critical wet prairie habitat (Loveless 1959)
  - Viable apple snail populations
  - Snail kite foraging and nesting habitat
  - Healthy sawgrass communities

High Water Monitoring Photos



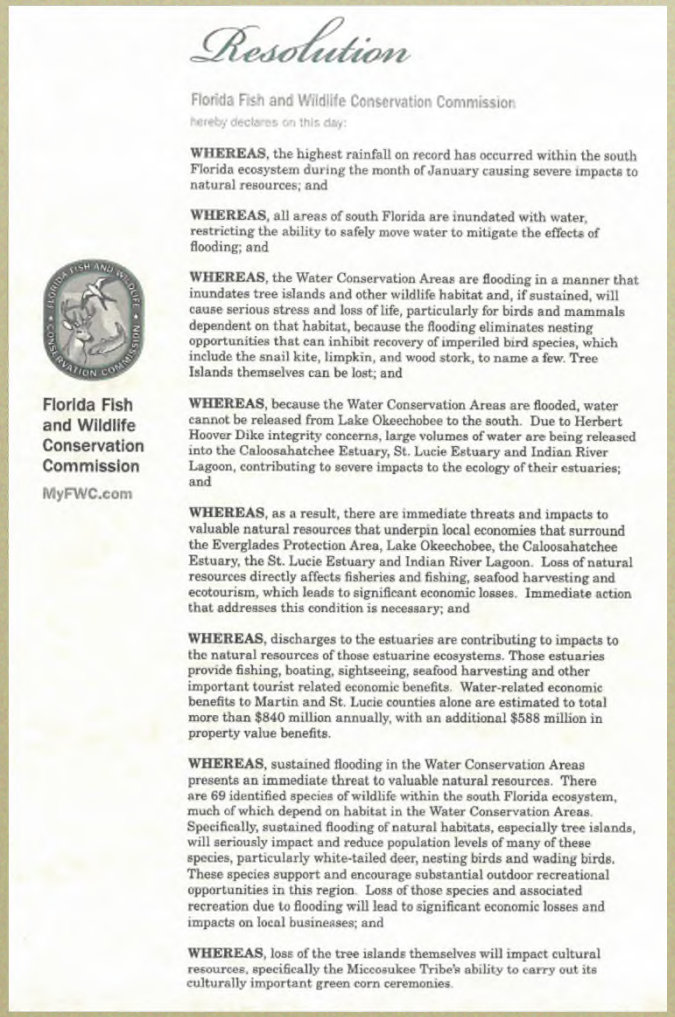
2016 High Water Conditions

- The EWMA experienced above-average water levels starting January 2016
- Heavy rainfall continued across south Florida throughout the month dramatically increasing water levels throughout the region.

2016 High Water Conditions

- The high water levels and related wildlife concerns prompted emergency restrictions for public access in the EWMA. (January 30, 2016).
- Record setting water levels were nearly 2 feet above historic average for this time of year.
- Water levels were above 2 feet for 7 weeks.

FWC Resolution



Resolution

Florida Fish and Wildlife Conservation Commission
hereby declares on this day:

WHEREAS, the highest rainfall on record has occurred within the south Florida ecosystem during the month of January causing severe impacts to natural resources; and

WHEREAS, all areas of south Florida are inundated with water, restricting the ability to safely move water to mitigate the effects of flooding; and

WHEREAS, the Water Conservation Areas are flooding in a manner that inundates tree islands and other wildlife habitat and, if sustained, will cause serious stress and loss of life, particularly for birds and mammals dependent on that habitat, because the flooding eliminates nesting opportunities that can inhibit recovery of imperiled bird species, which include the snail kite, limpkin, and wood stork, to name a few. Tree Islands themselves can be lost; and

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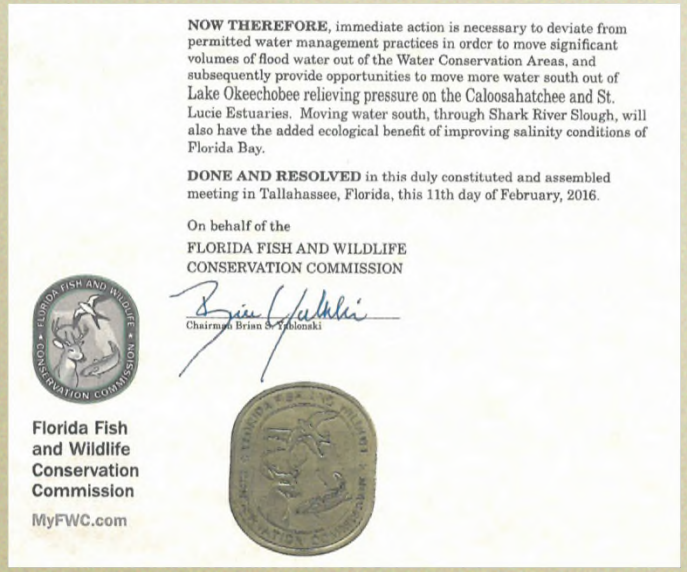
WHEREAS, because the Water Conservation Areas are flooded, water cannot be released from Lake Okeechobee to the south. Due to Herbert Hoover Dike integrity concerns, large volumes of water are being released into the Caloosahatchee Estuary, St. Lucie Estuary and Indian River Lagoon, contributing to severe impacts to the ecology of their estuaries; and

WHEREAS, as a result, there are immediate threats and impacts to valuable natural resources that underpin local economies that surround the Everglades Protection Area, Lake Okeechobee, the Caloosahatchee Estuary, the St. Lucie Estuary and Indian River Lagoon. Loss of natural resources directly affects fisheries and fishing, seafood harvesting and ecotourism, which leads to significant economic losses. Immediate action that addresses this condition is necessary; and

WHEREAS, discharges to the estuaries are contributing to impacts to the natural resources of those estuarine ecosystems. Those estuaries provide fishing, boating, sightseeing, seafood harvesting and other important tourist related economic benefits. Water-related economic benefits to Martin and St. Lucie counties alone are estimated to total more than $840 million annually, with an additional $588 million in property value benefits.

WHEREAS, sustained flooding in the Water Conservation Areas presents an immediate threat to valuable natural resources. There are 69 identified species of wildlife within the south Florida ecosystem, much of which depend on habitat in the Water Conservation Areas. Specifically, sustained flooding of natural habitats, especially tree islands, will seriously impact and reduce population levels of many of these species, particularly white-tailed deer, nesting birds and wading birds. These species support and encourage substantial outdoor recreational opportunities in this region. Loss of those species and associated recreation due to flooding will lead to significant economic losses and impacts on local businesses; and

WHEREAS, loss of the tree islands themselves will impact cultural resources, specifically the Miccosukee Tribe's ability to carry out its culturally important green corn ceremonies.



NOW THEREFORE, immediate action is necessary to deviate from permitted water management practices in order to move significant volumes of flood water out of the Water Conservation Areas, and subsequently provide opportunities to move more water south out of Lake Okeechobee relieving pressure on the Caloosahatchee and St. Lucie Estuaries. Moving water south, through Shark River Slough, will also have the added ecological benefit of improving salinity conditions of Florida Bay.

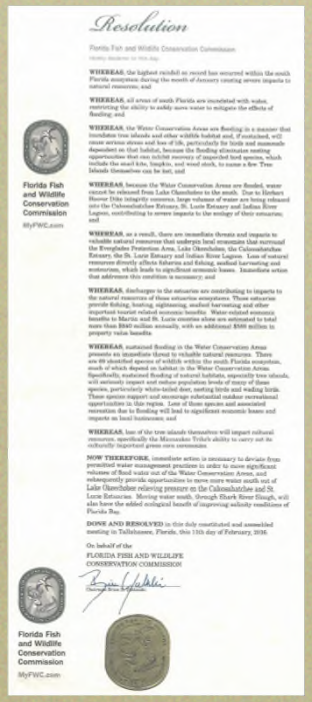
DONE AND RESOLVED in this duly constituted and assembled meeting in Tallahassee, Florida, this 11th day of February, 2016.

On behalf of the
FLORIDA FISH AND WILDLIFE
CONSERVATION COMMISSION

Chairman Brian S. Yablonski

Florida Fish and Wildlife Conservation Commission
MyFWC.com

Executed on
February 11, 2016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Florida Fish and Wildlife Conservation Commission

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WHEREAS, as a result, there are immediate threats and impacts to valuable natural resources that underpin local economies that surround the Everglades Protection Area, Lake Okeechobee, the Caloosahatchee Estuary, the St. Lucie Estuary and Indian River Lagoon. Loss of natural resources directly affects fisheries and fishing, seafood harvesting and restoration, which leads to significant economic losses. Immediate action that addresses this condition is necessary; and

WHEREAS, discharges to the estuaries are contributing to impacts to the natural resources of these estuarine ecosystems. These estuaries provide fishing, boating, sightseeing, seafood harvesting and other important tourist related economic benefits. Water-related economic benefits to Martin and St. Lucie counties alone are estimated to total more than $940 million annually, with an additional $569 million in property value benefits

WHEREAS, sustained flooding in the Water Conservation Areas presents an immediate threat to valuable natural resources. There are 69 identified species of wildlife within the south Florida ecosystem, much of which depend on habitat in the Water Conservation Areas. Specifically, sustained flooding of natural habitats, especially tree islands, will seriously impact and reduce population levels of many of these species, particularly white-tailed deer, nesting birds and wading birds. These species support and encourage substantial outdoor recreational opportunities in this region. Loss of these species and associated recreation due to flooding will lead to significant economic losses and impacts on local businesses; and

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DONE AND RESOLVED in this duly constituted and assembled meeting in Tallahassee, Florida, this 13th day of February, 2036.

On behalf of the
FLORIDA FISH AND WILDLIFE
CONSERVATION COMMISSION

Florida Fish and Wildlife Conservation Commission
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FWC Resolution

- Supported immediate action
  - To deviate from permitted water management plan
  - Move water out of Lake Okeechobee south to relieve pressure on Caloosahatchee and St. Lucie Estuaries
  - Lower extreme high water levels in WCAs
  - Move water into Northeast Shark River Slough and onto Florida Bay
  - Recognized ecological benefits of improving salinity conditions in Florida Bay

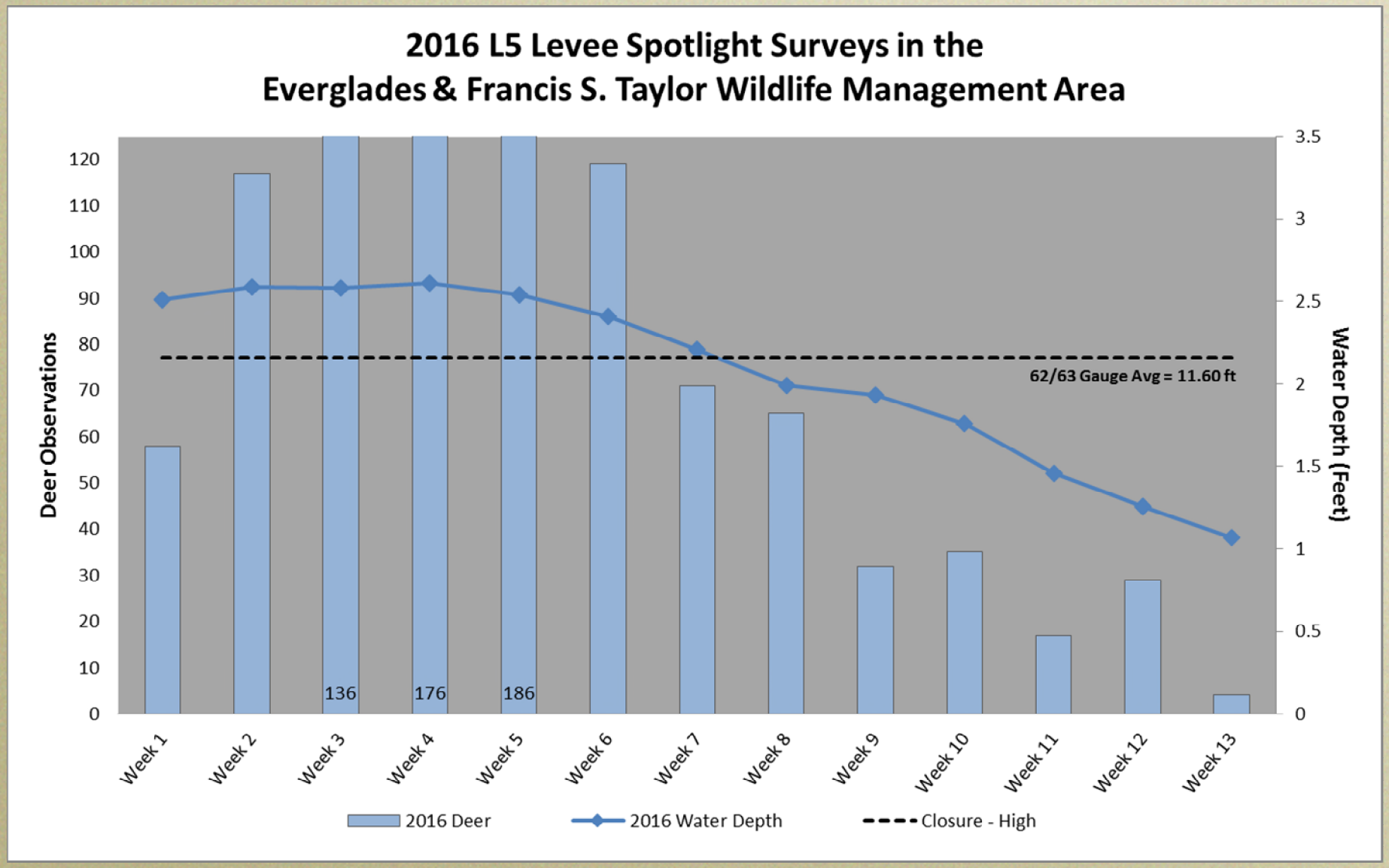
2016 High Water Conditions

- The US ACE initiated a 90-day emergency deviation to raise stages in the L-29 Canal up to 8.5 feet NGVD (February 2016)
- Authorized temporary pumping
- Additional authorization for S-344 deviation.

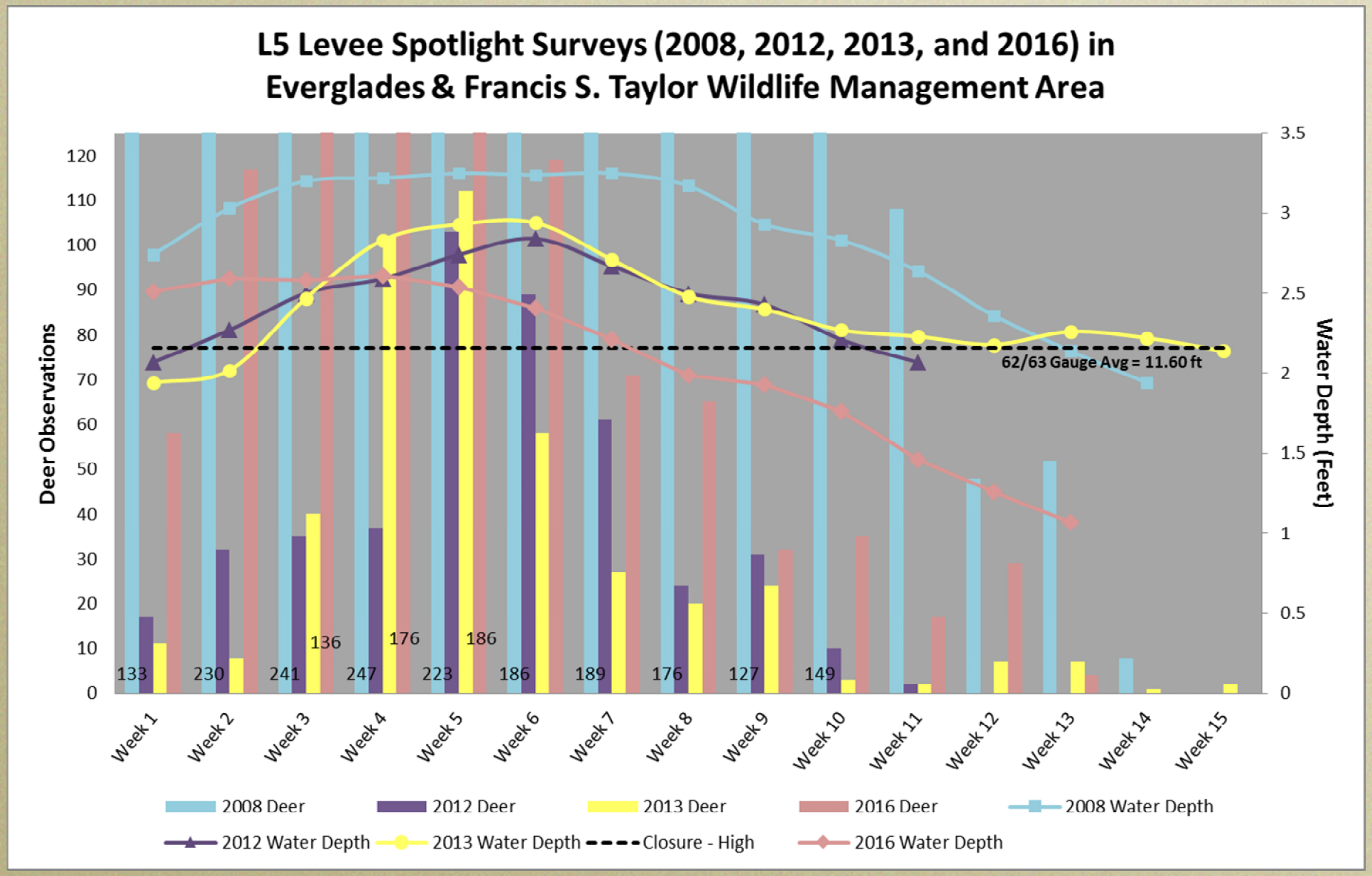
Improve releases from WCA 3A into Northeast Shark River Slough and onto Florida Bay!

2016 High Water Monitoring

- The FWC monitors wildlife and habitat conditions throughout high water events:
  - Levee spotlight surveys
  - Tree island browse surveys
  - Cameras placed on tree islands
  - Water level monitoring



High Water Closure = 11.60 AVE 62/63 Gauge (~2.16 ft).



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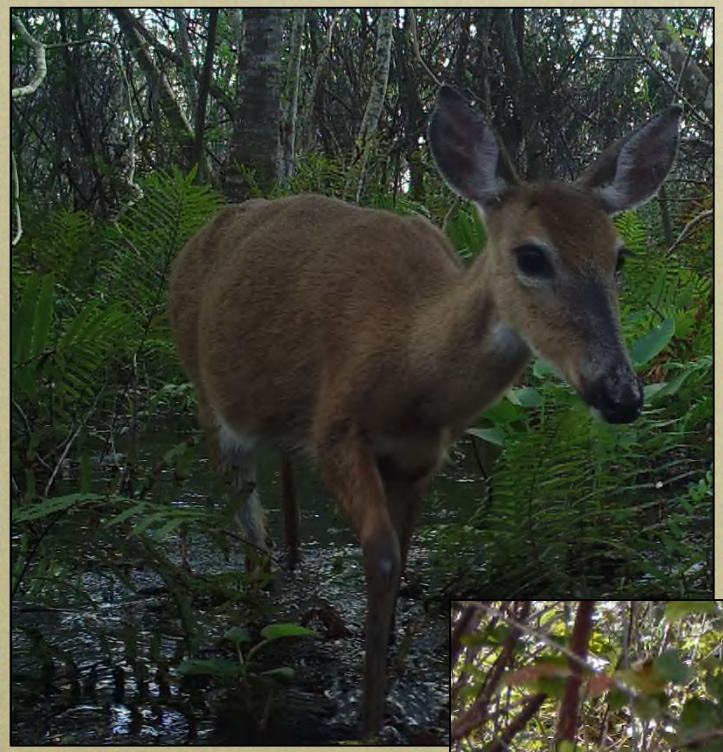
High Water Monitoring Photos



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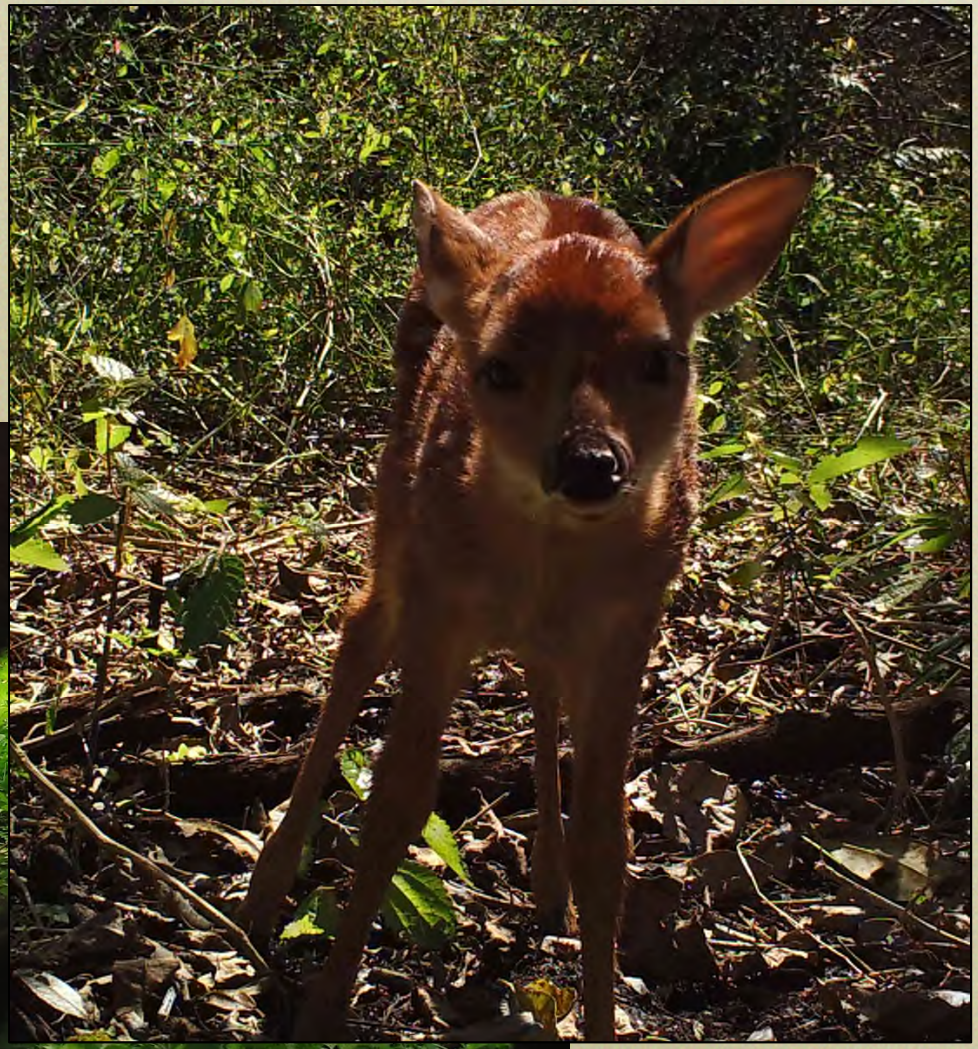
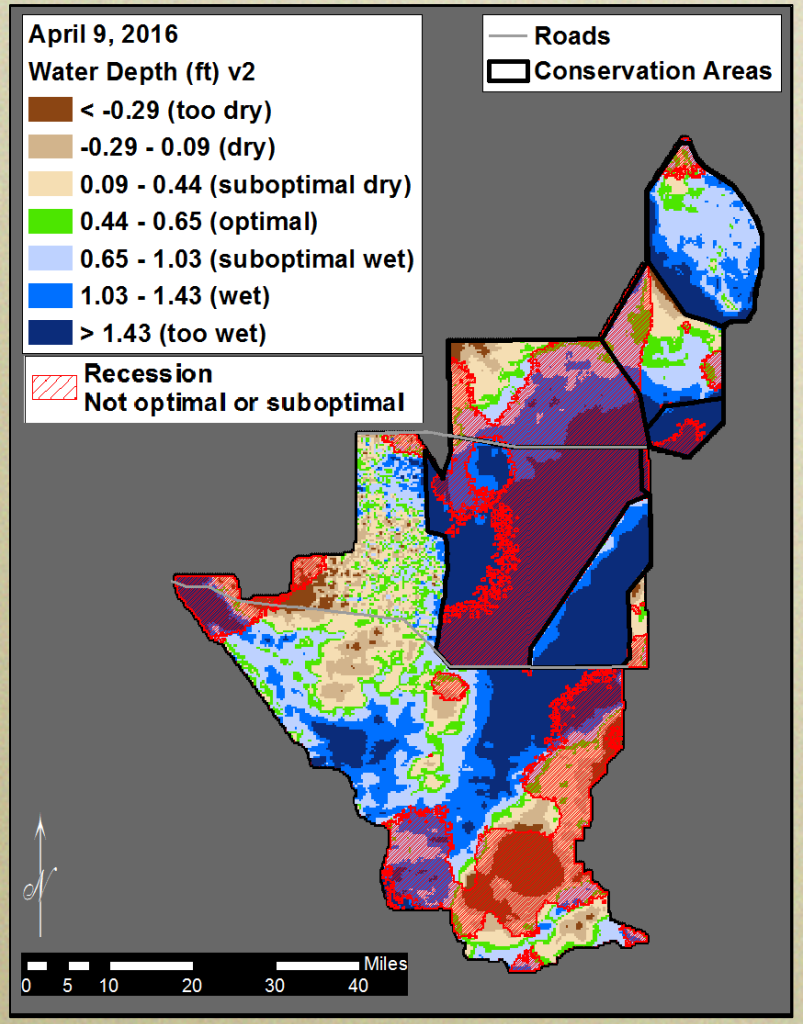


Wading Bird Nesting

- Foraging conditions (water depths and recession rates) have been unfavorable throughout the breeding season.
- Nest counts usually peak in April but this year numbers of nests are unusually low for all species.
  - April nest count for WCAs and northern ENP ~8,900 nests with 0 wood stork nests
- Likely to be a poor year for wading bird nesting in the Everglades.

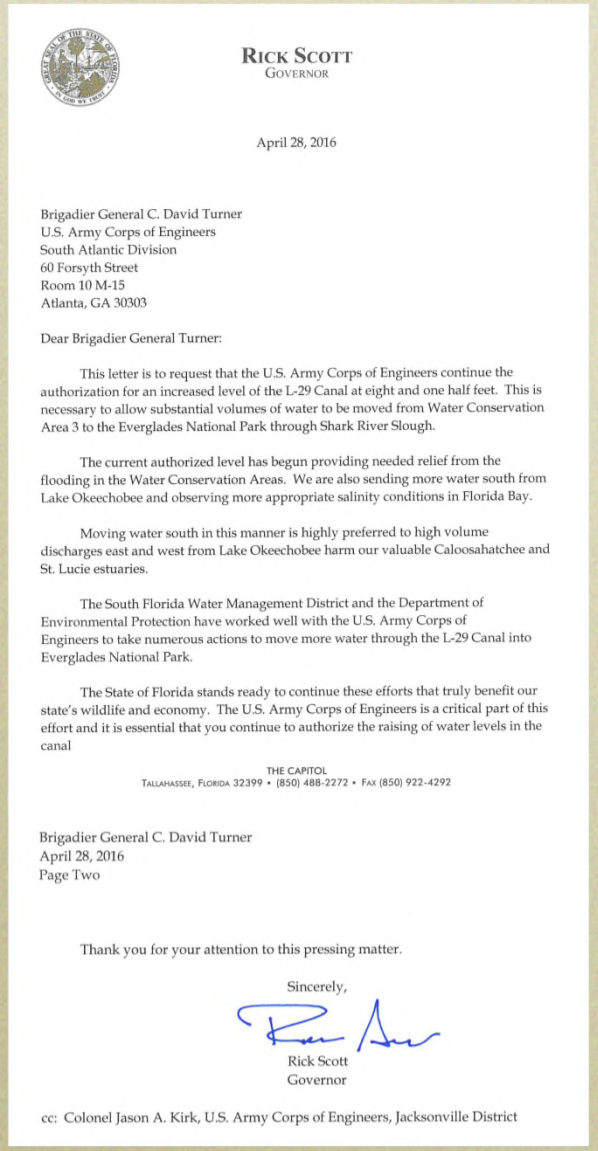


Wildlife and Habitat Conditions

- Dry season high water events impact wildlife breeding, nesting and recruitment.
- The NWS Climate Prediction Center continues to predict above average precipitation across South Florida
- Conditions have improved for wildlife; however wildlife and habitats within the EWMA remain in a stressed condition.

Request for continuation of L-29 Deviation

- Governor Scott requested USACE continues the authorization for an increased level in the L-29 Canal (April 28, 2016).
- Facilitate water movement from Lake Okeechobee through the system, ultimately to Florida Bay.
- Provide flexibility to balance the regional ecological needs with regional hydrologic demands.



RICK SCOTT
GOVERNOR

April 28, 2016

Brigadier General C. David Turner
U.S. Army Corps of Engineers
South Atlantic Division
60 Forsyth Street
Room 10 M-15
Atlanta, GA 30303

Dear Brigadier General Turner:

This letter is to request that the U.S. Army Corps of Engineers continue the authorization for an increased level of the L-29 Canal at eight and one half feet. This is necessary to allow substantial volumes of water to be moved from Water Conservation Area 3 to the Everglades National Park through Shark River Slough.

The current authorized level has begun providing needed relief from the flooding in the Water Conservation Areas. We are also sending more water south from Lake Okeechobee and observing more appropriate salinity conditions in Florida Bay.

Moving water south in this manner is highly preferred to high volume discharges east and west from Lake Okeechobee harm our valuable Caloosahatchee and St. Lucie estuaries.

The South Florida Water Management District and the Department of Environmental Protection have worked well with the U.S. Army Corps of Engineers to take numerous actions to move more water through the L-29 Canal into Everglades National Park.

The State of Florida stands ready to continue these efforts that truly benefit our state's wildlife and economy. The U.S. Army Corps of Engineers is a critical part of this effort and it is essential that you continue to authorize the raising of water levels in the canal

THE CAPITOL
TALLAHASSEE, FLORIDA 32399 • (850) 488-2272 • FAX (850) 922-4292

Brigadier General C. David Turner
April 28, 2016
Page Two

Thank you for your attention to this pressing matter.

Sincerely,

Rick Scott
Governor

cc: Colonel Jason A. Kirk, U.S. Army Corps of Engineers, Jacksonville District

FWC Ongoing Actions

- Partnering with State & Federal agencies to continue monitoring conditions downstream of WCA 3A.

- Partnering with stakeholders on monitoring current conditions & developing solutions.

- Continue to work with partnering agencies to develop water level recommendations to ensure protection of Florida's fish and wildlife resources for the benefit of the public.

Acknowledgements

- FWC Divisions
  - Habitat and Species Conservation
  - Freshwater Fisheries Management
  - Hunting and Game Management
  - Law Enforcement
  - Fish and Wildlife Research Institute

Questions?